CITY COMMISSION

REGULAR MEETING AGENDA

MONDAY, SEPTEMBER 23, 2024 - 6:30 PM

CITY HALL - COMMISSION CHAMBERS

1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER

Roll Call
Invocation
Pledge of Allegiance
Agenda Changes

AWARDS AND PRESENTATIONS

100. Gee Creek Update Presentation

INFORMATIONAL AGENDA

200. Informing the City Commission of the Upcoming Requirement for Appointments to the 2025 Winter Springs Districting Commission

PUBLIC INPUT

Anyone who wishes to speak during Public Input on any Agenda Item or subject matter will need to fill out a "Public Input" form. Individuals will limit their comments to three (3) minutes, and representatives of groups or homeowners' associations shall limit their comments to five (5) minutes, unless otherwise determined by the City Commission.

CONSENT AGENDA

300. Intent to Award RFP-07-24-01 BD: Automated Closed Caption System and Authorize Purchase of Enco Closed Captioning Device
RFP 07-24-01 BD Closed Captioning System.PDF
RFP 07-24-01 BD Closed Caption System Addendum 1.PDF
ENCO Quote - Winter Spring FL - enCap BO Q3848.pdf
RFP 07-24-01 BD Evalution Team Results.pdf
RFP 07-24-01 BD Infinity AV and Security Proposal.pdf
RFP 07-24-01 BD VZP Digital Proposal.pdf
RFP 07-24-01 BD Enco Proposal.pdf
RFP# -7-24-01 BD Verbit Inc. Proposal.pdf

301. Addendum to IT Managed Services Contract - EssentialNet Solutions
Addendum to Managed Services Agreement - Additional Headcount.pdf
EssentialNet Solutions Agreement Oct 1, 2023.pdf

302. Ratify Addendum to Contract for Building Department Services with Universal Engineering Sciences, Inc.
Universal Engineering Sciences, LLC Agreement for Building Department Services - 2020 06 29.pdf
Universal Engineering Sciences, LLC - First Addendum to Agreement for Building Department Services 2023 04 25.pdf

Universal Engineering Sciences, LLC - Second Addendum to Agreement for Building Department Services 2024 03 25.pdf

303. Extension Request - Winter Springs Marketplace Corner Lot Streetscaping Requirement
Winter Springs Marketplace_DA Extension Request.pdf

304. Resolution 2024-23: Adoption of Vision Zero Action Plan
Resolution 2024-23 - Adoption of Vision Zero Action Plan.pdf

305. Resolution 2024-25 Updating and Revising Parks Fees Schedule
Resolution_2024-25_Parks_and_Recreation_Facility_Fee_Schedule.pdf
Exhibit A - Fee Schedule.pdf

306. Resolution 2024-26: Joining the American Flood Coalition
American Flood Coalition Overview.pdf
Resolution 2024-26 American Flood Coalition.pdf
American Flood Coalition Executive Decision Letter.pdf

307. Approval of the Minutes from the Monday, August 12, 2024 City Commission Regular Meeting
2024 08 12 City Commission Regular Meeting Minutes.pdf

308. Approval of the Minutes from the Monday, August 26, 2024 City Commission Workshop
2024 08 26 City Commission Workshop Minutes.pdf

309. Approval of the Minutes from the Monday, August 26, 2024 City Commission Regular Meeting
2024 08 26 City Commission Regular Meeting Minutes.pdf

310. Approval of the Minutes from the Monday, September 9, 2024 City Commission Regular Meeting
2024 09 09 City Commission Regular Meeting Minutes.pdf

PUBLIC HEARINGS AGENDA

400. Final Millage Rate for Fiscal Year 2024 - 2025
Resolution 2024-18 Adopting Final Millage.pdf

401. Final Budget for Fiscal Year 2024 - 2025
Resolution 2024-19 Adopting Final Budget.pdf

402. First Reading of Ordinance 2024-09, Small-Scale Future Land Use Map Amendment of one (1) parcel of land located at 4301 SR 419.
Staff Report - 4301 SR 419.pdf

Exhibit A - Ordinance 2024-09.pdf
Exhibit B - Concept Plan.pdf
Exhibit C - Maps.pdf
Exhibit D - Application.pdf
Exhibit E - Legal Advertisement.pdf
Presentation CC - FLU - 09.23.2024.pdf

403. First Reading of Ordinance 2024-10, to assign the General Commercial Zoning District to one (1) parcel of land located at 4301 SR 419.
Staff Report - 4301 SR 419.pdf
Exhibit A - Ordinance No. 2024-10.pdf
Exhibit B - Concept Plan.pdf
Exhibit C - Maps.pdf
Exhibit D - Application.pdf
Exhibit E- Legal Advertisement.pdf
Presentation RZ - CC - 09.23.2024.pdf

404. First Reading of Ordinance 2024-14 Requiring Supermajority Vote of the City Commission for any Future Release, Conveyance, or Material Change to Conservation Land Managed by the City or Conveyance of any City Park Land.
Ordinance 2024-14 Supermajority Conservation Lands.pdf
Business Impact Estimate - 2024-14 - Supermajority Conservation Lands.pdf

REGULAR AGENDA

500. Intent to Award RFP 07-24-01 BI: Lift Station 7W Replacement Construction Contracts
RFP 07-24-01 BI Lift Station 7W Replacement v1 opt.pdf
Copy of RFP 07-24-01 BI LS 7W Evalution Team Results.pdf
LS7W Comments.pdf
RFP 07-24-01 BI LS 7W Mid South.pdf
RFP 07-24-01 BI LS 7W Prime Construction Group, Inc. - Proposal.pdf
RFP 07-24-01 BI LS 7W SanPik.pdf
LS 7W Replacement Const Services 9.11.2024.pdf

501. Budget Amendment - Designation of Funds for Sewer Infrastructure
Resolution_2024-24_Mid-Year_Budget_Amendment.pdf
Attachment 1 Budget Amendment 2024-24.pdf
Example of Allocation of General Gov Services.pdf

502. Discuss and consider approving the proposed City Manager Employment Agreement with Kevin A. Sweet
Sweet Kevin_City Manager Contract Final 9.23.24.pdf

503. Matters Related to City Board and Committees

504. New Business

REPORTS

600. Interim City Manager Phil Hursh
601. City Attorney Anthony A. Garganese
602. City Clerk Christian Gowan
603. Seat Three Commissioner Ted Johnson
604. Seat Four Commissioner Cade Resnick
605. Seat Five Commissioner Rob Elliott
606. Mayor Kevin McCann
607. Seat One Commissioner/Deputy Mayor Matt Benton
608. Seat Two Commissioner Victoria Bruce

PUBLIC INPUT

Anyone who wishes to speak during Public Input on any Agenda Item or subject matter will need to fill out a "Public Input" form. Individuals will limit their comments to three (3) minutes, and representatives of groups or homeowners' associations shall limit their comments to five (5) minutes, unless otherwise determined by the City Commission.

ADJOURNMENT

PUBLIC NOTICE

This is a Public Meeting, and the public is invited to attend and this Agenda is subject to change. Please be advised that one (1) or more Members of any of the City's Advisory Boards and Committees may be in attendance at this Meeting, and may participate in discussions.

Persons with disabilities needing assistance to participate in any of these proceedings should contact the City of Winter Springs at (407) 327-1800 "at least 48 hours prior to meeting, a written request by a physically handicapped person to attend the meeting, directed to the chairperson or director of such board, commission, agency, or authority" - per Section 286.26 *Florida Statutes*.

"If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based" - per Section 286.0105 Florida Statutes.

AWARDS AND PRESENTATIONS ITEM 100

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Gee Creek Update Presentation

SUMMARY

Due to ongoing concerns in the low-lying areas of the Gee Creek Basin the City's Engineering Consultant will provide an update to ongoing measures to assist in the occasional flooding experienced by the residents and the ongoing drainage study.

FUNDING SOURCE

RECOMMENDATION

A presentation will be provided by Pegasus Engineering on the Gee Creek Basin

INFORMATIONAL AGENDA ITEM 200

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Informing the City Commission of the Upcoming Requirement for Appointments to the 2025 Winter Springs Districting Commission

SUMMARY

Pursuant to Section 4.02 of the Charter of the City of Winter Springs, staff will be requesting that the Mayor and Members of the City Commission make appointments to the seven (7) member Districting Commission.

By February 1, 2025, the City Commission must appoint seven (7) city electors determined from the registration of the last election; one (1) to be appointed by each Commissioner from their respective district, and two (2) appointed by the Mayor from the city at-large. Electors chosen shall not be employed by the City in any other capacity.

The Districting Commission shall file their report with the City within one hundred twenty (120) days of appointment to the Districting Commission. This report will contain a recommended plan for adjustment of the Commission district boundaries.

The Districting Commission shall consider the following specific criteria in their recommendations for any district boundary adjustments:

- Each district shall be formed of compact, contiguous territory and its boundary lines shall follow the centerlines of streets insofar as practical or possible, or other boundaries available.
- The districts shall be based upon the principle of equal and affective representation as required by the United States Constitution and as represented in the mathematical preciseness reached in the legislative apportionment of the state.
- The report shall include a map and the description of the districts recommended and shall be drafted as a proposed ordinance. Once filed with the City, the report shall be treated as an ordinance introduced by a commissioner.

The tentative schedule for the Districting process is as follows:

- 09/23/2024 - Informational Item will be placed on the agenda regarding the upcoming Districting Commission

- December 2024 - Appointments will begin for the Districting Commission
- 01/27/2025 - Resolution establishing the Districting Commission and its members
- March - April 2025 - Districting Commission Meeting(s)
- May 27, 2025 - REPORT DEADLINE
- June - July 2025 - Commission 1st and 2nd Reading

FUNDING SOURCE

RECOMMENDATION

Staff requests the City Commission receive and review the information provided in this Agenda Item. The Commission may want to begin consideration of their respective appointments to the Districting Commission.

CONSENT AGENDA ITEM 300

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Intent to Award RFP-07-24-01 BD: Automated Closed Caption System and Authorize Purchase of Enco Closed Captioning Device

SUMMARY

On December 11th, 2023 The City of Winter Springs began including video of City meetings for live streaming and archived viewing purposes. Previously the meetings were available in an audio only format. Since launching video streaming City staff has been evaluating closed captioning options. City staff also requested the City Attorney's office for direction regarding recommended best practices for ADA accessibility/compliance for public meetings. Legal has advised City staff due recently litigated cases involving other public entities and the subsequent settlement agreements as a result of these cases it is advisable to implement closed captioning as soon as feasibly possible.

ITB RFP 07-24-01 BD was prepared to solicit potential vendors for this project. There were a total of 4 proposals submitted. The proposals were scored independently be a review committee of City staff. Enco Systems Inc. scored the highest of all the proposals submitted. For reference copies of the all of the proposal packages submitted and the evaluation results have been attached to this agenda item.

In addition to their proposal Enco also provided the City with a demo unit to test compatibility with existing recording hardware and software being used for public meetings. Staff found the demo unit provided by Enco to be fully compatible with our existing technology.

FUNDING SOURCE

The purchase of a closed captioning device is currently a budgeted expense in the Excellence in Customer Service Initiative Capital Project Fund #305 in the proposed FY 24-25 budget. This purchase is contingent on the final approval and adoption of the FY 24-25 by the City Commission.

RECOMMENDATION

Staff recommends The City Commission approve expenditure of $58,780 to purchase an Enco closed captioning device. Additionally staff recommends authorizing the Interim City Manager and City Attorney prepare and execute any and all documents consistent with this agenda item.

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, Florida 32708

REQUEST FOR PROPOSALS

PROPOSAL : RFP # 07-24-01 BD **DATE: July 19, 2024**

Sealed Proposals for the Automated Closed Captioning System will be received by the City of Winter Springs (CITY) Procurement Department, located at Winter Springs City Hall, 1126 East State Road 434, Winter Springs, Florida 32708, until:

August 23, 2024
2:00 p.m., local time
FOR
Automated Closed Captioning System

Said Proposals shall conform to the minimum requirements outlined in the Request For Proposal. The CITY reserves the right to reject any and all offers and to waive minor informalities.

The City issues this Request for Proposals in order to select a Proposal for further contract negotiation. Selection by the CITY Commission may not result in the formation of a contract.

Submission and Receipt of RFP's:

PROPOSERS shall submit their Proposal response to this RFP by:

> Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of your RFP response to this office by the date and time indicated above.

The ***outside of your package must be clearly labeled with the RFP number, title, opening date and time, and the name and address of the PROPOSER.*** The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY's deadline requirements.

Offers received after August 23, 2024 at 2:00 p.m., will be rejected.

Deadline for questions is **July 31, 2024 1:00pm local time**

Any Addenda will be issued by **2:00pm on August 02, 2024 on the Demand Star platform** if questions are received and require clarification.

If you have any questions regarding this Request for Proposal, please contact Stuart MacLean, Procurement Manager, at (407) 327-7581, or via email at smaclean@winterspringsfl.org

PROPOSAL DOCUMENTS CAN BE DOWNLOADED FREE OF CHARGE FROM:
www.demandstar.com

or

https://www.winterspringsfl.org/rfps

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PART I
SCOPE OF SERVICE/EVALUATION CRITERIA
FOR
RFP # 07-24-01 BD
Automated Closed Captioning System

Background
The City of Winter Springs is located in Seminole County Florida, which is part of the Orlando-Kissimmee-Sanford Metropolitan Area. As of 2021 the City of Winter Springs has a population of 38,317, covering 14.99 square miles.

Scope and Term of Service

The City of Winter Springs is requesting Proposals from qualified audio/visual system companies (PROPOSER or PROPOSERS) for the purposes of providing an Automated Closed Captioning System. The proposed pricing must be inclusive of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed.

The system proposed must be capable of meeting the following requirements:

- Automated closed captioning & transcription of speech to text in a fast and accurate manner
- Capable to support both video and open captioning of live meetings and events
- Easily configurable for differing programs with a built in easy to use scheduler
- Capable of multi-speaker identification to recognize different people speaking
- Low latency speech to text in live, real time environments with speed and accuracy
- Connection to a Granicus encoder with SDI input
- 24 X 7 availability, 365 days per year
- Vendor must provide minimum 2 hours of remote training
- Windows or Linux operating systems which are managed and monitered from a web browser
- AR/VR/XR graphics capabilities
- Compliant with ADA and 21st Century CVAA guidelines

Evaluation Criteria

Proposals will be evaluated by the CITY, and the PROPOSER will be selected based upon, but not limited to, the following criteria:

a. The background, and experience of the PROPOSER in providing high quality, similar equipment, services and support, including a level of experience in working with municipalities
b. Reasonableness/competitiveness of proposed costs and/or benefits to the City of Winter Springs. The CITY is not bound to select the PROPOSER who proposes the lowest cost or most benefits for service. The CITY of Winter Springs reserves the right to negotiate fees and/or benefits with the selected PROPOSER.
c. Determination that the selected PROPOSER has no contractual relationship which would result in a conflict of interest with the CITY.
d. The PROPOSER's ability, capacity, and skill to fully and satisfactorily, provide the equipment and services required in this RFP in a timely and efficient manner.
e. The quality of the PROPOSER's performance in comparable and/or similar projects through solid references.

Proposals will be evaluated by the CITY, and selection will be based on, but not limited to, the following scoring criteria:

Criteria:		Max Points:
	Experience: The Proposer's comprehension of the needs of the CITY as demonstrated by the description of its approach to addressing the requirements defined in this document.	
	Display Demonstration, Video and/or Equipment	20
	Proposers Background/Experience	20
	Experience Total:	**40**
References: Evaluation of the Proposer's work from previous organizations receiving similarequiment and services to those proposed within this RFP. See the Mandatory Proposal Form, Reference Information Form.		
	Reference 1	10
	Reference 2	10
	Reference 3	10
	References Total	**30**
Cost: The cost of the Proposal is important to the CITY, however, based on the evaluation of the other criteria, the CITY will not necessarily select the lowest cost Proposer. **Cost Total**:		**30**
EXTRA BONUS POINTS: Certified Minority Business Enterprise: (3 Extra Bonus Points if Yes) The firm is a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act.		**3**
	Total Possible Points	**103**

Pursuant to Florida Statutes § 287.05701, the CITY shall not request documentation regarding, consider, or give preference based upon, a vendor's social, political, or ideological interests when determining the vendor's qualifications.

Timeline of Events

Release of RFP	**July 19, 2024**
Deadline to receive questions (electronically) - 1:00pm local time	**July 31, 2024**
Addendum Released by 1:00pm local time	**August 02, 2024**
RFP Submittals Due by 2:00 pm local time	**August 23, 2024**
RFP Opening 2:15pm local time- immediately following Proposal registration in City Commission Chamber	**August 23, 2024**
Evaluation Committee Meeting/Selection Meeting: 3:00 pm local time (Tentative)	**September 06, 2024**
Possible Selection Committee Meeting to clarify Proposal(s) or oral presentations	TBD
CITY Commission Approval of Selection and Consideration of Contract	TBD

PART II
INSTRUCTIONS TO PROPOSERS AND GENERAL PROVISIONS
FOR
RFP # 07-24-01 BD
Automated Closed Captioning System

Definitions (as used herein)

a. The term "Request for Proposal" means a solicitation of proposals. The acronym "RFP" means Request for Proposal.

b. The term "Proposal" means the offer of qualitative evaluations by the PROPOSER.

c. The term "professional services" means those services of architects, auditors, dentists, engineers, landscape architects, lawyers, physicians, psychologists, surveyors, and any other professional service as determined by the CITY.

d. The term " PROPOSER " means the person, company, or entity making an offer.

e. The term "Change Order" means a written order signed by the Finance Department or authorized representative directing the PROPOSER to make changes to a contract or purchase order resulting from the RFP.

f. The term "CITY" means the City of Winter Springs, Florida.

g. The term "CITY Commission" means the governing body of the City of Winter Springs. The CITY Commission is the only body that can award Proposals.

h. The term “Evaluation Committee” means a team of CITY staff that will review and rank all Proposals and may provide a recommendation regarding selection of a PROPOSER to the CITY Commission.

Preparation of Request for Proposal

a. PROPOSERS are expected to examine the minimum requirements and all special and general conditions. Omission on the part of the PROPOSER to make the necessary examinations and investigations, or failure to fulfill every detail the requirements of the contract document, will not be accepted as a basis for varying the requirements of the CITY or the compensation to the PROPOSER. Failure to properly and fully complete the Proposal is at the PROPOSER's risk. The PROPOSER shall sign the Request for Proposal and print or type his/her name, address, and telephone number on the face page.

b. The apparent silence of any supplemental minimum requirements as to any details, or the omission from it of a detailed description concerning any point will be regarded as meaning that only the best commercial practices are to prevail. All workmanship is to be first quality. All interpretations of the minimum requirements shall be made upon the basis of this statement.

c. PROPOSERS should submit their response to this RFP by:

Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of PROPOSER’s Proposal to this office by the date and time indicated in Part I Timeline of Events.
The outside of PROPOSER’s package must be clearly labeled with the RFP number, title, opening date and time and the name and address of the PROPOSER. The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY’s deadline requirements.

d. The PROPOSER should retain a copy of all documents for future reference.

e. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. You may use the Sunbiz website screen shot or include a copy of your Corporate Resolution to prove the authority of the corporate signer.

f. Failure to follow the instructions in the Request for Proposal is cause for rejection of your offer.

Submission and Receipt of Proposals

a. Proposals must be received before the specified time as designated in the RFP Timeline of Events. A list of PROPOSERS who submitted Proposals will be furnished, upon request, following opening of the Proposals.

b. Proposals shall be submitted in a sealed envelope. The envelope shall show the opening date and time, the RFP number, and the name and address of the PROPOSER.

c. The City of Winter Springs is not responsible for the U.S. Mail or private couriers, in regard to mail being delivered by the specified time so that a Proposal can be considered.

d. Email and Facsimile (FAX) Proposals will not be considered, however, Proposals may be modified by email and FAX notice, provided such notices are received prior to the hour and date specified.

e. Late Proposals will be rejected.

f. Proposals having any erasures or corrections must be initialed by the offer or in ink. Proposals shall be signed in ink. All amounts shall be typewritten or completed in ink.

g. All Mandatory Proposal Forms must be completed and attached to the Proposal.

h. All costs of Proposal preparation, inspection of the RFP documents, and presentation of the Proposal shall be solely borne by the PROPOSER. The CITY shall not be liable for any cost incurred by the PROPOSER during the preparation and submission of its Proposal in response to this RFP.

Selection of Proposal

SELECTION OF THE PROPOSER AND PROPOSAL DEEMED THE MOST QUALIFIED, MOST ADVANTAGEOUS, AND IN THE BEST INTERESTS OF THE CITY, AS DETERMINED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS'S SOLE AND ABSOLUTE DISCRETION, SHALL NOT RESULT IN THE FORMATION OF A CONTRACT. NO CONTRACT SHALL BE FORMED UNTIL FINAL APPROVAL OF SUCH CONTRACT BY THE CITY COMMISSION AFTER SUCCESSFUL NEGOTIATION OF SPECIFIC CONTRACT TERMS DETERMINED TO BE IN THE BEST INTERESTS OF THE CITY BY THE CITY COMMISSION. Negotiations may be terminated at any time by the CITY Manager or CITY Commission if, in his/her/its sole discretion, the CITY Manager OR CITY Commission determines that the negotiation of terms acceptable to the CITY will not be successful.

Only the CITY Commission can select Proposals, authorize the CITY Manager to engage in negotiations, and ultimately enter into a contract.
The RFP Evaluation Committee scores Proposals and provides a recommendation to the CITY Commission for selection. The recommendation may or may not be adopted by the CITY Commission.

After the initial Evaluation Committee meeting, the Evaluation Committee may require one or more of the top-ranking PROPOSERS to attend a meeting to make an oral presentation, answer questions. This meeting will be exempt from the requirements of the Sunshine Law in accordance with section 286.0113, Florida Statutes. PROPOSER(s) will be notified of any further meeting requirements.

Acceptance of Offer

The signed Proposal shall be considered an offer on the part of the PROPOSER; however, such offer shall be deemed accepted only upon issuance by the CITY of a Purchase Order, Blanket Purchase Order, or execution of another contractual document deemed acceptable to the CITY.
The contract will be awarded to the most responsible and responsive, qualified PROPOSER(s) whose Proposal is deemed the most advantageous and in the best interests of the CITY in accordance with the criteria set forth in this RFP.

The CITY reserves the right to accept or reject any and all Proposals or parts of Proposals, waive minor informalities, and to request clarification of information from any PROPOSER.

Notice of Award

Within ten (10) calendar days from the date stipulated in the Notice of Award notifying PROPOSER that its Proposal has been accepted, the successful PROPOSER shall execute the Agreement. Failure to execute the Agreement within ten (10) calendar days from the date of the Notice of Award entitles the CITY to consider all rights arising out of the CITY's acceptance of the Proposal as abandoned and the CITY will enter into negotiations with other Proposer(s). The CITY shall be entitled to such other rights as may be granted by law.

Discrepancies, Errors, and Omissions

Any discrepancies, errors, or ambiguities in the Request for Proposals or addenda (if any) should be reported in writing to the CITY's Procurement Manager. Should it be found necessary, a written Addenda will be incorporated in the Request for Proposals and will become part of the Service Agreement (contract documents). The CITY will not be responsible for any oral instructions, clarifications, or other communications.

Right to Reject Proposals

The CITY reserves the right to reject any or all Proposals, and to disregard typographical, mathematical, or obvious errors. The CITY will not pay costs incurred by any PROPOSER in the preparation of Proposals.

Compensation

Compensation, which is determined to be fair, competitive, and reasonable, will be considered during the negotiations of a final contract with the selected PROPOSER.

Fiscal Non-Funding Clause

In the event sufficient budgeted funds are not available for a new fiscal period, the CITY shall notify the PROPOSER of such occurrence and any contracts entered into between the CITY and PROPOSER shall terminate on the last day of the current fiscal period without penalty or expense to the CITY.

Rights of the CITY

This RFP constitutes an invitation for submission of Proposals to the CITY. This RFP does not obligate the CITY to procure or contract for any of the scopes of services set forth in this RFP. The CITY reserves and holds at its sole discretion, various rights and options under Florida law, including without limitation, the following:

- To prepare and issue Addendums to the RFP that may expand, restrict, or cancel any portion or all work described in the RFP without obligation to commence a new procurement process or issue a modified or amended RFP.
- To receive questions from potential PROPOSERS and to provide such answers in writing as it deems appropriate.
- To waive any informalities, technicalities or irregularities in the PROPOSALS submitted.

- To reject any and all PROPOSAL submissions.
- To change the date for receipt of PROPOSAL or any deadlines and dates specified in the RFP.
- To change the procurement and/or selection process prior to receipt of Proposals.
- To conduct investigations with respect to the information provided by each PROPOSER and to request additional information (either in writing or in presentations and interviews) to support such PROPOSER's responses and submittals.
- To visit facilities referenced in the PROPOSER's submittal at any time or times during the procurement process.
- To seek clarification of Proposals from the PROPOSER either in writing or in presentations and interviews
- To cancel the RFP: with or without the substitution of another RFP.

Conflict of Interest

PROPOSER acknowledges and certifies that this Agreement does not violate any ethics provision found in Chapter 112, Florida Statutes, or Chapter 2 of the Code of Ordinances of the City of Winter Springs.

The PROPOSER certifies that, to the best of their knowledge or belief, no elected/appointed official or employee of the City of Winter Springs, a spouse thereof or other person residing in the same household, is financially interested, directly or indirectly, in providing the goods or services specified in this Proposal. Financial interest includes ownership of more than five percent (5%) of the total assets or capital stock or being an officer, director, manager, partner, proprietor, or agent of the business submitting the Proposal or of any subcontractor or supplier thereof providing goods or services in excess of ten percent (10%) of the total Proposal amount.

Additionally, the PROPOSER, on company letterhead, must divulge at the time of Proposal submittal, any relative, other than those already specified, of an elected /appointed official or employee of the City of Winter Springs who has a financial interest, as defined herein, in providing the goods or services specified in the Proposal. The CITY, at its sole discretion, will determine whether a conflict exists and whether to accept or reject the Proposal.

Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity, may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit Proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

Options

When the CITY requests Proposals with options regarding the extent of services to be provided, the CITY requests all PROPOSERS to provide a cost breakdown for each option proposed. Although all options may be purchased, some options may not ultimately be purchased. The CITY reserves the right to decide, at its discretion, which options shall be purchased. The CITY reserves the right to engage more than one (1) PROPOSER if it is believed that different PROPOSERS might best serve the CITY's interests in performing different segments of the work (e.g., one PROPOSER to provide building estimates, and another to provide infrastructure estimates).

Subcontracting

Where PROPOSERS do not have the "in-house" capability to perform work desired in the Request for Proposal, subcontracting may be permitted only with prior knowledge and approval of the CITY. The CITY must be assured of and agree that any proposed subcontractor(s) can perform work of the desired quality and in a timely manner. The name(s) of any intended subcontractor(s) should be given in the Proposal.

Failure to Submit Proposal

If PROPOSER does not wish to submit a Proposal, return the RFP and state the reason therefor; otherwise, PROPOSER's name may be removed from CITY's mailing list.

Default of Contract

In case of default by the PROPOSER, the CITY may procure the requested services from other sources and hold the PROPOSER responsible for any excess costs occasioned or incurred thereby.

Modification for Changes

No agreement or understanding to modify this RFP and resultant purchase order or contract shall be binding upon the CITY unless made in writing by the City of Winter Springs.

Order of Precedence

In the event of an inconsistency between provisions of the RFP, the inconsistency shall be resolved by giving precedence in the following order: (a) Instructions to PROPOSERS and General Provisions; and (b) the minimum requirements.

Examination of Records

The PROPOSER shall keep adequate records and supporting documentation applicable to the subject matter of this RFP to include, but not be limited to: records of costs, time worked, working paper and/or accumulations of data, and criteria or standards by which findings or data are measured. Said records and documentation shall be retained by the PROPOSER for a minimum of one (1) year from the date the contract is completed and accepted by the CITY. If any litigation is initiated before the expiration of the one-year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved, unless otherwise instructed by the CITY. Should any questions arise concerning this contract, the CITY and its authorized agents shall have the right to review, inspect, and copy all such records and documentation during the record retention period stated above; provided, however, such activity shall be conducted only during normal business hours and shall be at CITY expense. PROPOSERS shall be authorized to retain microfilm copies in lieu of original records if they so desire.
Any subcontractor(s) employed by a PROPOSER who is subject to these requirements and the PROPOSER itself are required to so notify any such subcontractor(s).

Proposals Received

All Proposals received in response to this RFP become the property of the CITY.

Lobbying/Cone of Silence

Lobbying is defined as any action taken by an individual, firm, association, joint venture, partnership, syndicate, corporation, and/or all other groups who seek to influence the governmental decision of a CITY Commission Member, the CITY Manager, any requesting or evaluating Department/Division/Office personnel and/or any member of the Evaluation Committee concerning an active solicitation during the black-out period. A lobbying black-out period commences upon the issuance of this solicitation document.

If an award item is presented to CITY Commission for approval or for a request to provide authorization to negotiate a Contract(s) and the CITY Commission refers the item back to the CITY Manager, Procurement Division and/or requesting Department/Division/Office for further review or otherwise does not act on the item, the Cone of Silence/Lobbying Black-out Period will be reinstated until such time as the CITY Commission meets to consider the item for action.
Bidders, PROPOSERS, Respondents, potential vendors, service providers, lobbyists, consultants, or vendor representatives

shall not contact any CITY Commission member, the CITY Manager, any requesting or evaluating Division, Department, Office personnel, and/or any member of the Evaluation Committee concerning an active Request For Proposal during the Lobbying/Cone of Silence Black-out Period.

Insurance And Hold Harmless Indemnification

To the fullest extent permitted by laws and regulations, Bidder shall indemnify and hold harmless CITY and its consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expenses (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of Bidder, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

In any and all claims against CITY or any of their consultants, agents or employees by any employee of PROPOSER, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under the previous paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Bidder or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

Bidder's Liability Insurance - The Bidder shall not commence any work under this Contract until he has obtained all insurance required under the Agreement. Bidder shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth which may arise out of or result from Bidder's performance and furnishing of the Work and Bidder's other obligations under the Contract Documents, whether it is to be performed or furnished by Bidder, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable. The insurance required shall include the specific coverage's and be written for not less than the limits of liability and coverage's provided or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. The comprehensive general liability insurance shall also include Contractual Liability Insurance applicable to Bidder's obligations under the Hold Harmless Indemnification. All of the policies of insurance so required to be purchased and maintained (or the certificates or their evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days' prior written notice has been given to CITY by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when Bidder may be correcting, removing or replacing defective work in accordance with the Contract Documents. Bidder's General Liability Insurance shall include the CITY, and CITY's consultants as insured or additional insured which may be accomplished by either an endorsement of Bidder's Comprehensive General Liability policy or by Bidder 's carrier issuing a separate protection liability policy.

Qualifications of PROPOSER

A PROPOSER may be required, before the award of any contract, to show to the complete satisfaction of the CITY that they have the necessary facilities, equipment, ability and financial resources to perform the work in a satisfactory manner within the time specified.

Disqualification of PROPOSER

Any or all Proposals will be rejected if there is any reason for believing that collusion exists among the PROPOSERS, and participants in such collusion will not be considered in future Proposals for the same work.

Licenses and Permits

The PROPOSER shall secure all licenses and permits and shall comply with all applicable laws, regulations and codes as required by the United States, the State of Florida, or by the City of Winter Springs. The PROPOSER must fully comply with all Federal and State Laws and County and Municipal Ordinances and Regulations in any manner affecting the performance of the work.

Provisions for Other Agencies

Unless otherwise stipulated by the PROPOSER, the PROPOSER agrees to make available to the Government agencies, departments, and municipalities the prices submitted in accordance with said terms and conditions therein, should any said governmental entity desire to buy under the Proposal.

Applicable Law and Venue

This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State of Florida without regard to the conflicts or choice of law principals thereof. Each of the parties hereto: (a) irrevocably submits itself to the exclusive jurisdiction of the State of Florida, and agree that venue shall lie exclusively in the Eighteenth Judicial Circuit Court in and for Seminole County, Florida for any state court action arising out of this Agreement, and exclusively in the United States District Court for the Middle District of Florida, Orlando Division, for any federal court action arising out of this Agreement; (b) waives and agrees not to assert against any party hereto, by way of motion, as a defense or otherwise, in any suit, action or other proceeding, (i) any claim that it is not personally subject to the jurisdiction of the above-named courts for any reason whatsoever, and (ii) any claim that such suit, action, or proceeding by any party hereto is brought in an inconvenient form or that venue of such suit, action, or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such courts.

Proposal Disclosure; Public Records Responsibilities

Florida law provides that municipal records shall, at all times, be open for personal inspection by any person. Section 119.01, Florida Statutes et. seq. (the Public Records Law). Unless otherwise provided by the Public Records Law, information and materials received by the CITY in connection with an RFP response and under any awarded contract shall be deemed to be public records subject to public inspection and/or copying at the end of the statutory exemption time period pursuant to Section 119.071, Florida Statutes. However, certain exemptions to the Public Records Law are statutorily provided for under sections 119.07 and 119.071, Florida Statutes, and other applicable laws. If the PROPOSER believes any of the information contained in its response is exempt from the Public Records Law, including trade secrets as defined by Florida law, the PROPOSER must, in its response, specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption; otherwise, the CITY will treat all materials received as public records.
Pursuant to section 119.0701, Florida Statutes, for any tasks performed by PROPOSER on behalf of the CITY, PROPOSER shall: (a) keep and maintain all public records, as that term is defined in chapter 119, Florida Statutes ("Public Records"), required by the CITY to perform the work contemplated by this Agreement; (b) upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested Public Records or allow the Public Records to be inspected or copied within a reasonable time at a cost that does not exceed the costs provided in chapter 119, Florida Statutes, or as otherwise provided by law; (c) ensure that Public Records that are exempt or confidential and exempt from Public Records disclosure requirements are not disclosed except as authorized by law for the duration of the term of this Agreement and following completion or termination of this Agreement, if PROPOSER does not transfer the records to the CITY in accordance with (d) below; and (d) upon completion or termination of this Agreement, (i) if the CITY, in its sole and absolute discretion, requests that all Public Records in possession of PROPOSER be transferred to the CITY, PROPOSER shall transfer, at no cost, to the CITY, all Public Records in possession of PROPOSER within thirty (30) days of such request or (ii) if no such request is made by the CITY, PROPOSER shall keep and maintain the Public Records required by the CITY to perform the work contemplated by this Agreement. If PROPOSER transfers all Public Records to the CITY pursuant to (d)(i) above, PROPOSER shall destroy any duplicate Public Records that are exempt or confidential and exempt from Public Records disclosure requirements within thirty (30) days of transferring the Public Records to the CITY and provide the CITY with written confirmation that such records have been destroyed within thirty (30) days of transferring the Public Records. If

PROPOSER keeps and maintains Public Records pursuant to (d)(ii) above, PROPOSER shall meet all applicable requirements for retaining Public Records. All Public Records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology of the CITY. If PROPOSER does not comply with a Public Records request, or does not comply with a Public Records request within a reasonable amount of time, the CITY may pursue any and all remedies available in law or equity including, but not limited to, specific performance. The provisions of this section only apply to those tasks in which PROPOSER is acting on behalf of the CITY.

IF THE PROPOSER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE PROPOSER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone number: (407) 327-6560 ext. 7003 E-mail address: cityclerkdepartment@winterspringsfl.org

E-Verify

Pursuant to section 448.095, Florida Statutes, beginning January 1, 2021, any CITY contractors shall register with and use the U.S. Department of Homeland Security's E-Verify system, https://e-verify.uscis.gov/emp, to verify the work authorization status of all employees hired on and after January 1, 2021. CITY contractors must provide evidence of compliance with section 448.095, Florida Statutes. Evidence shall consist of an affidavit from the PROPOSER stating all employees hired on and after January 1, 2021 have had their work authorization status verified through the E-Verify system and a copy of their proof of registration in the E-Verify system. Failure to comply with this provision will be a material breach of the contract, and shall result in the immediate termination of a contract without penalty to the CITY. PROPOSER shall be liable for all costs incurred by the CITY securing a replacement contract, including but not limited to, any increased costs for the same services, any costs due to delay, and rebidding costs, if applicable. If the PROPOSER utilizes subcontractors the following shall apply:

PROPOSER shall also require all subcontractors performing work under the Agreement to use the E-Verify system for any employees they may hire during the term of the Agreement.

PROPOSER shall obtain from all such subcontractors an affidavit stating the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, as defined in section 448.095, Florida Statutes. PROPOSER shall provide a copy of all subcontractor affidavits to the CITY upon request and shall maintain a copy for the duration of the Agreement.

Additional Information

Additional information may be obtained from the Procurement Manager, (407) 327-7581, or from any other individual listed on the RFP cover letter.

Modification and Withdraw

Proposals may not be modified after submittal.

Proposals may be withdrawn at any time prior to the deadline. Withdrawal requests shall be made in writing and must be received by the CITY's Procurement Manager before the time and date stated or as amended for the Proposal Opening. Properly withdrawn Proposals will be returned unopened to the PROPOSER submitting the Proposal.

A PROPOSER who timely withdraws its Proposal may submit a new Proposal in the same manner as specified herein under "Submission of Proposal." A Proposal submitted in place of a withdrawn Proposal shall be clearly marked as such on the outside of the envelope and on the Bid Form.

If a Contract is not awarded within 90 calendar days after opening of Proposals, a PROPOSER may file a written request with the CITY's Procurement Manager for the withdrawal of its Proposal.

Prohibition on Gifts to City Employees and Officials

No organization or individual shall offer or give, either directly or indirectly, any favor, gift, loan, fee, service or other item of value to any CITY employee, as set forth in Chapter 112, Part III, Florida Statutes, the current CITY Ethics Ordinance, and CITY Administrative Policy.

Violation of this provision may result in one or more of the following consequences:

a. Prohibition by the individual, firm, and/or any employee of the firm from contact with CITY staff for a specified period of time;
b. Prohibition by the individual and/or firm from doing business with the CITY for a specified period of time, including but not limited to: submitting bid/Proposals, RFP, and/or quotes; and,
c. Immediate termination of any contract held by the individual and/or firm for cause.

Discrimination

An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, Proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, Proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, Proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

Federal Requirements

This contract may be funded in whole or in part with federal funding. As such, federal laws, regulations, policies and related administrative practices shall apply to any contract negotiated with a selected firm as required by federal law. The most recent of such requires, including any amendments made such the submission of the Proposal, shall apply, unless federal government determines otherwise.

The federal government requirements contained in the most recent version of the Uniform Administrative Requirements for federal awards (Uniform Rules) codified at 2.C.F.R, Part 200, including any certifications and contractual provisions required by any federal statutes or regulations referenced therein to be included in this contract are deemed incorporated herein by reference and shall be incorporated into any sub-agreement or subcontract executed by the Proposer pursuant to its obligations under federal law.

PART III
SPECIFIC PROPOSAL REQUIREMENTS

For
RFP # 07-24-01 BD
Automated Closed Captioning System

Format

To assure consistency, Proposals must conform to the following format:

A. PROPOSER Information and Acknowledgement Form
B. Table of Contents
C. Introduction Letter
D. Qualifications
E. Other Information
F. Cost & Time (Appendix A)
G. Mandatory Proposal Forms
H. Florida State Corporate Filing

Section A – PROPOSER Information and Acknowledgement Form

1. Use the form provided in the Mandatory Proposal Forms titled "PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM." (See Proposal Form 1)

Section B – Table of Contents

1. Identify Proposal material by section and page number.

Section C – Introduction Letter

1. Summarize the key points of the Proposal including an understanding of the scope of work. Must be signed by an authorized official of the PROPOSER.

Section D – Qualifications

1. General – Provide general information about the PROPOSER, including size, office location(s), and structure of PROPOSER. Identify and explain any significant changes in organizational structure, ownership, or management both firm-wide and within Fixed Income/ Public Finance during the past five (5) years.

2. PROPOSER Experience – Describe the PROPOSER's experience with providing Fireworks services, focus on the PROPOSER's experience with Fireworks shows for municipalities

3. Team Experience – Identify key members of PROPOSER's team that will service the CITY. Identify the proposed project manager. Provide brief resumes for key team members that will service the CITY as an Appendix.

4. References – Use the form provided in the Mandatory Proposal Forms titled "REFERENCE INFORMATION FORM"

5. Conclusion – Briefly summarize why PROPOSER should be selected, including why PROPOSER is pursuing the City of Winter Springs' business. In short, summarize what makes PROPOSER different and why the CITY should select PROPOSER above all others.

Section E - Other Information

This section should address any other information necessary for a full understanding of PROPOSER's services. Please provide relevant information on any additional services offered by PROPOSER.

Section F – Cost and Time

This section must clearly state the cost and estimated completion time, if applicable, associated with the project. Use Appendix A: Cost Proposal Worksheet.

Section G – Mandatory Proposal Forms

1. Fill out and return the forms provided; PROPOSER Information and Acknowledgement Form, References Information Form, Scrutinized Company Certification, Non-Collusion Affidavit of Prime Respondent, Drug Free Workplace Form, Public Entity Crimes Statement, E-Verify Statement, Conflict of Interest Statement and Appendix A Cost Proposal Worksheet.

Section H – Florida State Corporate Filing

1. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. Use Sunbiz website screen shot or include a copy of Corporate Resolution or a Power of Attorney.

MANDATORY PROPOSAL FORMS

Proposal Form 1	-	PROPOSER Information and Acknowledgement Form
Proposal Form 2	-	References Information Form
Proposal Form 3	-	Scrutinized Company Certification
Proposal Form 4	-	Non-Collusion Affidavit
Proposal Form 5	-	Drug Free Workplace Form
Proposal Form 6	-	Public Entity Crimes Statement
Proposal Form 7	-	E-Verify Statement
Proposal Form 8	-	Conflict of Interest Statement
Appendix A	-	Cost Proposal Worksheet

Mandatory forms must be submitted with the Proposal.

Failure to submit forms may disqualify the PROPOSER from the RFP

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For
RFP # 07-24-01 BD
Automated Closed Captioning System

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com
FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: _____

TAX ID# SNN or EIN: _____

PROPOSER ADDRESS: _____

PURCHASE ORDER ADDRESS: _____

PHONE NUMBER: _____

COMPANY WEBSITE: _____

COMPANY CONTACT (REP): _____

CONTACT EMAIL ADDRESS: _____

SIGNATURE: _____

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BD Pertaining To: Automated Closed Captioning System
   2. Addenda:
      Number: _____, Dated _____.
      Number: _____, Dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

PROPOSER Representative Typed Name/Title: _____

PROPOSER Representative Signature: _____

PROPOSER: _____

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (_____) physical presence or (_____) online notarization,

this _____ day of _____, 2024 by _____ the _____ of

_____, a _____ (____) who is personally known to me or (_____) who

produced _____ as identification.

Notary Public: _____

Print Name: _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF _____

COUNTY OF _____

_____, being duly sworn, deposes and says that:

(1) He/she is _____ of _____
Title PROPOSER

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

_____ _____
(Signed) (Title)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____by
_____,

who is (___) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

_____ (Signature of Notary Public)

_____ (Name of Notary Typed, Printed or Stamped) Notary Public

_____ (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

_____ does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

_____ _____
(Authorized Signature) (Date)

_____
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BD Automated Closed Captioning System.

2. This sworn statement is submitted by (PROPOSER) _____ whose business address is

   _____ and (if applicable) Federal Employer Identification Number (FEIN)

   is _____ (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your

   Social Security Number: _____.

3. My name is _____ and my relationship to the PROPOSER named above is _____.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

____Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

_____

Signature Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this _____ day of _____, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: _____
Notary Public

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BD

Project Description: Automated Closed Captioning System

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: _____

Authorized Signature: _____

Title: _____

Date: _____

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BD Automated Closed Captioning System***

This sworn statement is submitted by (PROPOSER) _____ whose business address is

_____ and (if applicable) Federal Employer Identification Number (FEIN) is

_____(If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social

Security Number: _____.)

My name is _____ and my relationship to the PROPOSER named above is_____.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____

Signature Date:

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her

signature at the space provided above on this _____ day of _____, 2024 and is personally known to me, or

has provided _____ as identification.

_____ My Commission expires: _____

Notary Signature

Appendix A
COST PROPOSAL WORKSHEET

Part 1: The cost of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed. $_____

Re-state figure in words _____

Part 2: Estimated time from receipt of purchase order to operational system _____ weeks

Part 3: Individual cost details of additional options, accessories and/or post warranty support services :
Add additional rows if required

Description	Qty.	Unit Cost
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$

RFP No: 07-24-01 BD	QUESTIONS & RESPONSES	
#	QUESTION	RESPONSE
1	What is the length of the proposed contract?	The initial contract period is for the provision, installation and commissioning of the system and 1 year of warranty support. Repondents are encouraged to provide cost info for post warranty support and recurring charges which could result in a longer (3-5 years) contract term.
2	Can you provide the historical volume of services from 2023 (number of hours in 2023)?	In 2023 an estimated 156 hours
3	Can you provide an estimated annual volume for this contract (number of hours per year)?	It fluctuates as we never know exactly how long a meeting will go. We would estimate ~ 250 hours a year. If the volume affects your pricing, please provide price ranges
4	Does the City have a current provider for the requested services?	This is a new service we are implementing, there is no current vendor
5	The RFP references connection to a Granicus encoder, is this a streaming encoder or a closed caption encoder?	Streaming video encoder
6	Regarding Windows or Linux operating systems which are managed and monitored from a web browser, do you want to be able to access your OS through a web browser? Any access remotely would have to be through an application.	Remote access to the device is not required but an attractive feature
7	Can you please provide more details on the AR/VR/XR graphics capabilities?	XR is a combination or AR (Augmented Reality), VR (Virtual Reality) and MR (Mixed Reality) graphics and are integral to AI going forward
8	Would the Lumux system be Ubuntu?	The Linux or Windows version is for the bidder to decide
9	Are AR/VR/XR graphics capabilities required?	The bidder can decide based on their specific system capabilities, these technologies are the future direction
10	Would these be live events that would require closed captioning or would they be prerecorded videos?	Live events but prerecorded capabilities are a preferable feature
11	Is certification of compliance with ADA & 21st Century CVAA guidelines required? Would WCAG 2.2 standard for compliance on accessibility be considered equivalent?	CVAA would not necessarily apply as we are only streaming online and not broadcasting to TV. WCAG 2.0 AA at minimum is required.
12	Regarding the connection to Granicus encoder with SDI input, do you have specifications on how the AV would be inputted for generating the captions?	SDI in to the closed captioning appliance. Then SDI out to the Granicus video encoder.
13	For the multi-speaker identification to recognize different people speaking, it would require that people not speak over each other, will this be a conflict with the videos? Will there be loud background noises in the videos?	We understand circumstances may arise where it cannot clearly indicate multiple speakers at times.
14	Is there a requirement for the Awarded Contractor to provide Fireworks services as stated under Part III, Section D-Qualifications, 2. PROPOSER Experience? It was not listed in Part I under the Scope and Term of Service.	My apologies as that is one of the dangers of "cut & paste" editing. It should have read experience in providing automated closed caption services and that has been corrected in Addendum 1
15	Is the City interested in a full time service or one time system purchase?	Per the Question 1 response, we are interested in the initial implementation cost and annual support/licensing cost
16	Does the City currently have a Granicus encoder that enables closed captioning?	Yes
17	If the City currently has an encoder that enables closed captioning, please provide identifying information, ie brand, model, year, etc.	Supermicro Superserver X14
18	If the City does not have an encoder, does the City require an encoder purchase with this solicitation?	No
19	If the City does not have an encoder, how has the City broadcast meetings until now (online, Zoom, Webex, Teams, etc)?	We have a Granicus Encoder

PART III
SPECIFIC PROPOSAL REQUIREMENTS

For
RFP # 07-24-01 BD
Automated Closed Captioning System

Format

To assure consistency, Proposals must conform to the following format:

A. PROPOSER Information and Acknowledgement Form
B. Table of Contents
C. Introduction Letter
D. Qualifications
E. Other Information
F. Cost & Time (Appendix A)
G. Mandatory Proposal Forms
H. Florida State Corporate Filing

Section A – PROPOSER Information and Acknowledgement Form

1. Use the form provided in the Mandatory Proposal Forms titled "PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM." (See Proposal Form 1)

Section B – Table of Contents

1. Identify Proposal material by section and page number.

Section C – Introduction Letter

1. Summarize the key points of the Proposal including an understanding of the scope of work. Must be signed by an authorized official of the PROPOSER.

Section D – Qualifications

1. General – Provide general information about the PROPOSER, including size, office location(s), and structure of PROPOSER. Identify and explain any significant changes in organizational structure, ownership, or management both firm-wide and within Fixed Income/ Public Finance during the past five (5) years.

2. PROPOSER Experience – Describe the PROPOSER's experience with providing Automated Closed Captioning services, focus on the PROPOSER's experience with installations and commissioning for municipalities

3. Team Experience – Identify key members of PROPOSER's team that will service the CITY. Identify the proposed project manager. Provide brief resumes for key team members that will service the CITY as an Appendix.

4. References – Use the form provided in the Mandatory Proposal Forms titled "REFERENCE INFORMATION FORM"

5. Conclusion – Briefly summarize why PROPOSER should be selected, including why PROPOSER is pursuing the City of Winter Springs' business. In short, summarize what makes PROPOSER different and why the CITY should select PROPOSER above all others.

Section E - Other Information

This section should address any other information necessary for a full understanding of PROPOSER's services. Please provide relevant information on any additional services offered by PROPOSER.

41551 W 11 Mile Road
Novi, MI 48375-1803

QUOTE

Number Q3848
Date Sep 4, 2024

Sold To:	Ship To:	Your Salesperson:
Winter Springs, Florida Jonathan Duryea 1126 East State Road 434 Winter Springs, Florida, FL 32708 USA Phone (407) 327-7571 Email jduryea@winterspringsfl.org	**Winter Springs, Florida** Jonathan Duryea 1126 East State Road 434 Winter Springs, Florida, FL 32708 USA Phone (407) 327-7571 Email jduryea@winterspringsfl.org	**Bill Bennett** 248-827-4440 ext 205 bill@enco.com Expiration: 10/4/2024

#	Part	Description	List Price	Ext. Price
ENCAPTION 5 - ON-PREM AUTOMATED CLOSED CAPTIONING				
1	enCaption 5 UpFront	One-time Initial setup and configuration for all enCaption builds and usage amounts, includes up to 2 hours of remote training.	$1,795.00	$1,795.00
1	enCaption 5 BO LIVE	Price is for enCaption4 BUY OUT - LIVE VERSION. Hardware and Software; On-Prem (no Internet needed); Windows 10 Appliance; Can control an external customer-provided CEA 608/708 SDI Closed Caption embedder or optional internal CC DoCap embedder. Unlimited 24/7 usage (no overage fees); License good for 10 years; 5 year warranty on the hardware; after first year software upgrades require a paid support contract.	$45,995.00	$45,995.00
OPTIONAL: INTERNAL SDI CEA-607/708 EMBEDDER MODULE				
1	LRBox-CCIns	CEA-608/708 Closed Captions embedder ("DoCaption"). 3G/HD/SD-SDI Closed Caption Embedder card installed inside enCaption chassis. Inserts CEA-608/708 CC data into SDI VANC field, while passing-through audio + video signal fed into it; 1 year warranty on the hardware	$4,995.00	$4,995.00
ANNUAL SUPPORT CONTRACT				
1	enCaption 5 Support	Per Year / Annual Support for EnCaption 5: ENCO Support is required for the first year. Support includes 24/7 telephone and email support from US-based Support engineers. After 1st year, Support is recommended. Support includes any software upgrades at no cost as long as Customer is covered under the annual Support contract (typically 3 - 4 updates per year).	$5,995.00	$5,995.00

ORDER SUMMARY

Terms and Conditions: Hardware carries a one-year warranty unless specified otherwise. Purchase price includes technical support as noted; if parent system is not under support, new products are not under support. Technical support does not cover installation or configuration of covered items on non-ENCO provided and/or out of warranty hardware; this support will be subject to hourly billing. Shipment is FOB Novi MI and not included in totals. Applicable tax will be added to final invoice amount. Hardware installation, facility wiring, etc. is expected to be completed in advance of onsite training. Software is non-refundable. Hardware is refundable only for the first thirty days if accompanied by an RMA number and subject to a 20% restocking charge. Onsite travel related expenses may be billed separately. All non-check/cash payments are subject to a 3% convenience and processing fee. Quote is valid for thirty (30) days from date of issue unless specified otherwise.

List Price:	$58,780.00
Purchase Price:	$58,780.00
Downpayment:	$58,780.00
Terms:	100% DUE ON ORDER

I, the undersigned, have read, understand, and accept the terms and conditions contained in this agreement and hereby authorize purchase of the items listed in this quote and represent that I am authorized to bind the organization into this agreement.

Signature _____ Date _____

RFP 07-24-01 BD Closed Caption System - Proposal Evaluation		EvaluatorTeam Results	Date: September 03, 2024				
Criteria	**Max. Points - 3 Evaluations**	**Infinity AV & Security**	**VZP Digital Inc**	**Enco Systems Inc**	**Verbit Inc**		
Experience: *The Proposer's comprehension of the needs of the CITY as demonstrated by the description of its approach to addressing the requirements defined in this document .*							
Display Demonstration, Video and/or Equipment	20 X3	15	22	60	25		
Proposer's Background/Experience	20 X3	30	37	58	32		
Experience Total	**40 X 3**	**45**	**59**	**118**	**59**		
References: *Evaluation of the Proposer's work from previous organizations receiving similarequiment and services to those proposed within this RFP. See the Mandatory Proposal Form, Reference Information Form.*							
Reference 1	10 X 3	14	12	19	16		
Reference 2	10 X 3	14	15	23	16		
Reference 3	10 X 3	14	15	21	16		
References Total	**30 X 3**	**42**	**42**	**63**	**48**		
Cost: *The cost of the Proposal is important to the CITY, however, based on the evaluation of the other criteria, the CITY will not necessarily select the lowest cost Proposer.*	**30 X 3**	**62**	**50**	**81**	**52**		
EXTRA BONUS POINTS: Certified Minority Business Enterprise: (3 Extra Bonus Points if Yes) *The firm is a certified minority business enterprise as defined by the Florida Small and Minority Business assistance act*	**3 X 3**	**0**	**9**	**0**	**0**		
Total Possible Points	**103 X 3**	**149**	**160**	**262**	**159**	0	0

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For
RFP # 07-24-01 BD
Automated Closed Captioning System

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: INFINITY AV AND SECURITY

TAX ID# SNN or EIN: 27-117-8370

PROPOSER ADDRESS: 2890 W. AIRPORT BLVD. SANFORD FL 32771

PURCHASE ORDER ADDRESS: SAME AS ABOVE

PHONE NUMBER: 407-878-4283

COMPANY WEBSITE: WWW.INFINITYAVANDSECURITY.COM

COMPANY CONTACT (REP): JAMES CARL

CONTACT EMAIL ADDRESS: JCARL@INFINITYAVANDSECURITY.COM

SIGNATURE: [signature]

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BD Pertaining To: Automated Closed Captioning System
   2. Addenda:
      Number: 1, Dated NOT DATED
      Number: _____, Dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

RFP # 07-24-01 BD

Automated Closed Captioning System

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August 23, 2024

Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV & Security is pleased to provide you with this proposal to furnish and install the automated closed captioning (henceforth referred to as CC) system as requested per RFP # 07-24-01 BD, and acknowledges addendum # 1.

Scope of Work

Infinity AV and Security will provide & install a new, automatic, on-premise, CC system to your existing broadcast system. An on-premise solution means that cloud services, subscriptions, licensing, or other recurring requirements are NOT necessary – you own the hardware and software forever. The proposed CC system will be "inserted" inline of your existing downstream SDI feed; the new CC system will receive your SDI feed input, de-embed the digital audio, and encode it to real-time captioning provided as closed encoding on the SDI output, and as open encoding (video overlay) on the additional, separate output. This proposal includes installation & initial commissioning the new CC system, but assumes all other aspects of your existing broadcast system to be configured, maintained, and/or modified by City staff. This proposal includes a 1-year warranty, and additional annual warranties may be optionally purchased.

Equipment to be Provided

Link Electronics ACE-2000/102, with 1st year of warranty

Qualifications Specific to this Proposal

- The input insertion signal provided to the new CC system must be SDI with digitally embedded audio on channels 1 & 2.
- This proposal includes no other modifications to any existing system or subsystem, including downstream distribution, streaming, etc., other than what is explicitly listed above in the scope of work.
- This proposal assumes that you have available rack space available for the proposed equipment, near or adjacent to your existing source.
- This proposal assumes that neither permits nor other special process will be required for the scope of work to be performed.

Terms and Conditions

- All pricing is valid for 15 days of date provided.
- Terms of Payment:
  All payments shall be made pursuant to the following schedule and shall be due and payable upon receipt of the invoice from Infinity AV and Security.
  a) Deposit upon acceptance, 50% of contract price
  b) Payment due upon completion, remaining 50% of contract price
- If any contract, subcontract, or other written agreement must be entered into, all qualifications, terms, and conditions included herein shall remain in effect.
- All typical electrical requirements (if required) are to be provided and installed by others.
- Due to the recent volatile supply and/or logistical chains (product availability, shipping, etc.) not within our control, Infinity AV cannot be held responsible for any delays caused in the project timeline by any such circumstances. Infinity AV and Security will exercise every remedy available to overcome any such instances if they arise, including product substitution requests, alternate carriers, etc.
- *Sales Tax total, if stated above is based on our best estimate at time of writing. Minor adjustments may need to be made at time of invoicing due to changes to sales tax rates and/or other regulations. Actual sales tax will be added to all invoices at time of billing at then current rates, unless a valid tax exempt certificate is provided.
- All invoices/balances not paid within these terms are subject to a 2% monthly finance charge. In addition, any unpaid balances owed to Infinity AV and Security is subject to collection. Any reasonable costs incurred by Infinity AV and Security is association with the collection of outstanding debt (including collection and/or attorney's fees) will be fully reimbursable by the debtor or as allowed by Florida law.
- Warranty covers the warranty repair of all new equipment provided by Infinity AV and Security under this proposal. It does not cover repairs to previously installed equipment, equipment installed or modified by others, or equipment damaged due to misuse, abuse, neglect, or Acts of God.

James Carl,
Infinity AV & Security

8-23-2024

Signature Date

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

August 23, 2024 Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV and Security is one of Central Florida's premier residential and commercial systems integrators. Our primary focus is to provide high–quality products and solutions that meet our clients' needs, and to provide these solutions at an extraordinary value. We offer custom designs, engineering, installation and 24 hour emergency service 365 days a year on all of the products we sell. We install and service a vast number of low voltage systems including: **Audio Visual, CCTV, Access Control, Intercom, Distributed Audio, Broadcast/Production Studio, Home Theater, CATV Distribution, Voice/Data, and Pro Audio.** We proudly service **Orange, Seminole, Volusia, Lake, Brevard, Flagler, Osceola, Polk and surrounding Counties.** We are fully licensed and insured in the state of Florida and provide our clients with turnkey solutions that are not only affordable, but will provide them years of trouble free use.

Infinity AV and Security was incorporated in 2009 as a family owned, for profit corporation under Infinity Corporation of Central Florida. We have owned our own building since 2017, located in Sanford, Florida, and houses our office, staging, repair, and warehouse spaces. We effectively operate with 15 or less employees and sustain an average annual revenue of $2M. Infinity maintains a fleet of company vehicles.

We understand the importance of timely service. That's why all of our clients are repeat customers and will provide outstanding references and referrals. **We offer an exclusive 48 Hour response time guarantee to all of our customers on any of the residential or commercial systems we service.** If we are not able to respond to your service request within 48 hours, we will refund you the service call charge. In addition **we also offer 24 hour emergency response service 365 days** a year for those clients who need it. We also have some of the best services rates in the Central Florida area and to prove it we will match any service rate from a comparable company. When quality matters, let the team at Infinity AV and Security provide you with the right solutions at the right price.

For additional information regarding any of our services for your organization, visit our website at www.infinityavandsecurity.com or feel free to call us at 407-878-4283.

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

August 23, 2024 Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV and Security has extensive experience in and maintains a vast understanding of all facets of production & broadcast environments, as demonstrated by our references provided in section D.4 subsequently offered within this section. This includes closed and open captioning systems, both for internal distribution and public broadcast. Please see section D.4 for references.

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

August 23, 2024 Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV and Security, if awarded this opportunity, will dedicate the following key team members for this project:

Matt Pagliarulo – Project Manager

Laura Pagliarulo – Office Administrator

James Carl – Design Engineer

Josh Brookins – Lead Technician

Zane Schoening – Technician

Other technicians if/when needed

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: OSCEOLA COUNTY - BOARD OF COUNTY COMMISSIONERS

Contact Person: BRANDON PRITCHETT

Address: 1 COURTHOUSE SQUARE

City: KISSIMMEE State: FL Zip: 34741

Phone Number: (407) 742-5795

Project Cost: $60K Date Performed: 2018 - CURRENT

Organization: CITY OF ST AUGUSTINE - CITY HALL COMMISSION CHAMBERS

Contact Person: ANTHONY JOHNS

Address: 2200 A1A SOUTH

City: ST AUGUSTINE State: FL Zip: 32080

Phone Number: (904) 471-2122

Project Cost: $98K Date Performed: 2022

Organization: CITY OF DELAND - CITY COMMISSION CHAMBERS

Contact Person: GREG WHIDDEN

Address: 120 S. FLORIDA AVE.

City: DELAND State: FL Zip: 32720

Phone Number: (386) 626-7088

Project Cost: $ 70K Date Performed: 2019 - PRESENT

PROPOSER Representative Typed Name/Title: JAMES CARL / DESIGN ENGINEER

PROPOSER Representative Signature: James Carl

PROPOSER: INFINITY AV AND SECURITY

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: CITY OF EUSTIS - CITY HALL COMMISSION CHAMBERS

Contact Person: CHRISTINE HALLORAN

Address: 10 N GROVE ST.

City: EUSTIS State: FL Zip: 32727

Phone Number: (352) 483-5430

Project Cost: $65K Date Performed: 2021 - CURRENT

Organization: CITY OF KISSIMMEE - CITY COMMISSION CHAMBER

Contact Person: AUSTIN BLAKE

Address: 101 CHURCH ST.

City: KISSIMMEE State: FL Zip: 34741

Phone Number: (407) 742-5795

Project Cost: $77K Date Performed: 2021

Organization: CITY OF LAKE HELEN - CITY COMMISSION CHAMBERS

Contact Person: JIM GLEASON

Address: 327 S LAKEVIEW DR.

City: LAKE HELEN State: FL Zip: 32744

Phone Number: (386) 228-2308

Project Cost: $40K Date Performed: 2022

PROPOSER Representative Typed Name/Title: JAMES CARY - DESIGN ENGINEER

PROPOSER Representative Signature:

PROPOSER: INFINITY AV AND SECURITY

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: SEMINOLE COUNTY SCHOOL BOARD CHAMBERS

Contact Person: JED ACKERMAN

Address: 400 E LAKE MARY BLVD

City: SANFORD State: FL Zip: 32773

Phone Number: (407) 320-0387

Project Cost: $128K Date Performed: 2017

Organization: ORANGE COUNTY SCHOOL BOARD CHAMBERS

Contact Person: PHIL VARGAS

Address: 445 W AMELIA ST

City: ORLANDO State: FL Zip: 32801

Phone Number: (407) 573-1521

Project Cost: $237K Date Performed: 2016

Organization: FLORIDA MUNICIPAL POWER AGENCY - CORP BOARDROOM

Contact Person: MARK LARSON

Address: 8553 COMMODITY CIR.

City: ORLANDO State: FL Zip: 32819

Phone Number: (407) 355-7767

Project Cost: $24K Date Performed: 2021

PROPOSER Representative Typed Name/Title: _____

PROPOSER Representative Signature: _____

PROPOSER: _____

August 23, 2024 Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV and Security has not only satisfactorily performed projects with Winter Springs in the past, we continue to provide impeccable service for every client – we frequently receive praise from our clients that we surpass our competition in every aspect of the industry service we provide. Infinity AV is not satisfied until the client is satisfied, we respond quickly and supportively to any request you may have, and we value every relationship established, not just for now, but into the future... we look forward to and depend on repeat business. In addition to that, we are local, an established service provider, and not just a fly-by-night or national company trying to sell you product for profit & then disappear. Just ask any of our references.

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

August 23, 2024 Infinity Quote # 3054

City of Winter Springs – Procurement Dept.
1126 East State Road 434
Winter Springs, FL 3208

Infinity AV and Security offers preventative maintenance agreements and/or extended warranties, however, they are custom tailored to your needs and/or preferences – Infinity AV welcomes the opportunity to discuss and/or provide a proposal with available options, and therefore cannot provide a predetermined cost at the time of this submission.

2890 W. Airport Boulevard, Sanford, FL 32771
Phone: 407-878-4283 Fax: 407-878-4391
FL. Licensed Contractor # ES12001999
www.InfinityAVFL.com

Appendix A
COST PROPOSAL WORKSHEET

Part 1: The cost of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed. $ 54,489.00

Re-state figure in words Fifty Four Thousand, Four Hundred Eighty Nine Dollars

Part 2: Estimated time from receipt of purchase order to operational system 4 weeks

Part 3: Individual cost details of additional options, accessories and/or post warranty support services :
Add additional rows if required

Description	Qty.	Unit Cost
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF Florida

COUNTY OF Seminole

The foregoing instrument was acknowledged before me by means of (X) physical presence or (_____) online notarization,

this 22nd day of August, 2024 by James Carl the Design Engineer of Infinity Corporation of Central Florida, an employee (X) who is personally known to me or (_____) who produced _____ as identification.

Notary Public: _____

Print Name: Laura Pagliarulo

My Commission Expires: December 3, 2028

LAURA MARIE PAGLIARULO
MY COMMISSION # HH 579577
EXPIRES: December 3, 2028

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF Florida

COUNTY OF Seminole

James Carl, being duly sworn, deposes and says that:

(1) He/she is DESIGN ENGINEER (Title) of INFINITY AV + SECURITY (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

James Carl (Signed)

DESIGN ENGINEER (Title)

STATE OF Florida

COUNTY OF Seminole

The foregoing instrument was acknowledged before me this August 22, 2024 by James Carl,

who is (X) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

(Signature of Notary Public)

Laura Pagliarulo (Name of Notary Typed, Printed or Stamped) Notary Public

HH 579577 (Commission Number)

LAURA MARIE PAGLIARULO
MY COMMISSION # HH 579577
EXPIRES: December 3, 2028

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

INFINITY AV AND SECURITY does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) 8.22.2024 (Date)

JAMES CARL
(Print/Type Name as Signed Above

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BD Automated Closed Captioning System.

2. This sworn statement is submitted by (PROPOSER) INFINITY AV + SECURITY whose business address is 2890 W AIRPORT BLVD and (if applicable) Federal Employer Identification Number (FEIN) is 27-117-8370 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is JAMES CARL and my relationship to the PROPOSER named above is DESIGN ENGINEER

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

Signature 8.22.2024 Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF Florida

COUNTY OF Seminole

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 22nd day of August, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: December 3, 2028

Notary Public

LAURA MARIE PAGLIARULO
MY COMMISSION # HH 579577
EXPIRES: December 3, 2028

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BD

Project Description: Automated Closed Captioning System

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: INFINITY AV AND SECURITY

Authorized Signature: [signature]

Title: DESIGN ENGINEER

Date: 8-22-2024

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BD Automated Closed Captioning System***

This sworn statement is submitted by (PROPOSER) INFINITY AV AND SECURITY whose business address is 2890 W AIRPORT BLVD and (if applicable) Federal Employer Identification Number (FEIN) is 27-117-8370 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.)

My name is JAMES CARL and my relationship to the PROPOSER named above is DESIGN ENGINEER

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

James Carl 8-22-2024

Signature Date:

STATE OF Florida

COUNTY OF Seminole

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 22nd day of August, 2024 and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: December 3, 2028

Notary Signature

LAURA MARIE PAGLIARULO
MY COMMISSION # HH 579577
EXPIRES: December 3, 2028

2024 FLORIDA PROFIT CORPORATION ANNUAL REPORT

FILED
Apr 23, 2024
Secretary of State
7892653054CC

DOCUMENT# P09000087563

Entity Name: INFINITY CORPORATION OF CENTRAL FLORIDA

Current Principal Place of Business:

2890 W AIRPORT BLVD
SANFORD, FL 32771

Current Mailing Address:

P.O BOX 226
OSTEEN, FL 32764 US

FEI Number: 27-1178370

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

PAGLIARULO, MATTHEW J
2890 W AIRPORT BLVD
SANFORD, FL 32771 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE:

Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	P	Title	VP
Name	PAGLIARULO, MATTHEW J	Name	PAGLIARULO, LAURA M
Address	P.O BOX 226	Address	P.O BOX 226
City-State-Zip:	OSTEEN FL 32764	City-State-Zip:	OSTEEN FL 32764

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: LAURA PAGLIARULO VICE PRESIDENT 04/23/2024

Electronic Signature of Signing Officer/Director Detail — Date

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For
RFP # 07-24-01 BD
Automated Closed Captioning System

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: VZP Digital Inc.

TAX ID# SNN or EIN: 81-3324507

PROPOSER ADDRESS: PO Box 620091, Littleton, CO 80162

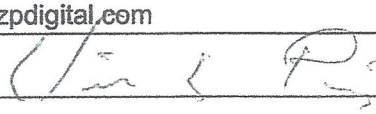
PURCHASE ORDER ADDRESS: PO Box 620091, Littleton, CO 80162 or accounting@vzpdigital.com

PHONE NUMBER: 720-482-4012

COMPANY WEBSITE: http://www.vzpdigital.com

COMPANY CONTACT (REP): John Rein

CONTACT EMAIL ADDRESS: rfp@vzpdigital.com

SIGNATURE: 

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BD Pertaining To: Automated Closed Captioning System
   2. Addenda:
      Number: 1, Dated 08/15/2024.
      Number: _____, Dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

VZP DIGITAL

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VZP DIGITAL

Introduction Letter

August 21, 2024

Mr. Stuart MacLean
Procurement Manager
Winter Springs City Hall
1126 East State Road 434
Winter Springs, Florida 32708

Dear Mr. MacLean:

On behalf of VZP Digital, I would like to thank the City Of Winter Springs for the opportunity to propose our services for an Automated Closed Captioning Solution. Since 2016, VZP Digital, Inc. (an American owned, small, minority-owned business) has provided human and automated real-time and offline open/closed captioning, CART, transcription, subtitles, and translation services to clients within the Higher Education, Government, Broadcast, and Non-Profit sectors. Commitment to quality and customer service is what separates VZP Digital from the competition. Our team of professionals are driven by passion, creativity, out-of-the-box thinking, strong work-ethic, and integrity. Along with insightful and interactive engagements, our company spares no effort to go beyond today's industry in performance and client satisfaction.

Our **patented** VZP REACH can generate open and closed captions along with simultaneous translation in over 100 languages in real-time with low latency, high speed and accuracy while creating a transcript that can be generated after the event. REACH utilizes a cloud-based solution to take an audio input, bounce it off multiple AI/VRS models to find the most accurate application of each spoken word. Words are then sent through to the video output in a captioned format. REACH can also be used to caption and provide subtitles for pre-produced materials. Not only can captions/translations be sent to an encoder, but they can also be sent to any connected mobile device via a URL or QR code. This provides a solid backup plan if the encoder isn't working properly by ensuring captions can be provided.

Unlike our competitors, VZP REACH is not licensed software that will need to be purchased. It is a human monitored automated captioning subscription service with significantly less financial and contractual commitment. REACH can work with both Windows, Mac, and Linux operating systems. There is no need for the City's technical team to upload updates and monitor performance. Updates to the SaaS occur on our end and are seamless to the City.

For your scheduled events, VZP's technical engineers will connect to the Granicus encoder, test to ensure captions are flowing and monitor the automated captioning live. REACH is constantly updating with the latest most accurate automated speech recognition engines(ASR). This ensures the City will receive captions from the best and most current automated speech recognition engine to increase accuracy. Many of our competitors are tied to only one ASR which means that the quality of service compared to newer ASR's will be lower.

We are offering an automated captioning solution that we believe is unique amongst our competitors. During the system set-up, we will collaborate with your technical team to determine captioning style, font, color, and size. Captions will be monitored live by our technical engineer during the City's events/meetings. This ensures a high-quality service along with live technical support should issues arise.

VZP DIGITAL

Introduction Letter

Scheduling for captions is managed via our on-line form at http://www.vzpdigital.com/order which take less than a minute to complete. In the manner of minutes, our team can have captions up and running for the City no matter the day and time. We will be there for the regularly scheduled meetings and "2AM hurricane updates". We are truly a 24/7/365 business that was built in part by our ability to provide services at any time of the day with minimal notice. VZP REACH can also be used for human captioning and human/automated translation-subtitle services if a higher quality of service is needed.

With our experience in providing automated captioning, translation, and transcription solutions for clients across the country in both government and television settings, and our patented VZP REACH technology, we are confident that VZP Digital is the best partner to exceed the expectations of the City of Winter Springs. Thank you for your consideration.

Sincerely,

Victor Perez
President & CEO
victorp@vzpcc.com
720-482-4012

VZP Digital, Inc.
PO Box 620091
Littleton, CO 80162

Section D: Qualifications

1. **General Qualifications**

Since 2016, VZP Digital, Inc. (VZP DIGITAL) has provided real-time and offline captioning, transcription, subtitling, audio description, and translation services to clients within the Government, Broadcast, Television, Higher Education, Professional Service and Non-Profit sectors via human and AI/automated technologies. These include various streamed and televised state, city and town meetings, school board meetings, in-venue and televised stadium events, webinars, graduations, press conferences along with post-production captioning and transcription services across all verticals. Staffed with operational and technical support team of 9 people along with a captioning/transcription roster of over 100 people, VZP Digital can support any needs for the City within and outside the scope of work provided.

As a Minority-Owned American Small Business based in Littleton, CO, VZP Digital is a community-focused technology company that strives for excellence by creating innovative accessibility solutions for our clients. We are committed to creating a positive impact in the world, through product and service development, community involvement, and education. With our President & CEO being a former COO (interim CEO) for a large captioning provider, this competitor's complacency in the market was his incentive to create VZP Digital. Since 2018, management, sales, customer support and operations teams have been supported by the same personnel with no organizational changes.

Business Information:
Registered Company Name: VZP Digital, Inc.
DBA: VZP Digital
Location: 6638 W Ottawa Ave, Littleton, CO 80128
Year Incorporated: 2016
Corporation Type: C-CORP
Web: http://www.vzpdigital.com

Contact Information:
John Rein: VP Sales & Client Relations
Office Phone: 720.482.4012
Cell Phone: 303.378.3794
Email: johnr@vzpcc.com

Proposal Questions:
Scott Hutchinson
Office Phone: 720.482.4012
Cell Phone: 720.639.0808
Email: rfp@vzpdigital.com

2. Proposer Experience

Snapshot of Current Clientele:

State of Washington	Chase Center (Oakland, CA)
Illinois Commerce Commission	SAP Center (San Jose, CA)
City of Davis (CA)	Ball Arena (Denver, CO)
City of Thronton (CO)	Empower Field (Denver, CO)
D300 School District	Ford Field (Detroit, MI)
Denver Public Schools	Camden Yards (Baltimore, MD)
Austin Ind. School District (TX)	Progressive Field (Cleveland, OH)
Town of Castle Rock (CO)	Kentucky Venues (Louisville, KY)
Wake County (NC)	Tech CU Arena (San Jose, CA)
Cornell University	KTAL
Michigan St University	PBS6-Denver
Ohio State University	Rocky Mountain PBS
University of Denver	A&E
University of Virginia	AMC
University of Louisville	WNYT
West Virginia University	Altitude Sports Network
Baylor University	CBS4-Denver

Technical and Automated Closed Captioning Experience:

- Since 2023, we have provided automated closed captioning via VZP REACH to the City of Davis (CA) for various town meetings via an encoder they purchased from us. We were awarded a one-year contract initially which was just renewed for another year. The client was so satisfied with the service for the initial contract, that they paid up front for the contract renewal. Part of the initial contract was to help them install an encoder and collaborating with their technical team to get captions flowing.
- After providing human captioning for their morning show for several years, Altitude Sports Network made the change to automated captioning in 2023. The quality of the automated captioning led them to further expand automated captioning via VZP REACH to other shows and live events shortly thereafter. In 2018, our technical team helped them with the system design and installation of the encoders when they initiated captioning services.
- In 2020, we helped the Town of Castle Rock (CO) and City of Thornton (CO) install encoders to provide captioning for their town meetings via encoder. Though captions are generated by human transcribers, live AI generated Spanish translation streams simultaneously with the English captions for Thornton.
- Since the development of our patented VZP REACH in 2018 and received our patent for On-Demand Captioning and Translation in 2020, we have provided thousands of hours of automated captions and translation services to clients across all business and government verticals from local cities and towns to members of the Fortune 500.

3. **Team Experience**

- **John Rein: VP Sales and Client Relations**
  Self-motivated marketing and client relations expert with 25+ years of interactive, content and marketing strategy experience. John is recognized for delivering complex cross-functional projects to satisfied stake holders on time and on budget. John has been with VZP Digital since its inception. John joined VZP Digital in 2016.
  a. Main point of contact for Client/Customer and Support Services
  b. Can provide pricing for potential work outside the scope of the contract
  c. Participate in meeting and conferences throughout the contract term

- **Apple Perez: Real-Time Operations Manager**
  Since 2018, Apple has managed the scheduling and preparation for all live events. She also manages the stenos and voice writers as volumes have grown sixfold in the last 4 years. Her ability to set the stenographers up to succeed has helped the company grow, maintain clients, and enhanced VZP Digital's reputation as one of the leading client-satisfaction based companies in the industry.
  a. Ensure all meetings/events are scheduled
  b. Monitors VZP REACH to ensure automated captions are flowing properly as a backup to the Technical Engineer
  c. Develop and maintain connection sheets specifical to the City's requirements.
  d. Keep abreast of schedule changes.

- **Jesus Rodriguez – Technical Engineer**
  Since joining VZP Digital in 2021, Jesus' skills and knowledge as a technical engineer has moved him up the company ladder. His background as a computer technician for 13 years along with an associate degree in computer programming and applied science has given him the knowledge base to tackle any problem. Jesus has worked side by side with our President & CEO who holds the patent and developed our automated captioning solution to become the expert for VZP REACH (automated captioning solution)
  a. Technical support in resolving technical issues should they arise.
  b. Primary technician if new encoder or caption process changes.
  c. Monitors VZP REACH to ensure automated captions are flowing properly
  d. Initial connectivity testing with the City's technical team if awarded the contract.
  e. Connectivity testing as needed

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: City of Davis (California)

Contact Person: Robert Schulz: City of Davis Media Services Specialist

Address: City Manager's Office. 23 Russell Blvd, Suite 1

City: Davis State: CA Zip: 95616

Phone Number: (530) 757-5667

Project Cost: ~$6,000/yr Date Performed: On-Going

Organization: Altitude Sports & Entertainment

Contact Person: Tim DeLay: Sr. Director of Operations

Address: 11203 E. Peakview Ave

City: Centennial State: CO Zip: 80111

Phone Number: (303) 925-2881

Project Cost: ~$37,000/yr (Automated) Date Performed: On-Going

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Organization: City of Thornton (Colorado)

Contact Person: Kristen Rosenbaum

Address: 9500 Civic Center Drive

City: Thornton State: CO Zip: 80229

Phone Number: (303) 538-7309

Project Cost: ~$35,000/yr Date Performed: On-Going

PROPOSER Representative Typed Name/Title: Scott Hutchinson: Business Process and Data Analyst

PROPOSER Representative Signature: 

PROPOSER: VZP Digital Inc.

5. Conclusion

Why is VZP Digital providing this proposal to the City of Winter Springs?
VZP Digital takes a unique interest in engaging the Deaf and Hearing community for guidance and developing collaborative technological innovations towards improving services across all media. In our initial years, our business had grown primarily through word of mouth and the reputation of our founder, Present and CEO Victor Perez. In 2022, we found ourselves well positioned to actively pursue additional opportunities by responding to RFP's and RFQ's for government services.

This opportunity presented to us by the City of Winter Springs fits right in with our business model. As our automated captioning business has grown immensely, we have the experience and technical expertise to best meet the requirements laid out in the RFP. We believe our automated captioning solution is the best in the industry not only today, but on-going as we are continuously making upgrades as the technology is rapidly advancing. Our technology is flexible and works with any system.

What sets VZP DIGITAL apart from our competitors and why the City of Winter Spring should choose VZP Digital:

- VZP Digital CAREs: Core Values
  - Community
  - Accessibility
  - Responsibility
  - Education
- Customer Service and Accessibility: We are truly a 24/7 business as our teams support events internationally and during emergencies. We answer the phones with a "hello" from a VZP Digital customer relations staff member who knows the business. No subcontracted call center. No press 1 for this and press 2 for that. VZP Digital has separated from our competitors due to our superior customer service. Our staff is held to a tight timeline in responding to emails. We often hear: "You responded so quickly!"
- Caption Monitoring: Unlike most of our competitors, each of your events/meetings will be monitored in real-time by our engineers to ensure captions are flowing properly with speed and accuracy. Most of our competitors will sell you a product at a high price with additional fees and costs with a service that is not monitored. Should any issues arise, our technical team will already be aware and working on a rapid solution.
- Innovation: VZP REACH (Patented on-demand cloud captioning and translation platform: Patent No. US 10,582271B2. See our response in Section E which explains further explains VZP REACH's capabilities. VZP Digital invented on-demand cloud captioning.
- Pricing/Affordability: Our pricing model provides minimal financial commitment. No pricing for upgrades or warranty. Cost and service flexibility if the City's scope of work changes.
- No costly hardware or software purchases are required. VZP REACH is our cloud-based SaaS technology that provides not only automated captioning, but human captioning, CART, and simultaneous translation services via both human and AI technologies. VZP REACH works across

- all operating systems and can feed captioning/CART and translation services to any kind of encoder. If the City decides to change encoders, REACH can accommodate.
- Updates for VZP REACH are managed seamlessly without the need to access the City's network or any involvement by the City's technicians free of charge and without system interruptions.
- For high profile events where accuracy needs to exceed AI/automated standards, we can provide human captioning to the Granicus encoder without any need for system changes.
- We will not sell you a product and leave you on your own. All your events will be set up by our operations team and monitored live by our Technical Engineers.
- Client Relationship Management. We are not a large business that will just add the City as another line in the financial reports. We view our clients as partners and will eagerly collaborate with you to provide the best service in the industry and provide solutions to any scope of work changes.

- Transparency: Many of our competitors are claiming captioning/CART/translation accuracy of nearly 98% for their AI technologies. What they do not reveal is that 98% must have optimal audio conditions with one person speaking in a studio setting with no background noise with a high-quality speaker clearly enunciating. As the holder of the patent for the on-demand cloud captioning and translation platform, we are aware of the limitations that AI technologies have.

- Most of our competitors automated captioning solutions are tied to one automated speech recognition engine. (ie: Google, IBM) It is well known that each engine has its own weaknesses and shortcomings. VZP REACH (our proprietary Platform) has several ASR's available which allows us to provide the highest quality of service when AI is the desired solution. Our technical team is constantly staying on top of the market and evolving as new and better technologies enter the marketplace.

- As the scope of work expands, VZP Digital can seamlessly provide automated translated captions/subtitles in over 100 languages, provide captions to web-enabled mobile devices via a QR code or URL, or provide human generated captions for high profile events.

- Experience and Technical Experience with every encoder in the market. If the City decides to change encoders, we can easily make the transition with you and provide technical support.

Section E – Other Information

- **Proposed Software: VZP REACH**
  VZP REACH is our patented on-demand, cloud-based SaaS technology designed to provide access to a larger viewing audience for live streaming and events. Our technology captures your spoken word to provide instant captioning to your broadcasts. This enables access for the Deaf,

Hard of Hearing and anyone who wants to watch without needing to have the volume on. VZP REACH can also simultaneously translate your content into over 100 languages and generate

captions simultaneously which creates the ability for viewers in countries around the world to watch in their own language.

Captions generated by REACH flow at a consistent rate without bursting. Font, font size, caption location, caption style can easily be set up and changed as needed. Captions can be generated from standard English dialect along with English spoken in various cultural accents. REACH can accept embedded audio via SDI. Being an automated AI technology, the most important piece of generating accurate captions is having a clean audio source. The REACH platform allows for monitoring of the captions as they are being generated while creating a caption file. Captions can be monitored as they are being generated and streamed to an encoder or public URL. After the events, a transcript can be created from the captions in multiple file formats.

This is the only primary required equipment for VZP Digital to send captioning to a device that is 608/708 compliant. The distribution of simultaneous captions to mobile devices is part of the cloud platform VZP REACH.

If the city decides it wants to provide simultaneous captions in both English and Spanish, a second encoder will be required. REACH can send captions in over 100 languages and generate a transcript in .DOC or .TXT file types.

Captions/CART can also be generated via a URL from REACH.

- **VZP REACH Capabilities**
  - On-demand automated and human generated captioning/CART services
  - On-demand translation/subtitles in over 100 languages. Translation/subtitles would be in sync with the English captioning.
  - Provide the above services to any web enabled device (cell phone, note pads) via a QR code or URL. This could allow the city to provide captions via the encoder and translation via the URL or QR code.

- **VZP REACH Advantage**
  As the holder of the patent for the on-demand cloud captioning and translation platform (Patent No. US 10,582271B2), we are aware of the limitations that AI technologies have. Most of our competitors AI translation solutions are tied to one automated speech recognition engine. (ie: Google, IBM) It is well known that each engine has its own weaknesses and shortcomings. VZP REACH (our proprietary Platform) has several ASR's available which allows us to provide the highest quality of service when AI is the desired solution. Our technical team is constantly staying on top of the market and evolving as new and better speech recognition engines enter the marketplace.

- **Automated Captioning Quality:**
  The most critical part for both human and automated (ai) captioning is the quality of audio. Factors that may impact the quality are the following:

  - Audio clarity and microphone proximity of speakers
  - Unclear articulation
  - Banter or speakers talking over one another

  While automated speech engines have improved dramatically, it is important to note that the above factors can radically impact quality to the negative. As multiple speakers can confuse any automation engine, so too can poor quality audio. We recognize the financial merits of automation, but want to emphasize the impact to quality, depending on venue audio quality, and temperament of content spoken (banter, varying level of speaker volume, complex dialects). While competitors may emphasize compliance through their solutions, *we find the responsible statement is to be aware of the limitations and levels of quality fluctuations subject to speakers, audio, and background noises.*

  VZP Digital will gladly provide a side-by-side comparison of our solution versus the competition if requested by the City.

- **Product Set-Up and Training:**
  Before the first event, testing will entail 1-2 hours with engineers, to set up and verify the connection with the encoder, video signal and communication lines for audio.

  The training is a short 1–2-hour tutorial with our technical staff consisting of feature reviews of VZP Reach. In the training, users will learn how to initiate a captioning session, encoders, obtain transcripts, and tweak individual displays (font, language, colors). Training will be provided virtually via Zoom. The training will be recorded for future access if requested. We will also provide documentation.

  VZP Digital will provide installation and setup, for up to 2.5 hours for $250.00. If client schedules and delays are incurred that exceed the initial 2.5 hours, an hourly $100.00/hour Engineering rate will apply for adjustments or customizations not originally scoped out.

- **Product Technical Support & Maintenance:**

  Technical Support Services/Hours: VZP Digital is available 24x7x365.

  You may reach us by:
  Email: support@vzpdigital.com

  Office hours: 7am – 6pm – 720.482.4012

  Off-Hours: 720.482.4012 (phones auto-transfer to on-call personnel). We always answer the phone no matter the time/date or hour.

  We will be mindful of your events and provide monitoring at no additional cost.

- **Software/Hardware Updates & Upgrades:**

  No cost to the City of Winter Springs. Updates to VZP REACH are maintained by our IT Team and will be seamless to the City. No software needs to be maintained by the City.

  VZP REACH is a cloud-based software platform that is developed and managed by our technical staff. We would notify the city of any upgrades/updates that affect the client and provide additional training if needed. Unless specific upgrades are requested by the City, there will be no implementation cost for these updates.

- **Backup/Redundancy plan:**

  VZP REACH SERVERS: VZP Digital's platform is cloud based and as such, can scale and be geographically balanced to work from different hosting centers.

  CLIENT: While most facilities provide constant internet services, even these services can fail within the venue. In these cases, VZP REACH's ability to deliver to any mobile device, tablet, desktop creates a powerful distribution method that leverages individual's cellular internet. The most critical component is the facilities ability to deliver audio to our servers.

VZP DIGITAL

Proposal: RFP # 07-24-01 BD: Automated Closed Captioning (Copy)

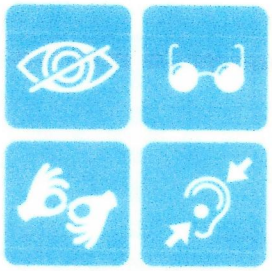
Pricing Model:

City of Winter Springs Rate Card		
General Services Per Scope of Work	Rate	
Human monitored AI/Automated Captioning: Up to 20 hours per month	$615.00/mth	
Human monitored AI/Automated Captioning after 20 hours per month	$32.00/hr	
Installation: Up to 3 hours	$250.00	
General Services Outside Scope of Work	Rate	Minimum
Human English Captioning: >24 hour notification	$105.00/hr	1/2 hour
Human English Captioning: <24 hour notification	$135.00/hr	1/2 hour
Simultaneous AI/Automated Captioning in >100 Non-English Languages (on top of Monthly rate)	$20.00	1/2 hour
Simultaneous AI/Automated Captioning to Mobile Devices (cell phone/lap tops)	$20.00	1/2 hour
Post-Production Captioning/Transcription		
Post-Production AI/Automated Rate (Monthly Rate includes up to 5 hour of post-production captioning/transcription)	$25.00	1/2 hour

Pricing Notes:

1. Pricing per the scope of work would be $615.00 per month and $250.00 one-time charge for installation and training.
2. VZP Digital is open to other pricing structures.
3. Human captioning is always available with our infrastructure and can be incorporated by scheduling an event at www.vzpdigital.com/order. Human Captioning is $105.00/hr with a 30-minute minimum rounded up to the nearest quarter hour. Real-Time Captioning scheduled within 24 hours of the start time will be invoiced at $135.00/hr with a 30-minute minimum. Cancellations within 24 hours of the start time would be invoiced in full.

COMPLIANCE GUIDELINES:



Under the Americans with Disabilities Act (ADA), **people who are deaf or hard of hearing, blind/vision issues are entitled to the same services provided to anyone else**. They may not be excluded or segregated from services, be denied services, or otherwise be treated differently than other people. **ADA best-practices** recommend captions to be **99% accurate**. This means you'll see an error every 2-3 sentences. YouTube's current auto-captioning produces captions that are on average 60-70% accurate, meaning every 2-3 words will be incorrect.

FCC rules require broadcasters and cable operators to make certain emergency information accessible to persons who are deaf or hard of hearing, and to persons who are blind or have visual disabilities. This rule means that certain information about an emergency must be provided in both audio and visual formats. FCC requires captions to be **98.5% accurate.**

Appendix A
COST PROPOSAL WORKSHEET

Part 1: The cost of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed. $ $250.00

Re-state figure in words Two Hundred and Fifty Dollars

Part 2: Estimated time from receipt of purchase order to operational system 1 weeks

Part 3: Individual cost details of additional options, accessories and/or post warranty support services :
Add additional rows if required

Description	Qty.	Unit Cost
Human Monitored AI/Automated Captioning: Up to 20 hours per Month	1	$ $615.00/month
Human Monitored AI/Automated Captioning > 20 hours per Month		$ $32.00/hr
Simultaneous AI Translated Captions/Subtitles (In Sync with English)		$ $20.00/hr
Human English Captioning if requested. >24 hour notice		$ $105.00/hr
Human English Captioning if requested. < 24 hour notice		$ $135.00/hr
Post Production Automated Captioning >5 hours per month		$ $25.00/hr
Simultaneous AI/Automated Captioning to Mobile Devices		$ $20.00/hr
		$
		$
		$
		$
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		$
		$
		$
		$
		$
		$
		$

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF Colorado

COUNTY OF Jefferson

The foregoing instrument was acknowledged before me by means of (X) physical presence or (_____) online notarization,

this 21 day of August, 2024 by Victor Perez the President & CEO of VZP Digital Inc., a Owner (____) who is personally known to me or (X) who produced Colorado Drivers License as identification.

Notary Public: _____

Print Name: Devin Noel Bingham

My Commission Expires: 05/09/2027

DEVIN NOEL BINGHAM
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017391
MY COMMISSION EXPIRES MAY 9, 2027

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF Colorado

COUNTY OF JEFFERSON

Victor Perez, being duly sworn, deposes and says that:

(1) He/she is President & CEO (Title) of VZP Digital Inc. (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed) President & CEO (Title)

STATE OF Colorado

COUNTY OF Jefferson

The foregoing instrument was acknowledged before me this August 21, 2024 by Victor Perez,

who is (X) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

(Signature of Notary Public)

DEVIN NOEL BINGHAM
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017391
MY COMMISSION EXPIRES MAY 9, 2027

Devin Noel Bingham (Name of Notary Typed, Printed or Stamped) Notary Public

20234017391 (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

VZP Digital Inc. does:

(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) 08/16/2024 (Date)

Victor Perez

(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BD Automated Closed Captioning System.

2. This sworn statement is submitted by (PROPOSER) VZP Digital Inc. whose business address is PO Box 620091, Littleton, CO 80162 and (if applicable) Federal Employer Identification Number (FEIN) is 81-3324507 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is Victor Perez and my relationship to the PROPOSER named above is President & CEO.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

Signature 8-21-24 Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF Colorado

COUNTY OF JEFFERSON

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 21 day of August, 2024, and is personally known to me, or has provided Drivers License as identification.

Notary Public

My Commission expires: 05/09/2027

DEVIN NOEL BINGHAM
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017391
MY COMMISSION EXPIRES MAY 9, 2027

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BD

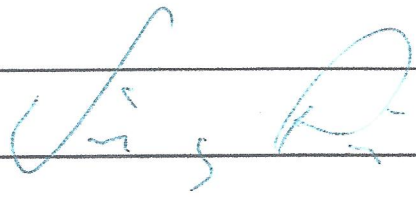
Project Description: Automated Closed Captioning System

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: VZP Digital Inc

Authorized Signature: 

Title: President & CEO

Date: 08/16/2024

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BD Automated Closed Captioning System***

This sworn statement is submitted by (PROPOSER) VZP Digital Inc. whose business address is

PO Box 620091, Littleton, CO 80162 and (if applicable) Federal Employer Identification Number (FEIN) is

81-3324507 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social

Security Number: _____.)

My name is Victor Perez and my relationship to the PROPOSER named above is President and CEO .

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____ 8-21-24

Signature Date:

STATE OF Colorado

COUNTY OF Jefferson

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 21 day of August, 2024 and is personally known to me, or has provided Drivers License as identification.

_____ My Commission expires: 05/09/2027

Notary Signature

DEVIN NOEL BINGHAM
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234017391
MY COMMISSION EXPIRES MAY 9, 2027

sunbiz.org Division of CORPORATIONS an official State of Florida site

Detail by Entity Name

Florida Profit Corporation
VZP DIGITAL INC.

Filing Information

Document Number	P24000053365
FEI/EIN Number	NONE
Date Filed	08/16/2024
Effective Date	08/16/2024
State	FL
Status	ACTIVE

Principal Address

6638 W OTTAWA AVE
SUITE 250
LITTLETON, CO 80128

Mailing Address

PO BOX 620091
LITTLETON, CO 80162

Registered Agent Name & Address

REGISTER AGENTS INC
7901 4TH ST N
STE 300
ST PETERSBURG, FL 33702

Officer/Director Detail

Name & Address

Title CEO

PEREZ, VICTOR Z
6638 W OTTAWA AVE STE 250
LITTLETON, CO 80128

Annual Reports

No Annual Reports Filed

Document Images

08/16/2024 -- Domestic Profit | View image in PDF format

Electronic Articles of Incorporation
For

P24000053365
FILED
August 16, 2024
Sec. Of State
dsultana

VZP DIGITAL INC.

The undersigned incorporator, for the purpose of forming a Florida profit corporation, hereby adopts the following Articles of Incorporation:

Article I

The name of the corporation is:

VZP DIGITAL INC.

Article II

The principal place of business address:

6638 W OTTAWA AVE
SUITE 250
LITTLETON, CO, . US 80128

The mailing address of the corporation is:

PO BOX 620091
LITTLETON, CO. US 80162

Article III

The purpose for which this corporation is organized is:

ANY AND ALL LAWFUL BUSINESS.

Article IV

The number of shares the corporation is authorized to issue is:

500

Article V

The name and Florida street address of the registered agent is:

REGISTER AGENTS INC
7901 4TH ST N
STE 300
ST PETERSBURG, FL. 33702

I certify that I am familiar with and accept the responsibilities of registered agent.

Registered Agent Signature: DAVID ROBERTS

P24000053365
FILED
August 16, 2024
Sec. Of State
dsultana

Article VI

The name and address of the incorporator is:

VICTOR Z PEREZ
PO BOX 620091

LITTLETON, CO 80162

Electronic Signature of Incorporator: VICTOR Z PEREZ

I am the incorporator submitting these Articles of Incorporation and affirm that the facts stated herein are true. I am aware that false information submitted in a document to the Department of State constitutes a third degree felony as provided for in s.817.155, F.S. I understand the requirement to file an annual report between January 1st and May 1st in the calendar year following formation of this corporation and every year thereafter to maintain "active" status.

Article VII

The initial officer(s) and/or director(s) of the corporation is/are:

Title: CEO
VICTOR Z PEREZ
6638 W OTTAWA AVE STE 250
LITTLETON, CO. 80128

Article VIII

The effective date for this corporation shall be:

08/16/2024

US010582271B2

(12) **United States Patent**
Perez

(10) **Patent No.: US 10,582,271 B2**
(45) **Date of Patent: Mar. 3, 2020**

(54) **ON-DEMAND CAPTIONING AND TRANSLATION**

(71) Applicant: **VZP Digital**, Centennial, CO (US)

(72) Inventor: **Victor Z. Perez**, Centennial, CO (US)

(73) Assignee: **VZP Digital**, Centennial, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/037,863**

(22) Filed: **Jul. 17, 2018**

(65) **Prior Publication Data**

US 2019/0028772 A1 Jan. 24. 2019

Related U.S. Application Data

(60) Provisional application No. 62/533,807, filed on Jul. 18, 2017.

(51) **Int. Cl.**

H04N 7/173	(2011.01)
H04N 21/488	(2011.01)
G10L 15/26	(2006.01)
H04N 21/2187	(2011.01)
H04N 21/233	(2011.01)
H04N 21/439	(2011.01)
G10L 15/30	(2013.01)
H04N 21/2343	(2011.01)
G06F 40/58	(2020.01)

(52) **U.S. Cl.**
CPC ***H04N 21/4884*** (2013.01); ***G06F 40/58*** (2020.01); ***G10L 15/265*** (2013.01); ***G10L 15/30*** (2013.01); ***H04N 21/2187*** (2013.01); ***H04N 21/233*** (2013.01); ***H04N 21/234336*** (2013.01); ***H04N 21/4394*** (2013.01); ***G10L 15/26*** (2013.01)

(58) **Field of Classification Search**
CPC H04N 21/4884; H04N 21/2187; H04N 21/233; H04N 21/4394
USPC 725/116
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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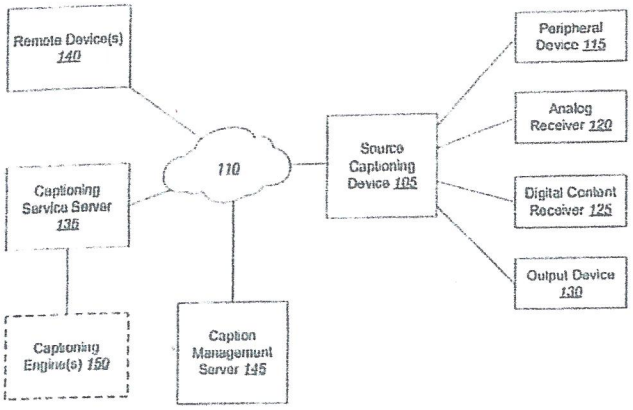
(Continued)

Primary Examiner — Pankaj Kumar
Assistant Examiner — Sahar Aqil Riaz
(74) *Attorney, Agent, or Firm* — Adsero IP

(57) **ABSTRACT**

Novel tools and techniques are provided for a live and/or on-demand captioning service. A system may include a caption management server, and a source captioning device. The source captioning device may generate a request to initiate captioning service, transmit the request to the caption management server, transmit the audio content to a captioning service provider as determined by the caption management server, and receive, via the caption management server, caption data from the captioning service provider. The caption management server may determine a type of captioning service requested, and determine the captioning service provider for the source captioning device to transmit the audio content based, at least in part, on the type of captioning service requested.

18 Claims, 9 Drawing Sheets



100

Response To

City of Winter Springs, Florida

RFP # 07-24-01 BD

Automated Closed Captioning System

Issued: July 19, 2024

Due: August 23, 2024

2:00 PM Local Time

ENCO Systems, Inc.
41551 W. 11 Mile Road
Novi, Michigan 48375-1803 U.S.A.
Ph. 248-827-4440
www.enco.com
DUNS 196229587

A. PROPOSER Information and Acknowledgement Form

PLEASE SEE NEXT PAGE

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For
RFP # 07-24-01 BD
Automated Closed Captioning System

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: ENCO SYSTEMS, INC

TAX ID# SNN or EIN: 43-1490600

PROPOSER ADDRESS: 41551 W 11 Mile Rd, Novi, MI48375

PURCHASE ORDER ADDRESS: Same as above

PHONE NUMBER: 248-827-4440

COMPANY WEBSITE: www.enco.com

COMPANY CONTACT (REP): Bill Bennett, x205

CONTACT EMAIL ADDRESS: bill@enco.com

SIGNATURE: 

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BD Pertaining To: Automated Closed Captioning System
   2. Addenda:
      Number: N/A_____, Dated N/A_____
      . Number: N/A_____, Dated N/A_____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

B. Table of Contents

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C. Introduction Letter

August 21, 2024

To:

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, Florida 32708
Stuart MacLean, Procurement Manager
(407) 327-7581
smaclean@winterspringsfl.org

Regarding:

RFP # 07-24-01 BD
Automated Closed Captioning System
Issued: July 19, 2024
Due: August 23, 2024
2:00 PM Local Time

Response Prepared By:
Bill Bennett
Media Solutions & Accounts Manager
bill@enco.com
Ph. 248-827-4440 x205

Secondary Contact:
Samantha Bortz
Sales Manager
samantha@enco.com
Ph. 248-827-4440 x201

ENCO Systems, Inc.
41551 W. 11 Mile Road
Novi, Michigan 48375-1803 U.S.A.

Dear Mr. MacLean,

ENCO Systems, Inc. an American-based privately-held corporation, is grateful for the opportunity to respond to your Request for Information as described herein, offering an elegant, superior and economically efficient solution to your need for Automated Closed Captioning for the City of Winter Spring's broadcasts and Web streams, via our automated on-premise AI-based Speech to Text captioning product, called enCaption.

enCaption is a standalone AI-based Appliance, designed to run 24/7/365 and fully on-prem (or Cloud), with no Internet needed for normal use. It just works - feed it spoken word audio via one of its many options, and it instantly can either control existing CEA-608/708 3rd party caption embedders, or can itself insert captions into SDI via its optional internal SDI embedding module. It offers best-in-class accuracy and speed, and is designed to work with customizable unique-word Libraries, corrective Filters, MOS rundowns, and can be configured to perform both live or file-based captioning to sidecar transcripts

(SMI, SCC, VTT, etc.) from pre-recorded content, while its robust Web interface, API & GPIO options and built-in Scheduler offer significant control options.

enCaption can be networked across LAN's and WAN's to share custom Word Libraries, Filters and other configuration settings across feeds or locations, as well as sharing access to assets for file-based captioning and sidecar transcription files, while also making backup or recovery data sets easier to access.

In addition to commercial broadcasters, ENCO has many governmental customers including the DOD's DIA and U.S. Central Command, the Veterans Administration, TSA, HHS, etc., state legislatures of Pennsylvania and Connecticut, and many local Municipal (PEG) broadcasters around the country.

We at ENCO look forward to exploring how we can be of maximum service to you, in your efforts to deploy a reliable, economical, and powerful automated captioning and transcription solution to benefit your community

We look forward to being of service.

Respectfully Submitted,

Bill Bennett
Media Solutions & Accounts Manager
(248) 827-4440 ext. 205 | bill@enco.com

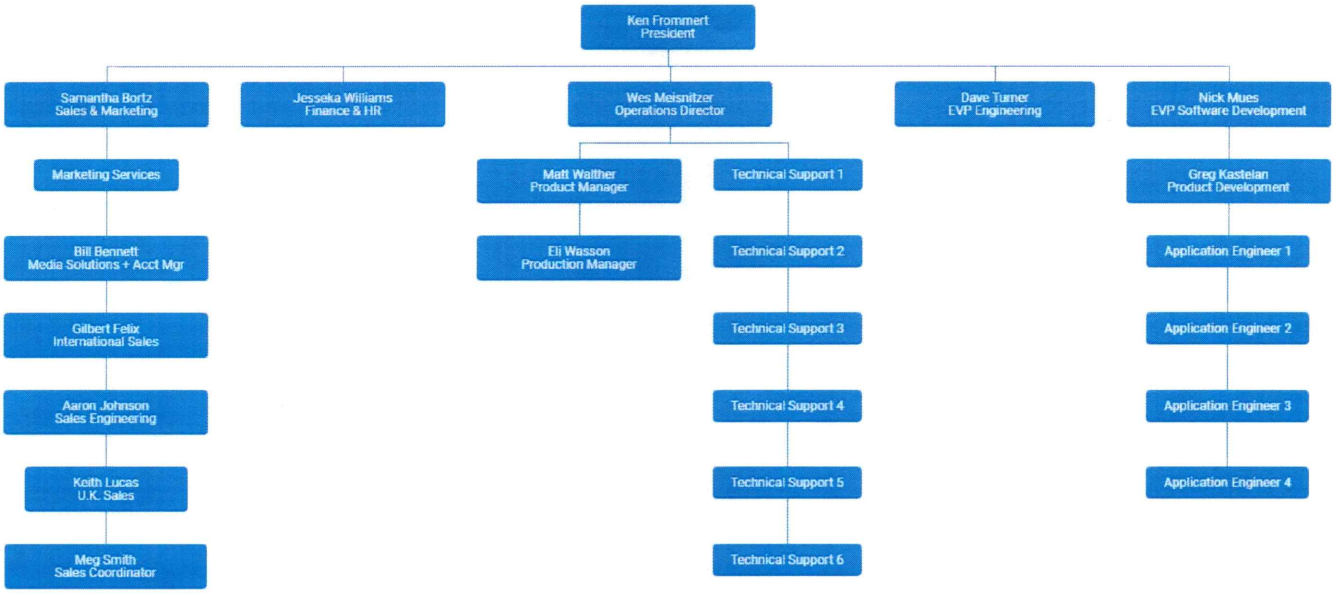
D. Qualifications

ENCO has been in business since the mid-1980's, originally as a maker of high-reliability automation software for industrial applications. In the early 1990's it refocused on automation software for the Broadcast industry, where it has remained ever since. The majority of its staff are based out of its headquarters in Novi, Michigan (just outside of Detroit), from where ENCO serves customers worldwide. ENCO has additional staff and / or production facilities in Texas, Oklahoma, Oregon, Arizona, Pennsylvania, and overseas in the United Kingdom, France and India.

ENCO's management team has been stable for more than five years, the most recent change being long-time employee Ken Frommert taking the lead as President in 2019 to replace ENCO's founder who retired. Ownership has not changed within the last five (5) years, and it is a privately held company. In early 2023 ENCO acquired RUSHWORKS of Texas, a maker of video production software for municipal and company meetings and robotic camera heads. In 2024 ENCO acquired DoCaption, a French company making world-class FPGA (field programmable gate array) software-defined hardware for caption and subtitle signal insertion, monitoring, transcoding.

Almost all of ENCO's engineering, support, sales, marketing and administrative staff who service our North American customers are located in the United States. We do not use off-site / off-shore contractors in support of our North American customers. While we have international representatives around the world, those people serve our international customers expressly. ENCO has decades of experience supporting large station groups both domestically and internationally, with a repudiation for fast response times and through, friendly and competent Customer Support.

Below is an general Organizational Chart for ENCO, indicating the primary roles and responsibilities for functional areas, but does not include staff unrelated to this RFP.



For key members of ENCO's team which will directly service the City of Winter Springs, please find attached Appendix B, Team Experience.

We're horizontally flat which allows for very direct communication from all levels of the company through each vertical group, from entry level employees to the president and management. This keeps us nimble, allowing for rapid communications across the company as new products, customer needs or other topics come up.

For ENCO company references, please find attached the "References Information Form"

In conclusion, with hundreds of commercial, non-profit, federal, municipal, defense and corporate customers using ENCO's enCaption today, it's become known as a brand and company you can trust to deliver an economical, flexible automated captioning solution that is designed to work in a multitude of different applications.

Our system's ability to interoperate with content management and playout solutions such as Granicus makes it an even more helpful solution to the City of Winter Springs, as does the fact that the City has already had the opportunity to evaluate our system on-site for demonstration and testing purposes.

ENCO is recognized as an authority in its field, having been invited many times to present at annual conferences such as the Infocomm, AV/IT Summit, ACM, Association of Public Radio Engineers, Wisconsin Broadcasters Clinic, Live Design International and more.

Further, ENCO has been chosen for many years now to make NAB Conference presentation stages more accessible by being the official live stage captioning provider for NAB in Las Vegas and in New York City

(ENCO also provides the stage captioning for the Wisconsin show mentioned above, LDI, AV/IT Summit and other conferences.

Further, earlier this year ENCO was chosen by the Federal Communications Commission to present to their Artificial Intelligence Closed Caption Working Group, which is part of the FCC Disability Advisory Committee.

Since first introducing into commerce an automated broadcast-tailored automated captioning solution in 2005, ENCO has become a proven leader in affordable, flexible, efficient AI-based on-prem automated captioning, with many satisfied customers. We hope to count the City of Winter Springs as one of our newest.

E. Other Information

Below is additional information on ENCO enCaption, and what a Customer might expect through Commissioning and subsequent Support.

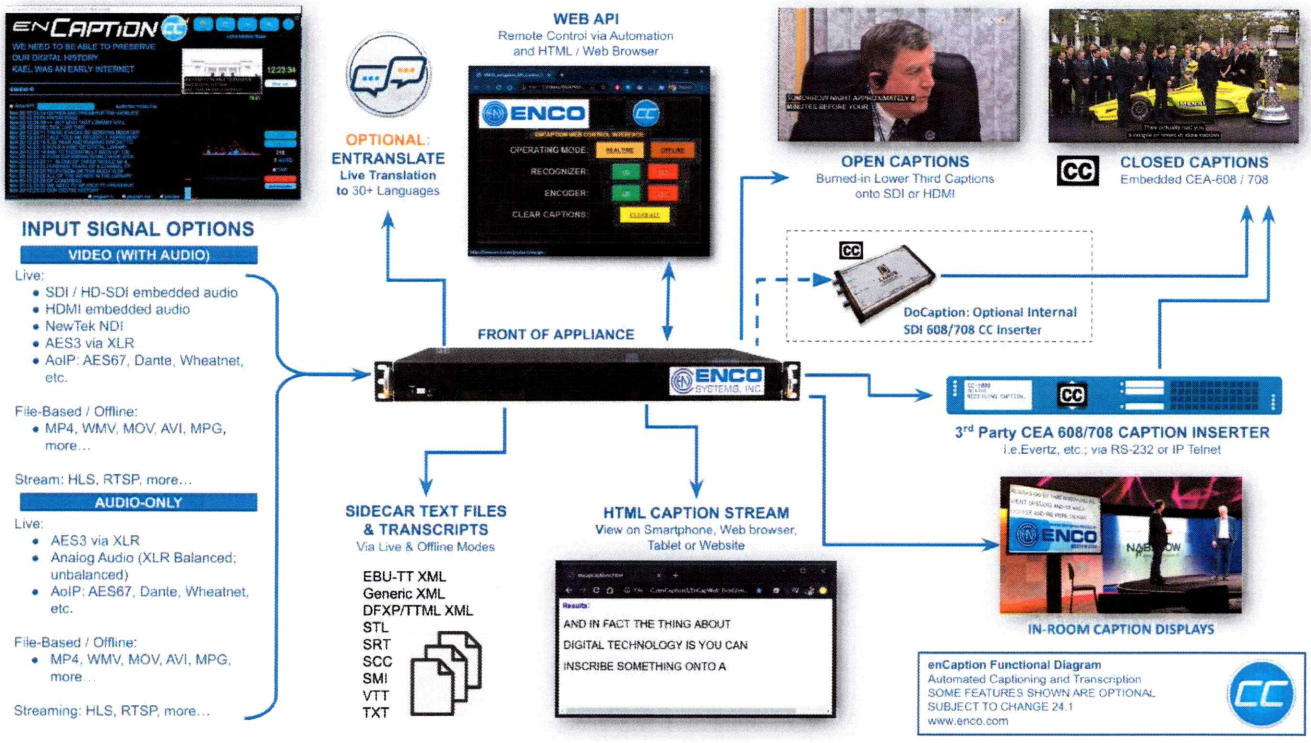
System Information

The enCaption Appliance is an on-prem device which needs no Internet connection for normal operation. The server performs all AI-based automated captioning on the device, as well as saves local text transcripts, and can control external 3rd party SDI captions embedded. It can optionally also be equipped as below, with its own internal SDI embedder card.



Per the overall signal and workflow diagram below, the enCaption Appliance is designed to be very flexible as to what signals to caption from, and how captions should be delivered. It's specifications include:

- Totally on-premise (no Internet needed)
- Can be configured to embed CEA-608/708 Closed Captions into SDI video, or control an external 3rd party CC encoder, and/or overlay Open Captions into SDI or HDMI signals (based on ordering)
- Generates transcripts and sidecar files for video editing
- Live latency around 3 - 4 seconds with accuracy in the mid- to high-90's
- Customizable Word Libraries and corrective Filters to improve accuracy and can "learn" uniquely spelled words, names and jargon, as well as newsroom rundown integration
- Send live captions via HTML for display on Websites, smart devices, or video displays (i.e. CART)
- 19" 1RU Windows 10 Enterprise Appliance



Process: Sales to Commissioning

Generally speaking, each new project (sale) runs along similar lines from initial Customer inquiry, RFP response, to final commissioning and ongoing customer service relationship, generally as follows:

1. Commercial / Sales (customer dialogs, demonstrations, loaners, RFP response, etc.)
2. Order Intake
3. Generation of Sales Orders with all technical and pricing information
4. Alerts to internal Support and Production teams
5. Designs are verified again for accuracy per customer requirements
6. For large order quantities, additional components may purchased by ENCO Production
7. Product Development is alerted for any unique software customization requirements, if any
8. Both software and hardware builds commence
9. Once built, each system is rigorously tested to confirm proper performance
10. Systems is sent to the customer, with instructions on who to contact at ENCO for initial training and configuration, and includes a manual on the computer desktop
11. Once installed by the customer or their designee, it is Commissioned by ENCO Support

12. After Commissioning, the Customer is taken care of by ENCO Support at any time, if they need further assistance or have questions; ENCO's incident tracking system keeps a log of all customer Support interactions for mutual access and auditing

Customer Training & Service

Once installed and running, ENCO works with the customer to help them understand how the customizable Word Libraries and Filters function and are built and maintained, and can advise and assist the customer how to manually add-in their own uniquely spelled words, and ENCO can link enCaption to the newsroom automation system via MOS Listener where present, to enable an automated ingest of unique words as-needed

At any time the Customer can notify ENCO Technical Support via phone or email about any questions or issues they may have, and ENCO can remotely connect (if Internet provided) to collaboratively optimize the system along with the Customer. All Customer interactions are logged into our incident tracker portal for access to an audit trail afterwards.

ENCO support personnel typically respond to any Emergency service support request from its customers within thirty (30) minutes of initial contact by the customer using ENCO's proper Emergency contact number.

ENCO maintains a stock inventory of emergency backup equipment, which can be pulled from to expedite a replacement unit to a Customer site. ENCO Support then works with the customer remotely to help them copy over the configuration files onto the spare or replacement unit (it is the responsibility of the customer to maintain an update-to-date backup store of their configuration data). Software and hardware availability is typically less than one month, and most orders ship within 3 weeks from receipt of PO or deposit.

ENCO has been training its customers on new and updated systems and software for decades, and is widely known for its very high level of sincere customer service. Each training program is different, because every customer base, their environment, their customs and regulations, and their constituents are different and unique.

Training for enCaption is included, and by default includes two hours of remote (online) training per Appliance (unit) for the customer. On-site training is also available at added cost. Further, ENCO publishes manuals, system diagrams and videos which help shed further light on captioning in-general.

The training can be technically detailed, or at a higher level - whichever is needed. It can cover matters such as system theory of operation, usage, audio / video connection, troubleshooting, log file usage, and Word Models - these are the methods of adding unique names, words, spellings, and Filter corrections to enCaption, to maximize its accuracy.

F. Cost and Time (Appendix A)

Per RFP instructions, please refer to Appendix A: Cost Proposal Worksheet for this information

G. Mandatory Proposed Forms

Please see the following pages for these customer-supplied Forms per the following order:

Proposal Form 2 - References Information Form

Proposal Form 3 - Scrutinized Company Certification

Proposal Form 4 - Non-Collusion Affidavit

Proposal Form 5 - Drug Free Workplace Form

Proposal Form 6 - Public Entity Crimes Statement

Proposal Form 7 - E-Verify Statement

Proposal Form 8 - Conflict of Interest Statement

Appendix A - Cost Proposal Worksheet

REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: City of Oakland Park FL

Contact Person: Michelle Fletcher, Administrative Aide, City Clerk's Office

Address: 3650 NE 12th Avenue

City: Oakland Park State: FL Zip: 33334

Phone Number: (954) 630-4299 michellef@oaklandparkfl.gov

Project Cost: $39,865 Date Performed: 2019

Organization: State of Connecticut

Contact Person: Skaff, Paul, Executive Director of Media Services

Address: 21 Oak St., Suite 309

City: Harford State: CT Zip: 06106

Phone Number: (860) 246-1553 x105 paul.Skaff@cga.ct.gov

Project Cost: $254,014.00 Date Performed: 2020

Organization: Senate of Pennsylvania

Contact Person: Dave Costanza

Address: Senate Video Facility

City: Harrisburg State: PA Zip: 17120

Phone Number: (717) 783-8343 dcostanza@occ.pasen.gov

Project Cost: $190,440.00 Date Performed: 2023

PROPOSER Representative Typed Name/Title: Bill Bennett
Media Solutions Account Manager

PROPOSER Representative Signature:

PROPOSER: ENCO Systems, Inc.

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF: Michigan

COUNTY OF: Oakland

The foregoing instrument was acknowledged before me by means of (XX___) physical presence or (_____) online notarization,this 21 day of August, 2024 by KEN FROMMERT the PRESIDENT of ENCO SYSTEMS, INC, a Delaware Corporation (XX) who is personally known to me or (__) who produced _____ as identification.

Notary Public: _____

Print Name: Jesseka Williams

My Commission Expires: 5-4-2029

JESSEKA WILLIAMS
Notary Public - State of Michigan
County of Oakland
My Commission Expires May 4, 2029
Acting in the County of Oakland

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF **Michigan**

COUNTY OF **Oakland**

KEN FROMMERT, being duly sworn, deposes and says that:

(1) He is the PRESIDENT of ENCO Systems, Inc.

(2) The PROPOSER that has submitted the attached response.

(3) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(4) Such Proposal is genuine and is not a collusive or sham solicitation.

(5) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(6) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

_____ President

(Signed) (Title)

STATE OF: Michigan

COUNTY OF: Oakland

The foregoing instrument was acknowledged before me this Aug. 21st 2024 by Ken Frommert,

who is (XX) personally known to me or (____) who has produced _____ as identification and who (did / did not) take an oath.

_____ (Signature of Notary Public)

JESSEKA WILLIAMS
Notary Public - State of Michigan
County of Oakland
My Commission Expires May 4, 2029
Acting in the County of Oakland

Jesseka Williams (Name of Notary Typed, Printed or Stamped) Notary Public

_____ (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

ENCO Systems, Inc. does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug- free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) 8-21-2024 (Date)

KEN FROMMERT
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BD Automated Closed Captioning System.

2. This sworn statement is submitted by (PROPOSER) ENCO Systems, Inc._____ whose business address is

   41551 W 11 Mile Road, Novi, MI 48375-1803 _____ and (if applicable) Federal Employer Identification

   Number (FEIN) is 43-1490600 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of

   your Social Security Number: _____.

3. My name is KEN FROMMERT and my relationship to the PROPOSER named above is PRESIDENT .

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

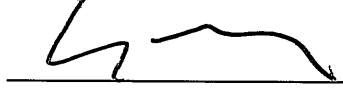
8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

_X_ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

_ The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

_ The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)



8-21-2024

Signature Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF Michigan

COUNTY OF Oakland

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 21st day of August, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 5-4-2029
Notary Public

JESSEKA WILLIAMS
Notary Public - State of Michigan
County of Oakland
My Commission Expires May 4, 2029
Acting in the County of Oakland

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BD
Project Description: Automated Closed Captioning System
PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: ENCO Systems, Inc._____

Authorized Signature:_____

Title:_____

Date: August 21, 2024_____

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BD Automated Closed Captioning System***

This sworn statement is submitted by (PROPOSER) ENCO Systems, Inc. whose business address is

41551 W. 11 Mile Road, Novi, MI 48375-1803 and (if applicable) Federal Employer Identification Number (FEIN) is

43-1490600 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number:

N/A_____.)

My name is KEN FROMMERT and my relationship to the PROPOSER named above is PRESIDENT.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____ 8-21-2024

Signature Date:

STATE OF Michigan

COUNTY OF Oakland

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 21st day of August, 2024 and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 5-4-2029

Notary Signature

JESSEKA WILLIAMS
Notary Public - State of Michigan
County of Oakland
My Commission Expires May 4, 2029
Acting in the County of Oakland

Appendix A

COST PROPOSAL WORKSHEET

Part 1: The cost of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed. $ **Varies based on Buyout or Lease, see below**_____

Re-state figure in words **Varies based on Buyout or Lease, see below**_____

Part 2: Estimated time from receipt of purchase order to operational system Usually ships in 3_____ weeks

Part 3: Individual cost details of additional options, accessories and/or post warranty support services:
Add additional rows if required

Description	Qty.	Unit Cost
BUYOUT OPTION:		
enCaption 5 Up Front One-time Initial setup and configuration for all enCaption builds and usage amounts, includes up to 2 hours of remote training.	1	$1,795.00
enCaption 5 BO LIVE Price is for enCaption 5 BUY OUT - LIVE VERSION. Hardware and Software; On-Prem (no Internet needed); Windows Appliance; Can control an external customer-provided CEA 608/708 SDI Closed Caption embedder or optional internal CC embedder. Unlimited 24/7 usage (no overage fees); License good for 10 years; 5 year warranty on the hardware; after 1st year software upgrades need support contract.	1	$45,995.00
LRBox-CCIns CEA-608/708 Closed Captions embedder ("DoCaption"). 3G/HD/SD-SDI Closed Caption Embedder card installed inside enCaption chassis. Inserts CEA-608/708 CC data into SDI VANC field, while passing-through audio + video signal fed into it; 1 year warranty on the hardware	1	$4,995.00
enCaption 4 Support Per Year / Annual Support for EnCaption 4: ENCO Support is required for the first year. Support includes 24/7 telephone and email support from US-based Support engineers. After 1st year, Support is recommended. Support includes any software upgrades at no cost as long as Customer is covered under the annual Support contract (typically 3 - 4 updates per year).		$5,995.00
TOTAL: BUYOUT OPTION / UNLIMITED USE		**$58,780.00**
ANNUAL LEASE OPTION:		
enCaption 5 Up Front One-time Initial setup and configuration for all enCaption builds and usage amounts, includes up to 2 hours of remote training.	1	$1,795.00
enCaption 5 30 LIVE Price is **per month** of enCaption4 usage per Live Signal; Includes Hardware, Software, and 24/7 Support; Appliance licensed for 30 Hours / Month (360 Hr / year); Overage fee of $35 / hour if allotment exceeded. Windows Appliance; Can control an external customer-provided CEA 608/708 SDI Closed Caption embedder or optional internal CC DoCap embedder; includes 24/7 telephone and email support from US-based engineers and any software upgrades at no cost NOTE: Other per-month hourly usage options are: 60, 120, 240, 360, 720	1	**$995.00 PER MONTH** (up to 30 hours of usage per month)
LRBox-CCIns Price **is per month of encoder module ("DoCaption") lease** per Live Signal; 3G/HD/SD-SDI Closed Caption Embedder card installed inside enCaption	1	**$195.00 PER MONTH**

chassis. Inserts CEA-608/708 CC data into SDI VANC field, while passing-through audio + video signal fed into it; ** Price is for 24-month Lease ** 12-month Lease is would be $295 / month		24 month lease
TOTAL: ANNUAL LEASE OPTION / 30 HOURS PER MONTH		
First Month Cost:		**$2,985**
Each Additional Month Cost (24 Month Commitment):		**$1,190**
		$
		$
		$
		$
		$

C. Agrees:

1. To hold this Proposal open for 90 calendar days after the bid opening date.
2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
3. To accept the provisions of the Instructions to PROPOSERS.
4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
5. To accomplish the work in accordance with the contract documents.

D. Certifies:

1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

H. Florida State Corporate Filing

Please see the following pages for ENCO's corporate documents

Appendix B, Team Experience

For key members of ENCO's team which may directly service the City of Winter Springs, please find below their backgrounds.

Bill Bennett
Media Solutions & Accounts Manager:

- RFP Role: Commercial Project Manager for City of Winter Springs
- 20+ years' experience in the broadcast production and software development industries
- Manager of very large-scale technical projects including six (6) Olympics

Samantha Bortz
Sales Manager:

- 15 years managing teams of sales, customer service and marketing for software development industry

Wes Meisnitzer
Operations Director:

- RFP Role: Support Project Manager for City of Winter Springs
- 9 Years overseeing ENCO Support, Product management and operations responsibilities added more recently

Dave Turner
Vice President, Engineering (CTO):

- ENCO-Founder and head of ENCO technology and engineering
- Technical Director for live major market news broadcasts (CBS Detroit)

Jesseka Williams
Finance & Human Resources

- Joined ENCO in 2022
- Prior, brought 6 years managing finance and/or Human Resources for multi-million-dollar enterprises

Electronic Copy

Proposal to Provide

Automated Closed Captioning Systems

RFP # 07-24-01 BD

City of Winter Springs, Florida

Opening: August 23rd, 2024, 2:00PM

Procurement Department
1126 East State Road 434
Suite 7001
Winter Springs, Florida 32708

ATTN: Stuart MacLean, Procurement Manager

Presented by:
Anthony Sirna
Account Manager – Government
Verbit Inc.
169 Madison Ave #2316
New York, NY 10016

Tel: 347-923-0098
Tony.s@verbit.ai

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Experience and Industry Leadership 7
Infrastructure and Data Privacy 7
Team Experience 7
Conclusions 8

C. OTHER INFORMATION 9

CAPABLE TO SUPPORT BOTH VIDEO AND OPEN CAPTIONING OF LIVE MEETINGS AND EVENTS 10

EASILY CONFIGURABLE FOR DIFFERING PROGRAMS WITH A BUILT-IN EASY-TO-USE SCHEDULER 10

Low latency speech to text in live, real-time environments with speed and accuracy 11
Connection to a Granicus encoder with SDI input 11
Vendor must provide minimum 2 hours of remote training 13
Windows or Linux operating systems which are managed and monitored from a web browser 13
AR/VR/XR graphics capabilities 13
Compliant with ADA and 21st Century CVAA guidelines 13

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Introduction Letter

Stuart McLean
Procurement Manager
The City of Winter Springs

August 23, 2024

Dear Stuart,

On behalf of Verbit, I would like to thank you for the opportunity to respond to your Request for Proposal for an Automated Closed Captioning Solution. We acknowledge the general terms and conditions.

Verbit is a leading technology accessibility company that delivers a wide range of access solutions, including live, real-time automated and human captioning, audio description, and transcription and translation services for municipal, state, and federal governments.

Our CaptiveTM AI powered captioning solution meets the requirements of the City. In addition, we are happy to offer the City a no cost pilot and evaluation.

- Fast (latency 2 – 4 seconds), low cost and highly accurate captions, with an AI Model tailored to the City's meetings and content. Our recent scoring of Captivate for the Presidential debates shows our solution performing 1% higher than our human captioning.
- Easy-to-use scheduler designed for order placement for simultaneous and multiple programs.
- No cost training for the City's staff during implementation and at any time thereafter.
- Our solution proposes an Enco caption encoder for use with Granicus. We can provide the Enco device directly to the City.
- 24 x 7 x 365 Customer Support and a dedicated Account team at no cost
- We own our technology and intellectual property, as a result we can advance our ASR model specific to customers content and domains, unlike other vendors which are reliant on 3rd party speech- to-text software.

Thank you for this opportunity and we look forward to hearing from you soon. If you have any questions, please do not hesitate to reach out to our team.

Sincerely,

J.P Son

A. Proposer Information and Acknowledgement Form

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PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For
RFP # 07-24-01 BD
Automated Closed Captioning System

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: Verbit, Inc.

TAX ID# SNN or EIN: 37-1841582

PROPOSER ADDRESS: 169 Madison Ave. #2316, New York, NY 10016

PURCHASE ORDER ADDRESS: Same

PHONE NUMBER: _____

COMPANY WEBSITE: www.verbit.ai

COMPANY CONTACT (REP): _____

CONTACT EMAIL ADDRESS: _____

SIGNATURE: _____ JP Son, VP & Secretary

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BD Pertaining To: Automated Closed Captioning System
   2. Addenda:
      Number: _____, Dated _____.
      Number: _____, Dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

B. QUALIFICATIONS

General Information

Verbit Inc. was founded in 2016 and registered as corporation the same year in the State of Delaware and is one of the largest providers of real-time and post-production captioning. In 2022, Verbit acquired VITAC Corporation, the largest provider of captioning services in the U.S. We have over 300 employees.

In November 2023, we announced our Series E private financing of $250 Million with a valuation of $2 billion. Verbit acquired several leading companies in the transcription and captioning industry including AutomaticSync Technologies and Take Note. As a privately held company, we are unable to disclose financial data in this RFP.

Over the past three decades, our government and private customers have relied on us to deliver FCC-level accuracy for public government broadcasts, events, and meetings.



We released our Auto Captioning solution, **Captivate™**, achieving adoption in several major media outlets including CNN, Max, and The Weather Channel for example, including coverage of the recent Presidential debates.

Company Leadership

In July 2024, when Yair Amsterdam was appointed Chief Executive Officer.

Executive Team:

URL to Leadership Profiles: https://verbit.ai/our-leadership/

Yair Amsterdam, Chief Executive Officer
Sagi Rothman, Chief Financial Officer
Jim Homes, Chief Revenue Officers
Barak Rozenblat, Chief Operating Officer
Dikla Edlis, Chief Human Resources Officer
JP Son Chief Legal Officer
Simon Rapoport Chief Technology Officer
David Landsber, V.P. of Product

Senior Management – Real-Time

Brenda Le, VP Real-time Operations
Doug Karlovits – General Manager Vitac
Adi Margolin, Director of Product (Auto Captions and ASR Technology)

Experience and Industry Leadership

- Over 200 Government customer including County, Municipal and Federal.
- Over 3,000 Total Customers – specific vertical focus in Government - Municipal, State and Federal, Legal/Court
- Annual Live Captioning Hours: + 580,000
- Other Services Provided: Postproduction Captions, Translation and Localization, Audio Description, Confidential Note Taking and Meeting Minutes
- Member Federal Communications Commission - Disability Advisory Committee Video Programming
- Accessibility Advisory Committee (VPACC) – 21st Century Video Communications Accessibility

Infrastructure and Data Privacy

Our technology is designed specifically for captioning and transcription is hosted on Amazon Web Services and holds SOC 2 Type II and ISO27001:2022 certifications. Further information on our security and compliance practices is available at the following link - https://verbit.ai/trust/ and our accessibility credentials which comply with Section 508 of the Rehabilitation Act of 1973 and WCAG 2.1 AA standards are available at the following link - https://verbit.ai/vpat/

You may review our privacy policy on our web page at the following links:
https://verbit.ai/privacy-policy/

Team Experience

The Key team members who will be assigned to service the City are listed below. Resumes are attached to this RFP.

Laura Humbert, Senior Client Services Associate
Role: Customer Implementation and Project Management
Over 20 Years, 6 Years with Verbit

Scott Helfin, Solutions Engineer
Role: Caption delivery, end-points and hardware configuration
Over 20 years, 3 Years with Verbit

Anthony Sirna, Account Manager Government Services
Role: Dedicated Customer Manager, Business and Contracts, Escalations
Years of Experience: Over 20 Years, 5 Years with Verbit

Nafeesah Pierkhan, Director of Government and Legal Services
Role: Executive Sponsor
Year of Experience: 20 Years, 4 Years with Verbit

Conclusions

By selecting us as your captioning technology company, the City will receive the partnership and support of a company with more than 30 years of experience delivering captioning services to government agencies. We thoroughly understand the needs of municipal government captioning. Our references are strong and demonstrate our commitment to our customers. We are experienced working with agendas, adapting to last minute meeting changes, identifying multiple speakers and varying accents, and connects with Granicus.

We are offering a complete solution leveraged by our strategic partnership with Enco, a leading manufacturer of captioning encoders and services. We announced this partnership earlier this year (read more here) and will supply all the necessary equipment, installation, and support as required. The cost of ownership and ongoing year to captioning is a fraction of the cost of traditional captioning, in addition we will honor our Captivate pricing for the next renewal.

Verbit's Captivate™ is the ideal solution for the City of Winter Springs, providing fast (low latency), accurate (FCC standards), and customized speech-to-text transcription for your live and pre-recorded meetings and events. Our testing of Captivate shows near human levels of accuracy with our human curated process and specific model topics.

We offer project management and implementation at no additional cost. During implementation we will run testing of the entire solution, run City programing through Captivate, and provide metrics on accuracy.

Our infrastructure provides highly availability and unlimited scalability for auto-captioning. The City will have the advantage of professional implementation and training at no additional cost, as well as 24 x 7 x 365 dedicated Customer Support and service.

C. Other Information

Automated closed captioning & transcription of speech to text in a fast and accurate manner

Verbit's Captivate™ auto captions, is an AI-powered live ASR captioning solution designed to provide fast (2-4 second latency), highly accurate, and cost-effective solution at a fraction of the expense of human captioning. We own our technology and intellectual property. As a result we can develop and advance our product for specific customers, unlike other vendors who use 3rd party ASR solutions.

Our solution is tailored to meet the unique needs of your organization, ensuring seamless integration with your existing workflow and infrastructure. **Accessibility regulations require us to have data related to speaker identification and accurate punctuation.**

Captivate continuously adapts/fine-tunes customer's ASR solutions for words, phrases and language patterns specific to the domains (government, education, etc.), council meeting and topics such as budgeting, emergency broadcast, and general sessions.

Real World Results:

Captivate was used to deliver captions for the recent U.S. presidential debate. The same session, with the same audio, was captioned by both Captivate and humans for comparison. With our AI-powered offering performing 1% better than the average captioner. Only a handful of top captioners performed slightly better than Captivate in terms of WER.

"Customization" and "Personalization" of City Content:

Customization is where we customize for a topic, ensuring a higher degree of accuracy for customers. For example, "nineteen ninety-nine" can be the year 1999 if spoken in a history class or a price $19.99 on a shopping channel.

We can personalize content for clients, tailoring the output to their specific needs. For example, the names of City Council members or agencies. Our highly trained human prep team will implement a special term-boosting and masking procedures during the setup process.

Captivate Key Features:

1. **Tailored ASR**: Our solution is designed to adapt to your specific requirements, incorporating important terms, acronyms, and terminology to ensure accurate transcription.
2. **Accuracy**: Our AI-powered engine is trained on tens of thousands of audio hours and supervised by professional human captioners, ensuring a quality difference of only +/- 0.5% compared to human captioners.
3. **Flexibility**: Our solution supports both video and open captioning of live meetings and events, with the ability to schedule and upload previously recorded media for captioning or transcription
4. **Scalability**: Our infrastructure is highly available, with multiple availability zones and regions to ensure that our services are available whenever you need them.
5. **Security**: Our platform is designed with security and privacy in mind, with AES-256 encryption, industry-standard protocols, and regular risk assessments to ensure the protection of your data.
6. **Multi-speaker Identification**: Our solution can recognize different people speaking, using the industry-standard double-chevron “>>” symbol.
7. **Low Latency**: Our real-time captioning streaming solution provides fast and accurate captions, with latency of 2-4 seconds for automated, verbatim English captions.
8. **Compliance**: Our solution is compliant with ADA and 21st Century CVAA guidelines, ensuring that your organization meets the latest accessibility standards

Capable to support both video and open captioning of live meetings and events
Verbit provides captioning services for both live and pre-recorded meetings and events.

Easily configurable for differing programs with a built-in easy-to-use scheduler

We provide an easy-to-use real-time scheduler for individual meetings events and simultaneous events. The scheduler is available on our Customer Platform. Event transcripts or captioning files can be made available to the city after the live session is completed.

Recorded media files are uploaded directly to the Customer Portal or can be obtained from common third-party applications and out-of-the box integrations. Files are processed directly inside our closed, encrypted platform. Data is never downloaded onto third-party devices and/or stored externally. Access to the platform is Username- and Password-protected and features two-factor authentication

Our Customer Portal include the following features:

- The ability to upload and place orders for multiple job types (mp4, mp3, wav., other)
- Resubmit transcripts for review. The option to edit transcripts if required after completion.
- Download time-stamped transcripts in multiple file formats (PDF, Word, TX)
- Media file audio corrections to minimize audio distortion.
- Create and upload profiles and invoicing by department, billing code, etc.

Capable of multi-speaker identification to recognize different people speaking

Our solution identifies multiple speakers. Change in speakers are identified using standard double-chevron ">>" symbol. Captivate supports different pre-set for speakers:

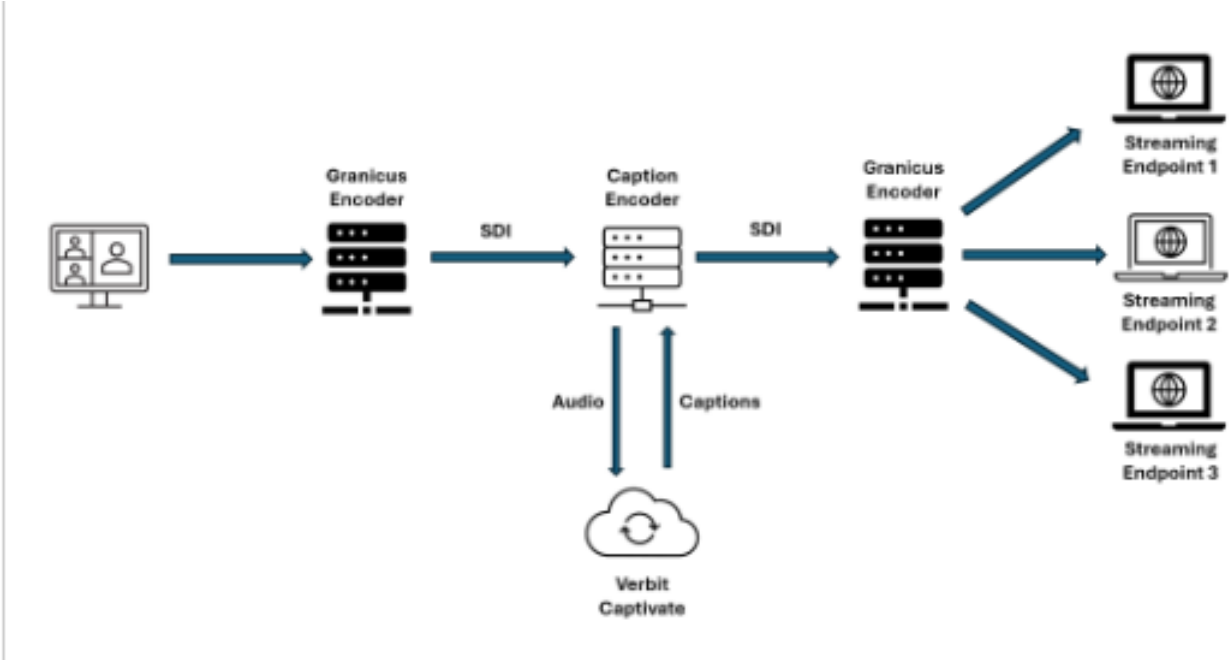
-Mostly Solo Speaker (Lectures, Presentations, Speeches etc.)
-Normal Conversation (Meetings, for example)
-Multiple party lively conversation (Municipal Council Meeting for example)

Low latency speech to text in live, real-time environments with speed and accuracy
Connection to a Granicus encoder with SDI input

Latency can be expected to be 2-4 seconds for automated, verbatim English captions with 98+% accuracy. We monitor our ASR performance throughout each day, and track performance metrics on our internal dashboard.

Integration with Granicus Encoder

We can connect to your Granicus encoder with SDI input. Below is a suggested captioning workflow with Granicus. Upon RFP award, Verbit will work with City of Winter Springs to determine final connectivity requirements.



Recommended Enco EN 848 Encoder Specification:
FPGA-based ultra-low latency 3G SDI Closed Caption encoder
Zero video frame delay / < 1 frame insertion delay
Dual SDI outputs: Closed and Open Caption options
Loop-thru failover bypass relay
Customizable software-defined FPGA architecture
Downward compatible to HD / SD
Integral power supply

Hardware Specs:
Enclosure 1RU 19" 1RU chassis with internal power supply.
100-240V operation
Includes internal LRBox 3G/HD/SD-SDI CEA-608/CEA-708 inserter card.
Provides one bypass relay protected output and one output for monitoring.
Captions decode and overlay on the monitoring output.
Ethernet and USB port data I/O.
Supports SMPTE CDP & Grand Alliance protocols as well as legacy “Ctrl-A” protocols.
Can support optional RS232 or RS422 serial port firmware and hardware add-on modules

Our Solution works with multiple common broadcast and streaming services for real-time captions, including:

- Verbit-connect – audio connection for mobile or PC devices
- Encoders (virtual and hardware)
- Cable/TV
- Common platforms such as, YouTube, Zoom, Teams, Webex

24 X 7 availability, 365 days per year

Our support services are available 24/7/365, with multiple channels for technical and ordering support, including real-time Chat within the customer platform, email and a technical hotline. Our customer platform also provides a comprehensive knowledge base.

Vendor must provide minimum 2 hours of remote training

All training is provided as part of the City's implementation phase. At any time throughout the relationship with the City, we are happy to provide additional training at no charge.

Windows or Linux operating systems which are managed and monitored from a web browser

Verbit is a browser-based solution best accessed using Google Chrome and other major web browsing applications via Windows, MacOS, Android and iOS platforms.

AR/VR/XR graphics capabilities

Verbit is currently investigating the usage of AR/VR/XR graphics relative to captioning of content.

Compliant with ADA and 21st Century CVAA guidelines

Verbit's team believes in the value of transparency regarding online accessibility and makes its VPATs available for your review. The VPATs below demonstrate compliance with WCAG 2.1 AA standards.

Link to Our VPAT https://verbit.ai/vpat/

Link to Verbit's Accessibility Hub:https://verbit.ai/accessibility-hub/

D. Cost and Time

Appendix A
COST PROPOSAL WORKSHEET

Part 1: The cost of all hardware, software, installation and system commissioning costs as well as a minimum of one year warranty coverage for all work performed. $ 15,148.00

Re-state figure in words Fifteen thousand and one hundred and forty-eight dollars

Part 2: Estimated time from receipt of purchase order to operational system 2-3 weeks

Part 3: Individual cost details of additional options, accessories and/or post warranty support services:
Add additional rows if required

Description	Qty.	Unit Cost
Captivate Live - Auto Captions with customer specific ASR Model	250 Hours	$ $3,750 ($0.25 Per Minute)
Implementation and Training (2 Hours Minimum)	2 Hours	$ No Cost
Annual Customer Support	N/A	$ No Cost
		$
Recommended Encoder Hardware		$
ENCO EN 848 Encoder	1	$ 10,199.00
Enco Annual Support Agreement	1	$ 1,199.00
		$
		$
Optional Services as Required		$
Recorded Media/Video Captioning 72 Hour Turn Around - ASR + Human (Edited Transcript)	Per Minute	$ 1.70
Recorded Media/Video Captioning 96 Hour Turn Around ASR + Human (Edited Transcript)	Per Minute	$ 1.50
		$
		$
		$
		$
		$
		$

Appendix B

Brief Resume for Key Personnel

Laura Humbert
Senior Account Manager – Government
linkedin.com/in/laura-humbert-89615512

Education:
- Waynesburg University, BA
- Franciscan University, MS

Recent Experience
Vitac, Verbit, Inc. (2018 to Present) Pittsburg, PA
Senior Client Services Coordinator/Onboarding Manager

FlatWorld. (2017 - 2018) Boston, MA
Director Account Management – Legal Services
Quality Assurance Analyst

ArtsAnywhere Inc Bridgeville, PA
Client Success Manager (2015 to 2018

Scott Helfen
Solutions Engineer
inkedin.com/in/scotthelfen/

Education:
- Purdue University

Recent Experience
Verbit, Inc. (2022 to Present) Fort Lauderdale, FLA
Senior Client Services Coordinator/Onboarding Manager

Marchex (2017 - 2022) Seattle, WA
Senior Sales Engineer

Nuance Communications
Enterprise Engineer (2010 to 2017) Seattle, WA

Anthony Sirna
Senior Account Manager – Government
linkedin.com/in/asirna

Education:
- Marist College, BA
- Fordham University, MA (

Recent Experience
Verbit, Inc. (2019 to 2024)
Senior Account Manager - Public Sector and Government

Workshare Inc. (2016 - 2021)
Director Account Management – Legal Services

FloTech, Inc
Customer Solutions Manager, 2010 to 2016

Nafeesah Pierkhan
Director, Legal and Government Services
linkedin.com/in/nafeesahpierkhan

Education:
- OnderwijsGroep Haaglanden, BA Business Administration

Recent Experience:
Verbit, Inc (2020-2023), New York, NY
Director Legal Services

Vertiex Legal Solutions (2013 - 2023) Maimi, FLA
Operations Manager

City of Hauge (2010 - 2011), The Hauge Area, Netherlands
Program Coordinator

E. Mandatory Proposal Form

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REFERENCE INFORMATION FORM

RFP # 07-24-01 BD

Automated Closed Captioning System

Organization: City of Rialto, CA

Contact Person: Jonathan Ballard, IT MANAGER

Address: 150 S. Palm Avenue

City: RIALTO State: CA Zip: 92376

Phone Number: (909) 421-7220

Project Cost: $14,000 Annual Date Performed: 8/2023 to Present

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Organization: Federal Resources Corporation/ U.S. Department of State

Contact Person: Julie Trainor, Executive Vice President

Address: 440 West 8th Street

City: Erie State: PA Zip: 16502

Phone Number: (253) 709-5115

Project Cost: Over 50,000 Annual Date Performed: 2020 to Present - Period of Performance for Department of State

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Organization: The Washington Post

Contact Person: Greg Bevan

Address: 1301 K St. NW

City: Washington State: DC Zip: 20071

Phone Number: (215) 783-5505

Project Cost: Over 50,000 Date Performed: 2017 to Present

PROPOSER Representative Typed Name/Title: Anthony Sirna

PROPOSER Representative Signature: Anthony Sirna

PROPOSER: Verbit

Verbit

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF New York

COUNTY OF New York

The foregoing instrument was acknowledged before me by means of (✓) physical presence or (_____) online notarization,

this 9th day of August, 2024 by IP Son the VP & Secretary of Verbit, Inc., a Delaware Corporation (✓) who is personally known to me or (_____) who produced _____ as identification.

Notary Public: _____ Commissioned in NY County, NY, USA

Print Name: Jaylen Lee 02LE6445817

My Commission Expires: 1-3-27

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF New York

COUNTY OF New York

JP Son, being duly sworn, deposes and says that:

(1) He/she is VP & Secretary (Title) of Verbit, Inc. (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed) VP & Secretary (Title)

STATE OF New York

COUNTY OF New York

The foregoing instrument was acknowledged before me this 9th of August 2024 by JP Son

who is (✓) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

(Signature of Notary Public)

Joyeon Le (Name of Notary Typed, Printed or Stamped) Notary Public

02LE6045817, -Commission expires 1-3-27 (Commission Number)

RFP 07-24-01BD Closed Captioning System

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

Verbit, Inc. does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) August 9, 2024 (Date)

IP Son
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BD Automated Closed Captioning System.

2. This sworn statement is submitted by (PROPOSER) Verbit, Inc. whose business address is 169 Madison Ave #2316 New York, NY 10016 and (if applicable) Federal Employer Identification Number (FEIN) is 37-1841582 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is JP Sen and my relationship to the PROPOSER named above is VP & Secretary.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

_√_ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____ The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____ The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

Signature: _____ Date: August 9, 2024

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF New York

COUNTY OF New York

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 9th day of August, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 1-3-29

Notary Public

Jaegeon Lee
Comissioned in N.Y. County, NY, USA
02LE6445817

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BD

Project Description: Automated Closed Captioning System

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: Verbit, Inc.

Authorized Signature: JP Sun

Title: VP & Secretary

Date: August 9, 2024

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BD Automated Closed Captioning System***

This sworn statement is submitted by (PROPOSER) Verbit, Inc. whose business address is 169 Madison Ave. #2316, New York, NY 10016 and (if applicable) Federal Employer Identification Number (FEIN) is 87-1841582 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.)

My name is JP Son and my relationship to the PROPOSER named above is VP & Secretary.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

Signature August 9, 2024 Date:

STATE OF New York

COUNTY OF New York

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 9th day of August, 2024 and is personally known to me, or has provided _____ as identification.

Notary Signature My Commission expires: 1-3-27

Jaeyeon Lee, comissioned in NY, NY, USA
01LE6445817

F. Florida State Corporate Filing

2024 FOREIGN PROFIT CORPORATION ANNUAL REPORT

FILED
Apr 09, 2024
Secretary of State
3180859221CC

DOCUMENT# F23000000210

Entity Name: VERBIT, INC.

Current Principal Place of Business:

169 MADISON AVE
2316
NEW YORK, NY 10016

Current Mailing Address:

169 MADISON AVE
2316
NEW YORK, NY 10016 US

FEI Number: 37-1841582

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

CT CORPORATION SYSTEM
1200 SOUTH PINE ISLAND ROAD
PLANTATION, FL 33324 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE:

Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	VP	Title	SECRETARY
Name	MIKHEL, TAMARA	Name	SON, JOHN P.
Address	169 MADISON AVE 2316	Address	169 MADISON AVE 2316
City-State-Zip:	NEW YORK NY 10016	City-State-Zip:	NEW YORK NY 10016
Title	VP	Title	TREASURER
Name	SON, JOHN P.	Name	MIKHEL, TAMARA
Address	169 MADISON AVE 2316	Address	169 MADISON AVE 2316
City-State-Zip:	NEW YORK NY 10016	City-State-Zip:	NEW YORK NY 10016
Title	DIRECTOR	Title	DIRECTOR
Name	SON, JOHN P.	Name	MIKHEL, TAMARA
Address	169 MADISON AVE 2316	Address	169 MADISON AVE 2316
City-State-Zip:	NEW YORK NY 10016	City-State-Zip:	NEW YORK NY 10016
Title	PRESIDENT		
Name	ROTHMAN, SAGI		
Address	169 MADISON AVE 2316		
City-State-Zip:	NEW YORK NY 10016		

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: JOHN P. SON SECRETARY 04/09/2024

Electronic Signature of Signing Officer/Director Detail — Date

CONSENT AGENDA ITEM 301

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Addendum to IT Managed Services Contract - EssentialNet Solutions

SUMMARY

On October 1st 2023 The City of Winter Springs entered into an IT Managed Service agreement with EssentialNet Solutions LLC. Since entering into this agreement City staff has evaluated the IT Managed Service needs of the City to determine the appropriate service level.

From October 1st of 2023-March of 2024 over 50% of the work orders generated by City Staff to the the vendor were from the Police Department. The IT support requirements of a fully functional police department will continue to increase as the City continues to equip our officers with technology to assist them in their duties. The additional headcount proposed in the addendum will facilitate an additional contracted IT technician to be primarily dedicated to the Police department and 2 contracted IT technicians to be dedicated to the other governmental departments during normal business hours.

Currently the City is paying $266,000 annually to EssentialNet Solutions LLC. The proposed increase of an additional headcount will increase the annual cost of this service to $344,000 annually.

FUNDING SOURCE

This expense is currently budgeted in the FY24-25 budget. Execution of the addendum is contingent on City Commission approval of the FY24-25 budget.

RECOMMENDATION

Staff recommends the City Commission authorize the Interim City Manager to execute the Addendum to IT Managed Service Agreement.

ADDENDUM TO
IT MANAGED SERVICES AGREEMENT

THIS ADDENDUM TO IT MANAGED SERVICES AGREEMENT ("Addendum") is made and entered into this ___ day of _____, 2024, by and between the **CITY OF WINTER SPRINGS, FLORIDA**, a Florida Municipal Corporation located at 1126 E. State Road 434, Winter Springs, Florida 32708 ("City") and **ESSENTIALNET SOLUTIONS, LLC**, with its principal place of business located at 2301 W. Eau Gallie Blvd., Suite 104, Melbourne, FL 32935 ("**Service Provider**" or "**Contractor**"). The City and Contractor hereby agree as follows:

WITNESSETH:

WHEREAS, the City and Contractor previously entered into the IT Managed Services Agreement ("Agreement") on October 1, 2023, for the purpose of Contractor providing managed IT services for the City; and

WHEREAS, the City and Service Provider desire and mutually agree to increase the quantity of on-site staff the Service Provider will provide to the City as outlined in Section 2, – *Place of Work* and Section 3, – *Time Devoted To Work* of the Agreement from two (2) employees to three (3) employees for the duration of the Agreement as provided herein; and

WHEREAS, the City and Service Provider desire and mutually agree to Amend Exhibit B of the Agreement, *RFP Appendix A – Cost Proposal Worksheet*, to account for the increase in on-site staff which the Service Provider agrees to provide to the City as provided herein; and

NOW THEREFORE, in consideration of the mutual promises herein contained, and for good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties hereto agree as follows:

1.0 Recitals. The foregoing recitals are hereby deemed to be true and correct and are incorporated herein by this reference as a material part of this Addendum.

2.0 Increase in Personnel. Section 2, *Place of Work*, and Section 3, *Time Devoted to Work*, of the Agreement are hereby amended to provide that the Service Provider agrees to provide **three (3)** of its employees to work on-site at the City of Winter Springs full-time during its normal business hours.

3.0 Increase to Compensation. Service Provider and City hereby agree to increase the compensation provided by City to Service Provider by **$6,500.00** per month for monthly minimum required services to account for the additional employe which Service Provider will be providing to City. Exhibit B, *RFP Appendix A - Cost Proposal Worksheet*, is hereby amended as follows (underlined type indicates additions and strikeout type indicates deletions, while asterisks (* * *) indicate a deletion from this Addendum of text existing in Exhibit B. It is intended that the text in

Exhibit B denoted by the asterisks and set forth in this Addendum shall remain unchanged from the language existing prior to the adoption of this Addendum):

* * *

Part 1: Minimum Required Services

Cost per Month to the CITY for the Minimum Required Services defined in the Statement of Work shall be:

~~$22,225.00~~ **$ 28,725.00.**

Pricing provided in the monthly total above assumes three full-time technicians, Managed Services agents and patch management, and advanced endpoint security protection (estimated 215 workstations, 35 servers).

* * *

4.0 Other Terms and Conditions. Any other term or condition of the Agreement not expressly modified by this Addendum shall remain in full force and effect.

5.0 Conflicts. In the event of any conflict(s) between this Addendum and the Agreement, this Addendum shall prevail

IN WITNESS WHEREOF, the Parties cause this Addendum to be executed and attested to by their respective authorized officials.

AGREED:

CITY OF WINTER SPRINGS:	**ESSENTIALNET SOLUTIONS:**
_____	_____
Philip Hursh	Name: _____
Interim City Manager	Title: _____
Date: _____	Date: _____

IT MANAGED SERVICES AGREEMENT

THIS AGREEMENT ("**Agreement**") is made this _01____ day of __October_____, 2023, by and between the **CITY OF WINTER SPRINGS**, a Florida Municipal Corporation headquartered at 1126 East State Road 434, Winter Springs, Florida, 32708 ("**City**") and **ESSENTIALNET SOLUTIONS, LLC**, with its principal place of business located at 2301 W. Eau Gallie Blvd., Suite 104, Melbourne, FL 32935 ("**Service Provider**" or "**Contractor**").

RECITALS:

WHEREAS, City is a municipal corporation existing under the laws of the State of Florida, and in the conduct of business, desires to obtain all materials, service, equipment, and labor for the provision of Managed Information Technology ("IT") Services; and

WHEREAS, Service Provider is an active for-profit Florida limited liability company, duly licensed and existing under the laws of the State of Florida, experienced in the foregoing, and agrees to perform these services for the City under the terms and conditions set forth in this Agreement; and

WHEREAS, Service Provider and City are hereby bound by the terms and conditions of this Agreement. City and Service Provider are hereby further bound by the City's Request for Proposals RFP #06-23-01 JD, attached hereto as **Exhibit "A"** and incorporated herein by this reference; and Service Provider's Response to RFP #06-23-01 JD, dated July 26, 2023, attached hereto as **Exhibit "B"** and incorporated herein by this reference; and

WHEREAS, Service Provider will comply with all applicable federal, state, and local regulations regarding the provision of information technology services; and

WHEREAS, City shall not be held responsible for any violations of any federal, state, or local regulations that occur related to Service Provider's provision of information technology services; and

WHEREAS, the City of Winter Springs deems the services being provided by this Agreement serve a public purpose and are in the best interests of the public health, safety, welfare, convenience, and morals of the citizens of Winter Springs.

NOW THEREFORE, in consideration of the mutual premises set forth in this Agreement, it is agreed by and between City and Service Provider as follows:

SECTION ONE
NATURE OF WORK

Service Provider will provide services related to IT Managed Services, as are described in **Exhibit "A"**, attached hereto and incorporated herein by this reference, generally referred to as "**Services**" herein. Service Provider shall work with the City's Information Technology Department to provide a seamlessly integrated system of support for all information technology services provided and required by the City. Service Provider shall further comply with the Federal Bureau of Investigation Criminal Justice Information Services Security Addendum, as provided in RFP #06-23-01 JD, which is further attached hereto and incorporated herein by reference as **Exhibit "C**". Service Provider personnel authorized to provide Services to the City must pass a background check and fingerprinting through the Winter Springs Police Department. Service Provider personnel authorized to provide Services to the City must participate in mandatory CJIS "security awareness" and also "limited access" training and obtain certifications. Proof of completion must be demonstrated to the City per individual. Staff employed with Service Provider who have not completed these requirements must be restricted from accessing City systems, City helpdesk tickets and any documented information or notes pertaining to City systems.

Unless otherwise provided herein, Service Provider shall furnish all tools, equipment, and manpower to complete the work required by this Agreement. The Service Provider warrants that it holds any and all necessary licenses required to conduct the work required by this Agreement, and agrees to maintain said licenses in good standing during the term of this Agreement, including a City of Winter Springs Business Tax Receipt (unless Service Provider is otherwise exempt from the payment of the City's business taxes). Service Provider shall immediately notify City in the event of a loss, suspension, or termination of any license required to perform the Services set forth in this Agreement. Service Provider acknowledges that it has performed due diligence investigation prior to the execution of this Agreement and has satisfied itself as to the conditions affecting the Services to be provided including but not limited to, the availability of materials and labor, the cost thereof, the requirements to obtain necessary insurance as set forth herein, and the steps necessary to complete the Services within the time set forth herein. Service Provider warrants unto the City that it has the competence and abilities to carefully and faithfully complete the Services within the time set forth herein. Service Provider will perform its Services with due and reasonable diligence consistent with sound professional practices. Service Provider shall ensure compliance with all applicable safety standards and with all federal, state, and local regulations related to the provision of information technology services. All pro-active or re-active changes made by the Service Provider to critical City IT systems, must be performed in accordance with the City's IT Department Change Management Policy.

SECTION TWO
PLACE OF WORK

Service Provider agrees to provide two (2) of its employees to work on-site at the Winter Springs City Hall full-time during its normal business hours. While on-site, Service Provider staff are to be working on City tasks and not offering services for their other clients. The Service Provider

staff may be directed to provide services at additional City locations as reasonably designated by the City, to perform the Services as necessary, such as at the City's Police Department or Public Works Building. The address of the locations designated by the City for service shall be provided to the Service Provider on an as-needed basis when Services are to be performed on-site. Service Provider shall be responsible for coordinating access to the location where Services will be performed and for coordinating all necessary meeting, set-up, staging, or workstation space with City's representative. Service Provider shall additionally follow all security protocols deemed necessary by the City as determined by the City's sole discretion. As part of the Services, Service Provider will be responsible for safekeeping all keys, access codes, combinations, access cards, personal identification numbers, passwords, and similar security codes and identifiers issued to Service Provider's employees, agents, or subcontractors, as applicable. Service Provider agrees that its employees must promptly report lost or stolen access devices or information. City or its affiliates shall at all times have the right to review or observe the Services performed by Service Provider. No inspection, review, or observation shall relieve Service Provider of its responsibility under this Agreement.

SECTION THREE
TIME DEVOTED TO WORK

In the performance of Services, the Service Provider agrees to provide two (2) of its employees to work on-site at the Winter Springs City Hall full-time during its normal business hours. The City will rely upon Service Provider to exercise sound professional judgment and to devote such time, as is reasonably necessary, to fulfill the intent and purpose of this Agreement and complete individual tasks. Any deliveries required pursuant to this Agreement are FOB to the City's destination. All work furnished by Service Provider hereunder shall conform to all applicable high quality professional standards of diligence, care, and practice which are in effect at the time the work is performed. Service Provider shall complete all Services in a timely manner and will keep City appraised of the status of work as reasonably requested by the City. Should Service Provider fall behind on an established schedule, it shall employ such resources as necessary to adhere to the schedule. No extension for completion of Services shall be granted to Service Provider without City's prior written consent. Any Service in effect at the termination of this Agreement shall remain in effect until completion of said Purchase Order, and all terms and conditions of this Agreement shall survive until completion of the Purchase Order.

Service Provider shall provide IT support and related Services during the City's normal operating hours, Monday through Friday 8:00 a.m. to 5:00 p.m. In addition, Service Provider shall be expected to provide IT support and related Services outside of the City's normal operating hours in the event of an emergency or as otherwise required and requested by the City. Service Provider shall provide two (2) personnel to be on-site at the Winter Springs Police Department to be available at any hour to provide emergency technical assistance to the City during activation and operation of the City Emergency Operations Center. To avoid uncommunicated incurred costs for emergency support, the Service Provider is not to exceed 3 hours of billable service for an after-hours service call without first seeking approval from the I.T. Manager or delegate to extend the service time.

Service Provider shall generally conform to the Response Times and Levels of Service outlined in **Exhibit "A."** Response Time shall commence upon receipt of a phone call and/or receipt of email from the end user stating the issue. If Service Provider is unable to complete Service within the Response Times set forth in **Exhibit "A,"** Service Provider shall communicate with the I.T. Manager or delegate and coordinate an appropriate Response Time and Level of Service.

SECTION FOUR
PAYMENT

Service Provider shall be compensated as set forth in Service Provider's Cost Proposal, which is found in Service Provider's Response to RFP #06-23-01 JD. To avoid uncommunicated incurred costs for emergency support, the Service Provider is not to exceed 3 hours of billable service for an after-hours service call without first seeking approval from the I.T. Manager or delegate to extend the service time. Delivery shall be FOB to the City's destination and shall be invoiced to the City no later than thirty (30) days after delivery. Payments shall be due and payable as provided by the Florida Local Government Prompt Payment Act s. 218.70 et. seq., Florida Statutes. All services provided to the City must be described upon the Service Provider's invoice with sufficient clarity for the City to easily identify and confirm the Services having been provided. All invoice entries shall clearly indicate the type of Service being rendered, identify the Service Provider employee who rendered such service, and note the appropriate charge and hourly rate if applicable.

The City may make changes in the Services at any time by giving written notice to the Service Provider. If, upon the request of the City, Service Provider agreed to perform additional Services hereunder, the City shall pay Service Provider for the performance of such additional Services an additional amount (in additional to all other amounts payable under this Agreement) based on a mutually agreed upon Addendum to this Agreement providing for such additional fees and services executed in writing by the parties to this Agreement. If such changes decrease or eliminate any amount of work, the City and the Service Provider will negotiate any change in total cost or schedule modifications. If the City and the Service Provider approve any change, the Purchase Order will be modified in writing to reflect the changes. The City shall not be responsible for the payment of any additional services provided by Service Provider unless the description of such services has been set forth in the aforementioned Addendum and the Addendum has been approved by the City Commission or City Manager in accordance with the City's purchasing policies and procedures. All change orders shall be authorized in writing by the City and approved by the Service Provider's designated representative.

Service Provider shall not invoice the City or seek any compensation from the City to correct or revise any errors or deficiencies in Services provided under this Agreement. To the extent Service Provider owes the City any money under this or any other Agreement with the City, the City shall have the right to withhold payment and otherwise back charge Service Provider for any money owed to City by Service Provider.

The City's payment of any invoice under this Agreement shall not be construed or operate as a waiver of any rights under this Agreement or any cause of action arising out of the performance

of this Agreement and the Service Provider shall remain liable to the City in accordance with applicable law for all damages to the City caused by the Service Provider's performance of any Services provided under this Agreement.

Service Provider shall not be compensated for travel time, food, lodging, or mileage expenses for its employees, agents, officers, or other personnel.

SECTION FIVE
TERM

The Term of this Agreement ("Effective Date") shall begin October 01, 2023. The term of this Agreement shall be contained in **Exhibit "B."** The initial term of this Agreement shall be for three (3) years with the option to extend for two (2) additional one (1) year periods. The City may at its sole discretion exercise a renewal option, subject to Service Provider's agreement to the renewal, by providing the Service Provider with at least thirty (30) days written notice in advance of the anniversary of the Effective Date. Renewals shall be made upon mutual agreement of the Parties and upon the same terms described herein. The City has the right to terminate this Agreement for its convenience and without at any time upon thirty (30) days advanced notice. Service Provider shall be required to review the managed information technology services with the City on a semi-annual basis.

Time is of the essence in the performance of this Agreement and any Purchase Order hereunder.

SECTION SIX
STATUS OF SERVICE PROVIDER

This Agreement calls for the performance of the Services of Service Provider as an independent contractor. Neither Service Provider, nor its assigns, nor its successors, shall be considered employees, officers, or agents of the City in any capacity. Service Provider shall not be entitled to any benefits which would otherwise apply to City employees.

SECTION SEVEN
INDEMNIFICATION

Service Provider shall indemnify and hold harmless, the City, its employees, agents, elected or appointed officials, and representatives from any and all claims, losses, suits, costs, expenses, fines, penalties, deficiencies, damages, obligations, and liabilities, including all attorney's fees and court costs through all appeals, for which City, its employees, agents, elected or appointed officials, and representatives can or may be held liable as a result of injury to persons (including death) or damage to property occurring by reason of any negligent acts, errors, omissions, or willful misconduct of Service Provider, its employees, or agents, arising out of or connected with this Agreement; or which arise out of any inaccurate representation made by the Service Provider, its employees or agents; or any breach of this Agreement by Service Provider, its employees or agents,

except to the extent of negligence, wrongful acts or omissions of the City or its agents, elected or appointed officials, employees, or representatives.

For purposes of this indemnification only, Service Provider shall indemnify the City for claims made by the employees of Service Provider, and Service Provider hereby waives its entitlement, if any, to immunity under SECTION 440.011, Florida Statutes. This waiver has been specifically and mutually negotiated by the parties.

Service Provider shall further indemnify and hold harmless, the City, its employees, agents, elected or appointed officials, and representatives from any and all claims and liabilities, whether rightful or otherwise, alleging that the work furnished by the Service Provider hereunder, or any part thereof, constitutes an infringement of any patent, copyright, trademark or other intellectual property right of the United States. Service Provider shall pay all damages and costs awarded against the City in connection with any such infringement, copyright, trademark, or other intellectual property rights claims.

This indemnification paragraph shall survive the termination of this Agreement until such time as all pending claims between the parties have been settled, or if no such pending claims, until such time as all applicable statute of limitation time periods have expired with respect to the work performed by Service Provider pursuant to this Agreement.

SECTION EIGHT
TERMINATION

The City may terminate this Agreement for any reason, with or without cause and without penalty, by giving the Service Provider thirty (30) days advance written notice of the termination of this Agreement. In the event of any termination without cause pursuant to the preceding sentence, City shall continue to be responsible for the payment of any outstanding undisputed invoices delivered to the City prior to the date of termination. In addition, if Service Provider should materially breach this Agreement and if such breach is not cured within fifteen (15) days of receiving written notice of such breach by the City, the City shall be entitled to terminate this Agreement immediately and Service Provider shall refund the City any pre-paid fees for Services not delivered to the City's satisfaction by Service Provider.

Upon receipt of a notice for any termination of this Agreement and any Work Order hereunder, the Parties shall cooperate with each other and use all commercially reasonable efforts to affect a smooth transition process.

SECTION NINE
PUBLIC RECORDS

A. Pursuant to Section 119.0701, Florida Statutes, and other applicable public records laws (collectively, the "Public Records Laws"), Service Provider agrees that any records, documents, transactions, writings, papers, letters, computerized information and programs, maps, books, audio or video tapes, films, photographs, data processing software, writings or other material(s),

regardless of the physical form, characteristics, or means of transmission, of Service Provider related, directly or indirectly, to the services provided to the City under this Agreement and made or received pursuant to law or ordinance or in connection with the transaction of official business by the City, may be deemed to be a public record under and pursuant to the Public Records Laws, whether in the possession or control of the City or the Service Provider. If and to the extent said records, documents, transactions, writings, papers, letters, computerized information and programs, maps, books, audio or video tapes, films, photographs, data processing software, writings or other material(s), regardless of the physical form, characteristics, or means of transmission of Service Provider are subject to the provisions of Chapter 119, Florida Statutes, or other Public Records Laws (records subject to the Public Records Laws are herein referred to as "public records"), they may not be destroyed without the specific written approval of the City's designated custodian of public records. All books, cards, registers, receipts, documents, and other papers in connection with this Agreement shall at any and all reasonable times during the normal working hours of the Service Provider be open and freely exhibited to the CITY for the purpose of examination and/or audit. Notwithstanding anything herein to the contrary, the parties agree to maintain the confidentiality of any and all records or documents from third party disclosure that are deemed confidential and/or exempt from public records disclosure pursuant to federal or state law, including, but not limited to, under the Health Insurance Portability and Accountability Act of 1996 and related HIPAA Privacy Rules.

IF THE SERVICE PROVIDER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE SERVICE PROVIDER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS, THE CITY CLERK, AT (407) 327-5999, cgowan@winterspringsfl.org or cityclerkdepartment@winterspringsfl.org, 1126 East State Road 434, Winter Springs, Florida, 32708.

Service Provider is required to and agrees to comply with public records laws. Service Provider shall keep and maintain all public records required by the City to perform the services as agreed to herein. Service Provider shall provide the City, upon request from the City Clerk, copies of the requested public records or allow the public records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided by law. Service Provider shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law. Upon completion of the Agreement, Service Provider shall transfer to the City, at no cost, copies of all public records in possession of the Service Provider, provided the transfer is requested in writing by the City Clerk. Upon such transfer, Service Provider shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. However, if the City Clerk does not request that copies of the public records be transferred, the Service Provider shall continue to keep and maintain the public records upon completion of the Agreement and shall meet all applicable requirements for retaining public records. All public records stored electronically must be provided to the City, upon request from the City Clerk, in a format that is compatible with the information technology systems of the City. Should the City not possess public records relating to this Agreement which are requested to be inspected or copied by the City or any other person, the City shall immediately notify Service Provider of the request and the Service Provider shall

then provide such public records to the City or allow the records to be inspected or copied within a reasonable time. If the Service Provider does not comply with a public records request, the City may enforce this Section to the extent permitted by law. Service Provider acknowledges that if the Service Provider does not provide the public records to the City within a reasonable time, the Service Provider may be subject to penalties under Section 119.10, Florida Statutes. The Service Provider acknowledges that if a civil action is filed against the Service Provider to compel production of public records relating to this Agreement, the court may assess and award against Service Provider the reasonable costs of enforcement, including reasonable attorney fees. All public records in connection with this Agreement shall, at any and all reasonable times during the normal business hours of the Service Provider, be open and freely exhibited to the City for the purpose of examination, audit, or otherwise. Failure by Service Provider to grant such public access and comply with public records laws and/or requests shall be grounds for immediate unilateral cancellation of this Agreement by the City upon delivery of a written notice of cancellation. If the Service Provider fails to comply with this Section, and the City must enforce this Section, or the City suffers a third-party award of attorney's fees and/or damages for violating Chapter 119, Florida Statutes, due to Service Provider's failure to comply with this Section, the City shall collect from Service Provider prevailing party attorney's fees and costs, and any damages incurred by the City, for enforcing this Section against Service Provider. And, if applicable, the City shall also be entitled to reimbursement of all attorneys' fees and damages which the City had to pay a third party because of the Service Provider's failure to comply with this Section. The terms and conditions set forth in this Section shall survive the termination of this Agreement.

B. All documents, including but not limited to, drawings, specifications and data or programs stored electronically or otherwise, prepared by the Service Provider and its independent contractors and associates pursuant to this Agreement or related exclusively to the Services described herein shall be owned by the City and may be reused by the City for any reason or purpose at any time. However, the City agrees that the aforesaid documents are not intended or represented to be suitable for reuse by the City or others on any undertaking other than the Work outlined in this Agreement. Any reuse for an undertaking other than for the Work without verification or adaptation by the Service Provider, or its independent contractors and associates, if necessary, to specific purposes intended will be at the City's sole risk and without liability or legal exposure to the Service Provider.

C. The City and the Service Provider agree that upon payment of fees due to the Service Provider by the City for a particular design, report, inventory list, compilation, drawing, specification, model, recommendation, schedule, or otherwise, said design, report, inventory list, compilation, drawing, specification, technical data, recommendation, model, schedule, and other instrument produced by the Service Provider, as applicable, in the performance of this Agreement, or any Work hereunder, shall be the sole property of the City, and the City is vested with all rights therein. The Service Provider waives all rights of copyright in said design, report, inventory list, compilation, drawing, specification, technical data, recommendation, model, schedule, and other instrument produced by the Service Provider in the performance of this Agreement, and hereby assigns and conveys the same to the City whether in the possession or control of the Service Provider or not.

D. Notwithstanding any provisions to the contrary contained in this Agreement, the Service Provider shall retain sole ownership to its preexisting information not produced and paid for by the City under this Agreement including, but not limited to, computer programs, software, standard details, figures, templates and specifications.

E. Regardless of the ticketing/helpdesk system(s) used by Service Provider, access to all data created, discovered, documented, and performance metrics contained therein shall be made available to or accessible by the City. During the term of this Agreement, and subsequent addendums, all open and closed helpdesk tickets must be viewable to at least one delegated City employee. Upon contract termination or expiration, Service Provider shall provide all records acquired during the engagement, to the City. The records must not be in a proprietary format that is accessible only by the Service Provider.

SECTION TEN
INSURANCE

During the term of this Agreement, Service Provider shall be responsible for providing the types of insurance and limits of liability as set forth under this Paragraph. The insurance policies provided hereunder by Service Provider shall also include coverage with respect to services performed by all agents and independent contractors employed by Service Provider to perform any Work hereunder.

A. The Service Provider shall maintain comprehensive general liability insurance in the minimum amount of $1,000,000 as the combined single limit for each occurrence and $3,000,000 general aggregate with a deductible not less than $5,000 unless otherwise approved in writing by the City Manager to protect the Service Provider from claims of property damages which may arise from any Work performed under this Agreement whether such Work are performed by the Service Provider or by anyone directly employed by or contracting with the Service Provider.

B. The Service Provider shall maintain comprehensive automobile liability insurance in the minimum amount of $1,000,000 combined single limit bodily injury and minimum $1,000,000 property damage as the combined single limit for each occurrence to protect the Service Provider from claims for damages for bodily injury, including wrongful death, as well as from claims from property damage, which may arise from the ownership, use, or maintenance of owned and non-owned automobiles, including rented automobiles whether such operations be by the Service Provider or by anyone directly or indirectly employed by the Service Provider.

C. The Service Provider shall maintain, during the life of this Agreement, adequate Workers' Compensation Insurance in at least such amounts as are required by law and Employer's Liability Insurance in the minimum amount of $1,000,000 for all of its employees performing Work for the Client pursuant to this Agreement.

D. Professional Liability. Proof of professional liability insurance shall be provided to the City for the minimum amount of $3,000,000.00 per occurrence or claim and in the aggregate, with a deductible not greater than $50,000.00. For professional liability insurance written on a "claims-

made" basis, the Service Provider shall maintain and provide evidence to the City of "tail" coverage that extends coverage for an additional five years following completion of all Work rendered under this Agreement.

All required insurance must be from insurance carriers that have a rating of "A" or better and a financial size category of "VII" or higher according to the A.M. Best Company (or equivalent rating and rating service as reasonably determined by the City Manager). Current, valid insurance policies meeting the requirements herein identified shall be maintained during the term of this Agreement. A copy of a current Certificate of Insurance shall be provided to the City by Service Provider upon the Effective Date of this Agreement which satisfied the insurance requirements of this Section. Renewal certificates shall be sent to the City at the time of any expiration. There shall also be a 30-day advance written notification to the City in the event of cancellation or material modification of any stipulated insurance coverage. The City shall be an additional insured on all stipulated insurance policies as its interest may appear, from time to time, excluding worker's compensation and professional liability policies.

SECTION ELEVEN
NOTICE

Any and all notices required or permitted under this Agreement shall be in writing and shall be sufficient in all respects if (i) delivered personally, (ii) mailed by registered or certified mail, return receipt requested and postage prepaid, or (iii) sent via a nationally recognized overnight courier service to the following:

For CITY:

City of Winter Springs
Attn: City Manager
1126 East State Road 434
Winter Springs, FL 32708
(407) 327-1800

For SERVICE PROVIDER:

Name: __EssentialNet Solutions_____
Att'n: ___President_____
Address: _2301 W Eau Gallie Blvd., Suite 4 Melbourne, FL 32935
Phone: __321-259-3242_____

Any Notice given as provided herein shall be deemed received as follows: if delivered by personal service, on the date so delivered; if delivered to an overnight courier service, on the business day immediately following delivery to such service; and if mailed, on the third business day after mailing.

SECTION TWELVE

E-VERIFY

A. In accordance with Chapter 448.095, Florida Statutes, the Service Provider shall register and utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Service Provider during the term of this Contract.

B. The Service Provider shall expressly require any subcontractors performing work providing services pursuant to this Agreement to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the term of this Contract.

C. The Service Provider agrees to maintain records of its participation and compliance with the provisions of the E-Verify program, including participation by its subcontractors as provided above, and to make such records available to the City consistent with the terms of the Service Provider's enrollment in the program. This includes maintaining a copy of proof of the Service Provider's and subcontractors' enrollment in the E-Verify program.

D. The Service Provider must meet this requirement unless:
   1. This Agreement is solely for goods-based procurement where no services are provided; or
   2. Where the requirement is waived by the City Commission; or
   3. The Agreement is being executed with a Sole Proprietor who does not hire employees and therefore is not required to file a Department of Homeland Security Form I-9 (which is the document used for E-Verify); or
   4. The Agreement is being executed with a company based outside of the United States of America and does not employ any citizens of the United States of America.

E. A Service Provider who registers with and participates in the E-Verify program may not be barred or penalized under this section if, as a result of receiving inaccurate verification information from the E-Verify program, the Service Provider hires or employs a person who is not eligible for employment.

F. Nothing in this section may be construed to allow intentional discrimination of any class of persons protected by law.

SECTION THIRTEEN
ATTORNEY FEES

In the event of any action arising under this Agreement, whether or not a lawsuit or other proceeding is filed, each party shall bear its own costs and expenses of such action including, but not limited to, reasonable attorney's fees incurred in any way in connection with the matter, whether incurred before litigation, during litigation, during appeal, or in connection with

enforcement of a judgment, including, but not limited to, attorneys' and experts' fees. This shall include fees and costs incurred in litigating entitlement to attorneys' fees and costs, as well as in determining or quantifying the amount of recoverable attorneys' fees and costs. The reasonable costs shall include costs that are taxable under any applicable statute, rule or guideline, as well as non-taxable costs, including but not limited to, costs of investigation, copying costs, electronic discovery costs, telephone charges, mailing and delivery charges, information technology support charges, consultant and expert witness fees, travel expenses, court reporter fees, and mediator fees, regardless of whether such costs are otherwise taxable.

SECTION FOURTEEN
VENUE

This Agreement is made and shall be interpreted, construed, governed, and enforced in accordance with the laws of the State of Florida. Venue for any state action or litigation shall be Seminole County, Florida. Venue for any federal action or litigation shall be Orlando, Florida.

SECTION FIFTEEN
SEVERABILITY

Should any term or provision of this Agreement be held, to any extent, invalid or unenforceable, as against any person, entity, or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this Agreement, to the extent that the Agreement shall remain operable, enforceable, and in full force and effect to the extent permitted by law.

SECTION SIXTEEN
ENTIRE AGREEMENT

This Agreement states the entire understanding and agreement between the parties and supersedes any and all written or oral representations, statements, negotiations, or agreements previously existing between the parties with respect to the subject matter of this Agreement, save for the representations which are attached to this Agreement as Exhibits. The Service Provider recognizes that any representations, statements, or negotiations made by the City staff do not suffice to legally bind the City in a contractual relationship unless they have been reduced to writing and signed by an authorized City representative. This Agreement shall inure to the benefit of and shall be binding upon the parties, their respective assigns, and successors in interest.

SECTION SEVENTEEN
NO ASSIGNMENTS OR SUBCONTRACTS

Service Provider shall not assign or subcontract this Agreement or any rights or any monies due or to become due hereunder without the prior, written consent of the City. Unless specifically stated to the contrary in any written consent to any assignment, no assignment will release or discharge the assignor form any duty or responsibility under this Agreement. Nothing under this

Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the City and Service Provider, and all duties and responsibilities under this Agreement will be for the sole and exclusive benefit of the City and Service Provider and not for the benefit of any other party.

SECTION EIGHTEEN
SOVEREIGN IMMUNITY

The City intends to avail itself of the benefits of Section 769.28, Florida Statutes, and any other statutes and common law governing sovereign immunity to the fullest extent possible. Neither this provision nor any other provision of this Agreement shall be construed as a waiver of the City's right to sovereign immunity under Section 768.28, Florida Statutes, or other limitations imposed on the City's potential liability under state or federal law. Service Provider agrees that City shall not be liable under this Agreement for punitive damages or interest for the period before judgment. Further, City shall not be liable for any claim or judgment, or portion thereof, to any one person over two hundred thousand dollars ($200,000.00), or any claim or judgment or portion thereof, which, when totaled with all other claims or judgments paid by the State or its agencies and subdivisions arising out of the same incident or occurrence, exceeds three hundred thousand dollars ($300,000.00). Nothing in this Agreement is intended to inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred under the doctrine of sovereign immunity or by operation of law. This paragraph shall survive termination of this Agreement.

SECTION NINETEEN
APPROPRIATIONS

This Agreement is subject to the annual appropriations of funds by the City Commission. The City has a right to terminate this Agreement for fiscal non-funding at no additional cost or liability to the City.

SECTION TWENTY
FORCE MAJEURE

Any delay or failure of either party in the performance of its required obligations hereunder shall be excused if and to the extent caused by acts of God; fire; flood; windstorm; explosion; riot; war; sabotage; strike (except involving the Service Provider's labor force); extraordinary breakdown of or damage to City's affiliates' facilities; court injunction or order; federal and/or state law and/or regulation; or order by any other regulatory agency, provided that prompt notice of such delay is given by such party to the other and each of the parties hereto shall be diligent in attempting to remove such cause or causes. If any circumstance of Force Majeure remains in effect for sixty (60) days, either party may terminate this Agreement. Monetary damages will not be awarded in the event of Force Majeure.

SECTION TWENTY-ONE

CITY PREMISES

Service Provider acknowledges that its employees and agents will behave in an appropriate manner while on City property and while on any residential or commercial private property relating to the performance of Services in accordance with this Agreement and shall, at all times, conduct themselves in a manner consistent with City policies, including the dress code, and within the discretion of the I.T. Manager or delegate. Professional and personal conduct of Service Provider's staff shall conform to City's personnel policies and procedures. It is a material breach of this Agreement for any agent or employee of Service Provider to behave in a manner which is inconsistent with appropriate conduct or decorum or to behave in any manner that will disrupt the functioning of the City or constitute any level of threat to the safety, health, and/or well-being of any citizen, invitee, licensee, agent, or employee of the City. Service Provider agrees to immediately remove any agent or employee if directed to do so by the I.T. Manager or delegate. It is the responsibility of Service Provider to inform the City of any Service Provider personnel terminations and provide written confirmation that access to City systems has been revoked for the individual.

Service Provider acknowledges that the City shall not be responsible for injury (including death) to Service Provider's employees, agents, officers, or other personnel, nor shall the City be responsible for damage to Service Provider's property, which occurs on the City's property, unless the injury is the result of the City's gross negligence or willful misconduct. At all times while on City's premises, Service Provider shall comply with all rules and regulations of City.

SECTION TWENTY-TWO
MOST FAVORED CUSTOMER

Service Provider warrants and represents that all terms, including prices, charges, benefits and warranties, in this Agreement are at least as or more favorable than any terms that Service Provider has offered to any other person or entity, for the types of Services covered by this Agreement. If at any time during this Agreement Service Provider shall offer any other person or entity, terms more favorable, Service Provider shall promptly notify City of such more favorable terms, and if such more favorable terms were offered by Service Provider to another person or entity City shall immediately receive the benefit of the more favorable terms for the remainder of this Agreement, including any renewals thereof, as well as retroactively to the effective date such more favorable terms were offered by Service Provider. Upon City's request, Service Provider shall advise City in writing, executed by an officer of Service Provider, that this section has not been contradicted by Service Provider since the later of (i) the Effective Date of this Agreement or (ii) the date of the most recent notice provided by Service Provider pursuant to this section.

SECTION TWENTY-THREE
MISCELLANEOUS

A. As an independent contractor, Service Provider shall pay all expenses in connection with its consulting business and Service Provider will not incur any indebtedness on behalf of City with this Agreement.

B. This Agreement shall constitute the entire Agreement between the parties relative to the transaction contemplated herein and neither this Agreement nor any term or provision hereof may be waived, except, by an instrument in writing executed by the City and Service Provider.

C. This Agreement may be amended, extended, or renewed only with the written approval of the parties. There shall be no modification of this Agreement without a writing.

D. The City and Service Provider each represent that they have both shared equally in drafting this Agreement and no party shall be favored or disfavored regarding the interpretation of this Agreement in the event of a dispute between the parties.

E. The Service Provider warrants that it has not employed or retained any company person, other than a bona fide employee working solely for the Service Provider, to solicit or secure this Agreement, and that it has not paid or agreed to pay any City employee or official, person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Service Provider, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award of making of this Agreement.

F. Precautions shall be exercised at all times for the protection of all persons (including City's employees) and property. The safety of all applicable laws, regulations, and codes shall be observed. Hazards arising from the use of vehicles, machinery, and equipment shall be guided or eliminated in accordance with the highest accepted standard of safety. Service Provider shall be solely and absolutely responsible and shall assume all liability for the safety and supervision of its principles, employees, contractors, and agents when performing the Services provided hereunder.

G. Service Provider shall comply with all requirements of federal, state, and local laws, rules, regulations, standards, and ordinances applicable to the performance of services under this Agreement and the incorporated Exhibits. Service Provider shall also secure and maintain any and all permits and licenses required to complete this Agreement. Service Provider shall comply with all safety regulations as may be outlined in **Exhibit "B."**

H. Service Provider shall acquire no rights under this Agreement to, and shall not use, the name of the City, either alone or in conjunction with or as a part of any other name, word, mark, picture, logo, design, and/or trademark ("City Marks") in any of Service Provider's advertising, publicity, or promotion, to express or imply any endorsement by the City of its Services, or in any other manner (whether or not similar to the uses hereinabove specifically prohibited) without the prior review and written approval by the City, except as expressly permitted herein. No advertisement, publication, or other use of the City Marks shall be published or otherwise promulgated by Service Provider without City's prior inspection and written approval. This clause shall survive the expiration or termination of this Agreement.

I. By signing this Agreement, Service Provider certifies that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by a federal department or agency.

2. Have not, within the preceding five-year period, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local)transaction or contract under public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.

3. Are not presently indicted or otherwise criminally charged by a government entity (federal, state or local) with commission of any of the offense enumerated in the preceding paragraph.

4. Have not within the preceding five years had one or more public transactions (federal, state or local) terminated for cause or default.

Service Provider agrees to notify City within thirty (30) days after the occurrence of any of the events, actions, debarments, proposals, declarations, exclusions, convictions, judgment, indictments, informations, or terminations as described above, with respect to Service Provider or its principals.

J. In case of any inconsistency in any of the documents bearing on the Agreement between the City and the Service Provider, the inconsistency shall be resolved by giving precedence in the following order:

1. Addenda or change orders to this Agreement entered subsequent to the Effective Date of this Agreement;
2. This Agreement;
3. Exhibits to this Agreement.
4. Purchase Orders entered pursuant to this Agreement.

Any inconsistency in the work description shall be clarified by the City and performed by the Service Provider.

K. At its discretion, during the course of the work, should any errors, ambiguities, or discrepancies be found in the Agreement or specifications, the City at its sole discretion will interpret the intent of the Agreement and work descriptions and the Service Provider hereby agrees to abide by the City's interpretation and agrees to carry out the work in accordance with the decision of the City.

L. The Service Provider warrants and represents that it complies with all Federal and State requirements concerning fair employment and that Service Provider does not and shall not discriminate by reason of race, color, religion, sex, age, national origin, disability, sexual

orientation, gender identity or expression, genetic information, or any other category of persons protected pursuant to federal and/or Florida law.

M. No inspection by the City, nor any payment for or acceptance of the whole or part of the items in this Agreement, nor any extension of time, nor any possession taken by the City of the product or services hereunder shall operate as a waiver of (1) any provision of this Agreement, (2) the right to have it fully performed, (3) any power herein reserved by the City or (4) any right to damages under this Agreement. No waiver of any breach of this Agreement shall be held to be a waiver of any other breach. Failure of City to insist upon performance within any time period or upon a proper level or quality of performance shall not act as a waiver of City's right to later claim a failure to perform by Service Provider.

N. Service Provider guarantees that it is duly licensed and registered to conduct business in the state of Florida.

O. Under no circumstances shall actual or direct costs under this Agreement include costs associated with inefficiency, offsite or office overhead, loss of productivity, consequential damages, legal or consulting costs or costs associated with delays caused in whole or in part by the Service Provider.

P. Paragraph headings are for the convenience of the parties only and are not to be construed as part of this Agreement.

Q. Service Provider shall certify, upon request by City, that Service Provider maintains a drug free workplace policy in accordance with Section 287.0878, Florida Statutes. Failure to submit this certification may result in the termination of this Agreement.

R. During the term of this Agreement, and subsequent addendums, and for a period of 12 months thereafter, Service Provider agrees not to, directly or indirectly, solicit, recruit or employ any employee of the City without the prior written consent of the City Manager.

IN WITNESS WHEREOF, the Parties or their duly authorized representatives hereby execute this Agreement on the date first written above.

SERVICE PROVIDER

Printed Name: FRANK HUSTON

Title: PRESIDENT

Date: 10/05/2023

CITY OF WINTER SPRINGS

Phil Hursh, Interim City Manager

10/06/2023

ATTEST:

Christian Gowan, City Clerk

CITY OF WINTER SPRINGS INCORPORATED 1959 SEMINOLE COUNTY FLORIDA

Exhibit “A”

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, Florida 32708

REQUEST FOR PROPOSALS

PROPOSAL : RFP #06-23-01 JD DATE: June 30, 2023

Sealed Proposals will be received by the City of Winter Springs (CITY) Procurement Department, located at Winter Springs City Hall, 1126 East State Road 434, Winter Springs, Florida 32708, until:

August 04, 2023
3:00 p.m., local time
FOR
IT Managed Services

Said Proposals shall conform to the minimum requirements outlined in the Request For Proposal. The CITY reserves the right to reject any and all offers and to waive minor informalities.

The CITY issues this Request for Proposals in order to select a Proposal for further contract negotiation. Selection by the CITY Commission may not result in the formation of a contract.

Submission and Receipt of RFP's:

Respondents shall submit their Proposal response to this RFP by:

> Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of your RFP response to this office by the date and time indicated above.

The outside of your package must be clearly labeled with the RFP number, title, opening date and time, and the name and address of the PROPOSER. The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY's deadline requirements.

Offers received after August 04, 2023 at 3:00 p.m., will be rejected.

Deadline for questions is **July 12, 2023 1:00pm local time**

Any Addenda will be issued by noon on **July 14, 2023** if questions are received and require clarification.

If you have any questions regarding this Request for Proposal, please contact Stuart MacLean, Interim Procurement Manager, at (407) 327-7581, or via email at smaclean@winterspringsfl.org

PROPOSAL AND ADDENDUM DOCUMENTS CAN BE DOWNLOADED FREE OF CHARGE FROM:
www.demandstar.com

or

https://www.winterspringsfl.org/rfps

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- Non Segregated Facilities Certification Form
- Public Entities Crimes Form
- E-Verify Statement Form
- Conflict of Interest Form

Appendix A Cost Proposal Worksheet

Appendix B Specifications/Statement of Work

PART I
SCOPE OF SERVICE/EVALUATION CRITERIA
FOR
RFP 06-23-01 JD
IT MANAGED SERVICES

Background

The City of Winter Springs is located in Seminole County Florida, which is part of the Orlando-Kissimmee-Sanford Metropolitan Area. As of 2021 the City of Winter Springs has a population of 38,317, covering 14.99 square miles.

Scope of Service

The CITY wishes to obtain pricing from a successful PROPOSER to provide the CITY with Managed Information Technology (IT) Services. The successful PROPOSER shall provide including, but not limited to the following services:

- Work Order/Service Order Ticketing System
- Patch Management system and Patch Reporting
- Monitoring CITY and ISP circuits and core infrastructure to alert during a system outage or critical behavior change
- Helpdesk support; including remote access to CITY workstations, servers, firewalls and network equipment
- Workstation imaging and deployment
- Perform regularly scheduled tasks such as weekly testing of phone lines and running file restore verifications
- After-hours support
- Emergency response support
- Vendor management support
- Training for CITY staff as needed
- Project management as needed
- Operating System/Application upgrades
- Firmware and driver upgrades
- Diagnostics, repair and/or replacement of hardware; including working with manufacturers and or third party vendors to ensure eligible equipment is repaired under valid warranties and/or existing contracts
- Develop and maintain documentation of both physical and logical networks, servers and service applications
- IT asset inventory tracking and allocation
- Software license tracking and reporting
- Monitor and maintain anti-virus, and security solutions for all servers, workstations and/or CITY issued mobile devices.
- Monitor and maintain data backup and file recovery
- Monitor and maintain e-mail archiving and e-discovery solutions
- Monitor and maintain disaster recovery and/or off-site back-up solutions
- Assist the Information Technology Manager with comprehensive information technology systems planning, and change outs and upgrades.
- Assist the Information Technology Manager in strategic plans, procedures, compliance evaluations and security audits.
- Monitor and maintain the Police Emergency Operations Center room and technical equipment within.
- Monitor and maintain multi-media encoder, streaming equipment, audio and video components of the CITY Hall Chambers meeting room.
- Occasionally assist with technology presentations and materials of CITY Commission
- Meetings, which at present time begin at 6:30PM and may run as late as 12:00AM.

Evaluation Criteria

Proposals will be evaluated by the CITY, and the PROPOSER will be selected based upon, but not limited to, the following criteria:

a. The background, and experience of the PROPOSER in providing similar services or items elsewhere, including the level of experience in working with municipalities and the quality of services performed or items supplied.
b. Reasonableness/competitiveness of proposed costs and/or benefits to the City of Winter Springs. The City of Winter Springs is not bound to select the PROPOSER who proposes the lowest cost or most benefits for service. The CITY of Winter Springs reserves the right to negotiate fees and/or benefits with the selected Proposer.
c. Determination that the selected PROPOSER has no contractual relationship which would result in a conflict of interest with the CITY.
d. The PROPOSER's ability, capacity, and skill to fully and satisfactorily, provide these services and/or items required in this RFP.
e. The quality of the PROPOSER's performance in comparable and/or similar projects.
f. Whether the PROPOSER can provide the service and/or items in a prompt and timely fashion.
g. Quality of proposed contract.

Proposals will be evaluated by the CITY, and the PROPOSER will be selected based on, but not limited to, the following scoring criteria:

Criteria:	**Points:**
Experience: The PROPOSER's comprehension of the needs of the CITY as demonstrated by the description of its approach to the elements listed within this document.	
Related Experience/Background with IT Managed Services	15
Related Experience/Background with providing IT Managed Services to Municipalities	15
Related Experience/Background with Supporting Emergency Operations Centers	15
Demonstrated Capacity to Provide Proposed Managed IT Services	10
Proposal Total:	**55**
References: Evaluation of the PROPOSER's work from previous organizations receiving similar services to those proposed within this RFP. See the Mandatory Proposal Form, Reference Information Form.	
Reference 1	8
Reference 2	7
Reference Total:	**15**
Cost: The cost of the Proposal is important to the CITY, however, based on the evaluation of the other criteria, the CITY may not necessarily select the lowest PROPOSER. See Appendix A; Cost Worksheet	
Cost for Services:	30
Cost Total:	**30**
EXTRA BONUS POINTS: Certified Minority Business Enterprise: (3 Extra Bonus Points if Yes) The PROPOSER is a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act.	3
Extra Points	**3**
Total Possible Points	**103**

Pursuant to Florida Statutes § 287.05701, the CITY shall not request documentation regarding, consider, or give preference based upon, a PROPOSER's social, political, or ideological interests when determining the vendor's qualifications.

Timeline of Events

Release of RFP	June 30, 2023
Deadline to receive questions (electronically)	July 12, 2023
Questions and Response Addenda Released by noon local time	July 14, 2023
RFP Proposals Due by 2:00 pm local time	August 04, 2023
RFP Proposal(s) Opening 2:15 pm local time	August 04, 2023
Evaluation Committee Meeting/Selection Meeting: 3:00 pm local time	August, 15, 2023
Possible Selection Committee Meeting to clarify PROPOSAL(s) or oral presentations	TBD
CITY Commission Approval of Selection and Consideration of Contract	TBD

PART II
INSTRUCTIONS TO PROPOSERS AND GENERAL PROVISIONS

FOR
RFP #06-23-01 JD
IT Managed Services

Definitions (as used herein)

a. The term "Request for Proposal" means a solicitation of Proposals. The acronym "RFP" means Request for Proposal.

b. The term "Proposal" means the offer of qualitative evaluations by the PROPOSER.

c. The term "professional services" means those services of architects, auditors, dentists, engineers, landscape architects, lawyers, physicians, psychologists, surveyors, and any other professional service as determined by the City.

d. The term " PROPOSER " means the person, company, firm, or entity making an offer.

e. The term "Change Order" means a written order signed by the Finance Department or authorized representative directing the PROPOSER to make changes to a contract or purchase order resulting from the RFP.

f. The term "CITY" means the City of Winter Springs, Florida.

g. The term "CITY Commission" means the governing body of the City of Winter Springs. The CITY Commission is the only body that can award proposals.

h. The term “Evaluation Committee” means a team of CITY staff that will review and rank all Proposals and provide a recommendation regarding selection of a PROPOSER to the CITY Commission.

Preparation of Request for Proposal

a. PROPOSERS are expected to examine the minimum requirements and all special and general conditions. Omission on the part of the PROPOSER to make the necessary examinations and investigations, or failure to fulfill every detail the requirements of the contract document, will not be accepted as a basis for varying the requirements of the CITY or the compensation to the PROPOSER. Failure to properly and fully complete the Proposal is at the PROPOSER's risk. The PROPOSER shall sign the Request for Proposal and print or type his/her name, address, and telephone number on the face page.

b. The apparent silence of any supplemental minimum requirements as to any details, or the omission from it of a detailed description concerning any point will be regarded as meaning that only the best commercial practices are to prevail. All workmanship is to be first quality. All interpretations of the minimum requirements shall be made upon the basis of this statement.

c. PROPOSERS should submit their response to this RFP by:

Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of your RFP to this office by the date and time indicated.
The outside of your package must be clearly labeled with the RFP number, title, opening date and time and the name and address of the PROPOSER. The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY’s deadline requirements.

d. The PROPOSER should retain a copy of all documents for future reference.

e. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. You may use the Sunbiz website screen shot or include a copy of your Corporate Resolution to prove the authority of the corporate signer.

f. Failure to follow the instructions in the Request for Proposal is cause for rejection of your Proposal.

Submission and Receipt of Proposals

a. Proposals must be received before the specified time as designated in the RFP. A list of PROPOSERS who submitted Proposals will be furnished, upon request, following opening of the Proposals.

b. Proposals shall be submitted in a sealed envelope. The envelope shall show the opening date and time, the RFP number, and the name and address of the PROPOSER.

c. The City of Winter Springs is not responsible for the U.S. Mail or private couriers, in regard to mail being delivered by the specified time so that a Proposal can be considered.

d. Email and Facsimile (FAX) Proposals will not be considered, however, Proposals may be modified by email and FAX notice, provided such notices are received prior to the hour and date specified.

e. Late Proposals will be rejected.

f. Proposals having any erasures or corrections must be initialed by the offer or in ink. Proposals shall be signed in ink. All amounts shall be typewritten or completed in ink.

g. All Mandatory Proposal Forms must be completed and attached to the Proposal.

h. All costs of Proposal preparation, inspection of the RFP documents, and presentation of the Proposal shall be solely borne by the PROPOSER. The CITY shall not be liable for any cost incurred by the PROPOSER during the preparation and submission of its Proposal in response to this RFP.

Selection of Proposal

SELECTION OF THE PROPOSER AND PROPOSAL DEEMED THE MOST QUALIFIED, MOST ADVANTAGEOUS, AND IN THE BEST INTERESTS OF THE CITY, AS DETERMINED IN THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS'S SOLE AND ABSOLUTE DISCRETION, SHALL NOT RESULT IN THE FORMATION OF A CONTRACT. NO CONTRACT SHALL BE FORMED UNTIL FINAL APPROVAL OF SUCH CONTRACT BY THE CITY COMMISSION AFTER SUCCESSFUL NEGOTIATION OF SPECIFIC CONTRACT TERMS DETERMINED TO BE IN THE BEST INTERESTS OF THE CITY BY THE CITY COMMISSION. Negotiations may be terminated at any time by the CITY Manager or CITY Commission if, in his/her/its sole discretion, the CITY Manager OR CITY Commission determines that the negotiation of terms acceptable to the CITY will not be successful.

Only the CITY Commission can select Proposals, authorize the CITY Manager to engage in negotiations, and ultimately enter into a contract.

The RFP Selection Committee scores Proposals and provides a recommendation for selection. The recommendation may be adopted by the CITY Commission.

After the initial Selection Committee meeting, the Selection Committee may require one or more of the top-ranking PROPOSERS to attend a meeting to make an oral presentation, answer questions. This meeting will be exempt from the requirements of the Sunshine Law in accordance with section 286.0113, Florida Statutes. PROPOSER(s) will be notified of any further meeting requirements.

Acceptance of Offer

The signed Proposal shall be considered an offer on the part of the PROPOSER; however, such offer shall be deemed accepted only upon issuance by the CITY of a Purchase Order, Blanket Purchase Order, or execution of another contractual document deemed acceptable to the CITY.
The contract will be awarded to the most responsible and responsive, qualified PROPOSER (s) whose Proposal is deemed the most advantageous and in the best interests of the CITY in accordance with the criteria set forth in this RFP.

The CITY reserves the right to accept or reject any and all Proposals or parts of Proposals, waive minor informalities, and to request clarification of information from any PROPOSER.

Discrepancies, Errors, and Omissions

Any discrepancies, errors, or ambiguities in the Request for Proposals or addenda (if any) should be reported in writing to the CITY's Procurement Manager. Should it be found necessary, a written Addenda will be incorporated in the Request for Proposals and will become part of the Service Agreement (contract documents). The CITY will not be responsible for any oral instructions, clarifications, or other communications.

Right to Reject Proposals

The CITY reserves the right to reject any or all Proposals, and to disregard typographical, mathematical, or obvious errors. The CITY will not pay costs incurred by any PROPOSER in the preparation of Proposals.

Compensation

Compensation, which is determined to be fair, competitive, and reasonable, will be considered during the negotiations of a final contract with the selected PROPOSER.

Fiscal Non-Funding Clause

In the event sufficient budgeted funds are not available for a new fiscal period, the CITY shall notify the PROPOSER of such occurrence and any contracts entered into between the CITY and PROPOSER shall terminate on the last day of the current fiscal period without penalty or expense to the CITY.

Conflict of Interest

PROPOSER acknowledges and certifies that this Agreement does not violate any ethics provision found in Chapter 112, Florida Statutes, or Chapter 2 of the Code of Ordinances of the City of Winter Springs.

The PROPOSER certifies that, to the best of their knowledge or belief, no elected/appointed official or employee of the City of Winter Springs, a spouse thereof or other person residing in the same household, is financially interested, directly or indirectly, in providing the goods or services specified in this Proposal. Financial interest includes ownership of more than five percent (5%) of the total assets or capital stock or being an officer, director, manager, partner, proprietor, or agent of the business submitting the Proposal or of any subcontractor or supplier thereof providing goods or services in excess of ten percent (10%) of the total proposal amount.

Additionally, the PROPOSER, on company letterhead, must divulge at the time of Proposal submittal, any relative, other than those already specified, of an elected /appointed official or employee of the City of Winter Springs who has a financial interest, as defined herein, in providing the goods or services specified in the Proposal. The CITY, at its sole discretion, will determine whether a conflict exists and whether to accept or reject the Proposal.

Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity, may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit Proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

Options

When the CITY requests Proposals with options regarding the extent of services to be provided, the CITY requests all PROPOSERS to provide a cost breakdown for each option proposed. Although all options may be purchased, some options may not ultimately be purchased. The CITY reserves the right to decide, at its discretion, which options shall be purchased.
The CITY reserves the right to engage more than one (1) firm if it is believed that different firms might best serve the CITY's interests in performing different segments of the work (e.g., one firm to provide building estimates, and another to provide infrastructure estimates).

Subcontracting

Where PROPOSERS do not have the "in-house" capability to perform work desired in the Request for Proposal, subcontracting may be permitted only with prior knowledge and approval of the CITY. The CITY must be assured of and agree that any proposed subcontractor(s) can perform work of the desired quality and in a timely manner. The name(s) of any intended subcontractor(s) should be given in the Proposal.

Failure to Submit Proposal

If you do not wish to submit a Proposal, return the RFP and state the reason therefor; otherwise, your name may be removed from our mailing list.

Default of Contract

In case of default by the PROPOSER, the CITY may procure the requested services from other sources and hold the PROPOSER responsible for any excess costs occasioned or incurred thereby.

Modification for Changes

No agreement or understanding to modify this RFP and resultant purchase order or contract shall be binding upon the CITY unless made in writing by the City of Winter Springs.

Order of Precedence

In the event of an inconsistency between provisions of the RFP, the inconsistency shall be resolved by giving precedence in the following order: (a) Instructions to PROPOSERS and General Provisions; and (b) the minimum requirements.

Examination of Records

The PROPOSER shall keep adequate records and supporting documentation applicable to the subject matter of this RFP to include, but not be limited to: records of costs, time worked, working paper and/or accumulations of data, and criteria or standards by which findings or data are measured. Said records and documentation shall be retained by the PROPOSER for a minimum of one (1) year from the date the contract is completed and accepted by the CITY. If any litigation is initiated before the expiration of the one-year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved, unless otherwise instructed by the CITY. Should any questions arise concerning this contract, the CITY and its authorized agents shall have the right to review, inspect, and copy all such records and documentation during the record retention period stated above; provided, however, such activity shall be conducted only during normal business hours and shall be at CITY expense. PROPOSERS shall be authorized to retain microfilm copies in lieu of original records if they so desire.

Any subcontractor(s) employed by a PROPOSER who is subject to these requirements and the PROPOSER itself are required to so notify any such subcontractor(s).

Proposals Received

All Proposals received in response to this RFP become the property of the CITY.

Lobbying/Cone of Silence

Lobbying is defined as any action taken by an individual, firm, association, joint venture, partnership, syndicate, corporation, and/or all other groups who seek to influence the governmental decision of a CITY Commission Member, the CITY Manager, any requesting or evaluating Department/Division/Office personnel and/or any member of the Evaluation Committee concerning an active solicitation during the black-out period. A lobbying black-out period commences upon the issuance of this solicitation document.
If an award item is presented to CITY Commission for approval or for a request to provide authorization to negotiate a Contract(s) and the CITY Commission refers the item back to the CITY Manager, Procurement Division and/or requesting Department/Division/Office for further review or otherwise does not act on the item, the Cone of Silence/Lobbying Black-out Period will be reinstated until such time as the CITY Commission meets to consider the item for action.
Bidders, PROPOSERS, Respondents, potential vendors, service providers, lobbyists, consultants, or vendor representatives shall not contact any CITY Commission member, the CITY Manager, any requesting or evaluating Division/Department/Office personnel, and/or any member of the Evaluation Committee concerning an active solicitation during the Cone of Silence/Lobbying Black-out Period.

Indemnity

The parties recognize that the PROPOSER is an independent contractor. The PROPOSER agrees to assume liability for and indemnify, hold harmless, and defend the CITY, its commissioners, mayor, officers, employees, agents, and attorneys of, from, and against all liability and expense, including reasonable attorney's fees and costs, in connection with any and all claims, demands, damages, actions, causes of action, and suits in equity of whatever kind or nature, including claims for personal injury, property damage, equitable relief, or loss of use, arising out of the execution, performance, nonperformance, or enforcement of the terms and conditions of this Agreement or Request for Proposal, whether or not due to or caused by the negligence of the CITY, its commissioners, mayor, officers, employees, agents, and attorneys excluding only the sole negligence of the CITY, its commissioners, mayor, officers, employees, agents, and attorneys. The PROPOSER's liability hereunder shall include all attorney's fees and costs incurred by the CITY in the enforcement of this indemnification provision. This includes claims made by the employees of the PROPOSER against the CITY. The PROPOSER hereby waives its entitlement, if any, to immunity under Section 440.11, Florida Statutes. The obligations contained in this provision shall survive termination of this Agreement and shall not be limited by the amount of any insurance required to be obtained or maintained under this Agreement.

Qualifications of PROPOSER

A PROPOSER may be required, before the award of any contract, to show to the complete satisfaction of the CITY that they have the necessary facilities, equipment, ability and financial resources to perform the work in a satisfactory manner within the time specified.

Disqualification of PROPOSER

Any or all Proposals will be rejected if there is any reason for believing that collusion exists among the PROPOSERS, and participants in such collusion will not be considered in future Proposals for the same work.

Licenses and Permits

The PROPOSER shall secure all licenses and permits and shall comply with all applicable laws, regulations and codes as required by the United States, the State of Florida, or by the City of Winter Springs. The PROPOSER must fully comply with all Federal and State Laws and County and Municipal Ordinances and Regulations in any manner affecting the performance of the work.

Provisions for Other Agencies

Unless otherwise stipulated by the PROPOSER, the PROPOSER agrees to make available to the Government agencies, departments, and municipalities the prices submitted in accordance with said terms and conditions therein, should any said governmental entity desire to buy under the Proposal.

Applicable Law and Venue

This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State of Florida without regard to the conflicts or choice of law principals thereof. Each of the parties hereto: (a) irrevocably submits itself to the exclusive jurisdiction of the State of Florida, and agree that venue shall lie exclusively in the Eighteenth Judicial Circuit Court in and for Seminole County, Florida for any state court action arising out of this Agreement, and exclusively in the United States District Court for the Middle District of Florida, Orlando Division, for any federal court action arising out of this Agreement; (b) waives and agrees not to assert against any party hereto, by way of motion, as a defense or otherwise, in any suit, action or other proceeding, (i) any claim that it is not personally subject to the jurisdiction of the above-named courts for any reason whatsoever, and (ii) any claim that such suit, action, or proceeding by any party hereto is brought in an inconvenient form or that venue of such suit, action, or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such courts.

Proposal Disclosure; Public Records Responsibilities

Florida law provides that municipal records shall, at all times, be open for personal inspection by any person. Section 119.01, Florida Statutes et. seq. (the Public Records Law). Unless otherwise provided by the Public Records Law, information and materials received by the City in connection with an RFP response and under any awarded contract shall be deemed to be public records subject to public inspection and/or copying at the end of the statutory exemption time period pursuant to Section 119.071, Florida Statutes. However, certain exemptions to the Public Records Law are statutorily provided for under sections 119.07 and 119.071, Florida Statutes, and other applicable laws. If the Respondent believes any of the information contained in its response is exempt from the Public Records Law, including trade secrets as defined by Florida law, the Respondent must, in its response, specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption; otherwise, the City will treat all materials received as public records.

Pursuant to section 119.0701, Florida Statutes, for any tasks performed by PROPOSER on behalf of the CITY, PROPOSER shall: (a) keep and maintain all public records, as that term is defined in chapter 119, Florida Statutes ("Public Records"), required by the CITY to perform the work contemplated by this Agreement; (b) upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested Public Records or allow the Public Records to be inspected or copied within a reasonable time at a cost that does not exceed the costs provided in chapter 119, Florida Statutes, or as otherwise provided by law; (c) ensure that Public Records that are exempt or confidential and exempt from Public Records disclosure requirements are not disclosed except as authorized by law for the duration of the term of this Agreement and following completion or termination of this Agreement, if PROPOSER does not transfer the records to the CITY in accordance with (d) below; and (d) upon completion or termination of this Agreement, (i) if the CITY, in its sole and absolute discretion, requests that all Public Records in possession of PROPOSER be transferred to the CITY, PROPOSER shall transfer, at no cost, to the CITY, all Public Records in possession of PROPOSER within thirty (30) days of such request or (ii) if no such request is made by the CITY, PROPOSER shall keep and maintain the Public Records required by the CITY to perform the work contemplated by this Agreement. If PROPOSER transfers all Public Records to the CITY pursuant to (d)(i) above, PROPOSER shall destroy any duplicate Public Records that are exempt or confidential and exempt from Public Records disclosure requirements within thirty (30) days of transferring the Public Records to the CITY and provide the CITY with written confirmation that such records have been destroyed within thirty (30) days of transferring the Public Records. If PROPOSER keeps and maintains Public Records pursuant to (d)(ii) above, PROPOSER shall meet all applicable requirements for retaining Public Records. All Public Records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology of the CITY. If PROPOSER does not comply with a Public Records request, or does not comply with a Public Records request within a reasonable amount of time, the CITY may pursue any and all remedies available in law or equity including, but not limited to, specific performance. The provisions of this section only apply to those tasks in which PROPOSER is acting on behalf of the CITY.

IF THE PROPOSER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE PROPOSER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:
Telephone number: (407) 327-6560 ext. 7003 E-mail address: cityclerkdepartment@winterspringsfl.org

E-Verify

Pursuant to section 448.095, Florida Statutes, beginning January 1, 2021, any CITY contractors shall register with and use the U.S. Department of Homeland Security's E-Verify system, https://e-verify.uscis.gov/emp, to verify the work authorization status of all employees hired on and after January 1, 2021. CITY Contractors must provide evidence of compliance with section 448.095, Florida Statutes. Evidence shall consist of an affidavit from the Contractor stating all employees hired on and after January 1, 2021 have had their work authorization status verified through the E-Verify system and a copy of their proof of registration in the E-Verify system. Failure to comply with this provision will be a material breach of the contract, and shall result in the immediate termination of a contract without penalty to the CITY. The CITY Contractor shall be liable for all costs incurred by the CITY securing a replacement contract, including but not limited to, any increased costs for the same services, any costs due to delay, and rebidding costs, if applicable. If the CITY Contractor utilizes Subcontractors the following shall apply:

Contractor shall also require all subcontractors performing work under the Agreement to use the E-Verify system for any employees they may hire during the term of the Agreement.

Contractor shall obtain from all such subcontractors an affidavit stating the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, as defined in section 448.095, Florida Statutes. Contractor shall provide a copy of all subcontractor affidavits to the CITY upon receipt and shall maintain a copy for the duration of the Agreement.

Additional Information

Additional information may be obtained from the Procurement Manager, (407) 327-7581, or from the individual listed on the RFP cover letter.

Modification and Withdraw

Proposals may not be modified after submittal.

Proposals may be withdrawn at any time prior to the deadline. Withdrawal requests shall be made in writing and must be received by the CITY's Procurement Manager before the time and date stated or as amended for the Proposal Opening. Properly withdrawn Proposals will be returned unopened to the PROPOSER submitting the Proposal.
A PROPOSER who timely withdraws his Proposal may submit a new Proposal in the same manner as specified herein under "Submission of Proposal." A Proposal submitted in place of a withdrawn Proposal shall be clearly marked as such on the outside of the envelope and on the Bid Form.

If a Contract is not awarded within 90 calendar days after opening of Proposals, a PROPOSER may file a written request with the CITY's Procurement Manager for the withdrawal of its Proposal.

Prohibition on Gifts to City Employees and Officials

No organization or individual shall offer or give, either directly or indirectly, any favor, gift, loan, fee, service or other item of value to any CITY employee, as set forth in Chapter 112, Part III, Florida Statutes, the current CITY Ethics Ordinance, and CITY Administrative Policy.

Violation of this provision may result in one or more of the following consequences:

a. Prohibition by the individual, firm, and/or any employee of the firm from contact with CITY staff for a specified period of time;
b. Prohibition by the individual and/or firm from doing business with the CITY for a specified period of time, including but not limited to: submitting bid/proposals, RFP, and/or quotes; and,
c. Immediate termination of any contract held by the individual and/or firm for cause.

Discrimination

An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, Proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, Proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, Proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

Federal Requirements

This contract may be funded in whole or in part with federal funding. As such, federal laws, regulations, policies and related administrative practices shall apply to any contract negotiated with a selected firm as required by federal law. The most recent of such requires, including any amendments made such the submission of the Proposal, shall apply, unless federal government determines otherwise.

The federal government requirements contained in the most recent version of the Uniform Administrative Requirements for federal awards (Uniform Rules) codified at 2.C.F.R, Part 200, including any certifications and contractual provisions required by any federal statutes or regulations referenced therein to be included in this contract are deemed incorporated herein by reference and shall be incorporated into any sub-agreement or subcontract executed by the Proposer pursuant to its obligations under federal law.

PART III
SPECIFIC PROPOSAL REQUIREMENTS
For
RFP #06-23-01 JD
IT Managed Services

Format

To assure consistency, proposals must conform to the following format:

A. PROPOSER Information Form
B. Table of Contents
C. Introduction Letter
D. Qualifications
E. Other Information
F. Cost & Time
G. Mandatory Proposal Forms
H. Florida State Corporate Filing

Section A – PROPOSER Information and Acknowledgement Form

1. Use the form provided in the Mandatory Proposal Forms titled "PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM."

Section B – Table of Contents

1. Identify Proposal material by section and page number.

Section C – Introduction Letter

1. Summarize the key points of the Proposal including an understanding of the scope of work. Must be signed by an authorized official of the PROPOSER.

Section D – Qualifications

1. General – Provide general information about the PROPOSER, including size, office location(s), and structure of PROPOSER. Identify and explain any significant changes in organizational structure, ownership, or management both firm-wide and within Fixed Income/ Public Finance during the past five (5) years.

2. PROPOSER Experience – Describe the PROPOSER's experience with providing IT Managed Services, focus on the firm's experience with providing such services to a municipality.

3. Team Experience – Identify key members of PROPOSER's team that will service the CITY. Identify the primary day-to-day contact for the engagement and their experience. Identify the proposed project manager. Provide brief resumes for key team members that will service the CITY as an Appendix.

4. Florida Knowledge – Describe any political, economic, legal, or other issues impacting Florida municipalities, specifically those impacting the City of Winter Springs, which may be relevant to the Proposal.

5. References – Use the form provided in the Mandatory Proposal Forms titled "REFERENCE INFORMATION FORM"

6. Conclusion – Briefly summarize why PROPOSER should be selected, including why you are pursuing the City of Winter Springs' business. In short, summarize what makes PROPOSER different and why the CITY should select PROPOSER above all others.

Section E - Other Information

This section should address any other information necessary for a full understanding of PROPOSER's services. Please provide relevant information on any additional services offered by PROPOSER.

Section F – Cost and Time

This section must clearly state the cost and estimated completion time associated with the project. Use Appendix A: Cost Proposal Worksheet Part 1 and Part 2.

Section G – Mandatory Proposal Forms

1. Fill out and return the forms provided; PROPOSER Information Form, References Information Form, Insurance Requirement Form, Scrutinized Company Certification, Non-Collusion Affidavit of Prime Respondent, Drug Free Workplace Form, Non-Segregated Facilities Form, Public Entity Crimes Statement, E-Verify Statement and Conflict of Interest Statement.

Section H – Florida State Corporate Filing

1. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. Use Sunbiz website screen shot or include a copy of Corporate Resolution or a Power of Attorney.

MANDATORY PROPOSAL FORMS

1. Proposal Form 1 - PROPOSER Information and Acknowledgement Form
2. Proposal Form 2 - References Information Form
3. Proposal Form 3 - Insurance Requirements Form
4. Proposal Form 4 - Scrutinized Company Certification
5. Proposal Form 5 – Non-Collusion Affidavit
6. Proposal Form 6 - Drug Free Workplace Form
7. Proposal Form 7 - SMWBE Utilization Plan
8. Proposal Form 8 - Public Entity Crimes Statement
9. Proposal Form 9 - E-Verify Statement
10. Proposal Form 10- Conflict of Interest Statement

11. Appendix A - Cost Proposal Worksheet, Part 1 and Part 2
12. Appendix B - Statement of Work

Mandatory forms must be submitted with the Proposal.

Failure to submit forms will disqualify the PROPOSER from the RFP

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

Managed IT Services

RFP #06-23-01 JD

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: _____

TAX ID# SNN or EIN: _____

PROPOSER ADDRESS: _____

PURCHASE ORDER ADDRESS: _____

PHONE NUMBER: _____

COMPANY WEBSITE: _____

COMPANY CONTACT (REP): _____

CONTACT EMAIL ADDRESS: _____

SIGNATURE: _____

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 06-23-01 JD Pertaining To: Managed IT Services
   2. Addenda:
      Number _____, dated _____.
      Number _____, dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the goods and/or services specified in this RFP at the prices quoted in my responsive Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this bid/Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this bid/Proposal on behalf of the vendor/contractor and that the vendor/contractor is ready, willing, and able to perform if awarded the bid/Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

REFERENCE INFORMATION FORM

IT Managed Services
RFP # 06-23-01 JD

PROPOSER shall submit as a part of the Proposal package, a minimum of three (3) and maximum of five (5) of the most significant projects which were performed within the last three (3) years as set forth below.

Project #1:	
Project Name:	
Type of Project/Service:	
Address:	
Contracting Agency/Client:	
Contact Name and Phone #:	
Contact Email Address and Fax #:	
Contract Amount:	Date Work Performed:
Project #2:	
Project Name:	
Type of Project/Service:	
Address:	
Contracting Agency/Client:	
Contact Name and Phone #:	
Contact Email Address and Fax #:	
Contract Amount:	Date Work Performed:
Project #3:	
Project Name:	
Type of Project/Service:	
Address:	
Contracting Agency/Client:	
Contact Name and Phone #:	
Contact Email Address and Fax #:	
Contract Amount:	Date Work Performed:
Project #4:	
Project Name:	
Type of Project/Service:	
Address:	
Contracting Agency/Client:	
Contact Name and Phone #:	
Contact Email Address and Fax #:	
Contract Amount:	Date Work Performed:
Project #5:	
Project Name:	
Type of Project/Service:	
Address:	
Contracting Agency/Client:	
Contact Name and Phone #:	
Contact Email Address and Fax #:	
Contract Amount:	Date Work Performed:

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
✔	Commercial General Liability (Occurrence Form) patterned after the current ISO form	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability. This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

Vendor shall ensure that all subcontractors comply with the same insurance requirements that he/she is required to meet. The same Vendor shall provide the City with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.
Thirty (30) days cancellation notice required.

The undersigned firm agrees to obtain, prior to award, if selected, insurance as stated above.

PROPOSER/Bidder

Authorized Signature

Officer Title

Date

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City for goods or services of:

a. Any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the City will not contract for the provision of goods or services with any scrutinized company referred to above. The Contractor must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The company is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The City shall provide notice, in writing, to the Contractor of any determination concerning a false certification.

a. The Contractor shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the Contractor does not demonstrate that the City's determination of false certification was made in error then the City shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and

If awarded the Contract, the Vendor, owners, or principals will immediately notify the City in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

_____

(Authorized Signature)

_____

(Printed Name and Title)

_____

(Name of Vendor)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (_____) physical presence or (_____) online notarization, this _____ day of _____, 2023 by _____ the _____ of _____, a _____ (____) who is personally known to me or (_____) who produced _____ as identification.

_____

Notary Public

Print Name: _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT of PRIME RESPONDENT

STATE OF _____

COUNTY OF _____

_____, being duly sworn, deposes and says that:

(1) He/she is _____ of _____
Title Firm/Company

The respondent that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal.

(3) Such Proposal is genuine and is not a collusive or sham Proposal.

(4) Neither the said PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham Proposal in connection with the Agreement for which the attached Proposal has been submitted or to refrain from proposing in connection with such Agreement, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

_____ _____
(Signed) (Title)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____by _____,

who is (___) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

_____ (Signature of Notary Public)

_____ (Name of Notary Typed, Printed or Stamped) Notary Public

_____ (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

_____ does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

_____ _____
(Authorized Signature) (Date)

_____
(Print/Type Name as Signed Above

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

Company Name (PROPOSER): _____

Project Name : ***IT Managed Services***

RFP Number : **RFP *06-23-01 JD***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.

- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.

- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.

- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.

- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for **RFP #06-23-01 JD IT Managed Services**.

2. This sworn statement is submitted by (entity) _____ whose business address is

   _____ and (if applicable) Federal Employer Identification Number (FEIN)

   is _____ (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your

   Social Security Number: _____.

3. My name is _____ and my relationship to the entity named above is_____.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:

- A predecessor or successor of a person convicted of a public entity crime; or
- An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

____Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

_____

Signature Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this ___ day of _____, 20____, and is personally known to me, or has provided _____ as identification.

_____My Commission expires: _____
Notary Public

E-VERIFY STATEMENT

Bid/Proposal Number: **RFP # 06-23-01 JD**

Project Description: **IT Managed Services**

I/FIRM acknowledges and agrees to the following:
I/FIRM shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the FIRM during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the FIRM to perform work pursuant to the contract with the Department.

Individual/Company/Firm: _____

Authorized Signature: _____

Title: _____

Date: _____

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal or Contract for **RFP # 06-23-01 JD IT Managed Services**.
This sworn statement is submitted by (entity) _____ whose business address is

_____ and (if applicable) Federal Employer Identification Number (FEIN) is

_____(If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Socia
l
Security Number: _____.)

My name is _____ and my relationship to the entity named above is_____.

1. The above-named entity is submitting a Proposal for the Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named entity has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named entity has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the entity's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the entity not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the entity nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the entity's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the entity's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named entity, will immediately notify the City of Winter Springs.

_____
Signature Date:

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her

signature at the space provided above on this ___ day of _____, 20___, and is personally known to me, or

has provided _____ as identification.

_____ My Commission expires: _____
Notary Signature

Appendix A
COST PROPOSAL WORKSHEET

Part 1: Minimum Required Services

Cost Per Month to the CITY for the Minimum Required Services defined in the Statement of Work shall be:

$_____ (print/type out amount here)

Part 2: Optional Services Unit Cost

These are the "a la carte" prices for additional/incremental services offered by the PROPOSER

Description	Unit	Unit Cost
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
		$
Total:		

PROPOSER may add additional lines and/or pages to accommodate its list of additional/incremental services offered

Appendix B
STATEMENT OF WORK

Project Overview

Intent and Purpose

It is the intent of this solicitation to engage one (1) qualified firm to work with the CITY's Information Technology Department to provide a seamlessly integrated system of support for all information technology services provided and required by the CITY. At a minimum, services will include, but not be limited to; helpdesk support, network management and support, server management and support, cyber security compliance, firewall management, general information technology services, unlimited on-site and remote support for all servers, workstations, network peripherals, software, hardware, CITY issued mobile devices, etcetera. Perform technology relocation for staff office moves. Perform all technology requirements for staff onboarding and offboarding. PROPOSER will be expected to maintain uptime for all critical infrastructure and provide after-hours support for emergency issues.

Term

It is anticipated an Agreement will be awarded for a three (3) year term to begin upon approval and execution by the CITY; with the opportunity for additional one (1) year extension period that can occur for a maximum of two (2) consecutive years when in the best interest of the CITY. Total contract length, including all renewals shall not exceed five (5) years. The contract and its related services shall commence on October 01, 2023.. The decision to renew or extend the contract shall be at the sole discretion of the CITY. The successful PROPOSER shall be required to review the managed information technology services with the CITY on a semi-annual basis.

Requirements and Qualifications

In order to be considered, the PROPOSER must meet all of the following criteria:

A. The PROPOSER shall have been in business for a minimum of five (5) consecutive years and shall currently be licensed to perform services within the State of Florida. This requirement shall be based on the RFP's due date. Copies of documentation demonstrating meeting this minimum requirement shall be submitted with your Proposal. Examples of documentation may include, but not be limited to; local business tax receipts for five (5) years, corporation documents with date of inception, certificate of authority, etcetera.

1. If the business headquarters is located outside of the state of Florida, they shall currently be licensed to perform services in both their home state and the state of Florida; and shall have been in business for a minimum of five (5) consecutive years. This requirement shall be based on the RFP's due date. Copies of documentation demonstrating meeting this minimum requirement shall be submitted with your Proposal. Examples of documentation may include, but not be limited to, local business tax receipts for five (5) years, corporation documents with date of inception, certificate of authority, etcetera.
    a. In this case the PROPOSER shall submit to Procurement a current Certificate of Authority, which is issued through the Department of State and in accordance with Florida Statute 607.1501, within ten (10) business days upon notice of intent to award.

B. Demonstration of Experience: PROPOSERS must demonstrate experience with the following:

- Organizational needs and culture unique to working with a municipal client.
- Customer service, excellence in communication skills and customer relations
- Critical thinking and troubleshooting
- Public Safety technologies and FDLE/CJIS Audit Requirements and Experience
- SCADA Systems, Water infrastructure security requirements and Experience
- Cyber security best practices

List and provide a brief description of similar work satisfactorily completed and/or currently being provided with location, dates of contract, names, addresses, email addresses and telephone numbers of owners by completing the Mandatory **References Informations Form (Proposal Form 2)** attached hereto.

The determination on whether a PROPOSER is responsible or not shall be at the sole discretion of the CITY. Although the CITY may request submission of a minimum number of contracts similar to the requirements of this RFP with certain minimum dimensions, quantities, dollar values, etcetera; the CITY's determination of a PROPOSER's responsibility shall not solely be based on the number of similar procurements the PROPOSER provides but the entirety of the PROPOSER's qualifications.

C. List of personnel, by name, title and qualifications, contemplated to perform the work. All personnel to be assigned to support the CITY must agree to be fingerprinted, pass a strict background check, shall have a valid Florida Driver's License, participate in and complete annual Police CJIS certification training and exams, participate in and complete annual CITY IT security awareness training. Personnel will be provided administrative permissions to critical CITY systems that may contain sensitive data such as criminal justice information, payment card information and social security numbers.

The PROPOSER shall provide proof of the above minimum qualification by furnishing copies and or written documentation to substantiate meeting the requirements. Failure to provide said documentation with the Proposal shall be grounds for deeming your Proposal unresponsive and removing it from further consideration. This is a non-negotiable item.

General Project Overview

The CITY's Information Technology Department is currently comprised of one (1) Information Technology Manager, one (1) GIS Specialist and two (2) Application Specialists. In addition, the CITY currently has a contractor to provide two (2) on-site technicians that support the network, servers, phone systems, desktop/laptops, wireless access points, security cameras, access control systems, etcetera. These technicians would have to be replaced by the successful PROPOSER. For informational purposes only; the CITY currently generates approximately two hundred sixty (260) helpdesk tickets/work orders per month. The CITY cannot guarantee that such volume and/or transactions will be the actual amount required. Actual quantities may be more or may be less and the estimated number of volume and/or transactions contained herein in no way shall obligate the CITY to commit to said volume and/or transactions. The CITY averages 120 end users who use technology on a daily basis and may occasionally work from home. In addition there is an average of 60 infrequent technology users plus several elected officials. The PROPOSER shall provide support to all staff, elected officials, volunteers, consultants and partner contractors when related to a technology need of the CITY. The PROPOSER shall first communicate and schedule all critical system reboots, upgrades and/or changes.

Minimum Services to be Provided

The CITY seekss to obtain pricing from a successful PROPOSER to provide the CITY with Managed Information Technology (IT) Services. The successful PROPOSER shall at a minimum provide including, but not limited to the following services:

- Work Order/Service Order Ticketing System
- Patch Management system and Patch Reporting
- Monitoring CITY and ISP circuits and core infrastructure to alert during a system outage or critical behavior change
- Helpdesk support; including remote access to CITY workstations, servers, firewalls and network equipment
- One (1) or more on-site helpdesk technicians
- Workstation imaging and deployment
- Perform regularly scheduled tasks such as weekly testing of phone lines and running file restore verifications
- After-hours support
- Emergency response support
- Vendor management support
- Training for CITY staff as needed

- Project management as needed
- Operating System/Application upgrades
- Firmware and driver upgrades
- Diagnostics, repair and/or replacement of hardware; including working with manufacturers and or third party vendors to ensure eligible equipment is repaired under valid warranties and/or existing contracts
- Develop and maintain documentation of both physical and logical networks, servers and service applications
- IT asset inventory tracking and allocation
- Software license tracking and reporting
- Monitor and maintain anti-virus, and security solutions for all servers, workstations and/or CITY issued mobile devices.
- Monitor and maintain data backup and file recovery
- Monitor and maintain e-mail archiving and e-discovery solutions
- Monitor and maintain disaster recovery and/or off-site back-up solutions
- Assist the Information Technology Manager with comprehensive information technology systems planning, and change outs and upgrades.
- Assist the Information Technology Manager in strategic plans, procedures, compliance evaluations and security audits.
- Monitor and maintain the Police Emergency Operations Center room and technical equipment within.
- Monitor and maintain multi-media encoder, streaming equipment, audio and video components of the CITY Hall Chambers meeting room.
- Occasionally assist with technology presentations and materials of CITY Commission meetings, which at present time begin at 6:30PM and may run as late as 12:00AM.

Governmental Experience

Demonstration of experience with Florida local government(s) and/or Sheriff's Office shall be favorably considered in the evaluation of proposals

Description of Environment and Existing Infrastructure

Hours of Operation

The CITY's primary operating hours are 8AM to 5PM Monday through Friday for most departments.
The CITY Police Department operates 24/7.
The CITY Water Utilities Department operates 24/7.

Sites

The CITY has a dozen locations within the CITY limits that may require technical maintenance, visitation and assistance.

Operating Systems primarily consist of

- Windows Server OS
- Windows 10 OS
- Linux Debian OS
- Linux Ubuntu OS

Applications and Cloud services primarily consist of

- Microsoft Office suite
- Microsoft Exchange

- Microsoft Sharepoint
- Microsoft InTune
- Webex Calling
- Webex Contact Center
- Adobe Reader
- Adobe Acrobat
- Barracuda Archiving
- Tyler Technologies New World
- Tyler Technologies EnerGov
- Acronis
- ESRI ArcGIS
- Laserfiche
- Granicus
- MFA systems
- Access control systems
- Anti-virus systems

Notable IT Hardware primarily consists of

- Dell workstations
- Dell servers
- Scale Computing hyperconverge virtual clusters
- Cisco switches and routers
- Cisco ATAs
- Meraki switches, routers and access points
- Meraki CCTV
- Cisco VoIP desk phones
- Sonicwall firewalls
- iPhones
- Mi-Fi hotspots
- Ricoh copiers
- Fujitsu scanners
- Fax machines

PROPOSER is expected to assist with all mentioned items above and any other Information Technology assets not specifically mentioned.

PROPOSER must also have experience with :

- Installing, maintain and upgrading Microsoft Server OS
- Active Directory
- Group Policies
- Print Servers
- File Servers
- NTFS permissions and grouping
- DNS
- Powershell scripting
- Workstation imaging

Expected Level of Service

Priority 1

Criteria:

Affects five (5) or more end users; or is mission critical and there is no workaround available. Or is related to possible cyber security event. Ore is related to critical impact to public safety.

Examples:

E-Mail services are not functional; end user suspects they may have a computer virus; Police officer is unable to log in to their computer; Executive Management team unable to perform time sensitive duties.

Target Response Time *

On-shift or on-call firm staff will respond within 15 minutes. Begin troubleshooting within 60 minutes.

Priority 2

Criteria:

Affects fewer than five (5) end users, no workaround available.

Example:

PC won't power on

Target Response Time *

Initial response within 4 working hours.

Priority 3

Criteria:

Affects fewer than five (5) end users, workarounds available.

Example:

Can't check e-mail from one computer, but could use WebMail from another computer.

Target Response Time *

Initial response within 10 working hours.

Priority 4

Criteria:

No effect on productivity, or unsupported software.

Examples:

Monitor showing b/w instead of color. Speakers have no sound.

Target Response Time *

Best effort as time allows; with an initial response provided to end user no later than 24 hours.

(*) Response time is defined as commencing upon receipt of phone call and/or receipt of email from the end user stating the issue.

The above samples are not meant to be an all-encompassing list for each and every situation but are just a guideline. For issues not listed, and dependent upon 3rd party providers, i.e.: software, etc., or for out of the ordinary issues, the PROPOSER shall communicate with the CITY's IT manager to discuss and set the appropriate priority level for such cases.

Customer Service and Quality

A. The successful PROPOSER shall warrant that all services be performed by skilled and competent personnel to the highest professional standards in the field. The CITY may require, in writing, that the successful PROPOSER removes from the awarded Agreement any employee the CITY deems incompetent, careless, or otherwise objectionable. The successful PROPOSER shall notify the CITY in writing, the removal and or the exchange of the personnel identified to service the CITY's accounts a minimum of thirty (30) days prior to the

removal and or exchange becomes effective.

B. The successful PROPOSER shall warrant that it has sufficient time to execute and fulfill its duties to the CITY and is not burdened by other professional responsibilities, workload, or by personal or other constraints which would interfere in any material respect with the successful proposer's principals or obligations stated herein.

C. When on-site, personnel are to wear business casual attire unless instructed otherwise by IT Manager. If present during a CITY Commission meeting, personnel are to wear tie, jacket or other business formal attire unless instructed otherwise by IT Manager.

After Hours Assistance and Tasks

On occasion PROPOSER may be asked to offer services and assistance after 5PM on a work day evening or on a weekend. The CITY considers these tasks to be part of the normal scope of services. Examples may include, but not be limited to, performing a critical system upgrade that could not be performed during business hours due to downtime or loss of critical business functionality. Other examples may include performing testing of backup power to critical IT hardware and/or performing hardware replacements in datacenter that could not be performed during business hours due to downtime or loss of critical business functionality.

Public Emergencies

It is hereby made a part of the Proposal that before, during, and after an activation of the CITY Emergency Operations Center and/or a declared public emergency, disaster, hurricane, tornado, flood, or other acts of God, the City of Winter Springs shall require a "First Priority" for goods and services. It is vital and imperative that the health, safety, and welfare of the citizens of the CITY are protected from any emergency situation that threatens public health and safety as determined by the CITY.

During activation and operation of the CITY Emergency Operations Center, the PROPOSER must provide two (2) personnel to be on-site at the Police Department, work in shifts, and be available at any hour to provide emergency technical assistance to the CITY until such emergency has been lifted (ie: the hurricane has passed and it is safe to drive home)

Changes, Additions or Deletions

The CITY may, at any time request from the successful PROPOSER changes to the nature and/or scope of services provided. Changes may include up to, but not be limited to: an increase/decrease in the type and/or services being provided, addition/removal of the type of services being provided, frequency of services being provided, etcetera. The cost impact of such changes shall be agreed upon by the PROPOSER and the CITY prior to implementation.

Questionnaire Section

Please provide responses to all items listed under each of the following ten (10) questionnaire sections.

A. Prior to a request being processed, the successful PROPOSER shall submit to the CITY documentation on how the request will affect the overall awarded Agreement.

B. In the event the successful PROPOSER performs or provides additional work or services without obtaining written approval via an appropriately executed change order, amendment, or purchase order, it shall be at its own risk and the CITY assumes no responsibility for any additional costs not specifically authorized by an appropriately issued and executed change order, Amendment, or purchase order as applicable.

QUESTIONNAIRE 1: ORGANIZATION AND EXPERIENCE

1. The PROPOSER's overall support strategy/philosophy - Please address the following in your response:

    a. Describe your view of the role of the information technology support services provider.
    b. Describe any management or implementation strategies or techniques that the PROPOSER intends to employ in carrying out the scope of work.
    c. Describe your communication strategy for keeping clients informed of system conditions and changes.

QUESTIONNAIRE 2: PROBLEM REPORTING AND RESOLUTION PROCESS

a. Include evidence that you understand the CITY's current environment, including an understanding of working within significant budgetary constraints.
b. Include plan of action and milestones for onboarding process.
c. Describe how you will propose changes in technicians assigned to the contract and seek approval from the CITY.
d. Explain how you plan to keep all desktop/laptop computers and servers operating at optimal performance.
e. Describe how you will keep the CITY informed about the state of the CITY's information technology services.
f. Describe how you will report about the status of systems, user needs, needs for changes, etcetera.
g. Describe how you will assist the CITY with strategic planning to insure that the CITY's IT system retains its usefulness, viability, compatibility, and dependability into the future.

QUESTIONNAIRE 3: ASSUMPTIONS, REQUIREMENTS, RISKS AND EXPECTATIONS

Please list in this section all your assumptions, requirements, risks and expectations for the provision of services pursuant to the scope of services outlined herein.

QUESTIONNAIRE 4: LEVEL OF SERVICE

An explanation of the problem reporting and resolution process that describes the PROPOSER's support plan, including tiers, service levels, call escalation, the person(s) authorized to close problem reports, etcetera. Please address the following in your response:

1. Services
    a. Describe your work order/trouble ticket system.
    b. Describe your system to escalate chronic or advanced problems.
    c. Describe availability of key staff during normal business hours (including systems administrators and engineers and other specialists).
    d. Describe after-hours support. What is the guaranteed response time? How is your afterhours response time structured (e.g., time of day, severity)? What is the average response time?
    e. Provide your guaranteed response time for issues dependent upon severity and time of day.
    f. How do you propose that the service level agreement be monitored and enforced?
    g. Describe any training your organization provides to your clients, including network applications and/or desktop applications. (Or are you affiliated with an organization that provides training to clients?)
    h. Describe any systems backup support you offer.
    i. Describe any disaster recovery support provided.

j. Describe how major software upgrades would be applied and what upgrades would require additional fees.
k. Describe patch management – how software updates and patches are performed both on servers and desktops. Who is responsible for doing updates? How often are they done? If using automated tools, what program is being used to rollout the updates and what programs are being updated?
l. How are network down-times for maintenance scheduled and communicated?
m. Describe how PROPOSER would resolve the situation in which one of our servers breaks down during service. Be sure to include time estimates as well.

2. Helpdesk and Monitoring
    a. Describe your work order/trouble ticket system.
    b. Describe your company's remote helpdesk and monitoring setup and how it would serve the CITY.
    c. Describe how you will schedule and assign help desk technicians for on-site coverage.
    d. Provide helpdesk statistics such as average time to respond to calls, average length of time for successful resolution of issues, the nature of the support calls, etcetera.
    e. Is it limited to a quota of calls?
    f. Is it limited to a quota of man hours?
    g. What are the helpdesk hours? If they do not cover all our hours of operations, please describe what coverage will be provided for those hours outside of your helpdesk hours.
    h. Who can call the helpdesk?
    i. Is helpdesk staff local? If not, where are they located? (**Note preference may be given to a City of Winter Springs based helpdesk**)
    j. Are helpdesk staff employees of the support company or sub- contracted?
    k. Are helpdesk staff full-time?
    l. What is the skill/certification level of first-level helpdesk staff?
    m. What happens if the helpdesk cannot resolve the problem?
    n. Does the helpdesk understand that they should never ask for CITY end user login passwords?
    o. Does the helpdesk understand they should never put sensitive information in any public communications?

3. Security

a) Describe your strategy for securing your client's data. Include PROPOSER's policies as well as any security certificates that you possess, including the year each was originally obtained.
b) Explain how PROPOSER will insure that the security clearances required are adhered to.
c) Describe PROPOSER's security certification and expertise.
d) Describe PROPOSER's handling of multi-factor authentication internally.
e) Provide details of PROPOSER's practices for staying current on regulations, legislation, certifications and compliance.
f) Describe background checks performed for all PROPOSER's staff.
g) How does PROPOSER stay informed regarding security alerts and/or events?
h) How does PROPOSER notify and manage security events for your clients?
i) How does PROPOSER manage mobile device security?
j) How does PROPOSER ensure best security practices are being followed?
k) Is an annual security assessment and report included in PROPOSER'sr service?

4. Management Deliverables and Reports

    a. Include descriptions of any reports used to summarize and provide detailed information for managed services customers.
    b. Include sample reports as attachments to the Proposal to provide an example of the types of reports that will be provided for this engagement.

5. Documentation and Records

    a. Describe how PROPOSER would document and record maintenance, installation, performance, and changes to the system.
    b. Describe the documentation that PROPOSER would make available to The City of Winter Springs at the end of the contract period.
    c. Describe how PROPOSER would maintain confidentiality in strict conformance with sensitive CITY data, State law and other Confidentiality laws and regulations.

QUESTIONNAIRE 5: DOCUMENTATION AND REPORTING

a. Please provide up to two examples of documentation that PROPOSER would create on the CITY's behalf when setting up new systems.
b. How does PROPOSER report daily and weekly activity to the the CITY's IT manager?
c. Do you have examples of reporting that PROPOSER would provide?

QUESTIONNAIRE 6: SECURITY

All staff working on Police Department information systems shall submit to a full fingerprint based background check to satisfy Criminal Justice Information Systems (CJIS) security policy and must comply with the requirements outlined in the CJIS Security Addendum. This information will be forwarded to the State of Florida for all clearances as required. The successful PROPOSER will not incur any costs other than their own staff time for this vetting process.

Please outline any experience PROPOSER has with these requirements and state how it will facilitate and maintain compliance with this requirement from onboarding throughout the term of the awarded Agreement.

QUESTIONNAIRE 7: PROPOSER'S STAFF TRAINING

Describe how PROPOSER intends to ensure that all personnel contributing to the management of CITY's information technology system are properly trained and monitored to ensure that they are performing their duties at proficient levels.

QUESTIONNAIRE 8: PROJECT MANAGEMENT

a) What experience in Project Management does PROPOSER's organization have?

b) Any certified PMP?

QUESTIONNAIRE 9: INFRASTRUCTURE HEALTH MONITORING

a) Describe PROPOSER's monitoring tools and strategies to monitor and insure the stability of the computing environment at the CITY.

b) Describe how these monitoring results would be communicated to the CITY.

QUESTIONNAIRE 10: FEE STRUCTURE

The CITY requests a fixed fee structure all-inclusive of all services provided. Include a fee breakdown based on the fixed fee pricing model. Please provide the following Manadatory Forms (i) a Fee Structure Spreadsheet Price Proposal (See Appendix A Cost Proposal - Part 1), and (ii) Acceptance of Proposal Terms and Conditions (see Proposal Form 1 – Proposer Information and Acknowledgement Form). Please address the following:

a) Are monthly/quarterly/yearly costs increased or decreased due to environmental changes? If so, please describe (i.e. adding or removing servers or users).

b) Based on the CITY's current support requirements; provide PROPOSER's ongoing monthly/quarterly fees and what is included. Address specifically the following list of items and if not included, please provide any separate fees the CITY would incur. Please provide "a la carte" pricing for any services PROPOSER can provide which is not included in this list:

1. On-site Time
2. Helpdesk Support
3. After-hours Support
4. Response Time/Problem Resolution Time
5. Travel Time
6. Vendor Management
7. Training for City Users
8. Project Management
9. OS/Application Upgrades
10. Additional Equipment, Applications, and/or Users
11. Special Requests and/or Projects beyond the Scope of this RFP
12. Regular in-person Business Review
13. Regular Reporting on System Health in business terms
14. Response to Major System Problems or Outages
15. Coverage and Response During Emergency Operations and/or Activations
16. Overall Description and Outline of the Level of Service Included for the Proposed Fees

c) Describe work and related costs that are specifically excluded from the contract, i.e. any optional/incremental ongoing services or project fees, (see Appendix A Cost Proposal – Part 2).

Exhibit “B”

Information Technology Managed Services
RFP No. 06-23-01 JD

City of Winter Springs

Submitted for consideration by:

ESSENTIAL
NET SOLUTIONS

EssentialNet Solutions

2301 W. Eau Gallie Blvd., Suite 104

Melbourne, FL 32935

321-259-3242

COPY

Point of Contact: Frank Huston

fhuston@ensusa.com

Office: 321-259-3242

Cell: 321-514-5823

COVER PAGE

Section A – Proposer Information and Acknowledgement Form

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

Managed IT Services RFP #06-23-01 JD

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: Networked Solutions Inc dba: EssentialNet Solitions

TAX ID# SNN or EIN: 59-3474526

PROPOSER ADDRESS: 2301 West Eau Gallie Blvd., Suite 104 Melbourne FL 32935

PURCHASE ORDER ADDRESS: 2301 West Eau Gallie Blvd., Suite 104 Melbourne FL 32935

PHONE NUMBER: 321-259-3242

COMPANY WEBSITE: ensusa.com

COMPANY CONTACT (REP): Frank Huston

CONTACT EMAIL ADDRESS: fhuston@ensusa.com

SIGNATURE: Frank M. Huston

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 06-23-01 JD Pertaining To: Managed IT Services
   2. Addenda:
      Number 1, dated 7/14/2023
      Number _____, dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the goods and/or services specified in this RFP at the prices quoted in my responsive Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

ulated Amount

Submit on Cost Proposal Worksheet, Appendix A.

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Section C – Introduction Letter

Networked Solutions, Inc, /DBA EssentialNet Solutions
2301 W. Eau Gallie Blvd., Ste 104
Melbourne, FL 32935
fhuston@ensusa.com - 321-259-3242
www.ensusa.com

July 26, 2023

Stuart MacLean
Interim Procurement Manager
City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, FL 32708

Subject: Introduction and Response to Request for Proposal

Dear Stuart MacLean,

We are excited to introduce Networked Solutions, Inc. /dba EssentialNet Solutions, a leading provider of comprehensive managed services solutions, and present our response to your Request for Proposal (RFP) for RFP #06-23-01 JD. With 26 years of experience in the industry, we are well-equipped to optimize your operations, enhance efficiency, and drive unparalleled success.

Our core strengths and differentiators include a proven track record of successful partnerships, an expert team of technology professionals, tailored solutions, 24/7 support, and a strong focus on security and compliance.

Proposed Solution:

Our comprehensive managed services solution addresses your specific needs, including system monitoring, network management, cloud solutions, cybersecurity, and more. Our implementation plan ensures seamless integration and migration with minimal disruptions. The pricing model offers exceptional value and transparency, supported by robust service level agreements (SLAs) to guarantee quality and responsiveness.

We are confident that our expertise and dedication to excellence will make a significant difference in your organization's success. By partnering with EssentialNet Solutions (ENS), you can focus on your core business while we handle the complexities of IT management.

Please find the complete details of our proposal attached. Should you have any questions or require further information, do not hesitate to reach out to our team.

Sincerely,

Frank Huston
President & CEO, Networked Solutions, Inc. /dba EssentialNet Solutions

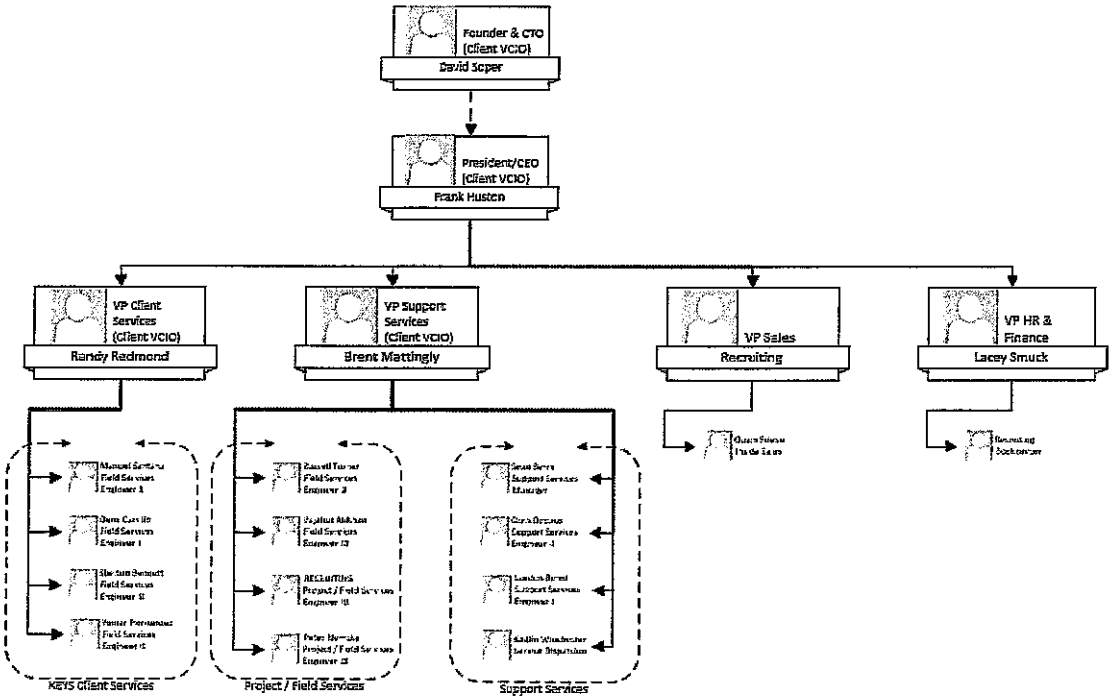
Section D – Qualifications

1. General

Provide general information about the PROPOSER, including size, office location(s), and structure of PROPOSER. Identify and explain any significant changes in organizational structure, ownership, or management both firm-wide and within Fixed Income/ Public Finance during the past five (5) years.

Networked Solutions Inc. dba EssentialNet Solutions (ENS) is a Managed Service & Technology Provider located Headquartered in Melbourne, Fl. We currently support clients throughout the state of Florida. We have 18 employees with 5 of these employees currently living in South Florida in support of our clients from West Palm through the Florida Keys. Other than growth, there have been no significant changes in our organization structure in the past five years.

ENS Organizational Chart



2. Proposer Experience

PROPOSER Experience – Describe the PROPOSER's experience with providing IT Managed Services, focus on the firm's experience with providing such services to a municipality.

ENS has been assisting clients with their technology needs for over twenty-six years. Originally founded as Networked Solutions, Inc in 1997, we started as a software and hardware support

company and evolved over the years into a full-service Managed Technology Services Provider serving all of Florida.

ENS is qualified to provide IT services to the City of Winter Springs due to our extensive experience with municipalities including the City of Marathon, Town of Ocean Ridge, Town of Haverhill, and Town of Palm Beach Shores. Due to the nature of these municipalities, ENS is experienced supporting Police Departments (CJIS) and Fire / Emergency Rescue with their proprietary technology needs. Additionally, these same organizations have required support of various utilities including wastewater, water, electricity, and gas which has allowed our staff to develop a solid understanding of the infrastructure requirements of SCADA and many other Municipal specific applications.

Since its founding, ENS has supported approximately thirty-six municipalities from monthly support to specialized projects including server upgrades, phone systems, security and Y2K mitigation.

In addition to our experience as a Managed Services Provider, ENS has a strong history of working with onsite IT staff in what is often referred to as Co-Managed IT. Through this service model we serve as either the IT lead for the organization or as the outsourced IT support arm reporting to onsite IT teams. In support of this model, we provide a shared ticketing system that can be cross utilized by clients and ENS staff alike. Additionally, we can provide shared documentation and monitoring tools so that communication between the two teams is seamless and efficient for both parties.

Our team shares a wide array of experiences in technology, networks, cloud solutions, security, telephony, business continuity, project management, strategic planning, budgeting, procurement, technology vendor management and customer service. We take pride in helping our clients with all aspects of their IT needs from frontline support to strategic planning and risk management.

Our service tools include best-in-class monitoring, alerting and patch management and we provide 24x7 support and response for clients requiring elevated support. A list of available services are provided below:

Managed Services	**Project/ Specialized Services**
• Managed Patch Management	• Network Design & Engineering Services
• Managed Workstation	• Cloud Migration Services
• Managed Servers	• Onsite / Remote Labor Services
• Managed Anti -virus Services	• Project Management Services
• Managed Firewall Services	• Virtual CIO Services
• Managed Network Services	• Budgeting and Planning
• Managed Cloud servers and applications	• Cloud Solutions
• Managed Backup Services	**Managed Security Services**
• Managed Colocation Services	• Security Information and Event Management
• Managed Cloud Services	• Security Training and Learning Management

• Managed VoIP Services	• Darkweb Monitoring
• Managed Hardware as a Service Solutions	• External/ Internal Security Scanning
• Managed 24x7 Monitoring and Alerting	• 24x7 Security Operations Center Monitoring
• Co-Managed IT Services	• Risk Assessment Analysis Reporting
Helpdesk Services	**MISC Services**
• Customized Client Portal	• Consulting
• Client Ticketing	• Budget Development / Management
• Client Reporting	• Strategic Planning
• Asset Tracking / Reporting	• Vendor Management
• Remote Workstation Access to All Users	• AV Support / VoIP Support
• Online Documentation	• Board Meeting Attendance
• Customer Services Assessments	• Custom Training Services

3. Team Experience

Team Experience – Identify key members of PROPOSER's team that will service the CITY. Identify the primary day-to-day contact for the engagement and their experience. Identify the proposed project manager. Provide brief resumes for key team members that will service the CITY as an Appendix.

The ENS team planned for the City of Winter Springs from day one will include:

- David Soper (Owner and client vCIO),
- Frank Huston (President and client vCIO),
- Brent Mattingly (VP of Field Services and Project Manager),
- Peter Nemsky (Senior Field Engineer)
- Kaitlin Winchester (VP of Client Experience)
- Sean Berry (Service Desk Manager)

Collectively, these six individuals have over 100 years of experience including IT Management and frontline support of municipalities, police departments, fire departments, and water treatment facilities.

Given the scope of the contract, ENS is prepared to recruit and manage additional staff as needed to meet the contracted needs onsite and remote. The primary day-to-day contact for the engagement will be our VP of Field Services – Brent Mattingly. Our VP of Client Experience – Kaitlin Winchester will serve as a secondary point of contact and Helpdesk escalation.

David Soper

David has over 25 years in technology services and business leadership. He is a business executive who started in field engineering supporting municipalities during the Y2K crisis and grew to own 5 technology related organizations including EssentialNet and Commulus (a VoIP provider in Central Florida)

Frank Huston

Frank has over 40 years' experience in technology services. He started in computer and technology services with the Air Force and then moved on to hold positions with two large healthcare organizations including Director of IT for St' Jude Childrens Research in Memphis Tennessee. Frank has been a part of the Managed Services industry for twenty years here in Florida and has five years' experience running a private data center for business aviation.

Brent Mattingly

Brent serves as the VP of Field Services and Project Manager for ENS and is responsible for overseeing the engineering services division, ensuring seamless project execution from conception to completion. He provides strategic leadership to the team, fosters innovation, and maintains exceptional client relationships. Brent efficiently allocates resources, manages budgets, and implements best practices, ensuring the successful delivery of projects while upholding the highest standards of quality and safety. Brent has over 20 years' experience in technology support with 15 years directly supporting municipalities.

Peter Nemsky

Peter serves as a Senior Engineer and backup Project Manager and is responsible for providing expert-level technical support and maintenance for complex network infrastructures. With a focus on delivering exceptional field services, he leads the installation, configuration, and troubleshooting of networking solutions, ensuring optimal performance and reliability. Peter collaborates closely with cross-functional teams, plays a pivotal role in project planning and execution, and consistently demonstrates a commitment to delivering top-tier customer service and exceeding project objectives.

Kaitlin Winchester

Kaitlin serves as the VP of Customer Experience, responsible for overseeing and optimizing the overall customer journey and satisfaction. She has over 17 years of professional experience dedicated to enriching customer interactions across a wide range of industries. Kaitlin's role involves overseeing dispatch, the service desk team, scheduling and is the main point of contact for customer communication.

Sean Berry

Sean serves as the Service Desk Manager and is responsible for overseeing the efficient operation and continuous improvement of the IT service desk. He leads a team of skilled professionals, ensuring the delivery of exceptional technical support to end-users, promptly resolving incidents and service requests. Additionally, Sean develops and implements service desk processes, maintains service level agreements, and fosters a customer-centric approach to enhance overall user satisfaction and IT service quality.

4. Florida Knowledge

Florida Knowledge – Describe any political, economic, legal, or other issues impacting Florida municipalities, specifically those impacting the City of Winter Springs, which may be relevant to the Proposal.

As a municipality in Florida, the City of Winter Springs faces several issues that influence the cities' technological needs including cybersecurity threats, budget constraints, regulatory compliance, infrastructure design and survivability, system integrations, cloud adoption, and general risk mitigation.

Some of the more pressing risk issues faced by the city range from hurricanes and severe weather to cybersecurity protection and the growing spread of ransomware. In order for the City to take the most appropriate action for themselves and their residents, they have to consider budget impacts (planned and unplanned) while trying to add layers of protection that are increasingly more expensive and possibly less understood / justified by City leadership and council members.

Due to the geographic location of the city, technology solutions must be redundant in design or implemented with quick recovery times. This means that all systems must be evaluated for local vs cloud benefits or risks, backup and recovery options for both, and continuity options (if cloud, then redundant internet. If local, then redundant power and hardware).

<continued on next page>

5. References

Project #1:	
Project Name: Managed Services / CIO Services / Monthly Services	
Type of Project / Service: Managed Services	
Address: 103355 Overseas Hwy, Key Largo, FL 33037	
Contracting Agency / Client: Key Largo Wastewater Treatment District	
Contact Name and Phone #: Peter Rosasco 305-451-4019	
Contact Email Address and Fax#: peter.rosasco@klwtd.com	
Contract Amount: $170,400 Estimated Annual	Date Work Performed: 2020 - Present
Project #2:	
Project Name: Managed IT / Monthly Services	
Type of Project / Service: Managed Services	
Address: 6450 N Ocean Blvd., Ocean Ridge, FL 33435	
Contracting Agency / Client: Town of Ocean Ridge	
Contact Name and Phone #: Lynne Ladner 561-732-8331	
Contact Email Address and Fax#: lladner@oceaneridgeflorida.com	
Contract Amount: $54,900 Estimated Annual	Date Work Performed: 2012 - Present
Project #3:	
Project Name: Managed IT / CIO Services / Monthly Services	
Type of Project / Service: Onsite Helpdesk, IT Director, and CIO Services	
Address: 5901 College Rd., Key West, FL 33040	
Contracting Agency / Client: The College of the Florida Keys	
Contact Name and Phone #: Heather Margiotta (305) 296-9081	
Contact Email Address and Fax#: heather.margiotta@cfk.edu	
Contract Amount: $594,000 Estimated Annual	Date Work Performed: 2020 - Present
Project #4:	
Project Name: Managed IT / CIO Services / Monthly Services	
Type of Project / Service: Helpdesk, Onsite Support, and CIO Services	
Address: 9805 Overseas Highway, Marathon, FL 33050	
Contracting Agency / Client: City of Marathon	
Contact Name and Phone #: George Garrett (305) 743-0033	
Contact Email Address and Fax#: garrettg@ci.marathon.fl.us	
Contract Amount: $342,000 Estimated Annual	Date Work Performed: 2001 - Present
Project #5:	
Project Name: Managed IT / CIO Services / Monthly Services	
Type of Project / Service: Managed IT, Co-Managed IT, CIO Services	
Address: 502 E New Haven Ave., Melbourne, FL 32901	
Contracting Agency / Client: Florida Eye Associates	
Contact Name and Phone #: Trish Barker (321)-727-2020 Ext 4050	
Contact Email Address and Fax#: tbarker@floridaeyeassociates.com	
Contract Amount: $115,000 Estimated Annual	Date Work Performed: 2019 - Present

MANDATORY FORM

6. Conclusion

Conclusion – Briefly summarize why PROPOSER should be selected, including why you are pursuing the City of Winter Springs' business. In short, summarize what makes PROPOSER different and why the CITY should select PROPOSER above all others.

ENS is a relationship business that provides technology services. In every contract engagement, we seek to understand the needs of our client's business so that we can respond with technology services and solutions that are foundational to the success of our client's growth. With client approval, we involve ourselves in every aspect of our client business including representing IT in Board Meetings, Town Meetings, Planning Sessions, and Vendor Negotiations.

ENS staff have provided technology services to over 30 municipalities throughout the state of Florida. We routinely engage in budgeting, planning, project management and implementation, day to day end user and system support. Additionally, we routinely attend council meetings and department head meetings.

ENS is a growing company, financially stable, and well-staffed.

ENS stays ahead of the ever-changing technology landscape by by attending industry trade shows related to our client needs as well those that are specific to IT. We also work with vendors to provide in-house training and roadmap reviews when they are in the area. Internally, we hold certification training for our staff and work with them to achieve certifications specific to industry needs.

Section E – Other Information

This section should address any other information necessary for a full understanding of PROPOSER's services. Please provide relevant information on any additional/incremental services offered by PROPOSER.

As shared previously, ENS provides variations of the following services:

Managed Services	**Project/ Specialized Services**
• Managed Patch Management	• Network Design & Engineering Services
• Managed Workstation	• Cloud Migration Services
• Managed Servers	• Onsite / Remote Labor Services
• Managed Anti -virus Services	• Project Management Services
• Managed Firewall Services	• Virtual CIO Services
• Managed Network Services	• Budgeting and Planning
• Managed Cloud servers and applications	• Cloud Solutions
• Managed Backup Services	**Managed Security Services**
• Managed Colocation Services	• Security Information and Event Management
• Managed Cloud Services	• Security Training and Learning Management
• Managed VoIP Services	• Darkweb Monitoring
• Managed Hardware as a Service Solutions	• External/ Internal Security Scanning
• Managed 24x7 Monitoring and Alerting	• 24x7 Security Operations Center Monitoring
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Helpdesk Services	**MISC Services**
• Customized Client Portal	• Consulting / Onsite Staffing
• Client Ticketing	• Budget Development / Management
• Client Reporting	• Strategic Planning
• Asset Tracking / Reporting	• Vendor Management
• Remote Workstation Access to All Users	• AV Support / VoIP Support
• Online Documentation	• Board Meeting Attendance
• Customer Services Assessments	• Custom Training Services

As standard business practice, these services (except for project work) are billed individually or bundled depending on the needs of the client. Our typical contract includes monthly billing of services based on the quantity of devices managed and increases / decreases as device counts are adjusted.

Section F – Cost and Time

(RFP Appendix A)
COST PROPOSAL WORKSHEET

Part 1: Minimum Required Services

Cost Per Month to the CITY for the Minimum Required Services defined in the Statement of Work shall be:

$ 22,225.00 (print/type out amount here)

Pricing provided in the monthly total above assumes two full-time technicians, Managed Services agents and patch management, and advanced endpoint security protection (estimated 215 Workstations, 35 Servers).

Part 2: Optional Services Unit Cost

These are the "a la carte" prices for additional / incremental services offered by the PROPOSER

Description	Unit	Unit Cost
M365 GCC G3 (monthly per licensed user)	1 EA	$32.00
Office365 GCC G1 (monthly per licensed user)	1 EA	$9.50
Power BI Pro for Gov (monthly per licensed user)	1 EA	$8.50
Cyber Security Training (monthly per licensed user)	1 EA	$2.20
Advanced Business Continuity Services "Estimated" (On-Premise & Cloud) – (1 appliance sized to environment)	1 EA	$3,000
Inky SPAM Prevention & Phish Prevention Service (monthly per licensed user)	1 EA	$2.00
Quarterly Vulnerability Scans (priced per scan)	1 EA	$75.00
MyGlue – client facing documentation tool (monthly per user)	1 EA	$2.00
Darkweb Monitor (monthly priced per monitored domain)	1 EA	$10.00
VoIP Phone Service (monthly per user)	1 EA	$19.00

PROPOSER may add additional lines and / or pages to accommodate its list of additional / incremental services offered

Section G – Mandatory Proposal Forms

1. Proposal Form 1 - PROPOSER Information and Acknowledgement Form

2. Proposal Form 2 - References Information Form

3. Proposal Form 3 - Insurance Requirements Form

4. Proposal Form 4 - Scrutinized Company Certification

5. Proposal Form 5 – Non-Collusion Affidavit

6. Proposal Form 6 - Drug Free Workplace Form

7. Proposal Form 7 - SMWBE Utilization Plan

8. Proposal Form 8 - Public Entity Crimes Statement

9. Proposal Form 9 - E-Verify Statement

10. Proposal Form 10- Conflict of Interest Statement

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

Managed IT Services RFP #06-23-01 JD

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: Networked Solutions Inc dba: EssentialNet Solitions

TAX ID# SNN or EIN: 59-3474526

PROPOSER ADDRESS: 2301 West Eau Gallie Blvd., Suite 104 Melbourne FL 32935

PURCHASE ORDER ADDRESS: 2301 West Eau Gallie Blvd., Suite 104 Melbourne FL 32935

PHONE NUMBER: 321-259-3242

COMPANY WEBSITE: ensusa.com

COMPANY CONTACT (REP): Frank Huston

CONTACT EMAIL ADDRESS: fhuston@ensusa.com

SIGNATURE: Frank M. Huston

THE UNDERSIGNED:

A. Acknowledges receipt of:

1. RFP # 06-23-01 JD Pertaining To: Managed IT Services
2. Addenda:
   Number 1, dated 7/14/2023
   Number _____, dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:

1. To hold this Proposal open for 90 calendar days after the bid opening date.
2. To furnish the goods and/or services specified in this RFP at the prices quoted in my responsive Proposal and in compliance with the RFP Documents.
3. To accept the provisions of the Instructions to PROPOSERS.
4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
5. To accomplish the work in accordance with the contract documents.

D. Certifies:

1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

Submit on Cost Proposal Worksheet, Appendix A.

REFERENCE INFORMATION FORM
IT Managed Services
RFP # 06-23-01 JD

PROPOSER shall submit as a part of the Proposal package, a minimum of three (3) and maximum of five (5) of the most significant projects which were performed within the last three years as set forth below.

Project #1:	
Project Name: Managed IT / CIO Services / Monthly Services	
Type of Project / Service: Managed Services	
Address: 103355 Overseas Hwy, Key Largo, FL 33037	
Contracting Agency / Client: Key Largo Wastewater Treatment District	
Contact Name and Phone #: Peter Rosasco 305-451-4019	
Contact Email Address and Fax#: peter.rosasco@klwtd.com	
Contract Amount: $170,400 Estimated Annual	Date Work Performed: 2020 - Present
Project #2:	
Project Name: Managed IT / Monthly Services	
Type of Project / Service: Managed Services	
Address: 6450 N Ocean Blvd., Ocean Ridge, FL 33435	
Contracting Agency / Client: Town of Ocean Ridge	
Contact Name and Phone #: Lynne Ladner 561-732-8331	
Contact Email Address and Fax#: lladner@oceaneridgeflorida.com	
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Contracting Agency / Client: City of Marathon	
Contact Name and Phone #: George Garrett (305) 743-0033	
Contact Email Address and Fax#: garrettg@ci.marathon.fl.us	
Contract Amount: $342,000 Estimated Annual	Date Work Performed: 2001 - Present
Project #5:	
Project Name: Managed IT / CIO Services / Monthly Services	
Type of Project / Service: Managed IT, Co-Managed IT, CIO Services	
Address: 502 E New Haven Ave., Melbourne, FL 32901	
Contracting Agency / Client: Florida Eye Associates	
Contact Name and Phone #: Trish Barker (321)-727-2020 Ext 4050	
Contact Email Address and Fax#: tbarker@floridaeyeassociates.com	
Contract Amount: $115,000 Estimated Annual	Date Work Performed: 2019 - Present

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
	Commercial General Liability	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability.
✔	(Occurrence Form) patterned after the current ISO form	This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

PROPOSER shall ensure that all subcontractors comply with the same insurance requirements that it is required to meet. The same PROPOSER shall provide the CITY with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.
Thirty (30) days cancellation notice required.

The undersigned firm agrees to obtain, prior to award, if selected, insurance as stated above.

Networked Solutions Inc dba EssentialNet Solutions
PROPOSER

Authorized Signature

Owner
Officer Title

28 July 2023
Date

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the company:
Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and

If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

(Authorized Signature)

David Soper Owner

(Printed Name and Title)

Networked Solutions dba EssentialNet Solutions Inc

PROPOSER

STATE OF Florida

COUNTY OF Brevard

The foregoing instrument was acknowledged before me by means of (✓) physical presence or (____) online notarization, this 28 day of July, 2023 by David Soper the Owner of Networked Solutions, a Florida Corp. (___) who is personally known to me or (✓) who produced FL D.L. as identification.

Dale L Hoppough

Notary Public State of Florida
Dale L Hoppough
My Commission
HH 220613
Exp. 2/22/2026

Notary Public

Print Name: Dale L Hoppough

My Commission Expires: 2/22/2026

NON-COLLUSION AFFIDAVIT of PRIME RESPONDENT

STATE OF FLORIDA

COUNTY OF BREVARD

David Soper, being duly sworn, deposes and says that:

(1) He/she is Owner (Title) of Networked Solutions Inc dba EssentialNet Solutions (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such Proposal.

(3) Such Proposal is genuine and is not a collusive or sham Proposal.

(4) Neither the said PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham Proposal in connection with the Agreement for which the attached Proposal has been submitted or to refrain from proposing in connection with such Agreement, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed) Owner (Title)

STATE OF Florida

COUNTY OF Brevard

The foregoing instrument was acknowledged before me this 7/28/2023 by David Soper, who is (___) personally known to me or (✓) who has produced FL D.L as identification and who (did / did not) take an oath.

Dale L Hopp (Signature of Notary Public)

Notary Public State of Florida
Dale L Hoppough
My Commission
HH 220613
Exp. 2/22/2026

(Name of Notary Typed, Printed or Stamped) Notary Public

HH220613 (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

Networked Solutions Inc dba EssentialNet Solutions does:

PROPOSER

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

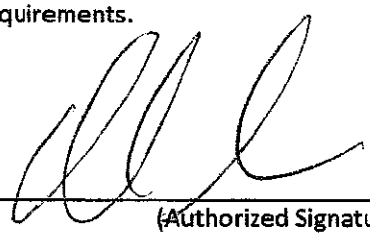
3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.



(Authorized Signature)

July 28 2023

(Date)

David Soper

(Print/Type Name as Signed Above

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

PROPOSER: Networked Solutions Inc dba EssentialNet Solutions

Project Name : ***IT Managed Services***

RFP Number : **RFP *06-23-01 JD***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.
- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.
- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.
- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.
- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

ESSENTIAL
NET SOLUTIONS

SMWBE Utilization Plan Response

Per the defined scope of work, ENS does not currently plan to engage sub-contractors in support of this contract. However, should project scopes or support requirements dictate the need for subcontractors, ENS will abide by the requirements defined in the provided SMWBE Utilization Plan provided in the RFP and restated on the previous page and will abide by internal policy as provided below:

ENS is committed to actively seeking out and prioritizing Small, Minority, Women, or Disadvantaged Business Enterprises (SMWBEs) as subcontractors. We recognize the importance of fostering diversity and inclusion in our projects and supporting underrepresented businesses in the communities we operate in. Here's how we will engage with SMWBE subcontractors:

1. We will proactively search for SMWBEs that align with the specific requirements of each project. Our dedicated team will conduct thorough research to identify qualified SMWBEs in the regions where our projects are taking place.

2. To ensure we work with legitimate SMWBEs, we will verify their official certification status. Working with certified businesses will allow us to uphold the highest standards of diversity and inclusivity in our subcontracting process.

3. We are committed to providing fair and equal bid opportunities to all potential subcontractors, including SMWBEs. All interested SMWBEs will receive clear and comprehensive information about the projects, deadlines, and requirements.

4. Communication is key to successful collaborations. We will maintain open and transparent lines of communication with SMWBE subcontractors, fostering a trusting and respectful relationship from the outset.

5. ENS will actively support SMWBE subcontractors by providing the necessary resources and assistance to help them succeed in their roles. This support may include technical guidance, training, or access to networks and opportunities.

6. We will regularly monitor the progress and performance of SMWBE subcontractors to ensure that projects stay on track and meet the desired outcomes. Any issues that arise will be addressed promptly and collaboratively.

7. Ensuring timely and fair payment to SMWBE subcontractors is a priority. We will adhere to the agreed-upon payment terms and streamline the invoicing process to maintain a positive working relationship.

8. ENS is dedicated to ongoing evaluation and improvement of our engagement with SMWBE subcontractors. We will identify areas for enhancement and strive to create even more mutually beneficial partnerships in the future.

By actively seeking out, giving priority to, and engaging with SMWBE subcontractors, ENS aims to lead by example and contribute positively to the growth and prosperity of diverse businesses in the communities we serve.

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for **RFP #06-23-01 JD IT Managed Services.**

2. This sworn statement is submitted by (PROPOSER) Networked Solutions Inc dba EssentialNet Solutions whose business address is 2301 West Eau Gallie Blvd., Suite. 104 Melbourne FL 32935 and (if applicable) Federal Employer Identification Number (FEIN) is 59-347-4526 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is David Soper and my relationship to the PROPOSER named above is Owner.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

__X__ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____ The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____ The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

Signature 7/28/22 Date:

PUBLIC ENTITY CRIMES STATEMENT cont.

STATE OF Florida

COUNTY OF Brevard

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 28 day of July, 2023, and is personally known to me, or has provided FL DL as identification.

Dale L Hoppough My Commission expires: 2/22/2026
Notary Public

Notary Public State of Florida
Dale L. Hoppough
My Commission
HH 220613
Exp. 2/22/2026

E-VERIFY STATEMENT

Bid/Proposal Number: **RFP # 06-23-01 JD**

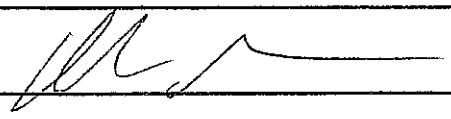
Project Description: **IT Managed Services**

I/FIRM acknowledges and agrees to the following:
I/FIRM shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties with the CITY, and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY

PROPOSER: Networked Solutions Inc dba EssentialNet Solutions

Authorized Signature: 

Title: Owner

Date: 7/28/23

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal or Contract for **RFP # 06-23-01 JD IT Managed Services.**
This sworn statement is submitted by (PROPOSER) Networked Solutions Inc dba EssentialNet Solutions whose business address is

2301 West Eau Gallie Blvd., Suite. 104 Melbourne FL 32935 and (if applicable) Federal Employer Identification Number (FEIN) is

59-3474526 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social

Security Number: _____.) My name is David Soper and my relationship

to the PROPOSER named above is Owner.

1. The above-named PROPOSER is submitting a Proposal for the Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named entity has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER nor its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____ 7/28/23
Signature Date:

STATE OF Florida

COUNTY OF Brevard

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 28 day of July, 2023, and is personally known to me, or has provided FL DL as identification.

Dale L Hoppough My Commission expires: 2/22/2026
Notary Signature

Notary Public State of Florida
Dale L Hoppough
My Commission
HH 220613
Exp. 2/22/2026

Section H – Florida State Corporate Filing

Detail by Entity Name

Florida Profit Corporation
NETWORKED SOLUTIONS, INC.

Filing Information

Document Number	P97000089405
FEI/EIN Number	59-3474526
Date Filed	10/16/1997
Effective Date	10/13/1997
State	FL
Status	ACTIVE
Last Event	AMENDMENT
Event Date Filed	01/15/1999
Event Effective Date	NONE

Principal Address

2301 W Eau Gallie
Suite 104
Melbourne, FL 32935

Changed: 01/06/2022

Mailing Address

2301 W Eau Gallie
Suite 104
Melbourne, FL 32935

Changed: 01/06/2022

Registered Agent Name & Address

Smuck, L
2301 W Eau Gallie
Suite 104
Melbourne, FL 32935

Name Changed: 01/06/2022

Address Changed: 01/06/2022

Officer/Director Detail

Name & Address

Title President

SOPER, DAVID R
4448 CHASTAIN DR
MELBOURNE, FL 32940

Appendix A – Cost Proposal Worksheet

(RFP Appendix A)
COST PROPOSAL WORKSHEET

Part 1: Minimum Required Services

Cost Per Month to the CITY for the Minimum Required Services defined in the Statement of Work shall be:
$ 22,225.00 (print/type out amount here)
Pricing provided in the monthly total above assumes two full-time technicians, Managed Services agents and patch management, and advanced endpoint security protection (estimated 215 Workstations, 35 Servers).

Part 2: Optional Services Unit Cost

These are the "a la carte" prices for additional / incremental services offered by the PROPOSER

Description	Unit	Unit Cost
M365 GCC G3 (monthly per licensed user)	1 EA	$32.00
Office365 GCC G1 (monthly per licensed user)	1 EA	$9.50
Power BI Pro for Gov (monthly per licensed user)	1 EA	$8.50
Cyber Security Training (monthly per licensed user)	1 EA	$2.20
Advanced Business Continuity Services "Estimated" (On-Premise & Cloud) – (1 appliance sized to environment)	1 EA	$3,000
Inky SPAM Prevention & Phish Prevention Service (monthly per licensed user)	1 EA	$2.00
Quarterly Vulnerability Scans (priced per scan)	1 EA	$75.00
MyGlue – client facing documentation tool (monthly per user)	1 EA	$2.00
Darkweb Monitor (monthly priced per monitored domain)	1 EA	$10.00
VoIP Phone Service (monthly per user)	1 EA	$19.00

PROPOSER may add additional lines and / or pages to accommodate its list of additional / incremental services offered

Appendix B – Statement of Work / RFP Attachment 1 Questionnaire

QUESTIONNAIRE 1: ORGANIZATION AND EXPERIENCE

The PROPOSER's overall support strategy/philosophy - Please address the following in your response:

Describe PROPOSER's view of the role of the information technology support services provider.

- Full outsourced IT Department
  - IT Director for budgeting, planning, vendor management, procurement, staff management, sla management,
  - Senior engineering
    - Design, Plan, Implementations, Product and service selection, Tier 3 support
  - Security Engineering
    - Product and service selection, implementation, monitoring, mitigation, risk assessments, compliance
  - Network Administration
    - Day to day server and systems administration and support, Patch management, preventative maintenance, adds moves changes
  - Applications Specialist
    - Resource dedicated to assisting with business application use, support, implementation and vendor management
  - Help Desk Technician
    - Day to day end user support

Describe any management or implementation strategies or techniques that the PROPOSER intends to employ in carrying out the scope of work.

As a technology support services provider, EssentialNet Solutions understands that it is critical to the successful operation of the city and as such it must continually monitor all systems and services to ensure proactive and urgent reactive support. In order to accomplish this, ENS expects to deploy a standard suite of tools including:

- Monitoring service agents on all workstations, laptops and servers.
- Network monitoring services for switches, firewalls, routers and managed access points.
- Customized Helpdesk support portal for customer ticketing.
- Advanced endpoint security protection services backed by 24x7 security operations center.

Describe PROPOSER's communication strategy for keeping clients informed of system conditions and changes.

Once the tools are deployed and active, ENS will ensure that all ticketing is configured for two-way communication so that all ticket actions are communicated back to the requestor in real-time. Once configured, Kaitlin will engage to align next steps and client expectations. She will serve as the point of contact for support processes and will train everyone involved in how to engage with our service desk for support. As Kaitlin begins to finalize the process and training, she will then engage Sean, the Service Desk Manager, to begin the transition to live support, documentation, and service assignment. Sean will be responsible for on-going management of tickets and ticket closure and will assign or escalate resources as required to resolve open issue.

QUESTIONNAIRE 2: PROBLEM REPORTING AND RESOLUTION PROCESS

a) *Include evidence that PROPOSER understands the CITY's current environment, including an understanding of working within significant budgetary constraints.*

ENS has over 20 years supporting Municipalities and understands the environment as described in this RFP. ENS has routinely worked with Finance departments and other department heads to establish IT budgets with an emphasis on cost savings while balancing the implementation of new technologies. MAYBE TALK ABOUT HOW WE PHASE PROJECTS OVER TIME AND MULTI YEAR PLANNING

The following list includes a sample of completed projects thorough an understanding of the existing environments and dealing with budgetary constraints.

Holy Trinity 5625 Holy Trinity Dr. Melbourne, FL 32940	Jun. 2019 – Aug. 2019	Network Replacement / Upgrade and Business Continuity Design	
- Implement high-availability network from the ground-up across two campuses for up to 1000 students - Install and configure firewalls, switches, internet fail-over and security services - Isolate and prioritize network segment utilizing vLANs, QoS and DNS/DHCP servers - Virtualized servers using VMware and automate backup using VEEAM backup & replication - Enhance wireless communications by incorporating vLANs and designated internet channels - Plan and develop disaster recovery solution with datacenter back-bone for hosting and communications			
City of Starke 209 N Thompson St. Starke, FL 32901	Oct. 2019	Workstation Upgrades	
- Design and implement custom workstation image for 35 municipal clients - Deploy physical assets onsite with migration of all user and production application data - Advance client through security compliance and end of operating system support lifecycle			
Town of Ocean Ridge 6450 N Ocean Blvd. Ocean Ridge, FL 33435	Sep. 2019	LAN / WAN Upgrades	
- Implement BGP/IP Sec VPN network for mobile police vehicles using ATT FirstNet - Bridge police vehicle wireless roaming to main office network and production applications - Load balance connectivity between multiple internet carriers and datacenters for redundancy			
Rosasco CPA 8085 Overseas Hwy . Marathon, FL 33050	Aug. 2019	Network Security and Workstation Deployment	
- Upgrade network segment hardware and implement cloud-based firewall security services - Complete image-based workstation deployment for high demand application environment			

John Greene Logistics 2405 Garden St . Suite 1 Titusville, FL 32796	Dec. 2019 – May 2020	VoIP Phone System, Server, and Workstation Upgrade	
- Migrated telecom services from analog to digital using cloud-base d VoIP - Integrate call center features allowing multiple dispatchers to collaborate - Implement virtual desktop infrastructure utilizing office 365 services - Migrate e-mail communications to Office 365 with Sales Force integration - Designed, migrated and installed new server infrastructure			
Loggerhead Marinelife 14200 US Highway One Juno Beach, FL 33408	Nov. 2019	Network and Firewall Upgrade	
- Upgrade network firewall and migrate to cloud-base d security services - Upgrade network switch layer to accommodate power over ethernet requirements			
Town of Palm Beach Shores 247 Edwards Lane Palm Beach Shores, FL 33404	Feb. 2020	Network and Workstation Upgrades	
- Migrate internet service from copper cable to fiber optics - Interconnect physical buildings into central network using fiber optics - Upgrade 13 workstations from Windows 7 to 10 with custom accounting applications			
City of Marathon 9805 Overseas Highway Marathon, FL 33050	March 2020	Network and Server Upgrades	
- Implement high-availability cluster across core network firewall and switch segment - Load balance high-availability cluster across two internet connections for performance and fail-over - Perform multiple server upgrades including all hardware, software, and virtual machines from the ground up - Interconnect peering facility across the city via Metro Ethernet and Virtual Private Networks - Implement encrypted and automated cloud-based back-up in addition to on-site resources			

Christian International 5200 East Highway 98 Santa Rosa Beach, FL 32459	Dec. 2019	Wireless and Network Upgrade	
- Design and implement wireless internet solution for 2500 users in 40,000 sqft building - Enhance network security by separating voice and data networks into vLANS with QoS - Enhance network security by upgrading to clo ud-based security services			
Gulf Coast State College 5230 W. U.S. Highway 98 Panama City, FL 32401	Aug. 2021	Server Migration and Upgrade	
- Deploy 13 servers - Migrate applications from existing servers - Test and validate			

b) Include plan of action and milestones for onboarding process.

Upon award of contract, and with the approval of city leadership, ENS will activate its newly revised / adopted "Client On-boarding" procedures as summarized below. It should be noted that these procedures are a defined baseline and are adjusted as needed in response to issues or concerns identified during each step of service activation.

**Services may vary based on RFP acceptance, budget finalization and final contracted services.*

Security Access

1. Assign a dedicated vCIO
2. Gather credentials for network, server, and workstation access.
3. Setup ENS credentials for domain and attached equipment.
4. Suspend access from previous service provider.
5. Assess current audit policies and increase where needed.
6. Monitor for possible problem(s) caused by credential suspension.
7. Terminate access from previous service provider.
8. Request facility access keys or escorts.
9. Physically inspect all locations
    a. Assess all IT equipment and note any issues.
    b. Assess all network carrier demarcation locations and note any issues
    c. Assess business continuity risks
        i. Generator power,
        ii. Battery power,
        iii. Flood risks,
        iv. Window/ Door access,
        v. Fire safety and suppression methods,
        vi. Water/ drainage pipe placements and routes.

d. Assess the physical facility access and document any security concerns.
e. Assess all computer and network devices connections and document any concerns including power strips, staff provided Wi-Fi units, staff provided network connectivity, and staff provided mobile devices and laptops.
f. Compile all findings and review with city leadership and IT staff.

Systems Risk Assessment

1. Request a list of primary systems from onsite IT staff and executive leadership.
2. Scan and analyze all primary network systems for the purpose of documentation.
3. Scan and analyze all servers and workstations for security vulnerabilities and system performance issues.
4. Scan and analyze all user accounts for validity of account, security rights, and security risk.
5. Perform a Wide Area Network scan to identify possible security risks.
6. Request a copy of the most recent Strategic Plan / Business Plan or equivalent.
7. Assess each primary system and validate backup and protection methodologies. Analyze all firewalls and firewall rule sets and challenge their authorizations with Executive Management.
8. Analyze all persistent VPNs and challenge their purpose and validity with Executive Management.
9. Scan for and assess all Wi-Fi access points. Verify functionality and purpose. Modify credentials as needed.
10. Analyze all primary systems and weigh their current status against the requirements identified in the Strategic Plan/ Business Plan previously requested.
11. Review all domain user accounts and validate their use with Human Resources, IT and city leadership.

Security Protection

1. Deploy end point monitoring agents to all workstations, servers, and laptops.
2. Deploy (or validate) end point protection agents on all workstations, servers, and laptops.
3. Assess and document all network switches, routers and related VLANs.
4. Assess all primary system components and verify all components are current and patched to the latest release.
5. Review reports generated from end point agent deployments.

User Support Experience

1. Setup the City with a dedicated service board in our CRM and Ticketing systems.
   a. Setup each facility site.
   b. Setup accounts for each employee and associate with the appropriate site.
   c. Send welcome emails to all city employees.
2. Setup customer service portal access for all employees.
3. Setup Service Level Agreement in accordance with contract obligations.
4. Schedule department head meetings for introductions.
5. Distribute customer service process documentation to all city employees.
6. If contracted, kick-off cybersecurity training for all staff members.

Operational Support

1. Prioritize corrective actions noted during on-boarding and review with the City leadership.
2. Document all critical components, systems, and services so that ENS team members know how to prioritize systems.
3. Modify ticket types, sub-types, and SLA definitions to align with system requirements identified in prior steps.
4. Prioritize projects and present timelines to the City leadership for review and approval.
5. Define support and staffing requirements in accordance with defined systems and onsite City staff needs.
6. Contact all third-party vendors and provide introductions and proof of authority to act on behalf of City.
7. Review all third-party contracts and support processes.

Leadership Review

1. Review all findings with City Management for clarification of direction, planning and next steps.
2. Review defined budgets and compare to risk analysis findings.
3. Provide recommendations.

c) *Describe how PROPOSER will propose changes in technicians assigned to the contract and seek approval from the CITY.*

EssentialNet Solutions will seek to maintain longevity and stability in our contract using dedicated resources assigned to the account. Changes to these resources caused by staff turnover, vacations, or extended illness will be communicated to City leadership in a manner accepted defined and accepted in advance by all parties involved. We expect that this process will include advanced communication of changes where possible and interviewed replacement where time allows.

d) *Explain how PROPOSER plans to keep all desktop/laptop computers and servers operating at optimal performance.*

EssentialNet will use third-party managed agents that monitor, auto-patch, and report on the performance of each system. Additionally, ENS will work with the City to recommend and budget for pro-active replacement of a portion of systems per year based on age, performance, and reported support incidents related to the device(s).

e) *Describe how PROPOSER will keep the CITY informed about the state of the CITY's information technology services.*

It is standard practice for ENS to schedule recurring meetings with leadership to review ongoing projects, support issues, and to assist with strategic planning. We typically do this through Monthly or Quarterly meetings based on the needs of the organization. Additionally, where invited, we attend board meetings, planning sessions, executive committee meetings, and other relevant meetings.

f) Describe how PROPOSER will report about the status of systems, user needs, needs for changes, etcetera.

ENS will provide regularly scheduled reports through automated processes along with recommendations compiled from helpdesk support tickets that are used to identify equipment issues, staff training needs, software issues, and other customer impacting items.

g) Describe how PROPOSER will assist the CITY with strategic planning to insure that the CITY's IT system retains its usefulness, viability, compatibility, and dependability into the future.

ENS will assign one or more of our vCIO team members to work with City leadership in the development of technology service plans that align with the City's overall strategic business plan. In our capacity as a vCIO we will assist with planning for critical system upgrades, business system integrations, business continuity planning, software upgrades, and budgetary planning that support these initiatives while also helping to avoid technology obsolescence through planned proactive replacement of aging equipment and services.

QUESTIONNAIRE 3: ASSUMPTIONS, REQUIREMENTS, RISKS AND EXPECTATIONS

Please list in this section all PROPOSER's assumptions, requirements, risks and expectations for the provision of services pursuant to the scope of services outlined herein.

EssnetialNet Solutions assumes the City will cover the license fees for all tools used by ENS to deliver the scope of services. In the event that the City wishes to use their own tools, the City agrees to give time for ENS to train staff on the tools used by the city. Additionally, ENS assumes that all service qty changes will be contractually "adjusted" in a good faith period quarterly and that the City will pay charges incurred during these periods to ENS if and when charges exceed initial contracted qtys.

QUESTIONNAIRE 4: LEVEL OF SERVICE

An explanation of the problem reporting and resolution process that describes the PROPOSER's support plan, including tiers, service levels, call escalation, the person(s) authorized to close problem reports, etcetera. Please address the following in PROPOSER's response:

A. Services

a) Describe PROPOSER's work order/trouble ticket system.

ENS utilizes an industry recognized customer service and support tool called ConnectWise for its ticketing system. This system offers a dedicated support portal that can be specialized to the needs of the City. Tickets can be captured through portal entry, emailed requests, and phoned in issues to the staffed Helpdesk.

All tickets are categorized and linked to a custom Service Level Agreement (SLA) where actions are tracked and measured. All communications on tickets are communicated back to the user through emailed updates and the user can add details as needed should the needs change.

Once the City's portal is defined and configured, ENS will work with the City to align its triage, dispatch, scheduling and escalation procedures to best support city needs. At this point, we expect

that service tickets will be handled via remote support initially and then dispatched to our onsite dedicated resources. We will need to clarify the role the existing City staff will play in the support and approval process and will adjust policy and procedure accordingly.

b) *Describe PROPOSER's system to escalate chronic or advanced problems.*

Chronic or advanced problems are escalated to ENS leadership in real-time with all emergency escalations handled through internal escalation procedures that include "all hands" response when needed. All issues that impact service delivery are communicated to City leadership as quickly as possible following initial triage assessment. All actions are captured in tickets and regular updates / calls are provided as needed.

Problems that stem from repeated issues with hardware or software are assessed and escalated within ENS and recommendations are drafted and shared with City leadership immediately or during the next scheduled meeting depending on the urgency of the issue reported.

c) *Describe availability of key staff during normal business hours (including systems administrators and engineers and other specialists).*

The ENS Helpdesk is staff Monday through Friday 8 to 5. Field services are assigned to onsite locations as needed in support of clients and escalations are handled as needed. Staff dedicated to contracts like the proposed contract with the City are dedicated to the client and are not utilized at other sites without prior approval from the client.

d) *Describe after-hours support. What is the guaranteed response time? How is PROPOSER's after-hours response time structured (e.g., time of day, severity)? What is the average response time?*

The current ENS model for after-hours support includes the communicated requirement to all clients that a call be placed to the office where the answering service picks up the call and calls the on-call engineer for dispatch. On-call is always handled by two engineers and the standard SLA is one hour response. Below is a sample support request process that is customized to the specific needs of the client.

Customer Support Request Procedure

Business Hours Support:
8:00 am – 5:00 pm, Monday – Friday

During normal business hours ENS has two methods for requesting support. By e-mailing our helpdesk or by calling our main office number. For non-critical issues we recommend emailing our helpdesk and for technical emergencies we recommend calling the main office number.

Contact Information:
Phone: 321-259-3242
Email: helpdesk@ensusa.com

After Hours Support:
5:00pm – 8:00 am, 365 days/year (including weekends and holidays).

Critical after hours support requests MUST be initiated by customer call in. Issues sent in via e-mail will be addressed the following business day.

If you are having a technical emergency that needs immediate attention, please call the ENS main Help Desk number 321-259-3242 you will be transferred to our answering service and a systems engineer will be contacted. You will receive a call back within 1 hour. Please note, if you do not receive a call back within 1 hour, or you cannot wait please call the any of the below numbers for assistance:

David Soper: 321-750-3795
Frank Huston: 321-514-5823
Randy Redmond: 321-292-9243

e) *PROPOSER's guaranteed response time for issues dependent upon severity and time of day.*

ENS's guaranteed response is based on client's final negotiated and contracted SLA with ENS. The terms currently understood and provided under "Expected Level of Service" in the RFP are restated below:

Priority 1
Criteria:
Affects five (5) or more end users; or is mission critical and there is no workaround available. Or is related to possible cyber security event. Ore is related to critical impact to public safety.
Examples:
E-Mail services are not functional; end user suspects they may have a computer virus; Police officer is unable to log in to their computer; Executive Management team unable to perform time-sensitive duties.
Target Response Time *
On-shift or on-call firm staff will respond within 15 minutes. Begin troubleshooting within 60 minutes.

Priority 2
Criteria:
Affects fewer than five (5) end users, no workaround available.
Example:
PC won't power on.
Target Response Time *
Initial response within 4 working hours.

Priority 3
Criteria:
Affects fewer than five (5) end users, workarounds available.
Example:
Can't check e-mail from one computer but could use WebMail from another computer.
Target Response Time *
Initial response within 10 working hours.

Priority 4
Criteria:
No effect on productivity, or unsupported software.

Examples:
Monitor showing b/w instead of color. Speakers have no sound.
Target Response Time *
Best effort as time allows; with an initial response provided to end user no later than 24 hours.
(*) Response time is defined as commencing upon receipt of phone call and/or receipt of email from the end user stating the issue.

The City's contracted SLA will be configured into a custom SLA within our ticking system and assigned to all incoming tickets.

f) How does the PROPOSER propose that the service level agreement be monitored and enforced?

ENS will use the SLA module of its ticketing system to track the City SLA and will provide reports at a time and frequency agreed upon by the City and ENS.

g) Describe any training PROPOSER's organization provides to PROPOSER's clients, including network applications and/or desktop applications. (Or are you affiliated with an organization that provides training to clients?)

ENS provides ad-hoc training using our onsite engineers as needed. We do not have a formal training department, but we do offer resold training services on standard Office products through a third-party.

If the City is accepting of our recommendation (and not already providing one), we will develop custom IT SharePoint site in the City's M365 environment where we will provide training content and Tips and Tricks.

h) Describe any systems backup support PROPOSER offers.

ENS manages several backup solutions due to the nature of our client based and the need to support pre-established solutions. If we are recommending solutions from scratch, we prefer to quote solutions that can be converted into a live virtual server (local or in the cloud) in the event that the primary system has failed. We currently support Infrascale, Datto, Acronis, ShadowProtect, Back Blaze, and VEEAM for a variety of clients.

i) Describe any disaster recovery support provided.

ENS offers custom disaster recovery solutions utilizing either variety of the above-mentioned solutions. Our preference is Infrascale and Veeam for localized recovery as they have proven to be the most reliable and timely solutions in recent years.

j) Describe how major software upgrades would be applied and what upgrades would require additional fees.

Software upgrades that are localized in nature and with minimal impact at the desktop level are typically covered under standard onsite services. Major version upgrades, conversions or migrations to new platforms are generally considered projects and are negotiated in advance and billed on a

project by project basis. ENS expects the city to maintain active vendor support on all software to be supported.

k) *Describe patch management – how software updates and patches are performed both on servers and desktops. Who is responsible for doing updates? How often are they done? If using automated tools, what program is being used to rollout the updates and what programs are being updated?*

ENS has access to several different patch management platforms but typically standardizes on the ConnectWise Automate toolset. This tool is backed by the ConnectWise Network Operations Center and provides advanced testing of all patches before they are approved for installation. Once approved, they are communicated to ENS where we then add a secondary approval before the patches are deployed. Patches are pushed to client workstations based on several different criteria to avoid unexpected disruption. All patches are tracked and reported through patch management reports. As a rule, we try to install all patches within three weeks of release unless the update is critical which might warrant an immediate push to all workstations.

l) *How are network down-times for maintenance scheduled and communicated?*

ENS always works directly with clients to schedule downtimes and maintenance. We will typically ask for a regularly scheduled time window that can be used without needing to get additional approval but that varies from client to client. All downtime notices are sent in accordance with client leadership directives and is generally announced via pushed email to client end users.

m) *Describe how PROPOSER would resolve the situation in which one of our servers breaks down during service. Be sure to include time estimates as well.*

ENS strives to assess all servers and primary applications to understand the critical nature of the server or application to the business. In every instance where an extended server outage might negatively impact business, we will work to communicate the need for additional redundancy so that issues such as the one presented are mitigated. In the event that redundancy has not been approved, we will strive to assess the outage, identify alternative options, and open support tickets with vendors as quickly as possible. In terms of a time estimate, we would strive to assess the outage within 30 minutes, and target a return to operation as quickly as possible based on the variables of redundancy, onsite spares, and vendor SLAs previously approved by City leadership after a system risk assessment with ENS.

B. Helpdesk and Monitoring

a) *Describe PROPOSER's work order/trouble ticket system.*

ENS offers a standard Helpdesk portal for all its clients and can customize a private portal for clients who have unique needs or onsite staff that need to work tickets alongside the ENS team. The ticketing system is cloud based and can be used with federated access of Microsoft Office and Google.

Tickets can be entered directly via the client portal, via email using an automated email to ticket conversion process or requested over the phone through the ENS Helpdesk support line.

All tickets have two-way communication enabled between the user and the support team assigned to the ticket. All time entries entered against the ticket are shared with the client immediately upon submission of the time entry.

b) *Describe PROPOSER's company's remote helpdesk and monitoring setup and how it would serve the CITY.*

ENS provides Helpdesk support between the hours of 8 and 5 Monday through Friday (except holidays). Clients can manually submit tickets or call the Helpdesk directly. All tickets are triaged and dispatched based on need. Tickets that require onsite response are assigned to the appropriate onsite technician via the ticket and a call is made to ensure they are aware of the assignment and customer issue.

Once ENS has had the opportunity to review the needs of the City and its internal IT staff, the Helpdesk process will be finalized and communicated to all end users for clarify. The standard ENS support process is shown in the example email notice that is typically sent during onboarding of our standard clients.

Customer Support Request Procedure

Business Hours Support:
8:00 am – 5:00 pm, Monday – Friday

During normal business hours ENS has two methods for requesting support. By e-mailing our helpdesk or by calling our main office number. For non-critical issues we recommend emailing our helpdesk and for technical emergencies we recommend calling the main office number.

Contact Information:
Phone: 321-259-3242
Email: helpdesk@ensusa.com

After Hours Support:
5:00pm – 8:00 am, 365 days/year (including weekends and holidays).

Critical after hours support requests MUST be initiated by customer call in. Issues sent in via e-mail will be addressed the following business day.

If you are having a technical emergency that needs immediate attention, please call the ENS main Help Desk number 321-259-3242 you will be transferred to our answering service and a systems engineer will be contacted. You will receive a call back within 1 hour. Please note, if you do not receive a call back within 1 hour, or you cannot wait please call the any of the below numbers for assistance:

David Soper: 321-750-3795
Frank Huston: 321-514-5823
Randy Redmond: 321-292-9243

c) *Describe how PROPOSER will schedule and assign help desk technicians for on-site coverage.*

In accordance with the RFP requirements, ENS expects to place two full-time resources onsite with the City. Once a ticket is entered / received into our system, we will triage the request, resolve the

issue remotely if possible, and if not, escalate the ticket to onsite staff via ticket assignment and call notification.

All tickets will be monitored for closure and notifications will be sent to the end user updating them on status and giving them the opportunity to respond to a simple customer satisfaction survey embedded in the footer of the ticket. See the Figure below.

From: Help Desk <helpdesk@ensusa.com>
Sent: Friday, March 10, 2023 4:32 PM
To: [redacted]
Subject: Ticket #266313 has been completed. Please confirm your acceptance and satisfaction.

--REPLY above this line to respond--
Dear Jerry Butz,

Our engineering team has marked "*#266313 - Need access to Sharepoint*" as complete.

If you feel that we have closed this ticket in error, please reply to this email and we will contact you.

Thank you,

EssentialNet Solutions
Help Desk

Please tell us how we did resolving your issue!



Great OK Poor

View Ticket

Figure 1- Service Ticket

d) *Provide helpdesk statistics such as average time to respond to calls, average length of time for successful resolution of issues, the nature of the support calls, etcetera.*

Client SLA's are defined during the contract negotiation phase and aligned to the needs of the business. An example setup / outcome of SLA is provided below:

Default Response Matrix

	High Urgency	Medium Urgency	Low Urgency
High Impact	Priority 1 - Critical	Priority 2 - High	Priority 3 - Medium
Medium Impact	Priority 2 - High	Priority 3 - Medium	Priority 4 - Low
Low Impact	Priority 3 - Medium	Priority 4 - Low	Priority 4 - Low

Default Response Goals

Respond Within: 1	Goal Percent: 80
Plan Within: 4	Goal Percent: 80
Resolved Within: 8	Goal Percent: 70

SLA: SAMPLE
Division: ENS Headquarters
Department: HELPDESK

EssentialNet Solutions
SLA Performance by SLA
Period: ##/##/#### to ##/##/####

Board: Help Desk
Company: ALL
Show: Open

Type	#SR	Responded %	Responded Goal %	Resolution Plan %	Resolution Plan Goal %	Resolved %	Resolved Goal %
SLA: Standard SLA							
Proactive	##	##%	##%	##%	##%	##%	##%
Reactive	##	##%	##%	##%	##%	##%	##%
Other	##	##%	##%	##%	##%	##%	##%
Total	###	###%	###%	##%	##%	###%	##%
Report Totals							
Proactive	**##**	**##%**		**##%**		**##%**	
Reactive	**##**	**##%**		**##%**		**##%**	
Other	**##**	**##%**		**##%**		**##%**	
Total	**###**	**###%**		**###%**		**###%**	

Confidential

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##/##/#### ##:## PM Eastern Daylight Ti

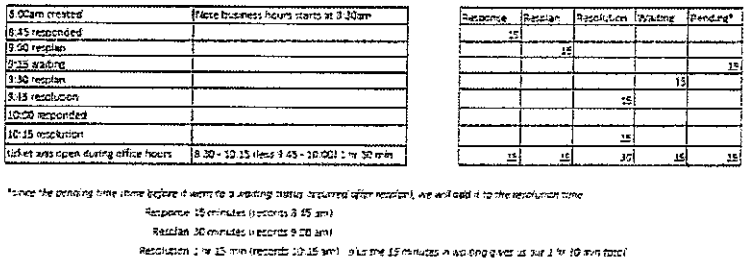
The SLA process is driven from time calculations during each stage of ticket assignment. The stages and statuses are adjustable per engagement.

SLA Calculation Explanation

Example 1

Default Response Goals

- Respond within: 30 minutes
- Resolution plan within: 1 hour
- Resolved within: 4 hours



8:00am created	Work business hours starts at 8:30am
8:45 responded	
9:00 replan	
9:15 waiting	
9:30 replan	
8:45 resolution	
10:00 responded	
10:15 resolution	
ticket was open during office hours	8:30 - 10:15 (less 1:45 - 10:00) 1 hr 30 min

Response	Replan	Resolution	Waiting	Pending*
15				
	15			
				15
			15	
		15		
		15		
15	15	30	15	15

*since the pending time (time before it went to a waiting status occurred after replan), we will add it to the resolution time

Response 15 minutes (records 8:45 am)

Replan 30 minutes (records 9:00 am)

Resolution 1 hr 15 min (records 10:15 am) b/c the 15 minutes in waiting was added to the 1 hr 30 min total

Were SLA goals met?

	Goal	Actual	Met?
Respond within	.5	.25	Yes
Resolution plan within	1.0	.5	Yes
Resolved within	4.0	1.25	Yes

e) Is it limited to a quota of calls?

Our RFP response and subsequent contract is not expected to limit call quota or vary SLA based on quota.

f) Is it limited to a quota of man hours?

Manhour calculations are used for billing purposes and do not typically impact SLA standards although a strong SLA may warrant negotiation of additional staff.

g) What are the helpdesk hours? If they do not cover all our hours of operations, please describe what coverage will be provided for those hours outside of PROPOSER's helpdesk hours.

ENS standard Helpdesk hours are 8AM to 5PM Monday through Friday. Each week two on-call staff and leadership is always on call for escalation. This model is successfully used in support of medical, fire, police, and utility departments/clients.

h) Who can call the helpdesk?

This is defined on contract-by-contract basis and is generally defined by the client. While we can support taking calls from all end users, many clients limit who can place calls in order to minimize unnecessary expense caused by lack of local training or awareness.

i) *Is helpdesk staff local? If not, where are they located? (**Note preference may be given to a City of Winter Springs based helpdesk**)*

The ENS Helpdesk staff are in our corporate offices in Melbourne, FL. We do offer expanded hours options available at additional cost using contract staff located outside of Florida but still in North America.

j) *Are helpdesk staff employees of the support company or sub- contracted?*

ENS Helpdesk staff are all full-time employees of ENS. The extended hours option mentioned earlier utilizes and outsourced contract services of US based contractors.

k) *Are helpdesk staff full-time?*

All ENS Helpdesk staff are full-time.

l) *What is the skill/certification level of first-level helpdesk staff?*

Our Helpdesk staff are defined as Level 1 through Level 3. Level 2 and Level 3 staff have experience in the field and are often rotated into the field for additional experience and client awareness.

m) *What happens if the helpdesk cannot resolve the problem?*

If Helpdesk staff are unable to resolve tickets in an appropriate amount of time, the ticket is escalated to field engineers who then take over the ticket and work to resolve it either remotely or onsite depending on the nature of the issue.

n) *Does the helpdesk understand that they should never ask for CITY end user login passwords?*

Yes. As a rule, ENS does not request credentials from end users. In the event that we must "see what the user sees" we will request permission to connect to the workstations and observe while the client describes / experiences the issue.

o) *Does the helpdesk understand they should never put sensitive information in any public communications?*

Yes. ENS employees are regularly trained on data security practices and are held accountable to ENS policies that define requirements for data protection of ENS and client data.

C. Security

1. *Describe your strategy for securing your client's data. Include PROPOSER's policies as well as any security certificates that you possess, including the year each was originally obtained.*

ENS provides risk assessment and vulnerability assessments annually for their clients. These assessments utilize a series of tools and contracted services in order to provide a complete assessment with recommendations.

Our company implements robust data protection strategies to safeguard both our internal data and that of our clients. Our approach involves comprehensive data lifecycle management, starting from data creation, through storage and archiving, until its secure deletion. We prioritize data risk management, identifying and mitigating potential threats to ensure the utmost security.

For data safety, we have a well-defined backup and recovery process in place. This includes regular data backups and efficient recovery measures to counter any unforeseen data loss or system failures. Our business continuity and disaster recovery initiatives are integrated with these measures to maintain seamless operations.

Data access management is a critical aspect we focus on, where access controls are strictly enforced to limit data access to authorized personnel only. Robust authentication and authorization protocols are employed to protect sensitive information.

In terms of data storage management, we prioritize secure data movement and utilize appropriate storage solutions based on data sensitivity and access requirements. For data no longer in active use, we have established secure archival storage with strict access controls.

Data breach prevention is a top priority, and we implement comprehensive cybersecurity measures. This includes data encryption for data in transit and at rest, antivirus software, ransomware protection, perimeter security, and access management software.

The CIA triad (Confidentiality, Integrity, and Availability) forms the foundation of our data protection standards, and we have measures in place to uphold these principles throughout the data lifecycle.

Our data protection policies and procedures are well-documented and regularly audited for compliance. We stay updated with industry standards and ensure adherence to relevant data protection regulations such as GDPR.

To continuously improve our data protection efforts, we monitor and review data activities, conduct internal audits, and respond promptly to any incidents or anomalies.

Employees receive comprehensive training on data protection, and we promote data protection awareness throughout the organization.

Our commitment to data protection is evident through our meticulous documentation, record-keeping, and periodic SOP reviews. Non-compliance with our data protection policies and procedures is taken seriously, and we enforce appropriate disciplinary actions.

In support of our clients we draft and adapt policies and procedures and provide each as templated documents for adoption and review.

2. *Explain how PROPOSER will ensure that the security clearances required are adhered to.*

   ENS currently monitors all employees for requirements such as CJIS that require re-certification and testing. Based on the requirements of the City, we will modify existing processes or develop new to accommodate contractual requirements.

3. *Describe PROPOSER's security certification and expertise.*

   ENS requires annual training for Cybersecurity and HIPAA. This is handled through online training partnerships with Breach Secure Now and KnowBe4. ENS partners with 3rd party cyber security firms to routinely review our process, services, and solutions to assist with developing, maintaining, and updated our security services.

4. *Describe PROPOSER's handling of multi-factor authentication internally.*

   MFA is required for all ENS staff on internal systems. Adherence to MFA for clients is handled on a per client basis. ENS adheres to all client policies and procedures.

5. *Provide details of PROPOSER's practices for staying current on regulations, legislation, certifications and compliance.*

   In order to stay current on regulations, legislation, certifications and compliance, the ENS team subscribes to websites and newsletters relevant to our clients, attends industry events, networking conferences, and other relevant continuing education. Each engineer typically subscribes / attends for their own specialized client purposes, but common issues are shared among the team.

6. *Describe background checks performed for all PROPOSER's staff.*

   All staff complete a pre-employment comprehensive background screening & drug test. Technical engineers complete a CJIS background screening in addition to the pre-employment screening. Any technical engineer involved in support for an education facility would complete a Level II FBI Background screening in addition to CJIS & pre-employment screening.

7. *How does PROPOSER stay informed regarding security alerts and/or events?*

   ENS subscribes to several organizational newsfeeds in support of its clients. We currently rely on our CW / PERCH SOC, SANS Internet Storm Center (ISC), FireEye Threat Research Blog, CISA Alerts and Analysis, Talos Intelligence Blog and Bleeping Computer.

8. *How does PROPOSER notify and manage security events for your clients?*

   Due to the confidential nature of many security incidents, ENS limits all communication to client senior leadership in accordance with client policy. Only after approvals are given, will ENS converse with client staff and then only in accordance with client leadership directives of (Voice / Email / Phone / Etc.)

9. *How does PROPOSER manage mobile device security?*

   ENS typically offers Mobile Device Management using a product called SOTI. These services are handled on a client-by-client basis and is billed on a per device per month model.

10. *How does PROPOSER ensure best security practices are being followed?*

    ENS provides clients with several security policy templates to help them align their internal practices with industry norms. In addition to standard policies, ENS runs periodic AD and vulnerability reports to ensure that best practices are being followed. These reports are reviewed internally and shared with the client as needed or to support corrective actions required by client staff.

11. *Is an annual security assessment and report included in Proposer's service?*

    ENS recommends quarterly internal and external vulnerability scans and annual risk assessment reviews for all clients. These services are included in the proposed price structure.

D. Management Deliverables and Reports

1. *Include descriptions of any reports used to summarize and provide detailed information for managed services customers.*

   ENS has access to several different reporting tools and the list of potential reporting options is rather extensive. Some of the more commonly used reports are listed below although this is not an all-inclusive list. It should be noted that ENS also has a custom report writer for service ticket items.

   - Hardware Lifecycle Report – This report provides asset details of all managed PCs / Servers to aid in tracking of age and warranty status for budget planning.
   - Security Assessment – User Behavior Analysis – This report provides user login detail per device to help identify security issues / risks
   - Consolidated Management Plan – This report ranks individual issues based on potential risk to the network while providing guidance on which issues to address by priority.
   - Consolidated Risk Report – This report aggregates risk analysis from multiple assessments performed on the network and provides a consolidated risk score for review and improvement consideration / planning.
   - Login History by Computer – This report shows login history and helps to identify security concerns related to user login activity.
   - Consolidated Security Report Card – This report assesses individual computers at a high level based on various security criteria and is used as a relative measure of how well a computer complies with security best practices.

- Risk Assessment Report – This is a dynamic Risk Assessment report used to annually assess the client's risk and to track improvements from year to year.

- SLA Performance Report – This report tracks SLA performance through the Helpdesk.

2. *Include sample reports as attachments to the Proposal to provide an example of the types of reports that will be provided for this engagement.*

   Samples provided in Appendix C.

Documentation and Records

a) *Describe how PROPOSER would document and record maintenance, installation, performance, and changes to the system.*

   All actions are logged into support tickets that are shared with the city. For more specific details related to performance, installed software, and Health Checks, ENS utilizes the Automate report writer to provide detailed reports on assets.

b) *Describe the documentation that PROPOSER would make available to The City of Winter Springs at the end of the contract period.*

   ENS utilizes a standardized toolset for documentation that includes ITGlue and MyGlue. ITGlue is primarily for use by ENS but can be exported for clients as needed. MyGlue is an add-on offering that extends the online documentation toolset to the city and allows them to maintain their own documentation while also "seeing into" the documentation ENS maintains.

c) *Describe how PROPOSER would maintain confidentiality in strict conformance with sensitive CITY data, State law and other Confidentiality laws and regulations.*

QUESTIONNAIRE 5: DOCUMENTATION AND REPORTING

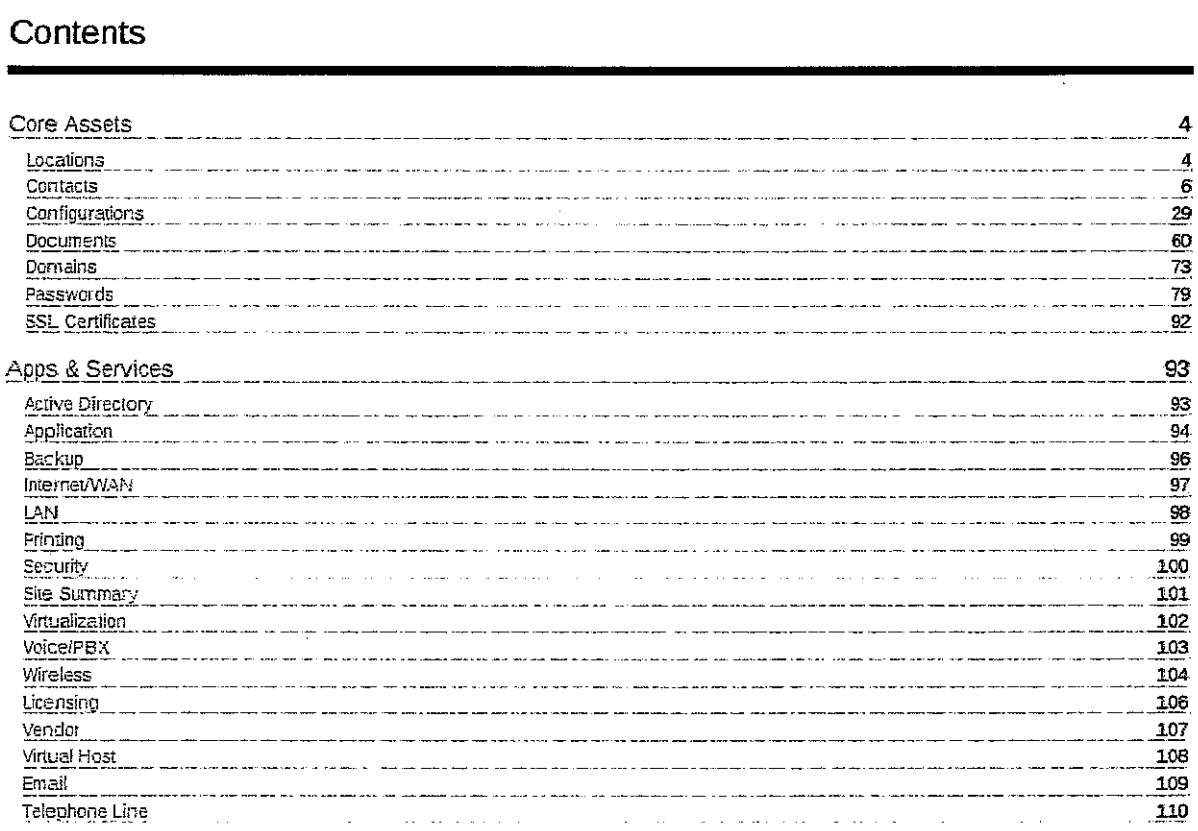
1. *Please provide up to two examples of documentation that PROPOSER would create on the CITY's behalf when setting up new systems.*

   ENS creates custom installation procedures for each client. These procedures are then configured as custom ticket templates unique to the client. This ticket template includes all tasks to be completed for the client before the ticket is to be closed.

   Additionally, we can provide asset reporting to the client to show the specifics of the workstation including performance stats. A screen capture of our most common reports is provided below.

Executive Summary	Executive Summary
Client Health Summary	Client Health Summary
Computers Not Checking in Last 90 Days	Computers by Client
Computer Inventory Detail	Computer Audit
Performance Review Summary	Performance Review
Server Detail by Client	Computer Audit
Unsupported or at Risk Server Versions	Computers by Client

For general documentation we use a product called ITGlue and MyGlue. These two tools work together to provide ENS staff and customer staff access to system and support details. The "contents" image below shows the type of data that is captured during service delivery and made accessible through secured and segmented system access.



Contents

Core Assets 4
- Locations 4
- Contacts 6
- Configurations 29
- Documents 60
- Domains 73
- Passwords 79
- SSL Certificates 92

Apps & Services 93
- Active Directory 93
- Application 94
- Backup 96
- Internet/WAN 97
- LAN 98
- Printing 99
- Security 100
- Site Summary 101
- Virtualization 102
- Voice/PBX 103
- Wireless 104
- Licensing 106
- Vendor 107
- Virtual Host 108
- Email 109
- Telephone Line 110

2. *How does PROPOSER report daily and weekly activity to the CITY's IT manager?*

   Our standard process would be the generation of a custom support ticket report set to auto-deliver to an individual's inbox. This process can be modified to better align with the needs of the city if needed.

3. *Do you have examples of reporting that PROPOSER would provide?*

   Has mentioned earlier, ENS can provide custom reports or a series of "canned" reports included in the list below.

Certifications List	Standard	Generate a list of employee certifications.
Company Service Report	Standard	Summary of service tickets by Company
Dashboard: Service - Current	Standard	Displays the latest Service Dashboard KPIs. You can drill in to the service and SLA metrics for details.
Dashboard: Service - In Progress	Standard	Service Dashboard that gives a summary of service tickets that are currently in progress and being worked today.
Dashboard: Service - Resolution	Standard	The Dashboard: Service - Resolution provides a summary view of the resolved rate over two periods of time and the ...
Dashboard: Service By Member	Standard	The Dashboard: Service by Member provides a summary of service tickets and surveys per member, intended to pro...
Hours by Service Type	Standard	Hours by Service Type Report.
Resource Skill Report	Standard	List of members showing skill level information for a specific group and/or skill category.
Service Board Backlog	Standard	List of service tickets and their hourly budget information.
Service Team Review	Standard	This report displays key performance indicators for a Service Team, including the number of tickets scheduled, clos...
Service Ticket List	Standard	List of service tickets based on various criteria. Runs in either a summary or detail mode.
Service Type, Subtype and Items Report	Standard	A summary report to review the number of tickets and time entries by Service Type, Subtype, and Item.
Signature Report by Service Ticket	Standard	Signature Report by Service Ticket
SLA Associations Report	Standard	SLA Associations Report.
SLA Performance by Service Ticket	Standard	Service Level Agreement Performance summary by Service Ticket
SLA Performance by SLA	Standard	Service Level Agreement Performance summary by SLA
SLA Priority Report	Standard	Service Level Agreement Priority.
Survey Analysis	Standard	Analysis report for surveys.
Survey Analysis Detail	Standard	CRS Custom Report: Survey Analysis Detail

QUESTIONNAIRE 6: SECURITY

All staff working on Police Department information systems shall submit to a full fingerprint-based background check to satisfy Criminal Justice Information Systems (CJIS) security policy and must comply with the requirements outlined in the CJIS Security Addendum. This information will be forwarded to the State of Florida for all clearances as required. The successful PROPOSER will not incur any costs other than their own staff time for this vetting process.

Please outline any experience PROPOSER has with these requirements and state how it will facilitate and maintain compliance with this requirement from onboarding throughout the term of the awarded Agreement.

ENS supports existing police departments and requires that all support staff be background checked and CJIS approved / certified in accordance with annual CJIS requirements. Additionally, our academic clients required level 2 background checks.

QUESTIONNAIRE 7: PROPOSER'S STAFF TRAINING

Describe how PROPOSER intends to ensure that all personnel contributing to the management of CITY's information technology system are properly trained and monitored to ensure that they are performing their duties at proficient levels.

ENS staff are reviewed annually as part of their review / peer review. Training needs are assessed annually, and training plans updated based on identified technology needs. Training requirements that are unique to an assigned client as addressed on a case-by-case basis and specialized training authorized or scheduled to support the needs of the client.

QUESTIONNAIRE 8: PROJECT MANAGEMENT

A. What experience in Project Management does PROPOSER's organization have?

Although several of the ENS leadership team have experience with Microsoft Project and other formal platforms, ENS utilizes a Project Management module within ConnectWise for client projects because of the inherent integration with billing, ticking and contracts.

B. Any certified PMP?

While ENS does not currently employe anyone with a PMP certification we have performed hundreds of IT projects including those that tie with client construction projects and facility expansions. As a general rule, ENS considers any implementation involving labor by more than one resource as a project and all projects must have a workplan and an assigned Project Manager.

ENS does not limit projects to clients. Our internal processes include onboarding of staff and clients are considered projects and have templated workplans.

QUESTIONNAIRE 9: INFRASTRUCTURE HEALTH MONITORING

1. *Describe PROPOSER's monitoring tools and strategies to monitor and insure the stability of the computing environment at the CITY.*

   ENS deploys a suite of monitoring tools based on the allowed budget. Our typical product suite includes Automate for workstation and server monitoring and alerting and Auvik for network monitoring and reporting. For SIEM, we currently utilize PERCH.

2. *Describe how these monitoring results would be communicated to the CITY.*

   Our standard operating procedure for monitoring has all reporting tools going to a NOC/SOC/Ticket depending on the nature of the alert. All tools can be modified to provide alerting to City personnel if needed.

QUESTIONNAIRE 10: FEE STRUCTURE

The CITY requests a fixed fee structure all-inclusive of all services provided. Include a fee breakdown based on the fixed fee pricing model. Please provide the following Mandatory Forms (i) a Fee Structure Spreadsheet Price Proposal (See Appendix A Cost Proposal - Part 1), and (ii) Acceptance of Proposal Terms and Conditions (see Proposal Form 1 – Proposer Information and Acknowledgement Form). Please address the following:

a) *Are monthly/quarterly/yearly costs increased or decreased due to environmental changes? If so, please describe (i.e. adding or removing servers or users).*

   ENS typically negotiates contract terms in partnership with the client. Our standard recommendation is a buffered budget item that can be used to respond to contract adjustment during each quarter's "true-up" where counts are reviewed and adjusted based on the needs of the client.

b) *Based on the CITY's current support requirements; provide PROPOSER's ongoing monthly/quarterly fees and what is included. Address specifically the following list of items and if*

not included, please provide any separate fees the CITY would incur. Please provide "a la carte" pricing for any services PROPOSER can provide which is not included in this list:

A. On-site Time - $125 per hour for hours outside of contracted time.

B. Helpdesk Support - Inclusive of contract

C. After-hours Support – Inclusive of contract

D. Response Time/Problem Resolution Time – Inclusive of contract

E. Travel Time – Inclusive of contract

F. Vendor Management – Inclusive of contract

G. Training for City Users – Minor training is inclusive of the contract. For more formal training a price of roughly $850 per day is pre-negotiated.

H. Project Management – Inclusive of contract.

I. OS/Application Upgrades – Hours are inclusive of contract, but licensing is billed as incurred.

J. Additional Equipment, Applications, and/or Users – Quoted to client on a per case basis and billed on approval but before purchase.

K. Special Requests and/or Projects beyond the Scope of this RFP – Quoted to client on a per case basis and billed on approval but before purchase.

L. Regular in-person Business Review - Inclusive of contract

M. Regular Reporting on System Health in business terms – Inclusive of contract

N. Response to Major System Problems or Outages – Inclusive of contract

O. Coverage and Response During Emergency Operations and/or Activations – Hours agreed to be outside of contract will be billed at $125 per hour.

P. Overall Description and Outline of the Level of Service Included for the Proposed Fees – ENS provides onsite and remote support at $150 per hour with discounts applied to contracted hours. All rates are negotiated during the contract review period.

o Describe work and related costs that are specifically excluded from the contract, i.e. any optional/incremental ongoing services or project fees, (see Appendix A Cost Proposal – Part 2).

The Cost Proposal has been provided as requested in Section F and Appendix A per the RFP instructions.

Appendix C – Example Reports

ConnectWise
Identify®



Risk Assessment Report
Completed On: 29 Jul 2022

Thank you for taking the time to participate in this risk assessment process. The goal of this assessment is to identify your security strengths and weaknesses, and to provide advice as to the improvements you should be considering relative to your security posture.

The assessment and your results are aligned to the National Institute of Standards and Technology, Cybersecurity Framework v1.1, (NIST CSF), considered to be a best practice for firms such as yours.

The assessment spanned the five core areas of the framework as detailed below, and this report will show you results against the framework, as well as how your business aligns to other firms with respect to size, location, and industry.

IDENTIFY	PROTECT	DETECT	RESPOND	RECOVER
• ASSET MANAGEMENT	• ACCESS CONTROL	• ANOMALIES & EVENTS	• RESPONSE PLANNING	• RECOVERY PLANNING
• BUSINESS ENVIRONMENT	• AWARENESS & TRAINING	• SECURITY CONTINUOUS MONITORING	• COMMUNICATIONS	• IMPROVEMENTS
• GOVERNANCE	• DATA SECURITY	• DETECTION PROCESSES	• ANALYSIS	• COMMUNICATIONS
• RISK ASSESSMENT	• INFO PROTECTION PROCESS & PROCEDURES		• MITIGATION	
• RISK MANAGEMENT STRATEGY	• MAINTENANCE		• IMPROVEMENTS	
• SUPPLY CHAIN RISK MANAGEMENT	• PROTECTIVE TECHNOLOGY			

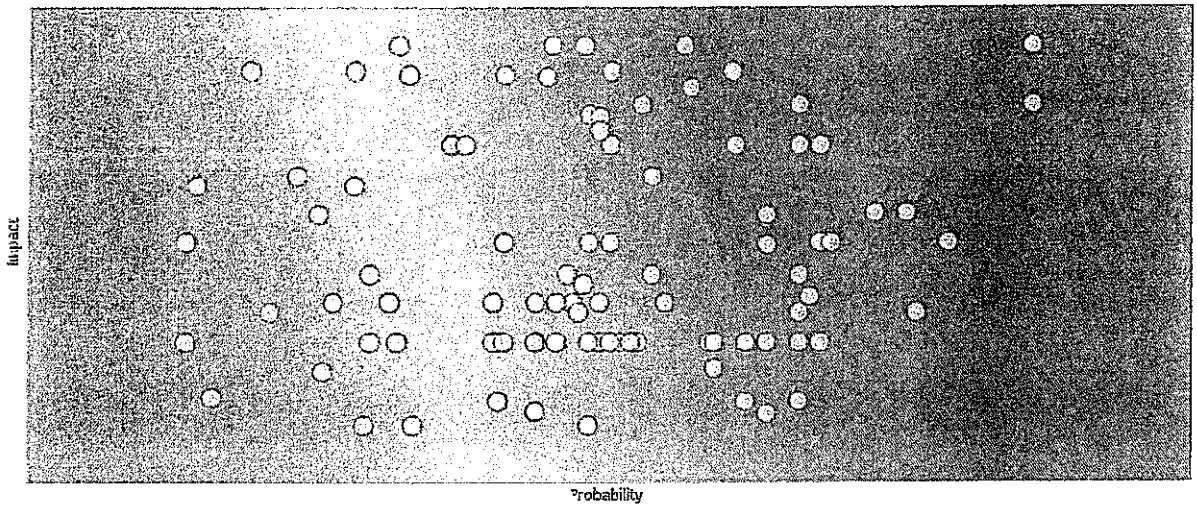
For your reference we have provided a link to the NIST Cybersecurity Framework and encourage you to download the document and become more familiar with the valuable information that can help you in your journey to better secure your business.

https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.04162018.pdf

OVERALL RISK ASSESSMENT

Your overall risk rating is MEDIUM

Your overall rating for this assessment raises some concerns as to your ability to detect and prevent threats that would negatively impact your organization. You should pay careful attention to the recommendations and remediate as many of the high risk items as you can.



TOP RISK AREAS

Critical — ID.BE-5 - Resilience requirements to support delivery of critical services are established for all operating states (e.g. under duress/attack, during recovery, normal operations)

Critical — ID.AM-6 - Cybersecurity roles and responsibilities for the entire workforce and third-party stakeholders (e.g., suppliers, customers, partners) are established

Critical — PR.AT-5 - Physical and information security personnel understand roles & responsibilities

Critical — RS.AN-3 - Forensics are performed

Critical — PR.DS-2 - Data-in-transit is protected

Critical	PR.DS-1 - Data-at-rest is protected
Critical	ID.RA-3 - Threats, both internal and external, are identified and documented
High	PR.AT-3 - Third-party stakeholders (e.g., suppliers, customers, partners) understand roles & responsibilities
High	RS.AN-5 - Processes are established to receive, analyze and respond to vulnerabilities disclosed to the organization from internal and external sources (e.g. internal testing, security bulletins, or security researchers)
High	PR.IP-7 - Protection processes are continuously improved
High	PR.IP-3 - Configuration change control processes are in place
High	PR.PT-4 - Communications and control networks are protected
High	ID.BE-1 - The organization's role in the supply chain is identified and communicated
High	PR.IP-2 - A System Development Life Cycle to manage systems is implemented
High	RC.CO-2 - Reputation after an event is repaired
High	PR.DS-7 - The development and testing environment(s) are separate from the production environment
High	ID.RA-4 - Potential business impacts and likelihoods are identified
High	ID.RA-6 - Risk responses are identified and prioritized
High	PR.DS-3 - Assets are formally managed throughout removal, transfers, and disposition
High	PR.PT-3 - The principle of least functionality is incorporated by configuring systems to provide only essential capabilities

High	PR.IP-5 - Policy and regulations regarding the physical operating environment for organizational assets are met
High	ID.RM-1 - Risk management processes are established, managed, and agreed to by organizational stakeholders
High	DE.CM-8 - Vulnerability scans are performed
High	ID.RA-5 - Threats, vulnerabilities, likelihoods, and impacts are used to determine risk
High	PR.PT-5 - Mechanisms (e.g., failsafe, load balancing, hot swap) are implemented to achieve resilience requirements in normal and adverse situations
High	ID.AM-3 - Organizational communication and data flows are mapped
High	ID.AM-5 - Resources (e.g., hardware, devices, data, and software) are prioritized based on their classification, criticality, and business value
High	ID.SC-2 - Suppliers and third party partners of information systems, components, and services are identified, prioritized, and assessed using a cyber supply chain risk assessment process
High	RS.RP-1 - Response plan is executed during or after an event
High	ID.AM-4 - External information systems are catalogued
High	ID.BE-4 - Dependencies and critical functions for delivery of critical services are established
High	RC.RP-1 - Recovery plan is executed during or after an event
High	PR.DS-6 - Integrity checking mechanisms are used to verify software, firmware, and information integrity
High	RC.CO-1 - Public relations are managed

ESSENTIAL
NET SOLUTIONS

Network Assessment

Asset Detail Report

Prepared for: CLIENT NAME REMOVED
Prepared by: EssentialNet Solutions

07-Jul-2023

CONFIDENTIALITY NOTE: The information contained in this report is for the exclusive use of the client specified above and may contain confidential, privileged, and non-disclosable information. If you are not the client or addressee, you are strictly prohibited from reading, photocopying, distributing, or otherwise using this report or its contents in any way.

Scan Date: 27-Jun-2023

1 - Domain: CSC.local

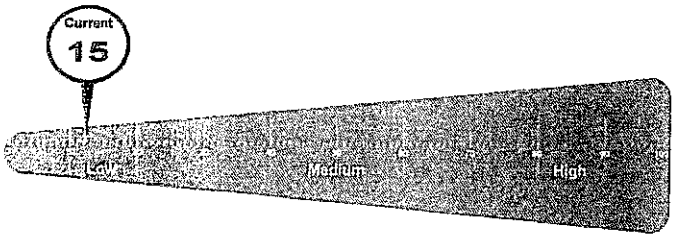
1.1 - CSC.LOCAL\ADMIN003

Operating System and IP Address

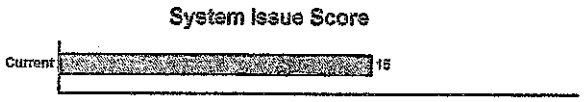
Computer	IP address
Windows 10 Enterprise	192.168.0.153

Risk Section

System Risk Score



System Issue Score



Issues

- Inactive computers (15 pts)

System Profile

Profile	
OS	Windows 10 Enterprise
Processor	
Last Active Directory Check-in	21-Oct-2022 2:52:51 PM

System Memory

None Detected

Disk Space Utilization

None Detected

Windows IP Configuration

None Detected

Endpoint Security

Security Center

Antivirus

Unable to scan

Antispyware

Unable to scan

Firewall

Unable to scan

Detected by Services

Antivirus

Unable to scan

Antispyware

Unable to scan

Firewall

Unable to scan

Connected Printers

Unable to scan

Shares

Unable to scan

Installed Applications

Windows Applications

None Detected

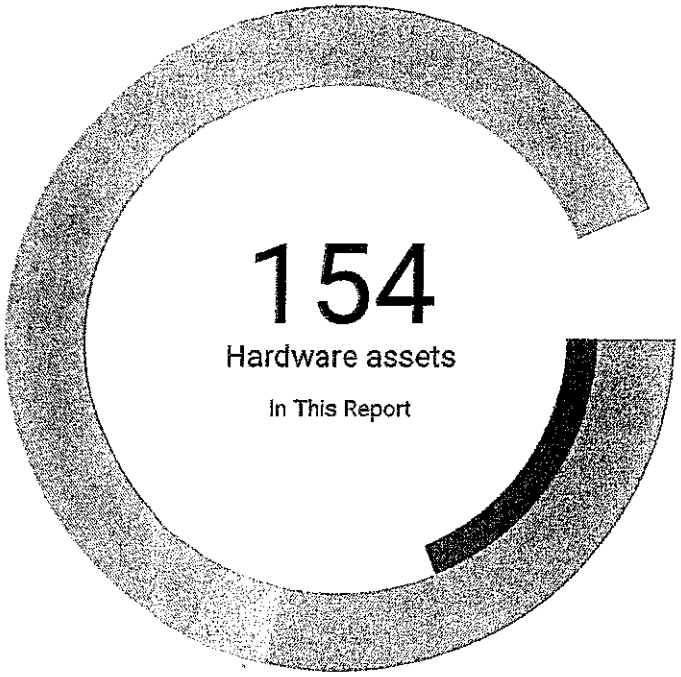
License Keys

Unable to scan

Hardware Lifecycle Report

July 2023

ESSENTIAL NET SOLUTIONS



About This Report

This is an overview of known server and workstation hardware for s. A detailed breakdown starts on page 2. The sample evergreen report appearing on the last page is for discussion purposes only, and doesn't represent an actual quote. Please contact us with any questions and we would be pleased to discuss this report in further detail.

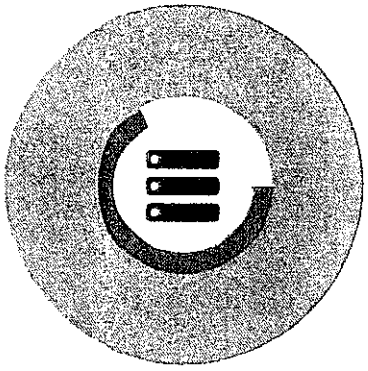
Replacement status:

- **44** Supported — No action required
- **6** Due soon — Due date within 180 days
- **94** Overdue — Action required
- **10** Unknown — Under review or unknown

Operating System:

- **29** OS supported — Within support period
- **6** OS ending soon — Update recommended
- **119** OS unsupported — No longer maintained

3 Servers



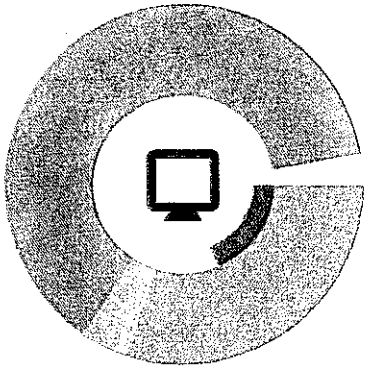
Replacement status:

- **3** Overdue

Operating System:

- **2** OS supported
- **1** OS unsupported

145 Workstations



Replacement status:

- **44** Supported
- **6** Due soon
- **91** Overdue
- **4** Unknown

Operating System:

- **27** OS supported
- **118** OS unsupported

6 Virtual Machines



Operating System:

- **6** OS ending soon

Servers	User	Make	Serial	Model	OS	Age	Purchased	Expires
FEA-MEL-NAS		Dell	GP15FW2	EMC Storage NX3240	Server 2016	4.2	05/17/2019	05/17/2022
FEA-NAS02		Dell	7Q2HKH2	Storage NX430	Server 2016	6.1	06/10/2017	06/11/2020
FEA-VCS02		Dell	6KYXNL1	PowerEdge R710	Windows 8.1 9600	13.4	02/17/2010	08/02/2016

Workstations	User	Make	Serial	Model	OS	Age	Purchased	Expires
FEA-3423-LT		Lenovo		X1 Carbon 10th Gen	Windows 11 22H2	0.1	07/07/2023	07/16/2024
FEA-3417-LT		Dell		LATITUDE 3520	Windows 10 22H2	0.3	04/21/2023	05/05/2024
FEA-3395-LT		Dell		LATITUDE 3520	Windows 10 21H2	0.5	02/07/2023	05/25/2024
FEA-3411-LT		Dell		LATITUDE 3520	Windows 10 22H2	0.5	01/16/2023	01/30/2024
FEA-3412-LT		Dell		LATITUDE 3520	Windows 10 22H2	0.5	01/16/2023	01/30/2024
FEA-3375-LT		Dell		LATITUDE 3520	Windows 10 21H2	0.8	10/26/2022	11/21/2023
FEA-3367-LT		Dell		LATITUDE 3520	Windows 10 21H2	0.8	10/26/2022	11/21/2023
FEA-3368-LT		Dell		LATITUDE 3520	Windows 10 21H2	0.8	10/26/2022	11/21/2023
FEA-3353-LT		Dell		LATITUDE 3420	Windows 10 20H2	1.9	09/16/2021	10/13/2022
CAPTURE1		HP Inc		HP Z4 G4 Workstati	Windows 10 21H1	1.9	09/09/2021	09/08/2024
509-CAPTURE		HP Inc		HP Z4 G4 Workstati	Windows 10 21H2	1.9	09/09/2021	09/08/2024
VI-CAPTURE1-		HP Inc		HP Z4 G4 Workstati	Windows 10 21H2	1.9	09/09/2021	09/08/2024
OCTPB		HP Inc		HP Z4 G4 Workstati	Windows 10 21H2	1.9	09/09/2021	09/08/2024
FEA-3322-DT		Dell		PRECISION 3240	Windows 10 20H2	2	07/19/2021	07/21/2024
OCT3		HP Inc		HP Z2 Tower G5 Wo	Windows 10 20H2	2.1	06/28/2021	06/27/2024
MEL-3317-DT		Dell		PRECISION 3240	Windows 10 20H2	2.1	06/19/2021	06/21/2024
FEA-3310-LT		Dell		Precision 3551	Windows 10 20H2	2.3	04/08/2021	04/09/2022
OPTOSADVAI		Dell		OptiPlex 3080	Windows 10 1809	2.3	03/28/2021	03/28/2022
FEA-3309-LT		Micros		Surface Pro 7 - i5/8/	Windows 10 20H2	2.4	02/24/2021	04/26/2022
FEA-3308-LT		Micros		Surface Pro 7 - i5/8/	Windows 10 2004	2.4	02/24/2021	04/26/2022
FEA-3307-LT		Micros		Surface Pro 7 - i5/8/	Windows 10 2004	2.4	02/24/2021	04/26/2022
FEA-3365-LT		Dell		INSPIRON 3502	Windows 10 20H2	2.4	02/18/2021	02/19/2023
OPTOSADVAI		Dell		OptiPlex 3080	Windows 10 1809	2.5	02/04/2021	02/04/2022
OPTOSADVAI		Dell		OptiPlex 3080	Windows 10 1809	2.5	01/20/2021	01/20/2022
FEA-3303-LT		Dell		XPS 15 9500	Windows 10 20H2	2.6	12/22/2020	01/14/2022
FEA-3290-LT		Dell		XPS 15 9500	Windows 10 2004	2.6	12/22/2020	01/13/2022

Sample Evergreen/Replacement Budget

This table provides an idea of a sample replacement budget spread over four quarters for devices which are overdue or are due within the next 180 days.

Due soon/Overdue	Q1	Q2	Q3	Q4	Total
Servers $9,000/ea	1	1	1	-	3
Workstations $1,000/ea	25	24	24	24	97
Budget Amount	**$34,000**	**$33,000**	**$33,000**	**$24,000**	**$124,000**

The Hidden Cost of Old Hardware

.e true cost of slow systems can be surprisingly high for any business. Slow workstations are estimated to drop productivity by 2.75% (13 minutes per day, or 5.5 days per year). The problem is exacerbated with server equipment, which can dramatically affect a large number of users in parallel. As a result, the 1-year ROI for replacement of old systems is often 5X to 10X. We would be happy to discuss with you how best to plan your evergreen/replacement budget.

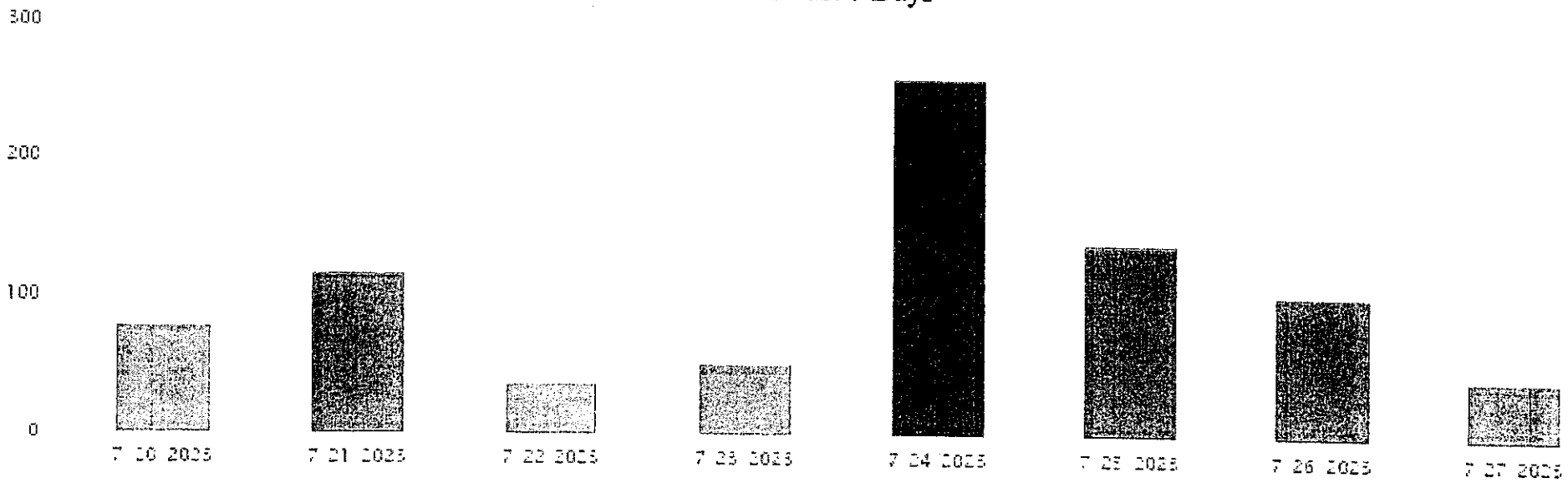
Closed Se. ce Ticket Metrics

Please use "Save As" to save your changes. This report is subject to replacement upon a ConnectWise release.

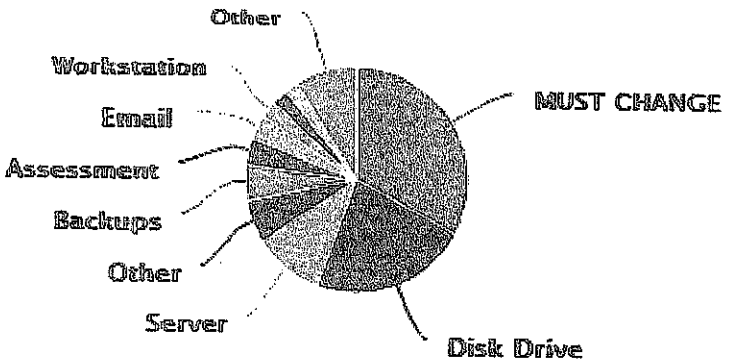
Average Age When Closed

Service Board	Average Age
NOC Alerts	413
	17
	14
	14
Help Desk	7
Maint Alerts	6
Backups	6

Closed Last 7 Days



Closed Type



Closed

Date	By	Ticket#	Company	Summary	Status	Hours Actual
7/27/2023	kwinchester	290665		Renewal Notice: Your services are coming up for expiration	>Canceled	0.00
7/27/2023	kwinchester	290649		Monthly Newsletter - The Personal Side of Security	>Cancelled	0.00
7/27/2023	kwinchester	290582	Catchall	- SynologyNAS Active Backup for Business - backup task COM-Host1-SynologyNAS on C	>Cancelled	0.00
7/27/2023	kwinchester	290615	Catchall	JGLC214 Failure <07/26/2023> 4pm 7 days	>Cancelled	0.00
7/27/2023	kwinchester	290616	Catchall	COM-CH-Synology No Result <07/26/2023> backup task COM-Host3-SynologyNAS	>Cancelled	0.00
7/27/2023	kwinchester	290617	Catchall	DESKTOP-1MH9V1V No Result <07/26/2023> Backup Offsite (clone)	>Cancelled	0.00
7/27/2023	kwinchester	290618	Catchall	perch No Result <07/26/2023> Entire machine to Cloud storage	>Cancelled	0.00
7/27/2023	kwinchester	290619	Catchall	BSE-DC02 No Result <07/26/2023> BSE-Siris - (0cc47acd8af3)	>Cancelled	0.00
7/27/2023	kwinchester	290620	Catchall	JGLC106.G e.net Failure <07/26/2023> 4pm 7 days	>Cancelled	0.00
7/27/2023	kwinchester	290621	Catchall	FS1.cimn.local Failure <07/26/2023> ONSITE	>Cancelled	0.00
7/27/2023	kwinchester	290622	Catchall	JGLC107. Failure <07/26/2023> 4pm 7 days	>Cancelled	0.00
7/27/2023	kwinchester	290623	Catchall	BSE-DC02 No Result <07/26/2023> BSE-Siris - (0cc47acd8af3) - Local Verification	>Cancelled	0.00

Appendix D – Summary Resumes

Appendix D – Summary Resumes

David Soper

David has over 25 years in technology services and business leadership. He is a business executive who started in field engineering supporting municipalities during the Y2K crisis and grew to own 5 technology related organizations including EssentialNet and Commulus (a VoIP provider in Central Florida)

Frank Huston

Frank has over 40 years' experience in technology services. He started in computer and technology services with the Air Force and then moved on to hold positions with two large healthcare organizations including Director of IT for St' Jude Childrens Research in Memphis Tennessee. Frank has been a part of the Managed Services industry for twenty years here in Florida and has five years' experience running a private data center for business aviation.

Brent Mattingly

Brent serves as the VP of Field Services and Project Manager for ENS and is responsible for overseeing the engineering services division, ensuring seamless project execution from conception to completion. He provides strategic leadership to the team, fosters innovation, and maintains exceptional client relationships. Brent efficiently allocates resources, manages budgets, and implements best practices, ensuring the successful delivery of projects while upholding the highest standards of quality and safety. Brent has over 20 years' experience in technology support with 15 years directly supporting municipalities.

Peter Nemsky

Peter serves as a Senior Engineer and backup Project Manager and is responsible for providing expert-level technical support and maintenance for complex network infrastructures. With a focus on delivering exceptional field services, he leads the installation, configuration, and troubleshooting of networking solutions, ensuring optimal performance and reliability. Peter collaborates closely with cross-functional teams, plays a pivotal role in project planning and execution, and consistently demonstrates a commitment to delivering top-tier customer service and exceeding project objectives.

Kaitlin Winchester

Kaitlin serves as the VP of Customer Experience, responsible for overseeing and optimizing the overall customer journey and satisfaction. She has over 17 years of professional experience dedicated to enriching customer interactions across a wide range of industries. Kaitlin's role involves overseeing dispatch, the service desk team, scheduling and is the main point of contact for customer communication.

Sean Berry

Sean serves as the Service Desk Manager and is responsible for overseeing the efficient operation and continuous improvement of the IT service desk. He leads a team of skilled professionals, ensuring the delivery of exceptional technical support to end-users, promptly resolving incidents and service requests. Additionally, Sean develops and implements service desk processes, maintains service level agreements, and fosters a customer-centric approach to enhance overall user satisfaction and IT service quality.

Exhibit “C”

FEDERAL BUREAU OF INVESTIGATION
CRIMINAL JUSTICE INFORMATION SERVICES
SECURITY ADDENDUM

Legal Authority for and Purpose and Genesis of the Security Addendum

Traditionally, law enforcement and other criminal justice agencies have been responsible for the confidentiality of their information. Accordingly, until mid-1999, the Code of Federal Regulations Title 28, Part 20, subpart C, and the National Crime Information Center (NCIC) policy paper approved December 6, 1982, required that the management and exchange of criminal justice information be performed by a criminal justice agency or, in certain circumstances, by a noncriminal justice agency under the management control of a criminal justice agency.

In light of the increasing desire of governmental agencies to contract with private entities to perform administration of criminal justice functions, the FBI sought and obtained approval from the United States Department of Justice (DOJ) to permit such privatization of traditional law enforcement functions under certain controlled circumstances. In the Federal Register of May 10, 1999, the FBI published a Notice of Proposed Rulemaking, announcing as follows:

> 1. Access to CHRI [Criminal History Record Information] and Related Information, Subject to Appropriate Controls, by a Private Contractor Pursuant to a Specific Agreement with an Authorized Governmental Agency To Perform an Administration of Criminal Justice Function (Privatization). Section 534 of title 28 of the United States Code authorizes the Attorney General to exchange identification, criminal identification, crime, and other records for the official use of authorized officials of the federal government, the states, cities, and penal and other institutions. This statute also provides, however, that such exchanges are subject to cancellation if dissemination is made outside the receiving departments or related agencies. Agencies authorized access to CHRI traditionally have been hesitant to disclose that information, even in furtherance of authorized criminal justice functions, to anyone other than actual agency employees lest such disclosure be viewed as unauthorized. In recent years, however, governmental agencies seeking greater efficiency and economy have become increasingly interested in obtaining support services for the administration of criminal justice from the private sector. With the concurrence of the FBI's Criminal Justice Information Services (CJIS) Advisory Policy Board, the DOJ has concluded that disclosures to private persons and entities providing support services for criminal justice agencies may, when subject to appropriate controls, properly be viewed as permissible disclosures for purposes of compliance with 28 U.S.C. 534.
>
> We are therefore proposing to revise 28 CFR 20.33(a)(7) to provide express authority for such arrangements. The proposed authority is similar to the authority that already exists in 28 CFR 20.21(b)(3) for state and local CHRI systems. Provision of CHRI under this authority would only be permitted pursuant to a specific agreement with an authorized governmental agency for the purpose of providing services for the administration of criminal justice. The agreement would be required to incorporate a security addendum approved by the Director of the FBI (acting for the Attorney General). The security

addendum would specifically authorize access to CHRI, limit the use of the information to the specific purposes for which it is being provided, ensure the security and confidentiality of the information consistent with applicable laws and regulations, provide for sanctions, and contain such other provisions as the Director of the FBI (acting for the Attorney General) may require. The security addendum, buttressed by ongoing audit programs of both the FBI and the sponsoring governmental agency, will provide an appropriate balance between the benefits of privatization, protection of individual privacy interests, and preservation of the security of the FBI's CHRI systems.

The FBI will develop a security addendum to be made available to interested governmental agencies. We anticipate that the security addendum will include physical and personnel security constraints historically required by NCIC security practices and other programmatic requirements, together with personal integrity and electronic security provisions comparable to those in NCIC User Agreements between the FBI and criminal justice agencies, and in existing Management Control Agreements between criminal justice agencies and noncriminal justice governmental entities. The security addendum will make clear that access to CHRI will be limited to those officers and employees of the private contractor or its subcontractor who require the information to properly perform services for the sponsoring governmental agency, and that the service provider may not access, modify, use, or disseminate such information for inconsistent or unauthorized purposes.

Consistent with such intent, Title 28 of the Code of Federal Regulations (C.F.R.) was amended to read:

§ 20.33 Dissemination of criminal history record information.

a) Criminal history record information contained in the Interstate Identification Index (III) System and the Fingerprint Identification Records System (FIRS) may be made available:

1) To criminal justice agencies for criminal justice purposes, which purposes include the screening of employees or applicants for employment hired by criminal justice agencies.

2) To noncriminal justice governmental agencies performing criminal justice dispatching functions or data processing/information services for criminal justice agencies; and

3) To private contractors pursuant to a specific agreement with an agency identified in paragraphs (a)(1) or (a)(6) of this section and for the purpose of providing services for the administration of criminal justice pursuant to that agreement. The agreement must incorporate a security addendum approved by the Attorney General of the United States, which shall specifically authorize access to criminal history record information, limit the use of the information to the purposes for which it is provided, ensure the security and confidentiality of the information consistent with these regulations, provide for sanctions, and contain such other provisions as the Attorney General may require. The power

and authority of the Attorney General hereunder shall be exercised by the FBI Director (or the Director's designee).

This Security Addendum, appended to and incorporated by reference in a government-private sector contract entered into for such purpose, is intended to insure that the benefits of privatization are not attained with any accompanying degradation in the security of the national system of criminal records accessed by the contracting private party. This Security Addendum addresses both concerns for personal integrity and electronic security which have been addressed in previously executed user agreements and management control agreements.

A government agency may privatize functions traditionally performed by criminal justice agencies (or noncriminal justice agencies acting under a management control agreement), subject to the terms of this Security Addendum. If privatized, access by a private contractor's personnel to NCIC data and other CJIS information is restricted to only that necessary to perform the privatized tasks consistent with the government agency's function and the focus of the contract. If privatized the contractor may not access, modify, use or disseminate such data in any manner not expressly authorized by the government agency in consultation with the FBI.

EXAMPLE OF A CONTRACT ADDENDUM

AMENDMENT NO. ___ TO THE CONTRACT BETWEEN
[PARTY NO. 1] AND [PARTY NO. 2], ENTERED INTO [DATE]

[Name of Law Enforcement Agency] and [Party No. 2], upon notification and pursuant to Paragraph/Section No. ___ [the amendment clause of the original contract] of that certain contract entered into by these parties on [date][and entitled "___"], hereby amend and revise the contract to include the following:

1. Access to and use of criminal history record information and other sensitive information maintained in [state and] FBI-managed criminal justice information systems by [private party] are subject to the following restrictions:

a.

b.

c.

and

d. The Security Addendum appended hereto, which is incorporated by reference and made a part thereof as if fully appearing herein.

This amendment is effective the ____ day of _____, 20__.

On behalf of [Party No. 1]: _____

[Name]

_____

[Title]

_____

Date

On behalf of [Party No. 2]: _____

[Name]

_____

[Title]

FEDERAL BUREAU OF INVESTIGATION
CRIMINAL JUSTICE INFORMATION SERVICES
SECURITY ADDENDUM

The goal of this document is to augment the CJIS Security Policy to ensure adequate security is provided for criminal justice systems while (1) under the control or management of a private entity or (2) connectivity to FBI CJIS Systems has been provided to a private entity (contractor). Adequate security is defined in Office of Management and Budget Circular A-130 as "security commensurate with the risk and magnitude of harm resulting from the loss, misuse, or unauthorized access to or modification of information."

The intent of this Security Addendum is to require that the Contractor maintain a security program consistent with federal and state laws, regulations, and standards (including the CJIS Security Policy in effect when the contract is executed), as well as with policies and standards established by the Criminal Justice Information Services (CJIS) Advisory Policy Board (APB).

This Security Addendum identifies the duties and responsibilities with respect to the installation and maintenance of adequate internal controls within the contractual relationship so that the security and integrity of the FBI's information resources are not compromised. The security program shall include consideration of personnel security, site security, system security, and data security, and technical security.

The provisions of this Security Addendum apply to all personnel, systems, networks and support facilities supporting and/or acting on behalf of the government agency.

1.00 Definitions

1.01 Contracting Government Agency (CGA) - the government agency, whether a Criminal Justice Agency or a Noncriminal Justice Agency, which enters into an agreement with a private contractor subject to this Security Addendum.

1.02 Contractor - a private business, organization or individual which has entered into an agreement for the administration of criminal justice with a Criminal Justice Agency or a Noncriminal Justice Agency.

2.00 Responsibilities of the Contracting Government Agency.

2.01 The CGA will ensure that each Contractor employee receives a copy of the Security Addendum and the CJIS Security Policy and executes an acknowledgment of such receipt and the contents of the Security Addendum. The signed acknowledgments shall remain in the possession of the CGA and available for audit purposes. The acknowledgement may be signed by hand or via digital signature (see glossary for definition of digital signature).

3.00 Responsibilities of the Contractor.

3.01 The Contractor will maintain a security program consistent with federal and state laws, regulations, and standards (including the CJIS Security Policy in effect when the contract is executed and all subsequent versions), as well as with policies and standards established by the Criminal Justice Information Services (CJIS) Advisory Policy Board (APB).

4.00 Security Violations.

4.01 The CGA must report security violations to the CJIS Systems Officer (CSO) and the Director, FBI, along with indications of actions taken by the CGA and Contractor.

4.02 Security violations can justify termination of the appended agreement.

4.03 Upon notification, the FBI reserves the right to:

a. Investigate or decline to investigate any report of unauthorized use;

b. Suspend or terminate access and services, including telecommunications links. The FBI will provide the CSO with timely written notice of the suspension. Access and services will be reinstated only after satisfactory assurances have been provided to the FBI by the CGA and Contractor. Upon termination, the Contractor's records containing CHRI must be deleted or returned to the CGA.

5.00 Audit

5.01 The FBI is authorized to perform a final audit of the Contractor's systems after termination of the Security Addendum.

6.00 Scope and Authority

6.01 This Security Addendum does not confer, grant, or authorize any rights, privileges, or obligations on any persons other than the Contractor, CGA, CJA (where applicable), CSA, and FBI.

6.02 The following documents are incorporated by reference and made part of this agreement: (1) the Security Addendum; (2) the NCIC 2000 Operating Manual; (3) the CJIS Security Policy; and (4) Title 28, Code of Federal Regulations, Part 20. The parties are also subject to applicable federal and state laws and regulations.

6.03 The terms set forth in this document do not constitute the sole understanding by and between the parties hereto; rather they augment the provisions of the CJIS Security Policy to provide a minimum basis for the security of the system and contained information and it is understood that there may be terms and conditions of the appended Agreement which impose more stringent requirements upon the Contractor.

6.04 This Security Addendum may only be modified by the FBI, and may not be modified by the parties to the appended Agreement without the consent of the FBI.

6.05 All notices and correspondence shall be forwarded by First Class mail to:

Information Security Officer

Criminal Justice Information Services Division, FBI

1000 Custer Hollow Road

Clarksburg, West Virginia 26306

FEDERAL BUREAU OF INVESTIGATION
CRIMINAL JUSTICE INFORMATION SERVICES
SECURITY ADDENDUM

CERTIFICATION

I hereby certify that I am familiar with the contents of (1) the Security Addendum, including its legal authority and purpose; (2) the NCIC Operating Manual; (3) the CJIS Security Policy; and (4) Title 28, Code of Federal Regulations, Part 20, and agree to be bound by their provisions.

I recognize that criminal history record information and related data, by its very nature, is sensitive and has potential for great harm if misused. I acknowledge that access to criminal history record information and related data is therefore limited to the purpose(s) for which a government agency has entered into the contract incorporating this Security Addendum. I understand that misuse of the system by, among other things: accessing it without authorization; accessing it by exceeding authorization; accessing it for an improper purpose; using, disseminating or re-disseminating information received as a result of this contract for a purpose other than that envisioned by the contract, may subject me to administrative and criminal penalties. I understand that accessing the system for an appropriate purpose and then using, disseminating or re-disseminating the information received for another purpose other than execution of the contract also constitutes misuse. I further understand that the occurrence of misuse does not depend upon whether or not I receive additional compensation for such authorized activity. Such exposure for misuse includes, but is not limited to, suspension or loss of employment and prosecution for state and federal crimes.

_____ _____

Printed Name/Signature of Contractor Employee Date

_____ _____

Printed Name/Signature of Contractor Representative Date

_____

Organization and Title of Contractor Representative

CONSENT AGENDA ITEM 302

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Ratify Addendum to Contract for Building Department Services with Universal Engineering Sciences, Inc.

SUMMARY

The City is currently contracted with Universal Engineering Sciences, LLC to provide building department services. The initial term of the contract was for a period of three years, commencing on April 1, 2020 and terminating at midnight on March 31, 2023. Also included was the option for two (2) one-year extensions. The City Commission budgeted for these services to continue in the City's 2023/24 and 2024/25 budgets. This addendum exercises the second one-year extension and covers the term from April 1, 2024 through March 31, 2025. Exhibit “B” contains a Fee Schedule for Services performed. The addendum modifies Exhibit “B,” “Fee Schedule and Assigned Hours,” subsection III, as follows:
Building Code Administrator/Building Official Services = $118.00 per hour (up from $109 per hour);
Plan Review Services = $95.00 per hour (up from $87.00 per hour);
Field Inspection Services = $95.00 per hour (up from $87.00 per hour).

FUNDING SOURCE

GL 420-24-2400-530341-001 (Other Svcs- Contract/Administrative Temp Services)

RECOMMENDATION

Staff recommends the Commission ratify the Second Addendum to the Agreement for Building Department Services with updated hourly rates for services provided during the City's operating hours, and authorize the Interim City Manager and City Attorney to execute the contract.

AGREEMENT FOR BUILDING DEPARTMENT SERVICES

THIS AGREEMENT FOR BUILDING DEPARTMENT SERVICES ("Agreement") is made and entered into by and between the **CITY OF WINTER SPRINGS**, a Florida municipal corporation ("City"), located at 1126 East State Road 434, Winter Springs, Florida 32708, and **UNIVERSAL ENGINEERING SCIENCES, LLC**, a Florida Limited Liability Company ("Service Provider"), located at 3532 Maggie Blvd., Orlando, Florida 32811.

WITNESSETH:

WHEREAS, City wishes to obtain professional services relating to Building Code Administration/Building Official Services, Plans Review Services, and Building Code Inspection Services, for the City of Winter Springs on a continuing basis, as outlined in Exhibit "A," Scope of Services ("Services"); and

WHEREAS, Service Provider has provided such services to the City since 2016; and

WHEREAS, Service Provider is willing to provide such building department Services for the City under the terms and conditions stated herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties covenant and agree as follows:

1.0 GENERAL PROVISIONS

1.1 Recitals. The foregoing recitals are deemed to be true and accurate and are fully incorporated herein by reference.

1.2 Engagement. The City hereby engages Service Provider and Service Provider agrees to perform the Services outlined in this Agreement for the stated fee arrangement. No prior or present agreements or representations shall be binding upon any of the parties hereto unless incorporated in this Agreement.

1.3 Due Diligence. Service Provider acknowledges that it has investigated prior to the execution of this Agreement and satisfied itself as to the conditions affecting the Services, the availability of materials and labor, the cost thereof, the requirements to obtain necessary insurance as set forth herein, and the steps necessary to complete the Services within the time set forth herein. Service Provider warrants unto the City that it has the competence and abilities to carefully and faithfully complete the Services within the time set forth herein. Service Provider will perform its Services with due and reasonable diligence consistent with sound professional practices.

2.0 TERM AND DEFINITIONS

2.1 **Term.** The initial term of this Agreement shall be for three (3) years, commencing on April 1, 2020, and terminating at midnight on March 31, 2023, unless either party chooses to exercise its rights under Section 20, "Termination". The parties shall have the option to extend the term of this Agreement for two (2) one-year periods. Any such extension shall be by mutual written agreement of all parties and shall be executed no less than ninety (90) days prior to the expiration of this Agreement's current term.

The City Manager or the City Manager's designee (hereinafter "City Manager") shall review the performance of the Service Provider annually at least ninety (90) days prior to the Agreement's anniversary date. The City Manager shall recommend a one (1) year extension or termination.

2.2 **Definitions.** The following words and phrases used in this Agreement shall have the following meaning ascribed to them unless the context clearly indicates otherwise:

a. "Agreement" or "Contract" shall be used interchangeably and shall refer to this Agreement, as amended from time to time, which shall constitute authorization for the Service Provider to provide the building department services approved by the City.

b. "Effective Date" shall be the date on which the last signatory hereto shall execute this Agreement, and it shall be the date on which this Agreement shall go into effect. The Agreement shall not go into effect until said date.

c. "Service Provider" shall mean UNIVERSAL ENGINEERING SCIENCES, LLC, and its principals, officers, employees, professional staff, subcontractors, consultants and agents.

d. "Public Record" shall have the meaning given in Chapter 119.011, Florida Statutes.

e. "Work" or "Services" shall be used interchangeably and shall include the performance of the work agreed to by the parties in this Agreement and outlined in Exhibit "A," Scope of Services.

f. "City Project Manager" or "Designated Representative" shall mean the City Manager, the Community Development Director, or his/her respective designee, who is to provide the general administration of the Agreement.

g. "Building Official" shall mean Universal's Building Code Administrator (Building Official). The Building Official directly reports to the City's Community Development Director.

h. "City Code" shall mean the Code of Ordinances, City of Winter Springs.

3.0 SCOPE OF SERVICES

3.1 The Service Provider shall do, perform, deliver and carry out, in a professional manner, the type of building department services as set forth in the "Scope of Work," attached hereto as **Exhibit "A"** and fully incorporated herein by this reference, including but not limited to the furnishing of all materials, equipment, tools, labor, and incidentals, unless otherwise expressly agreed to by the City. The hours assigned to Service Provider are addressed in the "Fee Schedule and Assigned Hours, attached hereto as **Exhibit "B"** and fully incorporated herein by this reference

4.0 AMENDMENTS AND MODIFICATIONS

4.1 Modifications or changes in the terms and conditions set forth in this Agreement, including any exhibits hereto, must be mutually agreed to in writing and executed by the parties bound to this Agreement.

5.0 SCHEDULE

5.1 Service Provider shall perform services in conformance with the schedule reasonably established by the City Project Manager. Service Provider shall complete all of said services in a timely manner and will keep City apprised of the status of work on at least a monthly basis or as otherwise reasonably requested by the City. Should Service Provider fall behind on an established schedule, it shall employ such resources so as to comply with the schedule.

5.2 No extension for completion of services shall be granted to Service Provider without City's prior written consent.

6.0 PAYMENT

6.1 City agrees to pay for Services at the rates outlined in **Exhibit "B,"** Fee Schedule and Assigned Hours, which is attached hereto and fully incorporated herein.

6.2 Invoices. All Services provided to the City must be described upon the Service Provider's invoice with sufficient clarity for the City to easily identify and confirm the Services having been provided. All invoice entries shall clearly indicate the type of Service rendered, identify the Service Provider's employee who rendered such Service, and note the appropriate hourly rate charged.

6.3 Payment. Upon receipt of a proper invoice from Service Provider, the City agrees to pay the Service Provider the invoice amount providing said amount accurately reflects the terms and conditions of this Agreement. Invoices may only be submitted on a monthly basis unless otherwise agreed by the City. Unless otherwise agreed in writing by the City, there shall be no other compensation paid to the Service Provider and its principals, employees, and independent professional associates and consultants in the performance of Work under this Agreement. The City agrees to make all payments due within thirty (30) days of receipt of a proper invoice delivered by Service Provider. The Service Provider may only bill the City for actual work performed.

6.4 Truth-In-Negotiation Certificate. Signature of this Agreement by the Service Provider shall act as the execution of a truth-in-negotiation certificate certifying that the wage and rates and costs used to determine the compensation provided for in this Agreement are accurate, complete, and current as of the date of the Agreement.

7.0 RIGHT TO INSPECTION

7.1 City or its affiliates shall at all times have the right to review or observe the services performed by Service Provider.

7.2 No inspection, review, or observation shall relieve Service Provider of its responsibility under this Agreement.

8.0 AUDIT AND INSPECTIONS

8.1 The Service Provider shall maintain records on the City's projects, in accordance with generally accepted accounting principles and practices to substantiate all invoiced amounts. Said records shall be kept and made available to the City in accordance with Section 18.1 herein. The Service Provider may be audited by the City in relation to this Agreement at the City's discretion. Should such an audit by the City reveal monies owed to the City, the Service Provider shall reimburse the City for the cost of the audit and pay the principal overcharge amount owed the City plus interest accrued at the prime interest rate in effect on the date of discovery. Said interest rate shall apply to the principal overcharge amount revealed in the audit for the period from the original payment due date(s) to the payment by the Service Provider of all monies owed.

9.0 PROFESSIONALISM AND STANDARD OF CARE

9.1 Service Provider shall do, perform and carry out in a professional manner all Services required to be performed by this Agreement. Service Provider shall also use the degree of care and skill in performing the Services that are ordinarily exercised under similar circumstances by reputable members of Service Provider's profession working in the same or similar locality as Service Provider.

10.0 SUBMITTAL OF PROGRESS REPORTS

10.1 Service Provider shall submit a monthly written progress report as to the status of all Work set forth in this Agreement. If the detail is not sufficient in the City Project Manager's reasonable discretion

to permit the City to determine the Work performed or the manner in which it is being performed, the City may seek more detail from the Service Provider. Service Provider agrees to provide that information within a reasonable time period.

11.0 WARRANTY OF PROFESSIONAL SERVICES

11.1 The Service Provider (for itself and any of its employees, contractors, partners, and agents used to perform the Services) hereby warrants unto the City that all of its employees (and those of any of its contractors, partners, and agents used to perform the Services) have sufficient experience to properly complete the Services specified herein or as may be performed pursuant to this Agreement. In pursuit of any Work, the Service Provider shall supervise and direct the Work, using its best skill and attention and shall enforce strict discipline and good order among its employees. The Service Provider shall comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work. The Service Provider further warrants that all inspection and plan review personnel of Service Provider possess the required Florida state certifications required by Chapters 468,471, or 481, Florida Statutes.

12.0 CORPORATE REPRESENTATIONS BY SERVICE PROVIDER

12.1 Service Provider hereby represents and warrants to the City the following:

a. Service Provider is duly registered and licensed to do business in the State of Florida and is in good standing under the laws of Florida, and is duly qualified and authorized to carry on the functions and operations set forth in this Agreement.

b. The undersigned signatory for Service Provider has the power, authority, and the legal right to enter into and perform the obligations set forth in this Agreement and all applicable exhibits thereto, and the execution, delivery, and performance hereof by Service Provider has been duly authorized by the board of directors and/or president of Service Provider. In support of said representation, Service Provider agrees to provide a copy to the City of a corporate certificate of good standing provided by the State of Florida prior to the execution of this Agreement.

c. Service Provider is duly licensed under all local, state and federal laws to provide the Services stated in paragraph 3.0 herein. In support of said representation, Service Provider agrees to provide a copy of all said licenses to the City prior to the execution of this Agreement.

13.0 WORK IS A PRIVATE UNDERTAKING

13.1 With regard to any and all Work performed hereunder, it is specifically understood and agreed to by and between the parties hereto that the contractual relationship between the City and Service Provider is such that the Service Provider is an independent contractor and not an agent of the City. The Service Provider, its contractors, partners, agents, and their employees are independent contractors and not employees of the City. Nothing in this Agreement shall be interpreted to establish any relationship other than that of an independent contractor, between the City, on one hand, and the Service Provider, its contractors, partners, employees, or agents, during or after the performance of the Work under this Agreement.

14.0 PROGRESS MEETING

14.1 City Project Manager may hold periodic progress meetings on a monthly basis, or more frequently if required by the City, during the term of work entered into under this Agreement. Service

Provider's Project Manager and all other appropriate personnel shall attend such meetings as designated by the City Project Manager.

15.0 SAFETY

15.1 Precautions shall be exercised at all times for the protection of all persons (including the City's employees) and property. The safety provisions of all applicable laws, regulations, and codes shall be observed. Hazards arising from the use of vehicles, machinery, and equipment shall be guided or eliminated in accordance with the highest accepted standard of safety. Service Provider shall be solely and absolutely responsible and assume all liability for the safety and supervision of its principals, employees, contractors, and agents while performing Services provided hereunder.

16.0 INSURANCE

16.1 Without limiting any of the other obligations or liabilities of Service Provider, Service Provider shall, at its sole expense, procure, maintain and keep in force adequate amounts and types of insurance conforming to the minimum requirements set forth below. The insurance shall become effective prior to the commencement of work by Service Provider and shall be maintained in force until final completion. The Certificate of Insurance must be made to the City of Winter Springs, 1126 East State Road 434, Florida, 32708 and should reference the operation and shall name the City as an additional insured. Prior to renewal, non-renewal, cancellation, or change or modification of any insurance policy, at least 30 days advance written notice shall be given to the City of Winter Springs. All insurance required herein shall be written as primary policies, not contributing to or in excess of any coverage that the City may carry. The insurance carriers shall have a minimum of B+ rating based on the latest rating publication for Property and Casualty Insurers such as A.M. Best Company (or its equivalent). All insurers must be lawfully admitted to conduct business within the State of Florida. The amounts and types of insurance shall conform to the following minimum requirements:

a. Worker's Compensation. Shall cover Service Provider and subcontractors to the fullest extent of the minimum coverage amounts required by law.

b. Commercial General Liability. Minimum limit of $1 Million per occurrence and $3 Million aggregate for bodily injury and property damage liability; this coverage shall also include: Premises and Operations liability; Contractual liability; and, coverage of Service Provider's subcontractors and Independent Contractors.

c.. Commercial Automobile Liability. Minimum limit of $1 Million per claim, covering any auto including owned, non-owned, hired or leased. In the event Service Provider owns no automobiles, the Commercial Auto Liability requirement shall be amended allowing Service Provider to maintain only Hired & Non-Owned Auto Liability. If vehicles are acquired throughout the term of the contract, Service Provider agrees to purchase "Owned Auto" coverage as of the date of acquisition. This amended requirement may be satisfied by way of endorsement to the Commercial General Liability, or a separate Commercial Auto coverage form.

d. Professional Liability Insurance (Errors and Omissions). Minimum limit of $1 Million per occurrence and $2 Million annual aggregate for services, goods, or projects that will exceed $1 Million in value over a year. Minimum limit of $250,000.00 per occurrence and $500,000.00 annual aggregate for services, goods, or projects that will not exceed $1 Million in value over a year.

Service Provider expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by Service Provider shall in no way limit the responsibility to indemnify,

keep and save harmless and defend the City or its officers, employees, agents and instrumentalities as herein provided.

17.0 COMPLIANCE WITH LAWS AND REGULATIONS

17.1 In the performance of work and services under this Agreement, Service Provider agrees to comply with the Florida Building Code and all Federal, State and Local laws and regulations now in effect, or hereinafter enacted during the term of this Agreement that are applicable to Service Provider, its employees, agents or subcontractors, if any, with respect to the work and services described herein. Service Provider agrees it shall comply with all applicable City policies and regulations, rules and guidelines in connection with the Services to be provided hereunder.

18.0 DOCUMENTS

18.1 Public Records. Pursuant to Section 119.0701, Florida Statutes and other applicable public records laws, Service Provider agrees that any records, documents, transactions, writings, papers, letters, computerized information and programs, maps, books, audio or video tapes, films, photographs, data processing software, writings or other material(s), regardless of the physical form, characteristics, or means of transmission, of Service Provider related, directly or indirectly, to the services provided to the City under this Agreement and made or received pursuant to law or ordinance or in connection with the transaction of official business by the City, may be deemed to be a public record, whether in the possession or control of the City or the Service Provider. Said records, documents, transactions, writings, papers, letters, computerized information and programs, maps, books, audio or video tapes, films, photographs, data processing software, writings or other material(s), regardless of the physical form, characteristics, or means of transmission of Service Provider are subject to the provisions of Chapter 119, Florida Statutes, and may not be destroyed without the specific written approval of the City's designated custodian of public records.

IF THE SERVICE PROVIDER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE SERVICE PROVIDER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS, THE CITY CLERK, AT (407) 327-5955, CITYCLERKDEPARTMENT@WINTERSPRINGSFL.ORG, 1126 EAST STATE ROAD 434, FLORIDA 32708.

Service Provider is required to and agrees to comply with public records laws. Service Provider shall keep and maintain all public records required by the City to perform the services as agreed to herein. Service Provider shall provide the City, upon request from the City Clerk, copies of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided by law. Service Provider shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term. Upon completion of the Agreement, Service Provider shall transfer to the City, at no cost, all public records in possession of the Service Provider, provided the transfer is requested in writing by the City Clerk. Upon such transfer, Service Provider shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. However, if the City Clerk does not request that the public records be transferred, the Service Provider shall continue to keep and maintain the public records upon completion of the Agreement and shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City Clerk, in a format that is compatible with the information technology systems of the City. Should the City not possess public records relating to this Agreement which are requested to be inspected or copied by the City or any other person, the City shall immediately notify Service Provider of the request and the Service Provider shall then provide such records to the City or allow the records to be inspected or copied within a reasonable time. If the Service Provider does not comply with a public records request, the City may enforce this Section to the extent permitted by law. Service Provider acknowledges that if the Service Provider does not provide the public records to the City within a reasonable time, the Service Provider may be subject to penalties under Section 119.10, Florida Statutes. The Service Provider

acknowledges that if a civil action is filed against the Service Provider to compel production of public records relating to this Agreement, the court may assess and award against Service Provider the reasonable costs of enforcement, including reasonable attorney fees. All public records in connection with this Agreement shall, at any and all reasonable times during the normal business hours of the Service Provider, be open and freely exhibited to the City for the purpose of examination, audit, or otherwise. Failure by Service Provider to grant such public access and comply with public records laws and/or requests shall be grounds for immediate unilateral cancellation of this Agreement by the City upon delivery of a written notice of cancellation. If the Service Provider fails to comply with this Section, and the City must enforce this Section, or the City suffers a third party award of attorney's fees and/or damages for violating Chapter 119, Florida Statutes, due to Service Provider's failure to comply with this Section, the City shall collect from Service Provider prevailing party attorney's fees and costs, and any damages incurred by the City, for enforcing this Section against Service Provider. And, if applicable, the City shall also be entitled to reimbursement of all attorneys' fees and damages which the City had to pay a third party because of the Service Provider's failure to comply with this Section. The terms and conditions set forth in this Section shall survive the termination of this Agreement.

19.0 ASSIGNMENT

19.1 Service Provider shall not assign or subcontract this Agreement, or any rights or any monies due or to become due hereunder without the prior, written consent of City. Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than City and Service Provider, and all duties and responsibilities under this Agreement will be for the sole and exclusive benefit of City and Service Provider and not for the benefit of any other party.

19.2 If upon receiving written approval from City, any part of this Agreement is subcontracted by Service Provider, Service Provider shall be fully responsible to City for all acts and/or omissions performed by the subcontractor as if no subcontract had been made.

19.3 If City determines that any subcontractor is not performing in accordance with this Agreement, City shall so notify Service Provider who shall take immediate steps to remedy the situation.

19.4 If any part of this Agreement is subcontracted by Service Provider, prior to the commencement of any Work by the subcontractor, Service Provider shall require the subcontractor to provide City and its affiliates with insurance coverage as set forth by the City.

20.0 TERMINATION

20.1 This Agreement may be terminated by the Service Provider upon thirty (30) days prior written notice to the City in the event of substantial failure by the City to perform in accordance with the terms of this Agreement through no fault of the Service Provider. It may also be terminated by the City with or without cause immediately upon written notice to the Service Provider. Unless the Service Provider is in breach of this Agreement, the Service Provider shall be paid for services rendered to the City's satisfaction through the date of termination. After receipt of a Termination Notice and except as otherwise directed by the City, the Service Provider shall:

a. Stop work on the date and to the extent specified by the City.

b. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.

c. Transfer all work in process, completed work and other material related to the terminated work to the City or approved designee.

d. Continue and complete all parts of the work that have not been terminated.

21.0 FORCE MAJEURE

21.1 Any delay or failure of either party in the performance of its required obligations hereunder shall be excused if and to the extent caused by acts of God; fire; flood; windstorm; explosion; riot; war; sabotage; strikes (except involving Service Providers labor force); extraordinary breakdown of or damage to City's affiliates' generating plants, their equipment, or facilities; court injunction or order; federal and/or state law or regulation; order by any regulatory agency; or cause or causes beyond the reasonable control of the party affected; provided that prompt notice of such delay is given by such party to the other and each of the parties hereunto shall be diligent in attempting to remove such cause or causes. If any circumstance of Force Majeure remains in effect for sixty days, either party may terminate this Agreement.

22.0 GOVERNING LAW & VENUE

22.1 This Agreement is made and shall be interpreted, construed, governed, and enforced in accordance with the laws of the State of Florida. Venue for any state action or litigation shall be Seminole County, Florida. The parties agree that the Agreement was consummated in Seminole County, and the site of the Services is Seminole County. Venue for any federal action or litigation shall be in the Middle District of Florida in Orlando, Florida.

23.0 HEADINGS

23.1 Paragraph headings are for the convenience of the parties only and are not to be construed as part of this Agreement.

24.0 SEVERABILITY

24.1 In the event any portion or part thereof of this Agreement is deemed invalid, against public policy, void, or otherwise unenforceable by a court of law, the parties, at the sole discretion and option of the City, shall negotiate an equitable adjustment in the affected provision of this Agreement. The validity and enforceability of the remaining parts of this Agreement shall otherwise be fully enforceable.

25.0 INTEGRATION.

25.1 The drafting, execution, and delivery of this Agreement by the Parties have been induced by no representations, statements, warranties, or agreements other than those expressed herein. This Agreement represents the entire and integrated Agreement between the parties and supersedes all prior negotiations, representations, or Agreements, either oral or written, and all such matters shall be deemed merged into this Agreement.

26.0 THIRD PARTY RIGHTS

26.1 Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Service Provider.

27.0 PROHIBITION AGAINST CONTINGENT FEES

27.1 Service Provider warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Service Provider, to solicit or secure this Agreement, and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Service Provider, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement.

28.0 NO JOINT VENTURE

28.1 Nothing herein shall be deemed to create a joint venture or principal-agent relationship between the parties, and neither party is authorized to, nor shall either party act toward third persons or the public in any manner which would indicate any such relationship with the other party.

29.0 ATTORNEY'S FEES

29.1 Should any litigation arise concerning this Agreement between the parties, the parties agree to bear their own costs and attorney's fees.

30.0 COUNTERPARTS

30.1 This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be considered an original agreement; but such counterparts shall together constitute but one and the same instrument.

31.0 DRAFTING

31.1 City and Service Provider each represent that they have both shared equally in drafting this Agreement and no party shall be favored or disfavored regarding the interpretation of this Agreement in the event of a dispute between the parties.

32.0 NOTICES

32.1 All projects, notices, demands, requests, instructions, approvals, and claims shall be in writing. All notices of any type shall be given by U.S. mail or by hand delivery to an individual authorized to receive mail for the below listed individuals, all to the following individuals at the following locations:

For Service Provider:

Universal Engineering Sciences, LLC
c/o David Olivieri
3532 Maggie Blvd.
Orlando, Florida 32811
Phone: (407) 581-8161
Facsimile: (407) 581-0313

For City:

City Manager
City of Winter Springs
1126 East State Road 434
Winter Springs, FL 32708
Phone: (407) 327-1800
Facsimile: (407) 327-4753

Notice shall be deemed to have been given and received on the date the notice is physically received if given by hand delivery, or if notice is given by first class U.S. mail, postage prepaid, then notice shall be deemed to have been given upon the date said notice was deposited in the U.S. Mail addressed in the manner set forth above. Any party hereto by giving notice in the manner set forth may unilaterally change the name of the person to whom notice is to be given or the address at which notice is to be received.

32.2 Either party may change the notice address by providing the other party written notice of the change.

33.0 SOVEREIGN IMMUNITY

33.1 The City intends to avail itself of the benefits of Section 768.28, Florida Statutes and any other statutes and common law governing sovereign immunity to the fullest extent possible. Neither this provision nor any other provision of this Agreement shall be construed as a waiver of the City's right to sovereign immunity under Section 768.28, Florida Statutes, or other limitations imposed on the City's potential liability under state or federal law. Erdman agrees that City shall not be liable under this Agreement for punitive damages or interest for the period before judgment. Further, City shall not be liable for any claim or judgment, or portion thereof, to any one person for over two hundred thousand dollars ($200,000.00), or any claim or judgment, or portion thereof, which, when totaled with all other claims or judgments paid by the State or its agencies and subdivisions arising out of the same incident or occurrence, exceeds three hundred thousand dollars ($300,000.00). Nothing in this Agreement is intended to inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred under the doctrine of sovereign immunity or by operation of law. This paragraph shall survive termination of this Agreement.

34.0 INDEMNIFICATION

34.1 For all Services performed pursuant to this Agreement, the Service Provider agrees to the fullest extent permitted by law, to indemnify and hold harmless the City and its commissioners, employees, officers, and city attorneys (individually and in their official capacity) from and against all claims, losses, damages, personal injuries (including but not limited to death), or liability (including reasonable attorney's fees through any and all administrative, trial and appellate proceedings), directly or indirectly arising from:

a. any default under this Agreement by Service Provider;

b. any negligent act, omission or operation of work related to all Services performed under this Agreement by Service Provider, and its employees, principals, agents, independent contractors, subcontractors and consultants.

c. the acts, errors, omissions, intentional or otherwise, arising out of or resulting from Service Provider's and its employees, partners, contractors, subcontractors and agents on the performance of the Services being performed under this Agreement;

d. Service Provider's, and its employees', partners', contractors', subcontractors and agents' failure(s) to comply with the provisions of any federal, state, or local laws, ordinance, or regulations applicable to Service Provider's and its employees', partners', contractors', subcontractors' and agents' performance under this Agreement;

e. any fraud and misrepresentation conducted by Service Provider and its employees, partners, contractors, subcontractors and agents on the City under this Agreement.

34.2 The indemnification provided above shall obligate the Service Provider to defend at its own expense or to provide for such defense, at the option of the City, as the case may be, of any and all claims of liability and all suits and actions of every name and description that may be brought against the City or its commissioners, employees, officers, and City Attorney which may result from any negligent act, omission or operation of work related to the Services under this Agreement whether the Services be performed by the Service Provider, or anyone directly or indirectly employed by them. In all events the City and its

commissioners, employees, officers, and City Attorney shall be permitted to choose legal counsel of its sole choice, the fees for which shall be reasonable and subject to and included with this indemnification provided herein.

35.0 SUCCESSORS AND ASSIGNS

City and Service Provider each binds itself and its partners, successors, executors, administrators and assigns to the other Party of this Agreement and to the partners, successors, executors, administrators and assigns of such other Party, in respect to all covenants of this Agreement. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of City, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than City and Service Provider.

36.0 ARREARS

Service Provider shall not pledge City's credit or make it a guarantor of payment or surety for any agreement, debt, obligation, judgment, lien, or any form of indebtedness, Service Provider further warrants that it has not obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

37.0 AVAILABILITY OF FUNDS

The obligations of the City under this Agreement are subject to the availability of funds lawfully appropriated for its purpose by the City.

38.0 CONDUCT OF SERVICE PROVIDER

Service Provider acknowledges that its employees and agents will behave in an appropriate manner while on any City property and while on any residential or commercial private property relating to the performance of Services in accordance with this Agreement and shall, at all times, conduct themselves in a manner consistent with City policies and within the discretion of the City Project Manager or designee. Professional and personal conduct of Service Provider's staff shall conform to City's personnel policies. It is a breach of this Agreement for any agent or employee of Service Provider to behave in a manner which is inconsistent with good conduct or decorum or to behave in any manner that will disrupt the functioning of the City or constitute any level of threat to the safety, health, and well-being of any citizen, Invitee, licensee, agent or employee of the City. Service Provider agrees to immediately remove any agent or employee if directed to do so by the City Project Manager or designee.

39.0 BACKGROUND AND DRIVING RECORD CHECKS

Service Provider shall conduct criminal background and legal status checks of all employees that provide Services to City. Service Provider shall conduct driving record checks as needed in order to ensure that Service Provider's employees are coverable by Service Provider's vehicle insurer. Service Provider staff which do not conform to the standards required by City will be counseled by Service Provider and/or removed at the request of City.

40.0 OWNERSHIP OF DOCUMENTS

All documents produced by the Service Provider in relation to this Agreement shall remain the property of the City.

41.0 SURVIVAL

All covenants, agreements representation, and warranties made herein, or otherwise made in writing by any Party, including but not limited to any representations herein relating to disclosure or

ownership of documents, shall survive the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby. The insurance and indemnity provisions set forth in the Agreement shall survive the termination of the Agreement.

42.0 AUTHORITY

Service Provider hereby represents and warrants that it has and will continue to maintain all licenses and approvals required to conduct its business, and that it will at all times conduct its business activities in a reputable manner.

43.0 FORCE MAJEURE

Any delay or failure of either party in the performance of its required obligations hereunder shall be excused if and to the extent caused by acts of God; fire; flood; windstorm; explosion; riot; war; sabotage; strikes (except involving Service Providers labor force); extraordinary breakdown of or damage to City's affiliates' generating plants, their equipment, or facilities; court injunction or order; federal and/or state law or regulation; order by any regulatory agency; or cause or causes beyond the reasonable control of the party affected; provided that prompt notice of such delay is given by such party to the other and each of the parties hereunto shall be diligent in attempting to remove such cause or causes. If any circumstance of Force Majeure remains in effect for sixty days, either party may terminate this Agreement.

44.0 COMPLIANCE WITH LAWS

Service Provider agrees it shall comply with all applicable laws, codes, ordinances, permitting and regulations as well as applicable City policies and regulations, rules and guidelines in connection with the Services to be provided hereunder. City agrees that it shall comply with all applicable laws, codes, ordinances, permitting and regulations in connection with the Services to be provided hereunder.

45.0 NAMES; TRADEMARKS

Service Provider shall acquire no rights under the Agreement to, and shall not use, the name of the City of Winter Springs, Florida, either alone or in conjunction with or as part of any other name, word, mark, picture, logo, design, and/or trademark (collectively "City Marks") in any of Service Provider's advertising, publicity or promotion; to express or imply any endorsement by the City of its Services; or in any other manner (whether or not similar to the uses hereinabove specifically prohibited) without the prior review and written approval by the City, except as expressly permitted herein. No advertisement, publication, or other use of City Marks shall be published or otherwise promulgated by Service Provider without City's prior inspection and written approval. This clause shall survive the expiration or sooner termination of this Agreement.

46.0 DEBARMENT

46.1 By signing this Agreement, SP certifies that it and its principals:

46.1.1 Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by a federal department or agency.

46.1.2 Have not, within the preceding five-year period, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local)transaction or contract under public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.

46.1.3 Are not presently indicted or otherwise criminally charged by a government entity (federal, state or local) with commission of any of the offense enumerated in the preceding paragraph.

46.1.4 Have not within the preceding five years had one or more public transactions (federal, state or local) terminated for cause or default,

46.1.5 Service Provider agrees to notify City within thirty (30) days after the occurrence of any of the events, actions, debarments, proposals, declarations, exclusions, convictions, judgment, indictments, informations, or terminations as described above, with respect to Service Provider or its principals.

47.0 SAFEKEEPING AND SECURITY

As part of the Services, Service Provider will be responsible for safekeeping all keys, access codes, combinations, access cards, personal identification numbers, passwords, and similar security codes and identifiers issued to Service Provider's employees, agents, or subcontractors. Service Provider agrees to require its employees to promptly report a lost or stolen access device or information.

48.0 DATA SECURITY AND HANDLING AT END OF AGREEMENT

Service Provider agrees to protect and maintain the security of data with protection security measures that include maintaining secure environment that are patched and up to date with all appropriate security updates as designated by a relevant authority (e.g., Microsoft notifications, etc.).

48.1 Data Transmission, Service Provider agrees that any and all transmission or exchange of system application data with City and/or any other parties shall take place via secure means, e.g., HTTPS, FTPS, SFTP or equivalent.

48.2 Data Storage and Backup. Service Provider agrees that any and all City data will be stored, processed, and maintained solely on designated servers and that no City data at any time will be processed on or transferred to any portable or laptop computing device or any portable storage medium, unless that storage medium is in use as part of the Service Provider's designated backup and recovery processes. All servers, storage, backups and network paths utilized in the delivery of the service shall be contained within the states, districts, and territories of the United States unless specifically agreed to in writing by City with designated data, security or signature authority. An appropriate officer with the necessary authority can be identified by City for any general or specific case.

48.3 Service Provider agrees to store all City backup data stored as part of its backup and recovery processes in encrypted form, using no less than 128 bit key.

48.4 Data Re-Use. Service Provider agrees that any and all data exchanged shall be used expressly and solely for the purpose enumerated in this Agreement. Data shall not be distributed, repurposed or shared across other application, environments, or business units of Service Provider.

48.5 End of Agreement Data Handling. Service Provider agrees that upon termination of this Agreement it shall return to City all data in an electronic form useable by the City.

49.0 TIME OF ESSENCE

Time is of the essence concerning the performance of all terms and conditions of this Agreement.

50.0 CONFLICT OF INTEREST

Service Provider represents that it presently has no interest and shall acquire no interest either direct or indirect, which would conflict in any manner with the performance of Services required hereunder, as provided for in Section 112.311, Florida Statutes. Service Provider further represents that no person having any interest shall be employed for said performance of Services. Service Provider shall promptly notify City in writing by certified mail of all potential conflicts of interest for any prospective business association, interest or other circumstances that may influence or appear to influence Service Provider's judgment or quality of Services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstances and the nature of work that Service Provider may undertake. Service Provider shall request an opinion by City as to whether the association, interest or circumstances would, in the opinion of the City, constitute a conflict of interest if entered into by Service Provider. City agrees to notify Service Provider of its opinion within thirty calendar days' receipt of notification by Service Provider. If, in the opinion of the City, the prospective business association, interest or circumstances would not constitute a conflict of interest by Service Provider, City shall so state in its response, and Service Provider may, at its option, enter into said association, interest or circumstance and it shall be deemed not a conflict of interest with respect to the Services provided to City by Service Provider under the terms of this Agreement. If City, in its sole discretion, determines that there is such a conflict, Service Provider shall not enter into or if already entered into, shall immediately terminate such arrangement or Agreement with the subject business associate.

51.0 ORDER OF PRECEDENCE

51.1 In case of any inconsistency in any of the documents bearing on the Agreement between the City and the Service Provider, the inconsistency shall be resolved by giving precedence in the following order:

a. Addenda to this Agreement subsequent to the Effective date of this Agreement;
b. This Agreement;
c. Exhibits to this Agreement.

51.2 Any inconsistency in the work description shall be clarified by the City and performed by the Service Provider.

52.0 AGREEMENT INTERPRETATION

52.1 At its discretion, during the course of the work, should any errors, ambiguities, or discrepancies be found in the Agreement or specifications, the City at its sole discretion will interpret the intent of the Agreement and work descriptions and the Service Provider hereby agrees to abide by the City's interpretation and agrees to carry out the work in accordance with the decision of the City.

53.0 NONDISCRIMINATION

53.1 The Service Provider warrants and represents that it complies with all Federal and State requirements concerning fair employment and will not discriminate by reason of race, color, religion, sex, age, national origin, disability, national origin, sexual orientation, gender identity, or expression, and genetic information or any other category of persons protected pursuant to Florida law.

54.0 ARREARS

54.1 The Service Provider shall not pledge the City's credit or make it guarantor of payment or surety for any contract, debt, obligation, judgment, lien or any form of indebtedness. The Service Provider further warrants and represents that it has no obligation for indebtedness that would impair its ability to fulfill the terms of this Agreement.

55.0 WARRANTY

55.1 The Service Provider warrants that skilled and competent personnel to the highest professional standards in the field shall perform the Services. Service Provider shall comply with all laws, ordinances and rules in performing the Services. Service Provider shall pay all taxes, fees, license fees required by law, including but not limited to occupational fees and withholding taxes and assume all costs incident to the Services, except as provided herein.

56.0 INDEPENDENT CONTRACTOR

56.1 The Service Provider specifically understands and agrees that it is an independent contractor with respect to the Services provided pursuant to this Agreement, and not an employee, agent, or servant of the City. All persons engaged in any of the Services performed shall at all times, and in all places, be subject to the Service Provider's sole discretion, supervision, and control. The Service Provider shall exercise control over the means and manner in which it and its employees perform the work; the City's interest is in the results obtained. Nothing in this Agreement shall be interpreted to establish any relationship, other than that of an independent contractor, between City and Service Provider, during or after performing the Services.

57.0 WAIVER

57.1 No inspection by the City, nor any payment for or acceptance of the whole or part of the items in this Agreement, nor any extension of time, nor any possession taken by the City of the product or services hereunder shall operate as a waiver of (1) any provision of this Agreement, (2) the right to have it fully performed, (3) any power herein reserved by the City or (4) any right to damages under this Agreement. No waiver of any breach of this Agreement shall be held to be a waiver of any other breach. Failure of City to insist upon performance within any time period or upon a proper level or quality of performance shall not act as a waiver of City's right to later claim a failure to perform by Service Provider.

58.0 EXCLUSIVITY

58.1 This is not an exclusive Agreement. The City may, at its sole discretion, contract with other entities for work similar to that to be performed by the Service Provider hereunder.

[Remainder of page intentionally blank. Signature page follows.]

IN WITNESS WHEREOF, the parties hereto caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

SERVICE PROVIDER:

UNIVERSAL ENGINEERING SCIENCES, LLC

R. Kenneth Derick
Name (Printed and Signed)

Sr. V.P.
Title

5/22/2020
Date

CITY:

CITY OF WINTER SPRINGS, FLORIDA
A Florida municipal corporation

SHAWN BOYLE
City Manager

6-29-2020
Date

ATTEST:

CHRISTIAN GOWAN, Interim City Clerk

Exhibit "A"

SCOPE OF SERVICES

I. Services

A. City operating hours. The City's operating hours are Monday through Friday, 8:00 a.m. to 5:00 p.m., except for certain holidays. Service Provider shall provide municipal building department services to the City's citizens and clients.

B. Services. The Services to be provided by Service Provider pursuant to this Agreement shall include, but not be limited to building code administration services; plans examination of both residential and commercial projects prior to permit issuance; and, field inspection of both residential and commercial projects located within the City, as further described herein. Service Provider shall meet all responsibilities of building code administrators, plans examiners, and inspectors as provided in Section 468.604, Florida Statutes, and as otherwise described herein.

1. Building Code Administration/Building Official ("Building Official") Services

a. Service Provider shall provide to the City, on a daily basis, a Building Official who shall be licensed in accordance with Chapters 468 and 553, Florida Statutes, as may be amended, as a Building Code Administrator by the State of Florida.

b. The Building Official is responsible for direct regulatory administration or supervision of plan review, enforcement, or inspection of building construction, erection, repair, addition, remodeling, demolition, or alteration projects that require permitting indicating compliance with building, plumbing, mechanical, electrical, gas, fire prevention, energy, accessibility, and other construction codes as required by state law or municipal or county ordinance.

c. The Building Official is authorized to enforce the provisions of the City Code. The Building Official shall have the authority to render interpretations of the City Code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of the City Code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in the City Code.

d. The Building Official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of the City Code. The Building Official shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

e. The Building Official shall make all of the required inspections, or the Building Official shall have the authority to accept reports of inspection by its authorized plans examiners and inspectors.

f. The Building Official shall issue all necessary notices or orders to ensure compliance with this code.

g. The Building Official shall investigate complaints regarding building construction codes, ordinances, or hazards. The Building Official shall issue Stop Work Orders as required to achieve compliance.

h. The Building Official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

i. Where it is necessary to make an inspection to enforce the provisions of this code, or where the Building Official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the Building Official is authorized by the City Code to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the Building Official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the Building Official shall have recourse to the remedies provided by law to secure entry.

j. The Building Official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records pursuant to Chapter 119, Florida Statutes.

k. The Building Official shall respond to architects, engineers, contractors, building owners and associates, City staff, officials and the general public, or as otherwise directed by the City, concerning the explanation and interpretation of building codes and standards relating to construction within the City, or other matters as requested by the City.

l. The Building Official shall report directly to the City's Community Development Director as needed or requested by the City.

m. The Building Official shall attend any meetings as requested by the City (including but not limited to development review, preconstruction and construction meetings) and will represent the City's interest in oversight of all construction projects within the City. Upon request by the City, the Building Official shall evaluate current permitting, plan review, inspection and certificate issuance processes of the City. Any recommendations will be made to the Community Development Director, or his/her respective designee.

n. The Building Official is responsible for supervision of all Service Provider employees assigned to the City. The Building Official shall provide oversight in work processes to City staff working within the Community Development Department or as otherwise directed. The Building Official shall coordinate with City departments and City staff in the performance of Services for the City.

o. The Building Official shall be knowledgeable regarding and enforce the latest, most current edition of the Florida Building Code and the National Electrical Code.

p. The Building Official shall be available for and provide timely responses to the City in the case of emergencies whether during or outside of City operating hours.

q. The Building Official shall Review and maintain all records required by the Federal Emergency Management Agency (FEMA) in association with processing of building permits and elevation certificates.

r. The Building Official will be responsible for monitoring construction activity and future inspection volumes. This monitoring process will involve gathering of different type of statistics from permits issued reports on a monthly basis. The Building Official will provide such information to the City Project Manager on a monthly basis or as otherwise requested by the City.

s. The Building Official will attempt to respond to issues or problems reported to the Building Official on the same business day, but in any event the Building Official's response time shall not exceed 24 hours. In order to ensure public safety, response to hazards, nuisances, or Florida Building Code violation, evaluation of such complaints will be performed within one business day of receiving notice.

t. The Building Official shall provide Services as requested by the City regarding post disaster (natural or manmade, including but not limited to hurricanes and other large storms) damage assessments and safety inspections. The Building Official shall work with the City during post disaster (natural or manmade) times in restoring Plan Review and Inspection Services pursuant to the Florida Building Code and executive orders of the Governor.

u. The Building Official shall provide other related Services as requested by the City.

2. Plans Review Services

a. Service Provider shall perform the state required examination, review, and analysis of construction drawings both traditional and electronic, plans and specifications to ensure compliance with adopted local, state and federal codes, ordinances, policies and regulations.

b. Service Provider shall provide examination, review, and analysis of life safety drawings, plans and specifications to ensure compliance with adopted local, state and federal codes, ordinances, policies and regulations. Service Provider shall submit any corrections needed for compliance with Florida Building Codes.

c. Service Provider shall process plan review comments and plan review actions.

d. Service Provider shall establish permit valuations and permit fees based on adopted ordinances.

e. At the request of the City, Service Provider's plans examiner staff shall attend and participate in meetings relating to plan design data and code compliance.

f. Service Provider's plans examiner staff shall respond to code compliance and design criteria inquiries from architects, engineers, contractors, building owners and associates, City staff, officials and the general public, or as otherwise directed by the City.

g. Service Provider shall conduct research relating to local, state and federal codes, new legislation and product approvals.

h. Service Provider's plans examiner staff shall provide technical assistance to building inspectors as needed.

i. All plans examiners shall be licensed as and meet the qualifications for licensure as a plans examiner as established in Chapters 468 and 553, Florida Statutes, as may be amended.

3. Field Inspection Services

a. Service Provider shall dispatch state licensed building code inspectors to perform field inspections at all commercial and residential properties undergoing repair and/or construction within the City.

b. Service Provider shall use standard industry inspection practices when performing all inspections.

c. Service Provider shall use any notices specified by the City in issuance of correction notices and related when detailing areas of code deficiencies.

d. Service Provider shall provide both commercial and residential building code inspectors, as licensed plan reviewers in all categories of building code inspectors as further described in Section 468.603(5), Florida Statutes.

e. Service Provider's building code inspectors shall attend and participate in meetings relating to plan design data and code compliance.

f. All building code inspectors shall be licensed as and meet the qualifications for licensure as, a building code inspector as established in Chapters 468 and 553, Florida Statutes, as may be amended.

EXHIBIT "B"

FEE SCHEDULE AND ASSIGNED HOURS

I. **Hours assigned to Service Provider.**

A. **Building Official hours.** Based on current permit activity, the Building Official is assigned eight (8) hours per day (totaling forty [40] hours per week) to the City performing duties within the City. If permitting volume falls, the decision to lessen the Building Official's assigned billable hours may be made at the discretion of the City. Building Official hours reassigned to other clients will not be billed to the City of Winter Springs

B. **Plans Examiner hours and Inspector hours.** Plans Examiner hours and Inspector hours are billed as performed for Services provided to the City.

II. **City operating hours.** The City's operating hours are Monday through Friday, 8:00 a.m. to 5:00 p.m., except for holidays.

III. **Hourly rates for Services provided during the City's operating hours.**

A. Building Code Administrator/Building Official Services = $100.00 per hour

B. Plans Review Services = $80.00 per hour

C. Field Inspection Services = $80.00 per hour

IV. **Hourly rates for Services requested by the City to be performed outside of City operating hours.**

A. Requests made by the City for any Services to be performed outside of its operating hours will be billed at an hourly rate of $120.00, with a 2-hour minimum. Only the City Project Manager or his/her designee may make such requests of Service Provider.

FIRST ADDENDUM TO
AGREEMENT FOR BUILDING DEPARTMENT SERVICES

THIS FIRST ADDENDUM TO AGREEMENT FOR BUILDING SERVICES ("**Addendum**") is made and entered into by and between **the CITY OF WINTER SPRINGS**, a Florida municipal corporation located at 1126 East State Road 434, Winter Springs, Florida 32708 ("**City**"), and **UNIVERSAL ENGINEERING SCIENCES, LLC**, a Florida Limited Liability Company located at 3532 Maggie Blvd., Orlando, Florida 32811 ("**Service Provider**").

WITNESSETH:

WHEREAS, the City and Service Provider previously entered into an Agreement for Building Department Services ("**Agreement**") under the terms and conditions stated therein, the term of which began on April 1, 2020; and

WHEREAS, the Agreement is set to terminate on March 31, 2023, unless renewed. The Agreement is subject to extension and renewal for two (2) additional one-year periods; and

WHEREAS, the parties desire and mutually agree: to extend the term for an additional one (1) year term; to increase the compensation to the Service Provider in accordance with Section 6.1 and **Exhibit "B"** of the Agreement; to include a provision regarding statutory requirements related to the mandated use of the E-Verify system; and for the implementation of modifications as otherwise provided for herein; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties covenant and agree as follows:

1.0 Recitals. The foregoing recitals are deemed to be true and accurate and are fully incorporated herein by this reference.

2.0 Term of Agreement Extension. In accordance with Sections 2.1 and 4.0 of the Agreement, the Agreement is hereby extended for one (1) year, commencing on April 1, 2023, and terminating at midnight on March 31, 2024, unless the parties mutually agree to extend the Agreement for an additional one-year term pursuant to Section 2.1, or unless either party chooses to exercise its rights under Section 20, "Termination."

3.0 Payment. Section 6.0 of the Agreement regulates "Payment," and **Exhibit "B"** contains a Fee Schedule for Services performed. **Exhibit "B,"** "Fee Schedule and Assigned Hours," subsection III, is hereby modified as follows:

III. Hourly rates for Services provided during the City's operating hours.

A. Building Code Administrator/Building Official Services = $109.00 per hour

B. Plans Review Services = $87.00 per hour

C. Field Inspection Services = $87.00 per hour

Except for the price increases expressly provided for above, the provisions of **Exhibit "B"** shall remain unchanged.

4.0. E-Verify. Section 59.0 of the Agreement is hereby created as follows:

59.0 E-VERIFY

A. In accordance with Chapter 448.095, Florida Statutes, the Service Provider shall register and utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Service Provider during the term of this Contract.

B. The Service Provider shall expressly require any subcontractors performing work providing services pursuant to this Agreement to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the term of this Contract.

C. The Service Provider agrees to maintain records of its participation and compliance with the provisions of the E-Verify program, including participation by its subcontractors as provided above, and to make such records available to the City consistent with the terms of the Service Provider's enrollment in the program. This includes maintaining a copy of proof of the Service Provider's and subcontractors' enrollment in the E-Verify program.

D. The Service Provider must meet this requirement unless:
1. This Agreement is solely for goods-based procurement where no services are provided; or
2. Where the requirement is waived by the City Commission; or
3. The Agreement is being executed with a Sole Proprietor who does not hire employees and therefore is not required to file a Department of Homeland Security Form I-9 (which is the document used for E-Verify); or
4. The Agreement is being executed with a company based outside of the United States of America and does not employ any citizens of the United States of America.

E. A Service Provider who registers with and participates in the E-Verify program may not be barred or penalized under this section if, as a result of receiving inaccurate verification information from the E-Verify program,

the Service Provider hires or employs a person who is not eligible for employment.

F. Nothing in this section may be construed to allow intentional discrimination of any class of persons protected by law.

5.0 Other Terms and Conditions. Any other term or condition of the Agreement not expressly modified by this First Addendum shall remain in full force and effect.

AGREED:

CITY OF WINTER SPRINGS

Philip Hursh, PE
Interim City Manager

Date: 3/28/2023

UNIVERSAL ENGINEERING SCIENCES, LLC

Print Name: DAVID OLIVIERI
Title: BID MANAGER

Date: 4/25/2023

ATTEST:

Christian Gowan
City Clerk

SECOND ADDENDUM TO
AGREEMENT FOR BUILDING DEPARTMENT SERVICES

THIS SECOND ADDENDUM TO AGREEMENT FOR BUILDING SERVICES (**"Addendum"**) is made and entered into by and between **the CITY OF WINTER SPRINGS,** a Florida municipal corporation located at 1126 East State Road 434, Winter Springs, Florida 32708 (**"City"**), and **UNIVERSAL ENGINEERING SCIENCES, LLC,** a Florida Limited Liability Company located at 3532 Maggie Blvd., Orlando, Florida 32811 (**"Service Provider"**).

WITNESSETH:

WHEREAS, the City and Service Provider previously entered into an Agreement for Building Department Services (**"Agreement"**) under the terms and conditions stated therein, the term of which began on April 1 , 2020; and

WHEREAS, the City and Service Provider previously executed the First Addendum to the Agreement extending the term of the Agreement to April 01, 2024, amending the fee schedule and adding a new Section 59.0 regarding E-Verify to the Agreement; and

WHEREAS, the Agreement is set to terminate at midnight on March 31, 2024, unless renewed. The Agreement is subject to extension and renewal for one (1) additional one-year periods; and

WHEREAS, the parties desire and mutually agree: to extend the term for an additional one (1) year term; to increase the compensation to the Service Provider in accordance with Section 6.1 and **Exhibit "B"** of the Agreement; and

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties covenant and agree as follows:

1.0 **Recitals.** The foregoing recitals are deemed to be true and accurate and are fully incorporated herein by this reference.

2.0 **Term of Agreement Extension.** In accordance with Sections 2.1 and 4.0 of the Agreement, the Agreement is hereby extended for one (1) year, commencing on April 1, 2024, and terminating at midnight on March 31, 2025, unless either party chooses to exercise its rights under Section 20, "Termination."

3.0 **Payment.** Section 6.0 of the Agreement regulates "Payment," and **Exhibit "B"** contains a Fee Schedule for Services performed. **Exhibit "B,"** "Fee Schedule and Assigned Hours," subsection III, is hereby modified as follows:

III. **Hourly rates for Services provided during the City's operating hours.**

A. Building Code Administrator/Building Official Services= $ 118.00 per hour

B. Plans Review Services= $95.00 per hour

C. Field Inspection Services= $95.00 per hour

Except for the price increases expressly provided for above, the provisions of **Exhibit "B"** shall remain unchanged.

4.0 **Other Terms and Conditions.** Any other term or condition of the Agreement not expressly modified by this Second Addendum shall remain in full force and effect.

AGREED:

CITY OF WINTER SPRINGS

Philip Hursh

Interim City Manager

Date: 3/25/24

UNIVERSAL ENGINEERING SCIENCES, LLC

Name: DAVID OLIVIERI

Title: BID MANAGER

Date: 3/25/2024

CONSENT AGENDA ITEM 303

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Extension Request - Winter Springs Marketplace Corner Lot Streetscaping Requirement

SUMMARY

The Fifth Third Bank, located adjacent to the Winter Springs Marketplace, received approval by the City Commission on January 9, 2023. As part of that approval, a modification to the Development Agreement for the Winter Springs Marketplace provided for an extension on the timeframe within which the property owner had to install the required streetscaping fronting the corner lot located at State Road 434 and Tuskawilla Road. The timeframe afforded by the Development Agreement has since expired and the required streetscape has not been installed. Staff previously reached out to the property owner, Equinox Development, to ask when they intended to fulfill the required streetscape, and as a result the City Commission approved a six (6) month extension which expires on September 23, 2024. Mr. Stahl is requesting an additional six (6) month extension on the requirement to install the streetscape on the corner lot. Staff recommends approval of the requested extension.

FUNDING SOURCE

RECOMMENDATION

Staff recommends that the City Commission review the attached request from Ryan Stahl, Equinox Development, and approve the requested extension of the corner lot streetscaping requirement for the Winter Springs Marketplace.

September 3, 2024

Via Email

City Commission
City of Winter Springs
1126 East S.R. 434
Winter Springs, Florida 32708

Re: Winter Springs Marketplace - *Development and Property Division Agreement Future Development Area (Extension to Landscaping Requirement)*

Dear Esteemed Commission Members:

Pursuant to the First Modification to Development and Property Division Agreement, recorded in Book 10397, Page 628-643, of the Seminole County public records on March 1, 2023, Tuscawilla Property Investors, LLC ("TPI") hereby requests an extension to the requirement under section 7.0 to allow TPI additional time to complete the Trust Property Streetscape.

As shared with Nick Tafelsky via email correspondence on February 23, 2024, and subsequently approved by the Commission thereafter, TPI is currently in discussions with a retailer who has shown interest in pursuing this last remaining corner parcel, known as the Trust Property. TPI has recently held a pre-app meeting with City Staff and anticipates those discussions to be wrapped up shortly. Accordingly, TPI hereby requests an additional six (6) month extension to complete the Trust Property Streetscape bringing the date to complete the work to March 23, 2025. As part of this request, TPI would appreciate the Commission to consider the following:

1) There is currently no irrigation for this parcel since each parcel within the development is maintained and irrigated individually by the respective retailers, which would make maintaining the required Streetscape very challenging and costly.
2) TPI has a landscaper under contract to provide regular service to ensure the existing sod is maintained.
3) TPI has attempted to be a good partner with the City and has always been responsive and available to staff should any issues arise.

Your consideration of this request is appreciated.

Sincerely,
Tuscawilla Property Investors, LLC

Ryan P. Stahl
Manager

cc: Nick Tafelsky (via email to ntafelsky@winterpsringsfl.org)
Kristin Eick (via email to keick@orlandolaw.net)
Terrilyn Rolle (via email to trolle@winterspringsfl.org)

EQUINOX
DEVELOPMENT

CONSENT AGENDA ITEM 304

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Resolution 2024-23: Adoption of Vision Zero Action Plan

SUMMARY

Vision Zero is a strategy to eliminate all traffic deaths and serious injuries while increasing safe, healthy, and equitable mobility for all. The City of Winter Springs Vision Zero Action Plan is just one of such plans prepared and adopted across the Orlando metropolitan region. The plans were prepared by MetroPlan Orlando with assistance from staff of the various local governments. The regional Vision Zero effort and the preparation of the Action Plans was funded by a Safe Streets and Roads for All federal grant that was awarded to MetroPlan Orlando by the federal government.

FUNDING SOURCE

RECOMMENDATION

Staff recommends that the City Commission adopt Resolution 2024-23, which adopts the Vision Zero Action Plan as prepared by MetroPlan Orlando with assistance from City of Winter Springs staff.

RESOLUTION NO. 2024-23

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, ADOPTING THE VISION ZERO GOAL OF ELIMINATING TRAFFIC DEATHS AND SEVERE INJURIES ON CITY-MAINTAINED ROADS BY 2035 AND ALL ROADS IN THE CITY BY 2050, AND ADOPTING THE 2024 VISION ZERO ACTION PLAN; PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT RESOLUTIONS, SEVERABILITY, AND AN EFFECTIVE DATE.

WHEREAS, the City of Winter Springs recognizes deadly and severe traffic crashes are not inevitable, and death and severe injury are not an acceptable cost for using our public roadway system; and

WHEREAS, it is critical for the City of Winter Springs to prioritize individual Vision Zero plans to build safe streets and begin to prioritize the safety of our pedestrians, cyclists and road users of all ages and abilities; and

WHEREAS, human life and health are paramount and should take priority over mobility and other objectives of the transportation system; and

WHEREAS, the U. S. Department of Transportation has adopted the Safe System approach; and

WHEREAS, the Florida Department of Transportation has adopted a Target Zero Initiative; and

WHEREAS, the City of Winter Springs intends to utilize Vision Zero's data-driven strategy to eliminate all traffic deaths and severe injuries, while increasing safe, healthy, equitable mobility for all; and

WHEREAS, the City of Winter Springs has utilized a Vision Zero data-driven strategy to identify areas of need that will help to eliminate all traffic deaths and severe injuries, while increasing safe, healthy, equitable mobility for all; and

WHEREAS, the City of Winter Springs will implement USDOT's Safe System approach that recognizes that people will make mistakes and roadway systems and policies should be designed to protect them through redundancies and shared responsibilities; and

NOW, THEREFORE, BE IT DULY RESOLVED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, THAT:

Section 1. Incorporation of Recitals. The foregoing recitals are deemed true and correct and are hereby fully incorporated herein by reference.

Section 2. Adoption of Vision Zero Action Plan. The City Commission of the City of Winter Springs adopts the Vision Zero goal of eliminating traffic deaths and severe injuries on City-maintained roads by 2035 and on all roads in the city by 2050. The City Commission further hereby adopts the 2024 Vision Zero Action Plan, attached herein as EXHIBIT "A". The City Commission is committed to ensuring equity in all aspects of Vision Zero, including incorporating data analysis that acknowledges and addresses reporting biases, project prioritization efforts that promote projects in historically under-invested communities, and enforcement strategies that protect against racial profiling and follow data driven approaches.

Section 3. Severability. If any section, subsection, sentence, clause, phrase, word, or portion of this Resolution is for any reason held invalid or unconstitutional by a court of competent jurisdiction, whether for substantive or procedural reasons, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of this Resolution.

Section 4. Repeal of Prior Inconsistent Resolutions. All prior resolutions or parts of resolutions in conflict herewith are hereby repealed to the extent of the conflict.

Section 5. Effective Date. This Resolution shall become effective upon its adoption by the City Commission of the City of Winter Springs, Florida.

ADOPTED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on this 23rd day of September, 2024.

_____
Kevin McCann, Mayor

ATTEST:

_____
Christian Gowan, City Clerk

Approved as to legal form and sufficiency for
the City of Winter Springs only:

_____
Anthony A. Garganese, City Attorney

EXHIBIT A

Vision Zero Action Plan





VISION ZERO
CENTRAL FLORIDA

Vision Zero
ACTION PLAN

WINTER SPRINGS

metroplan orlando

CITY OF WINTER SPRINGS
Incorporated 1959
IN GOD WE TRUST

2024





Executive Summary

Vision Zero is a strategy to eliminate all traffic deaths and serious injuries while increasing safe, healthy, equitable mobility for all.

This City of Winter Springs Safety Action Plan was developed from a coordinated planning effort led by MetroPlan Orlando, in partnership with local governments and the Florida Department of Transportation (FDOT).

As a region (Orange, Osceola, and Seminole counties), more than 5 people are killed and 35 people are seriously injured on our roadways every week - a higher rate than elsewhere in Florida and the nation. Thirty percent of people killed on our roadways are walking or biking. These aren't just numbers, but represent people in our communities: co-workers, neighbors, visitors, friends, and family members. Each of these deaths and serious injuries leaves our community with pain and loss.

Achieving zero traffic deaths and serious injuries is an ambitious goal, requiring a cultural change and a shift in how we plan, operate, and use our transportation system. It represents a shared responsibility among all stakeholders including all road users, decision makers, agency staff, law enforcement, and vehicle manufacturers.

This plan is grounded in the Safe System Approach which aims to eliminate deadly and serious injury crashes on our roads by anticipating human mistakes and minimizing impacts on the human body when crashes do occur.

Every week, 5 people die and 35 are seriously injured in Central Florida crashes.

The City seeks to eliminate deaths and serious injuries on city roads by 2035 and all roads by 2050.





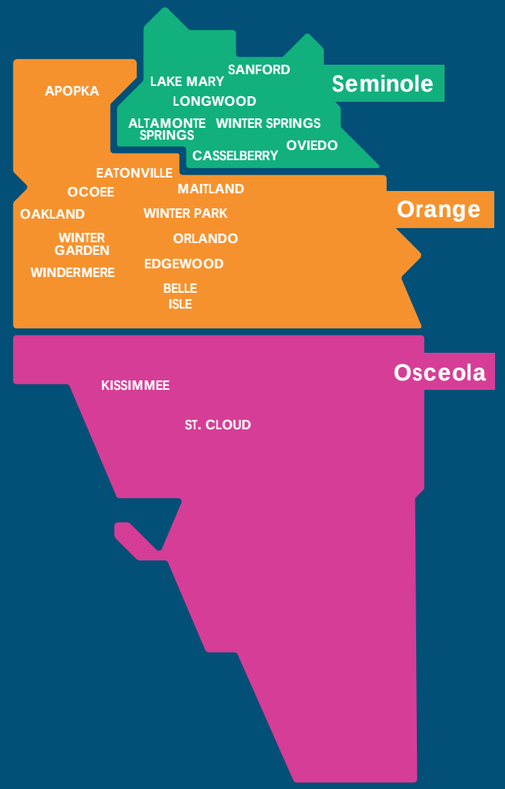
What Is Vision Zero Central Florida & Why Do We Need to Take Action?

Saving lives. That's what it's all about. The only acceptable number for traffic deaths is zero, because everyone deserves to travel safely around Central Florida.

No one entity or agency can fix road safety problems alone. This Vision Zero Central Florida Safety Action Plan results from a coordinated planning effort led by MetroPlan Orlando, in partnership with local governments and the Florida Department of Transportation. We're the only place in the nation where a regional organization worked alongside every single county and city government in the area to coordinate safety planning on this scale. Action plans tailored for each county and city have identified opportunities to change roadway designs, educational needs, and enforcement strategies.

The plans include:

- **High Injury Network**: Identifying places on the transportation system with the highest risk of deadly and serious injury crashes so we can focus on our most important problem areas.
- **Equity**: Identifying and prioritizing efforts in disadvantaged communities that are disproportionately affected by traffic crashes.
- **List of Priority Streets and Intersections:** Producing a list of feasible projects that have the most safety impact.
- **Educational and Enforcement Programs:** Identifying key behavioral changes needed to reduce crashes and methods for encouraging those changes.
- **Sustained Effort:** Establishing a defined process and responsibilities for carrying out, updating, and monitoring progress.
- **Outreach Events:** Public engagement is a key part of the study.



3-COUNTY REGION (2018-2022)

325,775 total crashes | **1,466** deaths | **9,500** serious injuries

Reason For Concern In Winter Springs

Nearly 40,000 people call Winter Springs home. The community chooses Winter Springs for its plentiful recreational opportunities, strong leadership, and an enjoyable pace of living. Safety is a top priority.

Unfortunately, two people lost their lives in Winter Springs over the five year period from 2018 to 2022. People who walk, bike, and ride motorcycles are at greatest risk. Both of the deaths were motorcyclists involved in left-turn collisions.

Speed is a major factor in survival rate. Speeding related crashes account for 1 out of 2 deaths and serious injuries. The time of day is another major factor in determining crash severity. The hours of 6 PM to 12 AM have the highest number of deadly or serious traffic crashes compared to other times of day. The most common deadly or serious injury crashes are off-road and left-turn collisions.

The road to zero is long, but the City of Winter Springs is positioned to make progress. There is a countywide downward trend in traffic deaths and serious injury crashes. **Deadly and serious injury crashes occurred 7 times in 2018. Five years later in 2022, they occurred 1 time. That's a reduction of 86%. There is more work to be done. This plan outlines steps to get there.**

WINTER SPRINGS (2018-2022)

2 people were killed on our roadways, including:

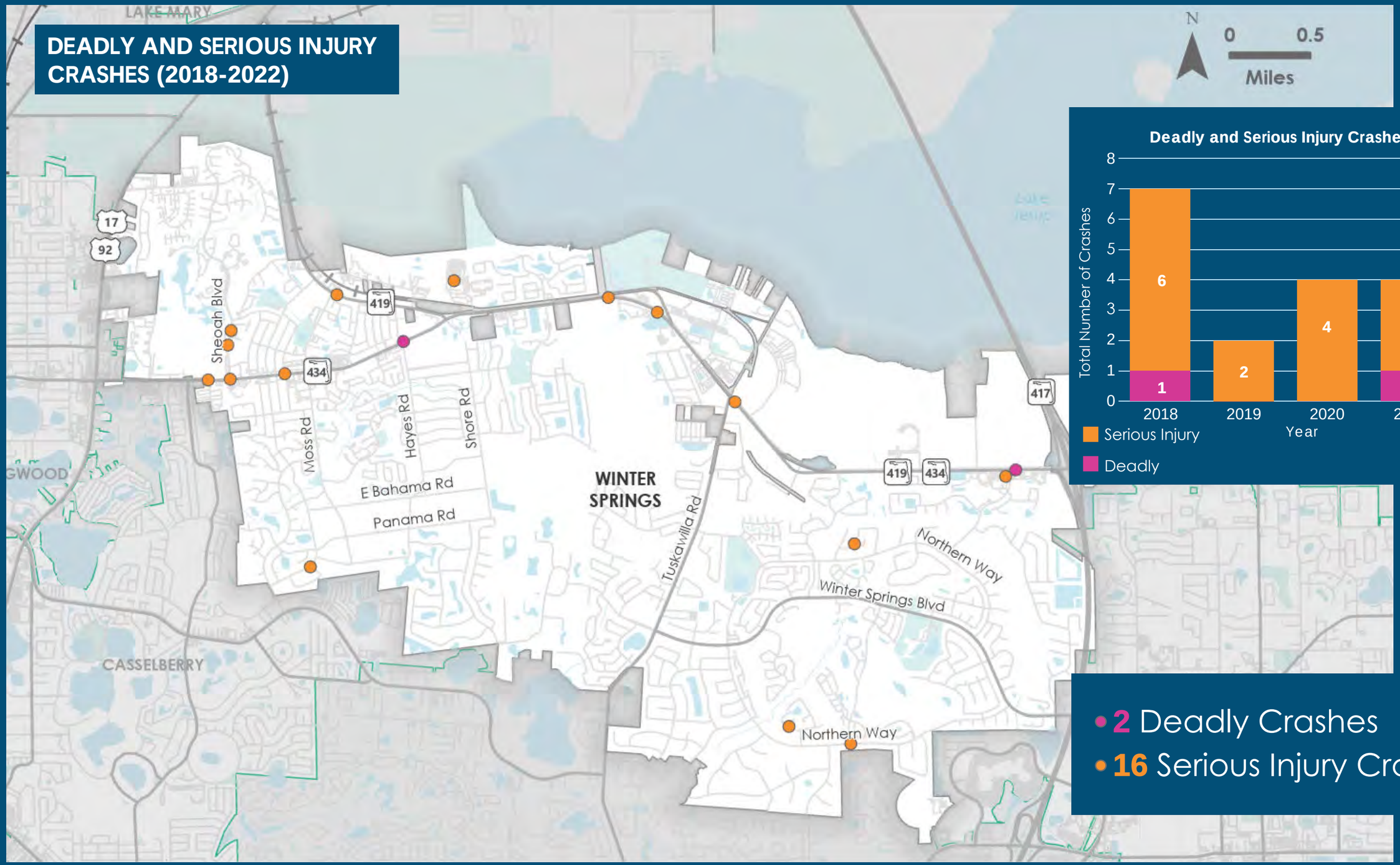
- **0** motorist deaths
- **0** pedestrian deaths
- **2** motorcyclist deaths
- **0** bicyclist deaths

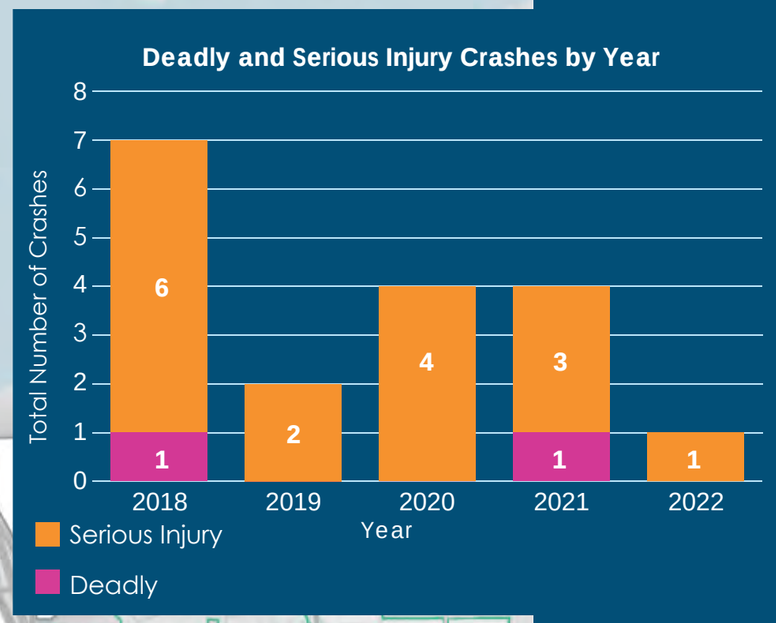
excludes limited access facilities

Winter Springs Mission Statement:

"To provide an efficient delivery of public services through innovation and excellence and promote quality of life by working cooperatively with all of our customers to protect health and safety, improve economic vitality, and enhance neighborhood livability throughout the City."

DEADLY AND SERIOUS INJURY CRASHES (2018-2022)





- **2** Deadly Crashes
- **16** Serious Injury Crashes

Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

Key Highlights and Recommendations from This Plan

Actions

The list of actions in this plan are organized around the Safe System approach. Infrastructure alone cannot solve the traffic safety crisis. **It will take a combination of enhancement to our roads, travel speeds, road users, vehicles, and post-crash care.** Each of the actions in this plan has a performance measure, a target year for initiation, a responsible party within county departments, and a relative cost. Some actions can be done right away. Some have longer lead times to account for coordination, funding, and strategic planning. Tracking progress on each of the actions is critical for evaluating and refining strategies over time. A separate section of actions is dedicated to future progress. It includes strategies such as updating this action plan every five years.

Projects

Additionally, a list of priority projects was identified to strengthen the safety on our roads. **There are 2 prioritized projects on city roads and 2 prioritized projects on county and state roads.** Each project includes recommendations for engineering countermeasures, such as roadway lighting. Network-wide projects, ones that can be done before, during, or after roadway specific projects are included as well. These network-wide projects address crash factors such as speeding. Project implementation will require a coordinated effort between the city, Seminole County, and the state.

Outcome

Completing the actions in this plan is more than a check mark. It is tangible action to touch the lives of our community. It can translate into less pain and suffering from traffic deaths. Fewer parents worrying as their children become drivers. Fewer funerals for our loved ones. **This plan is a major milestone in shifting our transportation system to a safer system.** Together we start our quest to zero traffic deaths. Together we drive to zero.

Relationship to Other City Efforts

This Vision Zero Action plan is meant to complement the city's current plans and initiatives. A few key plans include:

- *2030 Comprehensive Plan* **-** Guides the vision of the community for the future. The Comprehensive Plan is currently being updated and will include Vision Zero strategies.
- *Code of Ordinances* **-** The Vision Zero Action Plan supports existing Code of Ordinances already adopted or makes suggestions for oridnance improvements in the future.
- *Capital Improvements Program (CIP)* **-** The CIP inventories new and ongoing infrastructure projects within city limits.

Winter Springs Action Plan Summary

SAFER ROADS

- Develop a Traffic Calming Plan
- Develop a Multimodal Master Plan
- Prioritize Lighting Projects

SAFER SPEEDS

- Install Speed Feedback Signs
- Support Traffic Signal Retiming Strategy on SR 434
- Support Lowest Target Speed for SR 434

SAFER ROAD USERS

- Partner with Motorcycle Safety Organization, Emphasize Helmet Usage
- Coordinate Traffic Safety Presentations with Schools
- Initiate Youth Traffic Safety Programs
- Conducted Targeted Enforcement and High Visibility Enforcement Operations
- Launch Vision Zero Outreach Campaign

SAFER VEHICLES

- Collaborate with Professional Organizations Furthering Safe Vehicle Requirements
- Consider Emerging Vehicle Safety Systems when Purchasing New Fleet Vehicles
- Publicize the Availability of the "SAFERCAR" Phone Application for Recall Notifications

POST CRASH CARE

- Meet with First Responders Regularly
- Supplement Crash Data with First Responder, Hospital, and Trauma Center Data
- Promote CPR / Emergency First Aid Training

CONTINUING PROGRESS

- Develop Vision Zero Status Report
- Formalize Vision Zero Working Group
- Update Action Plan Every 5-Years
- Create / Assign a Dedicated Transportation Safety Staff Position

Acknowledgements

City of Winter Springs Working Group
Terrilyn Rolle, Director of Community Development
Nick Tafelsky, Senior City Planner
Talbert Jackson, Senior City Planner
Michael Krist, Parks Manager
Matt Reeser, Public Communications Manager
Robert Stephens, Police Sergeant
Phil Hursh, Interim City Manager / Public Works Director

MetroPlan Orlando
Lara Bouck, Project Manager
Slade Downs, Deputy Project Manager
Mighk Wilson, Regional Project Manager
Adriana Rodriguez, Program Manager
Mary Ann Horne, Communications Lead
Taylor Laurent, Manager of Transportation Planning
Cynthia Lambert, Public Information Manager
Taylor Laurent, Manager of Transportation Planning
Alex Trauger, Principal / Director of Transportation Planning

Consultant Project Team (HDR)
Megan Ferguson, Project Manager
Jeff Arms, Project Principal
Melissa Porcaro, Deputy Project Manager
Sean Murphy
Cheryl Isenberg
Laura Agudelo
Tyler Swafford
Stephen Alianiello
Anna Perry
Taylor Belinger
Jay Aber

Preparation of this plan was funded by a $3.79 million Safe Streets and Roads for All federal grant awarded to MetroPlan Orlando

Statement of Protection of Data from Discovery and Admissions

SECTION 148 OF TITLE 23, UNITED STATES CODE
REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION —
Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at the location identified or addressed in the reports, surveys, schedules, lists, or other data.

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Guiding Principles & Safe Systems Approach

Vision Zero is the strategy to eliminate all traffic deaths and serious injuries, while increasing safe, healthy, and equitable mobility for all.



WHAT IS VISION ZERO?

Vision Zero reframes traffic deaths as preventable.

Vision Zero is an international movement with nearly 20 years of success around the world that is now making its way through America. It acknowledges we all make mistakes AND aims to establish a safe system through data driven decision making.

Being a Vision Zero community is more than a tagline. Vision Zero communities must meet these minimum standards:

- Set clear goal of eliminating traffic deaths and severe injuries
- Elected officials have committed publicly to Vision Zero
- Data driven, equity-focused decision making is used
- Actionable Strategies are developed
- Key agency departments (including police, transportation, public health) are engaged

Like all ambitious goals, Vision Zero is not without its challenges. Some hurdles observed in other Vision Zero Communities include:

- Rapid population growth
- Availability of funding
- Inability to gain consensus on specific strategies and projects
- Spot improvements alone without system wide improvements
- Failing to adapt as trends and technology changes

TRADITIONAL APPROACH		VISION ZERO
Traffic deaths are INEVITABLE		Traffic deaths are PREVENTABLE
PERFECT human behavior	VS	Integrate HUMAN FAILING in approach
Prevent COLLISIONS		Prevent FATAL AND SEVERE CRASHES
INDIVIDUAL responsibility		SYSTEMS approach
Saving lives is EXPENSIVE		Saving lives is NOT EXPENSIVE

Source: Vision Zero Network

SAFE SYSTEMS APPROACH

The Safe System Approach acknowledges safety is a shared responsibility.

This data-driven, holistic, and equitable method to improve roadway safety is adopted by the U.S. Department of Transportation (USDOT). It acknowledges the vulnerability of the human body when designing and operating a transportation network to minimize serious consequences of crashes. Creating a Safe System means shifting some responsibility from road users to those who plan and design the transportation system. While road users are responsible for their own behavior, there is a shared responsibility with those who design, operate, and maintain the transportation network, including the automotive industry, law enforcement, elected officials, and government agencies to improve safety. In a Safe System, road system designers and operators take on the highest level of ethical responsibility to design and build our transportation system in a way that encourages safer behavior and provides redundancies.

The Safe System Approach acknowledges that no one entity or agency can fix road safety problems alone. Instead, coordination, cooperation, resources, and focus from other agencies within the region, the State and Federal Governments are necessary for success.



THE SAFE SYSTEMS APPROACH IS CENTERED AROUND THE FOLLOWING:

6 SAFE SYSTEM PRINCIPLES

- Death/Serious Injury is Unacceptable
- Humans Make Mistakes
- Humans are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

5 SAFE SYSTEM ELEMENTS

- Safer Road Users
- Safer Vehicles
- Safer Speeds
- Safer Roads
- Post-Crash Care

Talking to Our Community

This section highlights feedback and outreach events. Vision Zero is successful when we engage everyone. Everyone is involved in transportation. Everyone has a stake: drivers, non-drivers, walkers, cyclists, motorcycle riders, bus riders, bus drivers, and beyond.



TALKING TO OUR COMMUNITY

Seminole County Open House & Pop-Up Events

- **April 2, 2024: Lake Mary**
  Lake Mary Senior Center, 911 Wallace Ct, Lake Mary, FL 32746
- **April 3, 2024: Oviedo**
  Oviedo City Hall, 400 Alexandria Blvd, Oviedo, FL 32765
- **April 11, 2024: Altamonte Springs**
  Westmonte Park, 624 Bills Ln, Altamonte Springs, FL 32714
- **May 29, 2024: Altamonte Springs**
  Altamonte Springs SunRail Station, 2741 S Ronald Reagan Blvd, Altamonte Springs, FL 32701
- **June 1, 2024: Sanford**
  Sanford Farmer's Market 150 E 1st St, Sanford, FL 32771
- **June 1, 2024: Winter Springs**
  Black Hammock Trailhead 1571 E State Rd 434, Winter Springs, FL 32708
- **June 6, 2024: Casselberry**
  LYNX Fern Park Super Stop, Fernwood Blvd & Oxford Rd, Fern Park, FL 32730

Seminole County Community Concerns & Priorities

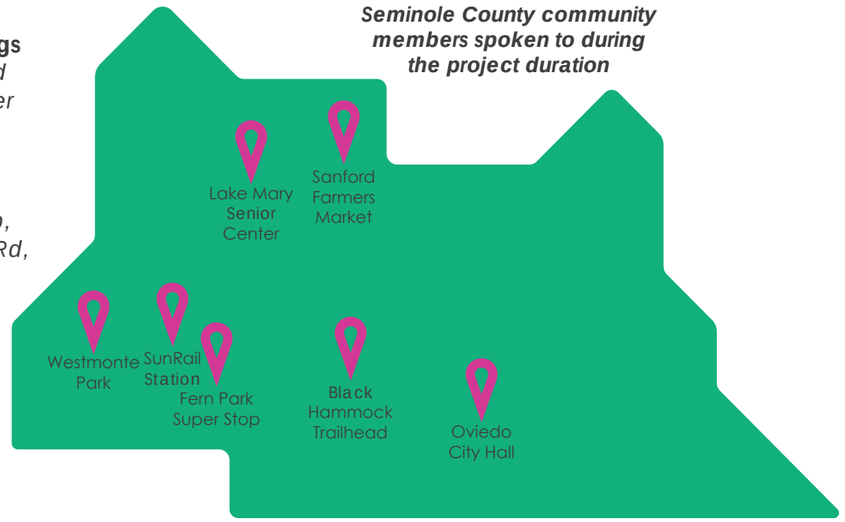
As a part of the Vision Zero Action Plan development, Seminole County hosted open houses and pop-up events in each municipality to educate the public about the purpose of Vision Zero, and to better understand the transportation issues from a community based perspective rather than just relying on crash data. The project team displayed informational boards that describe what Vision Zero and the Safe Systems Approach are, and where the local High Injury Network crashes have occurred. To collect feedback from the community, the project team utilized an online comment form created by the Vision Zero Regional Team.

The first three open houses were hosted in Lake Mary and Oviedo in the evening, and Altamonte Springs during the mid-day hours respectively. Following the open houses, Seminole County hosted four pop-up events. These events focused on the "meeting people where they are at" approach.

As a part of public engagement efforts, the Vision Zero Central Florida website has a "Help Identify Safety Problems" tab for the public to provide feedback noting specific locations in the region that feel unsafe to travel in.

1500+

Seminole County community members spoken to during the project duration



Community Feedback Enhances the Plan

Crash data alone does not tell the whole story - community conversations were vital to confirming and adding context to high crash areas within Seminole County. Feedback was used to guide emphasis areas and identify percieved roadway risk that may show up as near misses today, but could be deadly in the future.

> **"Speed bump(s) needed. Cars hit 50mph daily in a 25mph zone. Too long of a straight road without bumps for a neighborhood. Very unsafe."**

> **"I would like to see more multimodal paved trails around the county."**





Lake Mary Senior Center Open House



Winter Springs City Commission Presentation



Egg-citing Egg Hunt Pop-Up



Winter Wonderland Pop-Up

City of Winter Springs Community Key Themes

Community engagement was critical to this Plan. The project team attended three City specific pop-up events from the beginning of the study during data analysis through Plan development.

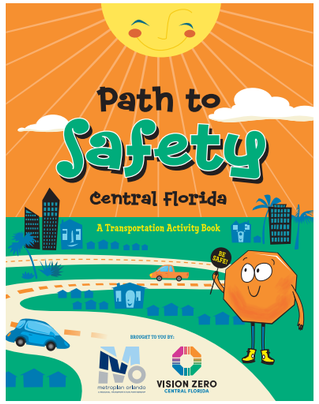
During the initial phases of the project, the project team presented at the Winter Springs Bicycle & Pedestrian Advisory Committee (BPAC). Having the BPAC's support for the city's Vision Zero efforts is critical to advise staff about safer trail, sidewalk, and bicycle network projects.

A second Vision Zero outreach opportunity was at the Winter Wonderland event that included the 41st annual Holiday Parade and was a host to many local businesses and initiatives. Residents who stopped by the tent were interested in the safety initiatives and the goal to reach zero fatalities and serious injuries.

For the last pop-up event, the project team participated in the Winter Springs Egg-Citing Egg Hunt. This annual event is family friendly and gives children of all age ranges an opportunity to hunt for eggs during the Spring season. Vision Zero spoke to the community and gathered thoughts on transportation and safety within the region.

All of the feedback collected for Winter Springs has been heard in-person through the pop-up and workshop events.

EVENT MATERIALS





City of Winter Springs Open House & Pop-Up Events

- **November 8, 2023: Winter Springs Bicycle and Pedestrian Advisory Committee**
  Winter Springs City Hall, 1126 East State Road 434, Winter Springs, FL 32708
- **December 2, 2023: Winter Springs Winter Wonderland**
  Winter Springs Town Center, 1160 E State Rd 434, Winter Springs, FL 32708
- **March 30, 2024: Winter Springs Egg-citing Egg Hunt 2024**
  Central Winds Park, 1000 Central Winds Drive, Winter Springs, FL 32708

Over
85
adults
&
150
children
spoken to at the Winter Springs Pop-Up Events

TALKING TO OUR COMMUNITY

Local Community Concerns & Collaboration

In addition to Seminole County open houses and pop-up events, each of the seven municipalities had their own pop-events for their own respective Vision Zero Action Plans. Overall, the Vision Zero project team attended over 22 events in 10 months. Concerns and collaboration are further detailed in each City Action Plan.

ALTAMONTE SPRINGS

- **December 15, 2023:** *Holiday Concert*
- **February 14, 2024:** *Senior Fair*
- **May 11, 2024:** *Family Fest*

CASSELBERRY

- **February 9, 2024:** *Food Trucks and Mardi Gras Party*
- **March 16, 2024:** *Spring Jazz & Arts Festival*
- **April 27, 2024:** *Earth Fest*

LAKE MARY

- **December 9, 2023:** *Farmer's Market*
- **April 17, 2024:** *Mind, Body, & Spirit: A Celebration of Seniors*
- **April 26, 2024:** *Arbor Day Park Party*

LONGWOOD

- **December 9, 2023:** *Farmer's Market*
- **February 3, 2024:** *MFMC's 37th Annual Mustang & Ford Roundup*
- **April 27, 2024:** *Longwood 2nd Annual Walk for Autism Awareness & Inclusion*

OVIEDO

- **January 15, 2024:** *Martin Luther King Jr. Day Celebration and Parade*
- **March 23, 2024:** *Taste of Oviedo*
- **June 15, 2024:** *CEOviedo at Versus Games*

SANFORD

- **April 6, 2024:** *39th Annual British Car Club Car Show*
- **April 25, 2024:** *District 2 Community Meeting*
- **May 1, 2024:** *Sanford Community Redevelopment Agency (CRA) Meeting*
- **June 27, 2024:** *District 2 Community Meeting*

WINTER SPRINGS

- **November 8, 2023:** *Winter Springs Bicycle and Pedestrian Advisory Committee*
- **December 2, 2023:** *Winter Wonderland*
- **March 30, 2024:** *Egg-Citing Egg Hunt 2024*



LYNX Fern Park Super Stop Pop-Up



Holiday Concert - Altamonte Springs



Winter Springs Bicycle and Pedestrian Advisory Committee

Focusing on Our Users

This section highlights crash insights and the High Injury Network.



FOCUSING ON OUR USERS

Serious Injury: May also be referred to as an incapacitating injury. Serious injuries may include broken bones, severed limbs, etc. These injuries usually require hospitalization and transport to a medical facility.

Evaluating Crash Data & Trends

In striving toward Vision Zero, a data-driven approach is critical to uncover the details of deadly and serious injury crashes. This includes reviewing locations, frequency, and contributing factors. Understanding where and why these crashes happen is key.

Even one life lost is too many. Winter Springs lost Charles in 2018 and Christopher in 2021. These two deaths and the 16 other serious injuries in Winter Springs are unacceptable. While deadly and serious injury crashes in Winter Springs are decreasing over time, there is more work to be done.

What are major contributing factors to crashes?

Contributing causes to crashes includes environmental factors such as the time of day or day of week, human factors such as age or distracted driving, and roadway factors such as speed and lighting condition.

Roadway	***Human Factors***	***Environmental***
• ***Speed***	• ***Aggressive Driving***	• ***Time of Day***
• ***Number of Lanes***	• ***Impaired Driving***	• ***Day of Week***
• ***Lighting Condition***	• ***Driver Inattention***	

Who are vulnerable users?

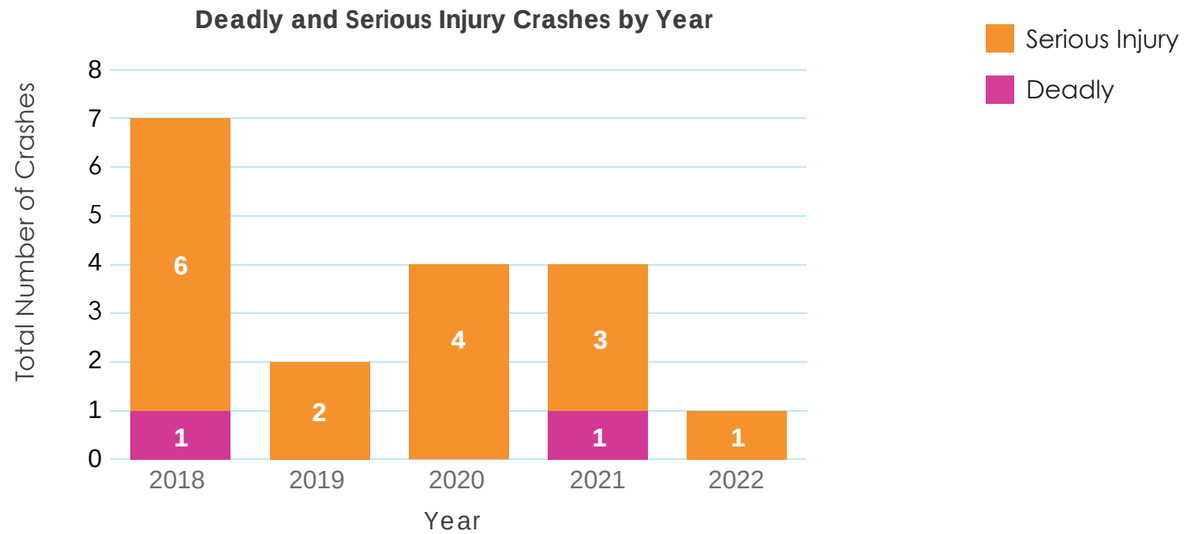
Vulnerable users are those outside of a vehicle. People who are walking, biking, or driving a motorcycle. They are physically unprotected and are at greater risk of death or serious injury in a collision. Vulnerable users make up 36 percent of the deadly and serious injury crashes in Seminole County.

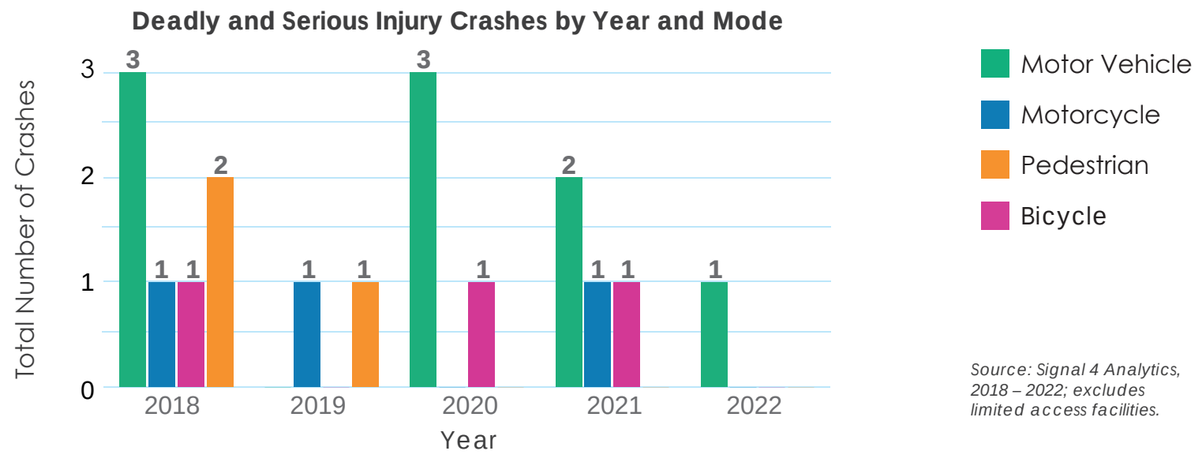
What is a crash type?

A crash type describes how the motorist or vulnerable user collided with another traveler or object. Crashes that involve turning are called "left-turn" or "right-angle" collisions. Some crashes only involve one motorist and are considered "off-road" or "single-vehicle" collisions.

The City trend in traffic deaths and serious injury crashes is in a slight downtrend. Deadly and serious injury crashes occurred 7 times in 2018. Five years later in 2022, they occurred 1 time. That's a reduction of 86%. While this trend is encouraging, the two deaths cannot be ignored.

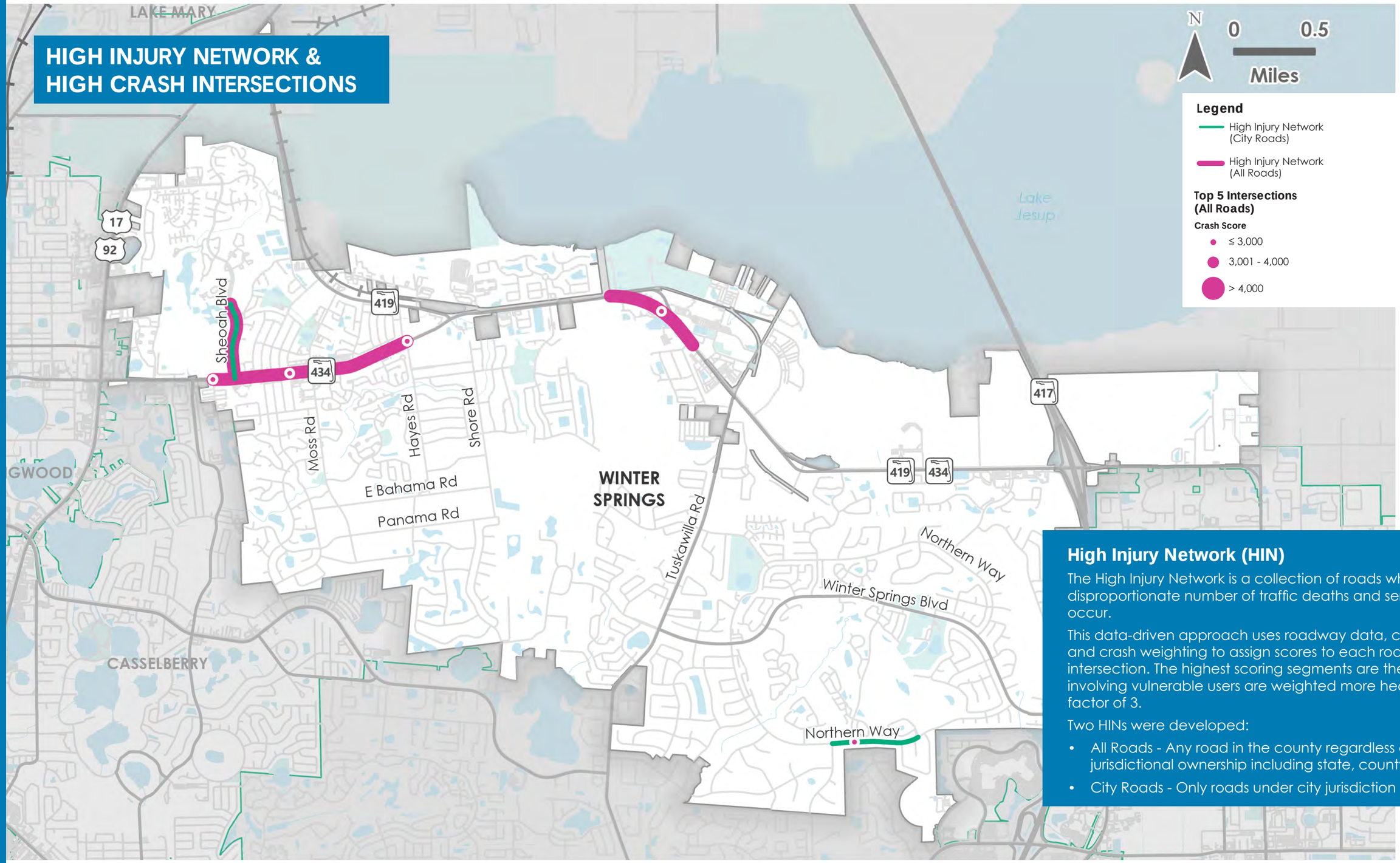
Vulnerable users make up 50% of the deadly and serious injury crashes. While all motorcyclists deadly and serious injury crashes occurred on major roads, the bicyclist and pedestrian deadly and serious injury crashes occurred on major roads and local roads. The shared use trail network and activity centers on the west end of SR 434 serve as attractors and generators of bicyclist and pedestrian activity. It is noted the pedestrian deadly and serious injury crashes on SR 434 west of Tuskawilla Road occurred during construction conditions.





Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

HIGH INJURY NETWORK & HIGH CRASH INTERSECTIONS



High Injury Network (HIN)

The High Injury Network is a collection of roads where a disproportionate number of traffic deaths and serious injuries occur.

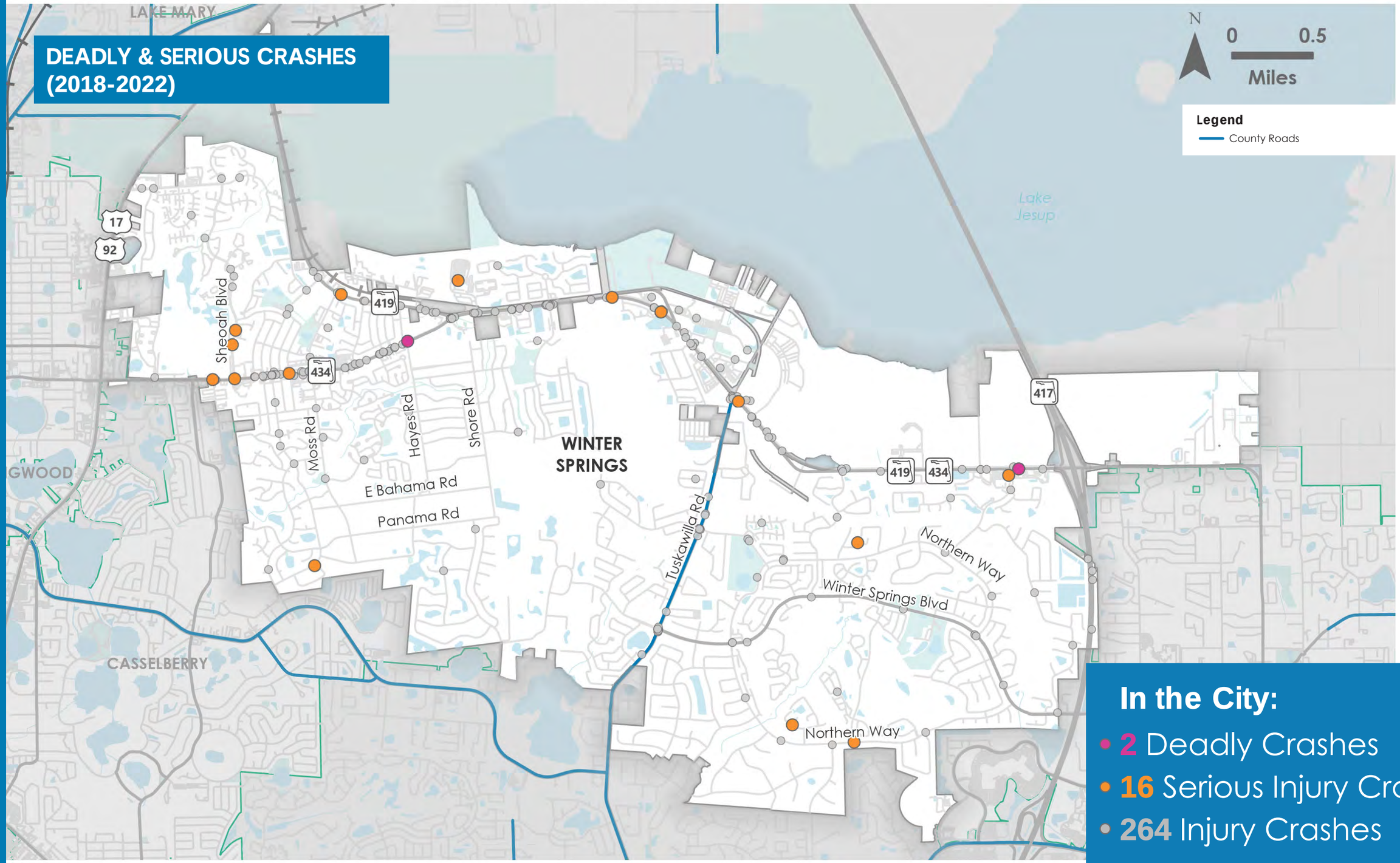
This data-driven approach uses roadway data, crash data, and crash weighting to assign scores to each roadway or intersection. The highest scoring segments are the HIN. Crashes involving vulnerable users are weighted more heavily by a factor of 3.

Two HINs were developed:

- All Roads - Any road in the county regardless of jurisdictional ownership including state, county, or city
- City Roads - Only roads under city jurisdiction

Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

DEADLY & SERIOUS CRASHES (2018-2022)

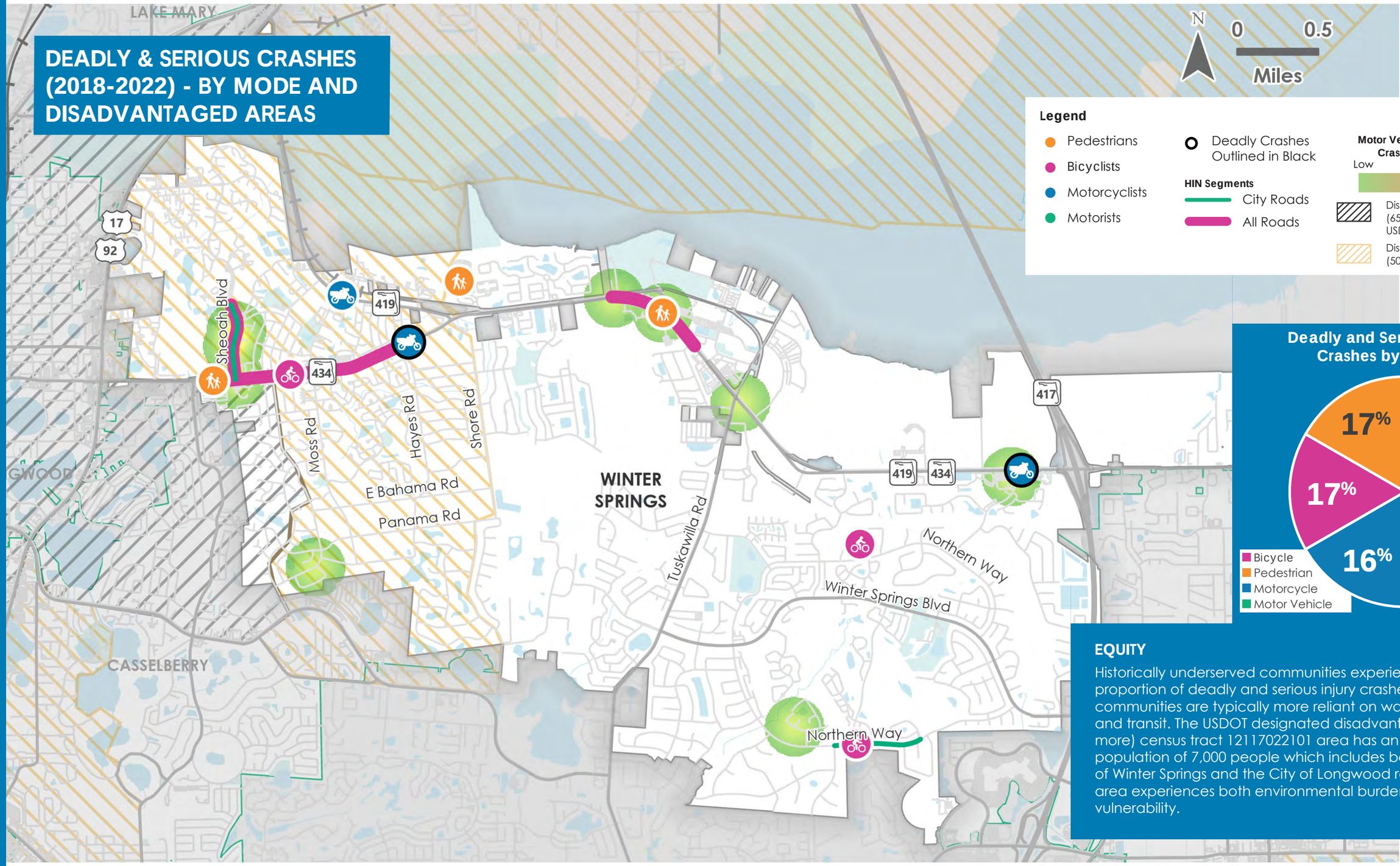


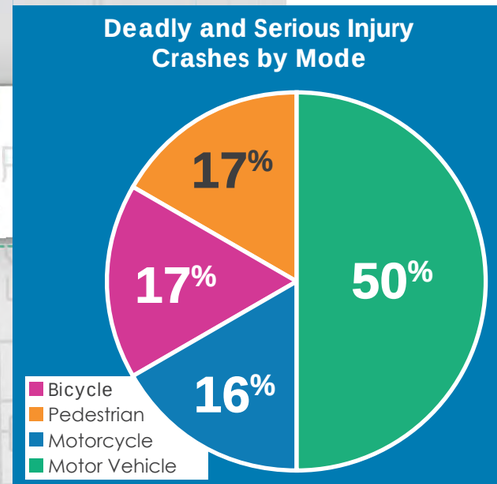
In the City:

- **2** Deadly Crashes
- **16** Serious Injury Crashes
- **264** Injury Crashes

Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

DEADLY & SERIOUS CRASHES (2018-2022) - BY MODE AND DISADVANTAGED AREAS



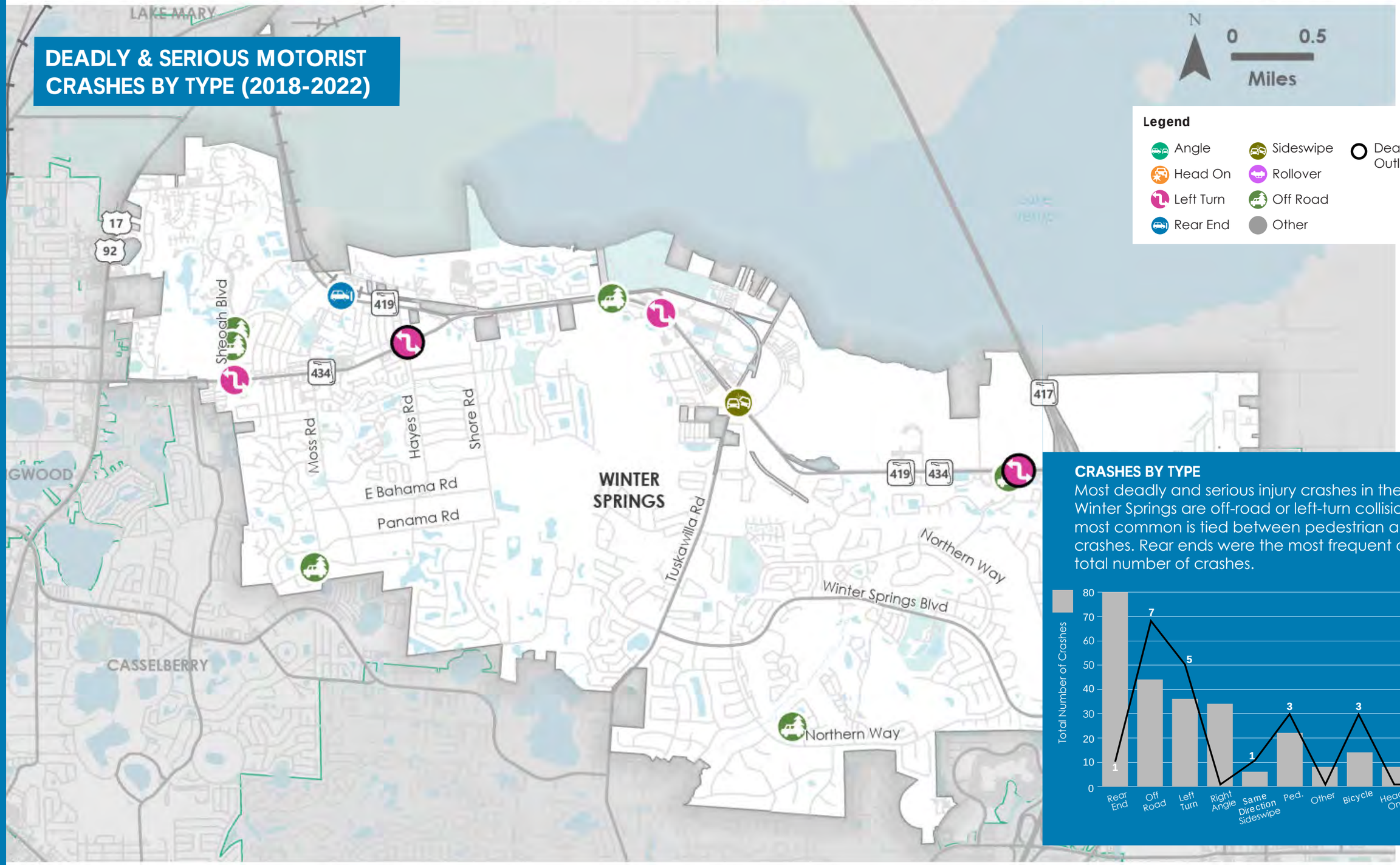


EQUITY

Historically underserved communities experience a higher proportion of deadly and serious injury crashes. These communities are typically more reliant on walking, biking, and transit. The USDOT designated disadvantaged (65% or more) census tract 12117022101 area has an approximate population of 7,000 people which includes both the City of Winter Springs and the City of Longwood residents. This area experiences both environmental burden and health vulnerability.

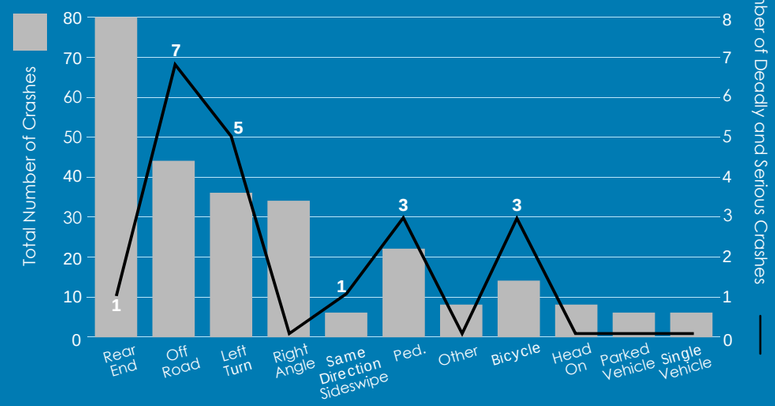
Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

DEADLY & SERIOUS MOTORIST CRASHES BY TYPE (2018-2022)



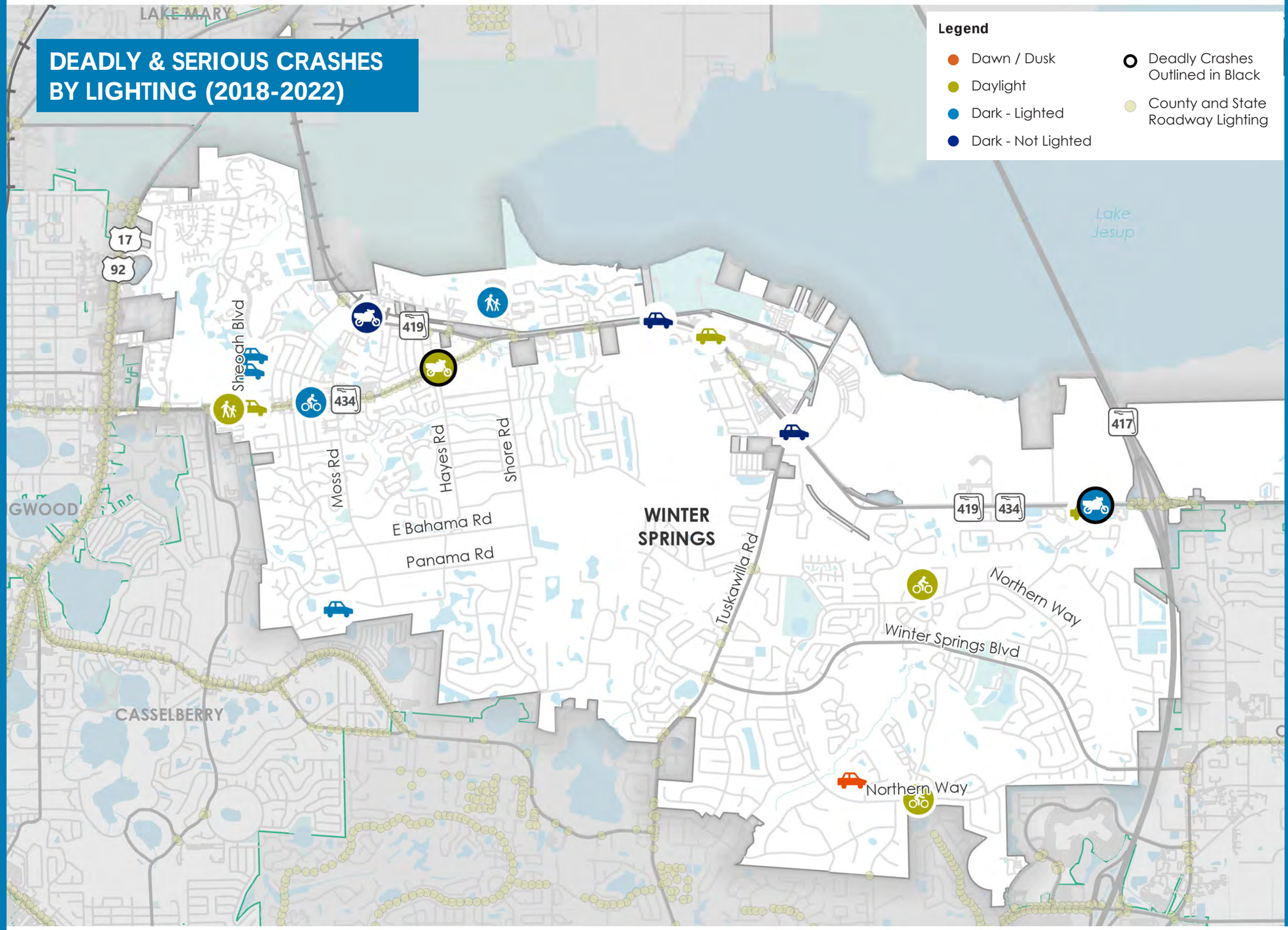
CRASHES BY TYPE

Most deadly and serious injury crashes in the City of Winter Springs are off-road or left-turn collisions. The third most common is tied between pedestrian and bicycle crashes. Rear ends were the most frequent out of the total number of crashes.



Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.

DEADLY & SERIOUS CRASHES BY LIGHTING (2018-2022)



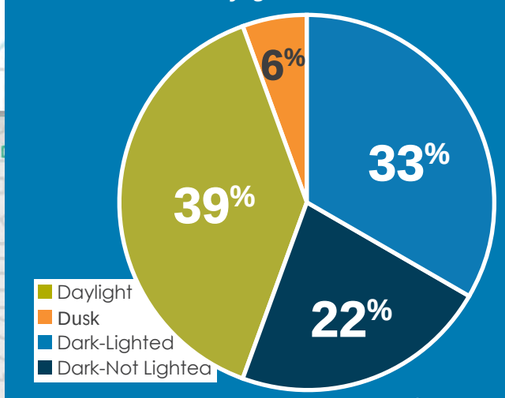
LIGHTING/TIME OF DAY

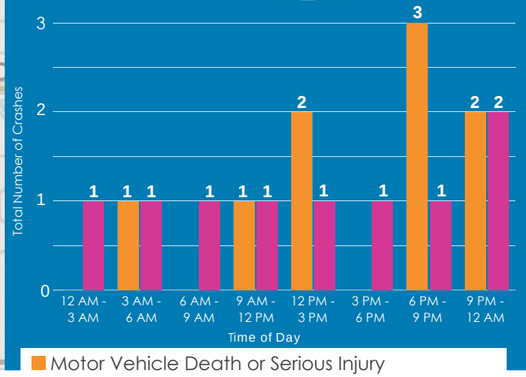
The later in the day it gets, the more deadly and serious injury crashes occur. This is true for both motorists and vulnerable users. The hours of 6 PM to 12 AM account for 44% of deadly and serious injury crashes, though those six hours are just 25% of day.

As daylight turns to dusk, lighting becomes a more important roadway characteristic. Of the deadly and serious injury crashes that occurred in the dark, 22% were in locations without lighting.

61%

of deadly or serious injury crashes happened outside of daylight hours





Source: Signal 4 Analytics, 2018 – 2022; excludes limited access facilities.
Roadway lighting data obtained from Seminole County.

FOCUSING ON OUR USERS



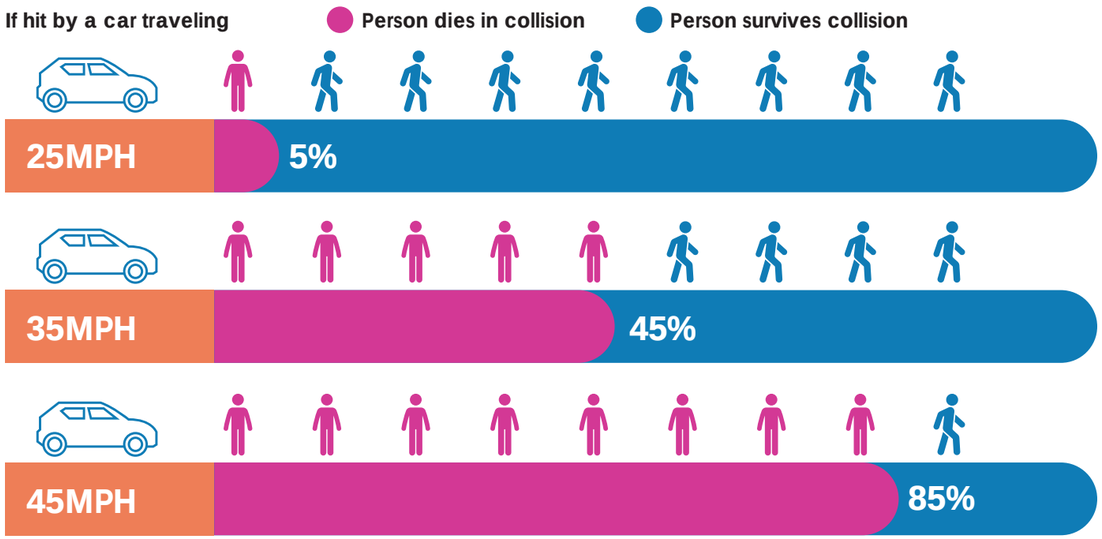




The Impact of Speed on Survival

Speed is a major factor in survival rate. 71% of all traffic deaths and serious injuries in the County were on roads with posted speed limits of 40 miles per hour or higher. This data does not consider the speed at which the collision occurred, which could be much higher than the posted speed limit.

High speed is particularly impactful for vulnerable roadway users involved in crashes with vehicles. National data shows that nearly any pedestrian hit by a vehicle traveling at 45 mph or above will be killed -- there is only a 15% chance of survival. As speed increases, the toll on the human body increases and the driver's cone of vision decreases. Deploying roadway design changes to reduce speeds is critical to Vision Zero.



Data Source: National Traffic Safety Board (2017)

The Impact of Human Factors Survival

Humans make mistakes. Behavioral factors such as drinking and driving can influence the outcome of a crash. Younger and older people are especially vulnerable to serious injury.



Regional

- **1 in 3** serious injury crashes involves distracted driving.
- **1 in 5** deadly crashes involves drunk driving. **1 in 6** involves drugs.
- Only **6%** of drivers are teens, but are in **13%** of serious injury crashes.
- **10%** of all serious injury crashes are hit-and-runs. That number **doubles** when the person hit is walking or biking.

Seminole County

- **1 in 8** deadly or serious injury crashes involved distracted driving.
- **1 in 14** deadly and serious injury crashes involves drunk driving. **1 in 25** involves drugs.
- Only **17%** of the County is age 65 or older - they are involved in **23%** of deadly and serious injury crashes.
- **6%** of all deadly and serious injury crashes are hit-and-runs.

City of Winter Springs

- **Zero** deadly or serious injury crashes involved distracted driving.
- **Zero** deadly or serious injury crashes involved drunk driving or drugs.
- **1 of the 8** serious injury crashes was a teen driver.
- **Zero** deadly or serious injury crashes were hit-and-runs crashes.

Getting to Zero

This section highlights agency coordination and the toolbox of strategies and countermeasures.

To achieve zero deaths and serious injuries, Winter Springs should collaborate and rely on proven strategies and countermeasures.



Vision Zero Central Florida by the Numbers

Vision Zero Central Florida has been a monumental effort. Public engagement strategies were aimed at collecting feedback from residents and visitors and included a range of in-person and online opportunities.

23 Vision Zero Action Plans

- **1** Regional Task Force
- **3** County Steering Committees
- **18** Local Working Groups

40+ community events with **1,000+** interactions with the public

150+ local government meetings

400+ views of Call-to-Action video

15+ updates to MetroPlan Orlando Board and committees

30+ mentions on local media outlets

Over **10,000** views by over **2,700** unique users of VisionZeroCFL.gov

5 Safety Champion Speaker Series Events

1 Regional Press Conference

345+ survey responses

Strategize with Key Stakeholders

Regional Vision Zero Task Force

The Regional Vision Zero Task Force was structured to develop a framework for continued action for the implementation and monitoring phases of the Action Plan at a regional level. This Task Force includes a diverse set of regional perspectives and county and local agency staff to help inform what materials should be prepared at the regional level to help support the County and Local Vision Zero Action Plans.

Seminole County Steering Committee

The Seminole County Steering Committee is comprised of Seminole County staff and local municipal staff, as well as local leaders who can support the County and Local Action Plans. Vision Zero relies on shared responsibility and authentic engagement.

Local Municipality Working Groups

The Working Groups are composed of city staff who can promote Vision Zero through different departments and actions. The Working Groups are similar to the Regional Task Force and the County-level Steering Committee to include participation from multiple city departments. They are tasked with carrying out the Action Plan following its adoption.

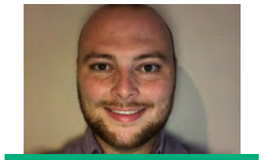
WORKING GROUP MEMBERS

Terrilyn Rolle, Director of Community Development
Nick Tafelsky, Senior City Planner
Talbert Jackson, Senior City Planner
Michael Krist, Parks Manager
Matt Reeser, Public Communications Manager
Robert Stephens, Police Sergeant
Phil Hursh, Interim City Manager / Public Works Director

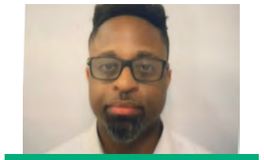
CITY OF WINTER SPRINGS WORKING GROUP MEMBERS



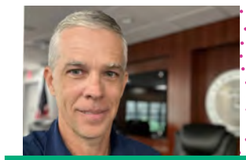
Terrilyn Rolle
Director of Community Development



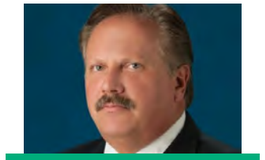
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Senior City Planner



Talbert Jackson
Senior City Planner



Matt Reeser
Public Communications



Phil Hursh
Interim City Manager / Public Works Director



Michael Krist
Parks Manager



Robert Stephens
Police Sergeant

Strategize with Key Stakeholders

The City of Winter Springs Working Group met three times throughout the plan development. As the Action Plan is completed and adopted, the Working Group will shift their focus on implementation and monitoring of projects within the plan and monitoring the serious injury and fatal crashes within the county limits. Additionally, the Working Group will strive to follow the goals and timelines set forth in the Action Plan.

During the first and second working group meetings, there was a question and answer opportunity in between each section of the presentation. Questions and answers are summarized below:

How would you describe the roadway safety culture in your agency and community?

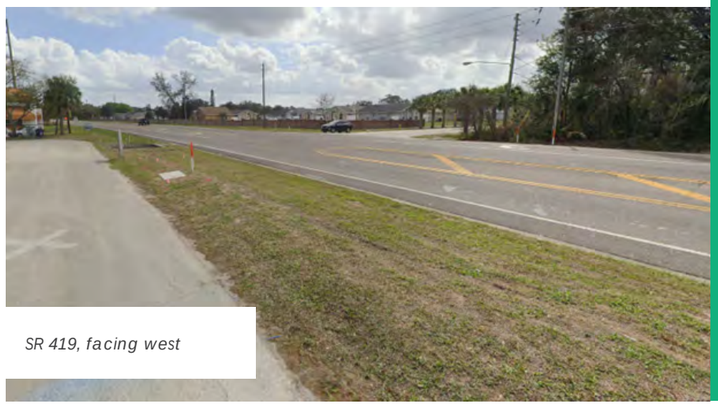
- Overall mindset of safety
- Speeding through intersections
- Share safety measures
- Residents are vocal about all transportation elements

What do you think are the biggest barriers to reaching zero traffic deaths and serious injuries?

- Need to build momentum nationally
- Distracted driving

Did you expect other roads to be on the High Injury Network? Would you like to see any changes?

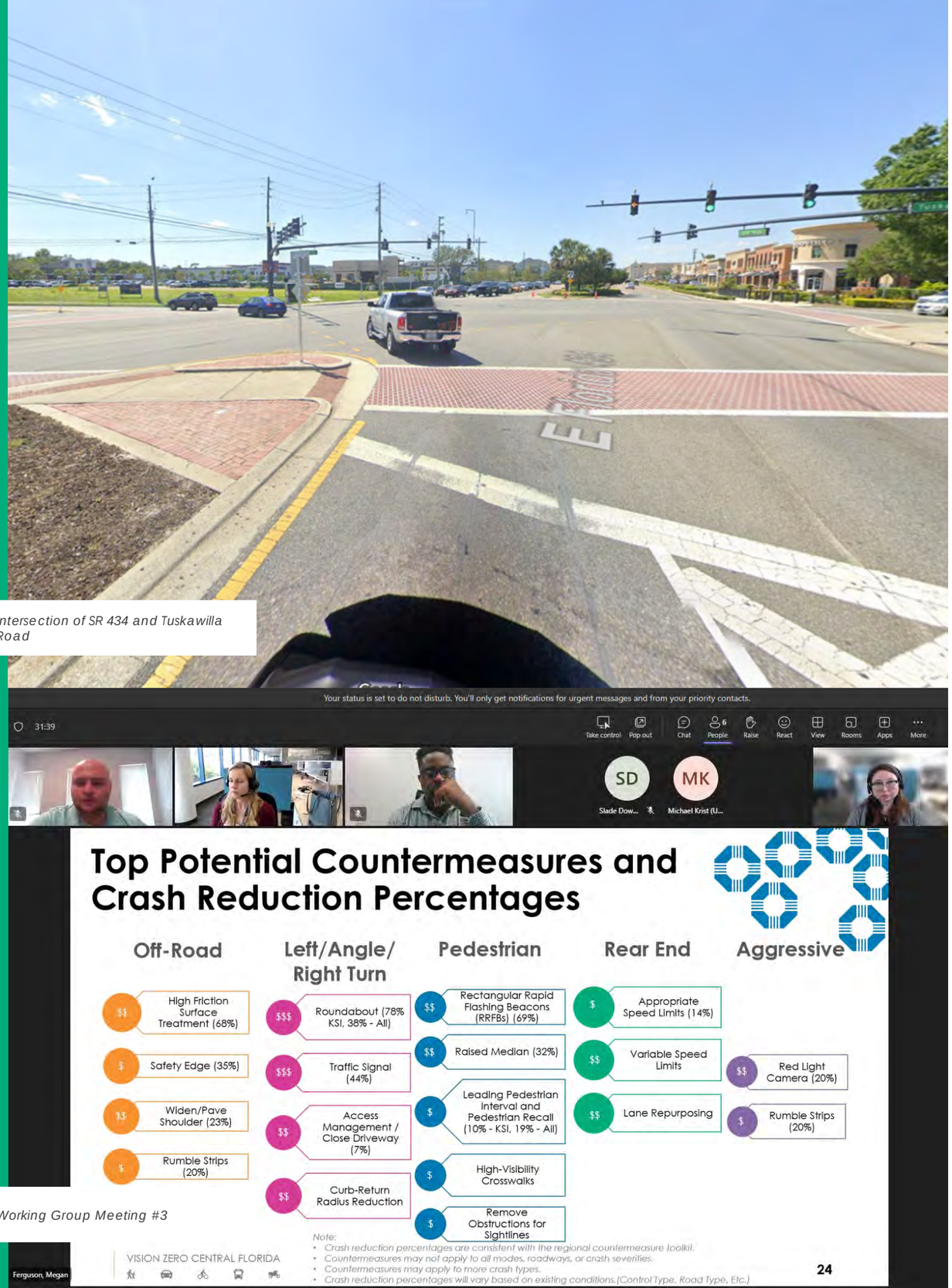
- No surprises for some
- Expected to see South Tuskawilla Rd
- Sheoah Blvd a surprise to one member
- Expected more motor vehicle crashes on major roadways



SR 419, facing west

Working Group Dates

- **Working Group Meeting #1 - November 11, 2023:**
  Kickoff - What is Vision Zero?
  Virtual Meeting
- **Working Group Meeting #2 - December 14, 2023:**
  Crash Analysis and High Injury Network
  Virtual Meeting
- **Working Group Meeting #3 - May 10, 2024:**
  Countermeasures, Policy, and Potential Projects
  Virtual Meeting



Intersection of SR 434 and Tuskawilla Road

Working Group Meeting #3

GETTING TO ZERO

Using Proven Safety Countermeasures

The Federal Highway Administration (FHWA) has 28 proven safety countermeasures. These countermeasures have been used in many states and on roads of many kinds. This list is a starting point for project identification, though countermeasures don't end here. Over 100 different countermeasures were considered as part of this action plan. Most countermeasures have what's called a Crash Modification Factor (CMF). This research-backed factor tells us the potential crash reduction percentage.

Did you know?

These countermeasures have the potential to reduce deadly and serious injury crashes by up to:

LIGHTING

28% on roadways

38% at intersections

42% at intersections (pedestrians)

LEADING PEDESTRIAN INTERVALS

13% at intersections (vehicle-pedestrian crashes)

ROUNDABOUTS

78% at intersections (converted from signal)

82% at intersections (converted from stop sign)

Signals

- Extend Yellow and All Red Time
- Leading Pedestrian Interval

Signing and Striping

- Chevron Signs on Horizontal Curves
- Curve Advance Warning Sign

Speed Management

- Appropriate Speed Limits
- Speed Cameras
- Variable Speed Limits

Pedestrian Facilities

- Add Sidewalk
- Pedestrian Hybrid Beacon
- Rectangular Rapid Flashing Beacon

Bikeways

- Bike Lane/ Buffered/ Separated Bike Lane
- Separated Bikeway

Intersections and Roadways

- Doubled-Up, Oversized Stop Signs
- High Friction Surface Treatment
- Lane Repurposing
- Median Barrier
- Raised Median
- Reduced Left-Turn Conflict Intersection
- Refuge Island
- Retroreflective Signal Backplates
- Roundabout
- Rumble Strips

Other Engineering Strategies

- Intersection Lighting
- Segment Lighting
- Access Management/ Close Driveway

Action Plan

This section outlines the recommendations, projects, and next steps following plan adoption.

These actions are ambitious, but achievable through collaboration and measurable goals.



ACTION PLAN SUMMARY



SAFER ROADS

Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Develop a Traffic Calming Plan	The citywide speed limit of 20 mph on residential roads lays a strong foundation for complementary traffic calming infrastructure. The city should develop a traffic calming plan to support the context transition from SR 434 to collector and residential roadways. Traffic calming strategies can be used as countermeasures for the off-road crashes observed on residential streets. The city can leverage MetroPlan Orlando Streetlight Data while available to assess prevailing speeds and change in operating speeds.	Adoption of Plan	Start Year 2	Community Development (Lead), Public Works & Utilities (Support), Parks and Recreation (Support), City Commissioners (Support)	**$**	Comprehensive Plan 2030 and ongoing Comprehensive Plan Update
Develop Multimodal Master Plan	Vulnerable users are over represented in the city's traffic deaths and serious injuries. A multimodal master plan (walk, bike, transit, drive) can identify preferred routes, crossing connections, gaps in facilities, and vulnerable user interactions with vehicles. This type of master plan can be done concurrently with Transportation System Management (TSM) or Transportation Demand Management (TDM) strategies to enhance traffic capacity, movement and safety. The multimodal master plan should also include forward-thinking mobility options to further the city's goal of discouraging the widening of SR 434 and deploying TDM.	Adoption of Plan	Start Year 1	Community Development (Lead), Public Works & Utilities (Support)	**$**	Comprehensive Plan 2030 and ongoing Comprehensive Plan Update
Prioritize Lighting Projects	Over half of the traffic deaths and serious injuries occured outside of daylight hours. Roadway and pedestrian-scale lighting projects should be prioritized in the city's transportation sales tax project list. Note at the time of writing, the next transportation sales tax has not been voted on.	Change to number of corridors assess for new lighting Decrease in crashes during dawn/dusk/ dark hours	Start Year 2	Public Works & Utilities (Lead), Coordination with Seminole County and Utility Providers	**$$**	-

ACTION PLAN SUMMARY



SAFER SPEEDS

Promote safer speeds in all roadway environments through a combination of thoughtful, equitable, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Install Speed Feedback Signs	Speeding is a major contributor to deadly and serious injury crashes. It is recommended that speed feedback signs be implemented on high injury network segments with excessive speeding. Signs should be located between traffic signals where vehicles typically gain the most speed. Actual speed data should be tracked to evaluate the impact of the sign.	Number of roadways with speed feedback signs and measured speeds after implementation	Start Year 1	Public Works & Utilities (Lead), Coordination with Seminole County	**$**	MetroPlan Orlando Speed Management Study (2022)
Support Traffic Signal Timing Strategy on SR 434	Traffic signal timing is a combination of minimizing delay and optimizing safety. Four of the deadly and serious injury crashes on SR 434 happened at signalized intersections. Minor modifications to signal progression speed and left-turn phasing can be reviewed to target intersection conflict points.	Adoption of Plan	Start Year 2	Public Works & Utilities (Lead), Community Development (Support)	**$ - $$**	Comprehensive Plan 2030 and ongoing Comprehensive Plan Update, Code of Ordinances
Support Lowest Target Speed for SR 434	SR 434 has a posted speed limit of 45 mph. The city should continue to coordinate with the police department and FDOT to evaluate a 35 mph context-appropriate posted speed limit. A 35 mph speed limit change could be evalauted concurrently with the SR 434 safety projects in progress just west of the City of Winter Springs, within the City of Oviedo. The city should subscribe to project notifications to evaluate whether similar strategies could be deployed on the portion of SR 434 through the City of Winter Springs.	Number of deaths and serious injuries on SR 434	Start Year 2	Community Development (Lead), Public Works & Utilities (Support)	**$$$**	-

ACTION PLAN SUMMARY

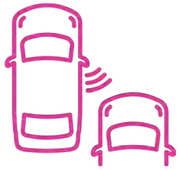


SAFER ROAD USERS

Safe road users means safe people. Encourage safe, responsible driving and behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Partner with Motorcycle Safety Organizations, Emphasize Helmet Usage	Motorcycle crashes account for 18% of all deadly and serious injury crashes -- the highest of any vulnerable road user in the city. Almost half the people killed on motorcycles in Central Florida were not wearing helments. Partnering with motorcycle safety organizations, such as Ride Smart Florida, can help increase awareness throughout the county and emphasize the shared responsibility of all road users. Opportunities for partnership may include joint tabling events, social media campaigns, and collaborative meetings for sharing latest trends and progress.	Number of organizations reached	Start Year 1	Communications (Lead), Public Works & Utilities (Support), Community Development (Support), Motorcycle Organizations (Support)	**$**	-
Coordinate Traffic Safety Presentations with Schools	The summer school driver's education program offered by Seminole County Public Schools is an excellent option for new drivers. It is recommended that introductory traffic safety information is made available to students who are unable to attend the driver education program or do not yet have learner's permits. Traffic safety education is recommended at all levels of schooling, from elementary to high school.	Number of schools reached	Start Year 3	Public Works & Utilities (Lead), Communications (Support), Seminole County Public Schools (Support)	**$-$$$**	-
Initiate Youth Traffic Safety Programs	In Central Florida, only 6% of drivers are teens but they're in 13% of serious injury crashes. It is recommended that youth safety programs such as SAFE (Seat Belts are for Everyone) or FDOT's Teen Driver Safety Program are supported in schools. SAFE focuses on increasing teen restraint compliance through education, positive rewards, and enforcement. The FDOT program targets teen drivers aged 15 through 19 to educate peers, parents, and communities about teen safe driving by means of coaching and empowerment.	Number of students engaged	Start Year 2	Seminole County Public Schools (Lead), Public Works & Utilities (Support), Communications (Support)	**$-$$**	-
Conduct Targeted Enforcement and High Visibility Enforcement Operation	Speeding is a major contributor to deadly and serious injury crashes. It is recommended that a targeted enforcement operation is conducted on roadways with operating speeds 10 mph above the posted speed limit. MetroPlan Orlando's Speed Management Study identified these roadways. Target county corridors for enforcement are: Red Bug Lake Road east of Tuskawilla Road.	Number of drivers reached	Start Year 2	Sheriff's Office (Lead), Communications (Support), Public Works & Utilities (Support)	**$$**	MetroPlan Orlando Speed Management Study (2022)

ACTION PLAN SUMMARY



SAFER VEHICLES

Proactively plan for a connected and autonomous vehicle fleet and encourage the purchase of vehicles that feature crash prevention technology.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Collaborate with Professional Organizations Furthering Safe Vehicle Requirements	Vehicles are regulated by the National Highway Traffic Safety Administration (NHTSA). NHSTA implements laws from Congress. Vehicle seatbelt requirements is an example of this. As autonomous driving, distracted driving, and impaired driving continue, emerging legislation is a tool to reaching zero traffic deaths. Several professional organizations coordinate membership efforts to coalesce behind policy strengthening the transportation field. The American Society of Civil Engineers (ASCE) maintains policy positions to reduce traffic deaths and injuries, including collaboration for connected and autonomous vehicles, and often make supportive statements to Congress. Additionally, organizations that lobby to the Legislature and vehicle companies should focus on accessibility or funding for free safety features that would normally be subscription service based, such as connected vehicle technology.	Number of Professional Organizations collaborated with	Start Year 1	Community Development (Lead), Public Works & Utilities (Support), Professional Organizations (Support)	$	-
Consider Emerging Vehicle Safety Systems when Purchasing New Fleet Vehicles	NHTSA has identified rulemaking initiatives for increasing vehicle safety. It is recommended the county compare the year of planned fleet vehicle purchases against the year of potential rule enactments to line up purchases with advanced safety features. For example, automatic emergency braking will be standard in cars and light trucks starting in 2029. This automatic braking will detect both vehicles and pedestrians in both daylight and nighttime hours.	Fleet vehicles evaluated	Start Year 3	City Manager's Office (Lead), Parks and Recreation (Support), Seminole County Traffic Engineering Division (Support)	$-$$$	Rulemaking Reference: www.transportation.gov/NRSS/SaferVehicles
Publicize the Availability of the "SAFERCAR" Phone Application for Recall Notifications	NHTSA developed the "SaferCar" phone application for tracking active recalls. This application will deliver an alert when a recall is published. NHTSA estimates that millions of vehicle recalls each year are not addressed.	Number of Safercar phone applications	Start Year 1	Communications (Lead)	$	-

ACTION PLAN SUMMARY

POST CRASH CARE

Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Meet with First Responders Regularly	To continue the best practices and data exchange upon the completion of this action plan, it is recommended that Public Works staff, first responders, and medical professionals meet at a defined interval each year to discuss how the barriers and opportunities for reaching Vision Zero are materializing.	Annual meeting	Start Year 2	Police Department (Lead), Sheriff's Office (Support), Community Development (Support), Public Works & Utilities (Support)	**$**	-
Supplement Crash Data with EMS and/ or Hospital/Trauma Center Data	Using crash data from additional sources besides Signal4 Analytics / police crash reports can help fill in missing data gaps and better understand crash outcomes. Data gaps can include crashes that are not reported to the police, or crashes where the police may not be able to collect all relevant information.	Crashes supplemented per year	Start Year 2	MetroPlan Orlando (Lead), Police Department (Support), Community Development (Support), Public Works & Utilities (Support)	**$-$$**	-
Promote CPR / Emergency First Aid Training to the General Public	Promoting CPR / Emergency First Aid Training to the community can encourage those trained to support another person in any potentially deadly situation. While waiting for emergency services to arrive on scene of a crash, it can serve as a temporary measure until professional EMS arrives.	CPR courses offered	Start Year 2	Police Department (Lead), Communications (Support)	**$-$$**	-

ACTION PLAN SUMMARY



CONTINUING PROGRESS

Maintaining momentum to zero traffic deaths and serious injuries requires a sustained effort. These overarching actions will help us get there.

ACTION	DESCRIPTION	PERFORMANCE MEASURE	TARGET YEAR	RESPONSIBLE PARTY	RELATIVE COST	INTEGRATES WITH
Develop Vision Zero Status Report to Track Progress	It is recommended the city's Vision Zero webpage be updated biannually with a status report on Action Plan progress. Basic information should include the list of actions, the status of each action (ongoing, complete, not started), and a summary of recent activities. Recent deadly and serious injury crash data should also be included. MetroPlan Orlando's crash dashboard can be leveraged to populate crash data.	Annual meeting Development of plan/progress report	Start Year 1	Public Works & Utilities (Lead), Community Development (Support) Office of Communications (Support)	**$**	-
Formalize Vision Zero Working Group	To maintain momentum in the Vision Zero Action Plan, it is recommended the city's working group continue to meet periodically. A biannual meeting to discuss progress, outstanding actions, and emerging trends would provide productive touch points. The working group should meet 3-months in advance of publishing a Vision Zero Status Report to discuss data and progress on initiatives. Additionally, BPAC members should be included in the process.	Establishment of working group	Start Year 1	City Council (Lead), City Manager's Office (Support), Community Development (Support)	**$**	Regional Vision Zero Task Force and County Steering Committee
Update Action Plan Every 5-Years	Vision Zero Action Plans may fail without sustained effort. It is recommended this Vision Zero Action Plan be updated at a regular frequency. Updating both concurrently would provide an opportunity to streamline the safety and crash analysis, however it also requires a greater staff workload commitment. To distribute resources more evenly, it is recommended the Vision Zero plan be updated two to three years off-cycle from the Transportation Plan.	Adoption of updated plan	Start Year 5	Public Works & Utilities (Lead), Community Development (Support)	**$**	-
Create / Assign Dedicated Transportation Safety Staff Position	Similar to how the Florida of Department Transportation is organized with a Safety Office, it is recommended the city consider organizing staff resources to create a dedicated Safety Planner or Engineer position. This staff position could organizationally fit under Public Works & Utilities or Community Development and be responsible for overseeing safety on all project phases from planning to construction. This position would drive the execution of actions in this plan, track progress, and coordinate with partner organizations.	Establishment of the position	Start Year 1	City Manager's Office (Lead), City Commissioners (Support)	***$-$$$***	-

ACTION PLAN SUMMARY

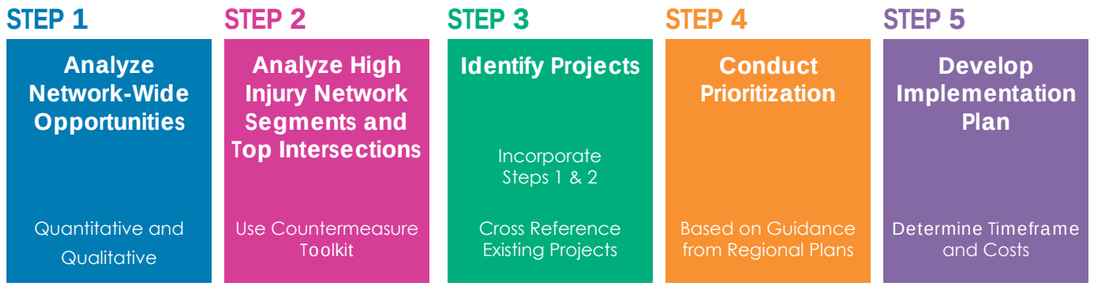
Safety Projects, Implementation, and Project Prioritization

Safety projects were developed collaboratively, using insights from the crash trends, high-injury networks, direction from the City working group, and community feedback. The process for identifying projects included a system-wide evaluation and a roadway-specific evaluation. High injury intersections are included in the roadway-specific evaluation. Anticipated project costs and an implementation timeline was also evaluated. Projects were then prioritized based on:

- Crash scores
- Being within a transportation underserved area
- Anticipated safety benefit
- Being on multiple high injury networks including the Regional, Seminole County, and City Action Plans
- Implementation timeline (higher scores for projects that may be completed in 5 years)

This prioritization approach was also used at the regional level, based on priorities identified by the MetroPlan Orlando Board. A priority list was completed separately for county and state roads. The maps on the next pages highlight the priority segments. Details of each safety project and the full list of projects is in the Appendix.

Project Planning Process



Top 2 City Road Project Priority List

1. Sheoah Blvd from Silver Sea Rd to SR 435 (0.47 miles)

Safety improvements to increase visibility and pedestrian safety. Add segment lighting, curve advance warning signage, LED enhanced signage, high friction surfaces, and speed cushions.

2. Northern Way from Shetland Ave to Royal Oak Dr (0.54 miles)

Safety improvements to increase active transportation safety and manage speeds. Add a high visibility crosswalk, a mini roundabout, RRFB, a "Bikes May Use Full Lane" sign, and speed cushions.

Top 2 County and State Road Project Priority List

1. SR 434 from Wagner Pt to Apache Trl (0.62 miles)

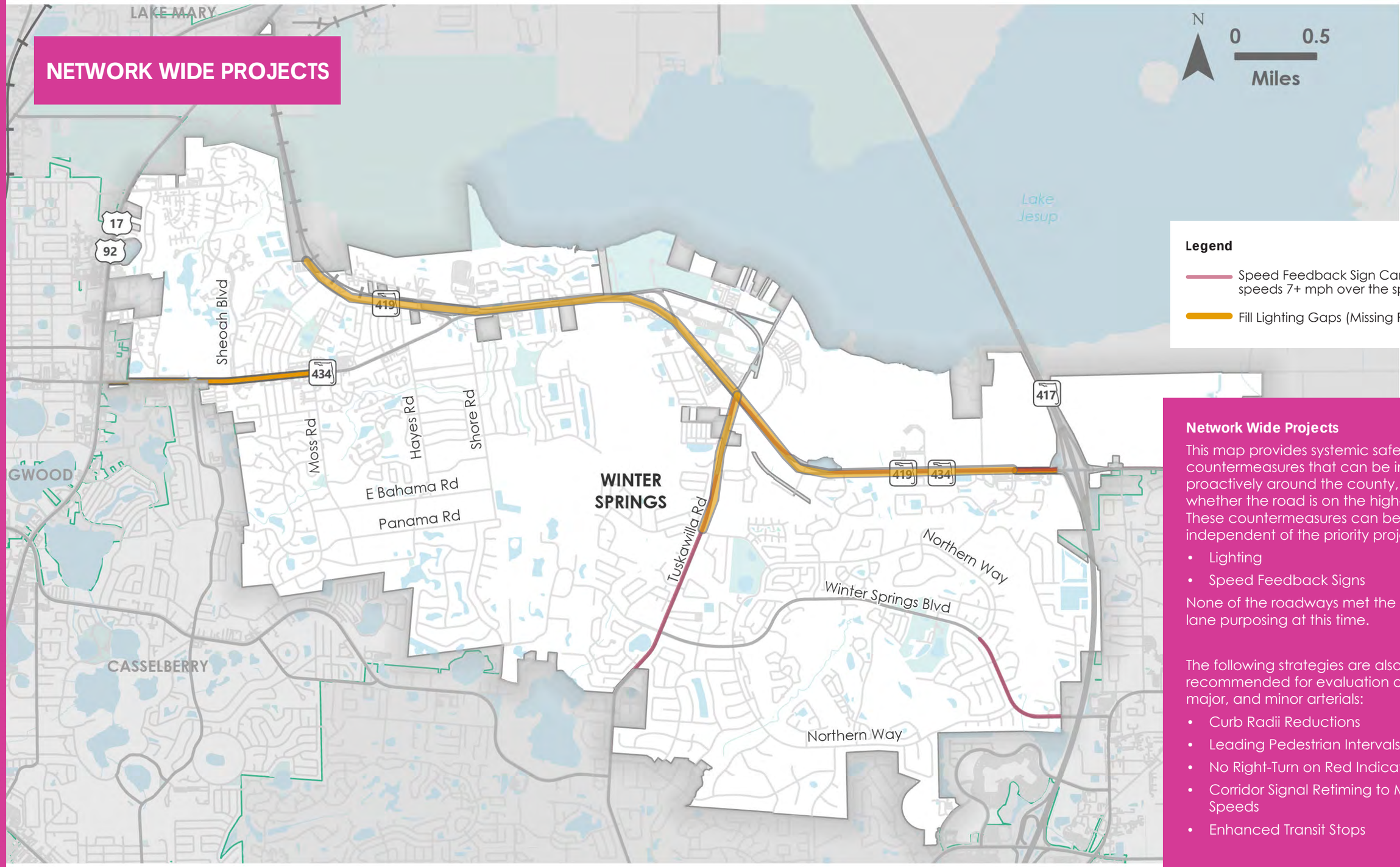
Safety improvements to manage speed and intersections. Add segment lighting, RCLT, high visibility crosswalks, and pavement speed legends.

2. SR 434 from Belle Ave to Hayes Rd (1.24 miles)

Safety improvements to manage speed. Add a raised median, RCLT, speed cameras, a landscaped buffer, and restripe crosswalks.

The next steps for implementation of these projects may include road safety audits, concept development plans, and feasibility studies.

NETWORK WIDE PROJECTS



Network Wide Projects

This map provides systemic safety countermeasures that can be implemented proactively around the county, regardless of whether the road is on the high-injury network. These countermeasures can be implemented independent of the priority projects:

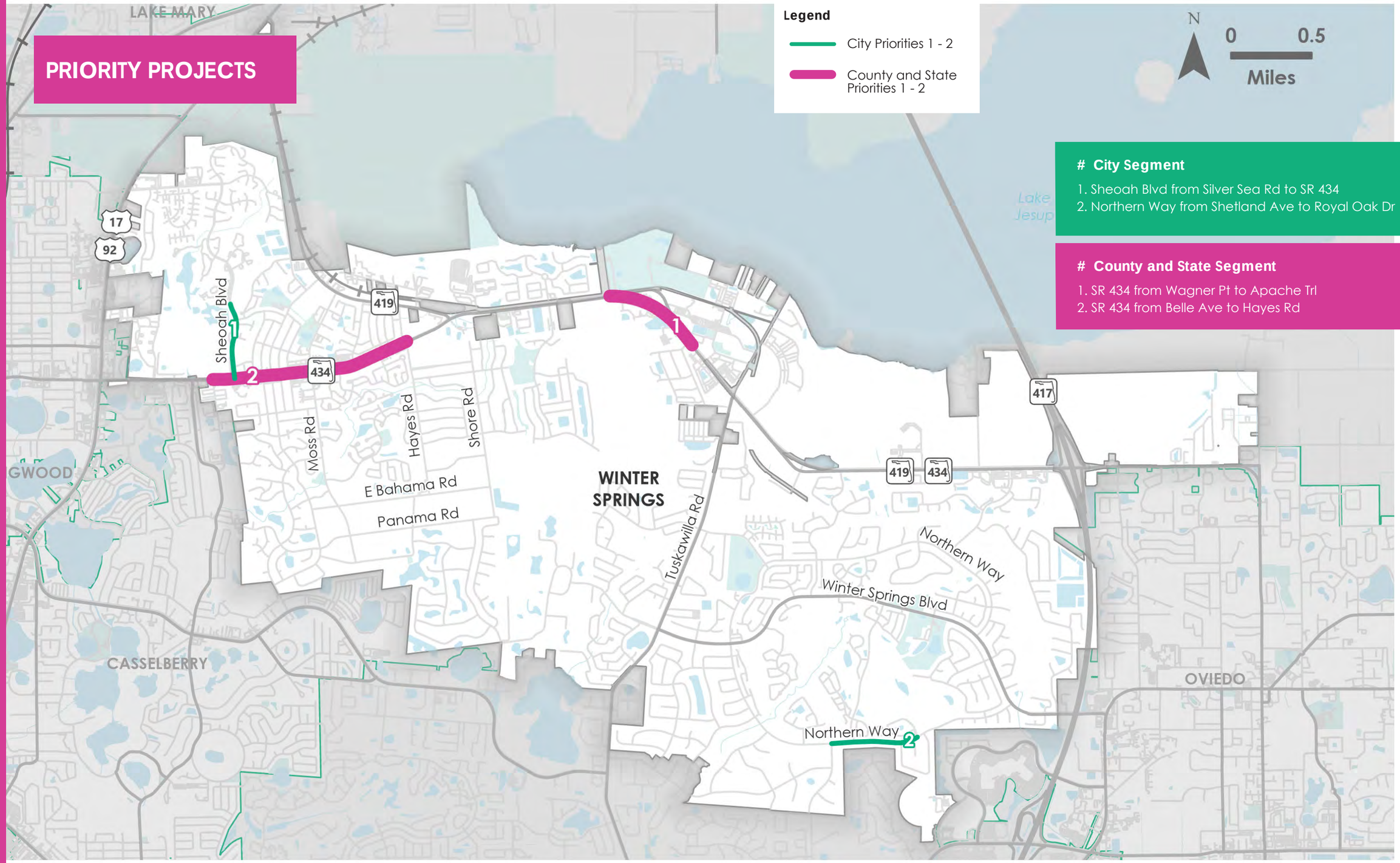
- Lighting
- Speed Feedback Signs

None of the roadways met the threshold for lane purposing at this time.

The following strategies are also recommended for evaluation on all principal, major, and minor arterials:

- Curb Radii Reductions
- Leading Pedestrian Intervals
- No Right-Turn on Red Indications
- Corridor Signal Retiming to Match Target Speeds
- Enhanced Transit Stops

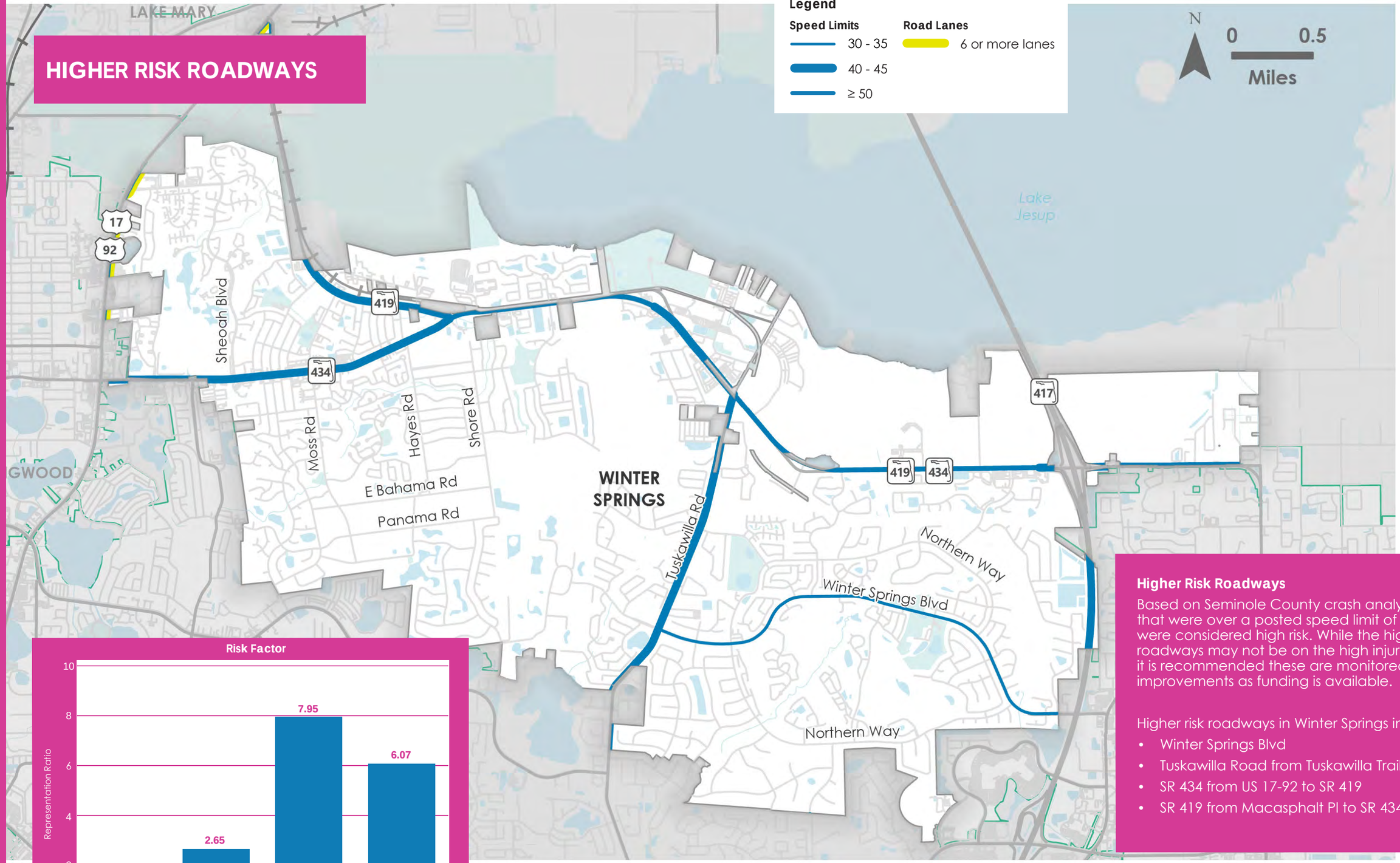
PRIORITY PROJECTS

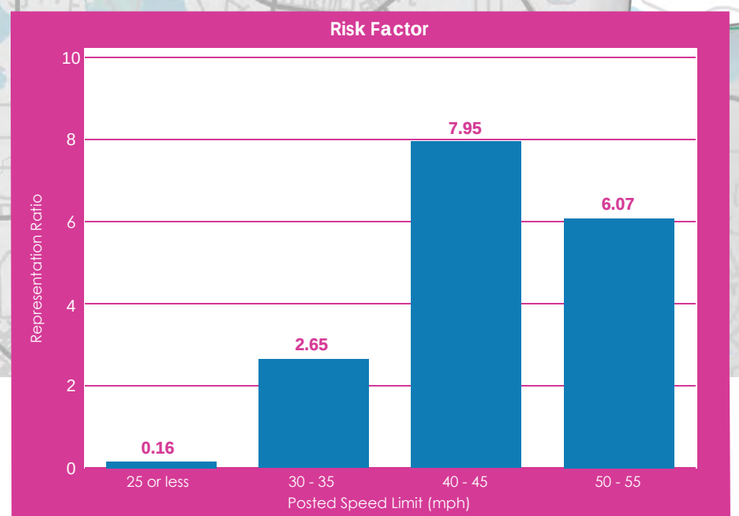


#	City Segment	Priority Score
1	Sheoah Blvd from Silver Sea Rd to SR 434	52.5
2	Northern Way from Shetland Ave to Royal Oak Dr	32.5

#	County and State Segment	Priority Score
1	SR 434 from Wagner Pt to Apache Trl	82.5
2	SR 434 from Belle Ave to Hayes Rd	55

HIGHER RISK ROADWAYS





Higher Risk Roadways

Based on Seminole County crash analysis, roadways that were over a posted speed limit of 40 MPH were considered high risk. While the highlighted roadways may not be on the high injury network, it is recommended these are monitored for improvements as funding is available.

Higher risk roadways in Winter Springs include:

- Winter Springs Blvd
- Tuskawilla Road from Tuskawilla Trail to SR 434
- SR 434 from US 17-92 to SR 419
- SR 419 from Macasphalt Pl to SR 434

QUICK BUILD HIGHLIGHTS

Quick build infrastructure projects are temporary, low-cost installations that can be constructed in a short timeframe, achieve safety goals, and inspire permanent change.

Quick build installations can be achieved with materials such as paint, plastic, rubber, concrete, asphalt, and even foliage! When selecting treatments and materials, consider*:

- Safety for all users
- Traffic calming
- Visibility and reflectivity
- Size
- Aesthetics
- Ease of procurement
- Accessibility
- Cost
- Target speed
- Ease of installation
- Stormwater impacts
- Durability and duration of installation
- Maintenance
- Climate
- Traffic volume and delay
- Roadway class

Countermeasures eligible for quick build projects include but are not limited to:

- Lane repurposing
- Horizontal deflections
- Speed tables/ cushions
- Parklets
- Lane narrowing
- Medians
- Slow turn wedge
- Crosswalks
- Roundabouts
- Refuge islands
- Buffered bike lanes
- Curb extensions

The planning phase of a quick build project ranges from 2-6 months, with around 1-3 days needed for installation.

*adapted from *Tactical Urbanist's Guide to Materials and Design*, from The Street Plans Collaborative


Recycled plastic roundabout, Annandale, VA

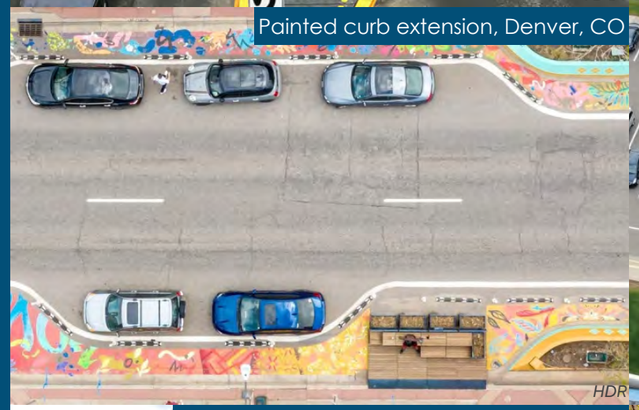
VDOT


Painted pedestrian refuge island, Pipestone, MN

MnDOT


Rubber speed cushion, Charlotte, NC

The Charlotte Ledger


Painted curb extension, Denver, CO

HDR


Painted curb return radius reduction, New Hope, MN

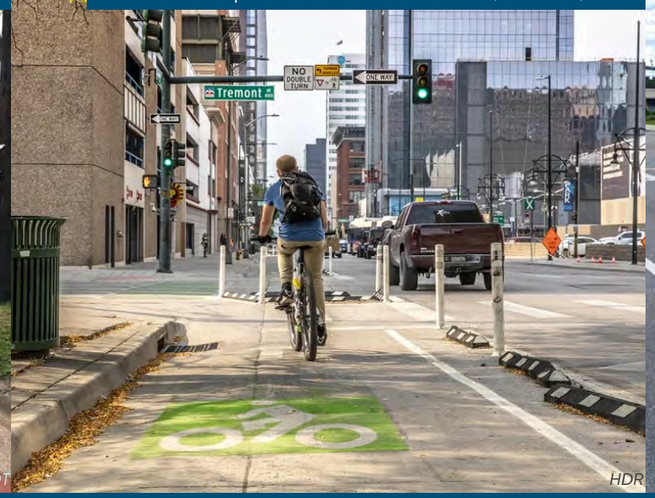
MnDOT


Paint and planter buffered bike lane, St. Petersburg, FL

HDR


Rubber raised crosswalk, Minneapolis, MN

MnDOT



Rubber and plastic buffered bike lane, Denver, CO

HDR



Plastic traffic separator, Oviedo, FL

Google



CHANGE TAKES TIME

This is Only the First Step

The Action Plan recommends improvements to many of the streets and intersections in the City of Winter Springs.

As those areas are improved, new needs will emerge — ***Vision Zero is iterative by its nature.***

The next steps include initiating Year 1 Actions and pursuing Federal funding.



Monitoring Progress is Critical to Evaluating Success

These performance measures are recommended for yearly tracking. They will help identify crash trends in real-time instead of waiting another five years. These performance measures help us understand our progress as we embark on zero traffic deaths by the years 2035 / 2050.

Recommended Performance Measures

In Winter Springs:	2024	2025	2026	2027	2028
Number of deadly traffic crashes					
Number of serious injury crashes					
Number of vulnerable user deadly traffic crashes					
Number of vulnerable user serious injury traffic crashes					
Number of deadly or serious injury crashes in USDOT underserved area					

On City Roads:	2024	2025	2026	2027	2028
Number of deadly traffic crashes					
Number of serious injury crashes					
Number of vulnerable user deadly traffic crashes					
Number of vulnerable user serious injury traffic crashes					
Number of deadly or serious injury crashes in USDOT underserved area					

The City of Winter Springs is not alone — all Counties and Cities in the MetroPlan Orlando Region are working together to ***Get to Zero. Together.***

Appendix

A. City Road Project Prioritization and Project Sheets

B. County and State Road Project Prioritization and Project Sheets



Appendix A:
City Road Project Prioritization and Project Sheets

CITY ROAD PRIORITY PROJECT LIST

*Note: Cost to be added for final draft.

PRIORITY RANK	SEGMENT	FROM	TO	LENGTH (MILES)	JURISDICTION	CITY	DISADVANTAGED SCORE (OUT OF 5)	MOTOR VEHICLE DEADLY OR SERIOUS CRASHES	VULNERABLE USER DEADLY OR SERIOUS CRASHES	CRASH SCORE PER MILE	PROJECT DESCRIPTION	OPINION OF PROBABLE COST*	PRIORITY SCORE
1	Sheoah Blvd	Silver Sea Rd	SR 434	0.47	City	Winter Springs	1	3	0	2286	Safety improvements to increase visibility and pedestrian safety. Add segment lighting, curve advance warning signage, LED enhanced signage, high friction surfaces, and speed cushions.	$60,000 - $410,000	52.5
2	Northern Way	Shetland Ave	Royal Oak Dr	0.54	City	Winter Springs	0	0	1	1804	Safety improvements to increase active transportation safety and manage speeds. Add a high visibility crosswalk, a mini roundabout, RRFB, a “Bikes May Use Full Lane” sign, and speed cushions.	$20,000 - $130,000	32.5

1. Sheoah Blvd, Silver Sea Rd to SR 434

Crash History (2018 - 22)

Deadly	Serious Injury
0 Pedestrian	0 Pedestrian
0 Bicyclist	0 Bicyclist
0 Motorcyclist	0 Motorcyclist
0 Motorist	3 Motorist
3 Total KSI	

Existing Conditions

C3R	Context Classification
25	Posted Speed Limit
	Operating Speed
Features	Raised medians, mid-block crosswalks, bike lane, segment lighting

Potential Solutions


Segment Lighting


Curve Warning Sign



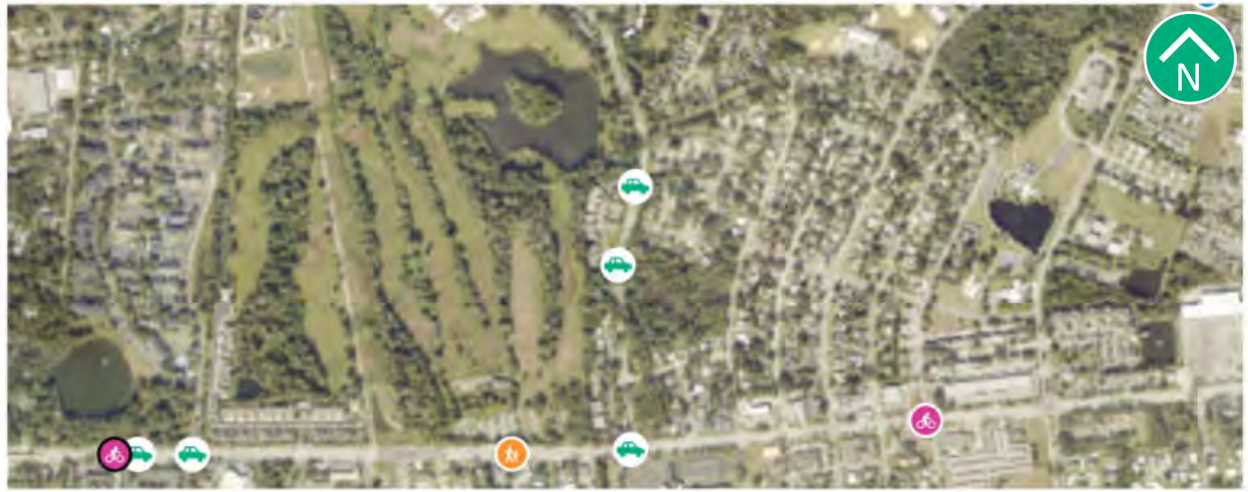
LED Enhanced Signage

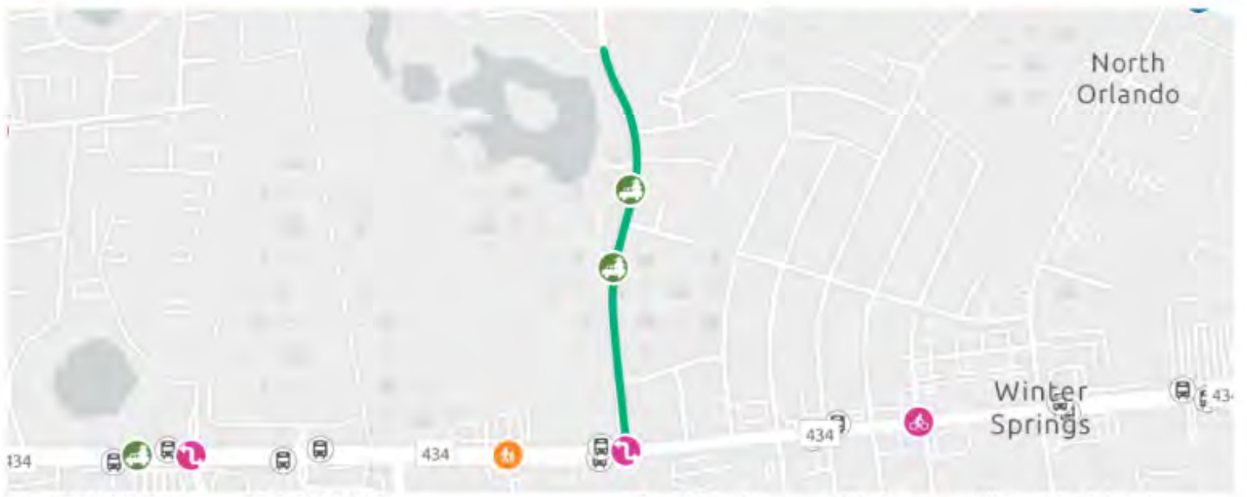

High Friction Surface Treatment


Speed Cushions

0.47 Miles
Crash Score: 2,286

Jurisdiction: City





CRASH MODE:
- Pedestrian
- Bicycle
- Motorcycle
- Motor Vehicle

CRASH TYPE:
- Angle
- Head On
- Left Turn
- Rear End
- Sideswipe
- Rollover
- Off Road
- Other

***Deaths shown with icon outlined in black**
- Death
- Bus Stops

FHWA PROVEN SAFETY COUNTERMEASURE

2. Northern Way, Shetland Ave to Royal Oak Dr

0.54 Miles
Crash Score: 1,804

Jurisdiction: City

Crash History (2018 - 22)

Deadly	Serious Injury
0 Pedestrian	0 Pedestrian
0 Bicyclist	1 Bicyclist
0 Motorcyclist	0 Motorcyclist
0 Motorist	0 Motorist
1 Total KSI	

Existing Conditions

C3R	Context Classification
25	Posted Speed Limit
	Operating Speed
Features	High-visibility crosswalks, segment lighting



Potential Solutions



High Visibility Crosswalk

Mini Roundabouts

Rectangular Rapid Flashing Beacon

Bikes May Use Full Lane Signage

Speed Cushions

Appendix B: County and State Road Project Prioritization and Project Sheets

COUNTY AND STATE ROAD PRIORITY PROJECT LIST

*Note: Cost to be added for final draft.

PRIORITY RANK	SEGMENT	FROM	TO	LENGTH (MILES)	JURISDICTION	CITY	DISADVANTAGED SCORE (OUT OF 5)	MOTOR VEHICLE DEADLY OR SERIOUS CRASHES	VULNERABLE USER DEADLY OR SERIOUS CRASHES	CRASH SCORE PER MILE	PROJECT DESCRIPTION	OPINION OF PROBABLE COST*	PRIORITY SCORE
1	SR 434	Wagner Pt	Apache Trl	0.62	State	Winter Springs	0	2	1	3254	Safety improvements to manage speed and intersections. Add segment lighting, RCLT, high visibility crosswalks, and pavement speed legends.	$100,000 - $1,330,000	82.5
2	SR 434	Belle Ave	Hayes Rd	1.24	State	Winter Springs	2	1	3	4040	Safety improvements to manage speed. Add a raised median, RCLT, speed cameras, a landscaped buffer, and restripe crosswalks.	$1,250,000 - $3,450,000	55

1. SR 434, Wagner Pt to Apache Trl

Crash History (2018 - 22)

Deadly		Serious Injury	
0	Pedestrian	1	Pedestrian
0	Bicyclist	0	Bicyclist
0	Motorcyclist	0	Motorcyclist
0	Motorist	2	Motorist
3	Total KSI		

Existing Conditions

C3C	Context Classification
25	Posted Speed Limit
56	Operating Speed
Features	Raised medians, bike lanes, sidewalks, landscaped median

Potential Solutions



Segment Lighting | Reduced Left-Turn Conflict Intersection | High Visibility Crosswalks | Pavement Speed Legends

0.62 Miles
Crash Score: 3,254

Jurisdiction: State





CRASH MODE:

- Pedestrian
- Bicycle
- Motorcycle
- Motor Vehicle

CRASH TYPE:

- Angle
- Head On
- Left Turn
- Rear End
- Sideswipe
- Rollover
- Off Road
- Other

***Deaths shown with icon outlined in black**

- Death
- Bus Stops

FHWA PROVEN SAFETY COUNTERMEASURE

2. SR 434, Belle Ave to Hayes Rd

1.24 Miles
Crash Score: 4,040

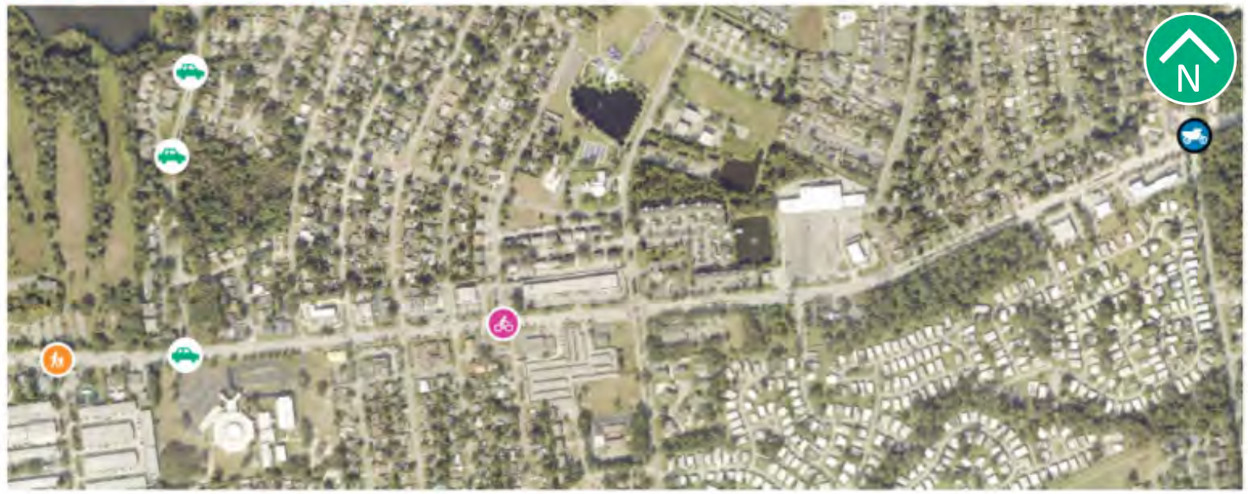
Jurisdiction: State

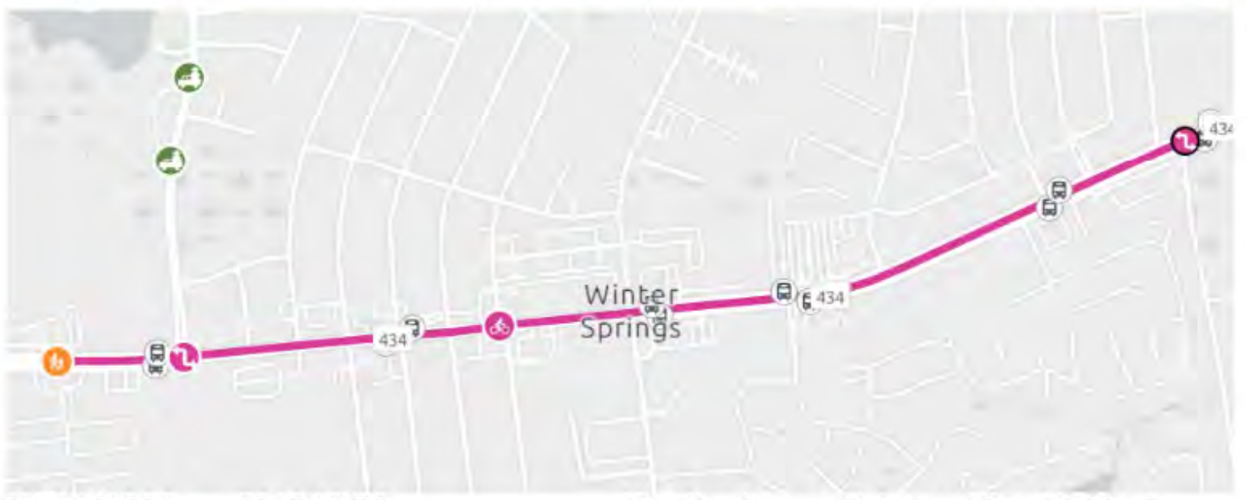
Crash History (2018 - 22)

Deadly		Serious Injury	
0	Pedestrian	1	Pedestrian
0	Bicyclist	1	Bicyclist
1	Motorcyclist	0	Motorcyclist
0	Motorist	1	Motorist
4	Total KSI		

Existing Conditions

C3C,C4	Context Classification
45	Posted Speed Limit
50	Operating Speed
Features	School zone, landscaped buffers





CRASH MODE: Pedestrian, Bicycle, Motorcycle, Motor Vehicle

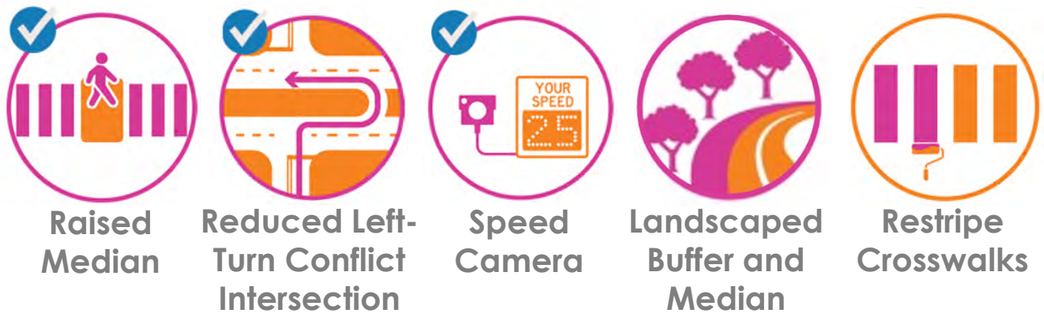
CRASH TYPE: Angle, Head On, Left Turn, Rear End, Sideswipe, Rollover, Off Road, Other

*Deaths shown with icon outlined in black

Death

Bus Stops

Potential Solutions



Raised Median

Reduced Left-Turn Conflict Intersection

Speed Camera

Landscaped Buffer and Median

Restripe Crosswalks

FHWA PROVEN SAFETY COUNTERMEASURE

VISION ZERO
CENTRAL FLORIDA

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Lara Bouck - lara.bouck@metroplanorlando.gov

Winter Springs Project Manager:
Terrilyn Rolle - trolle@winterspringsfl.org

CONSENT AGENDA ITEM 305

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Resolution 2024-25 Updating and Revising Parks Fees Schedule

SUMMARY

This Resolution, 2024-25 is being submitted to update and revise the existing Resolution 2024-03. This Resolution reflects a full day rental option for the Central Winds Pickleball Courts, an increase of Camp Sunshine rates and a ten percent increase of all non-resident fees for facility rentals and programming. Resolution 2024-25 reflects these changes on the fee schedule attached to the Resolution as "Exhibit A".

FUNDING SOURCE

N/A

RECOMMENDATION

Staff recommends the City Commission approve Resolution 2024-25 updating the schedule of fees for Parks and Recreation.

RESOLUTION NO: 2024-25

RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, FLORIDA, UPDATING AND REVISING THE SCHEDULE OF FEES FOR PARKS AND RECREATION FACILITY USES AND ACTIVITIES; PROVIDING FOR REPEAL OF PRIOR INCONSISTENT RESOLUTIONS; SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the City is granted the authority, under Section 2(b), Article VIII, of the State Constitution, to exercise any power for municipal purposes, except when expressly prohibited by law; and

WHEREAS, the City Commission has the authority to establish fees pursuant to section 166.201. Florida Statutes; and

WHEREAS, the City Commission desires to revise the fees for the City's Parks and Recreation Facility uses and activities; and

WHEREAS, the City Commission of the City of Winter Springs finds that this Resolution is in the best interests of the public health, safety, and welfare of the citizens of Winter Springs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, AS FOLLOWS:

Section 1. **Recitals.** The foregoing recitals are deemed true and correct and are hereby fully incorporated herein by this reference.

Section 2. **Fees Established.** The City Commission hereby adopts the fee schedule set in **Exhibit "A,"** attached hereto and fully incorporated herein by this reference.

Section 3. **Repeal of Prior Inconsistent Resolutions.** All prior inconsistent resolutions adopted by the City Commission, or parts of prior resolutions in conflict herewith, are hereby repealed to the extent of the conflict.

Section 4. **Severability.** If any section, subsection, sentence, clause, phrase, word, or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion hereto.

Section 5. **Effective date.** This Resolution shall become effective immediately upon adoption by the City Commission.

DONE AND ADOPTED in regular session of the City Commission of the City of Winter Springs, Florida, this 23rd day of September, 2024

_____

KEVIN McCANN, Mayor

ATTEST:

_____

CHRISTIAN GOWAN, City Clerk

Approved as to legal form and sufficiency for
The City of Winter Springs only:

_____

ANTHONY A. GARGANESE, City Attorney

EXHIBIT "A"
RESOLUTION 2024-25
(Fees effective 10/01/2024)

ADULT SPORTS Softball	RESIDENT $450 Per Season	NON-RESIDENT $450 Per Season
ALL BALLFIELDS/TURF FIELDS (Baseball, Softball, Soccer, Football, Lacrosse, open field – 2 hr minimum) CWP Upper Fields M-F After 5 & weekends CWP – Lower Fields M F After 5 & weekends All other fields M F After 5 & weekends Field Prep Parks Staff 5K Run Course	RESIDENT $30 / Hr* $40 / Hr* $20 / Hr* $30 / Hr* $15 / Hr* $20 / Hr* $25 / Field $25 / Hr $200 / Race*	NON-RESIDENT $54.50 / Hr* $73 / Hr* $36.50 / Hr* $54.50 / Hr* $27.25 / Hr* $36.50 / Hr* $27.50 / Field $27.50 / Hr $365 / Race*
PARK RENTAL Pre-Event Set Up / Post-Event Clean Up Full Day Park Rental Park Rental Security/Damage Deposit	 $150 / Day* $2,000* $500 refundable	 $272.25 / Day* $3,630* $500 refundable
RECREATIONAL CAMP Summer Camp	RESIDENT $170 / Week	NON-RESIDENT $255 / Week
PAVILION RENTALS Medium Pavilion Large Pavilion Trotwood Family Pavilion (4-hr min) Trotwood Family Pavilion (full day) Trotwood Family Pavilion Security/Damage Deposit	RESIDENT $40 / 4-hour block* $50 / 4-hour block* $35 / Hr* $250* $200 refundable	NON-RESIDENT $73 / 4-hour block* $91 / 4-hour block* $66.50 / Hr* $454* $200 refundable
BLUMBERG BLVD. GAZEBOS	RESIDENT $100 / 4-hour block* Any road closures will require a special event permit.	NON-RESIDENT $181.50 / 4-hour block* Any road closures will require a special event permit.
CIVIC CENTER RENTALS Weekdays before 5 (no minimum) After 5 & Weekends (4-hr minimum) Set Up (day before event if available) Civic Center Security/Damage Deposit SENIOR CENTER RENTAL After 5 Only Senior Center Security/Damage Deposit	RESIDENT $35 / Hr* $50 / Hr* $20 / Hr* $200 refundable $100 / Hr* $200 refundable	NON-RESIDENT $63.75 / Hr* $90.75 / Hr* $22 / Hr* $200 refundable $181.50 / Hr* $200 refundable
SENIOR CENTER PROGRAMS AND THERAPY POOL The Senior Center offers recreational, cultural, and educational programs as well as aqua aerobics at the therapy pool.	WINTER SPRINGS RESIDENT Senior Center - $20 / Year Therapy Pool - $40 / Year Guest Fee $5 per visit for Senior Center & Therapy Pool.	NON-RESIDENT Senior Center - $66 / Year Therapy Pool - $110 / Year Guest Fee $5 per visit for Senior Center & Therapy Pool.
PICKLEBALL COURT RESERVATION Full Day Pickleball Rental	WINTER SPRINGS RESIDENT $5.00 per court per hour. $2000*	NON-RESIDENT $9.00 per court per hour $3630*

*Prices do not include Sales Tax

CONSENT AGENDA ITEM 306

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Resolution 2024-26: Joining the American Flood Coalition

SUMMARY

Mayor McCann requested that a resolution be drafted to join the American Flood Coalition at no cost to the City. Attached to this agenda item is an overview of the American Flood Coalition as well as a Resolution to authorize the City of Winter Springs to join.

FUNDING SOURCE

RECOMMENDATION

Staff recommends approving Resolution 2024-26 to join the American Flood Coalition at no cost to the City and further to authorize Mayor McCann to sign the attached Resolution and Executive Decision Letter.

AMERICAN FLOOD COALITION

FloodCoalition.org

Who we are

We're a 501(c)3 nonprofit organization and nonpartisan coalition advancing solutions to flooding and sea level rise. We proactively address the growing threat of higher seas, stronger storms, and more frequent floods by advocating for smarter planning and investments that protect our nation's residents, economy, and military installations.



What we do

- **Unite voices in a powerful nonpartisan coalition** to advocate for federal funding and better policy
- **Leverage best-in-class communication tools** to engage citizens on flooding and sea level rise challenges and solutions
- **Share best practices in a national forum** to support local and state-level responses to flooding and sea level rise

The American Flood Coalition is a member-driven nonprofit organization. There are no costs or legal obligations associated with joining and members are free to withdraw at any point.

Our 4 pillars for solutions to flooding and sea level rise

Economy
Invest in infrastructure and natural solutions that boost the economy and protect property values

Rebuilding
Build back stronger to protect communities from future flooding

Communities
Use smart planning to keep communities safe and save taxpayer dollars

Military
Ensure our military installations are ready to deploy 365 days a year

RESOLUTION 2024-26

A RESOLUTION OF THE CITY OF WINTER SPRINGS, FLORIDA PROVIDING FOR THE CITY OF WINTER SPRINGS TO BECOME A MEMBER OF THE AMERICAN FLOOD COALITION; AND PROVIDING FOR AN EFFECTIVE DATE.

Whereas, proactively investing to prevent flooding is a wiser use of resources than spending on flooding recovery, as exemplified by FEMA research showing that $1 spent on disaster prevention saves up to $7 in recovery costs; and

Whereas, national coordination and support are necessary for communities to fully address the challenge of flooding and sea level rise, and the American Flood Coalition provides a platform advocating for national solutions to flooding and sea level rise that invest in and protect our coastal communities; and

Whereas, the American Flood Coalition is a no-cost forum for best practices and source of support in developing local and state-level responses to flooding and sea level rise that will enhance the City of Winter Springs resilience effort; and

Whereas, flooding and sea level rise are important issues that our residents deserve to understand and the American Flood Coalition provides opportunities and tools to communicate with residents on flooding challenges and solutions; and

Whereas, joining the American Flood Coalition will aid the City's efforts to protect against flooding without requiring any financial support or dues from the Winter Springs City Commission; and

Whereas, the Winter Springs City Commission finds that joining the American Flood Coalition will promote the welfare of Winter Springs residents and ensure the prosperity of the Winter Springs economy by accelerating solutions to sea level rise and flooding.

Now therefore, be it Resolved by the City Commission of the City of Winter Springs, Florida as follows:

The City of Winter Springs recognizes the need to advance national solutions to sea level rise and flooding and will work as a member of the American Flood Coalition to safeguard the welfare of the City of Winter Springs residents.

PASSED AND ADOPTED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, FLORIDA IN A REGULAR MEETING ASSEMBLED ON SEPTEMBER 23, 2024

In witness whereof I have hereunto by my hand and caused the seal to be affixed.

_____

Kevin McCann, Mayor

ATTEST: _____

City Clerk

Kevin McCann
Mayor

Matt Benton	**Victoria Bruce**	**Ted Johnson**	**Cade Resnick**	**Rob Elliott**
Commissioner	**Commissioner**	**Commissioner**	**Commissioner**	**Commissioner**

CITY OF WINTER SPRINGS, FLORIDA
OFFICE OF THE MAYOR
KEVIN McCANN

1126 EAST STATE ROAD 434
WINTER SPRINGS, FLORIDA 32708-2799
Telephone (407) 327-5956

Melissa Roberts
Executive Director
American Flood Coalition
1501 M St. NW Suite 430 Washington, DC 20005

September 23, 2024

Dear Ms. Roberts,

Through my authority as Mayor, I am submitting this letter to you as documentation of the City of Winter Springs decision to join the American Flood Coalition.

As a member of the American Flood Coalition we can apply the tools and resources provided by the coalition to improve our communications with residents on flooding challenges and solutions. There are also opportunities to use these resources in order to advance projects and programs within our community. Lastly, our staff is looking forward to using the expertise of the American Flood Coalition staff as a source of support in developing responses to flooding and sea level rise.

I understand that there are no financial or legal ties or obligations to membership.

Sincerely,

_____
Kevin McCann, Mayor

CONSENT AGENDA ITEM 307

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Approval of the Minutes from the Monday, August 12, 2024 City Commission Regular Meeting

SUMMARY

N/A

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve the August 12, 2024 City Commission Regular Meeting Minutes as presented.

CITY COMMISSION
REGULAR MEETING MINUTES

UNAPPROVED

MONDAY, AUGUST 12, 2024 AT 6:30 PM

CITY HALL – COMMISSION CHAMBERS
1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER
Mayor Kevin McCann called the Regular Meeting of Monday, August 12, 2024 of the City Commission to order at 6:34 p.m. in the Commission Chambers of the Municipal Building (City Hall, 1126 East State Road 434, Winter Springs, Florida 32708).

Roll Call:
Mayor Kevin McCann, present
Deputy Mayor Matt Benton, present
Commissioner Victoria Bruce, present
Commissioner Ted Johnson, present
Commissioner Cade Resnick, present
Commissioner Rob Elliott, present via telephone
Interim City Manager Phil Hursh, present
City Attorney Anthony Garganese, present
City Clerk Christian Gowan, present

Pastor Bob Melhorn led the invocation followed by the Pledge of Allegiance.

Commissioner Resnick asked that Items 300 and 306 be discussed prior to the adoption of the Consent Agenda. Commissioner Elliott asked that Items 305 and 307 be discussed prior to the adoption of the Consent Agenda. There was no objection and the agenda was adopted..

AWARDS AND PRESENTATIONS
100) Presentation of Retirement Resolution 2024-10 for Code Compliance Officer Terri Sanchez

Chief Matt Tracht recognized Terri Sanchez for her years of service with the Winter Springs Police Department. Mayor McCann read Resolution 2024-10 recognizing Terri Sanchez for her years of service.

Ms. Sanchez noted her many years of service and thanked those in attendance including residents and her family.

INFORMATIONAL AGENDA
200) Current Development Projects Summary

No discussion.

PUBLIC INPUT
Mayor McCann opened Public Input.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs noted events coming up at Central Winds Park and concerns about accessibility, discussed concerns about the Winding Hollow turn lane project and spoke about speed limit concerns along State Road 434.

Mr. Ken Spalthoff, 331 Wooded Vine Drive, Winter Springs noted a harassment complaint in regards to Commissioner Bruce.

Mayor McCann asked that Mr. Spalthoff not direct remarks at one Commissioner. Brief discussion followed on the rules of addressing the Mayor and Commission.

Mr. Spalthoff continued his comments and noted filing an ethics complaint against Commissioner Bruce.

UNAPPROVED

Mr. Art Gallo, 199 Nandina Terrace, Winter Springs noted that he was glad to see the City Manager search update item, noted previous discussion on the pension plan and comparisons and thought the city pension should be reviewed for competitiveness and further discussed to ensure retention of city employees.

Mr. Bryan Bruce, 129 Cherry Creek Circle, Winter Springs spoke in defense of his wife, Commissioner Bruce, noted comments made by Mr. Spalthoff and though Mr. Spalthoff was in violation of the Code of Conduct/Ethics.

Ms. Gina Shafer, Winter Springs Village, Winter Springs shared concerns about following the Code of Conduct from Commissioners, concerns about comments made about the Interim City Manager, and thanked Mr. Hursh for his service to the city.

Mayor McCann closed Public Input.

CONSENT AGENDA

300) Non-Ad Valorem Assessment Roll, Assessment Rates, Assessment Summary and FY 2024-2025 Annual Assessment Roll for Tax Year 2024 relating to the Oak Forest Wall and Beautification District, Tuscawilla Lighting and Beautification Assessment Area, and Tuscawilla Phase III Assessment Areas.

Commissioner Resnick asked about the rate for the Tuscawilla Lighting and Beautification Assessment Area and why it was not being increased. Ms. Holly Queen, Director, Finance Department noted a planned rate study that was necessary to make any increase to the rate and explained that he assessment area was currently at its max rate. Brief discussion followed on the anticipated costs of repairing the Tuscawilla fountain.

301) Surplus Assets

No discussion.

302) Client Consent for Registered Investment Advisor Unification

No discussion.

303) Traffic Signal Maintenance Agreement with Seminole County

No discussion.

304) Award of ITB #05-24-02 BI (Rough Cut Mowing & Tilling Services) to Outdoor With It, LLC

No discussion.

305) Updated 2024 City of Winter Springs Community Events Calendar

Commissioner Elliott asked about adding a fall Fish Winter Springs event. Mr. Brian Dunigan, Director, Operations Department noted the need to work with a state agency that provides fishing poles before moving forward with anything.

Mr. Leonard Hartman, Director, Parks and Recreation Department noted a typographical error on the calendar related to the date of the Central Winds Music Festival.

306) 2024 Hometown Hero Nomination Approval

UNAPPROVED

Commissioner Resnick asked about the potential recognition of Gerry Marino and if more than one individual should be recognized. Brief discussion followed.

307) Resolution 2024-20: Temporarily Suspending Sign Regulations.

Commissioner Elliott asked about the specific parts of the code that were being suspended. Ms. Terrilyn Rolle, Director, Community Development Department noted that this resolution was mainly to abate code enforcement issues related to signs during the election period.

308) Resolution 2024-22 Recognizing the Retirement of Captain Doug Seely from the Police Department.

No discussion.

309) Approval of the Minutes from the Monday, July 15, 2024 City Commission Budget Workshop

310) Approval of the Minutes from the Monday, July 15, 2024 City Commission Regular Meeting

No discussion.

311) Approval of the Minutes from the Monday, July 22, 2024 City Commission Special Meeting

No discussion.

"MOTION TO ACCEPT CONSENT AGENDA." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE(AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

PUBLIC HEARINGS AGENDA

400) First Reading of Ordinance 2024-07: Amendments to Chapter 6, Buildings and Building Regulations

MOTION TO READ BY TITLE ONLY. MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

Attorney Garganese read Ordinance 2024-07 by title and briefly discussed the proposed changes.

Mayor McCann opened the Public Hearing for Item 400.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 400.

"MOTION TO APPROVE ITEM 400." [APPROVE THE FIRST READING OF ORDINANCE 2024-07.] MOTION BY COMMISSIONER RESNICK. SECONDED BY COMIMSSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE(AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

UNAPPROVED

401) First Reading of Ordinance 2024-08: Amendments to Chapter 20, Zoning

MOTION TO READ BY TITLE ONLY. MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

Attorney Garganese read Ordinance 2024-08 by title and briefly discussed the proposed changes.

Mayor McCann opened the Public Hearing for Item 400.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 400.

"MOTION TO APPROVE ITEM 401." [APPROVE THE FIRST READING OF ORDINANCE 2024-08] MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE(AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

REGULAR AGENDA

500) Waste Pro Annual Performance Review

Ms. Susie Dolan and Mr. Eric Saxton, Waste Pro, 3705 St. Johns Parkway, Sanford presented to the Commission in response to the recent customer satisfaction survey, reviewed Waste Pro services, and shared concerns about the survey's methodology, specifically the inclusion of the "other" category in the calculation of the satisfaction rate.

Discussion followed on review of the data, the method of conducting the survey, the longstanding methodology, and the potential of contacting the University of Central Florida (UCF) to discuss concerns.

Attorney Garganese suggested submitting a written request to UCF to gain more information that could be presented to the city staff and Waste Pro.

Further discussion followed on the margin of error, analysis of the results, and requirements in other cities. It was noted that no other city required a customer satisfaction survey to be conducted, and that no other city provided bonuses to Waste Pro.

There was brief discussion regarding satisfaction with the service being provided by Waste Pro and the Mayor then summarized the discussion and noted that Waste Pro would write a letter detailing their concerns to be forwarded to UCF by the city and seek their feedback related to the survey.

501) City Manager Search Update from Slavin Management Consultants

Mayor McCann introduced the item and noted receiving information on four highly qualified candidates for the City Manager position.

Mr. Bob Slavin, Slavin Management Consultants recommended moving forward with interviews of the four candidates but did not suggest closing applications at this time.

Discussion followed on moving forward in a timely manner, scheduling availability, and the Commission proposed an August 26, 2024 Workshop to conduct the interviews throughout the day.

UNAPPROVED

Further discussion followed on notice requirements and when a candidate, if selected, would be able to start at the city, the use of a ranking system, and in-person versus video interviews.

Mr. Slavin noted that he would be sending additional information, including answers to a detailed questionnaire to the Commission and further advised that candidates should be given the option to attend in-person or via Zoom or similar technology.

The Mayor and Commission agreed to move forward with a Workshop on August 26, 2024 to take place during the day to conduct interviews and to further discuss next steps at the Regular Meeting scheduled to begin at 6:30 pm on August 26, 2024.

502) Discussion on the Senior Center Municipal Services Agreement

Mayor McCann noted this was brought forward at a Commissioner's request and asked if there was interest in having this discussion.

Commissioner Resnick noted his request was to have a Workshop with staff, the Winter Springs Senior Association, and the Commission to develop an updated Municipal Services Agreement.

Discussion followed funding for the Senior Center and interest in postponing the discussion until a permanent City Manager was in place, and maintaining the 2009 Municipal Services Agreement.

Further discussion followed on exploring alternative funding sources for Senior Center services, a desire to hear from the Winter Springs Senior Association, and coming back to the discussion in six weeks or so, potentially in January. There was no objection to this request.

503) Appointment Opportunities for City Boards and Committees/Florida League of Cities Policy Committees

The Mayor and Commission first discussed their service on Florida League of Cities Legislative Policy Committees. The following decisions were agreed upon.

- Mayor Kevin McCann to continue to serve of the Finance & Taxation Committee
- Deputy Mayor Matt Benton to continue to serve on the Municipal Operations Committee
- Commissioner Victoria Bruce to continue to serve on the Utilities, Natural Resources, and Public Works Committee
- Commissioner Cade Resnick to continue to serve on the Intergovernmental Relations, Mobility, and Emergency Management Committee

DEPUTY MAYOR BENTON NOMINATED KOK WAN MAH TO BE REAPPOINTED TO THE PLANNING AND ZONING BOARD. SECONDED BY COMMISSIONER RESNICK. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

DEPUTY MAYOR BENTON NOMINATED JOSE GALAN TO SERVE ON THE PARKS AND RECREATION ADVISORY COMMITTEE. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

COMMISSIONER ELLIOTT NOMINATED MARCO SANTORO TO BE APPOINTED TO THE BOARD OF TRUSTEES. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

UNAPPROVED

504) New Business

Commissioner Bruce asked about the remaining cover letters and resumes for candidates and it was noted they were forthcoming. Commissioner Bruce then asked about a pre-application meeting regarding the Winter Springs Marketplace corner lot. Attorney Garganese noted Mr. Ryan Stahl had inquired about filing an application for a convenience store at that location.

Commissioner Bruce asked for an update on the Winter Springs Golf Course land acquisition related to the West Wastewater Treatment Plant. Interim Manager Hursh explained that the city was in the process of negotiations and cited statutory exemptions related to public disclosure. Further discussion followed on eminent domain and the importance of starting the conversation.

Attorney Garganese reviewed the city's authority, the current pursuit of voluntary acquisition, and the process and timeline associated with engaging in eminent domain. Attorney Garganese also noted that the Commission could direct staff to initiate preparation work and offered to share more information upon request.

Commissioner Bruce requested an itemized description of capital outlays in the Fiscal Year (FY) 2025 budget.

Commissioner Resnick discussed concerns about the actions and comments made by Ken Spalthoff.

MOTION TO REMOVE KEN SPALTHOFF FROM THE PLANNING AND ZONING BOARD BASED ON THE BEHAVIOR HE HAS DISPLAYED ONLINE AND THE BEHAVIOR HE DISPLAYED TONIGHT. MOTION BY COMMISSIONER RESNICK.

The motion was deemed inappropriate to be brought up during new business and Commissioner Resnick then requested that it be brought back for discussion at the next Commission meeting.

Commissioner Resnick noted he had been in contact with a group from Highlands Elementary School that was interested in singing at Winter Wonderland and would like to be in the parade.

Commissioner Elliott asked about the definition of New Business. Attorney Garganese noted that there was a definition and agreed to forward this to the Mayor and Commission.

REPORTS

600) Interim City Manager Phil Hursh

- Noted the bids for the Winding Hollow deceleration lane would be opened on Wednesday;
- Noted the Michael Blake traffic signal was set to go to flashing the next day and scheduled to be fully operational on August 22, 2024.

601) City Attorney Anthony A. Garganese

- No report

602) City Clerk Christian Gowan

- Corrected a statement made earlier in the meeting and clarified that Gerry Marino had not previously been named a Hometown Hero

603) Seat Five Commissioner Rob Elliott

- No report

UNAPPROVED

604) Mayor Kevin McCann

- Noted his planned attendance at the Florida League of Cities Annual Conference;
- Noted a tour of Rescue Outreach Mission with Oviedo Mayor Megan Sladek;
- Noted recent Chamber luncheon with a presentation from Seminole County Emergency Management

605) Seat One Commissioner/Deputy Mayor Matt Benton

- No report

606) Seat Two Commissioner Victoria Bruce

- Noted a request for a "Do Not Feed the Ducks" sign at the Trotwood dock;
- Noted concerns about removal of tennis courts. Interim Manager Hursh clarified that the tennis courts were being resurfaced and not replace with pickleball.
- Sought to clarify CALNO comments from a previous meeting;
- Provided copies of ethics complaints filed by Ken Spalthoff and responses from the Commission on Ethics declining to pursue the matter(s) and noted that she intended to file an ethics complaint against Mr. Spalthoff.

607) Seat Three Commissioner Ted Johnson

- . No report

608) Seat Four Commissioner Cade Resnick

- Noted he was continuing to look into pension options and what other cities were doing;
- Asked that the Commission clarify how the Hometown Hero was picked and previous involvement of the Rotary Club and their desire to continue to be involved;
- Noted Rotary's desire to partner with the city for events;
- Noted flooding concerns as a result of recent rain storms. Brief discussion followed on the authorization of a stormwater study and the importance of addressing stormwater throughout the city.

PUBLIC INPUT

Mayor McCann opened Public Input..

Ms. Karen Meyer, 741 Andover Circle, Winter Springs noted she thought Waste Pro made valid points, thought the survey was flawed, and was in support of the proposed action.

Ms. Joanne Krebs, 1002 Taproot Circle, Winter Springs discussed concerns with the inclusion of "other" and noted she thought the sample size was too small and data was not scrubbed.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs spoke about Winding Hollow and stormwater concerns. Furthermore, she noted email was not the best option for conducting the Waste Pro survey.

Mr. Art Gallo, 199 Nandina Terrace, Winter Springs noted that he agreed with Waste Pro and discussed his recollection about the West Wastewater Treatment Plant and a lack of discussion about the need for more land.

Mayor McCann closed Public Input.

UNAPPROVED

ADJOURNMENT
Mayor McCann adjourned the meeting at 9:57 p.m.

RESPECTFULLY SUBMITTED:

_____
CHRISTIAN D. GOWAN, MPA
CITY CLERK

APPROVED:

_____
MAYOR KEVIN McCANN

UNAPPROVED

NOTE: These Minutes were approved at the _____, 2024 City Commission Regular Meeting.

CONSENT AGENDA ITEM 308

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Approval of the Minutes from the Monday, August 26, 2024 City Commission Workshop

SUMMARY

N/A

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve the August 26, 2024 City Commission Workshop Minutes as presented.

CITY COMMISSION
WORKSHOP
MINUTES

UNAPPROVED

MONDAY, AUGUST 26, 2024 AT 9:30AM

CITY HALL - COMMISSION CHAMBERS
1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER
Mayor Kevin McCann called the City Commission Workshop of Monday, August 26, 2024 to order at 9:35 AM in the Commission Chambers of the Municipal Building (City Hall, 1126 East State Road 434, Winter Springs, Florida 32708).

Roll Call:
Mayor Kevin McCann, present
Deputy Mayor Matt Benton, present via teleconference
Commissioner Victoria Colangelo, present
Commissioner Ted Johnson, present – arrived at 9:36am
Commissioner Cade Resnick, present
Commissioner Rob Elliott, present
City Clerk Christian Gowan, present

A moment of silence was held, followed by the Pledge of Allegiance.

There were no changes made to the agenda and the agenda was adopted without objection. Brief discussion followed on the use of the questions developed during the previous search and the opportunity to ask follow-up questions.

PUBLIC INPUT
Mayor McCann opened Public Input
No one addressed the Commission.
Mayor McCann closed Public Input.

THE MEETING WAS RECESSED AT 9:42 AM AND RECONVENED AT 9:57 AM

DISCUSSION ITEMS
1) Candidate Interview – Rich Reade (10:00 AM)

The Mayor and Commission asked the 19 agreed-upon questions, Mr. Reade provided answers, and follow-up questions were asked throughout the process.

The Commission then gave Mr. Reade an opportunity to ask questions of the Commission.

MAYOR McCANN RECESSED THE MEETING AT 11:53 AM.

2) Candidate Interview – David Jones (1:00 PM)

MAYOR McCANN CALLED THE MEETING BACK TO ORDER AT 1:03 PM
Note: Mr. Jones appeared before the Commission via teleconference (GoToMeeting)

The Mayor and Commission asked the 19 agreed-upon questions, Mr. Jones provided answers, and follow-up questions were asked throughout the process.

The Commission then gave Mr. Jones an opportunity to ask questions of the Commission.

MAYOR McCANN RECESSED THE MEETING AT 2:39 PM.

3) Candidate Interview – Kevin Sweet (3:00 PM)

MAYOR McCANN CALLED THE MEETING BACK TO ORDER AT 3:03 PM

UNAPPROVED

The Mayor and Commission asked the 19 agreed-upon questions, Mr. Sweet provided answers, and follow-up questions were asked throughout the process.

The Commission then gave Mr. Sweet an opportunity to ask questions of the Commission. Mr. Sweet provided a proposed 90-day plan to the Commission for their review[1].

PUBLIC INPUT
Mayor Kevin McCann opened Public Input.

Ms. Gina Shafer, Winter Springs Village, Winter Springs noted she had watched all interview conducted and thought it was inappropriate to ask about salary expectations in this setting, thought good candidates had been presented.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs spoke about the importance of communication.

Mayor Kevin McCann closed Public Input.

ADJOURNMENT

Mayor McCann adjourned the meeting at 4:51 PM.

RESPECTFULLY SUBMITTED:

_____
CHRISTIAN D. GOWAN, MPA
CITY CLERK

APPROVED:

_____
MAYOR KEVIN MCCANN

UNAPPROVED

NOTE: These Minutes were approved at the _____, 2024 City Commission Regular Meeting.

[1] The referenced plan provided by Kevin Sweet is attached at the end of these Minutes.

Kevin A. Sweet
Candidate for City Manager

City of Winter Springs

City Manager
90-Day Entry Plan

Objective: Establish a strong foundational understanding of the city's current operations and build key relationships. Develop strategic frameworks and begin implementing priority Commission initiatives, ensuring alignment with the City's vision and community values.

Orientation and Relationship Building

Meet and Greet

City Commission and Key Stakeholders:

- Conduct one-on-one introductory meetings with all City Commissioners to understand their priorities, goals, and vision for Winter Springs. Establish a regular weekly meeting schedule for individual updates and feedback sessions.
- Meet with heads of all departments to gain insights into their roles, challenges, and current projects. This will include understanding each department's operational priorities and any immediate issues they are facing.
- Conduct introductory meetings with staff, residents, leaders from local community organizations, businesses, and educational institutions. Understand their concerns, expectations, and opportunities for collaboration.
- Engage with relevant stakeholders from surrounding municipalities and regional entities to foster collaborative relationships and explore collaborative opportunities.

Learn the Culture and Operations

Understanding City Dynamics:

- Participate in a comprehensive orientation about Winter Springs' history, culture, governance structure, and community dynamics. This includes familiarizing with the city's key documents, such as the City Charter, Budget, Codes, Personnel Policies, Comprehensive Plan, and other guiding policies.
- Review current strategic plans, past reports, and ongoing initiatives to gain a thorough understanding of the operational landscape, including key projects like the wastewater treatment facilities, water, stormwater and bond rating upgrade.
- Conduct a thorough review of Winter Springs' financial policies, zoning laws, and land use plans to ensure alignment with future growth and development strategies.
- Shadow Key Personnel - Spend time shadowing key personnel in various departments to gain firsthand insights into daily operations, challenges, and workflows. This will provide a deeper understanding of the city's internal processes and help build rapport with staff.

Kevin A. Sweet
Candidate for City Manager

Initial Assessments

Operational Review:

- Begin assessing the status of current projects and operations within key areas of responsibility.
- Identify immediate challenges or issues that require short-term intervention or strategic reorientation. This includes evaluating the ongoing wastewater treatment plant project, stormwater management needs, and emergency preparedness protocols.
- Conduct site visits to all city facilities and key infrastructure, including parks like Central Winds Park, senior center, and public safety facilities, within the first 30 days to understand their condition and operational effectiveness.
- Evaluate Technology and Innovation Needs. Assess the city's current use of technology and identify opportunities for technological enhancements or innovations that could improve service delivery and operational efficiency, such as expanding online services through the Civic Access Portal.

Resource Evaluation

Financial and Resource Assessment:

- Review financial, human, and natural resources to ensure they are being utilized efficiently and align with strategic goals. This includes analyzing the city's budget, expenditures, and revenue streams to identify opportunities for optimization.
- Evaluate the current staffing levels and organizational structure to ensure they support the city's strategic priorities and service delivery goals.
- Launch any new initiatives that have been approved by the City Commission and ensure they are integrated seamlessly with ongoing operations.
- Assess Grant Opportunities and Funding Sources. Working closely with the finance team identify and evaluate potential grant opportunities, federal and state funding, and alternative revenue sources that could support city projects, particularly those related to infrastructure.

Communication Framework

Internal and External Communication:

- Establish regular communication channels with the City Commission and key stakeholders to ensure transparency and facilitate ongoing dialogue. This includes providing updates on ongoing projects, emerging issues, and strategic initiatives.
- Implement a structured schedule of regular meetings with department heads and key stakeholders within the community. These meetings will facilitate a two-way communication flow that ensures alignment and allows for the sharing of concerns or suggestions.
- Support and enhance public communications that leverage the city's website, social media platforms, newsletters, and other channels to keep residents informed and engaged.
- Develop an internal communication plan to ensure staff across all departments are informed and engaged, promoting a cohesive organizational culture and ensuring alignment with the city's strategic priorities.

Kevin A. Sweet
Candidate for City Manager

Strengthen Intergovernmental Relations

Building Collaborative Partnerships:

- Initiate contact with relevant federal, state, and local government agencies to develop and strengthen existing relationships and explore new partnerships. This includes coordinating with county and neighboring municipalities to address shared challenges such as stormwater management and emergency preparedness.
- Engage with neighboring municipalities to explore opportunities for shared services and regional initiatives that can enhance efficiency and reduce costs.
- Join State and regional Committees/Associations. Actively participate to represent Winter Springs' interests, share best practices, and advocate for regional collaboration on key issues.

Community Engagement

Enhancing Resident Participation:

- Increase engagement efforts with residents to ensure their needs and views are actively incorporated into city planning and decision-making processes. This includes organizing city hall and community workshops.
- Continue engagement with various stakeholders across Winter Springs, including businesses, nonprofits, and educational institutions, to align efforts and foster collaborative relationships.
- Working with the communication team to create a comprehensive community engagement plan that includes diverse outreach strategies such as digital engagement tools, focus groups, and neighborhood meetings to ensure inclusive participation from all segments of the community.

Performance Monitoring

Establishing Accountability Measures:

- Develop and implement key performance indicators (KPIs) for all major initiatives and operations to monitor progress and assess the impact of implemented strategies. This includes creating a performance dashboard that is regularly reviewed by the City Commission and shared with the public.
- Conduct regular reviews with department heads to ensure that all city operations are aligned with strategic goals and are achieving desired outcomes.
- Establish a continuous improvement program that encourages departments to regularly review and refine their processes and procedures, fostering a culture of innovation and excellence in service delivery.

CONSENT AGENDA ITEM 309

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Approval of the Minutes from the Monday, August 26, 2024 City Commission Regular Meeting

SUMMARY

N/A

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve the August 26, 2024 City Commission Regular Meeting Minutes as presented.

CITY COMMISSION
REGULAR MEETING MINUTES

UNAPPROVED

MONDAY, AUGUST 26, 2024 AT 6:30 PM

CITY HALL – COMMISSION CHAMBERS
1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER
Mayor Kevin McCann called the Regular Meeting of Monday, August 26, 2024 of the City Commission to order at 6:31 p.m. in the Commission Chambers of the Municipal Building (City Hall, 1126 East State Road 434, Winter Springs, Florida 32708).

Roll Call:
Mayor Kevin McCann, present
Deputy Mayor Matt Benton, present
Commissioner Victoria Bruce, present
Commissioner Ted Johnson, present
Commissioner Cade Resnick, present
Commissioner Rob Elliott, present
Interim City Manager Phil Hursh, present
City Attorney Anthony Garganese, present
City Clerk Christian Gowan, present

Pastor Kyle Stewart led the invocation followed by the Pledge of Allegiance.

Commissioner Bruce asked that Item 302 be discussed prior to approval of the consent agenda. There was no objection and the agenda was adopted.

AWARDS AND PRESENTATIONS
100) City of Winter Springs 2023 Consumer Confidence Report and Potable Water Update

Mr. Bilal Iftikhar, Director, Utilities Department noted that the City of Winter Springs had met all criteria, discussed potable water projects that the City had undertaken, future plans, and reviewed ongoing communications with the St. Johns River Water Management District (SJRWMD) and Florida Department of Environmental Protection (FDEP).

Mr. Scott Richards, Carollo Engineers, reviewed the 2023 Consumer Confidence Report (Annual Water Quality Report), reviewed regulatory limits and. next steps, and noted a wastewater update would be provided at a later date.

Discussion followed on the Lake Jesup Reclaimed Water Augmentation Plant, specifically regarding known issues and funding being sought, the city exceeding its consumptive use permit (CUP), and efforts to expand reclaimed water availability to help address the issue.

Mr. Iftikhar noted staff was looking for the best use of funds and thought CUP exceedance could occur even with reclaimed expansion. Mr. Iftikhar relayed that the SJRWMD was willing to work with the city as long as effort was being shown to reduce potable water usage and expand reclaimed.

Discussion followed on primary versus secondary standards, clarification of detected versus maximum contaminant levels, previous trihalomethane (TTHM) exceedances and improvements that had been made, and results of voluntary testing that showed PFAs and 1-4 dioxane were not detected in the City of Winter Springs water.

INFORMATIONAL AGENDA
200. Not Used

PUBLIC INPUT
Mayor McCann opened Public Input.

UNAPPROVED

Mr. Chad Cartledge, 282 Tavestock Loop, Winter Springs thanked the Commission for allowing Running for Heroes to participate in the 9/11 Memorial Ceremony, noted 9/11 Memorial Run and Zechariah's last race as runner. Mr. Cartledge further spoke about police pay and encouraged looking into incentives to retain and recruit officers or benefits for experienced officers.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs thought the consent agenda should not be used for major items, shared concerns about speed limits and the Winding Hollow deceleration lane project, and encouraged more money being spent on the police department.

Interim Manager Hursh noted lowest bid was $1.6 million, more than the amount that was authorized by Metroplan and had agreed to fund the difference.

Ms. Janet Pinell, The Savoy, Winter Springs thanked the City/Commission for the new traffic signal coming on ahead of schedule and then discussed a potential Chick-fil-a and traffic concerns.

Ms. Sarah Baker, 1551 Winter Springs Boulevard, Winter Springs thanked the Mayor and Commission for recognition of National Women's Equality Day and hoped for a proclamation in the future.

Ms. Gina Shafer, Winter Springs Village, Winter Springs thanked the Mayor and Commission for taking time to interview city manager candidates and thought all were qualified, thanked the Winter Springs Police Department for their handling of an issue on State Road 434 and Michael Blake Blvd, spoke about comments related to the new traffic signal, and discussed religious freedom and concerns about first amendment violations.

Mr. Ken Greenberg, 1635 White Dove Drive, Winter Springs representing the Winter Springs Community Association noted a survey related to the city manager job, noted attendance at interviews held earlier in the day, noted he was in support of Commissioner Bruce and shared concerns about Ken Spalthoff's comments and conduct and thought he should be removed from the Planning and Zoning Board.

Mr. Art Gallo, 199 Nandina Terrace, Winter Springs spoke about the importance of the city manager position and thought action needed to be taken to select one of the three candidates interviewed earlier in the day.

Mr. Mark Caruso, Winter Springs noted he thought the negativity needed to stop in the City, encouraged rebuilding relationships and working together.

Mr. John Horan, 1612 Wood Duck Drive, Winter Springs noted experience with manager searches, thought the process had taken too long, and thought the decision should now be delayed until after the election.

Mayor McCann closed Public Input.

CONSENT AGENDA

300) FY 2023 - 2024 Mid-Year Budget Amendment

No discussion.

301) Purchase of High Water Rescue Vehicle for the Winter Springs Police Department

No discussion.

UNAPPROVED

302) Reconstruction of TLBD South Fountain

Commissioner Bruce noted, and staff confirmed, that the fountain would be repaired using mainly insurance money.

303) Storm Sewer Pipe Repair - 1563 Carrington Avenue

No discussion.

304) Storm Sewer Pipe Repair - 648 Alton Road

No discussion.

"MOTION TO APPROVE CONSENT AGENDA." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

PUBLIC HEARINGS AGENDA

400) First Reading of Ordinance 2024-11: EAR-Based Amendments to the City's Comprehensive Plan

MOTION TO READ BY TITLE ONLY. MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSION JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

Attorney Garganese read Ordinance 2024-11 by title and briefly reviewed the item and process going forward.

Ms. Terrilyn Rolle, Director, Community Development Department reviewed the two-phase Comprehensive Plan process, the first deadline of September 1st, and noted Mr. Nick Tafelsky, Senior City Planner was available for questions.

Mr. Chris Dougherty, Inspire Placemaking Services, 4767 New Broad Street, Orlando presented the 2050 Comprehensive Plan Update, discussed the amendment process required every seven years by statute and recent changes, revised references, map series updates, next steps and the project timeline. Mr. Dougherty noted that Phase 2 would include public workshops, a vision summary, and recommendations. Mr. Dougherty noted that the plan should be considered for adoption in June 2025.

Discussion followed on proposed updates related to references to the Greenway Interchange District (GID) and the 17/92 Community Redevelopment Area (CRA) being removed from the Comprehensive Plan. Mr. Tafelsky noted that the GID was in the City Code and the 17/92 CRA was no longer in existence.

Mayor McCann opened the Public Hearing for Item 400.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs noted confusion about included maps and overlays.

Mayor McCann closed the Public Hearing for Item 400.

UNAPPROVED

"MOTION TO APPROVE ITEM 400." [FIRST READING AND TRANSMITTAL OF ORDINANCE 2024-11] MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

Brief discussion followed on maps and it was noted that updates to included maps would be a part of the process.

401) Second Reading and Adoption of Ordinance 2024-07: Amendments to Chapter 6, Buildings and Building Regulations

Attorney Garganese read Ordinance 2024-07 by title.

Mayor McCann opened the Public Hearing for Item 401.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 401.

"MOTION TO APPROVE ITEM 401." [SECOND READING AND ADOPTION OF ORDINANCE 2024-07] MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

402) Second Reading of Ordinance 2024-08: Amendments to Chapter 20, Zoning

Attorney Garganese read Ordinance 2024-08 by title and briefly reviewed housekeeping amendments.

Mayor McCann opened the Public Hearing for Item 402.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 402.

"MOTION TO ADOPT ORDINANCE 2024-08." MOTION BY DEPUTY MAYOR RESNICK. SECONDED BY COMMISSIONER RESNICK. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

REGULAR AGENDA

500) Discussion on City Manager Candidates

Mayor McCann reviewed the interview process that took place earlier in the day, noted The city had been 16 months without a permanent city manager, and asked that the Commission determine next steps to allow the process to move forward.

Discussion followed on a desire to speak one-on-one with candidates, concerns about proposals to postpone a decision until after the election, and background checks on the candidates.

Mr. Bob Slavin, Slavin Management Consultants, confirmed that he would be conducting background and reference checks and would provide the results to the Commission.

Further discussion on notice that any selected candidate would need to provide to their current employer.

UNAPPROVED

The Commission agreed that the discussion would continue at the September 9th Commission Meeting and Mayor McCann asked that each person bring the name of their top two candidates. Following that discussion, it was recommended that the top candidate(s) be invited to the city to meet further with the Commission, staff, and residents.

501) Appointment Opportunities for City Boards and Committees

COMMISSIONER BRUCE NOMINATED DENISE RITCHEY TO THE TUSCAWILLA LIGHTING AND BEAUTIFICATION DISTRICT ADVISORY COMMITTEE. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

COMMISSIONER ELLIOTT NOMINATED RACHEL HOOD FOR REAPPOINTMENT TO THE PLANNING AND ZONING BOARD. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

Commissioner Resnick noted his previous comments regarding P&Z Board Member Ken Spalthoff.

MOTION TO REMOVE KEN SPALTHOFF FROM PLANNING AND ZONING BOARD. MOTION BY COMMISSIONER RESNICK. MOTION BY COMMISSIONER BRUCE.

Discussion followed on first amendment concerns, the desire for documentation to be provided to back up the request, and previous decisions to remove board and committee members.

Attorney Garganese opined on member's rights to free speech, certain limitations, and concerns about citing specific reasons for a board member's removal.

Mayor McCann opened Public Input for the motion.

Mr. Ken Spalthoff, 331 Wooded Vine Drive, Winter Springs noted concerns about Commissioner Bruce and ethics complaints that he had filed against her, the potential for a civil rights lawsuit if he were removed from the board, and asked that the Commission drop the matter.

Mr. Bryan Bruce, 129 Cherry Creek Circle, Winter Springs was in favor of providing more information to support decisions being made, concerns about a lack of decency in the community and online, encouraged Commissioners to be on social media to know what was happening in the community, and was in favor of Mr. Spalthoff's removal.

Mr. Ken Greenberg, 1635 White Dove Drive, Winter Springs representing the Winter Springs Community Association spoke about removal of previous board members and shared concerns about the conduct of Mr. Spalthoff.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs noted getting on Facebook because she thought there was a lack of communication and encouraged the Commission to get more information.

Ms. Gina Shafer, Winter Springs Village, Winter Springs shared concerns about violating people's rights to speak, encouraged reflection and respect

UNAPPROVED

Mr. Howard Parsons, 1049 Chokecherry Drive, Winter Springs noted comments made about him from members of the dais and concerns about retaliation.

Mayor McCann closed Public Input for the motion.

VOTE: BRUCE (AYE); JOHNSON (NAY); RESNICK (AYE); ELLIOTT (NAY); BENTON (NAY)
MOTION FAILED 2-3.

502) New Business

No new business was brought forward.

REPORTS

600) Interim City Manager Phil Hursh

- Noted the completion of the Michael Blake traffic signal and ongoing discussions related to the Winding Hollow turn lane.

601) City Attorney Anthony A. Garganese

- No report

602) City Clerk Christian Gowan

- No report

603) Seat One Commissioner/Deputy Mayor Matt Benton

- No report

604) Seat Two Commissioner Victoria Bruce

- Noted meeting with residents in Hacienda Village and concerns about debris and sediment in Gee Creek;
- Noted meeting with a resident and discussion on concerns about Dee Run pond;
- Noted attendance at Trotwood Boardwalk and commended Alvaro Britos and team for their work;
- Encouraged collection of emails to create database for distributing city information.

605) Seat Three Commissioner Ted Johnson

- . No report

606) Seat Four Commissioner Cade Resnick

- Noted attendance at Florida League of Cities Annual Conference and discussions with city managers about the city's ongoing search. Also noted attending sessions related to AI, budgeting, and more;
- Discussed pay challenges for police officers and increased starting pay in surrounding areas;
- Noted odor issues on the west side of town related to the wastewater treatment plant

607) Seat Five Commissioner Rob Elliott

- Noted an interfaith group that was seeking to help residents in need;
- Noted upcoming temporary closure of the pickleball complex for installation of shade structures.

UNAPPROVED

608) Mayor Kevin McCann

- Discussed the importance of addressing stormwater issues as shown by retention pond issues mentioned in previous reports.

PUBLIC INPUT
Mayor McCann opened Public Input.

Mr. Mark Caruso, Winter Springs volunteered his company's services to assist with the interfaith project mentioned by Commissioner Elliott. .

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs encouraged looking at communication style when selecting next City Manager.

Ms. Gina Shafer, Winter Springs Village, Winter Springs asked about the progress of a study for Wetlands Park.

Mayor McCann closed Public Input.

ADJOURNMENT
Mayor McCann adjourned the meeting at 9:47 p.m.

RESPECTFULLY SUBMITTED:

_____
CHRISTIAN D. GOWAN, MPA
CITY CLERK

APPROVED:

_____
MAYOR KEVIN McCANN

UNAPPROVED

NOTE: These Minutes were approved at the _____, 2024 City Commission Regular Meeting.

CONSENT AGENDA ITEM 310

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Approval of the Minutes from the Monday, September 9, 2024 City Commission Regular Meeting

SUMMARY

N/A

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve the September 9, 2024 City Commission Regular Meeting Minutes as presented.

CITY COMMISSION
REGULAR MEETING MINUTES

UNAPPROVED

MONDAY, SEPTEMBER 9, 2024 AT 6:30 PM

CITY HALL – COMMISSION CHAMBERS
1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER
Mayor Kevin McCann called the Regular Meeting of Monday, September 9, 2024 of the City Commission to order at 6:31 p.m. in the Commission Chambers of the Municipal Building (City Hall, 1126 East State Road 434, Winter Springs, Florida 32708).

Roll Call:
Mayor Kevin McCann, present
Deputy Mayor Matt Benton, present
Commissioner Victoria Bruce, present
Commissioner Ted Johnson, present
Commissioner Cade Resnick, present
Commissioner Rob Elliott, present
Interim City Manager Phil Hursh, present
City Attorney Anthony Garganese, present
City Clerk Christian Gowan, present

Pastor Bob Melhorn led the invocation followed by the Pledge of Allegiance.

Commissioner Bruce requested that Item 301 be discussed prior to adoption of the Consent Agenda. There was no objection and the agenda was adopted.

AWARDS AND PRESENTATIONS

100) Presentation of Resolution 2024-22 Recognizing the Retirement of Captain Doug Seely from the Winter Springs Police Department

Chief Matt Tracht spoke about Captain Doug Seely's service to the City of Winter Springs Police Department and thanked him.

Mayor McCann read Resolution 2024-22 recognizing Captain Seely and his 33 years of service.

A photo was taken and Captain Seely made brief remarks.

INFORMATIONAL AGENDA

200) 2024 Election Proclamation

No discussion.

201) 2024 Qualifying Period Results - November 5, 2024 General Municipal Election

No discussion.

202) Current Development Projects Summary

No discussion.

PUBLIC INPUT
Mayor McCann opened Public Input.

Ms. Suzanne Gordon, 924 Oak Forest Drive, Winter Springs spoke regarding the condition of Oak Forest Lake and sought to be a point of contact for those conducting work on the lake.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs spoke about the level of the creek(s), status of the Winding Hollow turn lane, and communication.

UNAPPROVED

Ms. Karen Meyer, 741 Andover Circle, Winter Springs noted her attendance at CALNO that was hosted at the City and thanked Mayor McCann for his presentation on parks

Ms. Gina Shafer, Winter Springs Village, Winter Springs spoke about religious freedom.

Mr. Ruben Trevino, 731 Sailfish Road, Winter Springs spoke about No Name Creek, work done in the area, and continued flooding concerns.

Ms. Stefanie Galvan, 1042 E Pebble Beach Circle, Winter Springs discussed concerns about increased taxes.

Mr. Robert Miller, 679 Silver Creek Drive, Winter Springs spoke about No Name Creek, flooding concerns, and efforts through the years to address the issues. Mr. Miller further asked that the City address stormwater concerns and encouraged looking into the creation of a flood control district.

Ms. Sarah Baker, 1551 Winter Springs Boulevard, Winter Springs noted flooding in her area and asked about mitigation efforts.

Mr. Art Gallo, 199 Nandina Terrace, Winter Springs noted his research about the creeks as stormwater management tools, a lack of improvements, and the impacts of development throughout the region.

Mayor McCann closed Public Input.

CONSENT AGENDA

300) Storm Sewer Pipe Repair - 1120 Orange Avenue

No discussion.

301) City Waiver - Tree Replacement in Tuskawilla Crossings ROW

Commissioner Bruce reviewed the issue as she understood it and the proposed plan, asked about other neighborhoods with live oaks in the right-of-way and fear of setting a precedent.

Mr. Brian Dunigan, Director, Operations Department noted that this was a preventative measure that could be taken due to the age of the trees.

Mr. Kevin Maddox noted the trees in question were Southern Live Oaks, noted narrow rights of way and issues, and reiterated the trees were able to be transplanted at this time.

Further discussion followed on the number of trees to be replaced, code requirements, and the choice of replacement tree.

Commissioner Elliott noted tree damage witnessed during Hurricane Ian and in support of the effort

"MOTION TO APPROVE CONSENT AGENDA." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

UNAPPROVED

PUBLIC HEARINGS AGENDA

400) Tentative Millage Rate for Fiscal Year 2024-2025 and Related Advertising

Ms. Holly Queen, Director, Finance Department introduced the item, noted the tentative millage was the same as the proposed at 2.6200.

Mayor McCann opened the Public Hearing for Item 400.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 400.

"I MOVE TO ADOPT RESOLUTION 2024-16 ESTABLISHING THE FISCAL YEAR 2024-2025 OPERATING MILLAGE RATE FOR THE CITY OF WINTER SPRINGS AT 2.6200 MILLS AND PUBLICLY ANNOUNCE THAT THE TENTATIVE OPERATING MILLAGE RATE OF 2.6200 MILLS IS 17% GREATER THAN THE COMPUTED ROLLED-BACK RATE OF 2.2394 MILLS AND AUTHORIZING ADVERTISEMENT OF THE CITY'S INTENT TO HOLD PUBLIC HEARINGS TO ADOPT THE FINAL MILLAGE RATE AND BUDGET." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (NAY); BENTON (NAY)
MOTION CARRIED 3-2.

401) Tentative Budget for Fiscal Year 2024-2025 and Related Advertising

Ms. Queen introduced the item and noted changes made between the proposed and tentative budgets which were attached to the agenda item.

Mayor McCann opened the Public Hearing for Item 401.
No one addressed the Commission.
Mayor McCann closed the Public Hearing for Item 401.

"I MOVE TO APPROVE RESOLUTION 2024-17, ESTABLISHING THE TENTATIVE BUDGET FOR THE CITY OF WINTER SPRINGS FOR THE FISCAL YEAR COMMENCING ON OCTOBER 1, 2024 AND ENDING ON SEPTEMBER 30, 2025 AND AUTHORIZING ADVERTISEMENT OF THE CITY'S INTENT TO HOLD PUBLIC HEARINGS TO ADOPT THE FINAL MILLAGE RATE AND BUDGET." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER JOHNSON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

REGULAR AGENDA

500) 2023 Annual Comprehensive Financial Report (ACFR)

Ms. Queen introduced the item and representatives from Purvis Gray, Mr. Ron Whitesides and Mr. Pierce Hogan to discuss the ACFR.

Mr. Whitesides gave a presentation about the Fiscal Year (FY) 2023 audit and noted significant progress made since completion of the FY22 audit. The presentation reviewed what the audit team did, the issuance of an unmodified opinion, and the inclusion of an emphasis of matter paragraph related to IT subscription agreements. Mr. Whitesides noted findings related to deficiencies in internal control over financial reporting and noted the late submission of the FY22 audit resulted in some repeat findings but advised that eight of eleven findings in the FY22 report had been addressed. Finally, Mr. Whitesides reviewed required communications related to some necessary estimates and significant audit matters and then reviewed financial highlights of the general fund, enterprise funds, and pension.

UNAPPROVED

Discussion followed on the impacts of staff turnover, staffing levels, and questions about auditor's concerns and findings.

Mr. Whitesides noted that the city was in a good financial position and explained that the high cost of necessary wastewater treatment plant and stormwater improvements were important to monitor.

Further discussion followed on the city's bond default rating, fund balance policy, utility rates, and plans to address noted deficiencies and get the audit cycle back on track with an anticipated completion date for the FY 2025 audit presented in March or April.

Following further comments, Ms. Queen thanked her team and acknowledged the recent hiring of a new Finance Manager to the team.

"MOTION TO APPROVE ITEM 500." [ACCEPT THE ANNUAL COMPREHENSIVE FINANCIAL REPORT AS PRESENTED FOR THE FISCAL YEAR ENDED SEPTEMBER 30TH 2023 AND AUTHORIZE STAFF TO FORWARD TO AUDITOR GENERAL, INSPECTOR GENERAL, AND APPLICABLE FINANCIAL INSTITUTIONS AS REQUIRED BY DEBT COVENANTS] MOTION BY COMMISSIONER RESNICK. SECONDED BY DEPUTY MAYOR BENTON. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

501) Discussion on City Manager Selection Process

Mayor McCann noted background checks had come through and that the Clerk would forward the information to all Commissioners. Mayor McCann further noted that Mr. David Jones had withdrawn from consideration due to salary concerns.

Discussion followed on communication with candidates since the interviews and the next steps of the process to include a multi-day visit to the City to meet with the Mayor and Commission, staff, and residents.

Brief discussion followed on the contract negotiation process and the Commission agreed that the Mayor and City Attorney would lead that process. Discussion then turned to scheduling and the Commission was in favor of asking the selected candidate to be flown with their spouse to the City, subject to their availability, from September 19 – 22, 2024.

"I WOULD PUT THE NAME KEVIN A. SWEET FORWARD AS MY FIRST CHOICE FOR THE NEW CITY MANAGER OF WINTER SPRINGS." MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER ELLIOTT. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

City Clerk Gowan asked for clarification on the motion and the Commission's intent. Discussion followed on the Commission's desire to invite Mr. Sweet and his spouse to the city and to begin contract negotiations.

Attorney Garganese suggested clarifying the motion and direction being given.

"MOTION TO INVITE KEVIN SWEET AND HIS SPOUSE TO THE CITY TO MEET WITH THE COMMISSION, DIRECTORS, AND MEMBERS OF THE COMMUNITY [TENTATIVELY SET FOR

UNAPPROVED

SEPTEMBER 19-22, 2024 SUBJECT TO MR. SWEET'S AVAILABILITY] AND DIRECT THAT CONTRACT NEGOTIATIONS COMMENCE. MOTION BY COMMISSIONER RESNICK. SECONDED BY COMMISSIONER ELLIOTT. DISCUSSION.

VOTE: BRUCE (AYE); JOHNSON (AYE); RESNICK (AYE); ELLIOTT (AYE); BENTON (AYE)
MOTION CARRIED 5-0.

502) Matters Related to City Board and Committees

COMMISSIONER JOHNSON NOMINATED BRIGITTE HAGEN-PETER TO THE TUSCAWILLA LIGHTING AND BEAUTIFICATION DISTRICT ADVISORY COMMITTEE. SECONDED BY DEPUTY MAYOR BENTON. DISCUSSION.

MOTION PASSED WITH UNANIMOUS CONSENT.

Brief discussion followed on the Veterans and Veteran Families Advisory Committee and current vacancies to be filled.

503) New Business

Deputy Mayor Benton noted his attendance at the recent CALNO meeting and asked that the Commission consider an ordinance requiring a supermajority to change or convey conservation and parks land throughout the city. Discussion followed on the number of easements throughout the city, similar measures taken by Seminole County, and potential impacts on plans for the West Wastewater Treatment Plant.

Mayor McCann commented on efforts the city had taken to address stormwater challenges including the recent authorization of a stormwater study, showed graphs of current creek levels, noted revised stormwater standards, and reiterated that stormwater was one of the most important issues facing the city.

Interim Manager Hursh noted a presentation to give an update on Gee Creek was planned for the next Commission meeting. Interim Manager Hursh further noted conversations with the Florida Department of Transportation (FDOT) regarding culvert cleaning. Brief discussion followed on the impact of stormwater on ponds and lakes.

Commissioner Resnick requested that the city look at all agreements related to ponds and lakes and work to update them and develop public-private partnerships.

Commissioner Resnick requested a weekly update through the summer (June - October) on water.

Discussion followed with Attorney Garganese noting the extensive ongoing work to document ponds throughout the city and the city's related responsibilities.

Deputy Mayor Benton encouraged contacting Seminole County to discuss efforts related to portions of creeks in their jurisdiction. Discussion followed on efforts by Seminole County to do countywide mapping, measures the City had taken to cooperate with the County and State, and potential solutions, such as heightened berms, for certain creeks.

REPORTS

600) Interim City Manager Phil Hursh

- Noted ongoing communication with Ms. Weisman and stated there was no need for concern related to the Winding Hollow deceleration lane funding. Interim Manager Hursh explained

UNAPPROVED

that FDOT had further paperwork requirements and that award of the bid was planned to be on the September 23, 2024 agenda. Mayor McCann noted that this was acknowledged by MetroPlan at a recent Municipal Advisory Committee meeting.

601) City Attorney Anthony A. Garganese

- No report

602) City Clerk Christian Gowan

- No report

603) Seat Two Commissioner Victoria Bruce

- Noted the upcoming September 11th Memorial Event being held by the city and her planned attendance;
- Noted that September 10th was Suicide Awareness Day;
- Acknowledged the resignation of Mr. Bilal Iftikhar, Director, Utilities Department and thanked him for his work;
- Noted ongoing discussions with residents related to creeks and ponds.

604) Seat Three Commissioner Ted Johnson

- Noted he was very pleased with the unanimous decision on the potential new City Manager.

605) Seat Four Commissioner Cade Resnick

- Noted planned attendance at the September 11th Memorial Ceremony;
- Noted his involvement with the Rotary Club and planning for the Veterans Day event;
- Noted efforts to address stormwater issues and thought an 18-month wait was too long to address issues while the study was being completed;
- Noted an issue related to a violation of process related to the chaplain and invocation.

606) Seat Five Commissioner Rob Elliott

- Encouraged attendance at September 11th Memorial Ceremony;
- Noted upcoming Babe Ruth opening day.

607) Mayor Kevin McCann

- No report

608) Seat One Commissioner/Deputy Mayor Matt Benton

- No report

PUBLIC INPUT

Mayor McCann opened Public Input.

Ms. Donna Bruno, 599 Alton Road, Winter Springs spoke about the Annual Comprehensive Financial Report and community misrepresentation of the city's financial health.[1]

*NOTE: Commissioner Johnson requested that Ms. Bruno be given extended time to speak. There was no objection.

[1] Ms. Bruno submitted information for the record which is attached to the end of these Minutes.

UNAPPROVED

Evan Penelas, 143 Cortez Court, Winter Springs spoke regarding concerns about a lack of enforcement of ethics violations for committee members, the resignation of Mr. Iftikhar, and accountability and transparency.

Ms. Leah Weisman, 113 Brookshire Court, Winter Springs shared concerns about creeks and potential flooding.

Mr. Art Gallo, 199 Nandina Terrace, Winter Springs thanked the current Finance Department for their efforts related to the budget and ACFR. Mr. Gallo also thanked Ms. Bruno and encouraged people to look into issues for themselves.

Ms. Karen Meyer, 741 Andover Circle, Winter Springs noted she was in support of the proposal to require a supermajority related to conservation and park land changes.

Ms. Linda Freeburn, 1604 Cougar Court, Winter Springs noted appreciation for discussions about wastewater and stormwater. Ms. Freeburn encouraged sharing information about preventative measures that residents could take to mitigate flooding and associated impacts. Finally, Ms. Freeburn noted she was supportive of the proposal for supermajority vote related to changes to conservation and parks lands.

Mayor McCann closed Public Input.

ADJOURNMENT
Mayor McCann adjourned the meeting at 9:36 p.m.

RESPECTFULLY SUBMITTED:

_____
CHRISTIAN D. GOWAN, MPA
CITY CLERK

APPROVED:

_____
MAYOR KEVIN McCANN

NOTE: These Minutes were approved at the _____ City Commission Regular Meeting.

UNAPPROVED

PUBLIC HEARINGS AGENDA ITEM 400

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Final Millage Rate for Fiscal Year 2024 - 2025

SUMMARY

On September 9, 2024 the City Commission adopted a tentative operating millage rate of 2.6200 mills. Tonight, the Commission will set the final operating millage rate which cannot exceed the tentative operating millage rate.

The decision to levy an operating millage rate of 2.6200 mills as opposed to the rolled-back rate of 2.2394 mills will result in additional ad valorem General Fund revenue of $1,368,551 (net of statutory discount).

FUNDING SOURCE

RECOMMENDATION

Staff recommends the City Commission adopt Resolution 2024-18, establishing the Final Operating Millage Rate for Fiscal Year 2024 - 2025 for the City of Winter Springs at 2.6200 mills which is 17.00% more than the rolled back rate of 2.2394 mills.

A 'sample' motion which includes the necessary elements for statutory compliance is as follows:

I move to approve Resolution 2024-18 establishing the Final Fiscal Year 2024-2025 operating millage rate for the City of Winter Springs at 2.6200 mills and publicly announce that the final operating millage rate of 2.6200 mills is 17.00% greater than the computed rolled-back rate of 2.2394 mills.

RESOLUTION 2024-18

A RESOLUTION OF THE CITY COMMISSION OF WINTER SPRINGS, FLORIDA, ADOPTING THE FINAL OPERATING MILLAGE RATE FOR THE CITY OF WINTER SPRINGS FOR THE FISCAL YEAR COMMENCING ON OCTOBER 1, 2024 AND ENDING ON SEPTEMBER 30, 2025; ANNOUNCING THE PERCENTAGE BY WHICH THE FINAL OPERATING MILLAGE RATE IS MORE THAN THE ROLLED-BACK RATE; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF PRIOR INCONSISTENT RESOLUTIONS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City Commission of Winter Springs of Seminole County, Florida, on September 23, 2024, adopted Fiscal Year 2024-2025 Final Millage Rate following a public hearing as required by *Florida Statute 200.065*;

WHEREAS, the City Commission of Winter Springs of Seminole County, Florida, held a public hearing as required by *Florida Statute 200.065*;

WHEREAS, the gross taxable value for operating purposes not exempt from taxation within Seminole County has been certified by the Seminole County Property Appraiser to the City of Winter Springs on line 4 of the DR420 as $3,745,597,673;

WHEREAS, the City Commission of Winter Springs desires to adopt the final operating millage rate and publicly announce the percent, if any, by which the final operating millage rate is more than or less than the rolled-back rate; and

WHEREAS, the City Commission of Winter Springs deems that this Resolution is in the best interest of the public health, safety, and welfare of the citizens of Winter Springs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, AS FOLLOWS:

Section 1. Incorporation of Recitals. The foregoing recitals are deemed true and correct and are hereby fully incorporated by this reference.

Section 2. Final Millage. The City Commission adopts its final operating millage rate of 2.6200 mills for the fiscal year commencing October 1, 2024 and ending September 30, 2025.

Section 3. Rolled-back Rate. The final operating millage rate of 2.6200 mills is 17.00% more than the computed rolled-back rate of 2.2394 mills.

Section 4. Submissions. Within three (3) days of the date of this Resolution, the Finance Director shall forward the Resolution adopting the final millage rate to the Seminole County Property Appraiser and the Seminole County Tax Collector.

Section 5. Certification of Compliance. Within thirty (30) days of the date of this Resolution, the Finance Director shall certify compliance with Chapter 200, Florida Statutes by causing the Certification of Compliance, along with all necessary documentation, to be sent to the Property Tax Administration of the Department of Revenue.

Section 6. Repeal of Prior Inconsistent Resolutions. All prior resolutions or parts of resolutions in conflict herewith are hereby repealed to the extent of the conflict.

Section 7. Severability. If any section, subsection, sentence, clause, phrase, word, or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion hereto.

Section 8. Effective Date. This Resolution shall become effective immediately upon adoption by the City Commission of the City of Winter Springs, Florida.

RESOLVED by the City Commission of the City of Winter Springs, Florida, in a public hearing assembled on this 23rd day of September, 2024.

_____
Kevin McCann, Mayor

ATTEST:

_____
Christian Gowan, City Clerk

Approved as to legal form and sufficiency for
The City of Winter Springs only:

_____
Anthony A. Garganese, City Attorney

PUBLIC HEARINGS AGENDA ITEM 401

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Final Budget for Fiscal Year 2024 - 2025

SUMMARY

The Final Budget was prepared at the direction of the Commission using the operating millage rate of 2.6200 mills. The total expenditures in the final budget are $70,013,390 which includes inter-fund transfers and is comprised of the following:

General Fund - $26,691,028

Other Governmental Funds - $18,054,015

Enterprise Funds - $25,268,347

The City-Wide Final Budget by fund type currently reflects the following appropriations to/(from) fund balance:

General Fund - ($2,034,400)

Governmental Funds (exclusive of General Fund) - ($9,369,232)

Enterprise Funds - ($7,094,047)
There have not been any revisions subsequent to the Tentative Budget (September 9th Public Hearing 401). The Proposed, Tentative, and Final Budgets are on the City's website at www.winterspringsfl.org/finance/page/2025-annual-budgetreports.

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve and adopt Resolution 2024-19, establishing the Final Budget for the Fiscal Year 2024-2025.

A 'sample' motion which includes the necessary elements for statutorycompliance is as follows:

I move to approve Resolution 2024-19, establishing the Final Budget for the City of Winter Springs for the fiscal year commencing on October 1, 2024 and ending on September 30, 2025.

RESOLUTION 2024-19

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, FLORIDA, ADOPTING THE FINAL BUDGET FOR THE CITY OF WINTER SPRINGS FOR THE FISCAL YEAR COMMENCING ON OCTOBER 1, 2024 AND ENDING ON SEPTEMBER 30, 2025; PROVIDING FOR SEVERABILITY; PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT RESOLUTIONS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City Commission of the City of Winter Springs of Seminole County, Florida, on September 23, 2024, held a public hearing as required by *Florida Statute 200.065;*

WHEREAS, the City Commission of the City of Winter Springs desires to adopt the final budget; and

WHEREAS, the City Commission of the City of Winter Springs deems that this Resolution is in the best interest of the public health, safety, and welfare of the citizens of Winter Springs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, AS FOLLOWS:

Section 1. Incorporation of Recitals. The foregoing recitals are deemed true and correct and are hereby fully incorporated by this reference.

Section 2. Final Budget. Having previously adopted a final millage rate for the City of Winter Springs for fiscal year 2024-2025 the City Commission adopts its final budget as may be amended for the fiscal year commencing October 1, 2024 and ending September 30, 2025 as presented at its regular meeting assembled on the date of this Resolution with all amendments, if any, adopted at that meeting.

Section 2. Approved Expenditures. The expenditures in the final budget are $70,013,390 which includes inter-fund transfers and is comprised of the following: General Fund - $26,691,028; Other Governmental Funds - $18,054,015; and Enterprise Funds - $25,268,347. The budget is based upon gross taxable value of $3,745,597,673.

Section 4. Submissions. Within three (3) days of the date of this Resolution, the Finance Director shall forward the Resolution adopting the final millage rate to the Seminole County Property Appraiser and the Seminole County Tax Collector.

Section 5. **Certification of Compliance.** Within thirty (30) days of the date of this Resolution, the Finance Director will certify compliance with Chapter 200, Florida Statutes by causing the Certification of Compliance, along with all necessary documentation to be sent to the Property Tax Administration Program of the Department of Revenue.

Section 6. **Repeal of Prior Inconsistent Resolutions.** All prior resolutions or parts of resolutions in conflict herewith are hereby repealed to the extent of the conflict.

Section 7. **Severability.** If any section, subsection, sentence, clause, phrase, word, or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion hereto.

Section 8. **Effective Date.** This Resolution shall become effective immediately upon its adoption by the City Commission of the City of Winter Springs, Florida.

RESOLVED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on this 23rd day of September 2024.

_____
Kevin McCann, Mayor

ATTEST:

_____
Christian Gowan, City Clerk

Approved as to legal form and sufficiency for The City of Winter Springs only:

_____
Anthony A. Garganese, City Attorney

PUBLIC HEARINGS AGENDA ITEM 402

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

First Reading of Ordinance 2024-09, Small-Scale Future Land Use Map Amendment of one (1) parcel of land located at 4301 SR 419.

SUMMARY

The privately owned property generally located at 4301 SR 419 was voluntarily annexed into the City by Ordinance 2024-04. Ordinance 2024-09 proposes to assign the Commercial Future Land Use to the subject property. The applicant intends to utilize a the property for the outdoor storage of boats and recreational vehicles (RVs). The proposed Future Land Use (FLU) designation of Commercial meets the analysis requirements addressed in the staff report as it provides a transition of uses as the surrounding areas existing FLUs transition from residential to industrial forms of future land uses. The Planning and Zoning Board recommended approval during the September 05, 2024 public meeting.

Staff and the City Attorney's office are in the process of completing a draft development agreement with the property owner as required by Section 20-31(d)(18), City Code. The Agreement will be presented to the City Commission at Second Reading as a condition of approval of the Ordinance.

FUNDING SOURCE

N/A

RECOMMENDATION

Staff recommends City Commission approve the First Reading of Ordinance 2024-09 for a small-scale Future Land Use Map Amendment to assign the Commercial Future Land Use to property generally located at 4301 SR 419.

PUBLIC HEARINGS AGENDA

CITY COMMISSION

Monday, September 23, 2024 | REGULAR MEETING

TITLE

4301 SR 419 | Small-Scale Future Land Use (FLU) Map Amendment

SUMMARY/UPDATE

The Community Development Department requests that the City Commission hold a Public Hearing to consider Ordinance 2024-09 for the Small-Scale FLU Map Amendment for the ±8.12-acre lot located along State Road 419 north of State Road 434.

General Information		
Applicant	OM Engineering Services, Inc.	
Property Owner(s)	Kado Investments, LLC, Youdali International Investments, LLC, and Kira Woods	
Location	4301 SR 419, Winter Springs, FL 32708	
Tract Size	±8.12 acres	
Parcel ID Number	34-20-30-5AW-0000-0250	
Zoning Designation	Not Currently Assigned (Voluntary Annexation via Ordinance 2024-04)	
FLUM Designation	Not Currently Assigned (Voluntary Annexation via Ordinance 2024-04)	
Adjacent Land Use	North: Layer Elementary School & School Bus Yard East: Seminole County Transportation Depot	South: State Road 434; Day Care/Pre-School West: Vacant
Development Permits	None	
Development Agreement	None	
Code Enforcement	None	
City Liens	None	

Request:
The applicant seeks to designate the Commercial FLU, a Small-Scale Future Land Use Map Amendment, to the annexed property via Ordinance 2024-09.

Background Data:
The property is part of the Entzminger Farms Addition No 2 Subdivision. The property consists of a single-story concrete block building built in 1969, per the Seminole County Property Appraiser, utilized as a single-family residence that consists of approximately 2,466 SF. Two additional accessory buildings, a metal shed and one-story garage, exist on the site.

The property was voluntarily annexed by the applicant to the City of Winter Springs on April 08, 2024. via Ordinance 2024-04. The existing residential building is intended to be utilized for commercial purposes supportive of the proposed use. The applicant intends to utilize the property for the outdoor storage of recreational vehicles (RVs) and boats.

Public Notices:
Public Hearing Notices were mailed to all owners of real property adjacent to and within approximately five hundred (500) feet of the subject property and to all Homeowner's Associations on file with the City Winter Springs and located within one-half (1/2) mile of the subject property (27 notices) on July 19, 2024.

Comprehensive Plan Amendment Analysis:
The following summarizes the data and issues which staff analyzed in reviewing this application:

Through Ordinance 2024-09, the City of Winter Springs' Commercial land use designation is requested to be applied to the ±8.12 acres parcel. The requested Future Land Use Map designation is intended to complement the commercial crossroads of the area's future land use.

Future Land Use Map (FLUM) Amendment Analysis:
The following criteria is set forth by City of Winter Springs Code of Ordinances Chapter 15, Article 3 which has been analyzed by staff to form a recommendation:

Future Land Use Amendment Criteria & Analysis	
1.	Whether the proposed amendment will have a favorable or unfavorable effect on the city's budget, or the economy of the city or the region; **Analysis:** The property is privately owned. The annexation of the property to incorporate within the City of Winter Springs was completed as a voluntary action of the applicant. The applicant has applied to designate the property's future land use designation as Commercial. An unfavorable budgetary effect on the City of Winter Springs is not anticipated.

	The City of Winter Springs may collect property taxes as a result of the approved voluntary annexation into the City of Winter Springs; the taxable rate by which the city may collect if proposed to be the commercial rate.
2.	Whether the proposed amendment will diminish or negatively impact the Level of Service (LOS) of public facilities; **Analysis:** The proposed amendment is not anticipated to diminish or negatively impact the Level of Service (LOS) of public facilities. The subject property contains portions of Gee Creek as well as a powerline easement that limits the property's access points and outdoor storage capacity.
3.	Whether there will be a favorable or unfavorable impact on the environment or the natural or historical resources of the city or the region as a result of the proposed amendment; **Analysis:** The subject property contains Gee Creek and a powerline easement that both aide in restricting the property from unfavorable impacts on the environment and natural resources such as oversized development. Site Plan Review, as with all plans, will require adherence to internal and external permitting requirements. There are no foreseen negative impacts on historical resources of the City or the region by applying the Commercial FLU designation to the subject property.
4.	Whether the proposed amendment is consistent with the goals, objectives, and policies of the state comprehensive plan set forth in Chapter 187, Florida Statutes, and the East Central Florida Regional Planning Council, as amended from time to time; **Analysis:** The proposed amendment is consistent with the goals, objectives, and policies of the State Comprehensive Plan, most notably Future Land Use Element policy 1.5.1 which discourages land use inconsistencies; policy 1.5.5 locate less intensive transitional uses in between residential and industrial (as it applies for this property and the surrounding area); acknowledgement of policy 1.5.8 for adverse industrial uses.
5.	Whether the City is able to provide adequate service from public facilities to the affected property, if the proposed amendment is granted, and whether the proposed amendment will promote the cost/effective use of or unduly burden public facilities; **Analysis:** The proposed amendment is not anticipated to pose an unduly burden to public facilities. The subject property operates on a well and septic system. Any future expansion of public utilities would promote the most

	cost/effective use of said utilities. Additionally, the proposed use of the property is not intended to increase population density. Should residential uses be proposed for the property in the future, affecting a greater demand on public utilities, a feasibility analysis may be conducted for consideration. The applicant is not seeking residential uses.
6.	Whether the proposed amendment is compatible with surrounding neighborhoods and land use; **Analysis:** The surrounding neighborhoods and land uses are similar to and compatible with the proposed Commercial Future Land Use. The Commercial FLU exists on the Winter Springs Future Land Use Map south of the subject property and serves as a transitionary buffer between the Industrial FLU to the west/northwest and the residential FLU designations to the east.
7.	Whether approval of the proposed amendment will cause the Comprehensive Plan to be internally inconsistent; **Analysis:** Approval of the proposed amendment will cause the Comprehensive Plan to be consistent with the goals, objectives, and policies of the City of Winter Springs Comprehensive Plan Future Land Use Element item 6b concerning the Commercial Future Land Use. The proposed Commercial Future Land Use designation is compatible with future land use designations surrounding the property.
8.	Whether the proposed amendment will promote or adversely affect the public health, safety, welfare, economic order, or aesthetics of the city or region; **Analysis:** The proposed amendment to designate the Commercial Future Land Use to the property is not anticipated to adversely affect the public health, safety, welfare, economic order, or aesthetics of the city or region. The constraints of the property limit the extent to which any future development project may be realized. These constraints, as they currently exist at the time of this report, provide for small-scale development; increase the need for environmental considerations, such as permeable surfaces to reduce stormwater impacts; enhance the aesthetic considerations to the commercial level; provides consistency with the proposed General Commercial (C-2) zoning district proposed for the property that increases the property's value allocated tax rate; provides for a transitionary buffer between industrial uses and residential uses.
9.	The contents of any Evaluation and Appraisal Report (EAR) prepared pursuant to 163.3191, Florida Statutes;

	Analysis: Not applicable.
10.	Whether the proposed amendment is consistent and in compliance with law; **Analysis:** The proposed amendment is consistent and in compliance with law.
11.	Whether the proposed amendment is consistent, and not in conflict, with the legislative policy directives established by the City Commission including, but not limited to, those set forth in the City's Comprehensive Plan and City Code, adopted master plans, economic development goals and objectives, community redevelopment plans, and brownfield areas. **Analysis:** The proposed amendment is consistent, and without conflict as the property is a former enclave not previously under the jurisdiction of the city's plans, codes, goals, objectives, or areas. The property's recent incorporation into city limits necessitates a future land use designation that most appropriately coincides with city plans, goals, objectives, and areas. The Commercial Future Land Use designation most appropriately coincides without conflict with the aforementioned.

Procedural History:

Procedural History:	
September 25, 2023	Non-Binding Presentation (NBR2023-0047) City Commission observed
March 25, 2024	First Reading of Ordinance Number 2024-04 City Commission approved Annexation
April 08, 2024	Second Reading of Ordinance Number 2024-04 City Commission approved Annexation
May 08, 2024	Community Workshop Layer Elementary School – 4201 SR 419 Media Room
June 20, 2024	Pre-Application Meeting (PREM-2024-0013)
June 27, 2024	Application Submittal
September 05, 2024	Recommendation of approval by Planning & Zoning Board
TBD	First Reading of Ordinance Number 2024-09 City Commission approved Future Land Use change

Recommendation:
Staff recommends the City Commission adopt Ordinance 2024-09 to assign the future land use designation of Commercial to the subject parcel.

ORDINANCE NO. 2024-09

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE FUTURE LAND USE MAP DESIGNATION ON THE PARCEL FROM COUNTY "SUBURBAN ESTATES" TO CITY "COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, INCORPORATION INTO THE COMPREHENSIVE PLAN, AND AN EFFECTIVE DATE AND LEGAL STATUS OF THE PLAN AMENDMENT.

WHEREAS, on April 08, 2024, the City Commission adopted Ordinance Number 2024-04, which is recorded in the Official Records of Seminole County, Florida, at Book 10609, Page 752, and which annexed the subject property into the City of Winter Springs; and

WHEREAS, the City is granted the authority, under § 2(b), Art. VIII of the State Constitution, to exercise any power for municipal purposes except when expressly prohibited by law; and

WHEREAS, the future land use map amendment embodied in this Ordinance is a small-scale amendment to the City of Winter Springs Comprehensive Plan in accordance with Section 163.3187(1), Florida Statutes; and

WHEREAS the Local Planning Agency of the City of Winter Springs held a duly noticed public hearing on September 05, 2024, in accordance with the procedures established in Chapter 163, Part II, Florida Statutes, on the proposed comprehensive plan amendment; and

WHEREAS, the City Commission of the City of Winter Springs held two duly noticed public hearings on the proposed amendment set forth hereunder and considered findings and advice of staff, citizens, and all interested parties submitting written and oral comments and supporting data and analysis, and after complete deliberation, hereby approves and adopts the Comprehensive Plan Amendment set forth hereunder; and

WHEREAS, the City Commission hereby finds that this Ordinance serves a legitimate government purpose and is in the best interests of the public health, safety, and welfare of the citizens of the City of Winter Springs, Florida.

NOW, THEREFORE, THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS HEREBY ORDAINS, AS FOLLOWS:

Section 1. Recitals. The foregoing recitals are true and correct and are fully incorporated herein by this reference.

Section 2. Authority. This Ordinance is adopted in compliance with, and pursuant to, the Community Planning Act, sections 163.3161, et. seq., Florida Statutes.

Section 3. Purpose and Intent. It is hereby declared to be the purpose and intent of this Ordinance to adopt a Comprehensive Plan amendment incorporating the revisions stated herein as part of the City of Winter Springs Comprehensive Plan.

Section 4. Adoption of Amendment to the Future Land Use Map. The City of Winter Springs Comprehensive Plan, Future Land Use Map, is hereby amended by changing the designation of the real property legally described and depicted on **Exhibit "A"** from County "Suburban Estates" future land use to City "Commercial" future land use. Exhibit "A" is attached hereto and fully incorporated herein by this reference.

Section 5. Repeal of Prior Inconsistent Ordinances and Resolutions. All prior inconsistent ordinances and resolutions adopted by the City Commission, or parts of prior ordinances and resolutions in conflict herewith, are hereby repealed to the extent of the conflict.

Section 6. Severability. If any section, subsection, sentence, clause, phrase, word or provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

Section 7. Incorporation into Comprehensive Plan. Upon the effective date of the Comprehensive Plan Amendment adopted by this Ordinance, said Amendment shall be incorporated into the City of Winter Springs Comprehensive Plan and any section or paragraph number or letter and any heading may be changed or modified as necessary to effectuate the foregoing.

Section 8. Effective Date and Legal Status of the Plan Amendment. The effective date of this Ordinance shall take effect thirty-one (31) days after adoption, in accordance with Section 163.3187(5)(c), Florida Statutes, unless challenged within thirty (30) days after adoption of this Ordinance, in which case this Ordinance shall become effective at such time as the state land planning agency or the Administrative Commission issues a final order determining that the adopted small scale development amendment is in compliance. No development orders, development permits, or land use dependent on this Amendment may be issued or commenced before the Amendment has become effective. After and from the effective date of this Amendment, the Comprehensive Plan Amendment set forth herein shall amend the City of Winter Springs Comprehensive Plan and become a part of that plan and the Amendments shall

have the legal status of the City of Winter Springs Comprehensive Plan, as amended.

ADOPTED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on the _____ day of _____, 2024.

_____
Kevin McCann, Mayor

ATTEST:

_____
Christian Gowan, City Clerk
Approved as to legal form and sufficiency for
the City of Winter Springs only:

_____
Anthony A. Garganese, City Attorney

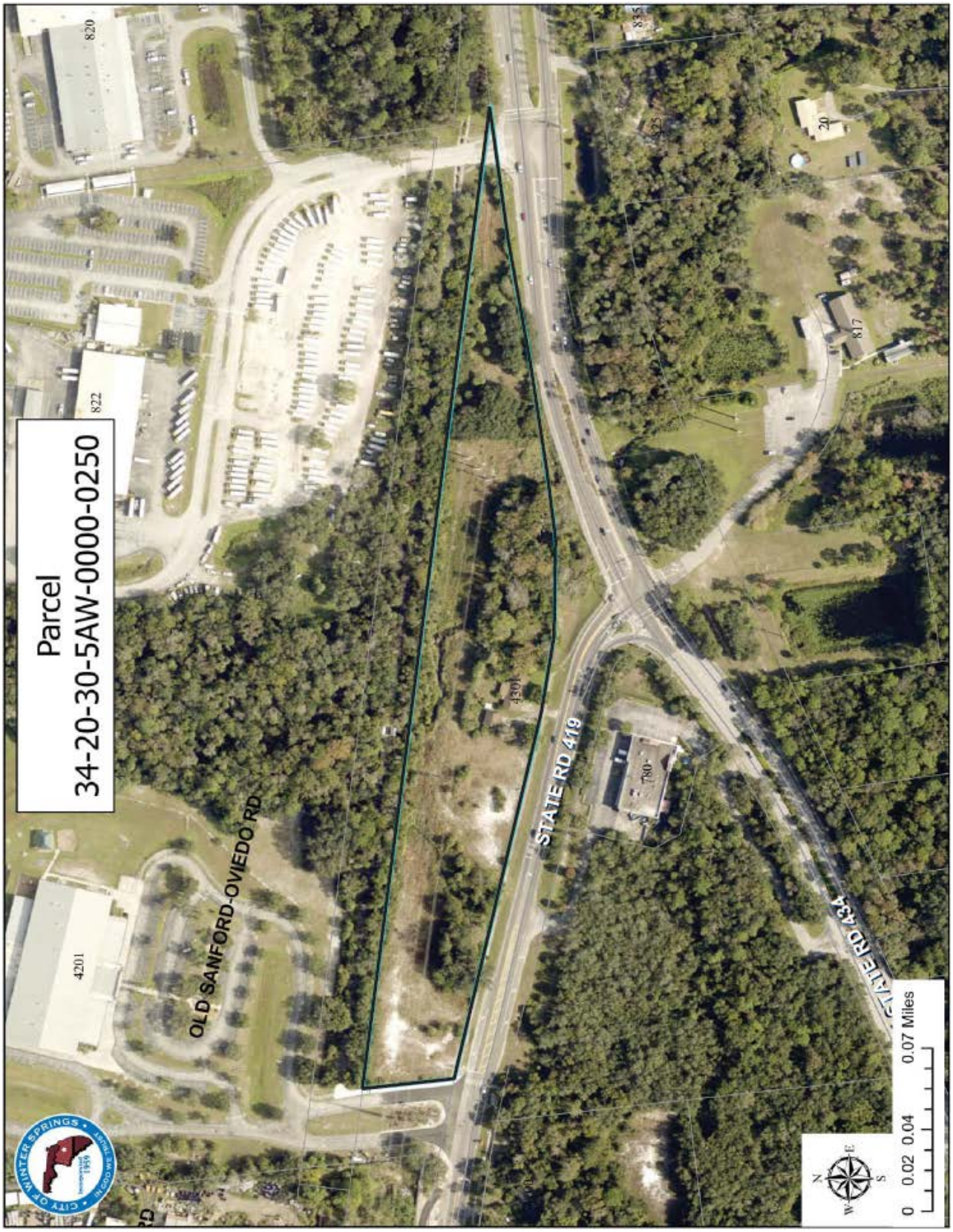
Legal Ad: _____
First Reading: _____
Legal Ad: _____
Second Reading: _____
Effective Date: _____

EXHIBIT "A"

LEGAL DESCRIPTION AND DEPICTION OF PROPERTY

Description:
LOTS 25 AND 32, ENTZMINGER FARMS ADDITION NO. 2, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 5, PAGE 9, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 419, (NEW SANFORD-OVIEDO ROAD, PER REFERENCED PLAT OF ENTZMINGER FARMS ADDITION NO. 2) AND THE WESTERLY LINE OF LOT 32 OF THE AFORESAID ENTZMINGER FARMS ADDITION NO. 2; THENCE N06°48'50"W, ALONG SAID WESTERLY LINE, A DISTANCE OF 178.55 FEET TO THE NORTHWEST CORNER OF THE AFORESAID LOT 32; SAID POINT ALSO BEING A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ATLANTIC COAST LINE RAILROAD; THENCE S82°26'56"E, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE AND NORTHERLY LINE OF LOTS 32 AND 25, A DISTANCE OF 1,838.88 FEET TO THE NORTHEAST CORNER OF LOT 25; THENCE S07°12'27"W, ALONG THE EASTERLY LINE OF LOT 25, A DISTANCE OF 26.03 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 434 (LONGWOOD- OVIEDO ROAD, PER REFERENCED PLAT OF ENTZMINGER FARMS ADDITION NO. 2); THENCE, ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 434 AND AFORESAID STATE ROAD 419, THE FOLLOWING FOUR (4) COURSES: S82°43'16"W, A DISTANCE OF 86.85 FEET TO A POINT ON A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 2737.83 FEET, A CHORD BEARING OF S79°57'47"W, A CHORD DISTANCE OF 231.49 FEET, AND A CENTRAL ANGLE OF 04°50'45"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 231.55 FEET TO A POINT; THENCE S81°06'41"W, A DISTANCE OF 317.18 FEET TO A POINT ON A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 1235.24 FEET, A CHORD BEARING OF N87°25'00"W, A CHORD DISTANCE OF 491.04 FEET, AND A CENTRAL ANGLE OF 22°55' 45"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 494.33 FEET TO A POINT; THENCE N75°57'07"W, A DISTANCE OF 582.85 FEET TO A POINT ON A CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 3869.72 FEET, A CHORD BEARING O N76°49'37"W, A CHORD DISTANCE OF 118.16 FEET; AND A CENTRAL ANGLE OF 01°44'59"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 118.17 FEET TO THE POINT OF BEGINNING. SAID LANDS CONTAINING APPROXI MATELY 7.84 ACRES, OR 341,667 SQUARE FEET, MORE OR LESS.


Parcel
34-20-30-5AW-0000-0250
OLD SANFORD-OVIEDO RD
STATE RD 419
4201
4301
822
820
817
780
0 0.02 0.04 0.07 Miles
N
E
S
W

0 40 80 160

FEET

AREA TO BE DEVELOPED

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Overall Site Plan - Concept

YOUDALI INVESTMENTS LOTS 25 & 32
SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

PROJECT NO.: 22-2211

C-1

0 15 30 60
FEET

PARCEL LOT BOUNDARY

60' DRAINAGE EASEMENT PER (ORB 1064, P 0828)

25' MIN. BUFFER FROM WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

26'

PROPOSED FENCE

RIBBON CURB (TYP)

EXISTING WETLAND AREA TO REMAIN UNAFFECTED

PROPOSED FENCE

CRUSHED STONE SURFACE OR EQUIVALENT PERVIOUS SURFACE FOR PARKING

GATE AT EXIT

OPEN STORAGE OF VEHICLES SUCH AS RECREATIONAL VEHICLES, BOATS, ETC.

GATE AT ENTRANCE

EXISTING CHAIN LINK FENCE ALONG PARCEL PERIMETER TO REMAIN

PARCEL LOT BOUNDARY

PROPOSED WALL

RIGHT ONLY EXIT

PROPOSED WALL

PARCEL LOT BOUNDARY

WIDEN EXISTING ENTRANCE TO ACCOMMODATE LARGER VEHICLES (ENTRANCE ONLY)

EXISTING ON SITE SEPTIC SYSTEM TO REMAIN AS IS

POINT OF BEGINNING
INTERSECTION OF NORTHERLY RIGHT-OF-WAY LINE OF 47' (C) STATE ROAD 419 & 14.46' WESTERLY LINE OF LOT 32 ENTZMINGER FARMS ADDITION W NO. 2 (PB 5, PG 9)

R=3869.72
CA=1°44'59"
L=118.17'
CB=N76°49'37"W
CH=118.16'

N 06°48'50" W 178.55' (M)

N61°21'53"E 328.61'

N 75°57'07" W 582.85' (M)

344.60'

STATE ROAD 419 (FIELD)
NEW SANFORD-OVIEDO ROAD (PLAT)
(60' PUBLIC R/W PER PLAT)
(R/W VARIES PER R/W MAP)

TOTAL PARCEL AREA: 8.12 ac

PROPOSED PARKING LOT AREA: 32,655 sf (0.75 ac)

PARKING LOT CONFIGURATION: 18" OF NO. 57 STONE ON 12" STABILIZED SUBGRADE, RIBBON CURB ALONG THE PERIMETER

PRELIMINARY DRAINAGE APPROACH:

1. *NO FEMA FLOODPLAIN IMPACTS ARE ANTICIPATED WITH THIS SITE PLAN DEVELOPMENT. THE 100-YR FEMA FLOODPLAIN ELEVATION WITHIN THE ADJACENT FLOODWAY RANGES FROM 11.0 TO 12.0 NAVD 88. THE ESTIMATED MIN. EXISTING SURVEY SPOT ELEVATION WITHIN THE WORK AREA IS AT ELEV. 14.6 NAVD 88.*
2. *BASED ON PRELIMINARY INFORMATION AVAILABLE, FROM THE ONLINE USDA/NRCS WEB SOIL SURVEY (WSS), THE EXISTING SOILS WITHIN THE SITE PLAN AREA ARE GENERALLY COMPRISED OF SOILS OF HYDROLOGIC SOIL GROUP (HSG): A, WHICH ARE CLASSIFIED AS WELL DRAINING AND GENERALLY GOOD FOR INFILTRATION. THIS WILL BE VERIFIED WITH A GEOTECHNICAL ENGINEER IN THE DESIGN PHASE.*
3. *BASED ON A PRELIMINARY DETERMINATION, THE PARKING AREA CAN LIKELY BE USED TO PROVIDE ANY REQUIRED STORMWATER TREATMENT AND ALLOW INFILTRATION INTO THE EXISTING SOILS.*
4. *ALL REQUIRED PERMITTING WILL BE FOLLOWED DURING DESIGN PHASE, INCLUDING PERMITTING WITH THE ST. JOHNS RIVER WATER MANAGEMENT (SJRWMD) DISTRICT.*

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Master Civil Site Plan - Concept

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-2



Aerial Fire Truck	
Overall Length	48.480ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	6.910ft
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	41.670ft

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Fire Truck - AUTOTURN

YOUDALI INVESTMENTS LOTS 25 & 32
SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-3

0 40 80 160

FEET

AREA TO BE DEVELOPED

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Overall Site Plan - Concept w/ FEMA MAP

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

NO. DATE:
DESCRIPTION:

PROJECT NO.: 22-2211

C-1F

0 15 30 60
FEET

REGULATORY FLOODWAY
PARCEL LOT BOUNDARY
100 YR FLOOD
500 YR FLOOD
60' DRAINAGE EASEMENT (ORB 4, P 0828)
50' MIN. BUFFER FROM WETLAND BOUNDARY
EXISTING WETLAND BOUNDARY
EXISTING WETLAND AREA TO REMAIN UNAFFECTED
RIBBON CURB (TYP)
PROPOSED FENCE
CRUSHED STONE SURFACE OR EQUIVALENT PERVIOUS SURFACE FOR PARKING
GATE AT EXIT
GATE AT ENTRANCE
EXISTING CHAIN LINK FENCE ALONG PARCEL PERIMETER TO REMAIN
PROPOSED WALL
RIGHT ONLY EXIT
WIDEN EXISTING ENTRANCE TO ACCOMMODATE LARGER VEHICLES (ENTRANCE ONLY)
EXISTING ON SITE SEPTIC SYSTEM TO REMAIN AS IS
25' SETBACK
20'
15.5' X 5' CONC WITH HEADSTONE
N 06°48'50" W 178.55' (M)
N61°21'53"E 328.61'
N 75°57'07" W 582.85' (M)
POINT OF BEGINNING
INTERSECTION OF NORTHERLY RIGHT-OF-WAY LINE OF 47' (C) STATE ROAD 419 & 14.46' WESTERLY LINE OF LOT 32 ENTZMINGER FARMS ADDITION W NO. 2 (PB 5, PG 9)
R=3869.72
CA=1°44'59"
L=118.17'
CB=N76°49'37"W
CH=118.16'
STATE ROAD 419 (FIELD)
NEW SANFORD-OVIEDO ROAD (PLAT)
(60' PUBLIC R/W PER PLAT)
(R/W VARIES PER R/W MAP)
LOT 32
ABANDONED/UNUSED IRRIGATION WELL
SET 3/4" IPC (7276)
0.75'X0.75' POST
REC 1 1/4" IP (NO ID)
REC DRILL HOLE OFFSET (4.86'S,0.63'E)
CONC HEADWALL EL. 15.7'
ALUMINUM HAND RAIL
FENCE
WALL W/ ALUMINUM HANDRAIL
CONC WALK
ASPHALT
CONC DRIVE
1 STORY CB GARAGE
1 STORY CB RESIDENCE
8'X8' CB SHED FOR WELL PUMP TO HOUSE
10'X12' METAL SHED ON CONC SLAB
DRAINAGE INLET
FDOT R/W
WPP CO
MES
FOCV
SIGN
TSB
TSP
EP
TOB
CONC CURB
ASPHALT
OHW

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Civil Site Plan - Concept w/ FEMA MAP

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

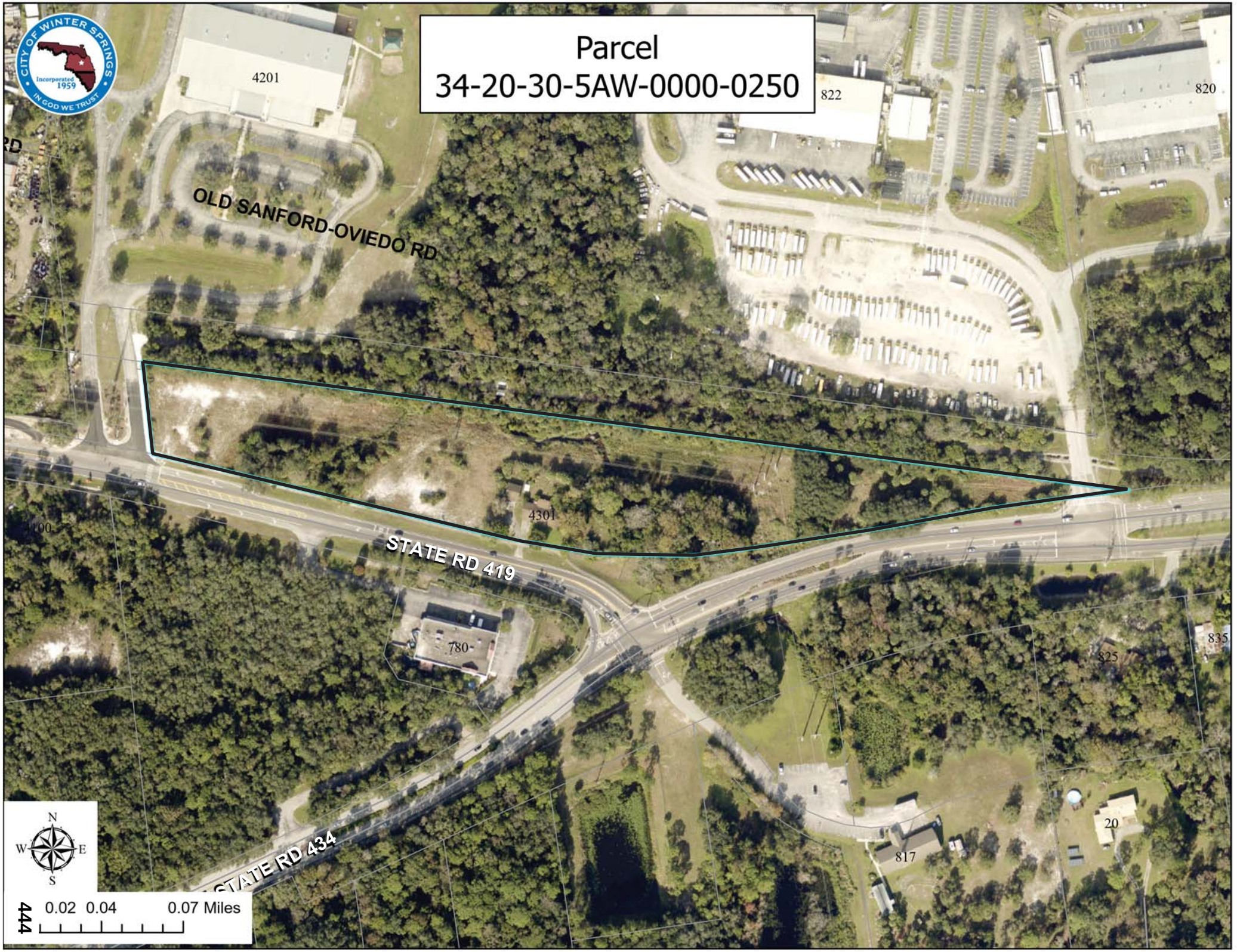
ISSUE DATE:

REVISIONS

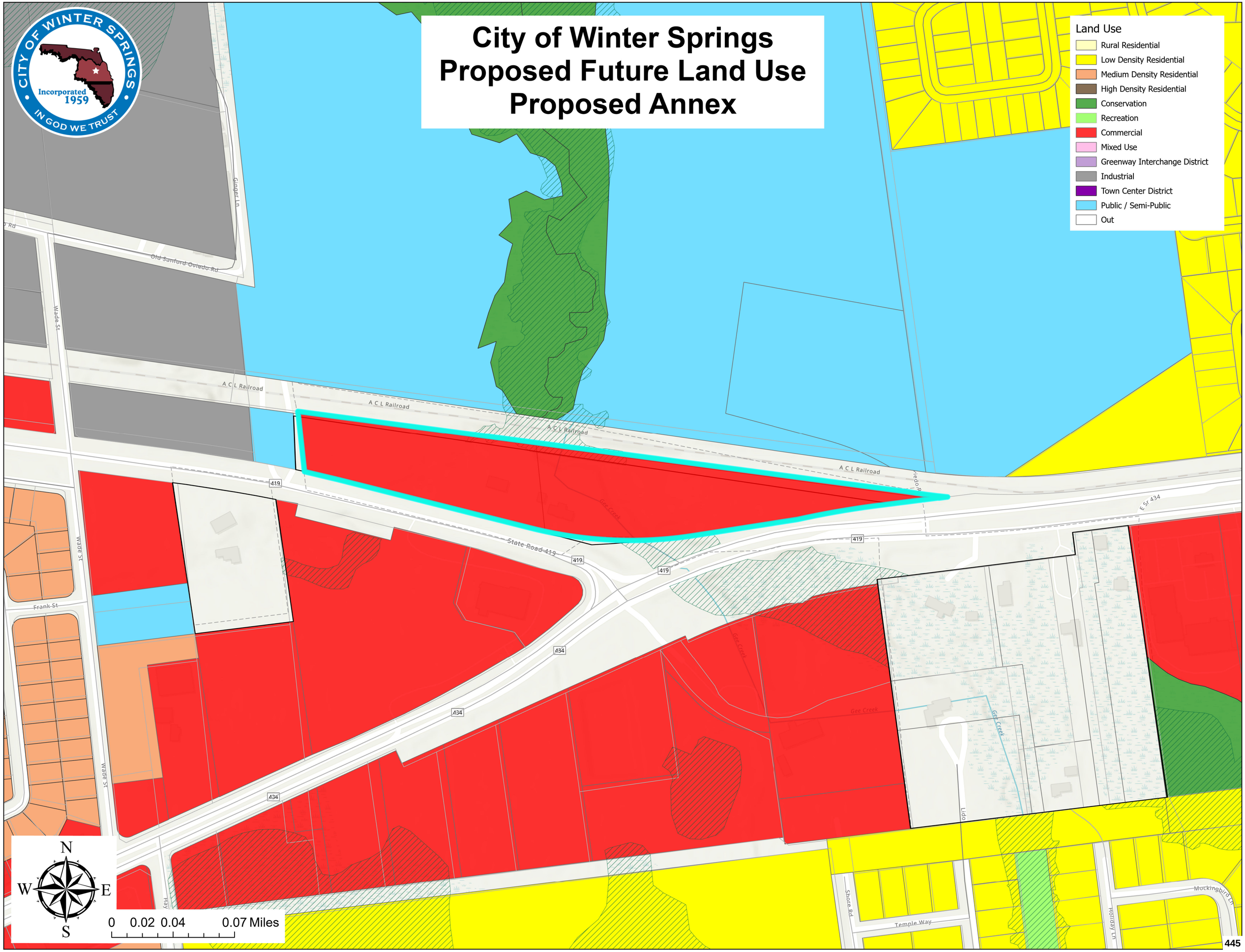
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NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-2F


Parcel
34-20-30-5AW-0000-0250
CITY OF WINTER SPRINGS
Incorporated 1959
IN GOD WE TRUST
4201
822
820
OLD SANFORD-OVIEDO RD
4301
STATE RD 419
780
825
835
817
20
STATE RD 434
N
W
E
S
0.02 0.04 0.07 Miles
444

City of Winter Springs
Proposed Future Land Use
Proposed Annex



City of Winter Springs
Future Land Use
Proposed Annex

CITY OF WINTER SPRINGS
Incorporated 1959
IN GOD WE TRUST

Land Use

- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Conservation
- Recreation
- Commercial
- Mixed Use
- Greenway Interchange District
- Industrial
- Town Center District
- Public / Semi-Public
- Out

Old Sanford Oviedo Rd
Ginger Ln
Wade St
A C L Railroad
State Road 419
419
434
Gee Creek
E Sr 434
Frank St
Lido
Shore Rd
Temple Way
Holiday Ln
Mockingbird Ln

N
W E
S

0 0.02 0.04 0.07 Miles

City of Winter Springs Utilities Proposed Annex

- Stormwater - Structures
- Stormwater - Cleanout
- Stormwater - Underdrain
- Stormwater - Pipes
- Water Hydrant
- Water Meter
- Water Valve
- Water Main
- Water Service
- Wastewater Cleanout
- Wastewater Manhole
- Wastewater Valve
- Wastewater Service
- Wastewater Lift Station
- Wastewater Gravity Main
- Wastewater Force Main
- Reclaimed Meter
- Reclaimed Hydrant
- Reclaimed Sleeve
- Reclaimed Service
- Reclaimed Valve
- Reclaimed Main

N W E S

0 0.25 0.5 1 Miles

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –FLU Amendment

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per City of Winter Springs Comprehensive Plan (CP) and Zoning Code. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. A Community Workshop may be required.

Future Land Use Amendments are subject to the approval of the City Commission. Each action is only effective when the notice and vote requirements of Chapter 166 and 171, Florida Statutes have been achieved.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, F.S.. Applicants are further advised that site-specific Rezones are quasi-judicial in nature. Therefore, applicant acknowledges and agrees, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Section 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission to the extent they are applicable.

NOTE: This application is ONLY for properties looking to annex into the City. If you are looking only to change the Future Land Use designation and/or Zoning classification on a property, please use the appropriate application.

REQUIRED INFORMATION

Applicant(s): OM Engineering Services, Inc. Date: 06/25/2024
Mailing address: 621 E. Washington Street, Ste 8, Orlando, FL 32801
Email: dbansal@omengineer.com
Phone Number: 407-704-7815

Property Owner(s): Matt Merdian (POA Agent for YOUDALI INTERNATIONAL INVESTMENTS LLC, KIRA WOODs, KADO INVESTMENTS LLC)
Mailing Address: 1889 BERKELEY CT, MAITLAND, FL 32751-3461
Email: info@taxdeedpro.com
Phone Number: 407-230-8093

Parcel ID(s): 34-20-30-5AW-0000-0250

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –FLU Amendment

Parcel Size: 6.99 AC

Existing Use: Agricultural/Single Family

Existing Future Land Use Designation:

Proposed Future Land Use Designation: Commercial Neighborhood/General (C)

Existing Zoning District: Agricultural/Single Family

Proposed Zoning District: General Commercial District (C-2)

What effect will the proposed amendment have on the City's budget or the economy of the region?

The property is self contained therefore the amendment will not effect the City's budget or the economy of the region.

Describe how the City might provide adequate services from public facilities to the affected property. Will the amendment promote the cost effective use of or will it unduly burden public facilities?

The property is self contained for RV & Boat storage therefore will not require services from public facilities. It will not unduly burden the public facilities.

Describe the impact that the proposed amendment will have on the Level of Service (LOS) of public facilities including sanitary sewer, solid waste, drainage, potable water, traffic circulation, and recreation.

Property will not have a impact on the sanitary sewer, solid waste, potable water and recreation public facilities

Property will have minor impact to the drainage and traffic circulation.

What impact will the proposed amendment have on the environment, natural resources, and historical resources of the City or the region?

The design will maintain the existing resources and therefore the property will not have a impact on the environmental, natural resources and historical resources. A landscape buffer and wall will be constructed to conceal the property.

Identify surrounding neighborhoods and land use. Is the amendment compatible with these surrounding uses and land use designations?

Existing surrounding business are a Dominion Metal Recycling Zoned for Industrial, Preferred Materials Inc Zoned Mineral Processing, Southern Truss Co. LLC & HL Pruitt Zoned Open Space. Yes

Will the proposed amendment promote or adversely affect the public health, safety, welfare, economic

order, or aesthetics of the City or region?

No. Property will be secured and concealed with ornamental concrete wall and landscaping.

Identify how the request is consistent with the Goals, Objectives and Policies of the Comprehensive Plan. Will approval of the amendment cause the Comprehensive Plan to be internally inconsistent?

Approval of amendment will not effect the Comprehensive Plan.

Describe how the proposed amendment is consistent with the Goals, Objectives, and Policies of the State Comprehensive Plan set forth in Chapter 187, Florida Statutes, and the East Central Florida Regional Policy Plan, adopted by Rule 29 F-19.001, Florida Administrative Code.

The proposed rezoning is consistent with the Land use plans for the local municipality.

Identify how the request is consistent with the Goals, Objectives and Policies of the Comprehensive Plan including, but not limited to, the Future Land Use Map. Will the proposed change have an adverse effect on the City's implementation of the Comprehensive Plan?

This is consistant with the goals of the Land use plans and will not effect the Comprehensive plan.

Is the proposed amendment consistent with any master plan applicable to the property?

Yes.

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Current property adjacent to this property is Industrial and Commercial. At the Non-Binding Preliminary review presentation, we provided evidence to the City which included existing pictures and current use of adjacent properties.

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this

application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing_

REQUIRED DOCUMENTATION

___ A complete Application and Fees

___ A general description of the relief sought under this division.

___ A brief narrative, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in Comprehensive Plan and Zoning Code.

___ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –FLU Amendment

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Annexation, CP Amendment, and Rezoning for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Nimesh Bhavsar

Applicant Signature: _____ Date: 6/26/24

Business Name: OM Engineering Services, Inc.

Address: 621 E. Washington St., Ste 8, Orlando, FL 32801 Parcel ID: 34-20-30-5AW-0000-0250

STATE OF FL COUNTY OF Orange

The foregoing instrument was acknowledged before ~~me~~ this 26th day of June, 2024, by Nimesh Bhavsar who is personally known to me or who has produced _____ as identification and ~~who did/did not take an oath~~.

Date: 6/26/24 (seal):

Notary Public Signature: _____

My Commission expires: 11/15/25

DAWN M. HORN
MY COMMISSION # HH 198660
EXPIRES: November 15, 2025
Bonded Thru Notary Public Underwriters

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): MATTHEW MERIDIAN

Property Owner Signature: _____ Date 06/25/2024

STATE OF FLORIDA COUNTY OF ORANGE

The foregoing instrument was acknowledged before me this 25th day of JUNE, 2024, by MATTHEW MERIDIAN who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 06/25/2024 (seal):

Notary Public Signature: _____

My Commission expires: 10/01/2027

JAZIEL ADORNO
Notary Public - State of Florida
Commission # HH 449497
My Comm. Expires Oct 1, 2027
Bonded through National Notary Assn.

CLASSIFIED

To place an ad:
- ORLANDOSENTINEL.COM/ADVERTISE
- CALL 407-420-5160 FROM 9 A.M. TO 6 P.M. MONDAY THROUGH FRIDAY

Orlando Sentinel

Classified Advertising Information

To place your classified ad, visit OrlandoSentinel.com/advertise or Call
407-420-5160

Telephone hours Monday–Friday 9 a.m.–6 p.m.

Deadlines

Sunday	1 p.m. Thursday
Thursday	1 p.m. Tuesday
Friday	1 p.m. Wednesday
Saturday	1 p.m. Thursday

Additional public notices can be found online at classifieds.orlandosentinel.com and floridapublicnotices.com

Legal Classified Deadlines

Sunday	1 p.m. Thursday
Monday	1 p.m. Friday
Tuesday	12 p.m. Monday
Wednesday	12 p.m. Tuesday
Thursday	1 p.m. Tuesday
Friday	1 p.m. Wednesday
Saturday	1 p.m. Thursday

Email your ad to us

Ads can also be emailed to us using the addresses listed below. Or, you can place your ad online at orlandosentinel.com/advertise

Obituaries & In-Memoriams:
notices@orlandosentinel.com

Legal:
classified_legal@orlandosentinel.com

Recruitment:
recruitment@orlandosentinel.com

LegalNotices

Advertisements for Bid

REQUEST FOR PROPOSALS

Proposals are hereby solicited by the City of Winter Springs, Florida for Central Winds Park Pickleball Complex Sponsorship

City Bid No. RFP 08-24-04 LH

Sealed bids must be received by September 20, 2024, at 2:00 PM at the Winter Springs City Hall, 1126 East State Road 434, Winter Springs, FL 32708. Bid opening will be immediately following the bid registration in City Hall, City Commission Chambers.

The Bidding Documents may be downloaded in PDF format from the Demand Star tool, and the City's website at:
https://www.winterspringsfl.org/rfps

The project consists of the following:

The City of Winter Springs is seeking a sponsor or sponsors for the Central Winds Park Pickleball complex consistent with the information included with the bid package.

All questions regarding the bid should be directed to Stuart MacLean, Procurement Manager by email to smaclean@winterspringsfl.org. The City of Winter Springs reserves the right to reject any or all bids, with or without cause, to waive technicalities and minor irregularities, or to accept bids that best serve the interest of the City.
8/16/2024 & 8/23/2024 7680969

REQUEST FOR QUALIFICATION

Responses are hereby solicited by the City of Winter Springs, Florida for construction Manager At Risk (CMAR) Services

City Bid No. RFQ 08-24-04 PH

Mandatory Pre-Bid Meeting scheduled for 8:45am on Wednesday September 11th, see schedule for details. Sealed bids must be received by October 18, 2024 at 2:00P.M. at the Winter Springs City Hall, 1126 East State Road 434, Winter Springs, FL 32708. Bid opening will be immediately following the bid registration in City Hall, City Commission Chambers.

The Bidding Documents may be downloaded in PDF format from the Demand Star tool, and the City's website at: https://www.winterspringsfl.org/rfps

The project consists of the following:

The City of Winter Springs is seeking to obtain the Services of a qualified and experienced Construction Manager At Risk to manage a project involving the design and construction of 2 new Wastewater Treatment Plants for the City of Winter Springs consistent with the Scope of Services information included in the bid package.

All questions regarding the bid should be directed to Stuart MacLean, Procurement Manager by email to smaclean@winterspringsfl.org. The City of Winter Springs reserves the right to reject any or all bids, with or without cause, to waive technicalities and minor irregularities, or to accept bids that best serve the interest of the City.
8/23/2024 8/30/2024 7685346

REQUEST FOR QUALIFICATIONS
COLLEGE OF CENTRAL FLORIDA
PURCHASING DEPARTMENT
3001 SW College Road, Ocala FL 34474

RFQ 24-1 Architectural and Engineering Services for the Criminal Justice Instructional Center

RFQ Documents will be available on Friday August 16, 2024

College of Central Florida is seeking a Request for Qualifications from Architectural and Engineering firms interested in providing professional services for the design and construction of an educational facility using the CM at Risk Delivery method. Interested firms may obtain the RFQ documents from the College Purchasing website:

https://www.cf.edu/about-cf/cf-at-a-glance/departments-directory/purchasing/

For solicitation Inquiries please email: Tony Denis or Jonathan Melo at Purchasing@cf.edu

CF will provide written answers to questions relating to this RFQ in the form of written addendum which will be uploaded to the CF Purchasing website noted above. All Statements of Qualifications must be hand delivered by courier or in person in a sealed package.

Qualifications will be accepted until:
Date: Friday September 27th 2024
Time: 2:00 PM
Location: CF Ocala Campus, Purchasing
Department, Building 1, Room 109

An Equal Opportunity College

August 16th, 23rd and 30th, 2024
8/16/24, 8/23/24, 8/30/24 7680973

CONSTRUCTION BID NOTICE
Orange Blossom Family Health is seeking sealed bids for the construction of an EXTENTION TO THE EXISTING MEDICAL OFFICE BUILDING of approximately 4,000 s.f. located at 4426 Old Winter Garden Road, Orlando, Florida 32811. For complete RFP please contact Melissa Schott at Baker Barrios Architects, 407-926-3000. A mandatory Pre-Bid meeting will be held on 08/29/2024 at 9:00am at the Baker Barrios Architects' Orlando Office. Bid Due Date by 2:00PM on 09/20/2024
8/23/2024 - 8/28/2024 7685232

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Public Hearing Notices

ORANGE COUNTY FLORIDA
NOTICE OF PUBLIC MEETING

A conflict assessment meeting will occur between officials of the City of Orlando and Orange County pursuant to Chapter 164, Florida Statutes, known as the "Florida Governmental Conflict Resolution Act." **This meeting will be held on Wednesday, September 4, 2024, at 3:30 p.m., in the County Administrator's Executive Conference Room on the fifth floor of the Orange County Administration Center, 201 S. Rosalind Avenue, in downtown Orlando.** The matters to be discussed at the meeting relate to the conflict described in Resolution No. 2024-M-12 adopted by the Board of County Commissioners on April 23, 2024, and Resolution No. 2024-M-14 adopted by the Board of County Commissioners on May 21, 2024. The meeting will be attended by appropriate personnel from each governmental entity, including the chief administrator, or his or her designee, for each governmental entity.

IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, PLEASE CONTACT THE ORANGE COUNTY ATTORNEY'S OFFICE, 407-836-7320, Email: andrew.mai@ocfl.net

PARA MÁS INFORMACIÓN, REFERENTE A ESTA VISTA PÚBLICA CON RESPECTO A UNA AUDIENCIA PÚBLICA EN CONSIDERACIÓN DE LA LEY, FAVOR COMUNICARSE CON LA OFFINA DE ABOGADOS DEL CONDADO DE ORANGE AL 407-836-7320.

If you require special accommodations under the Americans with Disabilities Act, please call 407-836-5631 no later than two business days prior to the meeting for assistance.

Si usted requiere ayuda especial bajo la ley de Americanos con Incapacidades, por favor llame al 407-836-3111.

7682141 8/23/2024

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Protection gives notice of its intent to issue a permit to KENROB, LLC. (1495 Evans Street, Suite 100, Oviedo, Florida 32765) to construct and operate a new 0.0021 mgd Distributed Wastewater Treatment System (DWTS) with an associated absorption field land application system. The facility will be located at latitude 28o 40' 37"N, longitude 81o 12' 29" W on 474 N. Central Ave, Oviedo, Florida 32765 in Seminole County. The Department has assigned permit file number FLAB07457-001-DW3T to the proposed project.
The intent to issue and application file are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department's Central District Office, 3319 Maguire Blvd, Suite 232, Orlando, Florida 32803-3767, at phone number (407)897-4100 and email: DEP_CD@dep.state.fl.us.
NOTICE OF RIGHTS
The Department will issue the permit unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.
Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:
(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the Department's agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.
The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.
Time Period for Filing a Petition
Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.
Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.
Mediation
Mediation is not available in this proceeding.
8/23/2024 7685393

Public Hearing Notices

NOTICE OF PUBLIC HEARINGS CITY OF WINTER SPRINGS

NOTICE IS HEREBY GIVEN THAT THE PLANNING AND ZONING BOARD AND THE CITY COMMISSION PROPOSE TO CONSIDER THE FOLLOWING:

ORDINANCE NO. 2024-09

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE FUTURE LAND USE MAP DESIGNATION ON THE PARCEL FROM COUNTY "SUBURBAN ESTATES" TO CITY "COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, INCORPORATION INTO THE COMPREHENSIVE PLAN, AND AN EFFECTIVE DATE AND LEGAL STATUS OF THE PLAN AMENDMENT.

ORDINANCE 2024-10

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE ZONING MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE ZONING MAP DESIGNATION ON THE PARCEL FROM COUNTY "AGRICULTURE" TO CITY "GENERAL COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, INCORPORATION INTO THE COMPREHENSIVE PLAN, AND AN EFFECTIVE DATE AND LEGAL STATUS OF THE PLAN AMENDMENT.

THE PLANNING AND ZONING BOARD PUBLIC HEARING WILL BE HELD ON THURSDAY, SEPTEMBER 05, 2024 AT 5:30 P.M. OR SOON THEREAFTER IN THE COMMISSION CHAMBERS LOCATED AT WINTER SPRINGS CITY HALL 1126 EAST STATE ROAD 434 WINTER SPRINGS, FL 32708

THE CITY COMMISSION FIRST READING PUBLIC HEARING WILL BE HELD ON MONDAY, SEPTEMBER 23, 2024 AT 6:30 P.M. OR SOON THEREAFTER IN THE COMMISSION CHAMBERS LOCATED AT WINTER SPRINGS CITY HALL 1126 EAST STATE ROAD 434 WINTER SPRINGS, FLORIDA

THE PLANNING AND ZONING BOARD AND/OR THE CITY COMMISSION RESERVE THE RIGHT TO POSTPONE OR CONTINUE THE PUBLIC HEARING ON THESE ORDINANCES AT THE ABOVE-LISTED MEETINGS WITHOUT FURTHER NOTICE.

The proposed ordinances may be obtained by interested parties between 8 a.m. and 5 p.m., Monday through Friday, from the office of the City Clerk, located at 1126 E. SR 434, Winter Springs, Florida. For more information, call (407) 327-1800 #237. Persons with disabilities needing assistance to participate in any of these proceedings should contact the Employee Relations Department Coordinator, 48 hours in advance of the meeting at (407) 327-1800, #236. This is a public hearing. Interested parties are advised that they may appear at the meeting and be heard with respect to the proposed ordinances. If you decide to appeal any recommendation or decision made by any of the City's Boards or Commission with respect to any matter considered at these meetings, you will need a record of the proceedings, and for such purposes, you may need to ensure that a verbatim record of the proceeding is made upon which the appeal is based.
8/23/2024 7682213

Notice of Administration

NOTICE TO CREDITORS
IN THE CIRCUIT COURT OF THE 9TH JUDICIAL CIRCUIT
IN AND FOR OSCEOLA COUNTY, FLORIDA
PROBATE DIVISION
File No. 2024 CP 000295 PR

IN RE: ESTATE OF GERTRUDE NICCOLI,
Deceased.

The administration of the estate of GERTRUDE NICCOLI, Deceased, whose date of death was February 25, 2024, is pending in the Circuit Court for OSCEOLA County, Florida, Probate Division, the address of which is 2 Courthouse Sq, Kissimmee, FL 34741. The names and addresses of the personal representative and the personal representative's attorney are set forth below.

All creditors of the decedent and other persons having claims or demands against decedent's estate on whom a copy of this notice is required to be served must file their claims with this court WITHIN THE LATER OF 3 MONTHS AFTER THE TIME OF THE FIRST PUBLICATION OF THIS NOTICE OR 30 DAYS AFTER THE DATE OF SERVICE OF A COPY OF THIS NOTICE ON THEM.

All other creditors of the decedent and other persons having claims or demands against decedent's estate must file their claims with this court WITHIN 3 MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE.

ALL CLAIMS NOT FILED WITHIN THE TIME PERIODS SET FORTH IN SECTION 733.702 OF THE FLORIDA PROBATE CODE WILL BE FOREVER BARRED.

NOTWITHSTANDING THE TIME PERIODS SET FORTH ABOVE, ANY CLAIM FILED TWO (2) YEARS OR MORE AFTER THE DECEDENT'S DATE OF DEATH IS BARRED.

The date of first publication of this notice is 5/13/2024

Attorney for Personal Representative:
Scott R. Bugay, Esquire
Florida Bar No. 5207
Citicentre, Suite P600
290 NW 165 Street
Miami FL 33169
Telephone: (305) 956-9040
Fax: (305) 945-2905
Primary Email: Scott@srblawyers.com
Secondary Email: angelica@srblawyers.com

BETH POTOCNAK,
Personal Representative
5/13/2024 5/20/2024 7634652

Notice of Administration

NOTICE TO CREDITORS
IN THE CIRCUIT COURT IN AND FOR SEMINOLE COUNTY, FLORIDA
PROBATE DIVISION
CASE NUMBER: 2024-CP-001164

IN RE: ESTATE OF ESTATE OF MARY LEE
Deceased

TO ALL PERSONS HAVING CLAIMS OR DEMANDS AGAINST THE ABOVE ESTATE:

The administration of the estate of Mary Lee, deceased whose date of death was June 12, 2024, is pending in the Circuit Court for Seminole County, Florida, Probate Division, the address of which is Juvenile Justice Center, 190 Eslinger Way, Sanford, FL 32773. The names and addresses of the personal representative and the personal representative's attorney are set forth below.
ALL INTERESTED PERSONS ARE NOTIFIED THAT:
All creditors of the decedent and other persons having claims or demands against decedent's estate on whom a copy of this notice is served within three months after the date of the first publication of this notice must file their claims with this Court ON OR BEFORE THE LATER OF THREE MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE OR THIRTY DAYS AFTER THE DATE OF SERVICE OF A COPY OF THIS NOTICE ON THEM.
All other creditors of the decedent and persons having claims or demands against the decedent's estate must file their claims with this court WITHIN THREE MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE.
ALL CLAIMS, DEMANDS AND OBJECTIONS NOT SO FILED WITHIN THE TIME PERIODS SET FORTH IN FLORIDA STATUTES SECTION 733.702 WILL BE FOREVER BARRED.

The date of the first publication of this Notice is 6/16/2024

Personal Representative:
Fred Alan Lee1210 Harding Street
Winter Park, FL 32789

Attorney for Personal Representative:
Arti Ajit Hirani, of
Meenakshi A. Hirani, P.A.
Florida Bar No.: 168645
2265 Lee Road, Suite 109
Winter Park, Fl. 32789
(407) 599-7199
Email: arti.hirani@hiranilaw.com
8/16/2024 & 8/23/2024 7680232

Fictitious Name

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Pixifi
under which (I am) (we are) engaged in business at 600 E Colonial Dr Ste. 100, Orlando 32803. That the (party) (parties) interested in said business enterprise is as follows:
Iris Works, LLC
600 E Colonial Dr Ste. 100 Orlando, FL 32803
Dated at Orlando, Orange County , Florida, 8/20/2024

7685319 8/24/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Alien Affection
under which (I am) (we are) engaged in business at 3931 Greenview Pines Ct That the (party) (parties) interested in said business enterprise is as follows:
Jim Walsh
3931 Greenview Pines Ct
Dated at Orlando, Orange County , Florida, 08/21/2024

7685414 8/23/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Steve O's Plumbing
under which (I am) (we are) engaged in business at 5008 Adanson St Orlando, Florida 32804 That the (party) (parties) interested in said business enterprise is as follows:
S & L Plumbing & Drain LLC
5008 Adanson St Orlando, Florida 32804
Dated at Orlando, Orange County , Florida, 08/21/2024

7685479 8/23/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Lake Trust LLC
under which (I am) (we are) engaged in business at 12501 Bear Creek Ter, Beltsville MD 20705 That the (party) (parties) interested in said business enterprise is as follows:
AliRental LLC
12501 Bear Creek Ter, Beltsville MD 20705
Dated at Orlando, Orange County , Florida, 08/23/2024

7685834 8/23/2024

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Fictitious Name

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
CARPET SOURCE OF WINTER PARK
under which (I am) (we are) engaged in business at 505 N Virginia Avenue That the (party) (parties) interested in said business enterprise is as follows:
PUSH THRU LLC
2075 47th Street, Sarasota FL
Dated at Winter Park, Orange County , Florida, 08/21/2024

7685778 8/23/2024

Sale Notices

NOTICE OF PUBLIC SALE
Notice is hereby given that PODS Enterprises, LLC, located at 7133 Municipal Dr, Orlando, FL 32819, will sell the contents of certain containers at auction to the highest bidder to satisfy owner's lien. Auction will be held online at www.StorageTreasures.com starting on September 3, 2024 and ending on September 10, 2024. Contents to be sold may include general household goods, electronics, office & business equipment, furniture, clothing and other miscellaneous property. Contents to be sold are stored by the following persons: Marie Oubina (73142BX, 8089B82); Helene Shearer (696B39); Barbara Cabone (399B107); Robert Gimbel (112B94); Krenare Gervalla (42A17); Kathy Kosich (238A4); Mwannesi Wade (32205BX).
8/16/2024 & 8/23/2024 7680112

NOTICE OF PUBLIC SALE
MILLAN AUTO SALVAGE,TOWING AND REPAIR gives notice that on 09/04/2024 at 09:00 AM the following vehicles(s) may be sold by public sale at 950 N HOAGLAND BLVD, KISSIMMEE, FL to satisfy the lien for the amount owed on each vehicle for any recovery, towing, or storage services charges and administrative fees allowed pursuant to Florida statute 713.78.

JS1GN7CA152103575 2005 SUZI
KMHD74LF5JU523640 2018 HYUN
KMHDN56D15U132979 2005 HYUN
WDDGF4HB0CA724799 2012 MERZ
8/23/2024 7685286

Miscellaneous Legals

NOTICE
Commonwealth of Massachusetts
Trial Court
Probate & Family Court
Docket Number: 24E0036
WORCESTER

Summons by Publication
Brandt Lane Development LLC
V.
Paul A. Kalashian Jr.

To the above named Defendant: Paul A. Kalashian Jr.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.

8/23/2024 7682960

SUMMONS BY PUBLICATION
Brandt Lane Development LLC
v.
Edward Oliver Kalashian

To the above named Defendant: Edward Oliver Kalashian.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development

LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.
8/23/2024 7684819

SUMMONS BY PUBLICATION
Brandt Lane Development LLC
V.
Lillian Simone Kalashian

To the above named Defendant: Lillian Simone Kalashian.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development

LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.
8/23/2024 7684861

Closing of Medical Office

NOTICE
Effective Sept. 1, 2024, Dean Behner, MD, will no longer be providing care at WellMed / Optum. Patients of Dr. Behner may continue care at WellMed / Optum. Patients can obtain copies of their medical records at:
WellMed at Apopka
125 S. Park Ave.
Apopka, FL 32703
Phone: 1-407-886-1171
Optum – Park Avenue
202 N. Park Ave.
Apopka, FL 32703
Phone: 1-407-889-4711
Optum – Apopka
2226 E. Semoran Blvd.
Apopka, FL 32703
Phone: 1-407-880-0011
8/9/,8/16,/8/23,8/30/2024 7668774

Employment

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Garage Sales

Orange County-Garage Sales

EAST ORLANDO
719 Meadowside Ct, Orlando, FL. Join us for a garage sale featuring a variety of tools and quality wood for all your DIY projects! Saturday 8/24 from 9a-3p

Merchandise

WANTED!

PRE-COLUMBIAN ART & ANTIQUITIES
$10,000 - We are looking to purchase single items or whole collections of Pre-Columbian art. Pieces from Mexico, Guatemala, Peru, Honduras. Mayan, Olmec or any culture from the Americas. Pottery, metal, wood, stone or textiles. Text pictures of what you have. 863-368-3454

Pets

Pets for Sale

GOLDENDOODLE'S PUPPIES BEST X SERV.DOGS
negotiable, 2k 4072237961 text

RealEstate forRent

Homes Seminole County for Rent

SANFORD 46,14, MALL
5bd,1g lot, gated, 3,150 **571-296-7010**

WINTER PARK
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COMMUNITY DEVELOPMENT

COMP-2024-0002: Ordinance 2024-09 First Reading

City Commission

Talbert Jackson, MSURP

Senior Planner

Background

Property Address: 4301 SR 419 (± 8.12 ac)

April 08, 2024:
City Commission approved Ordinance 2024-04 to annex subject property

May 08, 2024:
Community Workshop

June 20, 2024:
Pre-Application Meeting

August 07, 2024:
Public Notice Letters – Public Hearing

August 23, 2024:
Newspaper Advertisement (Rezoning)

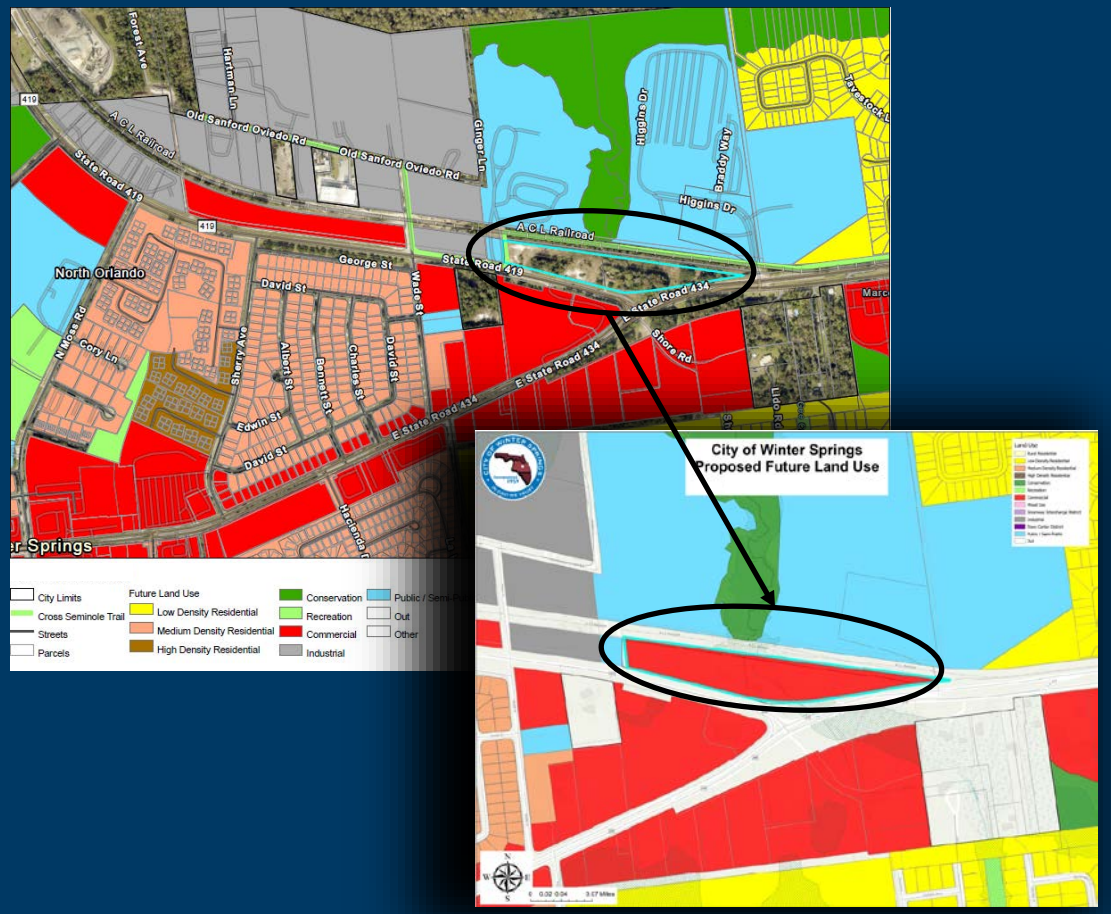


Future Land Use (FLU)

Existing Unincorporated FLU:
Suburban Estates

Proposed FLU:
Commercial
Transitions and buffers commercial and residential FLUs from Industrial FLUs while allowing for proposed use

Proposed Use:
Outdoor Storage of Recreational Vehicles (RVs) and Boats

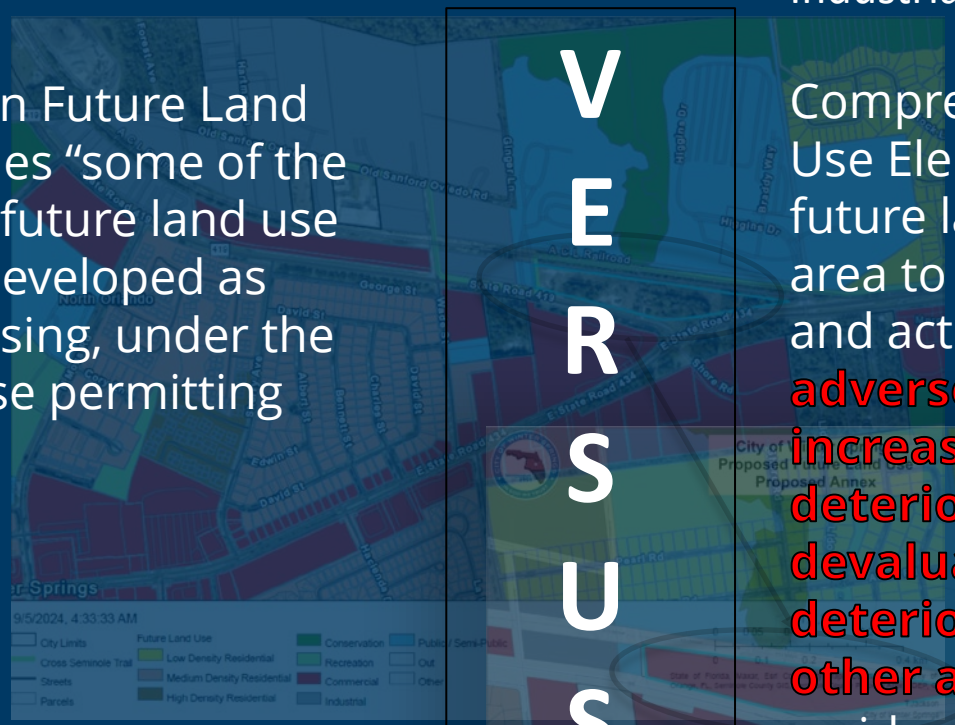


COMP-2024-0002: Ordinance 2024-09 First Reading

Future Land Use - Comparisons

Commercial

Comprehensive Plan Future Land Use Element provides "some of the City's [commercial] future land use acreage has been developed as multiple family housing, under the City's conditional use permitting process."



VERSUS

Industrial

Comprehensive Plan Future Land Use Element provides "the Industrial future land use category serves as an area to locate authorized land uses and activities which could have **adverse secondary effects (e.g. increased crime; neighborhood deterioration and blight; property devaluation; economic deterioration; health risks; and other adverse effects)** on residential areas, religious institutions, schools, parks, day care centers, and other public institutions located within the City."

AGENDA ITEM 402

City Commission

SEPT 23, 2024

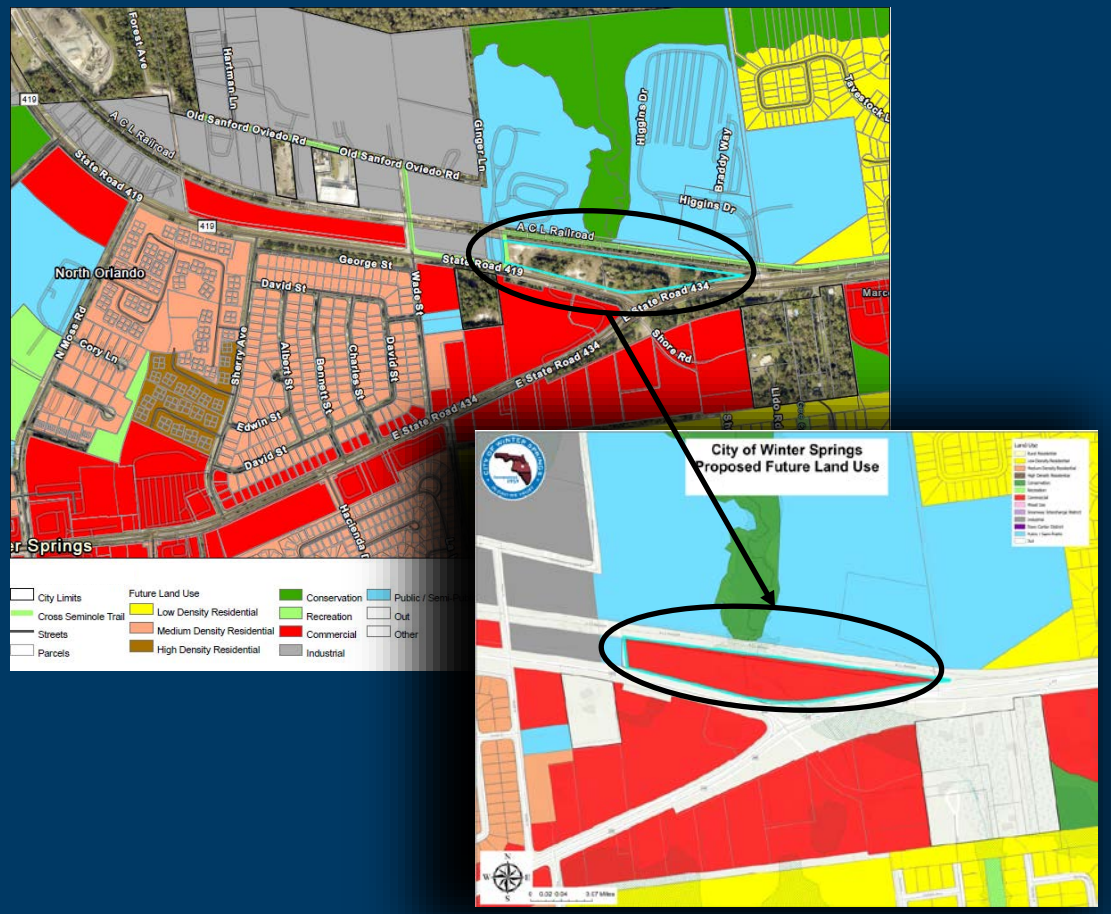
COMP-2024-0002: Ordinance 2024-09 First Reading

Questions/Comments/Objectives

Questions or comments pertaining to site development, maintenance, agreements, and Gee Creek should be reserved for the Site Plan public hearing that will be publicly noticed at a later date.

Inquiries pertaining to the future land use designation will be addressed at this time.

The objective is to consider amending the Future Land Use Map to Commercial by approving Ordinance 2024-09.



Applicant:
OM Engineering Services, Inc.

AGENDA ITEM 402

City Commission

SEPT 23, 2024

ANY QUESTIONS?

PUBLIC HEARINGS AGENDA ITEM 403

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

First Reading of Ordinance 2024-10, to assign the General Commercial Zoning District to one (1) parcel of land located at 4301 SR 419.

SUMMARY

The privately owned property generally located at 4301 SR 419 was voluntarily annexed into the City by Ordinance 2024-04. Ordinance 2024-10 proposes to assign the General Commercial Zoning District to the subject property. The applicant intends to utilize a the property for the outdoor storage of boats and recreational vehicles (RVs). The proposed General Commercial Zoning District meets the analysis requirements addressed in the staff report as it provides a transition of uses as the surrounding areas existing FLUs transition from residential to industrial forms of uses. The Planning and Zoning Board recommended approval during the September 05, 2024 public meeting.

Staff and the City Attorney's office are in the process of completing a draft development agreement with the property owner as required by Section 20-31(d)(18), City Code. The Agreement will be presented to the City Commission at Second Reading as a condition of approval of the Ordinance.

FUNDING SOURCE

N/A

RECOMMENDATION

Staff recommends City Commission approve the First Reading of Ordinance 2024-10 to assign the General Commercial Zoning District to property generally located at 4301 SR 419.

PUBLIC HEARINGS AGENDA

CITY COMMISSION

Monday, September 23, 2024 | REGULAR MEETING

TITLE

4301 SR 419 | Rezoning

SUMMARY/UPDATE

The Community Development Department requests that the City Commission hold a Public Hearing to consider Ordinance 2024-10 for the Rezoning of the ±8.12-acre lot located along State Road 419 north of State Road 434.

General Information		
Applicant	OM Engineering Services, Inc.	
Property Owner(s)	Kado Investments, LLC, Youdali International Investments, LLC, and Kira Woods	
Location	4301 SR 419, Winter Springs, FL 32708	
Tract Size	±8.12 acres	
Parcel ID Number	34-20-30-5AW-0000-0250	
Zoning Designation	Not Currently Assigned (Voluntary Annexation via Ordinance 2024-04)	
FLUM Designation	Not Currently Assigned (Voluntary Annexation via Ordinance 2024-04)	
Adjacent Land Use	North: Layer Elementary School & School Bus Yard East: Seminole County Transportation Depot	South: State Road 434; Day Care/Pre-School West: Vacant
Development Permits	None	
Development Agreement	None	
Code Enforcement	None	
City Liens	None	

Request:
The applicant seeks to designate the General Commercial (C-2) zoning district to the annexed property via Ordinance 2024-10.

Background Data:
The property is part of the Entzminger Farms Addition No 2 Subdivision. The property consists of a single-story concrete block building built in 1969, per the Seminole County Property Appraiser, utilized as a single-family residence that consists of approximately 2,466 SF. Two additional accessory buildings, a metal shed and one-story garage, exist on the site.

The property was voluntarily annexed by the applicant to the City of Winter Springs on April 08, 2024. via Ordinance 2024-04. The existing residential building is intended to be utilized for commercial purposes supportive of the proposed use. The applicant intends to utilize the property for the outdoor storage of recreational vehicles (RVs) and boats.

Public Notices:
Public Hearing Notices were mailed to all owners of real property adjacent to and within approximately five hundred (500) feet of the subject property and to all Homeowner's Associations on file with the City Winter Springs and located within one-half (1/2) mile of the subject property (27 notices) on July 19, 2024.

Rezoning Analysis:
The following criteria is set forth by City of Winter Springs Code of Ordinances Section 20-31(d) which has been analyzed by staff to form a recommendation:

Rezoning Criteria & Analysis	
1.	The proposed rezoning change is in compliance with all procedural requirements established by the City Code and law; **Analysis:** The proposed rezoning is in compliance with all procedural requirements established by the City Code and by law. Requirements for advertising the land use action have been met.
2.	The proposed rezoning change is consistent with the City's Comprehensive Plan including, but not limited to, the Future Land Use Map and the proposed change would not have an adverse effect on the Comprehensive Plan; **Analysis:** The proposed zoning designation is consistent with the City's Comprehensive Plan Future Land Use Element: Policy 1.5.4 – Conversions. Support the transition or conversion of older residential homes fronting onto arterial roadways, to a live-work or commercial use, by reducing the required development standards when

	appropriate, while maintaining compatibility and protecting adjacent neighborhood uses Policy 1.5.8 is satisfied by utilizing the proposed zoning district as an appropriate method of Policy 1.5.5: Policy 1.5.5 Buffers. Buffer residential areas from intensive commercial and industrial land uses. Locate less intensive transitional uses in between, or buffer with berms, trees, or other methods, as deemed appropriate by the City. Policy 1.5.8 Adverse Uses. Implemented through the adoption of the City's land development regulations, lands designated "industrial" on the Future Land Use Map – 2030 to also serve as an area to locate authorized land uses and activities which could have adverse secondary effects (e.g. increased crime; neighborhood deterioration and blight; property devaluation; economic deterioration; health risks; and other adverse effects) on residential areas, religious institutions, schools, parks, day care centers, and other public institutions located within the City. Policy 1.8.2 Enclaves. Annex all enclaves, where feasible, in order to reduce land uses conflicts and provide efficient public service. The request serves as a continuance of the subject parcel's annexation. The proposed change is not anticipated to have an adverse effect on the city's implementation of goals, policies, and objective of the comprehensive plan.
3.	The proposed rezoning change is consistent with any Master Plan applicable to the property; **Analysis:** A City of Winter Springs master plan involving the parcel in question does not exist; the property was previously unincorporated. Consideration of surrounding zoning, being Neighborhood Commercial (C-1), General Commercial (C-2), Light Industrial (I-1), all within the City of Winter Springs, allows for a transition of proposed uses that also buffers the Light Industrial (I-1) of the northwestern parcels from the Neighborhood Commercial (C-1) and Residential (R-1, R-3,) parcels to the south and southwest.
4.	The proposed rezoning change is not contrary to the land use pattern established by the City's Comprehensive Plan; **Analysis:** The proposed rezoning change is not contrary to the land use pattern established by the City's Comprehensive Plan. The General Commercial (C-2) zoning designation would enhance the transition from commercial to

	industrially zoned property traversing from east or west along SR 419 or residential to industrial from south to north.
5.	The proposed rezoning change would not create a spot zone prohibited by law; **Analysis:** The proposed zoning designation does not create spot zoning. The adjacent northern parcel is zoned General Commercial (C-2), Neighborhood Commercial (C-1) to the south, Planned Unit Development (PUD) to the east, and Light Industrial (I-1) to the west.
6.	The proposed rezoning change would not materially alter the population density pattern in a manner that would overtax the load on public facilities and services such as schools, utilities, streets, and other municipal services and infrastructure; **Analysis:** The proposed rezoning of General Commercial (C-2) does not alter the population density pattern and will not negatively contribute to public facilities and services. Additionally, the parcel is restricted by Gee Creek, a powerline access easement, and topographical challenges that renders the parcel deficient in being able to provide a population density that would overtax the load on public facilities and services.
7.	The proposed rezoning would not result in existing zoning district boundaries that are illogically drawn in relation to existing conditions on the property and the surrounding area and the land use pattern established by the city's comprehensive plan; **Analysis:** The proposed rezoning does not result in existing zoning district boundaries that are illogically drawn. The surrounding area consists of an elementary school, pre-school, and metal and auto recycling center. The General Commercial (C-2) zoning district allows, as a permitted use, uses allowed within the Neighborhood Commercial (C-1) zoning district.
8.	Changed or changing conditions make the proposed rezoning necessary; **Analysis:** The property was voluntarily annexed via Ordinance 2024-04 into the City of Winter Springs. The rezoning is necessary for the assignment of permitted uses of property within the jurisdiction of the City of Winter Springs.
9.	The proposed rezoning change will not seriously reduce light or air to adjacent areas;

	Analysis: The proposed rezoning to General Commercial (C-2) will not seriously reduce light or air to adjacent areas.
10.	Should the city be presented with competent substantial evidence indicating that property values will be adversely affected by the proposed rezoning, the applicant must demonstrate that the proposed rezoning change will not adversely affect property values in the surrounding area; **Analysis:** The proposed zoning designation has been determined by evaluating the prevailing character of the area around the subject property. The proposed rezoning is not anticipated to have an adverse effect on property values in the surrounding area. The Seminole County Property Appraisers Office estimates an increase in value of the subject property.
11.	The proposed rezoning will not be a substantial detriment to the future improvement or development of vacant adjacent property; **Analysis:** The proposed rezoning will not be a substantial detriment to the future improvement or development of vacant adjacent property. The proposed zoning designation of General Commercial (C-2) compliments the adjacent properties existing zoning classifications.
12.	The proposed rezoning will not constitute a grant of special privilege to an individual owner as contrasted with the public welfare; **Analysis:** The proposed rezoning does not constitute a grant of privilege to an individual owner as contrasted with the public welfare. The proposed General Commercial (C-2) zoning designation compliments the transition from Light Industrial (I-1) from the west and northwest to Planned Unit Development (PUD) residential to the east. The transition also applies from north to south.
13.	The proposed rezoning change is not out of scale or incompatible with the needs of the neighborhood or the city; **Analysis:** The proposed rezoning change will be compatible with, and is intended to meet, the surrounding area and City needs. The City stands to benefit from the assessors tax rate differential from the lower residential to higher commercial tax assessment rate.
14.	The proposed rezoning does not violate any applicable land use regulations adopted by the city.

	Analysis: The proposed rezoning does not violate any applicable land use regulations adopted by the City. As described in Division 8 of the City's Code of Ordinances, "the lands of the C-2 General Commercial District are to be used by a variety of commercial operations which serve the commercial needs of the community. The purpose of this district is to permit the normal operation of the majority of general commercial uses under such conditions of operation as will protect abutting residential and other noncommercial uses, minimize the interruption of traffic along adjacent thoroughfares, promote aesthetic and architectural harmony, attractiveness, and compatibility within the community, and abide by the performance and development standards of the city, county, state and U.S. government. This district is intended for lands adjacent to or easily serviced by collector and major arterial roads adaptable to higher traffic generating general commercial uses." The proposed zoning designation is suitable for the parcel in question.
15.	Applications in the town center to rezone to a transect zone shall meet the following additional criteria: (a) The proposed t-zone shall provide a logical extension of an existing zone, or an adequate transition between zones. **Analysis:** Not applicable as the parcel in question is not located within the Town Center District (b) The area shall have had a change in growth and development pattern to warrant a rezoning to a more or less urban t-zone. **Analysis:** Not applicable as the parcel in question is not located within the Town Center District (c) The request shall be consistent with the overall city vision for growth and development as expressed in the city's comprehensive plan or applicable master plan. **Analysis:** Not applicable as the parcel in question is not located within the Town Center District
16.	Speculative rezoning of land is very disfavored by the city. In conjunction with a rezoning application, the applicant shall be required to fully disclose any proposed new development project that will be pursued by the applicant if the proposed rezoning request is approved, and all applicable application information shall be submitted for the proposed new development project. The proposed development project shall be

	deemed to have been relied on by City in reaching its decision concerning the proposed change of zoning. Said site plan or concept plan shall be deemed to be binding on the subject property affected by the rezoning and site plan or concept plan, and any change of zoning shall be deemed to be granted in reliance on said site plan or concept plan, even though said site plan or concept plan imposes greater or stricter standards on said property than does other provisions of the City Code for the other lots, tracts, or parcels of land in like land use classifications. Such greater or stricter standards shall be deemed appropriate when unique or peculiar site and locational characteristics are evident and shall be deemed to exist when such site plan or concept plan is relied upon by the planning and zoning board and the city commission. The proposed new development project shall be evaluated in accordance with the review criteria set forth in this subsection and the applicable review criteria for conditional uses set forth in section 20-33. Mitigative techniques and plans required to support any change of zoning may be addressed pursuant to the restricted rezoning provisions set forth in subsection (e) and a binding development agreement. **Analysis:** The applicant intends to utilize the property for the outdoor storage of recreational vehicles (RVs) and boats.
17.	If the proposed rezoning will allow residential uses or increase the possible density of residential uses, the proposed rezoning shall not potentially cause negative impacts on school capacity (K—12), school overcrowding (K—12), accessibility and convenience (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the K—12 school population projected for the property and that will be drawn from any proposed residential project, and the integration of future residents of any proposed residential project into the existing city of Winter Springs community in a sustainable manner. **Analysis:** The proposed General Commercial (C-2) zoning district also allows for permitted uses within the Neighborhood Commercial (C-1) zoning district. Residential development would require conditional use approval. Two conditional use options within Chapter 20, Article III, Division 8, Sec. 20-254 exist: (4) Halfway houses, group homes, and similar uses (8) A multiple-family residential use that was lawfully approved and permitted as a conditional use by the City prior to the effective date of Ord. No. 2015-15 [January 25, 2016] shall be considered a lawful, conforming use subject to all applicable conditions and requirements imposed by the City when said use was previously permitted.

	At the time of this report, residential uses may only be approved by way of conditional use approval by the City Commission. Those uses include halfway houses, group homes, and similar uses. The applicant is not requesting residential conditional uses.
18.	Whether the applicant has agreed to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The applicant intends to agree to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

Procedural History:

Procedural History:	
September 25, 2023	Non-Binding Presentation (NBR2023-0047) City Commission observed
March 25, 2024	First Reading of Ordinance Number 2024-04 City Commission approved Annexation
April 08, 2024	Second Reading of Ordinance Number 2024-04 City Commission approved
May 08, 2024	Community Workshop Layer Elementary School – 4201 SR 419 Media Room
June 20, 2024	Pre-Application Meeting (PREM-2024-0013)
June 27, 2024	Application Submittal
September 05, 2024	Recommendation of approval by Planning & Zoning Board
TBD	First Reading of Ordinance Number 2024-10 City Commission approved Rezoning

Recommendation:
Staff recommends the City Commission adopt Ordinance 2024-10 to assign the zoning designation of General Commercial (C-2) to the subject parcel.

ORDINANCE NO. 2024-10

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA; AMENDING THE ZONING MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE ZONING MAP DESIGNATION ON THE PARCEL FROM COUNTY "AGRICULTURE" TO CITY "GENERAL COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, AND AN EFFECTIVE DATE.

WHEREAS, the City is granted the authority, under § 2(b), Art. VIII of the State Constitution, to exercise any power for municipal purposes except when expressly prohibited by law; and

WHEREAS, on April 08, 2024, the City Commission adopted Ordinance Number 2024-04, which is recorded in the Official Records of Seminole County, Florida, at Book 10609, Page 752, and which annexed the subject property into the City of Winter Springs; and

WHEREAS, the Planning and Zoning Board and City Staff of the City of Winter Springs recommended approval of this Ordinance at their September 05, 2024, meeting; and

WHEREAS, the City Commission of the City of Winter Springs held two duly noticed public hearings on the proposed amendment set forth hereunder and considered findings and advice of staff, citizens, and all interested parties submitting written and oral comments and supporting data and analysis, and after complete deliberation, hereby approves and adopts the zoning map amendment set forth hereunder; and

WHEREAS, the City Commission hereby finds that this Ordinance serves a legitimate government purpose and is in the best interests of the public health, safety, and welfare of the citizens of the City of Winter Springs, Florida.

NOW, THEREFORE, THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS HEREBY ORDAINS, AS FOLLOWS:

Section 1. Recitals. The foregoing recitals are true and correct and are fully incorporated herein by this reference.

Section 2. Purpose and Intent. It is hereby declared to be the purpose and intent of this Ordinance to adopt a zoning map amendment incorporating the revisions stated herein into the official Zoning Map of the City of Winter Springs.

Section 3. Zoning Map Amendment. The official Zoning Map of the City of Winter Springs is hereby amended to include a change of classification for the property legally described and depicted on **Exhibit "A"** from County "Agriculture" to City "General Commercial," (C-2). Exhibit "A" is attached hereto and fully incorporated herein by this reference.

Section 4. Staff Instructions. City Staff is hereby directed to promptly amend the City's Official Zoning Map upon the effective date of this Ordinance. In addition, upon adoption and full execution of this Ordinance by the City Commission, the City Clerk is hereby directed to record this Ordinance in the Official Records of Seminole County, Florida. This Ordinance shall run with the land.

Section 5. Repeal of Prior Inconsistent Ordinances and Resolutions. All prior inconsistent ordinances and resolutions adopted by the City Commission, or parts of prior ordinances and resolutions in conflict herewith, are hereby repealed to the extent of the conflict.

Section 6. Severability. If any section, subsection, sentence, clause, phrase, word or provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

Section 7. Effective Date. This Ordinance shall become effective immediately upon the effective date of Ordinance No. 2024-09 as adopted by the City Commission of the City of Winter Springs, Florida, and pursuant to the City Charter. If Ordinance No. 2024-09 does not become effective, then this Ordinance shall become null and void.

ADOPTED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on the _____ day of _____, 2024.

_____

Kevin McCann, Mayor

ATTEST:

_____

Christian Gowan, City Clerk

[Signatures continued on next page]

Approved as to legal form and sufficiency for

the City of Winter Springs only:

_____

Anthony A. Garganese, City Attorney

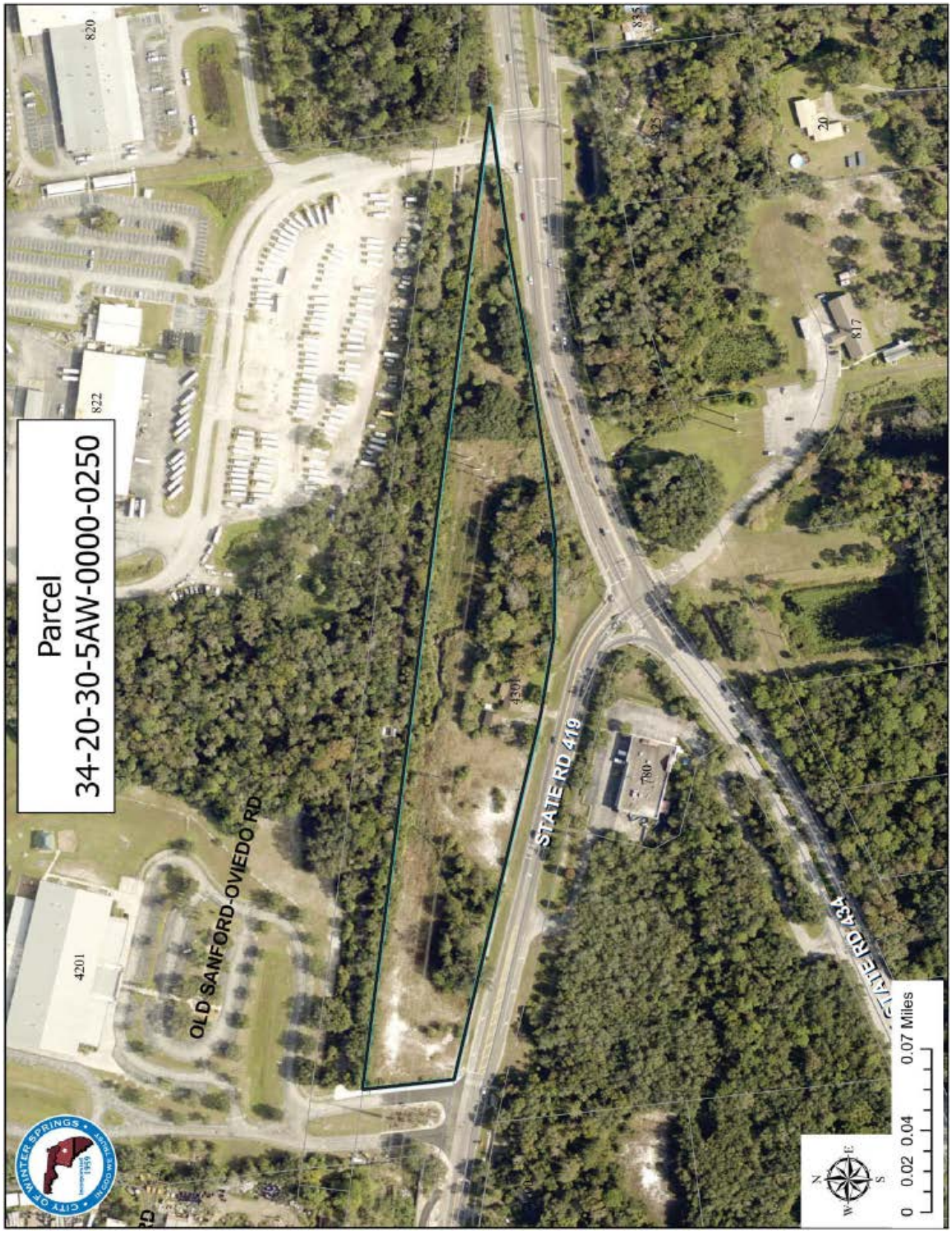
Legal Ad: _____
First Reading: _____
Legal Ad: _____
Second Reading: _____
Effective Date: _____

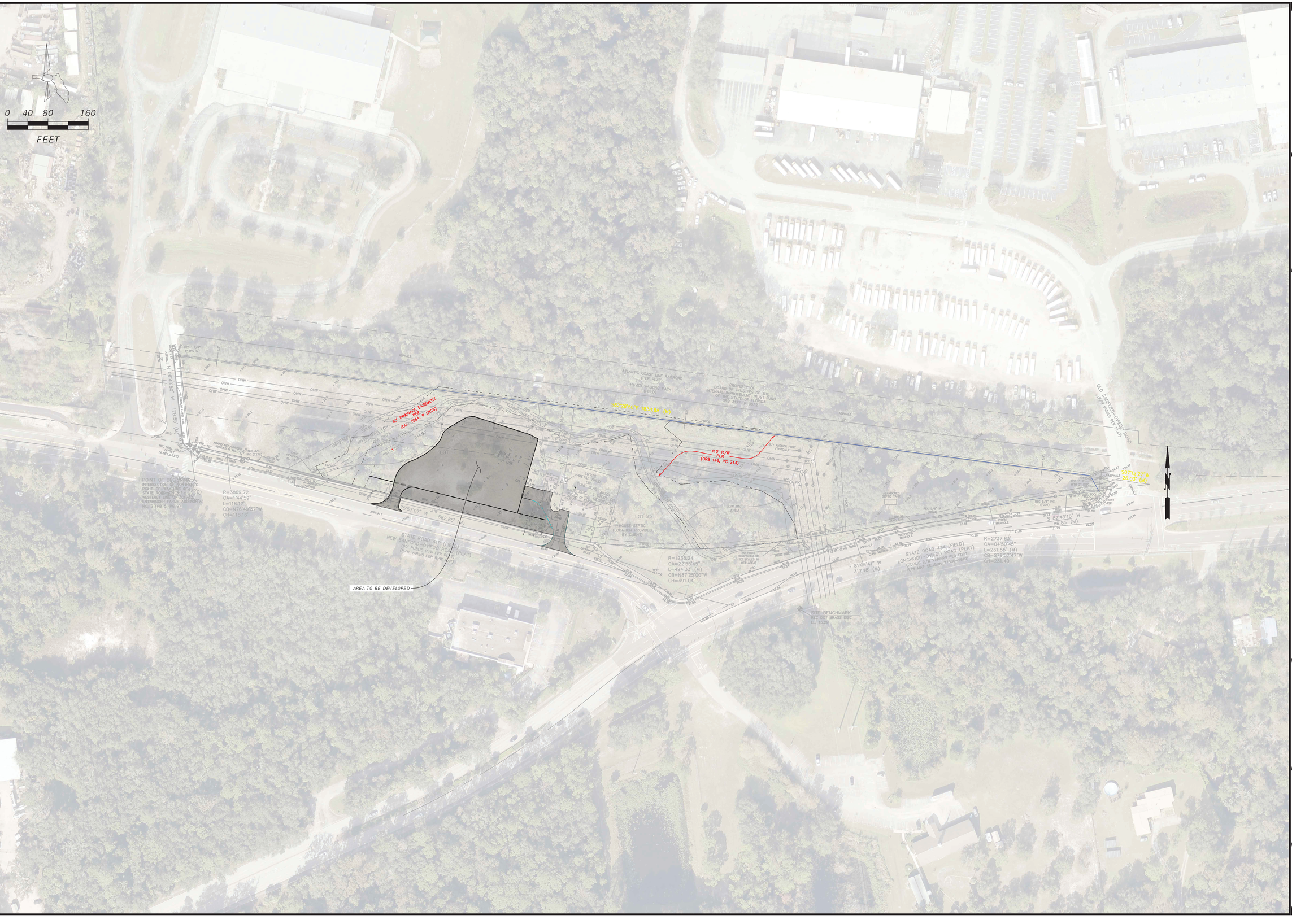
EXHIBIT "A"

LEGAL DESCRIPTION AND DEPICTION OF PROPERTY

Description:
LOTS 25 AND 32, ENTZMINGER FARMS ADDITION NO. 2, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 5, PAGE 9, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 419, (NEW SANFORD-OVIEDO ROAD, PER REFERENCED PLAT OF ENTZMINGER FARMS ADDITION NO. 2) AND THE WESTERLY LINE OF LOT 32 OF THE AFORESAID ENTZMINGER FARMS ADDITION NO. 2; THENCE N06°48'50"W, ALONG SAID WESTERLY LINE, A DISTANCE OF 178.55 FEET TO THE NORTHWEST CORNER OF THE AFORESAID LOT 32; SAID POINT ALSO BEING A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ATLANTIC COAST LINE RAILROAD; THENCE S82°26'56"E, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE AND NORTHERLY LINE OF LOTS 32 AND 25, A DISTANCE OF 1,838.88 FEET TO THE NORTHEAST CORNER OF LOT 25; THENCE S07°12'27"W, ALONG THE EASTERLY LINE OF LOT 25, A DISTANCE OF 26.03 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 434 (LONGWOOD- OVIEDO ROAD, PER REFERENCED PLAT OF ENTZMINGER FARMS ADDITION NO. 2); THENCE, ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD 434 AND AFORESAID STATE ROAD 419, THE FOLLOWING FOUR (4) COURSES: S82°43'16"W, A DISTANCE OF 86.85 FEET TO A POINT ON A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 2737.83 FEET, A CHORD BEARING OF S79°57'47"W, A CHORD DISTANCE OF 231.49 FEET, AND A CENTRAL ANGLE OF 04°50'45"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 231.55 FEET TO A POINT; THENCE S81°06'41"W, A DISTANCE OF 317.18 FEET TO A POINT ON A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 1235.24 FEET, A CHORD BEARING OF N87°25'00"W, A CHORD DISTANCE OF 491.04 FEET, AND A CENTRAL ANGLE OF 22°55' 45"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 494.33 FEET TO A POINT; THENCE N75°57'07"W, A DISTANCE OF 582.85 FEET TO A POINT ON A CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 3869.72 FEET, A CHORD BEARING O N76°49'37"W, A CHORD DISTANCE OF 118.16 FEET; AND A CENTRAL ANGLE OF 01°44'59"; THENCE, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 118.17 FEET TO THE POINT OF BEGINNING. SAID LANDS CONTAINING APPROXI MATELY 7.84 ACRES, OR 341,667 SQUARE FEET, MORE OR LESS.


Parcel
34-20-30-5AW-0000-0250
OLD SANFORD-OVIEDO RD
STATE RD 419
4201
4301
820
822
817
780
0 0.02 0.04 0.07 Miles



Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Overall Site Plan - Concept

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-1

474

0 15 30 60
FEET

PARCEL LOT BOUNDARY

60' DRAINAGE EASEMENT PER (ORB 1064, P 0828)

25' MIN. BUFFER FROM WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

26'

PROPOSED FENCE

RIBBON CURB (TYP)

EXISTING WETLAND AREA TO REMAIN UNAFFECTED

PROPOSED FENCE

CRUSHED STONE SURFACE OR EQUIVALENT PERVIOUS SURFACE FOR PARKING

GATE AT EXIT

OPEN STORAGE OF VEHICLES SUCH AS RECREATIONAL VEHICLES, BOATS, ETC.

GATE AT ENTRANCE

EXISTING CHAIN LINK FENCE ALONG PARCEL PERIMETER TO REMAIN

PARCEL LOT BOUNDARY

PROPOSED WALL

RIGHT ONLY EXIT

PROPOSED WALL

PARCEL LOT BOUNDARY

WIDEN EXISTING ENTRANCE TO ACCOMMODATE LARGER VEHICLES (ENTRANCE ONLY)

EXISTING ON SITE SEPTIC SYSTEM TO REMAIN AS IS

TOTAL PARCEL AREA: 8.12 ac

PROPOSED PARKING LOT AREA: 32,655 sf (0.75 ac)

PARKING LOT CONFIGURATION: 18" OF NO. 57 STONE ON 12" STABILIZED SUBGRADE, RIBBON CURB ALONG THE PERIMETER

PRELIMINARY DRAINAGE APPROACH:

1. *NO FEMA FLOODPLAIN IMPACTS ARE ANTICIPATED WITH THIS SITE PLAN DEVELOPMENT. THE 100-YR FEMA FLOODPLAIN ELEVATION WITHIN THE ADJACENT FLOODWAY RANGES FROM 11.0 TO 12.0 NAVD 88. THE ESTIMATED MIN. EXISTING SURVEY SPOT ELEVATION WITHIN THE WORK AREA IS AT ELEV. 14.6 NAVD 88.*
2. *BASED ON PRELIMINARY INFORMATION AVAILABLE, FROM THE ONLINE USDA/NRCS WEB SOIL SURVEY (WSS), THE EXISTING SOILS WITHIN THE SITE PLAN AREA ARE GENERALLY COMPRISED OF SOILS OF HYDROLOGIC SOIL GROUP (HSG): A, WHICH ARE CLASSIFIED AS WELL DRAINING AND GENERALLY GOOD FOR INFILTRATION. THIS WILL BE VERIFIED WITH A GEOTECHNICAL ENGINEER IN THE DESIGN PHASE.*
3. *BASED ON A PRELIMINARY DETERMINATION, THE PARKING AREA CAN LIKELY BE USED TO PROVIDE ANY REQUIRED STORMWATER TREATMENT AND ALLOW INFILTRATION INTO THE EXISTING SOILS.*
4. *ALL REQUIRED PERMITTING WILL BE FOLLOWED DURING DESIGN PHASE, INCLUDING PERMITTING WITH THE ST. JOHNS RIVER WATER MANAGEMENT (SJRWMD) DISTRICT.*

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Master Civil Site Plan - Concept

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO. DATE: DESCRIPTION:

NO. DATE: DESCRIPTION:

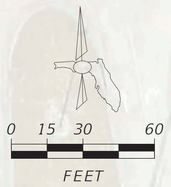
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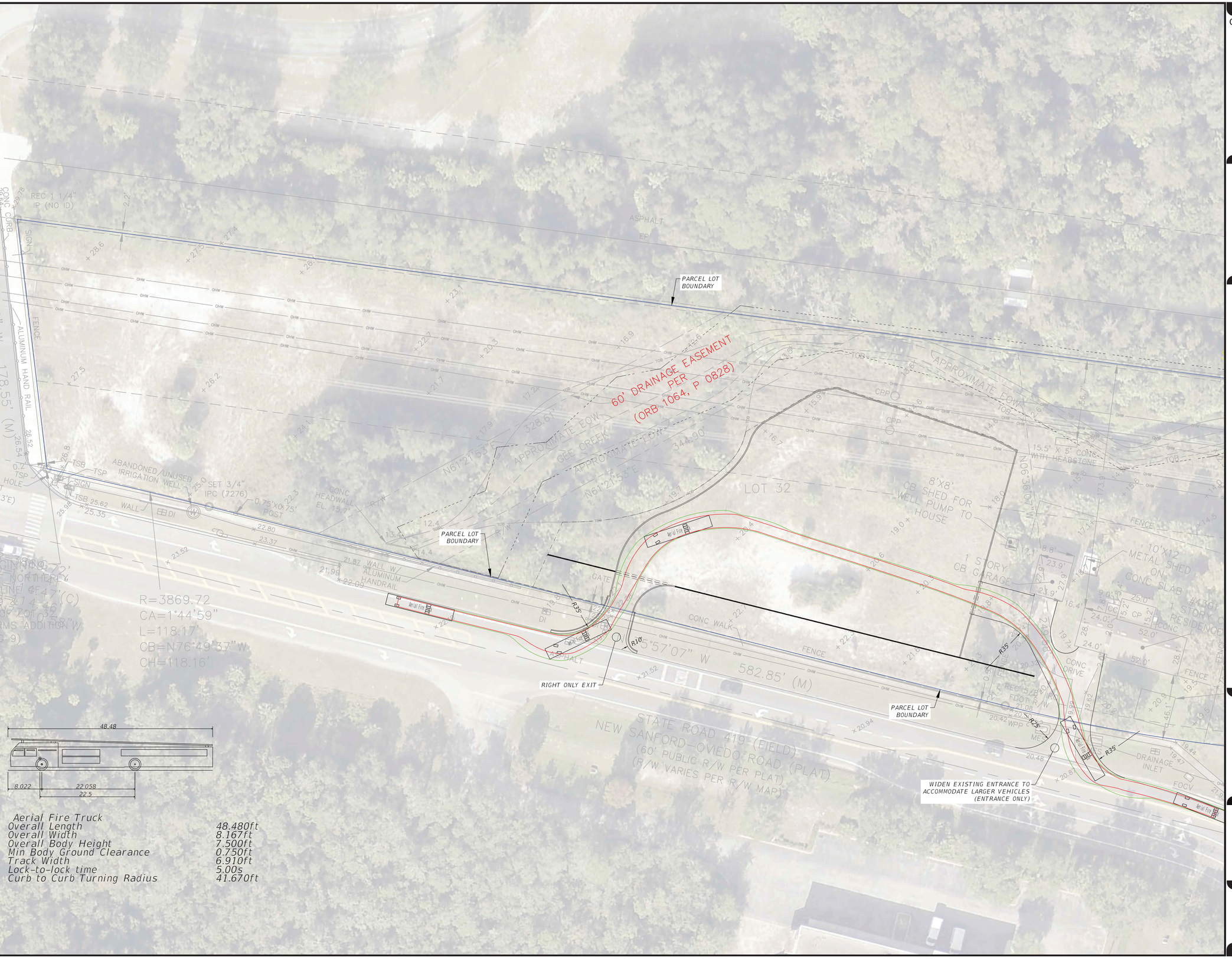
NO. DATE: DESCRIPTION:

NO. DATE: DESCRIPTION:

PROJECT NO.: 22-2211

C-2





Aerial Fire Truck	
Overall Length	48.480ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	6.910ft
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	41.670ft

Consultant:

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NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Fire Truck - AUTOTURN

YOUDALI INVESTMENTS LOTS 25 & 32
SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-3



Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Overall Site Plan - Concept w/ FEMA MAP

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	
NO.	DATE:
DESCRIPTION:	

PROJECT NO.: 22-2211

C-1F

0 15 30 60
FEET

REGULATORY FLOODWAY
PARCEL LOT BOUNDARY
100 YR FLOOD
500 YR FLOOD
60' DRAINAGE EASEMENT (ORB 4, P 0828)
50' MIN. BUFFER FROM WETLAND BOUNDARY
EXISTING WETLAND BOUNDARY
EXISTING WETLAND AREA TO REMAIN UNAFFECTED
RIBBON CURB (TYP)
PROPOSED FENCE
CRUSHED STONE SURFACE OR EQUIVALENT PERVIOUS SURFACE FOR PARKING
GATE AT EXIT
GATE AT ENTRANCE
EXISTING CHAIN LINK FENCE ALONG PARCEL PERIMETER TO REMAIN
PROPOSED WALL
RIGHT ONLY EXIT
WIDEN EXISTING ENTRANCE TO ACCOMMODATE LARGER VEHICLES (ENTRANCE ONLY)
EXISTING ON SITE SEPTIC SYSTEM TO REMAIN AS IS
25' SETBACK
20'
N 06°48'50" W 178.55' (M)
N61°21'53"E 328.61'
N75°57'07" W 582.85' (M)
R=3869.72
CA=1°44'59"
L=118.17'
CB=N76°49'37"W
CH=118.16'
POINT OF BEGINNING
INTERSECTION OF NORTHERLY RIGHT-OF-WAY LINE OF 47' (C) STATE ROAD 419 & 14.46' WESTERLY LINE OF LOT 32 ENTZMINGER FARMS ADDITION W NO. 2 (PB 5, PG 9)
LOT 32
STATE ROAD 419 (FIELD)
NEW SANFORD-OVIEDO ROAD (PLAT)
(60' PUBLIC R/W PER PLAT)
(R/W VARIES PER R/W MAP)
APPROXIMATE FLOW LINE OF GEE CREEK
ASPHALT
CONC WALK
CONC DRIVE
FENCE
WALL W/ ALUMINUM HANDRAIL
ALUMINUM HAND RAIL
CONC HEADWALL EL. 15.7'
ABANDONED/UNUSED IRRIGATION WELL
REC DRILL HOLE OFFSET (4.86'S,0.63'E)
SET 3/4" IPC (7276)
0.75'X0.75' POST
REC 1 1/4" IP (NO ID)
8'X8' SHED FOR WELL PUMP TO HOUSE
1 STORY CB GARAGE
10'X12' METAL SHED ON CONC SLAB
1 STORY CONC RESIDENCE
15.5' X 5' CONC WITH HEADSTONE
CONC DRIVE
DRAINAGE INLET
FDOT R/W

Consultant:

OM Engineering Services, Inc.
Civil • Structural • Inspections

621 E. Washington St., Suite 8
Orlando, Florida 32801
Office: (407) 704-7815
www.omengineer.com

NIMESH BHAVSAR, P.E.
FL. REG. # 56861

Civil Site Plan - Concept w/ FEMA MAP

YOUDALI INVESTMENTS LOTS 25 & 32 SITE MODIFICATIONS

4301 SR 419 WINTER SPRINGS, FL 32708

ISSUE DATE:

REVISIONS

NO. DATE: DESCRIPTION:

NO. DATE: DESCRIPTION:

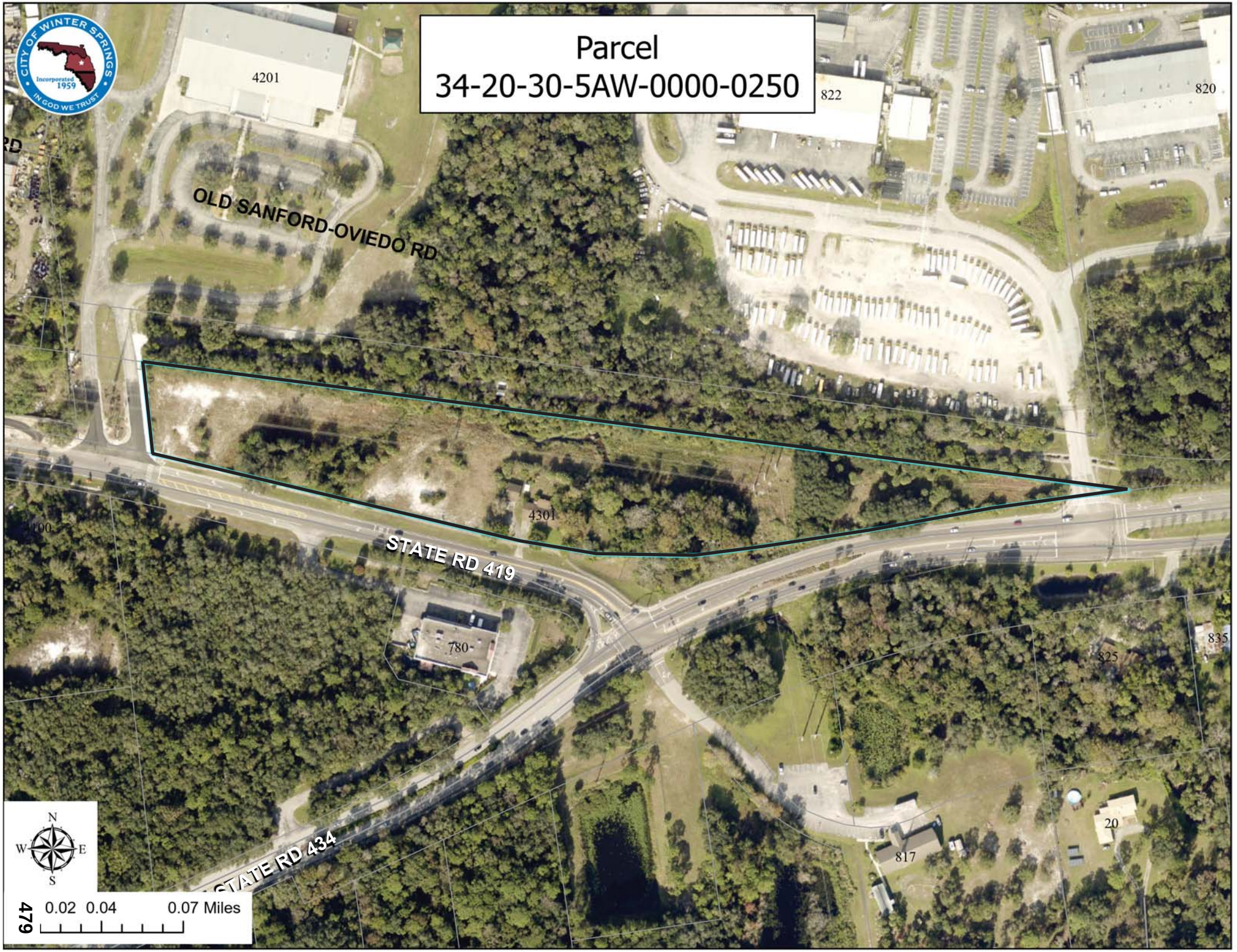
NO. DATE: DESCRIPTION:

NO. DATE: DESCRIPTION:

NO. DATE: DESCRIPTION:

PROJECT NO.: 22-2211

C-2F


Parcel
34-20-30-5AW-0000-0250
CITY OF WINTER SPRINGS
Incorporated 1959
IN GOD WE TRUST
4201
822
820
OLD SANFORD-OVIEDO RD
4301
STATE RD 419
780
835
825
20
817
STATE RD 434
N
W
E
S
0.02 0.04 0.07 Miles
479

City of Winter Springs
Zoning
Proposed Annex

Zoning
- C-3
- C-1
- C-2
- C-C
- GID
- I-1
- OUT
- PUD
- R-1
- R-1A
- R-1AA
- R-3
- R-T
- R-C1
- RU
- Split
- T-C

N
W E
S

0 0.02 0.04 0.07 Miles

City of Winter Springs
Proposed Zoning
Proposed Annex

Zoning
- C-3
- C-1
- C-2
- C-C
- GID
- I-1
- OUT
- PUD
- R-1
- R-1A
- R-1AA
- R-3
- R-T
- R-C1
- RU
- Split
- T-C

0 0.02 0.04 0.07 Miles

City of Winter Springs Utilities Proposed Annex

- Stormwater - Structures
- Stormwater - Cleanout
- Stormwater - Underdrain
- Stormwater - Pipes
- Water Hydrant
- Water Meter
- Water Valve
- Water Main
- Water Service
- Wastewater Cleanout
- Wastewater Manhole
- Wastewater Valve
- Wastewater Service
- Wastewater Lift Station
- Wastewater Gravity Main
- Wastewater Force Main
- Reclaimed Meter
- Reclaimed Hydrant
- Reclaimed Sleeve
- Reclaimed Service
- Reclaimed Valve
- Reclaimed Main

N W E S

0 0.25 0.5 1 Miles

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –Rezoning

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per City of Winter Springs Comprehensive Plan (CP) and Zoning Code. Applications will be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. A Community Workshop may be required.

Rezonings are subject to the approval of the City Commission. Each action is only effective when the notice and vote requirements of Chapter 166 and 171, Florida Statutes have been achieved.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, F.S.. Applicants are further advised that site-specific Rezones are quasi-judicial in nature. Therefore, applicant acknowledges and agrees, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

APPLICANTS are encouraged to familiarize themselves with Section 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission to the extent they are applicable.

REQUIRED INFORMATION

Applicant(s): OM Engineering Services, Inc. Date:
Mailing address: 621 E. Washington Street, Ste 8, Orlando, FL 32801
Email: nimesh@omengineer.com
Phone Number: 407-704-7815

Property Owner(s): Matt Merdian (POA Agent for YOUDALI INTERNATIONAL INVESTMENTS LLC, KIRA WOODs, KADO INVESTMENTS LLC)
Mailing Address: 1889 BERKELEY CT, MAITLAND, FL 32751-3461
Email: info@taxdeedpro.com
Phone Number: 407-230-8093

Project Name: RV Boat & Storage SR 419 Winter Springs Civil Site Engineering Services
Property Address: 4301 SR 419 WINTER SPRINGS FL 32708
Parcel ID(s): 34-20-30-5AW-0000-0250

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –Rezoning

Parcel Size: 6.99 AC

Existing Use: Agricultural/Single Family

Existing Future Land Use Designation:

Existing Zoning District: Agricultural/Single Family

Proposed Zoning District: General Commercial District (C-2)

Is the proposed rezoning in compliance with all procedural requirements established by City code and law?

Yes.

Identify how the request is consistent with the Goals, Objectives and Policies of the Comprehensive Plan including, but not limited to, the Future Land Use Map. Will the proposed change have an adverse effect on the City's implementation of the Comprehensive Plan?

This is consistant with the goals of the Land use plans and will not effect the Comprehensive plan.

Is the proposed rezoning consistent with any master plan applicable to the property?

Yes it is consistant with the future land use plans.

Is the proposed rezoning contrary to the land use pattern established by the City's Comprehensive Plan?

No. Since currently the properties along SR 419 are either commercial or Industrial the request is consistent with the Land use pattern.

Substantiate how the proposed rezoning will not create a spot zone (prohibited by law).

Since currently the properties along SR 419 are either commercial or Industrial the request is consistent with the Land use pattern.

Does the proposed rezoning materially alter the population density pattern in a manner that will overtax the load on public facilities and services such as schools, utilities, streets, and other municipal services and infrastructure?

No. Open storage for RV & Boats.

Does the proposed rezoning result in existing zoning district boundaries that are illogically drawn in relation to existing conditions on the property and the surrounding area and the land use pattern established by the City's Comprehensive Plan?

No. Open storage for RV & Boats.

Do changed or changing conditions make the proposed rezoning necessary for the City to serve the population and economic activities?

No. Open storage for RV & Boats.

Will the proposed rezoning seriously reduce light or air to adjacent areas?

No. Open storage for RV & Boats.

Does the Applicant understand that, IF the City were to be presented with competent substantial evidence indicating that the property values would be adversely affected by the proposed rezoning, the Applicant would then need to demonstrate that the proposed rezoning change would not adversely affect property values in the surrounding area?

Yes.

Describe how the proposed rezoning will not be a substantial detriment to the future improvement or development of vacant adjacent property and surrounding property.

The property will be an open lot used to storage for RV & Boats.

Describe how the proposed rezoning does not constitute a grant of special privilege to an individual owner as contrasted with the public welfare and legitimate government interests?

The proposed rezoning provides a local use for city residents and a contiguous layout of property zoning.

Explain how the proposed rezoning and allowed uses, intensity, and density are compatible with and not out of scale or incompatible with the surrounding existing development and needs of the neighborhood or the City.

There is an existing Layer Elementary School that has bus parking, Zoned for Institutional.

Does the proposed rezoning violate any of the City's applicable land use regulations?

NO

Applications in the Town Center to rezone to a transect zone shall meet additional criteria on Sec. 20-31(d)(15).

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

N/A

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Current property adjacent to this property is Industrial and Commercial. At the Non-Binding Preliminary review presentation, we provided evidence to the City which included existing pictures and current use of adjacent properties.

Applications in the Town Center to rezone to a transect zone shall meet additional criteria on Sec. 20-31(d)(15).

✓ Acknowledged

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

REQUIRED DOCUMENTATION

___ A complete Application and Fee

___ A general description of the relief sought under this division.

___ A brief narrative, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in Comprehensive Plan and Zoning Code.

___ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application –Rezoning

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Rezoning for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Nimesh Bhavsar

Applicant Signature: _____ Date: 6/26/24

Business Name: OM Engineering Services, Inc.

Address: 621 E. Washington St, Ste 8, Orlando, FL 32801 Parcel ID: 34-20-30-5AW-0000-0250

STATE OF FL COUNTY OF Orange

The foregoing instrument was acknowledged before me this 26th day of June, 2024, by Nimesh Bhavsar who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 6/26/24 (seal):

Notary Public Signature: _____

My Commission expires: 11/15/25

DAWN M. HORN
MY COMMISSION # HH 198660
EXPIRES: November 15, 2025
Bonded Thru Notary Public Underwriters

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): MATTHEW MERIDIAN

Property Owner Signature: _____ Date 06/25/2024

STATE OF FLORIDA COUNTY OF ORANGE

The foregoing instrument was acknowledged before me this 25th day of JUNE, 2024, by MATTHEW MERIDIAN who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 06/25/2024 (seal):

Notary Public Signature: _____

My Commission expires: 10/01/2027

JAZIEL ADORNO
Notary Public - State of Florida
Commission # HH 449497
My Comm. Expires Oct 1, 2027
Bonded through National Notary Assn.

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To place an ad:
- ORLANDOSENTINEL.COM/ADVERTISE
- CALL 407-420-5160 FROM 9 A.M. TO 6 P.M. MONDAY THROUGH FRIDAY

Orlando Sentinel

Classified Advertising Information

To place your classified ad, visit OrlandoSentinel.com/advertise or Call
407-420-5160

Telephone hours Monday–Friday 9 a.m.–6 p.m.

Deadlines

Sunday	1 p.m. Thursday
Thursday	1 p.m. Tuesday
Friday	1 p.m. Wednesday
Saturday	1 p.m. Thursday

Additional public notices can be found online at classifieds.orlandosentinel.com and floridapublicnotices.com

Legal Classified Deadlines

Sunday	1 p.m. Thursday
Monday	1 p.m. Friday
Tuesday	12 p.m. Monday
Wednesday	12 p.m. Tuesday
Thursday	1 p.m. Tuesday
Friday	1 p.m. Wednesday
Saturday	1 p.m. Thursday

Email your ad to us

Ads can also be emailed to us using the addresses listed below. Or, you can place your ad online at orlandosentinel.com/advertise

Obituaries & In-Memoriams:
notices@orlandosentinel.com

Legal:
classified_legal@orlandosentinel.com

Recruitment:
recruitment@orlandosentinel.com

LegalNotices

Advertisements for Bid

REQUEST FOR PROPOSALS

Proposals are hereby solicited by the City of Winter Springs, Florida for Central Winds Park Pickleball Complex Sponsorship

City Bid No. RFP 08-24-04 LH

Sealed bids must be received by September 20, 2024, at 2:00 PM at the Winter Springs City Hall, 1126 East State Road 434, Winter Springs, FL 32708. Bid opening will be immediately following the bid registration in City Hall, City Commission Chambers.

The Bidding Documents may be downloaded in PDF format from the Demand Star tool, and the City's website at:
https://www.winterspringsfl.org/rfps

The project consists of the following:

The City of Winter Springs is seeking a sponsor or sponsors for the Central Winds Park Pickleball complex consistent with the information included with the bid package.

All questions regarding the bid should be directed to Stuart MacLean, Procurement Manager by email to smaclean@winterspringsfl.org. The City of Winter Springs reserves the right to reject any or all bids, with or without cause, to waive technicalities and minor irregularities, or to accept bids that best serve the interest of the City.
8/16/2024 & 8/23/2024 7680969

REQUEST FOR QUALIFICATION

Responses are hereby solicited by the City of Winter Springs, Florida for construction Manager At Risk (CMAR) Services

City Bid No. RFQ 08-24-04 PH

Mandatory Pre-Bid Meeting scheduled for 8:45am on Wednesday September 11th, see schedule for details. Sealed bids must be received by October 18, 2024 at 2:00P.M. at the Winter Springs City Hall, 1126 East State Road 434, Winter Springs, FL 32708. Bid opening will be immediately following the bid registration in City Hall, City Commission Chambers.

The Bidding Documents may be downloaded in PDF format from the Demand Star tool, and the City's website at: https://www.winterspringsfl.org/rfps

The project consists of the following:

The City of Winter Springs is seeking to obtain the Services of a qualified and experienced Construction Manager At Risk to manage a project involving the design and construction of 2 new Wastewater Treatment Plants for the City of Winter Springs consistent with the Scope of Services information included in the bid package.

All questions regarding the bid should be directed to Stuart MacLean, Procurement Manager by email to smaclean@winterspringsfl.org. The City of Winter Springs reserves the right to reject any or all bids, with or without cause, to waive technicalities and minor irregularities, or to accept bids that best serve the interest of the City.
8/23/2024 8/30/2024 7685346

REQUEST FOR QUALIFICATIONS
COLLEGE OF CENTRAL FLORIDA
PURCHASING DEPARTMENT
3001 SW College Road, Ocala FL 34474

RFQ 24-1 Architectural and Engineering Services for the Criminal Justice Instructional Center

RFQ Documents will be available on Friday August 16, 2024

College of Central Florida is seeking a Request for Qualifications from Architectural and Engineering firms interested in providing professional services for the design and construction of an educational facility using the CM at Risk Delivery method. Interested firms may obtain the RFQ documents from the College Purchasing website:

https://www.cf.edu/about-cf/cf-at-a-glance/departments-directory/purchasing/

For solicitation Inquiries please email: Tony Denis or Jonathan Melo at Purchasing@cf.edu

CF will provide written answers to questions relating to this RFQ in the form of written addendum which will be uploaded to the CF Purchasing website noted above. All Statements of Qualifications must be hand delivered by courier or in person in a sealed package.

Qualifications will be accepted until:
Date: Friday September 27th 2024
Time: 2:00 PM
Location: CF Ocala Campus, Purchasing
Department, Building 1, Room 109

An Equal Opportunity College

August 16th, 23rd and 30th, 2024
8/16/24, 8/23/24, 8/30/24 7680973

CONSTRUCTION BID NOTICE
Orange Blossom Family Health is seeking sealed bids for the construction of an EXTENTION TO THE EXISTING MEDICAL OFFICE BUILDING of approximately 4,000 s.f. located at 4426 Old Winter Garden Road, Orlando, Florida 32811. For complete RFP please contact Melissa Schott at Baker Barrios Architects, 407-926-3000. A mandatory Pre-Bid meeting will be held on 08/29/2024 at 9:00am at the Baker Barrios Architects' Orlando Office. Bid Due Date by 2:00PM on 09/20/2024
8/23/2024 - 8/28/2024 7685232

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Public Hearing Notices

ORANGE COUNTY FLORIDA
NOTICE OF PUBLIC MEETING

A conflict assessment meeting will occur between officials of the City of Orlando and Orange County pursuant to Chapter 164, Florida Statutes, known as the "Florida Governmental Conflict Resolution Act." **This meeting will be held on Wednesday, September 4, 2024, at 3:30 p.m., in the County Administrator's Executive Conference Room on the fifth floor of the Orange County Administration Center, 201 S. Rosalind Avenue, in downtown Orlando.** The matters to be discussed at the meeting relate to the conflict described in Resolution No. 2024-M-12 adopted by the Board of County Commissioners on April 23, 2024, and Resolution No. 2024-M-14 adopted by the Board of County Commissioners on May 21, 2024. The meeting will be attended by appropriate personnel from each governmental entity, including the chief administrator, or his or her designee, for each governmental entity.

IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, PLEASE CONTACT THE ORANGE COUNTY ATTORNEY'S OFFICE, 407-836-7320, Email: andrew.mai@ocfl.net

PARA MÁS INFORMACIÓN, REFERENTE A ESTA VISTA PÚBLICA CON RESPECTO A UNA AUDIENCIA PÚBLICA EN CONSIDERACIÓN DE LA LEY, FAVOR COMUNICARSE CON LA OFFINA DE ABOGADOS DEL CONDADO DE ORANGE AL 407-836-7320.

If you require special accommodations under the Americans with Disabilities Act, please call 407-836-5631 no later than two business days prior to the meeting for assistance.

Si usted requiere ayuda especial bajo la ley de Americanos con Incapacidades, por favor llame al 407-836-3111.

7682141 8/23/2024

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Protection gives notice of its intent to issue a permit to KENROB, LLC. (1495 Evans Street, Suite 100, Oviedo, Florida 32765) to construct and operate a new 0.0021 mgd Distributed Wastewater Treatment System (DWTS) with an associated absorption field land application system. The facility will be located at latitude 28o 40' 37"N, longitude 81o 12' 29" W on 474 N. Central Ave, Oviedo, Florida 32765 in Seminole County. The Department has assigned permit file number FLAB07457-001-DW3T to the proposed project.
The intent to issue and application file are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department's Central District Office, 3319 Maguire Blvd, Suite 232, Orlando, Florida 32803-3767, at phone number (407)897-4100 and email: DEP_CD@dep.state.fl.us.
NOTICE OF RIGHTS
The Department will issue the permit unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.
Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:
(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the Department's agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.
The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.
Time Period for Filing a Petition
Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.
Extension of Time
Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.
Mediation
Mediation is not available in this proceeding.
8/23/2024 7685393

Public Hearing Notices

NOTICE OF PUBLIC HEARINGS CITY OF WINTER SPRINGS

NOTICE IS HEREBY GIVEN THAT THE PLANNING AND ZONING BOARD AND THE CITY COMMISSION PROPOSE TO CONSIDER THE FOLLOWING:

ORDINANCE NO. 2024-09

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE FUTURE LAND USE MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE FUTURE LAND USE MAP DESIGNATION ON THE PARCEL FROM COUNTY "SUBURBAN ESTATES" TO CITY "COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, INCORPORATION INTO THE COMPREHENSIVE PLAN, AND AN EFFECTIVE DATE AND LEGAL STATUS OF THE PLAN AMENDMENT.

ORDINANCE 2024-10

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, RELATING TO COMPREHENSIVE PLANNING; AMENDING THE ZONING MAP FOR ONE (1) PARCEL OF REAL PROPERTY WITHIN THE CITY OF WINTER SPRINGS TOTALING APPROXIMATELY 8.12 ACRES, MORE OR LESS, GENERALLY LOCATED ALONG STATE ROAD 419, NORTH OF STATE ROAD 434, SAID PARCEL BEING MORE PARTICULARLY DEPICTED AND LEGALLY DESCRIBED ON EXHIBIT "A" ATTACHED HERETO; CHANGING THE ZONING MAP DESIGNATION ON THE PARCEL FROM COUNTY "AGRICULTURE" TO CITY "GENERAL COMMERCIAL;" PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS, SEVERABILITY, INCORPORATION INTO THE COMPREHENSIVE PLAN, AND AN EFFECTIVE DATE AND LEGAL STATUS OF THE PLAN AMENDMENT.

THE PLANNING AND ZONING BOARD PUBLIC HEARING WILL BE HELD ON THURSDAY, SEPTEMBER 05, 2024 AT 5:30 P.M. OR SOON THEREAFTER IN THE COMMISSION CHAMBERS LOCATED AT WINTER SPRINGS CITY HALL 1126 EAST STATE ROAD 434 WINTER SPRINGS, FL 32708

THE CITY COMMISSION FIRST READING PUBLIC HEARING WILL BE HELD ON MONDAY, SEPTEMBER 23, 2024 AT 6:30 P.M. OR SOON THEREAFTER IN THE COMMISSION CHAMBERS LOCATED AT WINTER SPRINGS CITY HALL 1126 EAST STATE ROAD 434 WINTER SPRINGS, FLORIDA

THE PLANNING AND ZONING BOARD AND/OR THE CITY COMMISSION RESERVE THE RIGHT TO POSTPONE OR CONTINUE THE PUBLIC HEARING ON THESE ORDINANCES AT THE ABOVE-LISTED MEETINGS WITHOUT FURTHER NOTICE.

The proposed ordinances may be obtained by interested parties between 8 a.m. and 5 p.m., Monday through Friday, from the office of the City Clerk, located at 1126 E. SR 434, Winter Springs, Florida. For more information, call (407) 327-1800 #237. Persons with disabilities needing assistance to participate in any of these proceedings should contact the Employee Relations Department Coordinator, 48 hours in advance of the meeting at (407) 327-1800, #236. This is a public hearing. Interested parties are advised that they may appear at the meeting and be heard with respect to the proposed ordinances. If you decide to appeal any recommendation or decision made by any of the City's Boards or Commission with respect to any matter considered at these meetings, you will need a record of the proceedings, and for such purposes, you may need to ensure that a verbatim record of the proceeding is made upon which the appeal is based.
8/23/2024 7682213

Notice of Administration

NOTICE TO CREDITORS
IN THE CIRCUIT COURT OF THE 9TH JUDICIAL CIRCUIT
IN AND FOR OSCEOLA COUNTY, FLORIDA
PROBATE DIVISION
File No. 2024 CP 000295 PR

IN RE: ESTATE OF GERTRUDE NICCOLI,
Deceased.

The administration of the estate of GERTRUDE NICCOLI, Deceased, whose date of death was February 25, 2024, is pending in the Circuit Court for OSCEOLA County, Florida, Probate Division, the address of which is 2 Courthouse Sq, Kissimmee, FL 34741. The names and addresses of the personal representative and the personal representative's attorney are set forth below.

All creditors of the decedent and other persons having claims or demands against decedent's estate on whom a copy of this notice is required to be served must file their claims with this court WITHIN THE LATER OF 3 MONTHS AFTER THE TIME OF THE FIRST PUBLICATION OF THIS NOTICE OR 30 DAYS AFTER THE DATE OF SERVICE OF A COPY OF THIS NOTICE ON THEM.

All other creditors of the decedent and other persons having claims or demands against decedent's estate must file their claims with this court WITHIN 3 MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE.

ALL CLAIMS NOT FILED WITHIN THE TIME PERIODS SET FORTH IN SECTION 733.702 OF THE FLORIDA PROBATE CODE WILL BE FOREVER BARRED.

NOTWITHSTANDING THE TIME PERIODS SET FORTH ABOVE, ANY CLAIM FILED TWO (2) YEARS OR MORE AFTER THE DECEDENT'S DATE OF DEATH IS BARRED.

The date of first publication of this notice is 5/13/2024

Attorney for Personal Representative:
Scott R. Bugay, Esquire
Florida Bar No. 5207
Citicentre, Suite P600
290 NW 165 Street
Miami FL 33169
Telephone: (305) 956-9040
Fax: (305) 945-2905
Primary Email: Scott@srblawyers.com
Secondary Email: angelica@srblawyers.com

BETH POTOCNAK,
Personal Representative
5/13/2024 5/20/2024 7634652

Notice of Administration

NOTICE TO CREDITORS
IN THE CIRCUIT COURT IN AND FOR SEMINOLE COUNTY, FLORIDA
PROBATE DIVISION
CASE NUMBER: 2024-CP-001164

IN RE: ESTATE OF ESTATE OF MARY LEE
Deceased

TO ALL PERSONS HAVING CLAIMS OR DEMANDS AGAINST THE ABOVE ESTATE:

The administration of the estate of Mary Lee, deceased whose date of death was June 12, 2024, is pending in the Circuit Court for Seminole County, Florida, Probate Division, the address of which is Juvenile Justice Center, 190 Eslinger Way, Sanford, FL 32773. The names and addresses of the personal representative and the personal representative's attorney are set forth below.
ALL INTERESTED PERSONS ARE NOTIFIED THAT:
All creditors of the decedent and other persons having claims or demands against decedent's estate on whom a copy of this notice is served within three months after the date of the first publication of this notice must file their claims with this Court ON OR BEFORE THE LATER OF THREE MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE OR THIRTY DAYS AFTER THE DATE OF SERVICE OF A COPY OF THIS NOTICE ON THEM.
All other creditors of the decedent and persons having claims or demands against the decedent's estate must file their claims with this court WITHIN THREE MONTHS AFTER THE DATE OF THE FIRST PUBLICATION OF THIS NOTICE.
ALL CLAIMS, DEMANDS AND OBJECTIONS NOT SO FILED WITHIN THE TIME PERIODS SET FORTH IN FLORIDA STATUTES SECTION 733.702 WILL BE FOREVER BARRED.

The date of the first publication of this Notice is 6/16/2024

Personal Representative:
Fred Alan Lee1210 Harding Street
Winter Park, FL 32789

Attorney for Personal Representative:
Arti Ajit Hirani, of
Meenakshi A. Hirani, P.A.
Florida Bar No.: 168645
2265 Lee Road, Suite 109
Winter Park, Fl. 32789
(407) 599-7199
Email: arti.hirani@hiranilaw.com
8/16/2024 & 8/23/2024 7680232

Fictitious Name

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Pixifi
under which (I am) (we are) engaged in business at 600 E Colonial Dr Ste. 100, Orlando 32803. That the (party) (parties) interested in said business enterprise is as follows:
Iris Works, LLC
600 E Colonial Dr Ste. 100 Orlando, FL 32803
Dated at Orlando, Orange County , Florida, 8/20/2024

7685319 8/24/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Alien Affection
under which (I am) (we are) engaged in business at 3931 Greenview Pines Ct That the (party) (parties) interested in said business enterprise is as follows:
Jim Walsh
3931 Greenview Pines Ct
Dated at Orlando, Orange County , Florida, 08/21/2024

7685414 8/23/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Steve O's Plumbing
under which (I am) (we are) engaged in business at 5008 Adanson St Orlando, Florida 32804 That the (party) (parties) interested in said business enterprise is as follows:
S & L Plumbing & Drain LLC
5008 Adanson St Orlando, Florida 32804
Dated at Orlando, Orange County , Florida, 08/21/2024

7685479 8/23/2024

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
Lake Trust LLC
under which (I am) (we are) engaged in business at 12501 Bear Creek Ter, Beltsville MD 20705 That the (party) (parties) interested in said business enterprise is as follows:
AliRental LLC
12501 Bear Creek Ter, Beltsville MD 20705
Dated at Orlando, Orange County , Florida, 08/23/2024

7685834 8/23/2024

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Fictitious Name

NOTICE UNDER FICTITIOUS NAME

TO WHOM IT MAY CONCERN: Notice is hereby given that the under signed pursuant to the "Fictitious Name Statute, Chapter 865.09, Florida Statutes, will register with the Division of Corporations, Department of State, State of Florida upon receipt of this notice. The fictitious name, to-wit:
CARPET SOURCE OF WINTER PARK
under which (I am) (we are) engaged in business at 505 N Virginia Avenue That the (party) (parties) interested in said business enterprise is as follows:
PUSH THRU LLC
2075 47th Street, Sarasota FL
Dated at Winter Park, Orange County , Florida, 08/21/2024

7685778 8/23/2024

Sale Notices

NOTICE OF PUBLIC SALE
Notice is hereby given that PODS Enterprises, LLC, located at 7133 Municipal Dr, Orlando, FL 32819, will sell the contents of certain containers at auction to the highest bidder to satisfy owner's lien. Auction will be held online at www.StorageTreasures.com starting on September 3, 2024 and ending on September 10, 2024. Contents to be sold may include general household goods, electronics, office & business equipment, furniture, clothing and other miscellaneous property. Contents to be sold are stored by the following persons: Marie Oubina (73142BX, 8089B82); Helene Shearer (696B39); Barbara Cabone (399B107); Robert Gimbel (112B94); Krenare Gervalla (42A17); Kathy Kosich (238A4); Mwannesi Wade (32205BX).
8/16/2024 & 8/23/2024 7680112

NOTICE OF PUBLIC SALE
MILLAN AUTO SALVAGE,TOWING AND REPAIR gives notice that on 09/04/2024 at 09:00 AM the following vehicles(s) may be sold by public sale at 950 N HOAGLAND BLVD, KISSIMMEE, FL to satisfy the lien for the amount owed on each vehicle for any recovery, towing, or storage services charges and administrative fees allowed pursuant to Florida statute 713.78.

JS1GN7CA152103575 2005 SUZI
KMHD74LF5JU523640 2018 HYUN
KMHDN56D15U132979 2005 HYUN
WDDGF4HB0CA724799 2012 MERZ
8/23/2024 7685286

Miscellaneous Legals

NOTICE
Commonwealth of Massachusetts
Trial Court
Probate & Family Court
Docket Number: 24E0036
WORCESTER

Summons by Publication
Brandt Lane Development LLC
V.
Paul A. Kalashian Jr.

To the above named Defendant: Paul A. Kalashian Jr.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.

8/23/2024 7682960

SUMMONS BY PUBLICATION
Brandt Lane Development LLC
v.
Edward Oliver Kalashian

To the above named Defendant: Edward Oliver Kalashian.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development

LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.
8/23/2024 7684819

SUMMONS BY PUBLICATION
Brandt Lane Development LLC
V.
Lillian Simone Kalashian

To the above named Defendant: Lillian Simone Kalashian.

A Complaint has been presented to this Court by the Plaintiff, Brandt Lane Development

LLC, seeking for Complaint in Equity, reformation of deed.

You are required to serve upon Ann E Meilus, Esq. plaintiff-whose address is Landry and Meilus, LLP, 21 Summer St. P.O. Box 910 Barre, MA 01005-0910 your answer on or before October 1, 2024. If you fail to do so, the court will proceed to the hearing and adjudication of this action. You are also required to file a copy of your answer in the office of the Register of this Court at WORCESTER.

Witness Leilah A. Keamy, Esquire, First Justice of said Court at Worcester, on this 3rd day of July.
8/23/2024 7684861

Closing of Medical Office

NOTICE
Effective Sept. 1, 2024, Dean Behner, MD, will no longer be providing care at WellMed / Optum. Patients of Dr. Behner may continue care at WellMed / Optum. Patients can obtain copies of their medical records at:
WellMed at Apopka
125 S. Park Ave.
Apopka, FL 32703
Phone: 1-407-886-1171
Optum – Park Avenue
202 N. Park Ave.
Apopka, FL 32703
Phone: 1-407-889-4711
Optum – Apopka
2226 E. Semoran Blvd.
Apopka, FL 32703
Phone: 1-407-880-0011
8/9/,8/16,/8/23,8/30/2024 7668774

Employment

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Garage Sales

Orange County-Garage Sales

EAST ORLANDO
719 Meadowside Ct, Orlando, FL. Join us for a garage sale featuring a variety of tools and quality wood for all your DIY projects! Saturday 8/24 from 9a-3p

Merchandise

WANTED!

PRE-COLUMBIAN ART & ANTIQUITIES
$10,000 - We are looking to purchase single items or whole collections of Pre-Columbian art. Pieces from Mexico, Guatemala, Peru, Honduras. Mayan, Olmec or any culture from the Americas. Pottery, metal, wood, stone or textiles. Text pictures of what you have. 863-368-3454

Pets

Pets for Sale

GOLDENDOODLE'S PUPPIES BEST X SERV.DOGS
negotiable, 2k 4072237961 text

RealEstate forRent

Homes Seminole County for Rent

SANFORD 46,14, MALL
5bd,1g lot, gated, 3,150 **571-296-7010**

WINTER PARK
Exceptional 3/2/2 A/C/H Lease $1900 a month. $1900 Security Deposit. No Pets. Contact for details and amenities. **561-427-4618**

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COMMUNITY DEVELOPMENT

RZON-2024-0001: Ordinance 2024-10 First Reading

City Commission

Talbert Jackson, MSURP

Senior Planner

Background

Property Address: 4301 SR 419 (± 8.12 ac)

April 08, 2024:
Ordinance 2024-04 to annex property

May 08, 2024:
Community Workshop

June 20, 2024:
Pre-Application Meeting

August 07, 2024:
Public Notice Letters – Public Hearing

August 23, 2024:
Newspaper Advertisement (Rezoning)



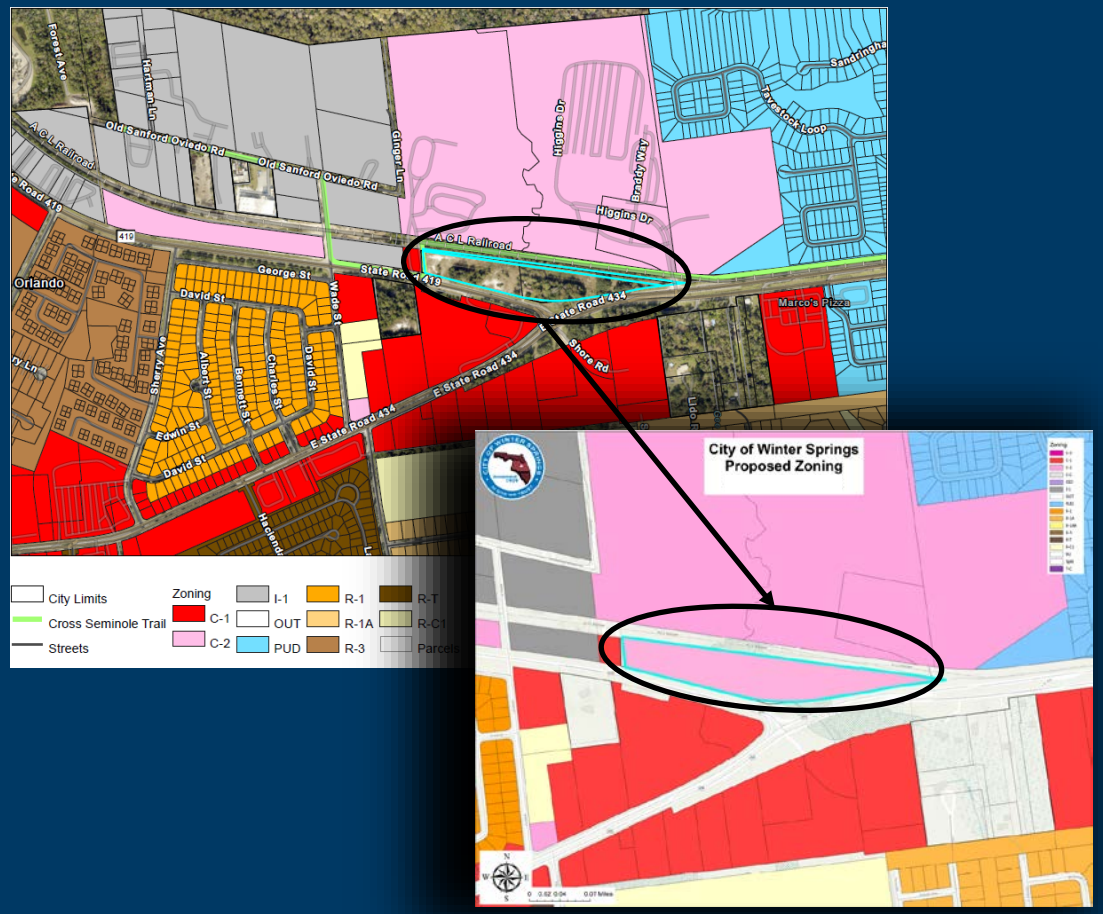
RZON-2024-0001: Ordinance 2024-10 First Reading

Rezoning

Existing Unincorporated Zoning:
Agriculture

Proposed Zoning:
General Commercial (C-2)
Transitions and buffers Neighborhood Commercial (C-1) and residential zoning from Industrial zoning while allowing for proposed use

Proposed Use:
Outdoor Storage of Recreational Vehicles (RVs) and Boats



AGENDA ITEM 403

City Commission

SEPT 23, 2024

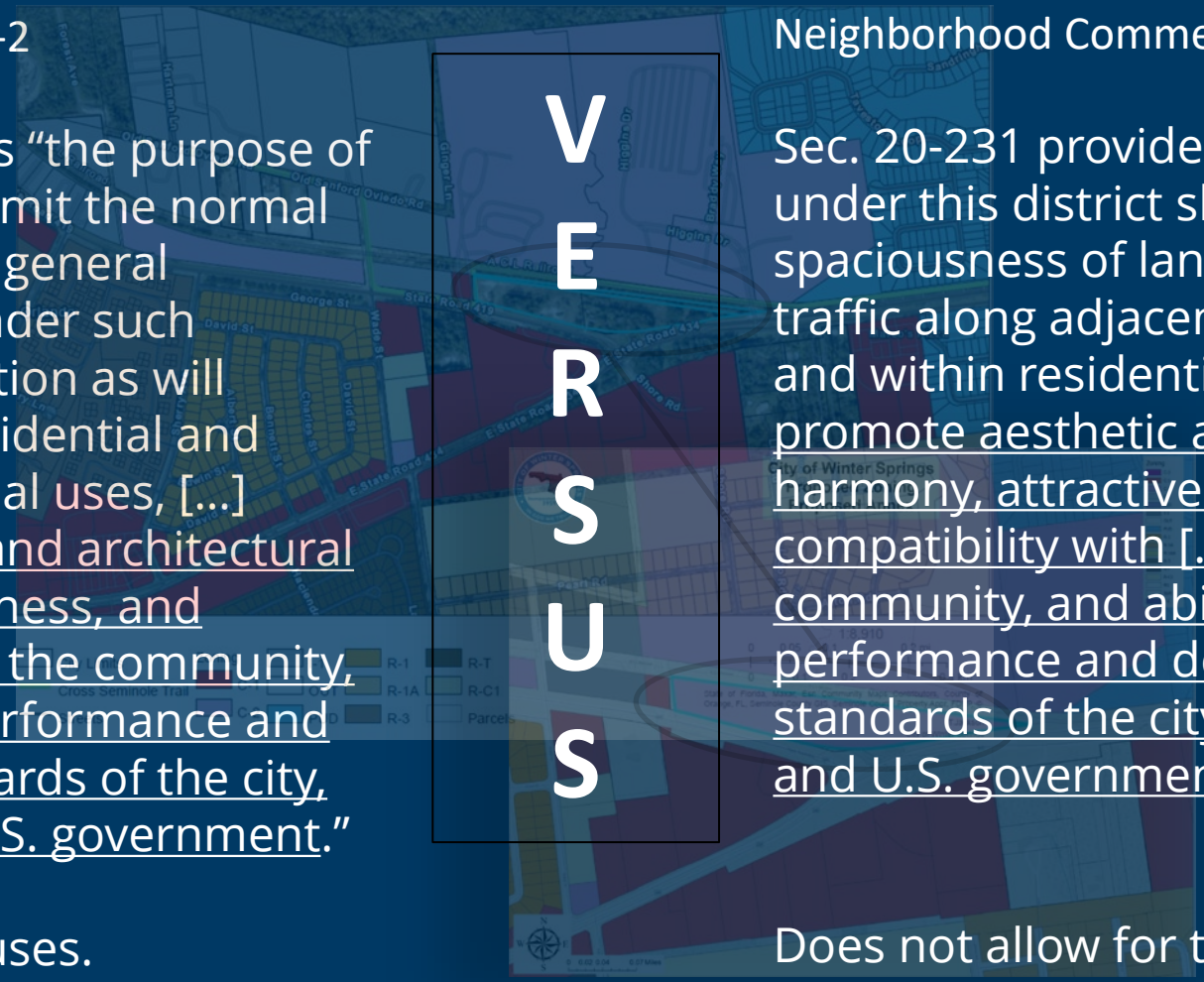
RZON-2024-0001: Ordinance 2024-10 First Reading

Rezoning - Comparisons

General Commercial C-2

Sec. 20-251 provides "the purpose of this district is to permit the normal operation of [most] general commercial uses under such conditions of operation as will protect abutting residential and other noncommercial uses, [...] promote aesthetic and architectural harmony, attractiveness, and compatibility within the community, and abide by the performance and development standards of the city, county, state and U.S. government."

Also allows for C-1 uses.



Neighborhood Commercial C-1

Sec. 20-231 provides "The land uses under this district shall promote spaciousness of land uses, minimize traffic along adjacent thoroughfares and within residential districts, promote aesthetic and architectural harmony, attractiveness, and compatibility with [...] the community, and abide by the performance and development standards of the city, county, state, and U.S. government."

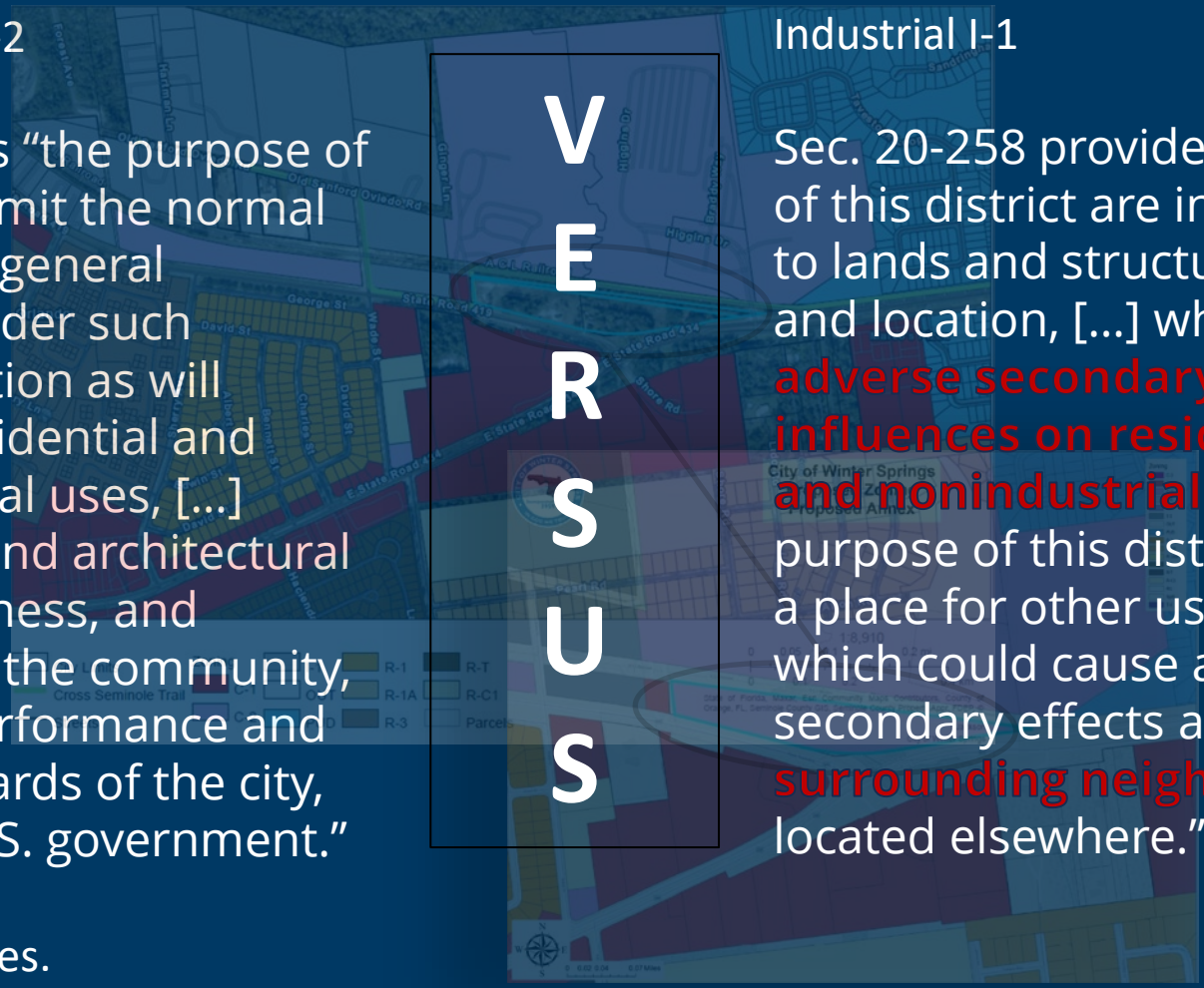
Does not allow for the proposed use.

Rezoning - Comparisons

General Commercial C-2

Sec. 20-251 provides "the purpose of this district is to permit the normal operation of [most] general commercial uses under such conditions of operation as will protect abutting residential and other noncommercial uses, [...] promote aesthetic and architectural harmony, attractiveness, and compatibility within the community, and abide by the performance and development standards of the city, county, state and U.S. government."

Also allows for (C-1) uses.



Industrial I-1

Sec. 20-258 provides "the provisions of this district are intended to apply to lands and structures, by their use and location, [...] which could cause adverse secondary effects and influences on residential areas and nonindustrial uses. The purpose of this district is [...] to allow a place for other uses and activities which could cause adverse secondary effects and influences on surrounding neighborhoods if located elsewhere."

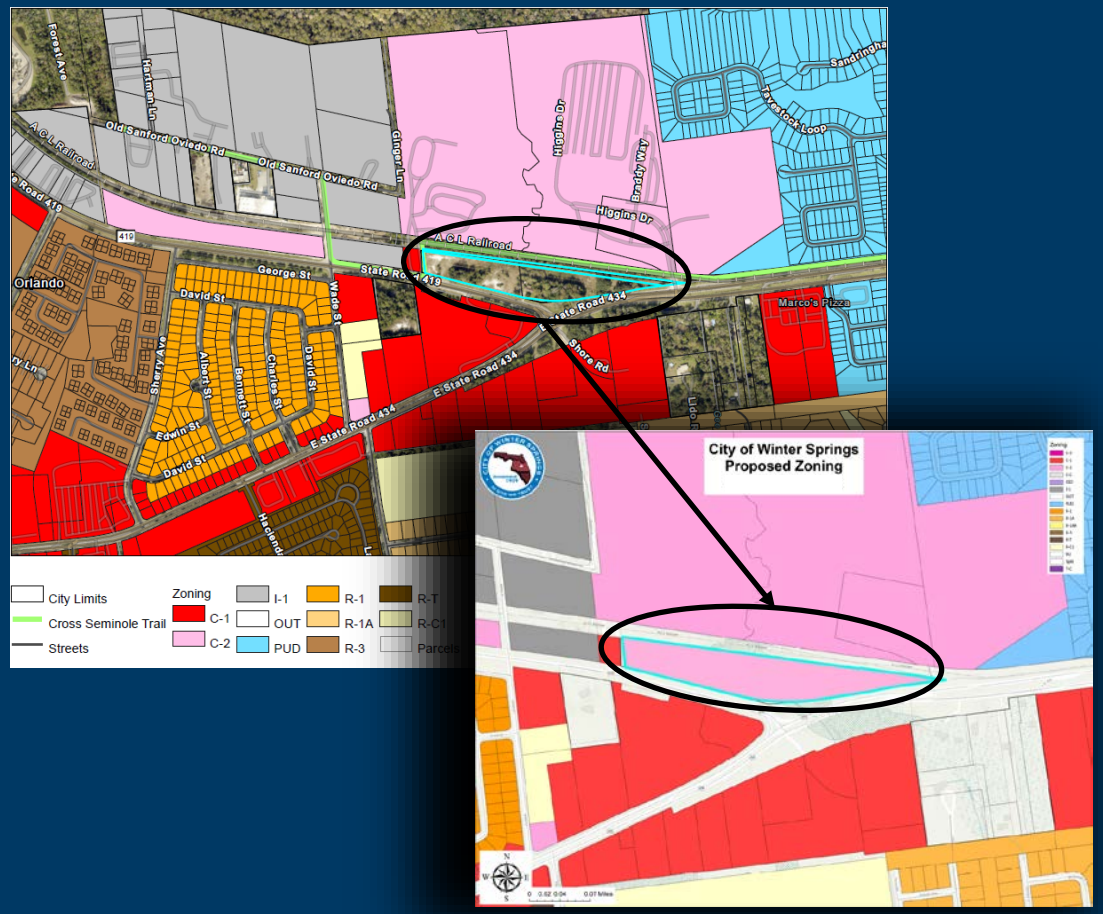
RZON-2024-0001: Ordinance 2024-10 First Reading

Questions/Comments/Objectives

Questions or comments pertaining to site development, maintenance, agreements, and Gee Creek should be reserved for the Site Plan public hearing that will be publicly noticed at a later date.

Inquiries pertaining to the zoning designation will be addressed at this time.

The objective is to consider amending the Zoning Map to General Commercial by approving Ordinance 2024-10.



Applicant:
OM Engineering Services, Inc.

AGENDA ITEM
403

City Commission

SEPT 23, 2024

RZON-2024-0001: Ordinance 2024-10 First Reading

ANY QUESTIONS?

AGENDA ITEM 403

City Commission

SEPT 23, 2024

PUBLIC HEARINGS AGENDA ITEM 404

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

First Reading of Ordinance 2024-14 Requiring Supermajority Vote of the City Commission for any Future Release, Conveyance, or Material Change to Conservation Land Managed by the City or Conveyance of any City Park Land.

SUMMARY

At the September 9, 2024 Commission meeting, the City Commission briefly discussed the continued importance of maintaining conservation and park lands within the City of Winter Springs. The preservation of natural spaces such as conservation and park lands benefit the citizens of Winter Springs and the environment. The Commission also recognized that Seminole County is also conducting a referendum election this November related to protecting natural lands. During this discussion, the City Commission directed that an ordinance be prepared to require a supermajority vote of the City Commission to release or convey conservation or park land owned or managed by the City. The proposed ordinance will apply city-wide to any such land and is essentially a local rule regarding City Commission procedures.

Since the City was incorporated in 1959, the City has prioritized the acquisition of numerous acreage of land for park purposes and has constructed award winning parks. In fact, parks have been so prioritized that in one instance in the early 2000s, the registered voters of Winter Springs even approved a general obligation bond to purchase additional property to expand Central Winds Park. The bond has since been paid and satisfied.

In addition, during this same time period when development projects were being planned and approved, numerous acreage of land was donated or dedicated to the City for conservation and greenbelt purposes by plat, easement or other legal instruments. For example, there are several conservation easements and greenbelt areas throughout the Tuskawilla PUD, Highlands PUD, Oak Forest PUD, and Winding Hollow PUD that have been conveyed by easement or dedicated to the public by plat.

The proposed Ordinance, if approved, will procedurally require a supermajority vote of the City Commission by ordinance to release, convey, or materially change the purpose, use, prohibitions, restrictions, or any other conservation related benefit of conservation land, which is defined in the ordinance as "any land conveyed or dedicated to the city for conservation or greenbelt purposes by deed, easement, plat, or some other recorded legal instrument."

Additionally, the proposed Ordinance will likewise procedurally require in the future that the city commission adopt an ordinance by supermajority vote to convey any park land that is identified as a park in the City's Comprehensive Plan.

FUNDING SOURCE

RECOMMENDATION

Staff recommends the City Commission hold a Public Hearing and approve the first reading of Ordinance 2024-14.

ORDINANCE NO. 2024-14

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, FLORIDA; PROVIDING MODIFICATIONS TO THE CITY CODE RELATED TO CONSERVATION AND PARK PROPERTY OWNED, DEDICATED OR MANAGED BY THE CITY OF WINTER SPRINGS; PROVIDING FOR A SUPERMAJORITY VOTE OF THE CITY COMMISSION TO RELEASE, CONVEY, OR MATERIALLY CHANGE THE PURPOSE, USE, PROHIBITIONS, RESTRICTIONS, OR ANY OTHER CONSERVATION RELATED BENEFIT OF CONSERVATION LANDS; PROVIDING FOR A SUPERMAJORITY VOTE OF THE CITY COMMISSION TO CONVEY OR TRANSFER PARK LAND; PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS; INCORPORATION INTO THE CODE; SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the City is granted the authority, under Section 2(b), Article VIII, of the State Constitution, to exercise any power for municipal purposes, except when expressly prohibited by law; and

WHEREAS, the City Commission recognizes the importance of parks, sustainable land use practices, and the preservation of natural spaces for the benefit of its citizens and the environment; and

WHEREAS, the establishment of conservation easements and greenbelt areas promotes environmental stewardship, enhances the quality of life for residents, and ensures the long term preservation of critical natural resources; and

WHEREAS, conservation easements and greenbelt dedications are legal agreements that permanently limit the use of land in order to protect its conservation values and public purposes, and generally control urban sprawl, protect wildlife habitat and ecosystems vital to the health and diversity of local flora and fauna, safeguard the environment, contribute to a healthier natural landscape, mitigate against climate change such as reducing urban heat island effect and pollution, provide public access and recreational opportunities, and enhance the aesthetic and scenic values of the community; and

WHEREAS, the City owns many acres of land used for park purposes for the benefit and use of the public; and

WHEREAS, the City is also the trustee for the benefit of the public of many conservation easements and greenbelt areas that are dedicated to, and located within, the City of Winter Springs; and

WHEREAS, because of the public importance of conservation easements and greenbelt areas and as more specifically set forth in this Ordinance, the City Commission desires to establish a supermajority vote requirement before the City Commission can authorize the release, conveyance, or material change to the purpose, use, prohibitions, restrictions, or any other conservation related benefit of conservation lands including greenbelt areas dedicated to the public, and similarly, the

City Commission desires to establish a supermajority vote of the city commission to convey or transfer park land; and

WHEREAS, the City Commission of the City of Winter Springs, Florida, hereby finds this Ordinance to be in the best interests of the public health, safety, and welfare of the citizens of Winter Springs; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, AS FOLLOWS:

Section 1. **Recitals.** The foregoing recitals are hereby fully incorporated herein by this reference as legislative findings and the intent and purpose of the City Commission of the City of Winter Springs.

Section 2. **New Section 2-3 and 2-4 of the City Code.** Section 2-3 and 2-4 of the City Code are hereby adopted as follows: (underlined type indicates additions to the City Code and ~~strikeout~~ type indicates deletions, while asterisks (* * *) indicate a deletion from this Ordinance of text existing in CHAPTER 2, ARTICLE I. – IN GENERAL. It is intended that the text in CHAPTER 2, ARTICLE I. – IN GENERAL shall remain unchanged from the language existing prior to adoption of this Ordinance):

CHAPTER 2 – ADMINISTRATION

ARTICLE I. – IN GENERAL

* * *

Sec. 2-3. Conservation lands – Supermajority vote required.

(a) For purposes of this section, the term "conservation land" shall mean any land conveyed or dedicated to the city for conservation or greenbelt purposes by deed, easement, plat, or some other recorded legal instrument.

(b) The City will manage conservation land for the benefit of the citizens of Winter Springs. The release, conveyance, or any material change of the purpose, use, prohibitions, restrictions, or any other conservation related benefit of conservation land by the city commission shall be by ordinance and require a supermajority affirmative vote of at least a majority plus one of the entire membership of the city commission.

Sec. 2-4. Conveyance of Park lands – Supermajority vote required.

The conveyance or transfer of any land owned by the city that is identified in the city's comprehensive plan as park land shall be by ordinance and require a supermajority affirmative vote of at least a majority plus one of the entire membership of the city commission.

Sec. 2-~~3~~5-2-25. – Reserved.

*** * ***

Section 3. **Repeal of Prior Inconsistent Ordinances and Resolutions.** All prior inconsistent ordinances and resolutions adopted by the City Commission, or parts or ordinances and resolutions in conflict herewith, are hereby repealed to the extent of the conflict.

Section 4. **Incorporation into Code.** This Ordinance shall be incorporated into the Winter Springs City Code and any section or paragraph, number or letter, and any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical, and like errors may be corrected and additions, alterations, and omissions, not affecting the construction or meaning of this ordinance and the City Code may be freely made.

Section 5. **Severability.** If any section, subsection, sentence, clause, phrase, word, or provision of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this ordinance.

Section 6. **Effective Date.** This Ordinance shall become effective upon adoption by the City Commission of the City of Winter Springs, Florida, and pursuant to City Charter.

ADOPTED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on the _____ day of_____, 2024.

_____
Kevin McCann, Mayor

ATTEST:

_____
Christian Gowan, City Clerk

APPROVED AS TO LEGAL FORM AND SUFFICIENCY FOR THE CITY OF WINTER SPRINGS ONLY:

_____
Anthony A. Garganese, City Attorney

First Reading:
Legal Ad:
Second Reading:

CITY OF WINTER SPRINGS, FLORIDA

1126 EAST STATE ROAD 434
WINTER SPRINGS, FLORIDA 32708-2799
TELEPHONE: (407) 327-1800
FACSIMILE: (407) 327-4753
WEBSITE: www.winterspringsfl.org

BUSINESS IMPACT ESTIMATE PURSUANT TO F.S. 166.041(4)

This form should be included in the agenda packet with the proposed ordinance to be considered. It must be posted on the City's website by the time notice of the proposed ordinance is published.

City Commission Meeting Dates: ___September 23, 2024, and October 14, 2024_____

Ordinance Number: _2024-14

Posted To Webpage: Wednesday, September 18, 2024

This Business Impact Estimate is given as it relates to the proposed ordinance titled:

ORDINANCE NO. 2024-14

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, FLORIDA; PROVIDING MODIFICATIONS TO THE CITY CODE RELATED TO CONSERVATION AND PARK PROPERTY OWNED, DEDICATED OR MANAGED BY THE CITY OF WINTER SPRINGS; PROVIDING FOR A SUPERMAJORITY VOTE OF THE CITY COMMISSION TO RELEASE, CONVEY, OR MATERIALLY CHANGE THE PURPOSE, USE, PROHIBITIONS, RESTRICTIONS, OR ANY OTHER CONSERVATION RELATED BENEFIT OF CONSERVATION LANDS; PROVIDING FOR A SUPERMAJORITY VOTE OF THE CITY COMMISSION TO CONVEY OR TRANSFER PARK LAND; PROVIDING FOR THE REPEAL OF PRIOR INCONSISTENT ORDINANCES AND RESOLUTIONS; INCORPORATION INTO THE CODE; SEVERABILITY AND AN EFFECTIVE DATE.

Parts I-IV below are not required to be completed if the ordinance involves any one of the following types of exemptions. Please check if applicable:

__ 1. Ordinances required for compliance with federal or state law or regulation;

__ 2. Ordinances relating to the issuance or refinancing of debt;

__ 3. Ordinances relating to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;

__ 4. Ordinances required to implement a contract or an agreement, including, but not limited to, any federal, state, local, or private grant, or other financial assistance accepted by a municipal government;

__ 5. Emergency ordinances;

__ 6. Ordinances relating to procurement; or

__ 7. Ordinances enacted to implement the following:

This Business Impact Estimate may be revised following its initial posting.

__ a. Part II of chapter 163, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements, and development permits;

__ b. Sections 190.005 and 190.046;

__ c. Section 553.73, relating to the Florida Building Code; or

__ d. Section 633.202, relating to the Florida Fire Prevention Code.

Part I.
Summary of the proposed ordinance and statement of public purpose:

The City of Winter Springs owns many acres of land used for park purposes. The City is also the trustee for the benefit of the public of many conservation easements and greenbelt areas which are dedicated to and located within the City's jurisdictional boundaries. These park and conservation areas encourage the preservation of natural spaces, sustainable growth, and outdoor recreation, which provides a benefit for the public. Because of the importance to the public of conservation lands, greenbelt areas, and park lands, the City desires to require a supermajority vote for certain actions involving conservation and park lands.

Ordinance 2024-14 proposes to amend Section 2-3 of the City Code of the City of Winter Springs to provide that the release, conveyance, or any material change of the purpose, use, prohibitions, restrictions, or any other conservation related benefit of conservation land by the City Commission shall be by ordinance and shall require a supermajority vote of the City Commission. The Ordinance also proposes to amend Section 2-4 of the City Code to provide that a conveyance or transfer of any land owned by the City which is identified in the City's Comprehensive Plan as park land shall be by ordinance and shall require a supermajority vote of the City Commission.

The proposed Ordinance is procedural, amending the Code to add only that a supermajority vote is required to take official action regarding conservation lands and park lands. The City Charter already requires that the lease or conveyance of any City land must be accomplished by ordinance. The proposed Ordinance adds an additional procedural requirement by requiring that ordinances conveying or otherwise modifying park or conservation land be passed by a supermajority vote of the City Commission.

Part II.
Estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the City of Winter Springs: (fill out subsections a-c as applicable, if not applicable write "not applicable")

(a) Estimate of direct compliance costs that businesses may reasonably incur if the proposed ordinance is enacted:

Direct economic costs associated with this Ordinance are negligible. The City is fee title owner of several hundred acres of park land that are managed by the City, and ownership and management of these lands do not directly impact businesses other than through normal public usage of the parks. The Ordinance does not change the terms or conditions of conservation lands granted to the City. Any changes to the terms and conditions of conservation lands granted to the City will now be required to obtain a supermajority vote to release, convey, or materially change those conservation lands. A supermajority requires the vote of four Commissioners rather than the current vote of three required for a simple majority. Significant financial changes are not expected and any economic impacts to businesses should be negligible.

(b) Identification of any new charges or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

Not applicable.

(c) An estimate of the City of Winter Springs' regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

Not applicable.

Part III.
Good faith estimate of the number of businesses likely to be impacted by the ordinance:

Only property owners who own land containing conservation lands will potentially be affected by this Ordinance. The number of known properties this Ordinance will impact on is limited and mostly are in residential and environmentally sensitive areas such as Tuskawilla PUD, Winding Hollow PUD, Oak Forest PUD and Highlands PUD and along creeks.

Part IV.
Additional Information the City Commission may find useful (if any):

This Ordinance is purely procedural, serving only to require a supermajority vote of the Commission rather than a simple majority vote in order to release, convey, or otherwise modify park and conservation lands. This Ordinance does not impact conservation lands that are granted to other government agencies within the City of Winter Springs including the St. Johns River Water Management District.

This Business Impact Estimate may be revised following its initial posting.

REGULAR AGENDA ITEM 500

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Intent to Award RFP 07-24-01 BI: Lift Station 7W Replacement Construction Contracts

SUMMARY

Lift station 7W was installed in 1995 and has had a few modifications which has allowed it to operate for almost 30 years. The design and electrical equipment are outdated. The lift station is currently operating with two pumps, 1 new pump and 1 refurbished pump, recently the wet well had to be repaired since the concrete line was falling off the walls and damaging the pumps, and there has been a by-pass pump connected to the system as back-up pump for multiple years now. Lift station 7W is beyond repair and needs to be replaced.

This construction project includes abandoning the existing wet well, dry well, and generator. Constructing new gravity sanitary runs, wet well, discharge piping, new submersible pumps, a new electrical building and installing the new generator, variable frequency drives (VFDs) and additional electrical equipment.

A Request for Proposal was published on DemandStar and the City's website. The mandatory site visit was attended by 7 vendors/contractors on July 23, 2024. A total of 3 bids were received by the August 26, 2024, (extended) deadline. The proposals were tabulated and then reviewed for responsiveness. The tabulated scores are attached to this agenda item. The most qualified contractor was Prime Construction Group, Inc. with a score of 260 and a construction price of $3,777,000.

This project was designed by Kimley-Horn and Associates and they will be providing Construction Phase Services and Certifications in the amount of $323,347.00 over the course of the two-year construction period was provided to the City. The scope includes, but is not limited to, shop drawing review, site observations during construction, and managing the construction timeline. This project is complex due to the need to keep the existing lift station operational during construction and the site constraints.

FUNDING SOURCE

Funding for this construction is from the City's Allocated ARPA Funding. The funding shall be allocated to the project by December 2024 and the project shall be completed by December 2026.

RECOMMENDATION

Staff recommends the City Commission approve the award of the proposal for the construction of Lift Station 7W Replacement project to Prime Construction Group, Inc. in the amount of $3,777,000 and the construction phase services and certifications contract with Kimley-Horn and Associates in the amount of $323,347.00 with a contract time of 45 weeks. It is also requested that the Interim City Manager and City Attorney prepare and execute all applicable contract documents consistent with this agenda item for Prime Construction Group, Inc. and Kimley-Horn and Associates.

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, Florida 32708

REQUEST FOR PROPOSALS

PROPOSAL : RFP # 07-24-01 BI **DATE: July 12, 2024**

Sealed Proposals for the Design and Construction for the Replacement of Lift Station 7W will be received by the City of Winter Springs (CITY) Procurement Department, located at Winter Springs City Hall, 1126 East State Road 434, Winter Springs, Florida 32708, until:

August 16, 2024
2:00 p.m., local time
FOR
Design and Construction Services for the Replacement of Lift Station 7W

Said Proposals shall conform to the minimum requirements outlined in this Request For Proposal. The CITY reserves the right to reject any and all offers and to waive minor informalities.

The City issues this Request for Proposals in order to select a Proposal for further contract negotiation. Selection by the CITY Commission may not result in the formation of a contract.

Submission and Receipt of RFP's:

PROPOSERS shall submit their Proposal response to this RFP by:

> Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of your RFP response to this office by the date and time indicated above.

The ***outside of your package must be clearly labeled with the RFP number, title, opening date and time, and the name and address of the PROPOSER.*** The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY's deadline requirements.

Offers received after August 16, 2024 at 2:00 p.m., will be rejected

Mandatory Site Visit July 23, 2024 at 9:00 am, see Timeline of Events for details

Deadline for questions is **July 30, 2024 1:00pm local time**

Any Addenda will be issued by **2:00pm on August 02, 2024 on the Demand Star platform** if questions are received and require clarification.

If you have any questions regarding this Request for Proposal, please contact Stuart MacLean, Procurement Manager, at (407) 327-7581, or via email at smaclean@winterspringsfl.org

PROPOSAL DOCUMENTS CAN BE DOWNLOADED FREE OF CHARGE FROM:
www.demandstar.com

or

https://www.winterspringsfl.org/rfps

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MANDATORY PROPOSAL FORMS

- PROPOSER Information and Acknowledgement
- Reference Information
- Insurance Requirements
- Scrutinized Company Certification
- Non-Collusions Affidavit
- Drug Free Workplace Certification
- Public Entity Crimes Statement
- Debarment, Suspension etc. Certification
- E-Verify Statement
- Conflict of Interest Statement
- SMWBE Utilization Plan
- Byrd Anti-Lobbying Act Certification

Appendix A Cost Proposal Worksheet

- o Appendix B Bid Bond Agreement
- o Appendix C Perfomance Bond Form
- o Appendix D Labor and Materials Payment Bond Form
- o Appendix E Notice of Award
- o Appendix F Notice to Proceed

Appendix G Contractor"s Release of Lien

Exhibit 1 Specifications
Exhibit 2 Geotechnical Report
Exhibit 3 Construction Drawings

PART I
SCOPE OF SERVICE/EVALUATION CRITERIA
RFP # 07-24-01 BI
Replacement of Lift Station 7W

Background

The City of Winter Springs is located in Seminole County Florida, which is part of the Orlando-Kissimmee-Sanford Metropolitan Area. As of 2021 the City of Winter Springs has a population of 38,317, covering 14.99 square miles. Lift Station 7W is located at 400 South Edgemon Avenue, Winter Springs and is a masterlift station serving the west side of the City. The lift station receives flow from multiple lift station and pumps through a 20-inch force main to the West Wastewater Reclaimation Facility.

Scope of Work

The City of Winter Springs is requesting Proposals from qualified construction companies (PROPOSER or PROPOSERS) for the purpose of constructing a new Lift Station to replace Lift Station 7W as follows, Including Exhibits 1, 2 & 3:

1.1 SUMMARY

1. The Work specified herein shall include construction for the replacement of lift station 7W located within the Western Wastewater Service Area within the City of Winter Springs.
2. Section Includes:
   a) Contract description.
   b) Work by CITY or other Work at the Site.
   c) CITY-furnished products.
   d) Contractor's use of Site and premises.
   e) Future work.
   f) Work sequence.
   g) CITY occupancy.
   h) Permits.
   i) Specification conventions.

1.2 CONTRACT DESCRIPTION

1. Work of the Project includes:
   a. Grading of site as designed
   b. Removal and replacement of existing chain link fencing and gates
   c. Installation of three (3) proposed sanitary manholes
   d. Modification of two (2) existing sanitary manholes
   e. Grout/Abandoning of existing PVC sanitary sewer pipe
      i. Grout/Abandoning of existing 12” VCP sanitary sewer pipe
      ii. Grout/Abandoning of existing 18” RCP/CIPP sanitary sewer pipe
      iii. Grout/Abandoning of existing 24” RCP sanitary sewer pipe
      iv. Grout/Abandoning of existing 20” CI force main pipe
      v. Grout/Abandoning of existing 10” by-pass force main pipe

f. Installation of proposed PVC sanitary sewer pipe
g. Installation of 21-inch PVC sanitary sewer pipe
h. Installation of 24-inch PVC sanitary sewer
i. Installation of 10-foot Diameter, 26-foot deep, concrete Triplex Lift Station
j. Installation of 16-inch DIP force main.
k. One (1) connection to existing 20-inch force main system pipe
l. One (1) tap of existing 6- inch potable water system pipe
m. One (1) tap of existing 8-inch reclaimed water system pipe
n. One (1) 10-inch line stop and to isolate existing 10-inch by-pass force main
o. Abandon existing ± 27' depth wet-well and dry-well.
    - Removal of existing pumps and valves within dry well.
p. Install new concrete driveway, sidewalk, and slab.
q. Setting of 12'x16'x12' pre-fabricated concrete electrical building
r. Removal of existing generator, day tank, control panels, variable frequency drive (VFD), and concrete curbing within existing generator building
s. Installation of new 125 kW diesel generator day tank, ATS, etc.
t. Installation of three (3) new VFDs, transformer, lighting panel, programmable logic controller (PLC), automatic transfer switch (ATS), circuit breaker, and other necessary and related appurtenances for the proposed new electrical building.
u. Radio study for telemetry tower

2. All materials, equipment, skills, tools, and labor which are reasonably and appropriately inferable and necessary for the proper completion of the Work and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by CONTRACTOR without additional compensation, whether specifically indicated in the Contract Documents or not. This includes testing and placing into operation all equipment.
3. All fees and permits for the permanent construction that are required by controlling agencies or authorities, including fees for the review of Contract Documents prior to construction, will be procured by CONTRACTOR. Other licenses or permits for construction facilities of a temporary nature which are necessary for the prosecution of the work shall be secured and paid for by CONTRACTOR
4. Repair, replace, or otherwise settle with the OWNER, if damage to property or existing facilities occurs, including damage to pavements, utilities, lawns, structures, etc.
5. Construct the Project under a Unit Price Contract.
6. CONTRACTOR shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, clean up, replacements, and restoration required as a result of damages caused during this construction.

1.3 WORK BY OWNER OR OTHERS

1. If work performed by the CITY or under CITY-awarded contracts interfere with each other due to work being performed at the same time or at the same Site, Owner will determine the sequence of work under all contracts according to "Work Sequence" and "Contractor's Use of Site and Premises" Articles in this Section.
2. Coordinate Work with utilities of Owner and public or private agencies.
3. Work under this Contract includes:
    - Work as indicated on Drawings and defined herein.
4. Items noted NIC (Not in Contract), will be furnished and installed by CITY.

1.4 OWNER-FURNISHED PRODUCTS

1. Owner's Responsibilities: one (1) Generator, day tank, Automatic Transfer Switch (ATS) and three (3) submersible pumps.

Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples to Contractor.
Arrange and pay for delivery to Site. Upon delivery, inspect products jointly with Contractor.
Submit claims for transportation damage and replace damaged, defective, or deficient items.
Arrange for manufacturers' warranties, inspections, and service.

2. Contractor's Responsibilities:

Review Owner-reviewed Shop Drawings, Product Data, and Samples.
Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
Handle, store, install, and finish products.
Repair or replace items damaged after receipt.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

1. Limit use of Site and premises to allow:

Owner occupancy.
Work by CITY.
Work by Others as directed by the Owner.

2. Construction Operations: Limited to areas indicated on Drawings or as described herein.

Noisy and Disruptive Operations (such as use of jack hammers and other noisy equipment): Not allowed in close proximity to existing buildings during regular hours of operation. Coordinate and schedule such operations with Owner to minimize disruptions.

3. Time Restrictions for Performing Work:

Working Hours shall be in accordance with the General Conditions.
Some Work including, but not limited to, abandonments of existing piping systems, as well as connections, replacements, extensions thereto and thereof may necessitate work being done after or before normal work hours,

said decision resting with the Engineer in coordination with the City of Winter Springs.

Normally such extended hours will be required only to maintain service to existing customers or to minimize inconvenience to those customers or members of the public.

This shall be considered incidental to the construction and therefore, no additional compensation shall be allowed.

4. Utility Outages and Shutdown:

Coordinate and schedule electrical and other utility outages with Owner.

Outages: Allowed only at previously agreed upon times.

At least one week before scheduled outage, submit Outage Request Plan to CITY itemizing the dates, times, and duration of each requested outage.

5. Sound Level Restrictions: Sound pressure level measured at boundary of Site shall not exceed 40 dBA.

1.6 WORK SEQUENCE

1. Construct Work in order to accommodate CITY's occupancy requirements during construction period. Coordinate construction schedule and operations with CITY.
2. Construction sequence shall be in accordance with 01 90 00 Sequence of Construction.
3. Sequencing of Construction Plan: Before start of construction, if required by the Engineer, submit three (3) hard copies and one (1) electronic copy of construction plan regarding phasing of all Work for acceptance by CITY. After acceptance of plan, construction sequencing shall comply with accepted plan unless deviations are accepted by CITY in writing.

1.7 OWNER OCCUPANCY

1. CITY will occupy Site for conduct of normal operations.
2. Cooperate with CITY to minimize conflict and to facilitate CITY's operations.
3. Schedule the Work to accommodate CITY occupancy.

1.8 PERMITS

1. The CITY will obtain all permits required for work within State, County, and Railroad Rights-of-Way.

The Contractor shall verify the existence of the approved permit prior to commencing any work.

2. Work within State of Florida Rights-of-Way:

All work related to State rights-of-way or property shall be in full compliance with all requirements of the permit and to the satisfaction of the State of Florida Department of Transportation.

Work within the rights-of-way of public thoroughfares, which are not under the jurisdiction of the State of Florida Department of Transportation, shall conform to the requirements of the agency having jurisdiction.

Installation shall include all the required work and necessary signs to provide the required traffic control, detours, and any other work to maintain traffic.

The Contractor shall notify the local Florida Department of Transportation Maintenance Engineer at least 48 hours prior to commencing work within the State rights-of-way and shall pay for any additional tests the State may require.

All work related to construction within the State rights-of-way shall be in full compliance with the terms of the permit and in accordance with the State of Florida Department of Transportation "Utility Accommodations Guide".

In the event of conflict between the requirements of Contract Documents and those of the State of Florida Department of Transportation, the more stringent requirements as determined by the Engineer, shall govern.

The costs of any, and all, items of work required by the State of Florida, payment for which is not specifically provided by bid items in the proposal, shall be included in the prices of bid items to which said items of work are related, incidental, or appurtenant. No additional compensation shall be allowed therefore.

3. Work within City of Winter Springs Rights-of-Way:

All work in CITY rights-of-way or property shall be in full compliance with all requirements of the permit, current service area agreement and to the satisfaction of the City of Winter Springs. Work within the rights-of-way of public thoroughfares which are not under the jurisdiction of City of Winter Springs shall conform to the requirements of the agency having jurisdiction. Installation shall include all the required work and necessary signs to provide the required traffic control, detours, and any other work to maintain traffic.

The Contractor shall notify the City of Winter Springs Public Works Department and City Engineer's Office at least 24 hours prior to commencing work within the CITY rights-of-way, and shall pay for any additional tests that the CITY may require.

In the event of conflict between the requirements of these Specifications and Details and those of the CITY, the more stringent requirements as determined by the Engineer, shall govern.

The costs of any, and all, items of work required by the City of Winter Springs, payment for which is not specifically provided by bid items in the Proposal, shall be included in the prices of bid items to which said items of work are related, incidental, or appurtenant. No additional compensation shall be allowed therefore.

The Contractor shall furnish copies of written approval or acceptance of the work by the City of Winter Springs to the Engineer along with the particular Periodic Estimate for Partial Payment on which payment for the work is requested. Final approval of the Project will not be issued until such approval has been furnished.

1.9 SPECIFICATION CONVENTIONS

1. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

GENERAL REQUIREMENTS

1. SCOPE

The scope of work includes furnishing all labor equipment, tools, materials, and incidentals necessary to complete the work in accordance with the Contract Documents in a first-class workmanlike manner, complete in all respects and ready for use

2. APPLICABLE SPECIFICATIONS AND REQUIREMENTS

All work to be performed on this project shall conform to the specifications and requirements, as defined herein and shall be of professional standards and quality, unless otherwise noted in the Contract Documents.

3. PERMITS AND REGULATIONS

The Proposer shall procure and pay for all permits, licenses, and bonds necessary for the prosecution of the Work, and/or required by Municipal, State and Federal regulations, laws and procedures, unless specifically provided otherwise in the Contract Documents. The CITY shall provide all required easements.

The CITY shall give all notices, pay all fees, and comply with all federal, state and municipal laws, ordinances, rules and regulations and building and construction codes bearing on the conduct of the Work. This RFP, as to all matters not particularly referred to and defined herein, shall notwithstanding, be subject to the provisions of all pertinent ordinances, codes and normal regulatory procedures of the municipality or other political subdivision within whose limits the Work is constructed, which ordinances, codes and procedures are hereby made a part hereof with the same force and effect as if specifically set out herein. It is the PROPOSER's responsibility to apply to the local jurisdiction for any Building Permit or Permit that may be required.

4. **INSURANCE AND HOLD HARMLESS INDEMNIFICATION**

To the fullest extent permitted by laws and regulations, Proposer shall indemnify and hold harmless CITY and its consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expenses (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of PROPOSER, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

In any and all claims against CITY or any of their consultants, agents or employees by any employee of PROPOSER, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under the previous paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for PROPOSER or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

PROPOSER's Liability Insurance - The PROPOSER shall not commence any work under this Contract until it has obtained all insurance required under the Agreement. PROPOSER shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth which may arise out of or result from Bidder's performance and furnishing of the Work and PROPOSER's other obligations under the Contract Documents, whether it is to be performed or furnished by PROPOSER, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable. The insurance required shall include the specific coverage's and be written for not less than the limits of liability and coverage's provided or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. The comprehensive general liability insurance shall also include Contractual Liability Insurance applicable to Bidder's obligations under the Hold Harmless Indemnification. All of the policies of insurance so required to be purchased and maintained (or the certificates or their evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days' prior written notice has been given to CITY by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when Bidder may be correcting, removing or replacing defective work in accordance with the Contract Documents. PROPOSER's General Liability Insurance shall include the CITY, and CITY's consultants as insured or additional insured which may be accomplished by either an endorsement of PROPOSER's Comprehensive General Liability policy or by PROPOSER 's carrier issuing a separate protection liability policy.

5. SALES TAX

The PROPOSER shall include in its Proposal, and shall pay, all Florida State sales tax and other local, State, and Federal taxes in accordance with existing laws and regulations.

6. LAYOUT OF WORK

The PROPOSER shall perform and be responsible for all layout work in connection with the project. The CITY will provide benchmarks as necessary in the project area.

7. CHANGES IN THE WORK

The CITY may, at any time, or from time to time, without invalidating the Agreement order alterations, deletions or revisions in the Work by written Change Order or Field Order. Upon receipt of any such order, PROPOSER shall promptly proceed with the Work involved, which shall be performed under the applicable conditions of the Contract Documents.

Any deviations from these specifications, plans and contract documents, must be approved by the CITY in advance of the work either by a written and executed Change Order or a written Field Order.

The PROPOSER agrees that he will do such work as may be required for the proper execution of the whole work herein contemplated, including all labor, equipment and materials reasonably necessary for the proper completion of the work. The PROPOSER agrees that he will make no claim for extra work unless that material or work is not covered by, or properly inferable from the Contract Documents. If the PROPOSER makes a claim for an extra or additional cost and requests a Change Order be issued prior to performing the work, and the CITY renders a decision denying such request, the PROPOSER must notify the CITY in writing within 3 days of the time that the PROPOSER is informed of the CITY's decision. Otherwise the CITY will not consider any such difference as a claim for a Change Order or additional payment or time. Any such written notice received by the CITY from the PROPOSER within the 3-day period shall be just reason for the CITY to reevaluate its previous decision.

8. PAYMENTS

The CITY may make partial payments on a monthly basis to the PROPOSER based on pay estimates, which have been approved by the CITY. The PROPOSER shall submit at least three (3) copies of his estimate, with reasonable time allowed to make a field inspection, check, and process the estimate.

Final Payment, including the retainage, will be made upon the completion of the work and certification by the CITY, and regulatory agencies and acceptance by the CITY that all of the work has been completed in accordance with the approved plans, specifications, and other Contract Documents, will be made to the PROPOSER. The CITY shall make final payment not later than 30 days after final acceptance of the work. Prior to final payment, the PROPOSER shall transfer to the OWNER all applicable items accumulated throughout construction. These include but are not limited to the following items:

Waivers of lien, releases and other items CITY may require in evidence of full payment to all Subcontractor's, suppliers and material-men.

Progress payments may be withheld if:

1. Work is found defective and not remedied;
2. PROPOSER does not make prompt and proper payments to SUBCONTRACTORs;
3. PROPOSER does not make prompt and proper payments for labor, materials, or equipment furnished;
4. Another PROPOSER is damaged by an act for which PROPOSER is responsible
5. Claims or liens are filed on the job; or
6. In the opinion of the City of Winter Springs, PROPOSER's work is not progressing satisfactorily.

9. PAYMENTS WITHHELD

The CITY will disburse, and shall have the right to act as agent for the PROPOSER in disbursing such funds as have been withheld pursuant to the agreement between PROPOSER and the CITY, to the party or parties who are entitled to

payment therefrom. The CITY will render to the PROPOSER a proper accounting of all such funds disbursed on behalf of the Contract. Neither the final payment nor any part of the retained percentage shall become due until the PROPOSER, if required, shall deliver to the CITY his written one year guarantee on the work and a complete release of liens arising out of this Contract, or receipts in full in lieu thereof, and, if required in either case, an affidavit that so far as he has knowledge or information, the releases and receipts include all the labor and material for which a lien could be filed; but the PROPOSER may, if any subcontractor refuses to sign a release or receipt in full, furnish a bond satisfactory to the CITY, to indemnify himself against any lien. If any lien remains unsatisfied after all payments are made, the PROPOSER shall refund to the CITY all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

10. GENERAL GUARANTEE

All work to be performed under this Contract shall be constructed in compliance with the Contract Documents.

SPECIAL CONDITIONS

1. Contract

The contract for this RFP is made using federal assistance provided to the City of Winter Springs by the US Department of Treasury under the American Rescue Plan Act ("ARPA"), Sections 602(b) and 603(b) of the Social Security Act, Pub. L. No. 117-2 (March 11, 2021). The following terms and conditions apply to you, the contractor or vendor, as a contractor of the City of Winter Springs, according to the City's Award Terms and Conditions signed on May 11, 2021; by ARPA and its implementing regulations; and as established by the Treasury Department.

2. Existing Utilities

In areas of work, all existing utilities, public or private, shall be located by the PROPOSER, and owners of said utilities shall be notified prior to commencing construction. PROPOSER shall immediately notify the CITY of any existing utilities that may interfere with completing the work. PROPOSER is to coordinate the relocation of any utilities within the areas of construction. Utility coordination work shall be considered as part of the lump sum pay item for mobilization.

3. Work Hours

All activity must occur between 7:00 AM and 6:00 PM, Monday through Friday excepting recognized holidays. Work on weekends or holidays must be requested a minimum of 7 days prior to the requested date for review and approval by the CITY.

4. Maintenance of Traffic

If necessary, temporary lane closures during working hours at an active construction site with an approved MOT plan will be permitted, subject to CITY review.

5. Shop Drawings

Shop drawings for all construction materials shall be submitted to and approved by the Engineer and CITY.

6. Property Restoration

All private and public property affected by the construction shall be restored to a condition equal to or better than the pre-work condition, including sodding, landscaping, irrigation systems, driveways, sidewalks, mailboxes, curbs, etc. The cost for all restoration work shall be incidental and no extra compensation will be allowed.

7. Excess Materials

All excess excavation, construction and other debris materials are the responsibility of the PROPOSER.

8. Sedimentation and Erosion Control

PROPOSER to follow all requirements set forth by the City of Winter Springs, SJRWMD, FDEP, NRCS, and USACOE with respect to sedimentation and erosion control.

9. Detailed Work Plan As part of the Proposal, the PROPOSER shall submit a detailed work plan, which will include the proposed construction sequence. The work plan shall also include, as needed, a bypass flow/dewatering plan and a turbidity control plan, based on the following requirements:

a. Bypass flow/Dewatering Plan:

The bypass flow/dewatering plan shall contain the Bidder's proposed method for diverting flow around the work areas at all project site locations. The plan shall include a detailed diagram and narrative describing techniques, materials, and storm preparedness.

b. Turbidity Control Plan:

The turbidity control plan, as needed, shall include the proposed best management practices (BMPs) to prevent erosion and the release of sediment and turbid water from the project site. The plan shall include the Bidder's proposed methods and materials necessary to prevent violations of water quality standards. Turbidity monitoring will be required weekly throughout construction at the direct discharge location of each of the project site. The results shall be submitted to the CITY on a weekly basis.

10. Equal Employment Opportunity 41 CFR 60-1.4 (b) (As required by 2 CFR 200.326 Appendix II to Part 200)

During the performance of this contract, the Bidder agrees as follows:

a. The PROPOSER will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The PROPOSER will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The PROPOSER agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

b. The PROPOSER will, in all solicitations or advertisements for employees placed by or on behalf of the PROPOSER, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

c. The PROPOSER will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

d. The PROPOSER will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor

union or workers' representatives of the PROPOSER 's commitments under this Section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

e. The PROPOSER will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

f. The PROPOSER will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

g. In the event of the PROPOSER's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the PROPOSER may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

h. The PROPOSER will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The PROPOSER will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a PROPOSER becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the PROPOSER may request the United States to enter into such litigation to protect the interests of the United States.

The PROPOSER further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: provided, that if the applicant so participating is a state or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.
The PROPOSER agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of its contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.
The PROPOSER further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to part ii, subpart d of the Executive Order. In addition, the PROPOSER agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the PROPOSER under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from

such applicant; and refer the case to the department of justice for appropriate legal proceedings.

11. Contract Work Hours and Safety Standards Act (40 U.S.C 3701-3708)

1) Overtime requirements. No PROPOSER or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the Bidder and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such PROPOSER and subcontractor shall be liable to the United States, for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

3) Withholding for unpaid wages and liquidated damages. The CITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the PROPOSER or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such PROPOSER or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

Subcontracts. The PROPOSER or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

12. Suspension and Debarment. (applies to all purchases.)

a. This contract is a covered transaction for purposes of 2 CFR pt. 180 and 2 CFR pt. 3000. As such, the Contractor is required to verify that none of Contractor's principals (defined at 2 CFR § 180.995) or its affiliates (defined at 2 CFR § 180.905) are excluded (defined at 2 CFR § 180.940) or disqualified (defined at 2 CFR § 180.935).

b. The Contractor must comply with 2 CFR pt. 180, subpart C and 2 CFR pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

13. Access to Records. (applies to all purchases.)

a. The Contractor agrees to provide the City of Winter Springs, the U.S. Department of Treasury, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Contractor agrees to permit any of the foregoing parties to reproduce by any means or to copy excerpts and transcriptions as reasonably needed, and agrees to cooperate with all such requests.

b. The Contractor agrees to provide the Treasury Department or authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

c. No language in this contract is intended to prohibit audits or internal reviews by the Treasury Department or the Comptroller General of the United States.

14. Rights to Inventions Made Under a Contract or Agreement.

Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any applicable implementing regulations

15. Clean Air Act & Federal Water Pollution Control Act (applies to purchases of more than $150,000.)

a. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

b. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

c. The Contractor agrees to report each violation of the Clean Air Act and the Water Pollution Control Act to the City of Winter Springs and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

d. Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance.

16. Prohibition on certain telecommunications and video surveillance services or equipment

(Huawei and ZTE)

Contractor is prohibited from obligating or expending loan or grant funds to:

(i) Procure or obtain;

(ii) Extend or renew a contract to procure or obtain; or

(iii) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by **Huawei Technologies Company or ZTE Corporation** (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

17. Buy USA - Domestic Preference for certain procurements using federal funds.

Contractor should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:

1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

18. Procurement of Recovered Materials: (applies only if the work involves the use of materials)

1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

   i. Competitively within a timeframe providing for compliance with the contract performance schedule;

   ii. Meeting contract performance requirements; or

   iii. At a reasonable price.

2) Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.

3) The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

19. Publications.

Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Recipient] by the U.S. Department of the Treasury."

20. Increasing Seat Belt Use in the United States.

Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Contractor is encouraged to adopt and enforce on-the-job seat belt policies and programs for your employees when operating company-owned, rented or personally owned vehicles.

21. Reducing Text Messaging While Driving.

Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Contractor is encouraged to adopt and enforce policies that ban text messaging while driving, and establish workplace safety policies to decrease accidents caused by distracted drivers.

EVALUATION CRITERIA

Proposals will be evaluated by the CITY, and the PROPOSER will be selected based upon, but not limited to, the following criteria:

a. The background, and experience of the PROPOSER in providing similar services or items elsewhere, including the level of experience in working with municipalities and the quality of services performed or items supplied.
b. Reasonableness/competitiveness of proposed costs and/or benefits to the City of Winter Springs. The CITY is not bound to select the PROPOSER who proposes the lowest cost or most benefits for service. The CITY of Winter Springs reserves the right to negotiate fees and/or benefits with the selected PROPOSER.

c. Determination that the selected PROPOSER has no contractual relationship which would result in a conflict of interest with the CITY.
d. The PROPOSER's ability, capacity, and skill to fully and satisfactorily, provide these services required in this RFP.
e. The quality of the PROPOSER's performance in comparable and/or similar projects.
f. Whether the PROPOSER can provide the service and/or items in a prompt and timely fashion.
g. Quality of proposed contract.

Proposals will be evaluated by the CITY, and selection will be based on, but not limited to, the following scoring criteria:

Criteria:		**Max Points:**
	Experience: ***The Proposer's experience in design and construction projects of this or a similar nature***	
Proposer has demonstrated significant experience and references provided attest to their skills and capabilities with designing and constructing lift stations		25
Proposers has significant experience in successfully completing projects very similar to this project and has the necessary capabilities and skills to undertake this project		20
Experience Total:		**45**
References: Evaluation of the Proposer's work from previous organizations receiving similar services to those proposed within this RFP. See the Mandatory Proposal Form, Reference Information Form.		
Reference 1		15
Reference 2		15
References Total		**30**
Cost: The cost of the Proposal is important to the CITY, however, based on the evaluation of the other criteria, the CITY will not necessarily select the lowest Proposer. **Cost Total**:		**25**
EXTRA BONUS POINTS: Certified Minority Business Enterprise: (3 Extra Bonus Points if Yes) The firm is a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act.		**3**
Total Possible Points		**103**

Pursuant to Florida Statutes § 287.05701, the CITY shall not request documentation regarding, consider, or give preference based upon, a vendor's social, political, or ideological interests when determining the vendor's qualifications.

Timeline of Events

Release of RFP	July 12, 2024
Mandatory Site Visit - 9:00am at 400 S. Edgemon Ave., Winter Springs	July 23, 2024
Deadline to receive questions (electronically) - 1:00 pm	July 30, 2024
Questions & Responses Addendum released on Demand Star - 2:00 pm	August 02, 2024
RFP Submittals - Due by 2:00pm local time	August 16, 2024
RFP Opening - Immediately after bids are logged, in City Commission Chambers	August 16, 2024
Evaluation Team Meeting and Vendor Recommendation - tentative 3:00pm	August 30, 2024
City Commission Approval of Vendor Selection and Consideration of Contract	TBD

PART I
INSTRUCTIONS TO PROPOSERS AND GENERAL PROVISIONS
FOR
RFP # 07-24-01 BI
Replacement of Lift Station 7W

Definitions (as used herein)

a. The term "Request for Proposal" means a solicitation of proposals. The acronym "RFP" means Request for Proposal.

b. The term "Proposal" means the offer of qualitative evaluations by the PROPOSER.

c. The term "professional services" means those services of architects, auditors, dentists, engineers, landscape architects, lawyers, physicians, psychologists, surveyors, and any other professional service as determined by the CITY.

d. The term " PROPOSER " means the person, company, or entity making an offer.

e. The term "Change Order" means a written order signed by the Finance Department or authorized representative directing the PROPOSER to make changes to a contract or purchase order resulting from the RFP.

f. The term "CITY" means the City of Winter Springs, Florida.

g. The term "CITY Commission" means the governing body of the City of Winter Springs. The CITY Commission is the only body that can award Proposals.

h. The term “Evaluation Committee” means a team of CITY staff that will review and rank all Proposals and may provide a recommendation regarding selection of a PROPOSER to the CITY Commission.

Preparation of Request for Proposal

a. PROPOSERS are expected to examine the minimum requirements and all special and general conditions. Omission on the part of the PROPOSER to make the necessary examinations and investigations, or failure to fulfill every detail the requirements of the contract document, will not be accepted as a basis for varying the requirements of the CITY or the compensation to the PROPOSER. Failure to properly and fully complete the Proposal is at the PROPOSER's risk. The PROPOSER shall sign the Request for Proposal and print or type his/her name, address, and telephone number on the face page.

b. The apparent silence of any supplemental minimum requirements as to any details, or the omission from it of a detailed description concerning any point will be regarded as meaning that only the best commercial practices are to prevail. All workmanship is to be first quality. All interpretations of the minimum requirements shall be made upon the basis of this statement.

c. PROPOSERS should submit their response to this RFP by:

Providing one (1) original, marked as such, three (3) copies, marked as such and one (1) electronic copy of PROPOSER’s Proposal to this office by the date and time indicated in Part I Timeline of Events.

The outside of PROPOSER’s package must be clearly labeled with the RFP number, title, opening date and time and the

name and address of the PROPOSER. The CITY is not responsible for submittals via postal or mail courier services, receipt by the post office or mail courier prior to the deadline does not meet the CITY's deadline requirements.

d. The PROPOSER should retain a copy of all documents for future reference.
e. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. You may use the Sunbiz website screen shot or include a copy of your Corporate Resolution to prove the authority of the corporate signer.
f. Failure to follow the instructions in the Request for Proposal is cause for rejection of your offer.

Submission and Receipt of Proposals

a. Proposals must be received before the specified time as designated in the RFP Timeline of Events. A list of PROPOSERS who submitted Proposals will be furnished, upon request, following opening of the Proposals.

b. Proposals shall be submitted in a sealed envelope. The envelope shall show the opening date and time, the RFP number, and the name and address of the PROPOSER.

c. The City of Winter Springs is not responsible for the U.S. Mail or private couriers, in regard to mail being delivered by the specified time so that a Proposal can be considered.

d. Email and Facsimile (FAX) Proposals will not be considered, however, Proposals may be modified by email and FAX notice, provided such notices are received prior to the hour and date specified.

e. Late Proposals will be rejected.

f. Proposals having any erasures or corrections must be initialed by the offer or in ink. Proposals shall be signed in ink. All amounts shall be typewritten or completed in ink.

g. All Mandatory Proposal Forms must be completed and attached to the Proposal.

h. All costs of Proposal preparation, inspection of the RFP documents, and presentation of the Proposal shall be solely borne by the PROPOSER. The CITY shall not be liable for any cost incurred by the PROPOSER during the preparation and submission of its Proposal in response to this RFP.

Selection of Proposal

SELECTION OF THE PROPOSER AND PROPOSAL DEEMED THE MOST QUALIFIED, MOST ADVANTAGEOUS, AND IN THE BEST INTERESTS OF THE CITY, AS DETERMINED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS'S SOLE AND ABSOLUTE DISCRETION, SHALL NOT RESULT IN THE FORMATION OF A CONTRACT. NO CONTRACT SHALL BE FORMED UNTIL FINAL APPROVAL OF SUCH CONTRACT BY THE CITY COMMISSION AFTER SUCCESSFUL NEGOTIATION OF SPECIFIC CONTRACT TERMS DETERMINED TO BE IN THE BEST INTERESTS OF THE CITY BY THE CITY COMMISSION. Negotiations may be terminated at any time by the CITY Manager or CITY Commission if, in his/her/its sole discretion, the CITY Manager OR CITY Commission determines that the negotiation of terms acceptable to the CITY will not be successful.

Only the CITY Commission can select Proposals, authorize the CITY Manager to engage in negotiations, and ultimately enter into a contract.
The RFP Evaluation Committee scores Proposals and provides a recommendation to the CITY Commission for selection. The recommendation may or may not be adopted by the CITY Commission.

After the initial Evaluation Committee meeting, the Evaluation Committee may require one or more of the top-ranking

PROPOSERS to attend a meeting to make an oral presentation, answer questions. This meeting will be exempt from the requirements of the Sunshine Law in accordance with section 286.0113, Florida Statutes. PROPOSER(s) will be notified of any further meeting requirements.

Acceptance of Offer

The signed Proposal shall be considered an offer on the part of the PROPOSER; however, such offer shall be deemed accepted only upon issuance by the CITY of a Purchase Order, Blanket Purchase Order, or execution of another contractual document deemed acceptable to the CITY.
The contract will be awarded to the most responsible and responsive, qualified PROPOSER(s) whose Proposal is deemed the most advantageous and in the best interests of the CITY in accordance with the criteria set forth in this RFP.

The CITY reserves the right to accept or reject any and all Proposals or parts of Proposals, waive minor informalities, and to request clarification of information from any PROPOSER.

Notice of Award, Performance Bond and Labor and Materials Payment Bond

Within ten (10) calendar days from the date stipulated in the Notice of Award notifying PROPOSER that its Proposal has been accepted, the successful PROPOSER shall execute the Agreement. Simultaneously with the execution of the Agreement, PROPOSER shall furnish a Performance Bond and a Labor and Materials Bond each in the amount of 110 percent of the contract price. The bonds shall be secured from a surety company acceptable to the CITY. The forms of the Bonds the successful PROPOSER will be required to execute are included in the RFP Documents. Failure to execute the Agreement and/or to furnish said bonds within ten (10) calendar days from the date of the Notice of Award entitles the CITY to consider all rights arising out of the CITY's acceptance of the Proposal as abandoned and the Bid Bond shall be forfeited. The CITY shall be entitled to such other rights as may be granted by law.

Discrepancies, Errors, and Omissions

Any discrepancies, errors, or ambiguities in the Request for Proposals or addenda (if any) should be reported in writing to the CITY's Procurement Manager. Should it be found necessary, a written Addenda will be incorporated in the Request for Proposals and will become part of the Service Agreement (contract documents). The CITY will not be responsible for any oral instructions, clarifications, or other communications.

Right to Reject Proposals

The CITY reserves the right to reject any or all Proposals, and to disregard typographical, mathematical, or obvious errors. The CITY will not pay costs incurred by any PROPOSER in the preparation of Proposals.

Compensation

Compensation, which is determined to be fair, competitive, and reasonable, will be considered during the negotiations of a final contract with the selected PROPOSER.

Fiscal Non-Funding Clause

In the event sufficient budgeted funds are not available for a new fiscal period, the CITY shall notify the PROPOSER of such occurrence and any contracts entered into between the CITY and PROPOSER shall terminate on the last day of the current fiscal period without penalty or expense to the CITY.

Rights of the CITY

This RFP constitutes an invitation for submission of Proposals to the CITY. This RFP does not obligate the CITY to procure or contract for any of the scopes of services set forth in this RFP. The CITY reserves and holds at its sole discretion, various

rights and options under Florida law, including without limitation, the following:

- To prepare and issue Addendums to the RFP that may expand, restrict, or cancel any portion or all work described in the RFP without obligation to commence a new procurement process or issue a modified or amended RFP.
- To receive questions from potential PROPOSERS and to provide such answers in writing as it deems appropriate.
- To waive any informalities, technicalities or irregularities in the PROPOSALS submitted.
- To reject any and all PROPOSAL submissions.
- To change the date for receipt of PROPOSAL or any deadlines and dates specified in the RFP.
- To change the procurement and/or selection process prior to receipt of Proposals.
- To conduct investigations with respect to the information provided by each PROPOSER and to request additional information (either in writing or in presentations and interviews) to support such PROPOSER's responses and submittals.
- To visit facilities referenced in the PROPOSER's submittal at any time or times during the procurement process.
- To seek clarification of Proposals from the PROPOSER either in writing or in presentations and interviews
- To cancel the RFP: with or without the substitution of another RFP.

Conflict of Interest

PROPOSER acknowledges and certifies that this Agreement does not violate any ethics provision found in Chapter 112, Florida Statutes, or Chapter 2 of the Code of Ordinances of the City of Winter Springs.

The PROPOSER certifies that, to the best of their knowledge or belief, no elected/appointed official or employee of the City of Winter Springs, a spouse thereof or other person residing in the same household, is financially interested, directly or indirectly, in providing the goods or services specified in this Proposal. Financial interest includes ownership of more than five percent (5%) of the total assets or capital stock or being an officer, director, manager, partner, proprietor, or agent of the business submitting the Proposal or of any subcontractor or supplier thereof providing goods or services in excess of ten percent (10%) of the total Proposal amount.

Additionally, the PROPOSER, on company letterhead, must divulge at the time of Proposal submittal, any relative, other than those already specified, of an elected /appointed official or employee of the City of Winter Springs who has a financial interest, as defined herein, in providing the goods or services specified in the Proposal. The CITY, at its sole discretion, will determine whether a conflict exists and whether to accept or reject the Proposal.

Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity, may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit Proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

Options

When the CITY requests Proposals with options regarding the extent of services to be provided, the CITY requests all PROPOSERS to provide a cost breakdown for each option proposed. Although all options may be purchased, some options may not ultimately be purchased. The CITY reserves the right to decide, at its discretion, which options shall be purchased. The CITY reserves the right to engage more than one (1) PROPOSER if it is believed that different PROPOSERS might best serve the CITY's interests in performing different segments of the work (e.g., one PROPOSER to provide building estimates, and another to provide infrastructure estimates).

Subcontracting

Where PROPOSERS do not have the "in-house" capability to perform work desired in the Request for Proposal, subcontracting may be permitted only with prior knowledge and approval of the CITY. The CITY must be assured of and agree that any proposed subcontractor(s) can perform work of the desired quality and in a timely manner. The name(s) of any intended subcontractor(s) should be given in the Proposal.

Failure to Submit Proposal

If PROPOSER does not wish to submit a Proposal, return the RFP and state the reason therefor; otherwise, PROPOSER's name may be removed from CITY's mailing list.

Default of Contract

In case of default by the PROPOSER, the CITY may procure the requested services from other sources and hold the PROPOSER responsible for any excess costs occasioned or incurred thereby.

Modification for Changes

No agreement or understanding to modify this RFP and resultant purchase order or contract shall be binding upon the CITY unless made in writing by the City of Winter Springs.

Order of Precedence

In the event of an inconsistency between provisions of the RFP, the inconsistency shall be resolved by giving precedence in the following order: (a) Instructions to PROPOSERS and General Provisions; and (b) the minimum requirements.

Examination of Records

The PROPOSER shall keep adequate records and supporting documentation applicable to the subject matter of this RFP to include, but not be limited to: records of costs, time worked, working paper and/or accumulations of data, and criteria or standards by which findings or data are measured. Said records and documentation shall be retained by the PROPOSER for a minimum of one (1) year from the date the contract is completed and accepted by the CITY. If any litigation is initiated before the expiration of the one-year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved, unless otherwise instructed by the CITY. Should any questions arise concerning this contract, the CITY and its authorized agents shall have the right to review, inspect, and copy all such records and documentation during the record retention period stated above; provided, however, such activity shall be conducted only during normal business hours and shall be at CITY expense. PROPOSERS shall be authorized to retain microfilm copies in lieu of original records if they so desire.
Any subcontractor(s) employed by a PROPOSER who is subject to these requirements and the PROPOSER itself are required to so notify any such subcontractor(s).

Proposals Received

All Proposals received in response to this RFP become the property of the CITY.

Contacting or Soliciting from CITY Staff

The PROPOSER, including its agents and associates, shall refrain from contacting or soliciting any staff member or official of the CITY regarding this RFP upon the release of the RFP through the time of notification of award. Failure to comply with the provision may result in disqualification of the PROPOSER.

Lobbying/Cone of Silence

Lobbying is defined as any action taken by an individual, firm, association, joint venture, partnership, syndicate, corporation, and/or all other groups who seek to influence the governmental decision of a CITY Commission Member, the CITY Manager, any requesting or evaluating Department/Division/Office personnel and/or any member of the Evaluation Committee concerning an active solicitation during the black-out period. A lobbying black-out period commences upon the issuance of this solicitation document.
If an award item is presented to CITY Commission for approval or for a request to provide authorization to negotiate a Contract(s) and the CITY Commission refers the item back to the CITY Manager, Procurement Division and/or requesting Department/Division/Office for further review or otherwise does not act on the item, the Cone of Silence/Lobbying Black-out Period will be reinstated until such time as the CITY Commission meets to consider the item for action.
Bidders, PROPOSERS, Respondents, potential vendors, service providers, lobbyists, consultants, or vendor representatives shall not contact any CITY Commission member, the CITY Manager, any requesting or evaluating Division, Department, Office personnel, and/or any member of the Evaluation Committee concerning an active Request For Proposal during the Lobbying/Cone of Silence Black-out Period.

Insurance and Hold Harmless Indemnification

To the fullest extent permitted by laws and regulations, PROPOSER shall indemnify and hold harmless CITY and its consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expenses (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of Bidder, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

In any and all claims against CITY or any of their consultants, agents or employees by any employee of PROPOSER, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under the previous paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for PROPOSER or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

PROPOSER's Liability Insurance - The PROPOSER shall not commence any work under this Contract until he has obtained all insurance required under the Agreement. PROPOSER shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth which may arise out of or result from PROPOSER's performance and furnishing of the Work and PROPOSER's other obligations under the Contract Documents, whether it is to be performed or furnished by Bidder, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable. The insurance required shall include the specific coverage's and be written for not less than the limits of liability and coverage's provided or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. The comprehensive general liability insurance shall also include Contractual Liability Insurance applicable to Bidder's obligations under the Hold Harmless Indemnification. All of the policies of insurance so required to be purchased and maintained (or the certificates or their evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days' prior written notice has been given to CITY by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when PROPOSER may be correcting, removing or replacing defective work in accordance with the Contract Documents. PROPOSER's General Liability Insurance shall include the CITY, and CITY's consultants as insured or additional insured which may be accomplished by either an endorsement of Bidder's

Comprehensive General Liability policy or by PROPOSER 's carrier issuing a separate protection liability policy.

Qualifications of PROPOSER

A PROPOSER may be required, before the award of any contract, to show to the complete satisfaction of the CITY that they have the necessary facilities, equipment, ability and financial resources to perform the work in a satisfactory manner within the time specified.

Disqualification of PROPOSER

Any or all Proposals will be rejected if there is any reason for believing that collusion exists among the PROPOSERS, and participants in such collusion will not be considered in future Proposals for the same work.

Licenses and Permits

The PROPOSER shall secure all licenses and permits and shall comply with all applicable laws, regulations and codes as required by the United States, the State of Florida, or by the City of Winter Springs. The PROPOSER must fully comply with all Federal and State Laws and County and Municipal Ordinances and Regulations in any manner affecting the performance of the work.

Provisions for Other Agencies

Unless otherwise stipulated by the PROPOSER, the PROPOSER agrees to make available to the Government agencies, departments, and municipalities the prices submitted in accordance with said terms and conditions therein, should any said governmental entity desire to buy under the Proposal.

Applicable Law and Venue

This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State of Florida without regard to the conflicts or choice of law principals thereof. Each of the parties hereto: (a) irrevocably submits itself to the exclusive jurisdiction of the State of Florida, and agree that venue shall lie exclusively in the Eighteenth Judicial Circuit Court in and for Seminole County, Florida for any state court action arising out of this Agreement, and exclusively in the United States District Court for the Middle District of Florida, Orlando Division, for any federal court action arising out of this Agreement; (b) waives and agrees not to assert against any party hereto, by way of motion, as a defense or otherwise, in any suit, action or other proceeding, (i) any claim that it is not personally subject to the jurisdiction of the above-named courts for any reason whatsoever, and (ii) any claim that such suit, action, or proceeding by any party hereto is brought in an inconvenient form or that venue of such suit, action, or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such courts.

Proposal Disclosure; Public Records Responsibilities

Florida law provides that municipal records shall, at all times, be open for personal inspection by any person. Section 119.01, Florida Statutes et. seq. (the Public Records Law). Unless otherwise provided by the Public Records Law, information and materials received by the CITY in connection with an RFP response and under any awarded contract shall be deemed to be public records subject to public inspection and/or copying at the end of the statutory exemption time period pursuant to Section 119.071, Florida Statutes. However, certain exemptions to the Public Records Law are statutorily provided for under sections 119.07 and 119.071, Florida Statutes, and other applicable laws. If the PROPOSER believes any of the information contained in its response is exempt from the Public Records Law, including trade secrets as defined by Florida law, the PROPOSER must, in its response, specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption; otherwise, the CITY will treat all materials received as public records.
Pursuant to section 119.0701, Florida Statutes, for any tasks performed by PROPOSER on behalf of the CITY, PROPOSER

shall: (a) keep and maintain all public records, as that term is defined in chapter 119, Florida Statutes ("Public Records"), required by the CITY to perform the work contemplated by this Agreement; (b) upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested Public Records or allow the Public Records to be inspected or copied within a reasonable time at a cost that does not exceed the costs provided in chapter 119, Florida Statutes, or as otherwise provided by law; (c) ensure that Public Records that are exempt or confidential and exempt from Public Records disclosure requirements are not disclosed except as authorized by law for the duration of the term of this Agreement and following completion or termination of this Agreement, if PROPOSER does not transfer the records to the CITY in accordance with (d) below; and (d) upon completion or termination of this Agreement, (i) if the CITY, in its sole and absolute discretion, requests that all Public Records in possession of PROPOSER be transferred to the CITY, PROPOSER shall transfer, at no cost, to the CITY, all Public Records in possession of PROPOSER within thirty (30) days of such request or (ii) if no such request is made by the CITY, PROPOSER shall keep and maintain the Public Records required by the CITY to perform the work contemplated by this Agreement. If PROPOSER transfers all Public Records to the CITY pursuant to (d)(i) above, PROPOSER shall destroy any duplicate Public Records that are exempt or confidential and exempt from Public Records disclosure requirements within thirty (30) days of transferring the Public Records to the CITY and provide the CITY with written confirmation that such records have been destroyed within thirty (30) days of transferring the Public Records. If PROPOSER keeps and maintains Public Records pursuant to (d)(ii) above, PROPOSER shall meet all applicable requirements for retaining Public Records. All Public Records stored electronically must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology of the CITY. If PROPOSER does not comply with a Public Records request, or does not comply with a Public Records request within a reasonable amount of time, the CITY may pursue any and all remedies available in law or equity including, but not limited to, specific performance. The provisions of this section only apply to those tasks in which PROPOSER is acting on behalf of the CITY.

IF THE PROPOSER HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE PROPOSER'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone number: (407) 327-6560 ext. 7003 E-mail address: cityclerkdepartment@winterspringsfl.org

Attorney Fees

In the event of legal action or other proceeding arising under this RFP, the prevailing party shall be entitled to recover from the adverse party all its reasonable attorneys' fees and costs incurred by the prevailing party in the prosecution or defense of such action, or in any post-judgment or collection proceedings and whether incurred before suit, at the trial level or at the appellate level. This shall include any bankruptcy proceedings. The prevailing party also shall be entitled to recover any reasonable attorneys' fees and costs incurred in litigating the entitlement to attorneys' fees and costs, as well as in determining the amount of attorneys' fees and costs due to the prevailing party. The reasonable costs to which the prevailing party will be entitled include costs that are taxable under any applicable statute, rule, or guideline, as well as costs of investigation, copying costs, electronic discovery costs, mailing and delivery charges, costs of conducting legal research, consultant and expert witness fees, travel expenses, court reporter fees and mediator fees, regardless of whether such costs are taxable under any applicable statue, rule or guideline.

E-Verify

Pursuant to section 448.095, Florida Statutes, beginning January 1, 2021, any CITY contractors shall register with and use the U.S. Department of Homeland Security's E-Verify system, https://e-verify.uscis.gov/emp, to verify the work authorization status of all employees hired on and after January 1, 2021. CITY contractors must provide evidence of compliance with section 448.095, Florida Statutes. Evidence shall consist of an affidavit from the PROPOSER stating all employees hired on and after January 1, 2021 have had their work authorization status verified through the E-Verify system and a copy of their proof of registration in the E-Verify system. Failure to comply with this provision will be a material breach of the contract, and shall result in the immediate termination of a contract without penalty to the CITY. PROPOSER shall be liable for all costs incurred by the CITY securing a replacement contract, including but not limited to, any increased costs for the same services, any costs due to delay, and rebidding costs, if applicable. If the PROPOSER utilizes

subcontractors the following shall apply:

PROPOSER shall also require all subcontractors performing work under the Agreement to use the E-Verify system for any employees they may hire during the term of the Agreement.
PROPOSER shall obtain from all such subcontractors an affidavit stating the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, as defined in section 448.095, Florida Statutes. PROPOSER shall provide a copy of all subcontractor affidavits to the CITY upon request and shall maintain a copy for the duration of the Agreement.

Additional Information

Additional information may be obtained from the Procurement Manager, (407) 327-7581, or from any other individual listed on the RFP cover letter.

Modification and Withdraw

Proposals may not be modified after submittal.

Proposals may be withdrawn at any time prior to the deadline. Withdrawal requests shall be made in writing and must be received by the CITY's Procurement Manager before the time and date stated or as amended for the Proposal Opening. Properly withdrawn Proposals will be returned unopened to the PROPOSER submitting the Proposal.

A PROPOSER who timely withdraws its Proposal may submit a new Proposal in the same manner as specified herein under "Submission of Proposal." A Proposal submitted in place of a withdrawn Proposal shall be clearly marked as such on the outside of the envelope and on the Bid Form.

If a Contract is not awarded within 90 calendar days after opening of Proposals, a PROPOSER may file a written request with the CITY's Procurement Manager for the withdrawal of its Proposal.

Prohibition on Gifts to City Employees and Officials

No organization or individual shall offer or give, either directly or indirectly, any favor, gift, loan, fee, service or other item of value to any CITY employee, as set forth in Chapter 112, Part III, Florida Statutes, the current CITY Ethics Ordinance, and CITY Administrative Policy.

Violation of this provision may result in one or more of the following consequences:

a. Prohibition by the individual, firm, and/or any employee of the firm from contact with CITY staff for a specified period of time;
b. Prohibition by the individual and/or firm from doing business with the CITY for a specified period of time, including but not limited to: submitting bid/Proposals, RFP, and/or quotes; and,
c. Immediate termination of any contract held by the individual and/or firm for cause.

Discrimination

An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, Proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, Proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, Proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

Federal Requirements

This contract may be funded in whole or in part with federal funding. As such, federal laws, regulations, policies and related

administrative practices shall apply to any contract negotiated with a selected firm as required by federal law. The most recent of such requires, including any amendments made such the submission of the Proposal, shall apply, unless federal government determines otherwise.

The federal government requirements contained in the most recent version of the Uniform Administrative Requirements for federal awards (Uniform Rules) codified at 2.C.F.R, Part 200, including any certifications and contractual provisions required by any federal statutes or regulations referenced therein to be included in this contract are deemed incorporated herein by reference and shall be incorporated into any sub-agreement or subcontract executed by the Proposer pursuant to its obligations under federal law.

PART III
SPECIFIC PROPOSAL REQUIREMENTS
For
RFP #07-24-01 BI
Replacement of Lift Station 7W

Format

To assure consistency, Proposals must conform to the following format:

A. PROPOSER Information and Acknowledgement Form
B. Table of Contents
C. Introduction Letter
D. Qualifications
E. Other Information
F. Cost & Time
G. Mandatory Proposal Forms
H. Florida State Corporate Filing

Section A – PROPOSER Information and Acknowledgement Form

1. Use the form provided in the Mandatory Proposal Forms titled "PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM." (See Proposal Form 1)

Section B – Table of Contents

1. Identify Proposal material by section and page number.

Section C – Introduction Letter

1. Summarize the key points of the Proposal including an understanding of the scope of work. Must be signed by an authorized official of the PROPOSER.

Section D – Qualifications

1. General – Provide general information about the PROPOSER, including size, office location(s), and structure of PROPOSER. Identify and explain any significant changes in organizational structure, ownership, or management both firm-wide and within Fixed Income/ Public Finance during the past five (5) years.

2. PROPOSER Experience – Describe the PROPOSER's experience with providing Design and Construction services, focus on the PROPOSER's experience with Lift Stations and Water Utilities for municipalities

3. Team Experience – Identify key members of PROPOSER's team that will service the CITY. Identify the proposed project manager. Provide brief resumes for key team members that will service the CITY as an Appendix.

4. References – Use the form provided in the Mandatory Proposal Forms titled "REFERENCE INFORMATION FORM"

5. Conclusion – Briefly summarize why PROPOSER should be selected, including why PROPOSER is pursuing the City of Winter Springs' business. In short, summarize what makes PROPOSER different and why the CITY should select PROPOSER above all others.

Section E - Other Information

This section should address any other information necessary for a full understanding of PROPOSER's services. Please provide relevant information on any additional services offered by PROPOSER.

Section F – Cost and Time

This section must clearly state the cost and estimated completion time, if applicable, associated with the project. Use Appendix A: Cost Proposal Worksheet.

Section G – Mandatory Proposal Forms

1. Fill out and return the forms provided; PROPOSER Information and Acknowledgement Form, References Information Form, Insurance Requirement Form, Scrutinized Company Certification, Non-Collusion Affidavit of Prime Respondent, Drug Free Workplace Form, Public Entity Crimes Statement, E-Verify Statement, Conflict of Interest Statement, SMWBE Utilization Plan, Byrd Anti-Lobbying Act Certification and Appendix A Cost Proposal Worksheet.

Section H – Florida State Corporate Filing

1. All Proposals must be signed with the PROPOSER's name and by an officer or employee having authority to bind the PROPOSER by his/her signature as indicated by the Florida Department of State, Division of Corporations (www.sunbiz.org). Proof of corporate signer must be included with the submittal with the Proposal. Use Sunbiz website screen shot or include a copy of Corporate Resolution or a Power of Attorney.

MANDATORY PROPOSAL FORMS

Proposal Form 1	-	PROPOSER Information and Acknowledgement Form
Proposal Form 2	-	References Information Form
Proposal Form 3	-	Insurance Requirements Form
Proposal Form 4	-	Scrutinized Company Certification
Proposal Form 5	-	Non-Collusion Affidavit
Proposal Form 6	-	Drug Free Workplace Form
Proposal Form 7	-	Public Entity Crimes Statement
Proposal Form 8	-	Debarment, Suspension etc. Certification
Proposal Form 9	-	E-Verify Statement
Proposal Form 10	-	Conflict of Interest Statement
Proposal Form 11	-	SMWBE Utilization Plan
Proposal Form 12	-	Byrd Anti-Lobbying Act Certification
Appendix A	-	Cost Proposal Worksheet

Mandatory forms must be submitted with the Proposal.

Failure to submit forms may disqualify the PROPOSER from the RFP

- Appendix B Bid Bond Agreement
- Appendix C Perfomance Bond Form
- Appendix D Labor and Materials Payment Bond Form
- Appendix E Notice of Award
- Appendix F Notice to Proceed
- Appendix G Contractor"s Release of Lien

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

RFP # 07-24-01 BI

Replacement of Lift Station 7W

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: _____

TAX ID# SNN or EIN: _____

PROPOSER ADDRESS: _____

PURCHASE ORDER ADDRESS: _____

PHONE NUMBER: _____

COMPANY WEBSITE: _____

COMPANY CONTACT (REP): _____

CONTACT EMAIL ADDRESS: _____

SIGNATURE: _____

THE UNDERSIGNED:

A. Acknowledges receipt of:
   1. RFP # 07-24-01 BI Pertaining To: Replacement of Lift Station 7W
   2. Addenda:
      Number: _____, Dated _____.
      Number: _____, Dated _____.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:
   1. To hold this Proposal open for 90 calendar days after the bid opening date.
   2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
   3. To accept the provisions of the Instructions to PROPOSERS.
   4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
   5. To accomplish the work in accordance with the contract documents.

D. Certifies:
   1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
   2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

REFERENCE INFORMATION FORM

RFP # 07-24-01 BI

Replacement of Lift Station 7W

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

Organization: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: ( ) _____

Project Cost: _____ Date Performed: _____

PROPOSER Representative Typed Name/Title: _____

PROPOSER Representative Signature: _____

PROPOSER: _____

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
	Commercial General Liability	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability.
✔	(Occurrence Form) patterned after the current ISO form	This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

PROPOSER shall ensure that all subcontractors comply with the same insurance requirements that it is required to meet. The same PROPOSER shall provide the CITY with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.

Thirty (30) days cancellation notice required.

The undersigned PROPOSER agrees to obtain, prior to award, if selected, insurance as stated above.

PROPOSER

Authorized Signature

Officer Title

Date

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (_____) physical presence or (_____) online notarization,

this _____ day of _____, 2024 by _____ the _____ of

_____, a _____ (____) who is personally known to me or (_____) who

produced _____ as identification.

Notary Public: _____

Print Name: _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF _____

COUNTY OF _____

_____, being duly sworn, deposes and says that:

(1) He/she is _____ of _____
Title PROPOSER

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

_____ _____
(Signed) (Title)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____by
_____,

who is (___) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

_____ (Signature of Notary Public)

_____ (Name of Notary Typed, Printed or Stamped) Notary Public

_____ (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

_____ does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

_____ _____
(Authorized Signature) (Date)

_____
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BI Replacement of Lift Station 7W.

2. This sworn statement is submitted by (PROPOSER) _____ whose business address is

   _____ and (if applicable) Federal Employer Identification Number (FEIN)

   is _____ (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your

   Social Security Number: _____.

3. My name is _____ and my relationship to the PROPOSER named above is _____.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

____Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

PUBLIC ENTITY CRIMES STATEMENT cont.

_____

Signature Date:

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this _____ day of _____, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: _____

DEBARMENT, SUSPENSION and OTHER RESPONSIBILITY MATTERS

Certification A - Primary Covered Transactions

The prospective primary participant certifies to the best of its knowledge and belief that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal debarment or agency;

b. Have not within a three-year period preceding this proposal, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation of this proposal.

Instructions for Certification (A)

By signing and submitting this Bid, the prospective primary participant is providing the certification set out below;

a. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or any explanation shall disqualify such person from participation in this transaction.

b. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous

certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

c. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

d. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules

implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

e. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

f. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines this eligibility of its principals. Each participant may, but is not required to, check the Non- procurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph (6) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

Certification B - Lower Tier Covered Transactions

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (B)

By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

a. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

b. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

c. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of these regulations.

d. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

e. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause title "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitation for lower tier covered transactions.

f. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principles. Each participant may but is not required to, check the Non- procurement List.

g. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

h. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a lower covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies including suspension and/or debarment.

Bidder:	Date:
Signature of Authorized Certifying Official:	Title:

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BI

Project Description: Replacement of Lift Station 7W

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: _____

Authorized Signature: _____

Title: _____

Date: _____

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BI Replacement of Lift Station 7W***

This sworn statement is submitted by (PROPOSER) _____ whose business address is

_____ and (if applicable) Federal Employer Identification Number (FEIN) is

_____(If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social

Security Number: _____.)

My name is _____ and my relationship to the PROPOSER named above is_____.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____

Signature Date:

STATE OF _____

COUNTY OF _____

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her

signature at the space provided above on this _____ day of _____, 2024 and is personally known to me, or

has provided _____ as identification.

_____ My Commission expires: _____

Notary Signature

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

PROPOSER Company Name: _____

Project Name : ***Replacement of Lift Station 7W***

RFP Number : ***RFP # 07-24-01 BI***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.

- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.

- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.

- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.

- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. §1352 (as amended)

Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352 (as amended). Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. See below – Certification Regarding Lobbying.
Byrd Anti-Lobbying Certification
Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Byrd Anti-Lobbying Amendment, 31 U.S.C. §1352 (as amended)

The PROPOSER, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of PROPOSER's Authorized Official

Name and Title of PROPOSER's Authorized Official

Date

Appendix A
COST PROPOSAL WORKSHEET

Part 1:

The total cost of the construction of the Replacement Lift Station 7W is: _____

_____ ($_____)

The estimated time to substantial completion of the project is _____ weeks from Notice To Proceed

Part 2:

The individual cost elements are as follows:

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	Mobilization/Demobilization	LS	1		$ -
2	Insurance, Performance and Payment Bond	LS	1		$ -
3	Preconstruction Video	LS	1		$ -
4	Construction Testing (Pressure, Density Testing, etc.)	LS	1		$ -
5	Survey Layout & Record Drawings	LS	1		$ -
				SUBTOTAL	$ -
SITE/CIVIL					
6	Demolition	LS	1		$ -
7	General Restoration - (site cleanup, debris removal)	LS	1		$ -
8	Clearing and grubbing, grading, general erosion control	LS	1		$ -
9	Asphalt Pavement Removal & Restoration	SY	55		$ -
10	Silt Fence (TYP.)	LF	1,865		$ -
11	Lift Station Abandonment	CY	221		$ -
12	Abandonment of existing 18-in PVC Sanitary Sewer	LF	315		$ -
13	Removal of existing 6-in VCP Sanitary Sewer	LF	41		$ -
14	Abandonment of existing 12-in VCP Sanitary Sewer	LF	188		$ -
15	Abandonment of existing 24-in RCP Sanitary Sewer	LF	52		$ -
16	Abandonment of existing 10-in By-pass force main	LF	188		$ -
17	10-inch Line-Stop	EA	1		$ -
18	Existing Manhole Modification	EA	2		$ -
19	Manhole Installation	EA	3		$ -
20	Fence Removal	LF	214		$ -
21	Fencing	LF	335		$ -
22	Bypass Operations	LS	1		$ -
				SUBTOTAL	$ -
CONCRETE					
23	Concrete (Driveway, Concrete Pads, New sidewalk)	CY	410		$ -
				SUBTOTAL	$ -

UTILITIES					
24	12-in DIP/HDPE Disharge Piping (Piping, Fittings, Valves, etc.)	LS	1		$ -
25	Potable and Reclaimed water service Connections	EA	2		$ -
26	20" Plug Valve (if existing is not operational)	EA	1		$ -
27	16-in PVC Force Main	LF	35		$ -
28	20-in PVC Force Main	LF	20		$ -
29	20-in Existing Force Main Connection	EA	1		$ -
30	1-in PVC Potable Water Service	LF	140		$ -
31	1-in PVC Reclaimed Water Service	LF	15		$ -
32	6-in PVC Sanitary Sewer	LF	20		$ -
33	8-in PVC Sanitary Sewer	LF	41		$ -
34	12-in PVC Sanitary Sewer	LF	199		$ -
35	21-in PVC Sanitary Sewer	LF	372		$ -
36	24-in PVC Sanitary Sewer	LF	12		$ -
37	16-in Magnetic Flow Meter	EA	1		$ -
				SUBTOTAL	$ -
ELECTRICAL					
38	Electrical I&C	LS	1		$ -
39	Prefabricated Concrete Electrical Building	LS	1		$ -
40	Generator Installation	EA	1		$ -
				SUBTOTAL	$ -
MECHANICAL					
41	Wet Well Installation	LS	1		$ -
42	Submersible Pumps Installation	LS	1		$ -
				SUBTOTAL	$ -

Appendix B - BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____as Principal, and _____
_____as Surety, are hereby and firmly bound unto the CITY OF

WINTER SPRINGS as OWNER, in the penal sum of _____ Dollars ($_____) for the payments of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the CITY OF WINTER SPRINGS a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Work described as: Replacement of Lift Station 7W

NOW, THEREFORE, if the Principal shall not withdraw said Bid within 90 days after the opening of the same, or in the alternate, if said Bid shall be accepted and the Principal shall execute and deliver required certificates of insurance and a contract that, at minimum, includes the terms of the Form of Agreement attached hereto (properly completed in accordance with said Bid), and shall give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then this obligation shall be void; otherwise the same shall remain in force and effect and the sum herein stated shall be due and payable to the CITY OF WINTER SPRINGS and the Surety herein agrees to pay said sum immediately, upon demand of the CITY OF WINTER SPRINGS, in good and lawful money of the United States of America, as liquidated damages for failure of the Principal; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such Bid; and said Surety does hereby give waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this _____day of _____, 2024, the name and corporate seal of each corporate body being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

_____
(Witness)

_____
(Principal) (Seal)

_____
(Title)

_____
(Address)

_____
(Surety) (Seal)

_____
(Title)

_____
(Address)

Appendix C – PERFORMANCE BOND FORM

Bond No. _____

BY THIS PERFORMANCE BOND, We _____, as Principal, whose address is

_____ and telephone number is _____ and _____, as

Surety, whose address is _____ and telephone number is _____are bound to the City of Winter Springs, a Florida municipal corporation, as OWNER, whose address is 1126 E. State Road 434, Winter Springs, Florida 32708 and telephone number is 407-327-1800, in the initial sum of $ _____ (110% of Contract Price), or such greater amount as the Contract may be adjusted from time to time in accordance with the Contract between the Principal and OWNER) (the "Penal Sum").

WHEREAS, the Principal has executed a contract with the OWNER, dated _____, 2024, for the construction of the

_____ project in the City of Winter Springs, Seminole County, Florida (the "Project"); and

WHEREAS, the OWNER has required the Principal to furnish a performance bond in accordance with law and as a condition of executing the Contract with Principal; and

WHEREAS, this bond is being entered into to satisfy the requirements of Section 255.05(1), Florida Statutes and the Contract referenced above, as the same may be amended, and additionally, to provide common law rights more expansive than as required by statute.
NOW THEREFORE, the Surety and the Principal, both joint and severally, and for themselves, their heirs, administrators, executors, successors and assigns agree as follows:

1. **CONTRACT INCORPORATED; SURETY AND PRINCIPAL BOUND FOR FULL PERFORMANCE.** The Contract is incorporated by reference and made a part of this bond. The Surety and the Principal are bound for the full performance of the Contract including without exception all of the Contract Documents (as defined in the Contract) and all of their terms and conditions, both express and implied. Without limiting the Principal's and Surety's obligations under the Contract and this bond, the Principal and Surety agree:

   A. Promptly and faithfully perform their duties and all the covenants, terms, conditions, and obligations under the Contract including, but not limited to the insurance provisions, guaranty period and the warranty provisions, in the time and manner prescribed in the Agreement, and

   B. Pay OWNER all losses, damages, delay damages (liquidated or actual), expenses, costs and attorneys' fees under sections 627.428 or 627.756, Florida Statutes, including costs and attorney's fees on appeal that OWNER sustains resulting directly or indirectly from any breach or default by Principal under the Contract, and

   C. Satisfy all claims and demands incurred under the Contract, and fully indemnify and hold harmless the OWNER from all costs and damages which it may suffer by reason or failure to do so.

   3. **OWNER'S AFFIDAVIT OF CONTRACTOR BREACH OR DEFAULT.** If the OWNER shall provide to Surety the written affidavit of the OWNER stating that the Principal is in breach or default of the Contract, and that such breach or default remains uncured by the Principal, then upon delivery of such affidavit to the Surety in the method for providing notices as set forth in Paragraph 7 below, Surety must promptly notify the OWNER in writing which action it will take as permitted in Paragraph 3.

3. **SURETY'S OBLIGATION UPON DELIVERY OF OWNER'S AFFIDAVIT OF CONTRACTOR'S BREACH OR DEFAULT.** Upon the delivery of the OWNER's affidavit of breach or default by the Principal as provided in Paragraph 2 above, the Surety may promptly remedy the breach or default or must, within ten (10) days, proceed to take one of the following courses of action:

   A. **Proceed Itself.** Complete performance of the Contract including correction of defective and nonconforming Work through its own CONTRACTORs or employees, approved as being acceptable to the OWNER, in the OWNER's sole discretion, provided, however, that OWNER's discretion in approving the Surety's CONTRACTOR will not be unreasonably withheld as to any CONTRACTOR who would have qualified to offer a proposal on the Contract and is not affiliated in any way with the Principal. During this performance by the Surety, the OWNER will pay the Surety from its own funds only those sums as would have been due and payable to the Principal under the Contract as and when they would have been due and payable to the Principal in the absence of the breach or default not to exceed the amount of the remaining Contract balance less any sums due the OWNER under the Contract. During this performance by Surety, any payment bond required under the Contract must remain in full force and effect; or

   B. **Tender a completing CONTRACTOR acceptable to OWNER.** Tender a CONTRACTOR, together with a contact for fulfillment and completion of the Contract executed by the completing CONTRACTOR, to the OWNER for the OWNER's execution. OWNER's discretion to approve Surety's completing CONTRACTOR will not be unreasonably withheld as to any CONTRACTOR who would have qualified to offer a proposal on the contract and is not affiliated with the Principal. OWNER's discretion to approve CONTRACTOR as the completing CONTRACTOR and to approve the tendered contract shall be in OWNER's sole and absolute discretion. Upon execution by the OWNER of the contract for fulfillment and completion of the Contract, the completing CONTRACTOR must furnish to the OWNER a performance bond and a separate payment bond, each in the form of those bonds previously furnished to the OWNER for the Project by the Principal. Each such bond must be in the Penal Sum of the full cost to complete the Contract. The OWNER will pay the completing CONTRACTOR from its own funds only those sums as would have been due and payable to the Principal under the Contract as and when they would have been due and payable to the Principal in the absence of the breach or default not to exceed the amount of the remaining Contract balance less any sums due the OWNER under the Contract. To the extent that the OWNER is obligated to pay the completing CONTRACTOR sums which would not have been due and payable to CONTRACTOR under the Contract (any sums in excess of the then remaining Contract balance less any sums due the OWNER under the Contract), the Surety must pay the OWNER the full amount of those sums at the time the completing CONTRACTOR tenders an invoice to the OWNER so that the OWNER can utilize those sums in making timely payment to the completing CONTRACTOR; or

   C. **Tender the Full Penal Sum.** Tender to the OWNER the full Penal Sum of the performance bond. The OWNER will refund to the Surety without interest any unused portion not spent by the OWNER procuring and paying a completing CONTRACTOR or completing the Contract itself, plus the cost allowed under Section 4, after completion of the contract for fulfillment and completion of the Contract and the expiration of any applicable warranties; or

   D. **Other Acts.** Take any other acts mutually agreed upon in writing by the OWNER and the Surety.

   E. **IT SHALL BE NO DEFENSE TO SURETY'S OBLIGATION TO UNDERTAKE ONE OF THE PRECEDING COURSES OF ACTION THAT THE PRINCIPAL CONTENDS THAT IT IS NOT IN BREACH OR DEFAULT OF THE CONTRACT, OR THAT THE NOTICE OF BREACH OR DEFAULT WAS DEFECTIVE, OR THAT THE PRINCIPAL HAS RAISED ANY OTHER CLAIM OF DEFENSE OR OFFSET, PROVIDED ONLY THAT THE SURETY HAS RECEIVED THE AFFIDAVIT OF THE OWNER AS SPECIFIED IN PARAGRAPH 2.**

4. **SURETY'S ADDITIONAL OBLIGATIONS.** In addition to those duties set forth herein above, the Surety must promptly pay the OWNER (i) all losses, costs and expenses resulting from the Principal's breach(es) or default(s), including, without limitation, fees (including attorney's fees pursuant to sections 627.428 or 627.756, Florida Statutes and related costs), expenses and costs for architects, ENGINEERs, consultants, testing, surveying and attorneys, plus (ii) liquidated or actual damages, whichever may be provided for in the Contract, for lost use of the Project, plus (iii) re-procurement costs and fees and expenses, plus (iv) costs incurred at the direction, request, or as a result of the acts or omissions of the Surety; provided that in no event shall Surety's liability exceed the Penal Sum of this Bond.

5. **SURETY'S WAIVER OF NOTICE.** The Surety waives notice of any Modifications to the Contract, including changes in the Contract Time, the Contract Sum, the amount of liquidated damages, or the work to be performed under the Contract.

6. **NO THIRD-PARTY BENEFICIARIES.** The Surety provides this performance bond for the sole and exclusive benefit of the OWNER and OWNER's heirs, administrators, executors, successors and assigns. No other party, person or entity has any rights against the Surety.

7. **METHOD OF NOTICE.** All notices to the Surety, the Principal or the OWNER must be given by Certified Mail, Return Receipt Requested, to the address set fourth for each party below:

SURETY:

Name: _____

Attention: _____

Street: _____

City, State: _____

Zip: _____

PRINCIPAL:

Name: _____

Attention: _____

Street: _____

City, State: _____

Zip: _____

OWNER:
The City of Winter Springs
Attention: Phil Hursh, Acting City Manager
1126 E. State Road 434
Winter Springs, Florida 32708
(407) 327-5957

with a copy to:
Anthony A. Garganese, City Attorney
Brown, Garganese, Weiss & D'Agresta, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, Florida 32802
(407) 425-9566

8. **STATUE OF LIMITATIONS.** Any statutory limitation, which may be contractually superseded, to the contrary notwithstanding, any action hereon may be instituted so long as the applicable statute of limitations governing the Contract (including any warranty period) has not run or expired or within three (3) years following Final Completion of the Contract (including any warranty period) and acceptance of the Work performed under the Contract by the OWNER, whichever is longer.

9. **RECITALS.** The recitals contained in this Performance Bond are incorporated by reference herein and are expressly made a part of this Performance Bond.

10. **GOVERNING LAW.** This performance bond shall be governed by, and construed in accordance with, the laws of the State of Florida without regard to its conflict of laws provisions.

11. **VENUE.** In the event any legal action shall be filed upon this performance bond, venue shall lie exclusively in the Circuit Court for Seminole County, Florida.

12. **MISCELLANEOUS.**

A. The Surety agrees that this performance bond shall afford the OWNER with all of the protections and rights afforded under Florida Statutes and under common law.

B. This performance bond is issued in addition to any other bond or warranty required under the Contract including, but not limited to, any labor and materials payment bond and maintenance bond. Each bond issued under the Contract shall be construed as separate and distinct from each other.

C. In the event that the Surety fails to fulfill its obligations under this performance bond, then the Surety shall also indemnify and hold the OWNER harmless from any and all loss, damage, cost and expense, including reasonable attorneys' fees and costs for all trial and appellate proceedings, resulting directly or indirectly from the Surety's failure to fulfill its obligations hereunder. This subsection shall survive the termination or cancellation of this performance bond.

D. This performance bond shall remain in full force and effect until such time all the work, labor and materials under the Contract have been performed or provided to the OWNER's complete satisfaction, through the expiration of all warranty periods.

Principal	**Surety**
_____	_____
(Typed Firm Name)	**(Typed Firm Name)**
_____	_____
(Seal)	**(Seal)**
By:_____	**By:**_____
(Signature)	**(Signature)**
_____	_____
(Printed Name)	**(Printed Name)**
_____	_____
(Title)	**(Title)**
_____	_____
_____	_____
(Address)	**(Address)**
_____	_____
(Date of Execution)	**(Date of Execution)**

Appendix D – LABOR AND MATERIALS PAYMENT BOND FORM

Bond No. _____

BY THIS LABOR AND MATERIALS PAYMENT BOND, We _____, as Principal, whose address is _____ and telephone number is _____ and _____, as Surety, whose address is _____ and telephone number is _____are bound to the City of Winter Springs, a Florida municipal corporation, as OWNER, whose address is 1126 E. State Road 434, Winter Springs, Florida 32708 and telephone number is 407-327-1800, in the initial sum of $ _____ (110% of Contract Price), or such greater amount as the Contract may be adjusted from time to time in accordance with the Contract between the Principal and OWNER) (the "Penal Sum").

WHEREAS, the Principal has executed a contract with the OWNER, dated _____, for the construction of the _____project in the City of Winter Springs, Seminole County, Florida (the "Project"); and

WHEREAS, the OWNER has required the Principal to furnish a labor and materials payment bond in accordance with law and as a condition of executing the Contract with Principal; and

WHEREAS, this bond is being entered into to satisfy the requirements of Section 255.05(1), Florida Statutes and the Contract referenced above, as the same may be amended, and additionally, to provide common law rights more expansive than as required by statute.

NOW THEREFORE, the Surety and the Principal, both joint and severally, and for themselves, their heirs, administrators, executors, successors and assigns agree as follows:

1. **CONTRACT INCORPORATED; SURETY AND PRINCIPAL BOUND FOR FULL PERFORMANCE.** The Contract is incorporated by reference and made a part of this bond. The Surety and the Principal are bound to promptly make payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, supplies, or rental equipment used directly or indirectly by Principal in the prosecution of the work provided under the Contract. Any such payments shall not involve the OWNER in any expense.

2. **CLAIMS**. Claims made under this bond shall be made pursuant to provisions of Section 255.05, Florida Statutes, and applicable law. Therefore, a claimant, except a laborer, who is not in privity with the Principal shall, before commencing or not later than 45 days after commencing to furnish labor, services, or materials for the prosecution of the work, furnish the Principal with written notice that he or she intends to look to the bond for protection. A claimant who is not in privity with the Principal and who has not received payment for his or her labor, services, or materials shall deliver to the Principal and to the surety written notice of the performance of the labor or delivery of materials or supplies and of the nonpayment. The notice of nonpayment may be served at any time during the progress of the work or thereafter but not before 45 days after the first furnishing of labor, services, or materials, and not later than 90 days after the final furnishing of the labor, services, or materials by the claimant or, with respect to the rental equipment, not later than 90 days after the date that the rental equipment was last on the job site available for use. Any notice of nonpayment served by a claimant who is not in privity with Principal which includes sums for retainage must specify the portion of the amount claimed for retainage.

3. **SURETY'S WAIVER OF NOTICE.** The Surety waives notice of any modifications to the Contract, including changes in the Contract Time, the Contract Sum, or the labor, work, or materials required to be performed under the Contract.
4. **BENEFICIARIES.** The Surety provides this performance bond for the sole and exclusive benefit of the OWNER and OWNER's heirs, administrators, executors, successors and assigns, as well as for the benefit of any claimants who have actually provided labor, material, rental equipment, or services under the Contract.

5. **RECITALS.** The recitals contained in this labor and materials payment bond are incorporated by reference herein and are expressly made a part of this bond.

6. **GOVERNING LAW.** This labor and materials payment bond shall be governed by, and construed in accordance with the laws of the State of Florida without regard to its conflict of laws provisions.

7. **VENUE.** In the event any legal action shall be filed upon this labor and materials payment bond, venue shall lie exclusively in the Circuit Court for Seminole County, Florida.

8. **MISCELLANEOUS.**
   A. The Surety agrees that this labor and materials payment bond shall afford the OWNER and all claimants under the Contract with all of the protections and rights afforded under Florida Statutes and under common law.
   B. This labor and materials payment bond is issued in addition to any other bond or warranty required under the Contract including, but not limited to, any performance bond and maintenance bond. Each bond issued under the Contract shall be construed as separate and distinct from each other.
   C. In the event that the Surety fails to fulfill its obligations under this labor and materials payment bond, then the Surety shall also indemnify and hold the OWNER harmless from any and all loss, damage, cost and expense, including reasonable attorneys' fees and costs for all trial and appellate proceedings, resulting directly or indirectly from the Surety's failure to fulfill its obligations hereunder. This subsection shall survive the termination or cancellation of this labor and materials payment bond.
   D. This labor and materials payment bond shall remain in full force and effect until such time that the legal deadline for filing a claim hereunder has duly expired.

Principal	**Surety**
_____	_____
(Typed Firm Name)	(Typed Firm Name)
_____	_____
(Seal)	(Seal)
By:_____	By:_____
(Signature)	(Signature)
_____	_____
(Printed Name)	(Printed Name)
_____	_____
(Title)	(Title)
_____	_____
_____	_____
_____	_____
(Address)	(Address)
_____	_____
(Date of Execution)	(Date of Execution)

Appendix E– NOTICE OF AWARD

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, FL 32708

TO: (BIDDER) _____

PROJECT NAME: RFP 07-24-01 BI Replacement of Lift Station 7W

The CITY has considered the Proposal submitted by _____, for

the above described WORK in response to the Advertisement for Proposals dated April 19, 2024 and Instructions to Proposers.

You are hereby notified that your Proposal has been accepted and the total amount of the contract award is

$_____.

You are required by the Instructions to Proposers to execute the Agreement and certificates of insurance and payment and performance bond within ten (10) calendar days from the date of this Notice to you. If you fail to execute said Agreement and to furnish said certificate of insurance within ten (10) calendar days from the date of this Notice, the CITY will be entitled to consider all your rights arising out of the CITY's acceptance of your BID as abandoned and your BID BOND shall be forfeited. The CITY will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the CITY.

Dated this _____day of _____, 2024.

OWNER:

By: _____
Philip Hursh

Title: Interim CITY Manager

ACCEPTANCE OF NOTICE

Receipt and acceptance of the above NOTICE OF AWARD is hereby acknowledged by this the

_____day of _____, 2024.

By: _____

Title:_____

Appendix F – NOTICE TO PROCEED

City of Winter Springs, Florida
1126 East State Road 434
Winter Springs, FL 32708

NOTICE TO PROCEED

TO: _____

_____

RE: EFFECTIVE DATE OF THE NOTICE TO PROCEED:

PROJECT: **RFP 07-24-01 BI Replacement of Lift Station 7W**

You are hereby notified to commence WORK in accordance with the Agreement dated _____. In accordance with the Agreement, WORK shall commence on _____and shall be complete on or before_____.

OWNER:
By: _____
Philip Hursh

Title: Interim City Manager

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED IS HEREBY ACKNOWLEDGED by this the _____ day of_____, 2024.

By: _____

Title: _____

Appendix G – CONTRACTOR'S RELEASE OF LIEN

Before me, the undersigned authority in said County and State, appeared

_____who, being first duly sworn, deposes and says that he is

_____of, a company and/or corporation authorized to do

business under the laws of Florida, whichis the Service Provider on a Project located in the City of Winter Springs, Seminole County of Florida, with the City of Winter Springs, FL dated the day of , 20 , that the said deponent is duly authorized to make this affidavit by resolution of the Board of Directors of said company and/or corporation; that deponent knows of his own knowledge that said contract has been complied with in every particular by said Service Provider and that all parts of the work have been approved by the OWNER; that there are no bills remaining unpaid for labor, material, or otherwise, in connection with said contract and work, and that there are no suits pending against the undersigned as Service Provider or anyone in connection with the work done and materials furnished or otherwise under said contract. Deponent further says that the final estimate which has been submitted to the OWNER simultaneously with the making of this affidavit constitutes all claims and demands against the OWNER on account of said contract or otherwise, and the acceptance of the sum specified in said final estimate will operate as a full and final release and discharge of the OWNER from any further claims, demands or compensation by the CONTRACTOR under the above contract. Deponent further agrees that all guarantees under this contract shall and be in full force from the date of this release as spelled out in the Contract Documents.

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or

(___) online notarization, this ____day of _____,2024,

by _____, the _____of

_____,a _____,who is personally known to me or

produced _____as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____

(Print Name)
Notary Public, State of _____

Commission No.: _____

My Commission Expires: _____

We, the _____ having heretofore executed a performance bond for the above-named

CONTRACTOR covering project and section as described above in the sum of_____

dollars ($_____), hereby agree that the OWNER may make full payment of the final estimate, including the retained percentage, to said CONTRACTOR.

It is fully understood that the granting of the right to the OWNER to make payment of the final estimate to said

CONTRACTOR and/or his assigns, shall in no way relieve this surety company of its obligations under its bond, as set forth in the specifications, contract and bond pertaining to the above project.

IN WITNESS WHEREOF, the _____has caused this instrument to be executed on its behalf by its and/or its duly authorized attorney in fact, and its corporate seal to be hereunto affixed, all on this day of __, 20__.

Surety Company Attorney in Fact
(Power of Attorney must be attached if executed by Attorney in Fact)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (_____) physical presence or (_) online notarization, this _____day of _____, 2024, by_____, the _of _____, a _____, who is

personally known to me or produced _____as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)

Notary Public, State of _____

Commission No.: _____

My Commission Expires: _____

EXHIBIT 1

Bid Set – Specifications Lift Station 7W Replacement

This Version Includes the changes made in Addendum 1 to the Exhibit 1 Bid Set Specifications

BID SET – SPECIFICATIONS

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SECTION 01 10 00
SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. The Work specified herein shall include construction for the replacement of lift station 7W located within the Western Wastewater Service Area within the City of Winter Springs.

B. Section Includes:

1. Contract description.
2. Work by Owner or other Work at the Site.
3. Owner-furnished products.
4. Contractor's use of Site and premises.
5. Future work.
6. Work sequence.
7. Owner occupancy.
8. Permits.
9. Specification conventions.

1.2 CONTRACT DESCRIPTION

A. Work of the Project includes:

1. Grading of site as designed
2. Removal and replacement of existing chain link fencing and gates
3. Installation of three (3) proposed sanitary manholes
4. Modification of two (2) existing sanitary manholes
5. Removal of existing VCP sanitary sewer pipe
6. Grout/Abandoning of existing PVC sanitary sewer pipe
7. Installation of 8-inch PVC sanitary sewer
8. Installation of 21-inch PVC sanitary sewer
9. Installation of 24-inch PVC sanitary sewer
10. Installation of 10-foot Diameter, 26-foot deep, concrete Triplex Lift Station
11. Installation of 16-inch DIP force main.
12. One (1) connection to existing 20-inch force main system
13. One (1) tap of existing 6- inch potable water system
14. One (1) tap of existing 8-inch reclaimed water system

15. Abandon existing ± 27’ depth wet-well and dry-well.
    a. Removal of existing pumps and valves within dry well.
16. Grout/abandoning of existing of 12” VCP sanitary sewer
17. Grout/abandoning of existing 18” RCP/CIPP sanitary sewer
18. Grout/abandoning of existing 24” RCP sanitary sewer
19. Grout/abandoning of existing 20-inch CI force main
20. Grout/abandoning of existing 10-inch by-pass force main
21. Install new concrete driveway, sidewalk, and slab.
22. Setting of 12’x16’x12’ pre-fabricated concrete electrical building
23. Removal of existing generator, day tank, control panels, variable frequency drive (VFD), and concrete curbing within existing generator building
24. Installation of new 125 kW diesel generator.
25. Installation of three (3) new VFDs, transformer, lighting panel, programmable logic controller (PLC), automatic transfer switch (ATS), circuit breaker, and other necessary and related appurtenances for the proposed new electrical building.

B. All materials, equipment, skills, tools, and labor which are reasonably and appropriately inferable and necessary for the proper completion of the Work and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by CONTRACTOR without additional compensation, whether specifically indicated in the Contract Documents or not. This includes testing and placing into operation all equipment.

C. All fees and permits for the permanent construction that are required by controlling agencies or authorities, including fees for the review of Contract Documents prior to construction, will be procured by CONTRACTOR. Other licenses or permits for construction facilities of a temporary nature which are necessary for the prosecution of the work shall be secured and paid for by CONTRACTOR

D. Repair, replace, or otherwise settle with the OWNER, if damage to property or existing facilities occurs, including damage to pavements, utilities, lawns, structures, etc.

E. Construct the Project under a Unit Price Contract.

F. CONTRACTOR shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, clean up, replacements, and restoration required as a result of damages caused during this construction.

1.3 WORK BY OWNER OR OTHERS

A. If work performed by the Owner or under Owner-awarded contracts interfere with each other due

to work being performed at the same time or at the same Site, Owner will determine the sequence of work under all contracts according to "Work Sequence" and "Contractor's Use of Site and Premises" Articles in this Section.

B. Coordinate Work with utilities of Owner and public or private agencies.

C. Work under this Contract includes:

1. Work as indicated on Drawings and defined herein.

D. Items noted NIC (Not in Contract), will be furnished and installed by Owner.

1.4 OWNER-FURNISHED PRODUCTS

A. Owner's Responsibilities: one (1) Generator and Automatic Transfer Switch (ATS), and three (3) submersible pumps,

1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples to Contractor.
2. Arrange and pay for delivery to Site.
3. Upon delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:

1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.
2. Receive and unload products at Site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install, and finish products.
4. Repair or replace items damaged after receipt.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

A. Limit use of Site and premises to allow:

1. Owner occupancy.
2. Work by Owner.
3. Work by Others as directed by the Owner.

B. Construction Operations: Limited to areas indicated on Drawings or as described herein.

1. Noisy and Disruptive Operations (such as use of jack hammers and other noisy equipment): Not allowed in close proximity to existing buildings during regular hours of operation. Coordinate and schedule such operations with Owner to minimize disruptions.

C. Time Restrictions for Performing Work:

1. Working Hours shall be in accordance with the General Conditions.
2. Some Work including, but not limited to, abandonments of existing piping systems, as well as connections, replacements, extensions thereto and thereof may necessitate work being done after or before normal work hours, said decision resting with the Engineer in coordination with the City of Winter Springs.
    a. Normally such extended hours will be required only to maintain service to existing customers or to minimize inconvenience to those customers or members of the public.
    b. This shall be considered incidental to the construction and therefore, no additional compensation shall be allowed.

D. Utility Outages and Shutdown:
1. Coordinate and schedule electrical and other utility outages with Owner.
2. Outages: Allowed only at previously agreed upon times.
3. At least one week before scheduled outage, submit Outage Request Plan to Owner itemizing the dates, times, and duration of each requested outage.

E. Sound Level Restrictions: Sound pressure level measured at boundary of Site shall not exceed 40 dBA.

1.6 WORK SEQUENCE

A. Construct Work in order to accommodate Owner's occupancy requirements during construction period. Coordinate construction schedule and operations with Owner.
B. Construction sequence shall be in accordance with 01 90 00 Sequence of Construction.
C. Sequencing of Construction Plan: Before start of construction, if required by the Engineer, submit three (3) hard copies and one (1) electronic copy of construction plan regarding phasing of all Work for acceptance by Owner. After acceptance of plan, construction sequencing shall comply with accepted plan unless deviations are accepted by Owner in writing.

1.7 OWNER OCCUPANCY

A. Owner will occupy Site for conduct of normal operations.
B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
C. Schedule the Work to accommodate Owner occupancy.

1.8 PERMITS

A. The Owner will obtain all permits required for work within State, County, and Railroad Rights-of-Way.
1. The Contractor shall verify the existence of the approved permit prior to commencing any

work.

B. Work within State of Florida Rights-of-Way:

1. All work related to State rights-of-way or property shall be in full compliance with all requirements of the permit and to the satisfaction of the State of Florida Department of Transportation.
2. Work within the rights-of-way of public thoroughfares, which are not under the jurisdiction of the State of Florida Department of Transportation, shall conform to the requirements of the agency having jurisdiction.
3. Installation shall include all the required work and necessary signs to provide the required traffic control, detours, and any other work to maintain traffic.
4. The Contractor shall notify the local Florida Department of Transportation Maintenance Engineer at least 48 hours prior to commencing work within the State rights-of-way and shall pay for any additional tests the State may require.
5. All work related to construction within the State rights-of-way shall be in full compliance with the terms of the permit and in accordance with the State of Florida Department of Transportation "Utility Accommodations Guide".
6. In the event of conflict between the requirements of Contract Documents and those of the State of Florida Department of Transportation, the more stringent requirements as determined by the Engineer, shall govern.
7. The costs of any, and all, items of work required by the State of Florida, payment for which is not specifically provided by bid items in the proposal, shall be included in the prices of bid items to which said items of work are related, incidental, or appurtenant. No additional compensation shall be allowed therefore.

C. Work within City of Winter Springs Rights-of-Way:

1. All work in City rights-of-way or property shall be in full compliance with all requirements of the permit, current service area agreement and to the satisfaction of the City of Winter Springs. Work within the rights-of-way of public thoroughfares which are not under the jurisdiction of City of Winter Springs shall conform to the requirements of the agency having jurisdiction. Installation shall include all the required work and necessary signs to provide the required traffic control, detours, and any other work to maintain traffic.
2. The Contractor shall notify the City of Winter Springs Public Works Department and City Engineer's Office at least 24 hours prior to commencing work within the City rights-of-way, and shall pay for any additional tests that the City may require.

3. In the event of conflict between the requirements of these Specifications and Details and those of the City, the more stringent requirements as determined by the Engineer, shall govern.
4. The costs of any, and all, items of work required by the City of Winter Springs, payment for which is not specifically provided by bid items in the Proposal, shall be included in the prices of bid items to which said items of work are related, incidental, or appurtenant. No additional compensation shall be allowed therefore.
5. The Contractor shall furnish copies of written approval or acceptance of the work by the City of Winter Springs to the Engineer along with the particular Periodic Estimate for Partial Payment on which payment for the work is requested. Final approval of the Project will not be issued until such approval has been furnished.

1.9 SPECIFICATION CONVENTIONS

A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 20 00

PROJECT MEETINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Preconstruction Meeting.
B. Progress Meetings.

1.2 REQUIREMENTS INCLUDED

A. OWNER shall schedule and administer preconstruction meeting, periodic progress meetings, and specially called meetings throughout the progress of the work.

1. Prepare agenda for meetings.
2. Coordinate physical arrangements for meetings
3. Preside at meetings.
4. Prepare minutes of meetings.

B. Representatives of CONTRACTORs, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each individual represents.
C. CONTRACTOR shall attend meeting to ascertain that work is expedited consistent with Contract Documents and construction schedules.

1.3 PRECONSTRUCTION MEETING

A. OWNER OR AUTHORIZED REPRESENTATIVE will schedule a preconstruction meeting prior to beginning the work. This meeting shall be attended by ENGINEER, CONTRACTOR, and the OWNER. The purpose of the meeting shall be to review shop drawing procedures, construction methods, and to establish a construction schedule.
B. Location: A central site, convenient for all parties designated by the OWNER OR AUTHORIZED REPRESENTATIVE.
C. Attendance:

1. OWNER's Representative
2. ENGINEER’s Representative
3. CONTRACTOR's Superintendent.
4. Major Subcontractors
5. Major Suppliers.
6. Others as appropriate.

D. Suggested Agenda:

1. Distribution and discussion of:

a. List of major subcontractors and suppliers.

b. Projected construction schedules.

2. Critical work sequencing.
3. Major equipment deliveries and priorities including list of long lead time items and anticipated delivery dates.
4. Project Coordination and Communication.
5. Designation of responsible personnel.
6. Procedures and processing of:

   a. Field decisions.
   b. Proposal requests.
   c. Submittals.
   d. Change Orders.
   e. Applications for payment.

7. Adequacy of distribution of Contract Documents.
8. Procedures for maintaining record documents.
9. Use of Premises:

   a. Office, work, and storage areas.
   b. OWNER's requirements.

10. Construction facilities, controls, and construction aids.
11. Construction Sequencing to minimize facility down time.
12. Housekeeping procedures.
13. Check of required Bond and Insurance certifications.
14. Liquidated Damages.
15. Request for a weekly job meeting for all involved.
16. Equal Opportunity Requirements.
17. Laboratory testing of material requirements.
18. Inventory of material stored on-site provisions.

1.4 PROGRESS MEETINGS

A. Schedule regular periodic meetings. The progress meetings will be held every 30 days or less with the first meeting 30 days after the preconstruction meeting or 30 days or less after the date of Notice to Proceed.
B. Hold called meetings as required by progress of the work.
C. Location of the meetings: As designated by the OWNER.
D. Attendance:

   1. OWNER's Representative

2. ENGINEER’s Representative
3. CONTRACTOR's Superintendent.
4. Subcontractors as appropriate to agenda.
5. Suppliers as appropriate to agenda.
6. Others as appropriate.

E. Suggested Agenda

1. Review, approval of minutes of previous meeting.
2. Review of work progress since previous meeting
3. Field observations, problems, conflicts
4. Problems which impede construction schedule
5. Review of offsite fabrication, delivery schedules
6. Corrective measures and procedures to regain projected schedule
7. Revisions to construction schedule
8. Progress, schedule during succeeding work period
9. Coordination of schedules
10. Review submittal schedules, expedite as required
11. Maintenance of quality standards
12. Pending changes and substitutions
13. Review proposed changes for:
    a. Effect of construction schedule and on completion date
    b. Effect on other contracts of the Project
14. Other business
15. Construction Schedule
16. Critical/long lead items.

F. CONTRACTOR is to attend progress meetings and is to study previous meeting minutes and current agenda items, to be prepared to discuss pertinent topics such as deliveries of materials and equipment, progress of the work, etc.

G. CONTRACTOR is to provide a current submittal log at each progress meeting in accordance with Section 01 30 00 – Administrative Requirements.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 22 00

MEASUREMENT AND PAYMENT

PART 1 - - GENERAL

1.1 SUMMARY

A. General:

1. This Section includes the requirements for wastewater and associated road and Right-of-Way improvements measurement and payment for pay items required to complete the Work and as shown and specified in the Contract Documents.
2. Items listed in this Section correspond with the pay items on the Bid Form.
3. All pay items identified in this Section may not be represented on the Bid Form. The Contractor shall coordinate the pay items on the Bid Form with the corresponding paragraphs located herein.
4. The omission of reference to any item shall not alter the intent of the Bid Form or relieve the Contractor of the necessity of constructing a complete project under this Contract.
5. Payment shall be made for the items listed on the Bid Form on the basis of the Work actually performed and completed in strict accordance with the Contract Documents, such Work including but not limited to, the furnishing of all necessary labor, materials, equipment, tools, testing, transportation, delivery, disposal of waste and surplus material, restoration, and all other incidentals and appurtenances to complete the construction and installation of the Work as shown and specified.
6. No additional payment shall be made for clean-up work. The cost thereof shall be included in the price for related items as set forth in the Proposal.
7. The Contractor shall not be allowed additional payment or compensation for removing and replacing, relocating or otherwise protecting or adjusting existing culverts or other existing storm drainage facilities shown on the plans which may be affected by the construction. The cost thereof shall be included in the cost of bid items to which they are required or appurtenant.
8. The Contractor shall be responsible for any debris and foreign matter which is allowed to enter any system as a result of construction and shall be solely responsible for any damage resulting therefrom.
9. Except those items outlined in the Schedule of Prices Bid, the Contractor shall not be allowed additional payment or compensation for removing and replacing, shoring or bracing, relocating, or otherwise protecting or adjusting any and all utilities which may be affected by the construction. Specifically, the Contractor shall adjust all valve boxes, valve covers, manhole

frames, and manhole covers to required grades. All methods of adjusting utilities shall be subject to the approval of the Engineer. The cost of items described herein shall be included in the cost of bid items to which they are incidental or appurtenant.

10. Unless provided by specific bid items in the Schedule of Prices Bid, the following shall be considered incidental or appurtenant and no measurement or payment will be made:
    a. Erosion and sediment control.
    b. Clearing and grubbing.
    c. Excavation and backfill.
    d. Dewatering.
    e. Trench boxes.
    f. Installation and/or removal of sheeting and shoring.
    g. Seeding and sodding.

1.2 RELATED SECTIONS

A. General Conditions.

B. Agreement.

C. Section 01 30 00 - Administrative Requirements.

1.3 ESTIMATE OF QUANTITIES

A. The quantities set forth in the Bid Form are approximate and are given to establish a uniform basis for the comparison of bids. The Owner reserves the right to increase or decrease the quantity of any item or portion of the Work during the progress of construction in accordance with the terms of the Contract. The Bid Form shall serve as a basis of developing additive or deductive Change Orders.

1.4 MEASUREMENT OF QUANTITIES

A. Unless otherwise provided in the specifications for the particular items involved, all measurements shall be taken from "finished grades and elevations" for vertical measurements and from pipe end to pipe end horizontally for lineal measurements. The method or combination of methods or measurements shall be those which will reflect with reasonable accuracy the actual areas of the finished Work as determined by the Engineer.

B. The term "finished grade" as used herein shall mean the final elevation of the accepted Work as approved by the Engineer and when located in Florida Department of Transportation (F.D.O.T.) rights-of-way shall be the elevation required and approved by F.D.O.T. to conform to its Work as proposed or later modified. It shall be the Contractor’s responsibility to determine the finished grade at any point as required by the Engineer or F.D.O.T.

C. For those pay items which were not included in the Schedule of Prices Bid, it shall be mutually understood that all items for payment shall be made from the master list of pay items set forth below. Items that are not specifically listed hereafter shall utilize the basic numbering system set forth.
Pay Items that indicate multiple measurement methods shall be paid at the method included in the Schedule of Prices Bid.

1.5 SCHEDULE OF PIRCES BID

A. Mobilization/Demobilization:

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum basis for Mobilization/Demobilization in accordance with the Contract Documents.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Work on the Project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, permits, etc.. Also included are temporary utilities/facilities, staging and storage areas, survey and layout, safety equipment and all other items not specifically identified under other bid items which are necessary for the construction, and compliance with administrative and regulatory requirements.
3. Payment of this item shall be in accordance with the following schedule:

Percent of Original Contract Amount Earned	**Allowable Percent of the lump sum Price to be Paid**
5	25
10	50
25	75
50	100*

* Partial payments for any project will be limited to ten (10) percent of the original contract amount listed above for that project. Any remaining amount will be paid upon completion of all work on the project.

B. Insurance, Performance and Payment Bond

1. Method of Measurement: Lump Sum (LS). The quantity to be paid shall be on a lump sum basis for Insurance, Performance and payment bond in accordance with the Contract Documents.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Work shall include

all costs for acquiring and maintaining all bonds specified in the Contract Documents, fees, bonds (excluding the Material and Workmanship Bond), and insurance

3. Payment of this item shall be in accordance with the following schedule:

Percent of Original Contract Amount Earned	Allowable Percent of the lump sum Price to be Paid
5	25
10	50
25	75
50	100*

C. Preconstruction Video

1. Method of Measurement: Lump Sum (LS). The quantity to be paid shall be on a lump sum basis for Preconstruction Video in accordance with the Contract Document.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents.

D. Construction Testing (Pressure, Density Testing, etc.)

1. Method of Measurement: Lump Sum (LS). The quantity to be paid shall be on a lump sum basis for Construction Testing in accordance with the Contract Document.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for Construction Testing (Pressure, Density Testing) as shown and specified.

E. Survey Layout and Record Drawings

1. Method of Measurement: Lump Sum (LS): The quantity to be paid shall be on a lump sum basis for the Survey Layout and Record Drawings in accordance with the Contract Documents.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs required to complete the Survey Layout and Record Drawings as shown and specified.

F. Demolition

1. Method of Measurement: Lump Sum (LS): The quantity to be paid under this unit cost shall be

on a lump sum basis for the following but not limited to cut, demolish, remove and dispose of existing control cabinets including the motor control panels and telemetry cabinets, removal and disposal of existing discharge piping, fittings, valves, and appurtenances, removal of existing control panels, removal of existing generator, removal of existing wet well access hatches and lids, and removal of three existing pumps– in accordance with the Contract Documents.

2. Payment for this bid item shall be made at the unit price set forth in the Bid Proposal and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all costs for removal and disposal of materials, and all incidentals and appurtenances required to complete the site work as shown and specified.

G. General Restoration - (Includes grading, seeding, debris removal and mulching all areas disturbed during construction, miscellaneous concrete)

1. Method of Measurement: Lump Sum (LS): The quantity to be paid shall be on a lump sum basis for General Restoration in accordance with the Contract Documents.

2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for General Restoration, including but not limiting to grading, seeding, mulching all areas disturbed during construction, general restoration of project, and all incidentals and appurtenances required to complete general restoration as shown and specified.

Percent of Original Contract Amount Earned	**Allowable Percent of the lump sum Price to be Paid**
5	25
10	50
25	75
50	100*

* Partial payments for any project will be limited to the percent of the original contract amount listed above for that project. Any remaining amount will be paid upon completion of all work on the project. The Contractor shall perform site restoration of each area of the project within two weeks of performing installation within that area. The project site shall not remain un-restored for longer than two weeks.

H. Clearing and grubbing, grading, general erosion Control

1. Method of Measurement: Lump Sum (LS). The quantity to be paid shall be on a lump sum basis

for Preconstruction Video in accordance with the Contract Document. Work Includes: Preparation and implementation of light clearing and grubbing, grading and sod – in accordance with the Contract Documents.

2. Payment shall include, but is not limited to, all costs for clearing and grubbing, disposal of materials, and all incidentals and appurtenances required to complete the site work as shown and specified. Additional measures may be necessary for supplement silt fence, including replacement and maintenance as needed based upon activities during construction. In the event temporary staging and storage areas are used, any required erosion and sediment control measures are to be included as well in this item.

I. Asphalt Removal/ Restoration:

1. Method of Measurement: Square Yard (SY): The quantity to be paid shall be the actual number of square yards of Asphalt Pavement in place in accordance with the Contract Documents.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for lime rock installation, grading, priming, asphalt installation, and all incidentals and appurtenances required to complete the Asphalt Pavement as shown and specified.

J. Silt Fence

1. Method of Measurement: Linear Feet (LF). The quantity to be paid shall be on a linear feet basis for the silt fence installed in accordance with the Contract Document.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents.

K. Existing Lift Station Abandonment:

1. Method of Measurement: Cubic Yard (CY): The quantity to be paid under this unit cost shall be the actual number of cubic yards of grout filled for full abandonment of lift station wet well, dry well, piping, valving, and appurtenances.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment partial removal of existing wet well and dry well and subsequent grout/gravel filling of wet well and dry well. Work also includes full removal of hatching, existing centrifugal pumps, interior suction piping, railing, mounting equipment, electrical, instrumentation, controls, bypass pumping, and all associated valves, piping, fittings, and appurtenances of the existing lift station system as shown and specified in the Contract Documents.

L. Pipe Abandonment - 18-Inch PVC Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 18-Inch PVC Sanitary Sewer Pipe filled and abandoned.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

M. Pipe Removal - 6-Inch VCP Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 6-Inch VCP Sanitary Sewer Pipe cut, plugged, and removed.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

N. Pipe Abandonment - 12-Inch VCP Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 12-Inch VCP Sanitary Sewer Pipe filled and abandoned.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

O. Pipe Abandonment - 24-Inch RCP Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 24-Inch RCP Sanitary Sewer Pipe filled and abandoned.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

P. Pipe Abandonment - 10-Inch By-pass Force Main:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 10-Inch By-pass force main filled and abandoned.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

Q. 10-inch Line Stop:

1. Method of Measurement: Each (EA): The quantity to be paid under this unit cost shall be on a unit price basis for labor and equipment cost for installation of proposed 10-inch line stop. Labor shall be included in the unit price in accordance with the contract documents.

2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all labor and equipment needed for handling and storage, materials, incidentals, and appurtenances required for complete installation of the manholes as shown and specified.

R. Existing Manhole Modification:

1. Method of Measurement: Each (EA): The quantity to be paid under this unit cost shall be on a unit price basis for labor and equipment cost for modifying the existing manhole structures. Labor shall be included in the unit price in accordance with the contract documents.
2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all labor and equipment needed for handling and storage, materials, incidentals, and appurtenances required for modifying the existing manholes as shown and specified.

S. Manhole Installation:

1. Method of Measurement: Each (EA): The quantity to be paid under this unit cost shall be on a unit price basis for labor and equipment cost for installation of proposed manhole structures. Labor shall be included in the unit price in accordance with the contract documents.
2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all labor and equipment needed for handling and storage, materials, incidentals, and appurtenances required for complete installation of the manholes as shown and specified.

T. Fencing Removal

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for removal of the existing chain link fencing.
2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances to remove existing fence and gate materials with associated concrete post bases, security wire, and all incidentals and appurtenances required for complete fence removal as shown and specified in the Contract Documents.

U. Fencing

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be

on a per linear foot basis for installation of the proposed additional chain link fencing.

2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances to furnish and install new fence and gate materials with associated concrete post bases, security wire, and all incidentals and appurtenances required for complete fence installation as shown and specified in the Contract Documents.

V. By-pass Operations:

1. Method of Measurement: Lump Sum (LS): The quantity to be paid under this unit cost shall be on a lump sum basis for labor and equipment cost for installation of proposed by-pass operations. Labor shall be included in the unit price in accordance with the contract documents.
2. Payment for this item shall be made at the unit price set forth in the Bid Proposal and Bid Form and shall constitute full compensation for Work shown and specified in the Contract Documents. Payment shall include, but is not limited to, all labor and equipment needed for handling and storage, materials, incidentals, and appurtenances, and fuel required for complete installation of the wet well, manholes as shown and specified.

W. Concrete (Driveway, Concrete Pads, New Sidewalk):

1. Method of Measurement: Square Yard (CY): The quantity to be paid shall be the actual number of square yards of concrete fill and rebar required for the lift station slab, driveway addition, driveway extension, sidewalk restoration, and any other concrete repair necessary to completely restore the site in accordance with the Contract Documents.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for grading, priming, concrete installation, and all incidentals and appurtenances required to complete the Asphalt Pavement as shown and specified.

X. 12-Inch DIP/HDPE Discharge Piping

1. Method of Measurement: Lump Sum (LS): The quantity to be paid under this unit cost shall be on a per lump sum basis for the 12-Inch DIP discharge piping.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment for this item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

Y. Potable and Reclaimed Water Service Connections

1. Method of Measurement: Each (EA). The quantity to be paid under this unit cost shall be on a per unit basis for connecting via a tapping saddle to the existing 6-Inch PVC Potable Water Main.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

Z. 20-Inch Plug Valve:

1. Method of Measurement: Each (EA). The quantity to be paid under this unit cost shall be on a per unit basis for the 20-Inch Plug Valves.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

AA. 16-Inch PVC Force Main – Open cut installation (includes fittings, restraints, adapters, etc.):

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 16-Inch PVC Force Main pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment for this item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

BB. 20-Inch PVC Force Main – Open cut installation (includes fittings, restraints, adapters, etc.):

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 20-Inch PVC Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment for this item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

CC. Connect to Existing 20-Inch Cast Iron Force Main:

1. Method of Measurement: Each (EA). The quantity to be paid under this unit cost shall be on a

per unit basis for connecting to the existing 20-Inch Cast Iron Force Main.

2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

DD. 1-Inch PVC Potable Water – Open cut installation:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 1-Inch PVC Potable Water Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

EE. 1-Inch PVC Reclaimed Water – Open cut installation :

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 1-Inch PVC Reclaimed Water Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

FF. 6-Inch PVC Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 6-Inch SDR 26 PVC Sanitary Sewer Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

GG. 8-Inch SDR 26 PVC Sanitary Sewer:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 8-Inch SDR 26 PVC Sanitary Sewer Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

HH. 12-Inch SDR 26 PVC Sanitary Sewer –:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 12-Inch SDR 26 PVC Sanitary Sewer Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

II. 21-Inch SDR 26 PVC Sanitary:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 21-Inch SDR 26 PVC Sanitary Sewer Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

JJ. 24-Inch SDR 26 PVC Sanitary Sewer – Open cut installation:

1. Method of Measurement: Linear Foot (LF): The quantity to be paid under this unit cost shall be on a per linear foot basis for the 24-Inch SDR 26 PVC Sanitary Sewer Pipe installed via open cut installation (including fittings, restraints, adapters, etc).
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, and materials for incidentals.

KK. 16-Inch Magnetic Flow Meter:

1. Method of Measurement: Each (EA). The quantity to be paid under this unit cost shall be on a per unit basis for the 16-Inch Magnetic Flow Meter.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Schedule and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but is not limited to, all costs for labor, equipment, materials for incidentals, and appurtenances.

LL. Electrical Instrumentation & Control:

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum for full installation of all electrical instrumentation and control devices.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment to install new wiring, PLCs, MCCs, control panels, telecommunications, and all other necessary furnishings related to

electrical instrumentation and controls as shown and specified in the Contract Documents.

MM. Prefabricated Concrete Electrical Building:

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum for full installation of prefabricated concrete electrical building.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment to install new prefabricated electrical building as shown and specified in the Contract Documents. This includes the lighting, HVAC system, control systems related to the electrical building, telecommunications, and all other necessary furnishings related to operations of the proposed electrical building, as well as any modifications necessary once arrived at the project location.

NN. Generator; Handling, Installation, and Start-up

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum for full handling, installation, and start-up of the proposed 125 kW permanent generator system, day tank and connection to existing con-vault.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment to install and startup proposed 125 kW permanent generator system and day tank including new wiring, piping, control systems, telecommunications, and all other necessary furnishings related to the 125 kW generator system as shown and specified in the Contract Documents.

OO. Wet Well Installation:

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum for full installation of lift station wet well, piping, valving, and appurtenances.
2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment to install new wet well, hatching, submersible centrifugal pumps with concrete pedestals, interior suction piping, railing, mounting equipment, wet well lining, electrical, instrumentation, controls, testing, bypass pumping, and all associated valves, piping, fittings, site restoration, and appurtenances as shown and specified in the Contract Documents.

JJ. Submersible Pumps Installation:

1. Method of Measurement: Lump Sum (LS). The quantity to be paid under this unit cost shall be on a lump sum for full installation of all pumps and associated piping, valving, and

appurtenances.

2. Payment for this bid item shall be made at the unit price set forth in the Bid Form and shall constitute full compensation for Work specified in the Contract Documents. Payment shall include, but not be limited to, furnishing all materials, labor, and equipment to install new wet well, hatching, submersible centrifugal pumps with concrete pedestals, interior suction piping,

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Quality assurance.

B. Product options.

C. Product substitution procedures.

1.2 QUALITY ASSURANCE

A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.

B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.

C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Engineer.

1.3 PRODUCT OPTIONS

A. See Section 01 60 00 - Product Requirements.

1.4 PRODUCT SUBSTITUTION PROCEDURES

A. Engineer will consider requests for substitutions only within 30 days after date established in Notice to Proceed.

B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.

C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:

1. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.

2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
3. Reference to Article and Paragraph numbers in Specification Section.
4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
5. Changes required in other Work.
6. Availability of maintenance service and source of replacement parts as applicable.
7. Certified test data to show compliance with performance characteristics specified.
8. Samples when applicable or requested.
9. Other information as necessary to assist Architect/Engineer's evaluation.

D. A request constitutes a representation that Contractor:
1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
2. Will provide same warranty for substitution as for specified product.
3. Will coordinate installation and make changes to other Work that may be required for the Work to be completed with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be completed in all respects.
6. Will reimburse Owner and Engineer for review or redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:
1. Submit requests for substitutions to the Engineer in writing.
2. Submit three copies of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
4. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 - PRODUCTS - Not Used
PART 3 - EXECUTION - Not Used

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS.

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Coordination and Project conditions.
B. Preconstruction meeting.
C. Progress meetings.
D. Pre-installation meetings.
E. Closeout meeting.

1.2 COORDINATION AND PROJECT CONDITIONS

A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
B. Verify that utility requirements and characteristics of operating equipment are compatible with existing utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practical; place runs parallel with lines of building. Use spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

    1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access, and where sequencing and coordination of installations are important.

D. Coordination Meetings: In addition to other meetings specified in this Section, hold coordination meetings with personnel and Subcontractors to ensure coordination of Work.
E. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
F. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.
G. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

A. Owner will schedule and preside over meeting after Notice of Award.
B. Attendance Required: Per General Conditions.
C. Minimum Agenda:

    1. Distribution of Contract Documents.
    2. Submission of list of Subcontractors, list of products, schedule of values, and Progress Schedule.

3. Designation of personnel representing parties in Contract.
4. Communication procedures.
5. Procedures and processing of requests for interpretations, field decisions, submittals, substitutions, Applications for Payments, proposal request, Change Orders, and Contract closeout procedures.
6. Scheduling.
7. Critical Work sequencing.
8. Status of required permits.

1.4 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work, at maximum, in monthly intervals.
B. Include first option in the following Paragraph when Contractor is responsible for progress meetings. When Architect/Engineer is responsible, edit second option accordingly.
C. Make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
D. Attendance Required: Job superintendent, major Subcontractors and suppliers, Engineer, and Owner, and any additional personnel as appropriate to agenda topics for each meeting.
E. Minimum Agenda:

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems impeding planned progress.
5. Review of submittal schedule and status of submittals.
6. Review of off-Site fabrication and delivery schedules.
7. Maintenance of Progress Schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on Progress Schedule and coordination.
13. Other business relating to Work.

F. Contractor: Record minutes and distribute copies to participants and those affected by decisions made within two (2) days after meeting.

1.5 PRE-INSTALLATION MEETINGS

A. When required in individual Specification Sections, convene pre-installation meetings at Project Site before starting Work of specific Section.
B. Require attendance of parties directly affecting, or affected by, Work of specific Section.

C. Notify Engineer, at minimum, five (5) days in advance of meeting date.
D. Prepare agenda and preside over meeting:

1. Review conditions of installation, preparation, and installation procedures.
2. Review coordination with related Work.

E. Record minutes and distribute copies to participants and those affected by decisions made within two (2) days after meeting.

1.6 CLOSEOUT MEETING

A. Schedule Project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Preside over meeting and be responsible for minutes.
B. Attendance Required: Contractor, major Subcontractors, Engineer, Owner, and others appropriate to agenda.
C. Notify Engineer, at minimum, five (5) days in advance of meeting date.
D. Minimum Agenda:

1. Start-up of facilities and systems.
2. Operations and maintenance manuals.
3. Testing, adjusting, and balancing.
4. System demonstration and observation.
5. Operation and maintenance instructions for Owner's personnel.
6. Contractor's inspection of Work.
7. Contractor's preparation of an initial "punch list."
8. Procedure to request Engineer inspection to determine date of Substantial Completion.
9. Completion time for correcting deficiencies.
10. Inspections by authorities having jurisdiction.
11. Certificate of Occupancy, if required, and transfer of insurance responsibilities.
12. Final cleaning.
13. Preparation for final inspection.
14. Closeout Submittals:

    a. Project record documents.
    b. Operating and maintenance documents.
    c. Operating and maintenance materials.
    d. Affidavits.

15. Final Application for Payment.
16. Contractor's demobilization of Site.
17. Maintenance.

SECTION 01 31 50
PRECONSTRUCTION VIDEO

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide continuous color digital audio-video recording at each entire work area prior to construction to serve as a record of pre-construction conditions. Specific recordings shall be made of lift station 7W. Provide two copies of the audio-video recordings on a USB thumb drive. Supplement video recording with digital color photographs for areas that require details not ascertainable on the video recordings.

1.2 RELATED REQUIREMENTS

A. Section 01 33 00 – Submittal Procedures

1.3 QUALIFICATIONS:

A. Preconstruction audio-video recording shall be of professional quality that will clearly log an accurate visual description of existing conditions. Any portion of the recording that is not acceptable for the determination of the existing conditions shall be re-recorded at no additional cost to the OWNER. Completion progress by listed activity and sub-activity, to within five (5) working days prior to submittal.

PART 2 - PRODUCTS

2.1 GENERAL

A. Total audio-video recording system and the procedures employed in its use shall be such as to produce a finished product that will fulfill the technical requirements of the project. The video portion of the recording shall produce bright, sharp, clear pictures with accurate colors and shall be free from distortion, tearing, rolls or any other form of picture imperfection. The audio portion of the recording shall produce the commentary of the camera operator with proper volume, clarity, and be free from distortion. The recording system shall utilize EIA standard video and NTSC compatible color.

2.2 VIDEO RECORDING

A. Video recording shall record in color and a high resolution, 2100 pixels.

PART 3 - EXECUTION

3.1 GENERAL

A. Provide OWNER a minimum of 48 hours' notice in advance of recording such that OWNER's representative can be present during recording. The recordings shall contain coverage of all surface features located within the construction's zone of influence. The construction's zone of influence shall be defined (1) as the area within the permanent and temporary easements or right-of-way, and areas adjacent to these areas which may be affected by routine construction operations, and (2) by the direction of the OWNER. The surface features within the construction's zone of influence shall include, but not be limited to, all roadways, pavements, curbs, driveways, ponds, sidewalks, culverts, headwalls, retaining walls, buildings, landscaping, trees, shrubbery, and

fences. Of particular concern shall be the existence or non-existence of any faults, fractures, or defects. Recording's coverage shall be limited to the construction site at any one time and shall include all surface conditions located within the zone of influence of construction supported by appropriate audio description.

B. Video recording shall be a simultaneously recorded audio recording. This audio recording, exclusively containing the commentary of the camcorder operator, shall assist in viewer orientation and in any needed identification, differentiation, clarification, or objective description of the feature being shown in the video portion of the recording. The audio recording also shall be free from any conversations between the camcorder operator and any other production technicians.
C. All USB thumb drives shall be permanently labeled and shall be properly identified by number and project title.
D. Each USB thumb drive shall have a log of the device's contents. The log shall describe the various segments of coverage contained on that thumb drive in terms of the names of streets or easements, coverage beginning and end, directions of coverage, and video unit counter numbers.

3.2 RECORDING SCHEDULE

A. The recording shall be performed prior to the placement of any construction materials or equipment on the proposed construction site.
B. CONTRACTOR shall coordinate the video recording with the construction schedule so that those portions of the construction that will be completed first will be recorded first. The recording company shall deliver the recordings to the OWNER upon their completion. Upon delivery of the thumb drives, transfer of Ownership of those drives shall be made to the OWNER.

3.3 VISIBILITY

A. All recordings shall be performed during times of good visibility. No recording shall be done during periods of significant precipitation, mist, fog, or any other conditions that would reduce visibility. The recording shall only be done when sufficient sunlight is present to properly illuminate the subject, and to produce bright, sharp video recordings of those subjects. No recording shall be performed when more than 10% of the area to be recorded contains debris or obstructions unless otherwise authorized by ENGINEER.

3.4 CONTINUITY OF COVERAGE

A. In order to increase the continuity of the coverage, the coverage shall consist of a single, continuous, unedited recording, which begins at one end of a particular construction area. However, where coverage is required in areas not accessible by conventional wheeled vehicles and smooth transport of the recording system is not possible, such coverage shall consist of an organized, interrelated sequence of recordings at various positions along that proposed construction area (e.g., wooded easement area).
B. The average rate of travel during a particular segment of coverage (e.g., coverage of one side of the street) shall be directly proportional to the number, size, and value of the surface features within that construction area's zone of influence.

3.5 CAMERA HEIGHT AND STABILITY

A. When conventional wheeled vehicles are used as conveyances for the recording system, the distance between the camera lens and the ground shall not be more than 10 feet. The camera shall be firmly mounted, such that transport of the camera during the recording process will not cause any unsteady picture.

3.6 CAMERA CONTROL

A. Camera pan, tilt, zoom-in, and zoom-out rates shall be sufficiently controlled such that recorded objects will be clearly viewed during playback. In addition, all other camera and recording system controls, such as lens, focus, aperture, video level, pedestal, chroma, white balance, and electrical focus, shall be properly controlled or adjusted to maximize recorded picture quality.

3.7 VIEWER ORIENTATION TECHNIQUES

A. Audio and video portions of the recording shall maintain viewer orientation. To this end, overall establishing views and visual displays of all visible house and building addresses shall be utilized. In easements where the proposed construction location will not be readily apparent in the recorder view, highly visible yellow flags shall be placed in such a fashion as to clearly indicate the proposed centerline of construction.

3.8 VIEWER ORIENTATION TECHNIQUES

A. CONTRACTOR shall televise and record, at a minimum, the following areas:

1. LIFT STATION 7W SITE EXISTING SITE
2. EXISTING GRAVITY SYSTEM TO BE ABANDAONED AS INDICATED IN THE CONSTRUCTION DRAWINGS

B. At no time shall CONTRACTOR be allowed to use any electrical circuits within private property building structure. All video recording shall be done during regular business hours, unless otherwise specified by the private property OWNER or ENGINEER. CONTRACTOR shall enter and leave private property in a professional and orderly, workmanlike manner.

END OF SECTION

E. Record minutes and distribute copies to participants and those affected by decisions made within two (2) days after meeting.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Submittals.
B. Bar chart schedules.
C. Review and evaluation.
D. Updating schedules.
E. Distribution.

1.2 SUBMITTALS

A. Submit preliminary progress schedule in accordance with the General Conditions.
B. If a bar chart schedule is to be used for simpler Projects, use the following two Subparagraphs.
C. Schedule Updates:

1. Overall percent complete, projected and actual.
2. Completion progress by listed activity and subactivity, to within five (5) working days prior to submittal.
3. Changes in Work scope and activities modified since submittal.
4. Delays in submittals or resubmittals, deliveries, or Work.
5. Adjusted or modified sequences of Work.
6. Other identifiable changes.
7. Revised projections of progress and completion.

1.1 BAR CHART SCHEDULES

A. Format: Bar chart Schedule, to include at least:

1. Identification and listing in chronological order of those activities reasonably required to complete the Work, including:

a. Subcontract Work.
b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
c. Move-in and other preliminary activities.
d. Equipment and equipment system test and startup activities.
e. Project closeout and cleanup.
f. Work sequences, constraints, and milestones.

2. Listings identified by Specification Section number.

3. Identification of the following:

   a. Horizontal time frame by year, month, and week.

   b. Duration, early start, and completion for each activity and subactivity.

   c. Critical activities and Project float.

   d. Subschedules to further define critical portions of Work.

B. Sheet Size: 11 inches high x 17 inches wide.

1.2 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of schedules with Engineer at each submittal.
B. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.
C. After review, revise schedules incorporating results of review, and resubmit within five (5) days.

1.3 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.
B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.
C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
D. Upon approval of a Change Order, include the change in the next schedule submittal.
E. Indicate changes required to maintain Date of Substantial Completion.
F. Submit sorts as required to support recommended changes.
G. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect.

1.4 DISTRIBUTION

A. Following joint review, distribute copies of updated schedules to Contractor's Project site file, to Subcontractors, suppliers, Engineer, Owner, and other concerned parties.
B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Definitions.
B. Submittal procedures.
C. Construction progress schedules.
D. Proposed product list.
E. Product data.
F. Electronic CAD files of Project Drawings.
G. Shop Drawings.
H. Samples.
I. Other submittals.
J. Test reports.
K. Certificates.
L. Manufacturer's instructions.
M. Manufacturer's field reports.
N. Erection Drawings.
O. Construction photographs.
P. Contractor review.
Q. Engineer review.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
B. Informational Submittals: Written and graphic information and physical Samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. Transmit each submittal with Engineer-accepted form.
B. In addition to the specified number of hard copies, one (1) electronic copy of each submittal shall be transmitted to the Engineer. The electronic copy shall be in Portable Document Format (.pdf) unless otherwise specified.
C. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
D. Identify: Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
E. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
F. Schedule submittals to expedite Project, and deliver to Engineer. Coordinate submission of related items.
G. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
H. Allow space on submittals for Contractor and Engineer review stamps.
I. When revised for resubmission, identify changes made since previous submission.

J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
K. Submittals not requested will not be recognized nor processed.
L. Incomplete Submittals: Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Engineer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

A. Comply with General Conditions and Section 01 32 16 - Construction Progress Schedule.

1.5 PROPOSED PRODUCT LIST

A. Within fifteen (15) days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards.

1.6 PRODUCT DATA

A. Product Data: Action Submittal: Submit to Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
B. Submit number of copies Contractor requires, plus three (3) copies Engineer will retain.
C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.7 ELECTRONIC CAD FILES OF PROJECT DRAWINGS

A. Electronic CAD Files of Project Drawings: May only be used to expedite production of Shop Drawings for the Project. Use for other Projects or purposes is not allowed.
B. Electronic CAD Files of Project Drawings: Distributed only under the following conditions:

1. Use of files is solely at receiver's risk. Engineer does not warrant accuracy of files. Receiving files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information on electronic media and that in Contract Documents, notify Engineer of discrepancy and use information in hard-copy Drawings and Specifications.
2. CAD files do not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.

4. Receiver shall not hold Engineer responsible for data or file clean-up required to make files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.
5. Receiver shall understand that even though Engineer has computer virus scanning software to detect presence of computer viruses, there is no guarantee that computer viruses are not present in files or in electronic media.
6. Receiver shall not hold Engineer responsible for such viruses or their consequences, and shall hold Engineer harmless against costs, losses, or damage caused by presence of computer virus in files or media.

1.8 SHOP DRAWINGS

A. Shop Drawings: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a Professional Engineer licensed in the State of Florida responsible for designing components shown on Shop Drawings.

1. Include signed and sealed calculations to support design.
2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
3. Make revisions and provide additional information when required by authorities having jurisdiction.

D. Submit number of opaque reproductions Contractor requires, plus three (3) copies Engineer will retain.
E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.9 SAMPLES

A. Samples: Action Submittal: Submit to Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
B. Samples for Selection as Specified in Product Sections:

1. Submit to Engineer for aesthetic, color, and finish selection.
2. Submit Samples of finishes, textures, and patterns for Engineer selection.

C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.
D. Include identification on each Sample, with full Project information.
E. Submit number of Samples specified in individual Specification Sections; Engineer will retain one (1) Sample.
F. Reviewed Samples that may be used in the Work are indicated in individual Specification Sections.

G. Samples will not be used for testing purposes unless specifically stated in Specification Section.
H. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01 70 00 - Execution and Closeout Requirements.

1.10 OTHER SUBMITTALS

A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.
B. Informational Submittal: Submit data for Engineer's knowledge as Contract administrator or for Owner.
C. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.11 TEST REPORTS

A. Informational Submittal: Test reports are typically submitted for Architect/Engineer's knowledge as Contract administrator or for Owner.
B. Submit test reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.12 CERTIFICATES

A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
C. Certificates may be recent or previous test results on material or product but must be acceptable to Engineer.

1.13 MANUFACTURER'S INSTRUCTIONS

A. Informational Submittal: Submit manufacturer's installation instructions for Engineer's knowledge as Contract administrator or for Owner.
B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Engineer in quantities specified for Product Data.
C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 MANUFACTURER'S FIELD REPORTS

A. Informational Submittal: Submit reports for Engineer's knowledge as Contract administrator or for Owner.
B. Submit report in duplicate within five (5) days of observation to Engineer for information.
C. Submit reports for information for assessing conformance with information given and design concept expressed in Contract Documents.

1.15 ERECTION DRAWINGS

A. Informational Submittal: Submit Drawings for Engineer's knowledge as Contract administrator or for Owner.
B. Submit Drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
C. Data indicating inappropriate or unacceptable Work may be subject to action by Engineer or Owner.

1.16 CONSTRUCTION PHOTOGRAPHS

A. Provide photographs of Site and construction throughout progress of Work produced by an experienced photographer acceptable to Engineer.
B. Each month submit photographs with Application for Payment.
C. The quantity of photographs taken shall be sufficient to document progress of Work.
D. Digital Images: Deliver complete set of digital image electronic files on CD-ROM to Owner with Project record documents. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as sensor, uncropped.

1. Digital Images: Uncompressed TIFF format, produced by digital camera with minimum sensor size of 4.0 megapixels, and image resolution of not less than 1600 by 1200 pixels.
2. Date and Time: Include date and time in filename for each image.

1.17 CONTRACTOR REVIEW

A. Review for compliance with Contract Documents and approve submittals before transmitting to Engineer.
B. Contractor shall be Responsible for:

1. Determination and verification of materials including manufacturer's catalog numbers.
2. Determination and verification of field measurements and field construction criteria.
3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
4. Determination of accuracy and completeness of dimensions and quantities.
5. Confirmation and coordination of dimensions and field conditions at Site.
6. Construction means, techniques, sequences, and procedures.
7. Safety precautions.
8. Coordination and performance of Work of all trades.

C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents.
D. Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Engineer.

1.18 ENGINEER REVIEW

A. Do not make "mass submittals" to Engineer. "Mass submittals" are defined as six or more submittals or items in one day or 20 or more submittals or items in one week. If "mass submittals" are received, Engineer's review time will be extended as necessary to perform proper review. Engineer will review "mass submittals" based on priority determined by Engineer after consultation with Owner and Contractor.
B. Informational submittals and other similar data are for Engineer's information, do not require Engineer's responsive action, and will not be reviewed or returned with comment.
C. Submittals made by Contractor that are not required by Contract Documents may be returned without action.
D. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.

E. Owner may withhold monies due to Contractor to cover additional costs beyond the second submittal review.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Quality control.
B. Tolerances.
C. References.
D. Labeling.
E. Testing and inspection services.
F. Manufacturers' field services.

1.2 QUALITY CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
B. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
C. Perform Work using persons qualified to produce required and specified quality.
D. Products, materials, and equipment may be subject to inspection by Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
E. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
C. Obtain copies of standards and maintain on Site when required by product Specification Sections.
D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
E. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 LABELING

A. Attach label from agency approved by authorities having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:

   1. Model number.
   2. Serial number.
   3. Performance characteristics.

C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.6 TESTING AND INSPECTION SERVICES

A. Owner will employ and pay for specified services of an independent firm to perform testing and inspection for the first successful test.
B. Contractor shall be responsible for all costs associated with retesting of any Work that fails initial tests.
C. Independent firm will perform tests, inspections, and other services specified in individual Specification Sections and as required by Engineer.
D. Testing, inspections, and source quality control may occur on or off Project Site. Perform off-Site testing as required by Engineer or Owner.
E. Reports shall be submitted by independent firm to Engineer, Contractor, and authorities having jurisdiction, in duplicate, indicating observations and results of tests and compliance or noncompliance with Contract Documents.

   1. Submit final report indicating correction of Work previously reported as noncompliant.

F. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.

   1. Notify Engineer and independent firm 48 hours before expected time for operations requiring services.
   2. Make arrangements with independent firm and pay for additional Samples and tests required for Contractor's use.

G. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
H. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Engineer.
I. The Contractor shall be responsible for all costs associated with failed tests, retesting, or re-inspection.
J. Agency Responsibilities:

   1. Test Samples of mixes submitted by Contractor.
   2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.

3. Perform indicated sampling and testing of products according to specified standards.
4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.
6. Perform additional tests required by Engineer.
7. Attend preconstruction meetings and progress meetings.

K. Agency Reports: After each test, promptly submit two (2) copies of report to Engineer, Contractor, and authorities having jurisdiction. When requested by Engineer, provide interpretation of test results. Include the following:

a. Date issued.
b. Project title and number.
c. Name of inspector.
d. Date and time of sampling or inspection.
e. Identification of product and Specification Section.
f. Location in Project.
g. Type of inspection or test.
h. Date of test.
i. Results of tests.
j. Conformance with Contract Documents.

L. Limits on Testing Authority:

1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency or laboratory may not approve or accept any portion of the Work.
3. Agency or laboratory may not assume duties of Contractor.
4. Agency or laboratory has no authority to stop the Work.

1.7 MANUFACTURER'S FIELD SERVICES

A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, startup of equipment, testing, adjusting, and balancing of equipment, and commissioning as applicable, and to initiate instructions when necessary.
B. Submit qualifications of observer to Engineer thirty (30) days in advance of required observations. Observer is subject to approval of Engineer.
C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
D. Refer to Section 01 33 00 - Submittal Procedures, "Manufacturer's Field Reports" Article.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities:

1. Temporary electricity.
2. Temporary lighting for construction purposes.
3. Temporary heating.
4. Temporary cooling.
5. Temporary ventilation.
6. Temporary water service.
7. Temporary sanitary facilities.

B. Construction Facilities:

1. Vehicular access.
2. Parking.
3. Progress cleaning and waste removal.
4. Project identification.
5. Traffic regulation.
6. Fire-prevention facilities.

C. Temporary Controls:

1. Barriers.
2. Enclosures and fencing.
3. Security.
4. Water control.
5. Dust control.
6. Erosion and sediment control.
7. Noise control.
8. Pest and rodent control.
9. Pollution control.

D. Removal of utilities, facilities, and controls.

1.2 REFERENCES

A. ASTM International:

1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
2. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
3. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

1.3 TEMPORARY ELECTRICITY

A. Retain first Paragraph below when Contractor is required to pay for power costs or second Paragraph when Owner is required to pay for power costs.
B. Provide and pay for power service required from utility source as needed for construction operation.
C. Provide temporary electric feeder from existing building electrical service, if applicable, at location as directed by Owner. Do not disrupt Owner's use of service.
D. Power Service Characteristics: as required for construction operations.
E. Provide power outlets with branch wiring and distribution boxes located as required for construction operations. Provide suitable, flexible power cords as required for portable construction tools and equipment.
F. Provide main service disconnect and overcurrent protection at location meeting all applicable codes and regulations.
G. Permanent convenience receptacles may be used during construction.

1.4 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain lighting necessary for safe and functional construction operations.
B. Provide and maintain one (1) watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
C. Provide and maintain 0.25 watt/sq ft HID lighting to interior work areas after dark for security purposes.
D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, lamps, and the like, for specified lighting levels.
E. Maintain lighting and provide routine repairs.
F. Permanent building lighting may be used upon written permission from the Owner during construction, if applicable.

1.5 TEMPORARY HEATING

A. Provide and pay for heating devices and heat as needed to maintain specified conditions for construction operations.
B. Contractor shall be responsible for all operation and maintenance costs associated with temporary heating.
C. Maintain minimum ambient temperature as required in individual Sections of the Contract Documents.

1.6 TEMPORARY COOLING

A. Provide and pay for cooling devices and cooling as needed to maintain specified conditions for construction operations.
B. Contractor shall be responsible for all operation and maintenance costs associated with temporary cooling.

C. Maintain maximum ambient temperature as required in individual Sections of the Contract Documents.

1.7 TEMPORARY VENTILATION

A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.8 TEMPORARY WATER SERVICE

A. Provide suitable quality water service as needed to maintain specified conditions for construction operations.
B. Contractor shall be responsible for coordination, cost of temporary connection(s), and cost of temporary water.
C. Extend branch piping with outlets located so that water is available by hoses with threaded connections.

1.9 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Existing facility use is not permitted. Provide facilities at time of Project mobilization.

1.10 VEHICULAR ACCESS

A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, of width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
B. All temporary vehicular access crossing public rights-of-way, property, or easements shall be coordinated with the authority having jurisdiction and comply with all applicable regulations.
C. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
D. Extend and relocate vehicular access as Work progress requires and provide detours as necessary for unimpeded traffic flow.
E. Locate as indicated on Drawings or approved by Engineer.
F. Provide unimpeded access for emergency vehicles. Maintain twenty (20) foot-wide driveways with turning space between and around combustible materials.
G. Provide and maintain access to fire hydrants and control valves free of obstructions.
H. Provide means of removing mud from vehicle wheels before entering streets.
I. Use designated existing on-Site roads for construction traffic upon written approval from the Owner.

1.11 PARKING

A. Provide temporary parking areas to accommodate construction personnel.
B. Locate as indicated on Drawings or approved by Engineer.
C. Off-Site Parking:

    1. If Site space is not adequate, provide additional off-Site parking.
    2. The Contractor shall provide to the Engineer written permission or executed permit from property owner prior to utilizing off-Site parking that is not on City property.

D. Use of designated areas of existing on-Site streets and driveways used for construction traffic is not permitted. Tracked vehicles are not allowed on paved areas.
E. Use of designated areas of existing parking facilities used by construction personnel is permitted upon written approval from the Owner.

F. Do not allow heavy vehicles or construction equipment in parking areas.
G. Do not allow vehicle parking on existing pavement.
H. Designate two (2) parking space for Engineer.
I. Permanent Pavements and Parking Facilities:

1. Bases for permanent roads and parking areas may be used for construction traffic.
2. Avoid traffic loading beyond paving design capacity. Tracked vehicles are not allowed.
3. Use of permanent parking structures is not permitted.

J. Maintenance:

1. Maintain traffic and parking areas in sound condition, free of excavated material, construction equipment, products, mud, snow, ice, and the like.
2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original condition.

K. Removal, Repair:

1. Remove temporary materials and construction before Substantial Completion.
2. Remove underground Work and compacted materials to depth of two (2) feet; fill and grade Site as indicated.
3. Repair existing facilities damaged by use, to original condition.

L. Mud from Site vehicles:

1. Provide means of removing mud from vehicle wheels before entering streets.

1.12 PROGRESS CLEANING AND WASTE REMOVAL

A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing spaces.
C. Broom and vacuum clean interior areas before starting surface finishing, and continue cleaning to eliminate dust.
D. Collect and remove waste materials, debris, and rubbish from Site and dispose of off-Site as required to maintain a safe, neat, and orderly Site.
E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.13 PROJECT IDENTIFICATION

A. Project Identification Sign:

1. Project Identification Sign shall comply with Owner standards.
2. Main signage boards shall be ¾-inch pressure treated plywood mounted on a two-inch (2”) x four-inch (4”) pressure treated wood frame painted on all sides.

3. Sign portability:

    a. Each sign shall consist of two of the above described plywood sheets and frames hinged together at the top to form a two-sided sign that folds together for transportation from location to location, transportation provided by the Contractor.

    b. When installed at the site, the hinged connection will allow the bottom portion to move outward forming a triangle with the ground, allowing the sign to stand on its own.

    c. The sign faces shall be positioned so that oncoming traffic from both directions can read one side.

        1) Lettering shall be black intermediate grade vinyl or approved equal.

        2) Border Line shall be black, a minimum of one half inch (1/2") wide, and inset one inch (1") from the board edge.

B. Project Informational Signs:

1. Painted informational signs of same colors and lettering as Project identification sign or standard products; size lettering for legibility at 100-foot distance.
2. Provide sign at each field office and storage shed, and provide directional signs to direct traffic into and within Site. Relocate as Work progress requires.
3. Provide directional traffic signs to and within Site as required by the agency having jurisdiction.
4. No other signs are allowed without Owner's permission except those required by law.

C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

D. Show content, layout, lettering, color, foundation, structure, sizes, and grades of members.

E. Sign Materials:

1. Structure and Framing: New wood or metal, structurally adequate.
2. Sign Surfaces: Exterior grade plywood with medium-density overlay, minimum of 3/4 inches thick, standard large sizes to minimize joints.
3. Rough Hardware: Galvanized.
4. Paint and Primers: Exterior quality, two (2) coats; sign background of color as selected.
5. Lettering: Exterior quality paint or precut vinyl self-adhesive products, colors as selected.

F. Installation:

1. Install Project identification sign within fifteen (15) days after date established by Notice to Proceed.
2. Erect at location of high public visibility adjacent to main entrance to Site.
3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind

loadings.

4. Install sign surface plumb and level, with butt joints. Anchor securely.
5. Paint exposed surfaces of sign, supports, and framing.

G. Maintenance: Maintain clean signs and supports; repair deterioration and damage.
H. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore area.

1.14 TRAFFIC REGULATION

A. Signs, Signals, and Devices:

1. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs: As approved by authorities having jurisdiction.
2. Traffic Control Signals: As approved by local jurisdictions.
3. Traffic Cones, Drums, Flares, and Lights: As approved by authorities having jurisdiction.
4. Flag Person Equipment: As required by authorities having jurisdiction.

B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
C. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.
D. Haul Routes:

1. Consult with authorities having jurisdiction and establish public thoroughfares to be used for haul routes and Site access.
2. Confine construction traffic to designated haul routes.
3. Provide traffic control at critical areas of haul routes to regulate traffic and to minimize interference with public traffic.

E. Traffic Signs and Signals:

1. Provide signs at approaches to Site and on Site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
2. Provide, operate, and maintain traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
3. Relocate signs and signals as Work progresses, to maintain effective traffic control.

F. Removal:

1. Remove equipment and devices when no longer required.
2. Repair damage caused by installation.
3. Remove post settings completely.

1.15 FIRE-PREVENTION FACILITIES

A. Prohibit smoking within buildings under construction and demolition. Designate area on Site where smoking is permitted. Provide approved ashtrays in designated smoking areas.
B. Establish fire watch for cutting, welding, and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
C. Portable Fire Extinguishers: NFPA 10; 10-pound capacity, 4A-60B: C UL rating.

1. Provide minimum of one (1) fire extinguisher in every construction trailer and storage shed.

D. Provide fire extinguishers for construction equipment as required by applicable federal, state, and local codes.

1.16 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of Site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
B. Provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way and for public access to existing building.
C. Tree and Plant Protection: Preserve and protect existing trees and plants designated to remain.

1. Protect areas within drip lines from traffic, parking, storage, dumping, chemically injurious materials and liquids, ponding, and continuous running water.
2. Provide 6-foot-high barriers around drip line, with access for maintenance.
3. Replace trees and plants damaged by construction operations.

D. Protect non-owned vehicular traffic, stored materials, Site, and structures from damage.

1.17 ENCLOSURES AND FENCING

A. Construction and type of fencing may require description by Drawing detail.
B. Construction: Commercial-grade chain-link fence unless otherwise shown or specified.
C. Provide 6-foot-high fence around construction Site and storage area(s); equip with vehicular and pedestrian gates with locks.
D. Exterior Enclosures:

1. Provide temporary weathertight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating, cooling, and maintenance of required ambient temperatures identified in individual Specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.18 SECURITY

A. Security Program:

1. Protect Work on existing premises and Owner's operations from theft, vandalism, and unauthorized entry.

2. Initiate program in coordination with Owner's existing security system at Project mobilization.
3. Maintain program throughout construction period until directed by Engineer.

B. Entry Control:

1. Restrict entrance of persons and vehicles to Project Site and existing facilities.
2. Allow entrance only to authorized persons with proper identification.
3. Maintain log of workers and visitors and make available to Owner on request.
4. Coordinate access of Owner's personnel to Site in coordination with Owner's security forces.

C. Personnel Identification:

1. Provide identification badge for each person authorized to enter premises.
2. Badge to Include: Personal photograph, name, expiration date, and employer.
3. Maintain list of accredited persons and submit copy to Owner on request.
4. Require return of badges at expiration of employment on the Work.

1.19 WATER CONTROL

A. Grade Site to drain. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.
B. Protect Site from puddles or running water. Provide water barriers as required to protect Site from soil erosion.

1.20 DUST CONTROL

A. Execute Work by methods that minimize raising dust from construction operations.
B. Provide positive means to prevent airborne dust from dispersing into atmosphere.

1.21 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
B. Minimize surface area of bare soil exposed at one time.
C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.
D. Construct fill and waste areas by selective placement to avoid erosive surface silts and clays.
E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.

1.22 NOISE CONTROL

A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.23 PEST AND RODENT CONTROL

A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work.
B. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.24 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere

from discharge of noxious, toxic substances and pollutants produced by construction operations.

B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.25 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, and materials before Substantial Completion inspection.
B. Remove underground installations to minimum depth of two (2) feet.
C. Clean and repair damage caused by installation or use of temporary Work.
D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 - PRODUCTS - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Products.
B. Product delivery requirements.
C. Product storage and handling requirements.
D. Product options.
E. Equipment electrical characteristics and components.

1.2 PRODUCTS

A. At minimum, comply with specified requirements and reference standards.
B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
C. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
D. Do not use materials and equipment removed from existing premises except as specifically permitted by Contract Documents.
E. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products according to manufacturer's instructions.
B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
C. Provide equipment and personnel to handle products; use methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products according to manufacturer's instructions.
B. Store products with seals and labels intact and legible.
C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
D. For exterior storage of fabricated products, place products on sloped supports aboveground.
E. Provide off-Site storage and protection when Site does not permit on-Site storage or protection.
F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Products complying with

specified reference standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and complying with Specifications; no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit Request for Substitution for any manufacturer not named, according to Section 01 25 00 - Substitution Procedures.

PART 2 - PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.

B. Cord and Plug: Furnish minimum 6-foot long cord and plug including grounding connector for connection to electric wiring system. Cord of longer length may be specified in individual Specification Sections.

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Field engineering.
B. Closeout procedures.
C. Starting of systems.
D. Demonstration and instructions.
E. Project record documents.
F. Operation and maintenance data.
G. Manual for materials and finishes.
H. Manual for equipment and systems.
I. Spare parts and maintenance products.
J. Product warranties and product bonds.
K. Examination.
L. Preparation.
M. Execution.
N. Cutting and patching.
O. Protecting installed construction.
P. Final cleaning.

1.2 FIELD ENGINEERING

A. Employ land surveyor registered in State of Florida and acceptable to Engineer.
B. Locate and protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.
C. Control datum for survey is indicated on Drawings.
D. Prior to beginning Work, verify and establish floor elevations of existing facilities to ensure that new Work will meet existing elevations in smooth and level alignment except where specifically detailed or indicated otherwise.
E. Verify setbacks and easements; confirm Drawing dimensions and elevations.
F. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.
G. Submit copy of Site drawing and certificate signed by land surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.
H. Maintain complete and accurate log of control and survey Work as Work progresses.
I. Protect survey control points prior to starting Site Work; preserve permanent reference points during construction.
J. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.
K. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.
L. Final Survey: Prior to Substantial Completion, prepare final survey illustrating locations, dimensions, angles, and elevations of all Work and the relationship to permanent benchmarks and property lines.

1. All elevations shall be referenced to N.A.V.D 88.
2. All drawings shall have their boundaries tied into the City of Winter Springs GPS horizontal

control network with a minimum of two corners at each end of one boundary line identified by state plane coordinates.

3. Include certification, signed by surveyor, that the survey meets State of Florida applicable standards of practice for As-Built/Record Surveys.

1.3 CLOSEOUT PROCEDURES

A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:

1. Submit maintenance manuals, Project record documents, digital images of construction photographs, and other similar final record data in compliance with this Section.
2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified in compliance with this Section.
3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
6. Make final change-over of locks and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
7. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
8. Perform final cleaning according to this Section.

B. Substantial Completion Inspection:

1. When Contractor considers Work to be substantially complete, submit to Engineer:

   a. Written certificate that Work, or designated portion, is substantially complete.
   b. List of items to be completed or corrected (initial punch list).

2. Within seven (7) days after receipt of request for Substantial Completion, Engineer will make inspection to determine whether Work or designated portion is substantially complete.
3. Should Engineer determine that Work is not substantially complete:

a. Engineer will promptly notify Contractor in writing, stating reasons for its opinion.
b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer.
c. Engineer will reinspect Work.
d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.

4. When Engineer finds that Work is substantially complete, Engineer will:

a. Prepare Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified and amended by Engineer and Owner (final punch list).
b. Submit Certificate to Owner and Contractor for their written acceptance of responsibilities assigned to them in Certificate.

5. After Work is substantially complete, Contractor shall:

a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
b. Complete Work listed for completion or correction within time period stipulated.

C. Prerequisites for Final Completion: Complete following items before requesting final acceptance and final payment.

1. When Contractor considers Work to be complete, submit written certification that:

a. Contract Documents have been reviewed.
b. Work has been examined for compliance with Contract Documents.
c. Work has been completed according to Contract Documents.
d. Work is completed and ready for final inspection.

2. Submittals: Submit following:

a. Final punch list indicating all items have been completed or corrected.
b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
d. Accounting statement for final changes to Contract Sum.
e. Contractor's affidavit of payment of debts and claims.
f. Contractor affidavit of release of liens.

g. Consent of surety to final payment.

3. Perform final cleaning for Contractor-soiled areas according to this Section.

D. Final Completion Inspection:

1. Within seven (7) days after receipt of request for final inspection, Engineer will make inspection to determine whether Work or designated portion is complete.
2. Should Engineer consider Work to be incomplete or defective:

a. Engineer will promptly notify Contractor in writing, listing incomplete or defective Work.
b. Contractor shall remedy stated deficiencies and send second written request to Engineer that Work is complete.
c. Engineer will reinspect Work.
d. Redo and Inspection of Deficient Work: Repeated until Work passes Engineer's inspection.

1.4 STARTING OF SYSTEMS

A. Coordinate schedule for startup of various equipment and systems.
B. Notify Engineer a minimum of seven (7) days prior to startup of each item.
C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.
E. Verify that wiring and support components for equipment are complete and tested.
F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.
G. When specified in individual Specification Sections, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.
H. Submit a written report according to Section 01 33 00 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two (2) weeks prior to date of Substantial Completion.
B. Demonstrate Project equipment and instruct in classroom environment at a location determined by the Owner and instructed by authorized manufacturer's representative who is knowledgeable about the Project.
C. Video Recordings: If required by the Engineer, provide high-quality color video recordings of demonstration and instructional sessions. Engage commercial videographer to record sessions. Include classroom instructions, demonstrations, board diagrams, and other visual aids. Include menu navigation.
D. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.
E. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
F. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and

shutdown of each item of equipment at scheduled time, at equipment location.

G. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

H. Required instruction time for each item of equipment and system is specified in individual Specification Sections.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain on Site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed Shop Drawings, product data, and Samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates used.
3. Changes made by Addenda and modifications.

F. As-Built Drawings:

1. As-Built Drawings shall be prepared, signed, and sealed by a Professional Mapper and Surveyor (PMS), licensed to practice in the State of Florida. If the project was designed by an Engineer hired by the Developer, the As-Builts shall also be sealed by the Professional Engineer registered in the State of Florida and submitted on CD or DVD using state plane coordinates.
2. The following information is required on all As-Built Drawings. The Contractor shall note that additional information may be required by the Engineer when deemed necessary.

   a. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and Change Orders.
   b. Unless otherwise specified, the original construction plans, with as-built information shown, will be accepted for those projects contracted by the City.
   c. The drawings shall be revised (redrawn) to scale to indicate final as-built data (true to scale) and in accordance to all construction changes. Only changing a station and off-set note or

just adding notes is not acceptable for horizontal changes. In making changes to the drawings, utility lines or other features to be changed shall be erased before new lines are drawn, notations to be changed shall be reworded as required.

d. Items that were not installed as shown shall be so indicated by placing a "revision cloud" around the as-built information and a note shall be placed on the sheet near the lower right-hand corner in bold marking indicating that the information contained within the cloud is as-built. The as-built date shall also be shown.

e. Items that were constructed exactly per plan shall be shown by placing an asterisk adjacent to the as-built information indicating that it was built per plans with no changes.

f. Water, Sewer, and Reclaim As-Built Drawings:

1) Pipe location and depth.

2) Pipes shall be referenced to power poles (identify power pole number) or other permanent structures such as inlets, sidewalks, edge of pavement, or right-of-way lines. Where no permanent above grade structure exists, pipes shall be referenced to rights-of-way lines and edge of pavement every one-hundred (100) feet.

3) Fittings shall be referenced on the drawings. At least two (2) above ground, visible reference distances shall be shown for each fitting. Insets may be used to decrease drawing scale and increase detail. Where water mains are adjusted vertically, fittings and their elevations must be shown on As-Builts. Provide a cross-section detail showing the fittings and measurements.

4) Where service lines are installed, the services shall be shown in their relative position. Services shall be clearly identified as to single or double services. Where services vary more than two feet (2') from the property corner, the distance from the service to the property corner shall be shown. Show the size and type of service pipe. This may be noted in a legend.

5) Reference all valves two inches (2") in diameter and larger. Valves shall be referenced on Valve Tie Sheets. Valves shall be shown in their relative positions to one another and shall clearly indicate which lines they control. Sheet numbers of Valve Tie Sheets shall be shown on the As-Built Drawings for easy referencing.

6) Reference all existing valves within fifty feet of the Site.

7) Under general notes, the name of the manufacturer and model number shall be shown for all valves referenced.

8) All As-Built Drawings shall be prepared by using the Owner's Standard Legend and Abbreviations.

9) The size and type of water mains shall be indicated between all valves and tees.

10) The following items shall be located by Global Positioning System (GPS) equipment: valve boxes, meter boxes, fire hydrants, fittings, casings, and points of connection to the existing system. Depending on the type of project there may be other features that require GPS location.

3. Procedure for Submitting As-Built Drawings:

a. Original Submittal: Three (3) copies of all required As-Built materials, including Valve Tie Sheets, shall be submitted to the Engineer. No originals or certified copies shall be submitted in the Original Submittal. Submittals must be furnished with a cover sheet or letter of transmittal. As-Builts submitted without cover sheets will not be accepted. In lieu of paper submittals, As-Builts can be submitted electronically until the final submittal.

b. As-Built Review: The Original Submittal shall be reviewed for content and compliance to the specified requirements. If the As-Builts are found to be incomplete, one set will be returned with comments marked in red. The Contractor shall correct the As-Builts as indicated.

c. Resubmittal: After corrections, additions, or deletions are complete, the As-Builts shall be resubmitted. Three (3) sets of those items that were returned for corrections along with the red lined set shall be resubmitted. Resubmittal without the red lined set will be refused. No resubmittals will be accepted without a cover sheet. No originals or certified copies shall be submitted with the Resubmittal.

d. Final Submittal: After all As-Builts have been reviewed and comply with all specified requirements, the Engineer shall notify the Contractor to submit final As-Builts. Final As-Builts shall include a cover letter, two copies of the As-Builts signed, sealed, and dated by a professional mapper and surveyor, and one electronic file with one reproducible original. The Final Submittal shall also include As-Built Drawings in AutoCAD .dwg format. The Contractor shall verify the version of AutoCAD utilized by the Owner to prevent file compatibility issues.

1.7 OPERATION AND MAINTENANCE DATA

A. Select one or both forms of submittal in following Paragraphs.
B. Submit in PDF composite electronic indexed file.
C. Submit data bound in 8-1/2-inch (8.5”) x 11-inch (11”) text pages, three D side ring binders with durable plastic covers.
D. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project, and subject matter of the binder when multiple binders are required.

E. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
F. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
G. Contents: Prepare table of contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:

1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by Specification Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:

    a. Significant design criteria.
    b. List of equipment.
    c. Parts list for each component.
    d. Operating instructions.
    e. Maintenance instructions for equipment and systems.
    f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
    g. Safety precautions to be taken when operating and maintaining or working near equipment.

3. Part 3: Project documents and certificates, including the following:

    a. Shop Drawings and product data.
    b. Air and water balance reports.
    c. Certificates.
    d. Photo copies of warranties.

1.8 MANUAL FOR MATERIALS AND FINISHES

A. Submit two (2) copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one (1) copy with comments.
B. For equipment, or component parts of equipment, put into service during construction and operated by Owner, submit documents within ten (10) days after acceptance.
C. Submit one copy of completed volumes before Substantial Completion. Draft copy to be reviewed and returned after Substantial Completion, with Engineer comments. Revise content of document sets as required prior to final submission.
D. Submit three (3) sets of revised final volumes within ten (10) days after final inspection.
E. Submit in PDF composite electronic indexed file of final manual within ten (10) days after final inspection.
F. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom-manufactured products.
G. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning

agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

H. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.

I. Additional Requirements: As specified in individual product Specification Sections.

J. Include listing in table of contents for design data, with tabbed fly sheet and space for insertion of data.

1.9 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two (2) copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one (1) copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten (10) days after acceptance.

C. Submit one copy of completed volumes before Substantial Completion. Draft copy will be reviewed and returned after Substantial Completion, with Engineer comments. Revise content of document sets as required prior to final submission.

D. Submit three (3) sets of revised final volumes within ten (10) days after final inspection.

E. Submit in PDF a composite electronic indexed file of final manual within ten (10) days after final inspection.

F. Each Item of Equipment and Each System: Include description of unit or system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

G. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

H. Include color-coded wiring diagrams as installed.

I. Operating Procedures: Include startup, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and special operating instructions.

J. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

K. Include servicing and lubrication schedule and list of lubricants required.

L. Include manufacturer's printed operation and maintenance instructions.

M. Include sequence of operation by controls manufacturer.

N. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

O. Include control diagrams by controls manufacturer as installed.

P. Include Contractor's coordination drawings with color-coded piping diagrams as installed.

Q. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

R. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

S. Include test and balancing reports as specified in Section 01 40 00 - Quality Requirements.

T. Additional Requirements: As specified in individual product Specification Sections.

U. Include listing in table of contents for design data with tabbed dividers and space for insertion of data.

1.10 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specification Sections.
B. Deliver to Project Site and place in location as directed by Owner; obtain receipt prior to final payment.

1.11 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible Subcontractors, suppliers, and manufacturers within ten (10) days after completion of applicable item of Work.
B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
C. Verify documents are in proper form, contain full information, and are notarized.
D. Co-execute submittals when required.
E. Include table of contents and assemble in three D side ring binder with durable plastic cover.
F. Submit prior to final Application for Payment.
G. Time of Submittals:

1. For equipment, or component parts of equipment, put into service during construction with Owner's permission, submit documents within ten (10) days after acceptance.
2. Make other submittals within ten (10) days after date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten (10) days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
C. Examine and verify specific conditions described in individual Specification Sections.
D. Verify that utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.
B. Seal cracks or openings of substrate prior to applying next material or substance.
C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until

completion of construction.

B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.

E. Allow for expansion of materials and movement of structures.
F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.

1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.

G. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.

1. Refer questionable mounting heights choices to Engineer for final decision.
2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.

H. Adjust operating products and equipment to ensure smooth and unhindered operation.
I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 CUTTING AND PATCHING

A. Employ skilled and experienced installers to perform cutting and patching.
B. Submit written request in advance of cutting or altering elements affecting:

1. Structural integrity of element.
2. Integrity of weather-exposed or moisture-resistant elements.
3. Efficiency, maintenance, or safety of element.
4. Visual qualities of sight-exposed elements.
5. Work of Owner or separate contractor.

C. Execute cutting, fitting, and patching including excavation and fill to complete Work and to:

1. Fit the several parts together, to integrate with other Work.
2. Uncover Work to install or correct ill-timed Work.
3. Remove and replace defective and nonconforming Work.
4. Remove samples of installed Work for testing.
5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

D. Execute Work by methods to avoid damage to other Work and to provide proper surfaces to receive patching and finishing.
E. Cut masonry and concrete materials using masonry saw or core drill.
F. Restore Work with new products according to requirements of Contract Documents.
G. Fit Work tight to pipes, sleeves, ducts, conduits, and other penetrations through surfaces.
H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
I. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
J. Identify hazardous substances or conditions exposed during the Work to Engineer for decision or remedy.

3.5 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified in individual Specification Sections.
B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
C. Prohibit traffic from landscaped areas.

3.6 FINAL CLEANING

A. Execute final cleaning prior to final Project assessment.

1. Employ experienced personnel or professional cleaning firm.

B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces.
C. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
D. Replace filters of operating equipment.
E. Clean debris from drainage systems.
F. Clean Site; sweep paved areas, rake clean landscaped surfaces.
G. Remove waste and surplus materials, rubbish, and construction facilities from Site.

END OF SECTION

SECTION 01 90 00

SEQUENCE OF CONSTRUCTION

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Owner is required to maintain proper operation of Lift Station 7W at all times during the execution of the Contract. The Contractor shall follow a sequence of construction consistent with that requirement. Down time during connection to the existing force main is anticipated, but must be kept to a minimum so operations and service to the customers is not interrupted.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 OVERALL SEQUENCE OF CONSTRUCTION

A. Erosion control measures must be established prior to commencement of construction. The pre-construction video must also be completed before starting construction.

B. The Contractor is required to maintain proper operation of Lift Station 7W at all times during the execution of the Contract.

C. Contractor shall submit a Sequence of Construction if their plan and identify any deviations from the following sequence. Suggested Sequence of Construction:

1. Procure and excavate for Proposed wet well.
2. Installation of Proposed Manhole (P02)
    a. Place proposed manhole (P02) in ground with E invert in and NW invert out plugged.
3. Installation of Proposed Manhole (P03)
    a. Place proposed manhole (P03) in ground with W invert out plugged.
4. Modify existing manhole (03).
    a. Manhole will be modified to have existing SW invert out plugged and have new S invert out connected.
    b. Flow-through plug will be utilized to keep manhole in service during modification.
5. Connect/Install proposed 21-inch PVC sanitary sewer from modified existing manhole (03) to proposed manhole (P03).
    a. Have by-pass system on standby to divert flows from P03 to the existing sanitary receiving structure once flows are active in P03.
6. Installation of proposed 10-foot diameter wet well lift station.
    a. Install 10-foot diameter wet well.

b. Connect and plug invert in from proposed manhole (P02) to the wet well structure.

7. Installation of Proposed Doghouse Inside Drop Manhole (01)

   a. Doghouse manhole will be placed, but not cut until new downstream 12-inch PVC sanitary sewer is installed.

8. Installation of Proposed 12-inch PVC Sanitary Sewer from proposed manhole (P01) to (P02).

   a. Install/Connect proposed 12-inch PVC sanitary sewer.
   b. Have by-pass system on standby to driver flows from P02 to the existing wet-well structure.
   c. Cut existing 6-inch VCP sanitary sewer and divert upstream flows via flow through plug to new 12-inch PVC sanitary sewer.
   d. Remove remaining pipe to NW invert in existing manhole (02).

9. Installation of proposed 8-inch PVC from existing manhole (01) to proposed manhole (P01).

   a. Connect flow through wye/tee from existing SE and SW inverts into existing manhole (02).
   b. Modify manhole to be fitted to have slope inverted for NW invert out.
   c. Connect/Install 8-inch PVC from existing manhole (01) to proposed manhole (P01).
   d. Adjust flow through plug to divert flow into new 8-inch PVC NW invert out.
   e. Plug, grout, and abandon existing NE invert to existing sanitary receiving structure.
   f. Remove flow through plugs from existing manhole (02) and proposed manhole (P01).

10. Installation and testing of Proposed 16-inch force main, valves and flow meter.
11. Connection of proposed 16-inch DIP force main assembly to existing 20-inch Cast Iron force main.

    a. Close valving/line stop necessary to isolate existing 20-inch Cast Iron force main.
    b. Cut existing force main at connection point and remove necessary section of force main to make connection.
    c. Grout and cap upstream portion of existing 20-inch Cast Iron force main.

12. Installation of Proposed 21-inch PVC sanitary sewer from Proposed Manhole (P03) to Proposed Manhole (P02)

    a. Relocate by-pass system to diver flow from proposed manhole (P03) to the existing wet-well structure.
    b. Existing 10-inch by-pass force main and modified to be used as a temporary by-pass

connection.

c. Cut and remove intersecting sections of existing 10-inch by-pass force main and existing 18-inch RCP sanitary sewer.

d. Grout plugged/capped portions of piping.

e. Connect/Install proposed 21-inch PVC sanitary sewer from proposed manhole (P03) to proposed manhole (P02).

f. Remove by-pass from proposed manhole (P03) to existing wet well.

13. Connect by-pass system from the existing wet well structure to the existing 10-inch by-pass force main previously cut.
14. Shut-off pumps in existing dry-well.
15. Conduct lift station start-up.

    a. If start up test passes, remove by-pass system from wet-well.

    b. Vacuum existing 10-inch by-pass force main. Then grout and Plug/Cap, and backfill trench.

3.2 ELECTRICAL IMPROVEMENTS SEQUENCE OF CONSTRUCTION

A. Contractor shall provide backup power and controls to maintain proper operation of Lift Station 7W at all times during the execution of the Contract. Provide temporary generator, starter, control panel, etc. as required.

B. Proposed Electrical Sequence of Construction:

1. Install new electrical building, all electrical equipment.
2. Coordinate with Duke Energy & Owner to temporarily shut off power to the lift station. Provide conduit and wire from existing transformer to new electrical building and service. Temporarily power both existing and new service.
3. Energize new service. Test all equipment.
4. Coordinate with Owner and transfer two pumps to new electrical service.
5. Note – One Pump must always be energized either on temporary or permanent service.
6. Once all electrical equipment is transferred to new service, prepare removal of existing service.
7. Coordinate with Duke Energy & Owner to temporarily shut off power to the lift station. Remove conduit and wire associated with existing service.
8. Provide temporary generator adjacent to new electrical building with plug matching new generator receptacle.
9. Remove existing electrical equipment, generator, generator batteries, day tank, VFDs, and appurtenances from existing generator building.

10. Install new generator, day tank, etc.
11. Energize and Test automatic transfer switch and generator systems.
12. Remove all temporary equipment. Any temporary starters or control panels to be given to the Owner.

END OF SECTION

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SECTION 02 20 50
SITE GRADING

PART 1 - PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Provide work under this section as shown or specified and in accordance with the Contract Documents.
B. Section Includes:

1. Preparing sites for the installation of structures, and horizontal directional drill pits.

1.3 REGULATORY REQUIREMENTS

A. Comply with Winter Springs, Florida Code of Ordinances Chapter 9 Land Development Standards.

PART 2 - PART 2 - PRODUCTS (NOT USED)
PART 3 - PART 3 - EXECUTION

3.1 GENERAL

A. Uniformly grade areas within the designated limits, including adjacent transition areas. Smooth finished surfaces to within specified tolerances with uniform levels or slopes between points where elevations are given or between such points and existing grade.
B. The degree of finished required for general site grading will be ordinarily obtainable with either motor grader or landscaping scraper operations. Grade areas around structures to meet required elevations and contours. Smooth and hand rake as required for a uniform surface, free of lumber, rocks, clods, rocks or other undesirable material.
C. Return any grade modified locations that may have been required during construction to preconstruction grade unless otherwise indicated.

3.2 SURFACE AREAS

A. Shape areas to receive surfacing material to line, with finished surface +0.0 to -0.10 feet of required sub-grade elevations. Slope areas to prevent any ponding. Compact to not less than 95% of standard density per AASHTO T-180.
B. Provide openings and temporary drainage facilities to prevent ponding of water on sub-grade before surfacing material is placed.

3.3 PROTECTION OF SURFACES

A. Comply with erosion control handbook requirements for prevention of erosion. Promptly repair, reestablish and install protective measures on settled, eroded, rutted or otherwise damaged areas to restore specified tolerances.

END OF SECTION

SECTION 02 32 00

TRENCHING, BEDDING, AND BACKFILLING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Trenching for piping and electrical work.
B. Excavation for manholes, junction boxes, meter vaults, and appurtenances.
C. Sheeting, shoring and bracing.
D. Bedding, backfilling, and compaction.

1.2 RELATED SECTIONS

A. Section 022050 -Site Grading

1.3 REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO) latest edition:
B. AASHTO M145 - Classification of Soils
C. AASHTO T180 - Moisture-Density Soil Sampling and Testing
D. American Society for Testing and Materials (ASTM) latest edition:
E. ASTM D1557 - Moisture-Density Soil Sampling and Testing
F. ASTM D2487 - Classification of Soils

1.4 DEFINITIONS

A. Bedding = Area from bottom of trench to centerline of pipe
B. Backfill = material above the top of pipe to the topsoil, paving sub-grade, or foundation level.
C. Influence Area = the area within lines sloped downward at 45 degrees from the outer edges of paving, foundations, and utility lines.

1.5 QUALITY ASSURANCE

A. Field density testing frequencies:

1. One test for each 200 lineal feet or fraction thereof per lift of general backfilling in the pipeline trench.
2. One test for each 100 square feet or fraction thereof of backfill around and under structures.
3. One test per lift per each change in type of fill.

B. Density testing is required around sanitary manholes. Tests shall be staggered around the manhole within three feet of the structure's outside diameter.

1.6 PRECONSTRUCTION REQUIREMENTS

A. Precondition surveys and vibration monitoring are required for those areas where residential structures are within 100 feet of the proposed construction.

PART 2 - PRODUCTS

2.1 GENERAL

A. It is intended that previously excavated materials conforming to the following requirements be utilized wherever possible.

2.2 MATERIALS

A. Suitable materials: AASHTO M145 classification A-1, A-3, A-2-4; ASTM D2487 classification GW, GP, SW, SP, SP-SM; unless otherwise disapproved within the Soil and Subsurface investigation reports. No more than 12% of acceptable materials shall pass the number 200 sieve.
B. Unsuitable materials: All materials other than those listed above.
C. Controlled low strength material ("flowable fill") shall meet the requirements of FDOT specification sections 121-1, 121-2, 121-3, 121-4, 121-5, and 121-6, except the range of acceptable 28-day compressive strength (as defined in 121-3) shall be revised to 75-100 psi.

2.3 SHEETING, SHORING, AND BRACING

A. The structural strength and safety of all sheeting, shoring, and bracing shall be the sole responsibility of the Contractor. Repair any damage resulting from failure to provide adequate supports.
B. Provide timber work, shoring, bracing, sheeting, and sheet piling where necessary to retain banks of excavations, prevent cave-in of adjacent ground, prevent displacement of utilities and structures, and to protect public safety.
C. Contractor is solely responsible for the design, installation, and operation of dewatering systems and their safety and conformity with local codes and regulations.

PART 3 - EXECUTION

3.1 GENERAL CONSTRUCTION REQUIREMENTS

A. Provide suitable temporary drainage channels for any water that may flow along or across the work.
B. Provide barriers, warning lights, and other protective devices at all excavations.
C. Sidewalks, roads, streets, and pavements shall not be blocked or obstructed by excavated materials, except as authorized by the Engineer, in which case adequate temporary provisions must be made for satisfactory temporary passage of pedestrians and vehicles. Minimize inconvenience to public travel or to tenants occupying adjoining properties.
D. Where necessary to place excavated material adjacent to buildings, erect barriers to keep earth at least 4 feet from such buildings. Earth deposited on lawns shall be promptly and carefully removed to preserve the turf. All trees, shrubs, etc., shall be protected. Boring and jacking shall be used, if necessary, except where ENGINEER permission is granted to remove trees and shrubs.
E. If open excavations cross existing rigid surfacing, the surfacing shall be removed for a width one foot beyond the anticipated edge of the excavation. The pavement break shall be sawed to insure a straight joint. Surface replacement shall match existing surfacing except as otherwise indicated on the Drawings. Where open excavation is allowed along or across public roadways, excavation, backfill, and surface replacement shall conform to the requirements of all permits applicable thereto. In no case shall surface replacement edges bear on less than 12 inches of undisturbed soil.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum.
B. Locate and identify existing utilities that are to remain and protect from damage.
C. Notify utility companies to remove or relocate utilities that are in conflict with proposed improvements.
D. Protect plant life, lawns, fences, existing structures, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
E. Protect benchmarks, property corners, and other survey monuments from damage or displacement. If marker needs to be removed, it shall be referenced by licensed land surveyor and replaced, as necessary, by same.

3.3 SHEETING, SHORING, AND BRACING

A. Furnish, install, and maintain, without additional compensation, sheeting, bracing, and shoring support required to keep excavations within the easement provided, to support the sides of the excavation, and to prevent any movement which may damage adjacent pavements or structures, damage or delay the work, or endanger life and health. Voids outside the supports shall be immediately filled and compacted.
B. Sheeting, where required, shall be driven below the bottom of excavation so the lowest set of swales and struts are above the bottom of the excavation to allow necessary working room.
C. The Engineer may direct in writing that supports in trenches be cut off at any specified elevation, in which case Contractor shall be paid for the supports left in place.
D. Contractor may leave in place, to be embedded in the backfill of the excavation, any or all supports for the purpose of preventing injury to persons or property, whether public or private. However, no supports which are within 4' of the ground or pavement surface may be left in place without written permission of the Engineer. No extra payment will be made for supports left in place at the Contractor's option.
E. All supports not left in place shall be removed in such manner as to avoid endangering the piping, structures, utilities, or property, whether public or private. All voids left by the withdrawal of sheeting shall be immediately filled and compacted.
F. The right of the Engineer to order supports left in place shall not be construed as creating an obligation on his part to issue such orders. Failure by the Engineer to exercise this right shall not relieve the Contractor from total liability for damages to persons or property resulting from the failure of the Contractor to leave in place sufficient supports to prevent any caving or moving of the ground adjacent to the excavation.

3.4 TRENCHING

A. All excavations shall be made by open cut unless otherwise indicated. Sides of trenches shall be kept as nearly vertical as possible from the trench bottom to a level of one foot above the top of the pipe.
B. Excavation of trenches shall not advance more than 50 feet ahead of completed pipe installation except as approved by the ENGINEER.
C. Excavate trenches to depth indicated or required for indicated flow lines and invert elevations.
D. Where rock is encountered, carry excavation 6 inches below scheduled elevation and backfill with a 6-inch layer of crushed stone or gravel prior to installation of pipe.
E. For pipes or conduit 5 inches or less, excavate to indicated depths. Hand excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.
F. For pipes or conduit 6 inches or larger, and other work indicated to receive subbase, excavate to subbase depth indicated, or, if not otherwise indicated, to 6 inches below bottom of work to be supported.
G. Except as otherwise indicated, excavate for pressure piping so top of piping is minimum 3 feet below finished grade.
H. Unsuitable excavated materials shall be removed from the site and disposed, unless otherwise indicated on the Drawings.
I. Grade bottoms of trenches as indicated, notching under pipe bells to provide solid bearing for entire body of pipe.
J. Trench bottoms shall be kept dry, compacted, and stable to a depth two feet below the bottom of the trench.
K. Dig trenches to the uniform width required for particular item to be installed, sufficiently wide to provide ample working room. Provide 9 to 12-inch clearance on each side of pipe or conduit.
L. If more than one pipe is to be installed in a trench, the pipes shall be spaced a minimum of one (1) foot apart for pipes 4 inches and larger.

M. If portions of the bottom of trenches consist of material unstable to such a degree that, in the opinion of the Engineer, it cannot adequately support the pipe or structure, the bottom shall be over excavated and stabilized with approved coarse granular stabilization material. Depth of stabilization shall be as directed by the Engineer. The initial 10 tons of stabilization shall be incidental to the Contract. Compensation will be allowed only for such additional quantities as the Engineer shall direct in writing to be placed.
N. Do not backfill trenches until tests and inspections have been made.

3.5 TRENCH BACKFILLING

A. Following placement of pipe and inspection of joints, install tamped bedding material. Place bedding fill materials in layers of 6-inch loose depth.
B. All bedding and backfill material shall be suitable soils or flowable fill. Backfill material within 1 foot of pipe and appurtenances shall not contain rock or stone larger than 2-inch diameter. If a sufficient quantity of suitable material is not available from the trench or other excavations within the site, provide additional suitable material or flowable fill.
C. After completion of bedding and preliminary approval of piping and testing, the pipe shall be covered to a point one foot above the top of the pipe for the full trench width, placed in layers of 6-inch loose depth.
D. Place backfill over pipe. Where trench is within the influence area of roadways, structures, foundations, or slabs, place backfill in layers of 6-inch loose depth. In all other areas, place backfill in layers of 8-inch loose depth.
E. Take necessary precautions not to cause settlement or damage to adjacent slabs, walls, structures, or foundations. Place backfill and fill materials evenly adjacent to structures, without wedging against structures or displacement of piping or conduit.

3.6 MINOR STRUCTURAL EXCAVATION AND BACKFILLING

A. Minor structures are defined as manholes, junction boxes, inlets, valve vaults, and meter vaults. Do not excavate for any structure until that structure is scheduled for construction. Excavate only to the depth and dimensions necessary for the construction.
B. The bottom of all excavations shall be undisturbed earth unless otherwise indicated, and shall be approved by the Engineer before any subsequent work is started.
C. Excavations carried below depths indicated on the Drawings without the previous approval of the Engineer shall be filled with 2500-psi concrete or flowable fill to the correct level at the expense of the Contractor.
D. Maintain excavations in good order. If the bearing capacity of the foundation soils is reduced because the excavation is allowed to remain open prior to commencing work, the weathered soil shall be removed and replaced with 2500 psi concrete or flowable fill at the expense of the Contractor.
E. Do not backfill until new concrete has properly cured, coatings have been approved, and any required tests have been accepted.
F. Exercise care during backfilling operations to avoid any puncture, break or other damage to waterproofing systems, if any. Backfill adjacent to waterproofing in the presence of the Engineer.
G. Where backfilling is required on both sides of structures, backfill and compact simultaneously on opposite sides in even layers. Other backfilling sequences shall be as specifically noted.

3.7 COMPACTION

A. Unless otherwise indicated, the type of equipment and number of passes required to obtain the specified degree of compaction shall be determined at the site, subject to the approval of the Engineer.
B. Provide mechanical compaction for cohesive material and vibratory compaction for granular materials, unless otherwise approved by the Engineer. Vibratory compaction is not allowed within

100 feet of existing structures. In these areas, compaction shall be accomplished by static means only. If compaction difficulties arise, the Engineer shall be consulted to review and possibly modify compaction procedures.

C. Noncohesive soils shall be compacted with vibrating roller or equivalent; cohesive soils shall be compacted with sheeps-foot roller, pneumatic tamping, or approved equivalent, unless otherwise indicated.

D. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

3.8 TESTING AND CLEANUP

A. Provide for testing and cleanup as soon as practicable, so these operations do not lag far behind pipe installation. Perform preliminary cleanup and grading operations immediately after backfilling.

B. All surplus excavated material shall be disposed of by the Contractor.

3.9 FIELD QUALITY CONTROL

A. Minimum Density Requirement (ASTM D1557 or AASHTO T180)

1. Fill under and within the influence area of roadways, structures, slabs, foundations = 98%
2. Pond and road embankment fill = 95%
3. Landscape areas = 85%
4. All other areas = 90%

END OF SECTION

SECTION 02 41 19
DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Preparation.
2. Salvage requirements.
3. Demolition.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Demolition Schedule: Indicate overall schedule and interruptions required for utility and building services.
C. Shop Drawings:

1. Indicate demolition and removal sequence.
2. Indicate location of items designated for reuse and Owner's retention.
3. Indicate location and construction of temporary work.

1.3 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition, and subsurface obstructions.

1.4 QUALITY ASSURANCE

A. Conform to applicable codes and regulations for demolition work, dust control, and products requiring electrical disconnection and re-connection.
B. Conform to applicable codes and regulations for procedures when hazardous or contaminated materials are discovered.
C. Obtain required permits from authorities having jurisdiction.
D. Perform Work in accordance with federal, state, and local regulations.

1.5 SEQUENCING

A. Section 01 10 00 - Summary: Requirements for sequencing.
B. Owner may conduct salvage operations before demolition begins to remove materials Owner chooses to retain.

1.6 SCHEDULING

A. Section 01 30 00 - Administrative Requirements: Requirements for scheduling.
B. Schedule Work to coincide with new construction.
C. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owners operation in adjoining spaces, or disturb the neighboring public.
D. Coordinate utility and building service interruptions with Owner.

1. Do not disable or disrupt building fire or life safety systems without five (5) days prior written notice to Owner.
2. Schedule tie-ins to existing systems to minimize disruption.

1.7 PROJECT CONDITIONS

A. Conduct demolition to minimize interference with adjacent facilities.
B. Cease operations immediately if structure appears to be in danger and notify Engineer. Do not resume operations until directed.

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION

3.1 PREPARATION

A. Notify affected utility companies before starting work and comply with applicable requirements.
B. Mark location and termination of utilities.
C. Edit the following for specific Project conditions. Reference Section 015000 for temporary partition construction.
D. Erect, and maintain temporary barriers and security devices, including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.
E. Retain the following only for demolition of post-tensioned elements.
F. Layout cuts in post tensioned concrete elements to avoid cutting concrete within 12 inches of any stressing tendon. Notify Engineer five (5) days in advance of cutting post-tensioned concrete.
G. Erect and maintain weatherproof closures for exterior openings.
H. Provide and maintain temporary measures to prevent spread of dust, odors, and noise.
I. Prevent movement of existing structures, utilities, or other facilities pertaining or adjacent to demolition activities; provide temporary bracing and shoring required.
J. Do not close or obstruct building egress path.

3.2 SALVAGE REQUIREMENTS

A. Coordinate with Owner to identify components and equipment required to be removed and delivered to Owner.
B. Tag components and equipment Owner designates for salvage.
C. Protect designated salvage items from demolition operations until items can be removed.
D. Carefully remove components and equipment indicated to be salvaged.
E. Disassemble as required to permit removal.
F. Package small and loose parts to avoid loss.
G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.
H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.
I. Deliver salvaged items to Owner. Obtain signed receipt from Owner.

3.3 DEMOLITION

A. Conduct demolition and/or removal operations, and the removal of equipment and debris to ensure minimum interference with roadways, walkways, and parking areas both onsite and offsite, and to

ensure minimum interference with occupied or used facilities.

B. Coordinate demolition activities to minimize impacts with Owner's operations.
C. Maintain protected egress from, and access to, adjacent existing buildings and parking areas at all times.
D. Do not close or obstruct roadways, driveways, parking areas, or sidewalks without prior written approval from the Engineer.
E. Cease operations immediately when any structure or facility appears to be in danger and notify Engineer.
F. Partial demolition of existing concrete structures and slabs shall include saw cutting in neat, orderly lines.
G. Disconnect and remove designated utilities within demolition areas.
H. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.
I. Edit the following for specific Project conditions.
J. Demolish in orderly and careful manner. Protect existing improvements and facilities.
K. Carefully remove components indicated to be reused.

1. Disassemble components as required to permit removal.
2. Package small and loose parts to avoid loss.
3. Mark components and packaged parts to permit reinstallation.
4. Store components, protected from construction operations, until reinstalled.

L. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
M. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
N. Remove temporary Work.

END OF SECTION

SECTION 03 32 05
PRECAST CONCRETE BUILDINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. This Section includes specifications for modular Precast Concrete Buildings
B. Related Work Specified Elsewhere.

1. SECTION 02200 – Earthwork
2. SECTION 03200 – Concrete Reinforcement
3. DIVISION 16

1.2 REFERENCES

A. American Concrete Institute (ACI), "Building Code Requirements for Reinforced Concrete, ACI 318-08 and ACID-318R-08".
B. American National Standard Institute (ANSI):

1. A156 – Specifications for Door and Frame Preparation.
2. A156.4 – Standards for Door Controls – Closer.
3. A156.13 – Standards for Mortise Locks and Latches.

C. American Society of Engineers (ASCE), "Minimum Design Loads for Buildings and Other Structures, ASCE 7-95.
D. American Society of Testing and Materials (ASTM): D1752 – Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
E. Federal Specifications (Fed. Spec.): TT-S-00227: Sealing Compound; Elastomeric Type, Multi Component.
F. 2024 Florida Building Code

1.3 SUBMITTALS

A. Submit as required per DIVISIONS 2, 3, and 16 for materials to be incorporated in the work.
B. Submit manufacturer's product data and certification that the proposed modular precast concrete building, steel doors and exhaust fan/ air-conditioning and other components conform to the specified requirements.
C. Submit manufacture's standard design data and calculations for components of modular precast concrete building, together with detailed layout drawings showing all reinforcement and concrete cover, and indicating all block-outs and penetrations, that bear the seal and signature of a Registered Professional Engineer licensed to practice by the State of Florida.
D. Submit manufacturer's standard design for form liners for selection of manufacturer's standard textures.
E. Submit manufacturer's product data sheets, for the steel insulated doors and hardware, exhaust fan, louvers, air-conditioner, interior finishes, floor coating, paint products and any other required building component.
F. Submit detail fabrication and erection shop drawings for placement of components and manufactured material.
G. Product/Code Certification: Provide written verification that the precast building and associated

exterior components provided and installed as a system or assembly in this Project meet or exceed requirements of 2024 Florida Building Code and ASCE 7-95 for wind resistance of components and classing. Products shall be designed and tested to be impact resistant in accordance with SBCCI STD 12-99. Provide design data and verification documentation signed and sealed by a professional engineer registered in the State of Florida including, but not limited to, the following:

1. Manufacturer's written certification indicating the type, grade, and size unit provided meets requirements.
2. Manufacturer's test data and engineering data developed indicating that requirements have been met.
3. Independent testing laboratory reports and certifications verifying that products meet requirements.
4. Calculations and definition of the code required loading for each unit in the Project.
5. Installation requirements describing types of fasteners and spacing.
6. Submit certification prior to or in conjunction with other submittals required herein. Other submittals received prior to receipt of this certification will be rejected.

1.4 QUALITY ASSURANCE:

A. Modular precast concrete building shall be designed and manufactured by a manufacturer having not less than three (3) years experience in the design and manufacture of similar facilities. Building design and drawings shall be prepared under the direct supervision of a Registered Professional Engineer.

Acceptable Manufacturers:

1. Leesburg Concrete Company, Inc., Leesburg, Florida
   Ph: 352-787-4177, Fx 352-787-7935.
2. Pre-Approved equal.

B. The manufacturer shall warrant its work against leakage for a period one year following installation. Leakage shall constitute proof of noncompliance with this specification, and shall be repaired at the Contractor's expense.

C. Precast Concrete Building envelope shall be resistant to 308 caliber (steel jacketed) rifle bullets, fired from a distance of 50-ft.

1.5 DESIGN CRITERIA

A. The modular precast concrete building(s) shall be constructed of reinforced concrete, and shall be designed to meet the following requirements using the most restrictive:

1. ASCE 7-95, or latest edition.
2. Building Code Requirements for Reinforced Concrete, ACI 318-08 and ACID-318R-08
3. 2024 Florida Building Code

B. The building(s) shall be designed for the following minimum loadings, unless the above reference codes are more restrictive:

1. Roof Live Load – 60 psf.
2. Roof Dead Load – 50 psf (minimum).
3. Floor Live Load – 100 psf.
4. Floor Dead Load – 63 psf (minimum).
5. Wind Speed – 150 mph / Category IV / Importance Factor – 1.15.
6. Earthquake – Zone 1.

C. The building(s) shall be designed to provide a factor of safety of at least 1.50 against overturning when subjected to the specified design wind loading. Provide additional concrete structure dead weight or soil anchors as required to ensure building's stability against overturning and sliding.
D. The building(s) shall be designed in accordance with AI 318. The floor and roof slabs shall be designed for 12-foot clear span without the use of interior supporting members. The interior finished ceiling height shall be not less than 12'-0". Concrete floor to concrete ceiling.
E. The building(s) shall be constructed of precast concrete panel sections which are plant assembled using structural steel connections. Joints shall be caulked with a material selected by the building manufacturer to maintain a permanent seal under severe weather and handling conditions.
F. Roof joints in modular buildings shall be sealed with EPDM membrane roofing strips of a thickness and width selected by the building manufacturer for the application proposed. Strips shall be cemented to the concrete with a compound designed for that purpose, and shall be sloped for drainage.
G. Exterior walls shall receive a skip trowel stucco finish and chamfered strip type extension at base, edges, seams and roof line to prevent unnecessary spalling. Exterior roof finish shall be smooth.
H. Interior of building(s) shall have an R-factor of 14 on the walls and 21 on the ceiling. Wall covering shall be 5/8" Type "X" drywall with "knockdown" finish. Painted white or color by owner. Interior on storage shall be light broom finish. Painted light gray or color by owner
I. The building(s) shall be assembled, sealed, waterproofed, and tested for watertightness at the building manufacturer's plant. All joints shall be caulked and concrete interior surfaced smoothed to remove projections.
J. Interior and exterior surfaces shall be painted as specified herein.
K. Coordinate the location of all openings for mechanical and electrical equipment.
L. Prefabricated building manufacturer shall provide wall-mounted air conditioning units manufacturer by Mitsubishi. Building manufacturer shall design the AC unit to provide sufficient building cooling based on the envelope dimensions and electrical loads shown in the building schedule below. Calculations shall be provided and signed and sealed by a Professional Engineer in the State of Destination.

1.6 BUILDING SCHEDULE

Location	Interior Dimensions	Access	AC Units
Electrical Building	As Shown in the Contract Drawings	1 PAIR 3’-0” x 8’-0” x 1-3/4” Steel Doors RHRA FL #4553-R11	Qty (1) two-ton split indoor unit system with one (1) outdoor wall-hung condenser as specified in the Contract Drawings.

END OF SECTION

SECTION 09 90 00
PAINTING AND COATING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation and field application of paints and other coatings.

1.2 DEFINITIONS

A. Refer to ASTM D16 for definitions of terms used in this Section.

1.3 REFERENCE STANDARDS

A. ASTM International:

1. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.
2. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.
3. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. American Water Works Association:

1. AWWA/ANSI C104/A21.4 – Cement Mortar Lining for Ductile Iron Pipe and Fittings.

C. Green Seal:

1. GS-03 - Anti-Corrosive Paints.
2. GS-11 - Paints and Coatings.

D. Master Painters Institute:

1. MPI - Approved Products List.
2. MPI - Architectural Painting Manual.

E. South Coast Air Quality Management District:

1. SCAQMD Rule 1113 - Architectural Coatings.

1.4 SEQUENCING

A. Section 01 10 00 - Summary: Requirements for sequencing.
B. Do not apply finish coats until paintable sealant is applied.

1.5 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data:

1. Submit manufacturer data on all painting and coating products specified herein.

2. Include MPI - Approved Products Lists with proposed products highlighted.

C. Samples:

1. Submit two (2) copies of the manufacturer's complete color charts for each coating.
2. Painted Samples:

a. Submit two (2) painted samples, illustrating selected colors and textures for each selected color and system with specified coats cascaded.

D. Manufacturer's Certificate:

1. Certify that products meet or exceed specified requirements.
2. Certify that coating and lining products are appropriate for the intended service.

E. Applicator's Certificate:

1. The applicator shall supply a "Certificate of Application" attesting that the specified lining systems are supplied and applied as specified.

F. Manufacturer Instructions: Submit special surface preparation procedures and substrate conditions requiring special attention for each coating system.
G. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
H. Qualifications Statements:

1. Coordinate following Subparagraphs with requirements specified in QUALIFICATIONS Article.
2. Submit qualifications for manufacturer and applicator.
3. Submit manufacturer's approval of applicator.

1.6 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Operation and Maintenance Data: Submit information on cleaning, touchup, and repair of painted, coated, and lined surfaces.

1. Furnish product number for recommend repair compounds for each coating and lining system supplied.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance materials.
B. Extra Stock Materials:

1. Furnish 1 gal. of each color and type of coating provided for Project.
2. Label each container with manufacturer's label, color, type, texture, and Site location.
3. Store where directed by Engineer.

1.8 QUALITY ASSURANCE

A. MPI Standards:

1. Comply with indicated MPI standards.
2. Products: Listed in MPI - Approved Products List.

B. Surface Burning Characteristics:

1. Fire-Retardant Finishes: Maximum 25/450 flame-spread/smoke-developed index when tested according to ASTM E84.

1.9 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years of documented experience.
B. Applicator: Company specializing in performing Work of this Section with minimum five (5) years of documented experience and approved by manufacturer.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
B. Container Labeling: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
C. Inspection:

1. Accept materials on Site in manufacturer's sealed and labeled containers.
2. Inspect for damage and to verify acceptability.

D. Store materials in ventilated area and otherwise according to manufacturer instructions.
E. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Provide additional protection according to manufacturer instructions.

1.11 AMBIENT CONDITIONS

A. Section 01 50 00 - Temporary Facilities and Controls: Requirements for ambient condition control facilities for product storage and installation.
B. Storage Conditions:

1. Minimum Ambient Temperature: 45 degrees F.
2. Maximum Ambient Temperature: 90 degrees F

C. Application Conditions:

1. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by coating manufacturer.

2. Do not apply exterior coatings during rain or snow, when relative humidity is outside humidity ranges, or when moisture content of surfaces exceeds those required by paint manufacturer.
3. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors and 50 degrees F for exteriors, unless otherwise indicated by manufacturer instructions.

1.12 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.
B. Furnish five-year manufacturer's warranty for paint and coatings.

PART 2 - PRODUCTS

2.1 PAINTS AND COATING SYSTEMS

A. Cement Mortar Pipe Lining:

1. Cement mortar pipe lining shall conform to AWWA/ANSI C104/A21.4.
2. All potable water main pipe lining materials shall conform to NSF 61 and NSF 372 requirements.

B. Amine Cured Novalac Cured Epoxy:

1. Description: Two component amine cured novalac epoxy for interior sewer pipe lining.
2. Minimum Solids Content: 87%.
3. Minimum Ceramic Quartz Content: 20%.
4. Minimum Dry Film Thickness: 40 mils.
5. Permeability:

a. The ceramic epoxy shall have a permeability rating of zero permeance when a film of at least 40 mils is tested according to ASTM D1653-79.
b. A permeability rating of 0.0 perms shall be achieved when measured using method A of ASTM E66-96 with a test duration of 42 days.

6. Manufacturers:

a. Fast Fabricators, SP-2000W
b. Induron, Protecto 401,
c. Environmental MD, Permox-CTF.

C. Bituminous Coating:

1. Description: Bituminous coating for concrete and pipe in mildly corrosive environments.
2. Number of Coats: Two (2).
3. Dry Film Thickness per Coat: Twelve (12) mils.

4. Application Method: Brush or Spray.
5. Each coat shall be applied at a rate of one (1) gallon per one hundred (100) square feet.
6. Manufacturers:
    a. Koppers, Bitumastic No. 300,
    b. Tnemec, 46H-413,
    c. or approve equal.

D. Polyamide Anti-Corrosive Coating – Moderately Corrosive Environment:

1. Description: Polyamide anti-corrosive coating for exposed metal and piping in moderately corrosive environments as shown and specified.
2. Polyamide, anti-corrosive epoxy primer:
    a. Number of Coats: One (1).
    b. Minimum Thickness per Coat: Three (3) mils.
3. Polyurethane Enamel:
    a. Number of Coats: Two (2).
    b. Minimum Thickness per Coat: Three (3) mils.
4. Manufacturers:
    a. Tnemec:
        1) Epoxy Primer: Series 66HS Hi-Build Epoxoline.
        2) Finish Coat: Series 72 Endura-Shield.
    b. Sherwin Williams
        1) Epoxy Primer: Macropoxy 646FC Polyamide Epoxy.
        2) Finish Coat: Macropoxy 646FC Polyamide Epoxy.

E. Polyamide Anti-Corrosive Coating – Highly Corrosive Environment:

1. Description: Polyamide anti-corrosive coating for exposed metal and piping in highly corrosive environments as shown and specified.
2. Polyamide, anti-corrosive epoxy primer:
    a. Number of Coats: One (1).
    b. Minimum Thickness per Coat: Three (3) mils.
3. Polyamide Epoxy-Coal Tar:

a. Number of Coats: Two (2).

b. Minimum Thickness per Coat: Eight (8) mils.

4. Manufacturers:

a. Tnemec:

1) Epoxy Primer: Series N69F Hi-Build Epoxoline.

2) Finish Coat: Series 435 Perma-Shield.

b. Sherwin Williams

1) Epoxy Primer: Cor-Cote SC Epoxy High Build Amine Cured Epoxy.

2) Finish Coat: Cor-Cote SC Epoxy High Build Amine Cured Epoxy.

F. Coal Tar Epoxy:

1. Description: Polyamide, epoxy-coal tar for application in moderately corrosive environments as shown or specified.
2. Exposure: Moderate.
3. Minimum Solids Content: 100-percent by volume.
4. Number of Coats: Two (2).
5. Minimum Dry Film Thickness Per Coat: Eight (8) mils.
6. Coating Systems:

a. Tnemec:

1) Epoxy Primer: Series N69F Hi-Build Epoxoline.

2) Finish Coat: Series 446 Perma-Shield.

b. Sherwin Williams:

1) Epoxy Primer: Cor-Cote SC Epoxy High Build Amine Cured Epoxy.

2) Finish Coat: Cor-Cote SC Epoxy High Build Amine Cured Epoxy.

G. Epoxy Coating for Concrete Coating for Highly Corrosive Environments:

1. Description: Multi-component aggregate-filled epoxy for application in highly corrosive environments as shown or specified.
2. Exposure: Severe.
3. Substrate Repair Material:

a. Number of Coats: One (1).

b. Minimum Thickness: 125 mil.

c. Application Method: Trowel.

4. Aggregate-Filled Epoxy Sealer:

a. Number of Coats: One (1).

b. Minimum Thickness: 125 mil.

c. Application Method: Spray or Trowel.

5. Minimum Solids Content: 100-percent by volume.

6. Manufacturers:

a. Sauereisen, SewerGard No. 210,

b. Tnemec, Series 434 Perma-Shield H2S,

c. Sherwin Williams, SherFlex Polyurethane Elastomer.

H. Coating for Aluminum in Contact with Dissimilar Materials:

1. Coat all surfaces of aluminum in contact with dissimilar materials such as concrete, mansonry, and steel with the following:

a. Two component polyamidoamine or polyamine epoxy.

b. Minimum Solids: 100-percent by volume.

c. Number of Coats: Two (2).

d. Minimum Thickness: 8 mil DFT per coat.

e. Manufacturers:

1) Tnemec, Series 165 Epoxoline 100,

2) Sherwin Williams, Dura-Plate UHS,

3) or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for application examination.
B. Verify that surfaces are ready to receive Work as recommended by product manufacturer.
C. Examine surfaces scheduled to be finished prior to commencement of Work and report conditions capable of affecting proper application to Engineer.
D. Test shop-applied primer for compatibility with subsequent cover materials.
E. Moisture Content:

1. Measure moisture content of surfaces using electronic moisture meter.

2. Do not apply finishes unless moisture content of surfaces are below following maximums:

a. Masonry, Concrete, and Concrete Unit Masonry: 15 percent.

b. Concrete Floors: 8 percent.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for application preparation.

B. Surface preparation, curing times, number of coats, and the application methods shall be as contained in the lining and/or coating material manufacturer's published literature.

C. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

D. Defects:

1. Correct defects and clean surfaces capable of affecting Work of this Section.
2. Remove or repair existing coatings exhibiting surface defects.

E. Impervious Surfaces:

1. Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach.
2. Rinse with clean water and allow surface to dry.

F. Aluminum Surfaces Scheduled for Paint Finish:

1. Remove surface contamination by steam or high-pressure water.
2. Remove oxidation with acid etch and solvent washing.
3. Apply etching primer immediately following cleaning.

G. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish:

1. Remove foreign particles to permit adhesion of finishing materials.
2. Apply compatible sealer or primer.

H. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.

I. Concrete Floors:

1. Remove contamination, acid etch, and rinse floors with clear water.
2. Verify that required acid-alkali balance is achieved.
3. Allow to dry.

J. Copper Surfaces Scheduled for Paint Finish:

1. Remove contamination by steam, high-pressure water, or solvent washing.
2. Apply vinyl-etch primer immediately following cleaning.

K. Gypsum Board Surfaces:

1. Fill minor defects with filler compound.
2. Spot-prime defects after repair.

L. Galvanized Surfaces:

1. Remove surface contamination and oils, and wash with solvent.
2. Apply coat of etching primer.

M. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish:

1. Concrete Manhole and Wet Well:
2. Sandblast according to Specification SSPC-SP-7 ("Brush Off Blast Cleaning") with 60-80 mesh sand and air pressure of 50-60 psi to remove all cement glaze and residue of form release agents and provide a uniform surface profile of approximately one (1) mil.
3. Vacuum clean or air blast surface prior to coating. Apply coating to a dry surface (less than [15%] moisture-free as measured by a moisture meter) only.

N. Metal, Non-Submerged:

1. Clean all metal surfaces according to Specification SSPC- SP6 ("Commercial Blast Cleaning").

O. Shop-Primed Steel Surfaces:

1. Sand and scrape to remove loose primer and rust.
2. Feather edges to make touch-up patches inconspicuous.
3. Clean surfaces with solvent.
4. Prime bare steel surfaces.

P. Metal Doors Scheduled for Painting: Prime metal door at top and bottom edge surfaces.
Q. Existing Work:

1. Extend existing paint and coatings installations using materials and methods compatible with existing installations and as specified.

3.3 APPLICATION

A. Ductile Iron Pipe:

1. Ductile iron pipe interior and exterior coatings shall be checked for thickness using a magnetic film thickness gauge.
2. Thickness testing shall be done using the method outlined in SSPC-PA-2 film thickness testing.
3. The lining material shall not be applied above the thickness per coat as recommended in the manufacturer's printed literature.
4. Each pipe joint and fitting shall be marked with the date of the application of the lining system and with its numerical sequence of application on that date.

B. Concrete Manhole and Wet Well:

1. Apply liner and coatings to uniform thickness and in strict accordance with manufacturer's instructions and these requirements.
2. After pre-cast sections have been assembled seal all joints with a minimum six (6) inch overlap at each joint.

C. Metal, Non-Submerged:

1. Paint all exposed steel that is not stainless steel, exposed pipe work (except PVC), fittings, motors, and all mechanical equipment.
2. Touch up all shop-primed metal work as required in the field with epoxy primers and final coatings.

D. Comply with MPI - Architectural Painting Manual.
E. Do not apply finishes to surfaces that are not dry.
F. Apply each coat to uniform appearance.
G. Apply each coat of paint slightly darker than preceding coat, unless specified otherwise.
H. Sand metal surfaces lightly between coats to achieve required finish.
I. Cleaning:

1. Vacuum surfaces to remove loose particles.
2. Use tack cloth to remove dust and particles just prior to applying next coat.

J. Finishing Mechanical and Electrical Equipment:

1. Paint shop-primed equipment.
2. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components, and paint separately.
3. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars, and supports, except where these items are shop finished.
4. Paint interior surfaces of air ducts visible through grilles and louvers with one coat of flat black paint to visible surfaces.
5. Paint dampers exposed behind louvers and grilles to match face panels.
6. Paint exposed conduit and electrical equipment installed in finished areas.
7. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
8. Color-Coding:

    a. Color-code equipment, piping, conduit, and exposed duct work according to indicated requirements.
    b. Color band and identify with flow arrows, names, and numbering as shown and specified.

9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings that were removed prior to finishing.

3.4 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Inspecting and Testing: Comply with MPI - Architectural Painting Manual.

3.5 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
B. Collect waste material that may constitute fire hazards, place in closed metal containers, and remove daily from Site.

3.6 ATTACHMENTS

A. Schedule: Finishes shall be as shown on the Drawings.

END OF SECTION

Section 13300

PROCESS INSTRUMENTATION AND CONTROL SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Work includes engineering, furnishing, installing, programming, testing, documenting and placing in operation a Programmable Logic Controller (PLC) within a SCADA/RTU Panel at Lift Station 7 West.

B. It is the ultimate responsibility of the CONTRACTOR to furnish a complete and fully operable system that reliably performs the specified functions. However, it is the intent of these Contract Documents that a single entity (henceforth referred to as the SYSTEM SUPPLIER) be retained by the CONTRACTOR to have overall responsibility for designing, furnishing, interfacing, adjusting, testing, documenting, and starting-up the equipment described in the Contract Documents.

C. The work defined in this Specification Section shall be performed by the following listed below and henceforth referred to as the SYSTEM SUPPLIER.

1. Revere Controls

2. Inframark A&I

3. iQuest

D. The CONTRACTOR shall be responsible for:

1. Equipment storage and protection until installed following the storage and handling instructions recommended by the SYSTEM SUPPLIER. Anti-static and winterization requirements shall be per the SYSTEM SUPPLIER's instructions and the SYSTEM SUPPLIER shall periodically verify that these instructions are followed.

2. Including within the electrical subcontractor's scope the provision, installation and termination of field and power wiring to the SCADA/RTU Panel. Termination shall be made in accordance with final accepted interconnection diagrams developed by the SYSTEM SUPPLIER. The electrical subcontractor shall mark on the interconnect diagram the field wire numbers used for each termination point. The SYSTEM SUPPLIER shall finalize the

interconnect diagrams by including these field wire numbers in the final as built version.

E. All engineering development required by the SYSTEM SUPPLIER will be in accordance with the Conditions of this Contract.

F. Equipment found to be defective prior to system acceptance shall be replaced and installed at no additional cost to the OWNER.

G. In the bid price, the SYSTEM SUPPLIER shall provide for obtaining the services of authorized field personnel from the manufacturers of components or systems provided under this section but not manufactured by the SYSTEM SUPPLIER. Should these personnel be required during installation, start-up and checkout of the new PLC, such services shall be provided at no additional cost to the OWNER.

1.02 RELATED WORK

A. All conduits, power and field wiring and cables are provided and installed under Division 16.

1.03 SUBMITTALS

A. Furnish, as prescribed under the General Requirements, all required submittals covering the items included under this section and its associated sections of the work.

B. Submit complete, neat, orderly, and indexed submittal packages. Handwritten diagrams are not acceptable, and all documentation submittals shall be made using CADD generated utilities.

C. Partial submittals or submittals that do not contain sufficient information for complete review or are unclear will not be reviewed and will be returned by the ENGINEER as not approved.

D. Provide all shop drawing submittals in PDF format.

E. Provide a single control panel shop drawing submittal containing the following:

1. Loop diagrams, consisting of complete wiring and/or plumbing diagrams for each control loop showing all terminal numbers, the location of the dc power supply, the location of any booster relays or common dropping resistors, surge arrestors, etc. The loop diagrams shall meet the minimum requirements of ISA S5.4 plus divide each

loop diagram into four areas for identification of element locations: PLC I/O point(s), panel face, back-of-panel, and field, respectively.

2. System interconnect diagram that shows all connections required between component parts of the items covered in this section and between the various other systems specified in this Contract. Number all electrical terminal blocks and field wiring. Identify each line at each termination point with the same number. Do not use this number again for any other purpose in the complete control scheme.

3. Bill of Materials: A list of all components, including all 3rd party software. Group components by type and include component model number and part number, component description, quantity supplied, and reference to component catalog information.

4. Descriptive Information: Catalog information, descriptive literature, performance specifications, internal wiring diagrams, power and grounding requirements, power consumption, and heat dissipation of all elements. Clearly mark all options and features proposed for this project.

5. Installation Details. Equipment installation drawings showing external dimensions, enclosure material and spacing, mounting connections, and installation requirements.

6. A list of, and descriptive literature for, spares, expendables, and test equipment.

F. Test Procedures: Submit the procedures proposed to be followed during all system testing. Procedures shall include test descriptions, forms, and check lists to be used to control and document the required tests.

G. Test Reports: Upon completion of each required test, document the test by submitting a copy of the signed off test procedures to the ENGINEER.

1.04 FINAL DOCUMENTATION

A. After the demonstration tests have been completed and as a part of the final acceptance requirements, submit the system record drawings. Record drawings shall include, corrected for any changes that may have been made up through Substantial Completion:

1. instrument loop wiring diagrams

2. panel wiring diagrams

3. panel elevations

4. interconnection diagrams showing terminal numbers at each wiring termination

B. Record drawings shall be developed or converted to the latest version of AutoCAD. Provide two copies of all AutoCAD files on USB Drives.

C. Operating and Maintenance (O&M) Manuals: Provide the specified number of complete sets of three-ring bound O&M manuals in accordance with Division 1. Include descriptive material, drawings, and figures bound in appropriate places. Include:

1. Cross references to 3rd party O&M manuals.

2. Additional operating and maintenance instructions in sufficient detail to facilitate the operation, removal, installation, adjustment, calibration and maintenance of each component provided.

3. All the submittal data for each component from the approved shop drawing submittals with corrections made on approved as noted items.

4. A USB containing the shop drawing data in PDF format in the binder sleeve.

D. Provide the following additional final documentation:

1. licenses in the OWNER's name for all software supplied including software used for programming.

2. final copies of all programming files on USB Drive

1.05 QUALITY CONTROL

A. The SYSTEM SUPPLIER shall be subcontracted by and paid by the CONTRACTOR.

B. The SYSTEM SUPPLIER shall meet all of the requirements of these specifications, and, unless specifically stated otherwise, no prior acceptance of any subsystem, equipment, or materials has been made.

C. All equipment furnished by the SYSTEM SUPPLIER shall be of the latest and most recent design and shall have overall accuracy as guaranteed by the manufacturer.

D. Materials and equipment used shall be U.L. approved wherever such approved equipment and materials are available.

E. Component equipment shall be as supplied by one of the manufacturers named or approved equal. The design of the system is based on the first-named manufacturer's equipment if there is a difference.

F. To facilitate the OWNER's operation and maintenance, products shall be of the same major MANUFACTURER, with panel mounted devices of the same type and model as far as possible.

G. In order to insure the interchangeability of parts and the maintenance of quality, strict compliance with the above requirements shall be maintained.

H. The SYSTEM SUPPLIER shall designate a single point of contact for interface with the ENGINEER on this project. The ENGINEER reserves the sole right to approve or reject this point of contact.

I. The SYSTEM SUPPLIER shall provide experienced personnel on-site to coordinate and/or perform installation, termination, and adjustment; on-site testing; OWNER training; and startup assistance for the system.

1.06 STANDARDS

A. The design, testing, assembly, and methods of installation of the wiring materials, electrical equipment and accessories proposed under this Contract shall conform to the National Electrical Code and to applicable state and local requirements. UL listing and labeling shall be adhered to under this Contract.

B. Instrument Society of America (ISA) and National Electrical Manufacturers Association (NEMA) standards shall be used where applicable in the design of the system.

C. Any equipment that does not have a UL, FM CSA, or other approved testing laboratory label shall be furnished with a notarized letter signed by the supplier stating that the equipment famished has been manufactured in accordance with the National Electric Code and OSHA requirements.

D. Any additional work needed resulting from any deviation from codes or local requirements shall be at no additional cost to the OWNER.

1.07 WARRANTY AND GUARANTEES

A. In accordance with Division 1, the SYSTEM SUPPLIER shall furnish to the OWNER a written two year guarantee commencing with substantial completion, that all equipment and parts thereof, material and/or workmanship are of top quality and free from defects.

B. The SYSTEM SUPPLIER shall guarantee all equipment whether or not of his own manufacture.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Equipment to be installed in a hazardous area shall meet Class, Group, and Division classification as shown on the Contract Electrical Drawings, or comply with the local or National Electrical Code, whichever is the most stringent requirement.

B. All components supplied shall be of the MANUFACTURER's latest design and shall produce or be activated by signals, which are established standards for the water and wastewater industries.

C. Electronic equipment shall utilize printed circuitry suitably coated to prevent contamination by dust, moisture and fungus. Solid-state components shall be conservatively rated for their purpose, to assure optimum long-term performance and dependability over ambient atmosphere fluctuations and 0 to 100 percent relative humidity. The field mounted equipment and system components shall be designed for installation in dusty, humid, and slightly corrosive service conditions.

D. All equipment shall be designed to operate on a 60-Hertz alternating current power source at a normal 120 volts, plus or minus 10 percent, except where specifically noted. All regulators and power supplies required for compliance with the above shall be provided between power supply and interconnected instrument loop. Where equipment requires voltage regulation, constant voltage transformers shall be supplied.

E. All equipment, cabinets and devices furnished hereunder shall be heavy-duty type, designed for continuous industrial service. The system shall contain products of a single MANUFACTURER, insofar as possible, and shall consist of equipment models which are currently in production. All equipment provided shall be of modular construction and shall be capable of field expansion through the installation of plug-in circuit cards or additional cabinets.

F. The equipment furnished shall be designed to operate satisfactorily between 0 degrees C and 40 degrees C at up to 95 percent Relative Humidity (non-condensing).

G. All switches shall have double-pole, double-throw contacts rated at a minimum of 600 volts-amperes (VA), unless specifically noted otherwise.

H. All equipment shall be designed and constructed so that in the event of a power interruption, the equipment specified hereunder shall resume normal operation without manual resetting when power is restored.

2.02 FIELD INSTRUMENTS

A. Provide the field instruments shown on the Contract Drawings and as further defined herein.

B. Electro-magnetic Flow Metering System. The magnetic flow metering system shall comprise a flow through spool piece with sensing electrodes (Flow Element, FE) and an electronics unit (Flow Indicating Transmitter, FIT). The spool piece shall contain a coil energized by D.C. pulses from the electronics unit. The voltage induced in the process fluid shall be sensed by the electrodes and converted, by the electronics unit, into a derived flow signal.

1. System Performance:

a. Systems shall be wet calibrated at the factory using NIST traceable equipment.

b. Overall system accuracy shall be plus or minus 0.2 percent of rate between 1 and 30 feet per second.

c. It shall be possible to verify system calibration in the field. Methods which require removal of the spool piece or a second flow measurement (i.e. another meter or known volume) will not be acceptable.

2. Materials:

a. Tube – 304 Stainless Steel

b. Liner – Teflon or Ebonite

c. Electrodes – 316 Stainless Steel or Hastelloy

3. Ratings:

a. Vault located spool piece – Rated for continual submergence to 10 feet. This shall include potting of the able between the spool piece and electronics unit.

b. Other spool pieces –NEMA 4X.

c. Electronics Unit – NEMA 4X

4. Electrical:

   a. Power Requirement - 120 VAC plus or minimum 10 percent, 60 Hertz.

   b. Maximum Power Consumption – 20 Watts.

5. Functional:

   a. Programmable low flow cut-out

   b. Empty pipe detection

   c. Electronic unit display: minimum of 2 x 16-character, backlit LCD.

6. Options:

   a. Provide HART compatible instrument communications.

   b. Provide grounding rings as required to establish potential matching.

   c. Provide ultrasonic cleaning where necessary for coating sensitive systems.

   d. Provide special tools and software necessary to effect field calibration.

   e. Provide certificate of factory calibration.

7. Manufacturer, Model series:

   a. Siemens SiTran Mag5100 flow tube and FM Mag 6000 transmitter with Siemens Verificator.

   b. ABB WaterMaster

C. Ultrasonic Level Element and Transmitter. The system shall consist of a sensor (Level Element, LE) that uses a non-contact measurement technique to measure the liquid level in a vessel, tank or basin that produces an analog signal proportional to level.

1. System Performance:

   a. Overall system accuracy shall be plus or minus 0.08 inches.

b. The unit shall contain programmable functions that allow false echoes from passing equipment are damped out.

c. The system shall be field calibratable

2. Power Requirement – Loop powered

3. Materials – PVDF cone

4. Options:

a. Provide manufacturer provided stainless steel mounting hardware.

b. Provide manufacturer supplied stainless steel sunshield.

5. Manufacturer, Model series:

a. Siemens HydroRanger, with XPS-15

b. Approved equal.

D. Level Switch, Float. The level switch shall be a direct acting, weighted float suspended on its own cable. As the liquid level rises the float tilts and actuates a hermetically sealed mercury switch inside the float. The cable shall be terminated within a junction box located outside the tank or basin. For multiple float applications, all cables shall terminate in a single junction box.

1. Materials:

a. Float wetted part – Polypropylene

b. Cable – PVC jacketed

c. Junction box – 316 SS

2. Ratings:

a. Junction box – NEMA 4X

3. Electrical:

a. Dry contact rated to 4.5 Amps at 120 VAC

b. Normally open or normally closed as required for the application

4. Options

a. Provide stainless steel supports/mounting accessories as required.

5. Manufacturer, model:

a. Anchor Scientific, Roto-float type S

b. No equal.

E. ~~Limit Switch. The limit switch shall detect the closed position of a hatch, door, etc. by means of an actuator. The actuator shall energize the switch while the door is closed.~~

~~1. General:~~

~~a. Actuator orientation: As required for application~~

~~b. Actuator mechanism: Adjustable lever roller.~~

~~c. Switch shall not be mounted on the moving portion of the door or hatch.~~

~~2. Materials:~~

~~a. Normal applications: Phosphate coated zinc with Epoxy coating.~~

~~b. Corrosive locations: All 316 Stainless Steel including actuating lever.~~

~~3. Ratings:~~

~~a. NEMA 4X for normal applications.~~

~~b. NEMA 6 where potential submergence exists.~~

~~c. Use explosion proof switches with factory installed cable for all Class I rated locations.~~

~~4. Electrical:~~

~~a. Normally open and normally closed dry contacts~~

~~b. Dry contact rated to 10 Amps at 120 VAC~~

~~5. Options~~

~~a. Provide stainless steel supports/mounting and strike plates as required.~~

~~6. Manufacturer, model:~~

~~a. Honeywell, model HDLS or LSX as applicable~~

~~b. Approved equal.~~

Radar Level Element and Transmitter. The system shall consist of a sensor (Level Element, LE) that uses a non-contact measurement technique to measure the liquid level in a vessel, tank, or basin that produces an analog signal proportional to level.

1. System Performance:

a. Overall system accuracy shall be plus or minus 0.08 inches.

b. The unit shall contain programmable functions that allow false echoes from passing equipment are damped out.

c. The system shall be field calibratable.

2. Power Requirement:

a. Loop Powered.

3. Materials:

a. Stainless Steel.

4. Communications:

a. 4-20mA Output.

b. HART.

5. Options:

a. Provide manufacturer provided stainless steel mounting hardware.

b. Provide manufacturer supplied stainless steel sunshield.

6. Manufacturer, Model Series:

a. Siemens LR560.

b. Approved equal.

2.03 PROGRAMMABLE LOGIC CONTROLLER

A. Monitoring and control of the site shall be accomplished within the PLC. All control strategies specified in Part 3 of this Specification Section shall be implemented within the new PLC.

B. The PLC shall be implemented using the Schneider M340 family of controllers and I/O. The use of other manufacturer's products will not be acceptable.

C. The PCP shall be NEMA 4X 316 stainless steel enclosure with a continuous piano hinge and a lockable 3-point latch.

D. The PCP shall be PLC based and be in strict compliance with the control panel requirements defined herein.

E. The PLC shall be implemented using the Schneider M340 series modules housed in a DIN-rail mounted chassis:

1. Power Supply Module. Each PLC rack shall be equipped with its own regulated power supply module energized from a standard, commercial 120 VAC 60 Hz, single phase source. Any power transformation, rectification, regulation, or other conditioning necessary shall be provided as part of the unit's power supply package. Provide Schneider P/N BMXCPS3020

2. Central Processor Unit (CPU). The CPU module shall include a math coprocessor and a minimum of 8 MBytes of SRAM memory shall be installed. However, the actual amount of memory supplied shall be sufficient to provide 20% unused capacity when the entire PLC program, as provided, is loaded and running. Provide Schneider M340 P/N BMXP342020 as necessary to perform the required functions. The PLC shall be programmed using Schneider's Unity platform.

3. Ethernet Module. Interfaces the CPU rack with an Ethernet network, either 10 Base-T/100 Base-TX or 100 Base-FX. Provide Schneider P/N BMXNGD0100.

4. Process I/O modules. Provide process I/O modules sufficient to accommodate the required I/O as shown on the Contract Drawings plus a minimum of 15% fully wired spares of each signal type. All I/O modules shall be provided with screw type terminal blocks with barriers between adjacent terminals for connection of field wiring. Terminals shall be suitable for accepting up to and including No. 14 AWG wire. All terminal blocks shall be key coded to prevent connection to other I/O modules. The following modules shall be used:

5. Discrete inputs: Schneider model BMXDDI3202K.

6. Analog inputs: Schneider model BMXAMI0810.

7. Discrete outputs: Schneider model BMXDRA0805.

8. Analog outputs: Schneider model BMXAMO0410.

9. Ethernet Backplanes. Used to interface I/O modules to the CPU. The following models are acceptable:

10. 4 Slot Ethernet Backplane: Schneider model BMEXBP0400

11. 12 Slot Ethernet Backplane: Schneider model BMEXBP1200

12. Memory Card. The Memory card shall be a 4GB SD memory card which will be used for program backup. Provide Schneider P/N BMXRMS004GPF

2.04 OPERATOR INTERFACE TERMINALS

A. An operator interface terminal shall be provided, where shown and/or specified. The OIT shall be a front panel mounted OIT with a 19" wide display (1366x768). Provide application software and programming as needed to allow local operator monitoring and control of the associated PLC. Provide a Harmony GTU, no equal.

2.05 CONTROL PANEL DEVICES

A. Uninterruptible Power Supply. A UPS shall be provided to power all components within the control panel. The UPS shall meet the following minimum requirements.

1. Voltage. 120VAC

2. VA Rating. 1500 VA

3. Wattage. 1350 W

4. Receptacles. 6 5-15R

5. Outputs. 2 Relay Outputs

6. Manufacturer, model

a. Eaton, 9SX1500

b. No Equal.

2.06 SPARES

A. Provide the following spare parts to cover all three stations:

1. One spare CPU module

2. One spare of each type of Power Supply Module.

3. One spare Interface Module of each type provided.

4. Two spare I/O modules of each type provided.

5. Five percent (rounded up) spare relays of each type provided.

6. One spare network switch.

2.07 COMMUNICATION

A. The CONTRACTOR shall provide an AT&T ASE fiber circuit. The circuit shall terminate on a telephone board in the electrical building per drawings.

B. The CONTRACTOR shall establish the AT&T ASE circuit account and maintain the contract until substantial completion. Upon substantial completion, the contractor shall turn over the service and account responsibility to the county.

C. All powered communication devices and appliances shall be provided online UPS power for bumpless power connectivity in case of a power outage.

PART 3 - EXECUTION

3.01 GENERAL

A. Prerequisite Activities and Lead Times: Do not start the following key project activities until the listed prerequisite activities have been completed and lead times have been satisfied:

1. Hardware Purchasing, Fabrication, and Assembly: Associated design related submittals completed (no exceptions, or approved as noted).

2. Shipment: Completion and approval of all design related submittals.

3. Startup: Operational Checkout Tests.

4. OWNER Training: Owner Training Plan completed and O&M manuals delivered.

5. Demonstration Tests: Operational Check-out Tests, Startup, OWNER Training, and Demonstration Test Procedures must be complete. Give 4 weeks' notice prior to the planned test start date.

B. Substantial Completion: Substantial Completion for the project is as defined in the General Conditions. However, the following requirements must be fulfilled before consideration will be given for Substantial Completion of the system:

1. All system submittals have been completed.

2. The system has successfully completed the Demonstration Tests.

3. The required OWNER training has been completed.

4. All spares, expendables, and test equipment have been received by OWNER.

C. Final Acceptance: system final acceptance is defined as the date when the ENGINEER issues a written notice of final acceptance. For this Section, the following must have been completed before consideration will be given to the issuance of notice of final acceptance:

1. All punch-list items have been checked off.

2. Revisions to the system O&M Manuals have been made (that may have resulted from the Demonstration Tests).

3.02 PRODUCT HANDLING

A. Adequately pack manufactured material to prevent damage during shipping, handling, storage and erection. Pack all material shipped to the project site in a container properly marked for identification. Use blocks and padding to prevent movement.

B. Ship materials that must be handled with the aid of mechanical tools in wood-framed crates.

C. Ship all materials to the project site with at least one layer of plastic wrapping or other approved means to make it weatherproof. Anti-stat protection shall be provided for all sensitive equipment.

D. Inspect the material prior to removing it from the carrier. Do not unwrap equipment until it is ready to be installed. If any damage is observed, immediately notify the carrier so that a claim can be made. If no such notice is given, the material shall be assumed to be in undamaged condition, and any subsequent damage that is discovered shall be repaired and replaced at no additional expense to the OWNER.

E. Store and protect equipment until installation following the storage and handling instructions recommended by the equipment manufacturers. Place special emphasis on proper anti-static protection of sensitive equipment.

F. ESD Protection: Provide for the proper handling, storage, and environmental conditions required for the system components deemed static sensitive by the equipment manufacturer. Utilize anti-stat wrist straps and matting during installation of these items to prevent component degradation.

G. Protection During Construction: Throughout this Contract, provide protection for materials and equipment against loss or damage and from the effects of weather. Prior to installation, store items in indoor, dry locations. Provide heating in storage areas for items subject to corrosion under damp conditions. Provide covers for panels and other elements that may be exposed to dusty construction environments. Specific storage requirements shall be in accordance with the SYSTEM SUPPLIER's recommendations.

H. Corrosion Protection: Protect all consoles, panels, enclosures, and other equipment containing electrical or instrumentation and control devices, including spare parts, from corrosion through the use of corrosion-inhibiting vapor capsules. Prior to shipment, include capsules in the shipping containers, and equipment as recommended by the capsule manufacturer. During the construction period, periodically replace the capsules in accordance with the capsule manufacturer's recommendations. Replace all capsules just prior to Final Acceptance.

I. The CONTRACTOR shall be responsible for any damage charges resulting from the handling of the materials.

3.03 INSTALLATION

A. Keep the premises free from accumulation of waste material or rubbish. Upon completion of work, remove materials, scraps, and debris from premises and from interior and exterior of all devices and equipment. Touch-up scratches, scrapes, or chips in interior and exterior surfaces of devices and equipment with finishes matching as nearly as possible the type, color, consistency, and type of surface of the original finish. Clean and polish the exterior of all panels and enclosures upon the completion of the demonstration tests.

B. Install materials and equipment in a workmanlike manner utilizing craftsmen skilled in the particular trade. Provide work which has a neat and finished appearance. Coordinate I&C work with the OWNER and work of other trades to avoid conflicts, errors, delays, and unnecessary interference.

C. Start up the new PLC and confirm its proper operation. While the station operation must be temporarily taken out of backup control to achieve this,

return it to that condition following any checkout work until the start up is fully and satisfactorily completed.

D. Once the new PLC is in full control of the station, verify the operation of the Backup Control Panel set forth in the Contract Drawings.

3.04 TRAINING

A. The cost of training programs to be conducted with OWNER's personnel shall be included in the Contract price.

B. All training schedules shall be coordinated with, and at the convenience of the OWNER. Shift training may be required to correspond to the OWNER's working schedule.

C. Provide a minimum of one day training for up to three of the OWNER's personnel in the maintenance of the hardware which shall include:

1. Training in standard hardware maintenance for the equipment provided.

2. Specific training for the actual hardware configuration to provide a detailed understanding of how the equipment and components are arranged, connected, and set up.

3. Test, adjustment, and calibration procedures.

4. Troubleshooting and diagnosis.

5. Component removal and replacement.

6. Periodic maintenance.

D. Provide a minimum of one day training for up to six of the OWNER's personnel in the use of the operator graphic screens.

3.05 TESTING - GENERAL

A. All elements of the system, both hardware and software, shall be tested to demonstrate that the total system satisfies all of the requirements of the Contract Documents

B. As a minimum, the testing shall include shop tests, operational check-out tests, and Demonstration Tests.

C. Each test shall be in the cause and effect format. The person conducting the test shall initiate an input (cause) and, upon the system producing the correct result (effect), the specific test requirements will have been satisfied.

D. All tests shall be conducted in accordance with, and documented on, prior approved procedures, forms, and checklists. Each specific test to be performed shall be described and a space provided after it for signoff by the appropriate party after its satisfactory completion. Copies of these signoff test procedures, forms, and checklists will constitute the required test documentation.

E. Provide all special testing materials and equipment. Wherever possible, perform tests using actual process variables, equipment, and data. Where it is not practical to test with real process variables, equipment, and data, provide suitable means of simulation. Define these simulation techniques in the test procedures.

F. The SYSTEM SUPPLIER shall coordinate all of their testing with the CONTRACTOR, the ENGINEER, all affected suppliers, and the OWNER.

G. The ENGINEER reserves the right to test or retest any and all specified functions whether or not explicitly stated in the approved test procedures. The ENGINEER's decision shall be final regarding the acceptability and completeness of all testing.

3.06 FACTORY ACCEPTANCE TEST

A. Prior to shipment, perform a factory demonstration test on the fully assembled and functioning system as further defined below. Actual software furnished by others shall be loaded on the simulated development environment virtual machines. It is anticipated that this test will be of at least three full working days duration.

B. The testing shall include VFD and MCC equipment furnished under Division 16.

C. Successfully perform a full dry run of the test prior to certifying to the ENGINEER that the system is ready for OWNER and/or ENGINEER witness of a formal test. Travel and living costs for the two (2) ENGINEERS and two (2) OWNER personnel to witness the test shall be the responsibility of the SYSTEM SUPPLIER.

D. The intent of this test is to demonstrate to the ENGINEER’s satisfaction that the system is fully operational and debugged prior to shipment and installation. It is recognized that loop tuning, final drive parameter settings, etc. can only be performed in the field. However, subsequent to shipment it should only be necessary to confirm correct wiring and installation and proper control loop operation. The factory demonstration test shall therefore be structured to confirm the functional operation of the complete system.

E. Before starting the test, prepare a system inspection log. In the log, record the serial numbers of all major components and document that all portions

of the system have been inspected by quality assurance personnel. Include the log in the required test report.

F. Start-up the system from a fully powered down condition demonstrating that the various system elements can be brought online without adverse consequences. Throughout subsequent testing use system CISCO, VLAN, VMWare, PLC, and PICS diagnostics to demonstrate system status under the various fault scenarios.

G. Demonstrate normal operations including the following:

1. Functioning of all control strategies using the operator process graphics.

2. Correct operation of protective interlock relay logic within the Local Control Panels, Backup Relay Panels, and MCCs.

H. Demonstrate the ability, from an Operator Workstation, to review, modify, and adjust the following:

1. PLC programs

2. VFD drive parameters

3. Reduced Voltage Starter parameters.

4. Electronic Overload Relay parameters.

5. Network management including the redundant ring.

6. Remote management and configuration of the Ethernet switches

I. Demonstrate the required UPS back-up duration. This may be performed concurrently with other portions of the test.

J. Demonstrate the system can detect hardware failures and failover to standby systems, and that other system functions remain unaffected:

1. Failure of a power supply, server, network switch, network cable, and PLC.

2. Failure of a HMI, drive, starter, motor overload, power monitor, and network card.

3. Loss of communications with a server, workstation, HMI, switch, VFD, and WAP.

4. Failure of a field instrument, blown fuses, and relay failure.

K. Provide for up to two hours per day of OWNER/ENGINEER directed additional tests.

L. The SYSTEM SUPPLIER shall provide any and all travel and lodging for the entirety of the factory acceptance testing. The OWNER shall not incur any cost as it relates to the factory acceptance testing.

3.07 OPERATIONAL READINESS TEST (ORT)

A. Prior to startup and demonstration testing, certify that the system (inspected, tested and documented) is ready for operation. These inspections and tests shall include Loop/Component inspections and tests. The SYSTEM SUPPLIER shall fully debug problems in the system as a whole. Final approval of control software will not be based on written descriptions of software functions alone, but on actual performance in the field.

B. Check the entire system for proper installation, calibration and adjustment on a loop-by-loop and component-by-component basis to ensure that it is in conformance with related submittals and the Specifications.

C. The Loop/Component Inspections and Tests shall be implemented using approved forms and checklists. These shall be developed by the SYSTEM SUPPLIER and submitted for approval.

D. Loop Status Report: Each control loop shall have a Loop Status Report to organize and track its inspection, adjustment, and calibration. These reports shall include the following information and check-off items with spaces for sign-off by the SYSTEM SUPPLIER:

1. Project Name

2. Control Loop Number or description

3. Tag Number or description for each component of the control loop

4. Check-offs/sign-offs for each component for proper installation, termination, and calibration/adjustment

5. Check-offs/sign-offs for the control loop for proper panel interface terminations, I/O interface terminations, I/O signal operation relative to the computer network, and total loop operation ready

6. Space for comments

E. Component Calibration Sheet: Each field instrument element and each PLC I/O module shall have a Component Calibration Sheet. These sheets shall have the following information, spaces for data entry, and a space for signoff by the SYSTEM SUPPLIER:

1. Project Name

2. Component Identification or I/O Module Number

3. Manufacturer, Model Number/Serial Number of field element

4. Summary of Functional Requirements (scale, range, computing equation, control action, etc.)

5. Calibrations of span, setpoints, and preset adjustable parameters

6. Space for comments

F. Maintain the Loop Status Reports and Component Calibration Sheets at the jobsite and make them available to the ENGINEER at any time.

G. Witnessing: These inspections and tests do not require witnessing. However, the ENGINEER will review the Loop Status Sheets and Component Calibration Sheets and spot-check their entries periodically and upon completion of the Operational Check-out Tests. Correct any deficiencies found.

3.08 FIELD ACCEPTANCE TEST (FAT)

A. Once the system has passed the ORT, the SYSTEM SUPPLIER shall perform a witnessed Field Acceptance Test (FAT) on the complete system. The FAT shall demonstrate that the system is operating and in compliance with the Contract requirements. Each specified function shall be demonstrated on a paragraph-by-paragraph, and site-by-site basis.

B. Prior to the FAT, the entire installed system shall be certified in writing by the CONTRACTOR that it is ready for operation.

C. The system shall operate for a continuous 100 hours without failure before this test will be considered successful.

D. The FAT shall cover the entire system, including control functions, alarms, and status monitoring. Test procedures used for shop tests may be adopted for these tests if modified as required.

3.09 30-DAY SITE ACCEPTANCE TEST (SAT)

A. After completion of the Field Acceptance Test, the entire system shall operate for a period of 30 consecutive days, under conditions of full plant process operation, without a single non-field repairable malfunction.

B. Provide complete O&M Manuals for the system at the jobsite at least two weeks prior to the SAT.

C. During this test, plant operating and SYSTEM SUPPLIER personnel shall be present as required. The SYSTEM SUPPLIER is expected to provide personnel for this test who have an intimate knowledge of the hardware and software of the system.

D. While this test is proceeding, the OWNER shall have full use of the system. Only plant operating personnel shall be allowed to operate equipment associated with live plant processes.

E. Any malfunction during the tests shall be analyzed and corrections made by the SYSTEM SUPPLIER. The ENGINEER and/or OWNER will determine whether any such malfunctions are sufficiently serious to warrant a repeat of this test.

F. Any malfunction, during this 30 consecutive day test period, which cannot be corrected within 24 hours of occurrence by the SYSTEM SUPPLIER's personnel, or more than two similar failures of any duration, will be considered as a non-field-repairable malfunction.

G. Upon completion of repairs, by the SYSTEM SUPPLIER, the test shall be repeated as specified herein.

H. In the event of rejection of any part or function, the SYSTEM SUPPLIER shall perform repairs or replacement within 90 days.

I. All data base errors must be corrected prior to the start of each test period. The 30-day test will not be considered successful until all databases are correct.

J. The total availability of the system shall be greater than 99.5 percent during this test period.

1. Availability is given by “(Total Time-Down Time) / Total Time".

2. Down times due to power outages or other factors outside the normal protection devices or back-up power supplies provided, shall not contribute to the availability test times above.

K. Upon successful completion of the 30-day Site Acceptance Test and subsequent review and approval of complete system final documentation, the system shall be considered substantially complete and the warranty period shall commence.

3.10 CONTROL STRATEGIES

A. General. Provide control strategies that meet the following general conditions:

1. Utilize the OWNER's standard Type 6 program as the base programming for this project.

2. Wherever in the descriptions the control strategy refers to the operator, it is intended to mean via the operator graphic screens on the OIT or at the SCADA master site.

3. All control strategies shall run within the PLC. Data manipulation (calculated analog values, elapsed time functions, event determination) shall be performed by the PLC for the associated equipment it is monitoring. Any resulting values from these manipulations shall be reported as individual registers. The intent is to avoid utilizing the HMI software for this purpose.

4. The control functions described herein are not intended to be complete comprehensive programming logic descriptions. They describe only the general intended control operation required. Provide complete program logic to completely fulfill the functional requirements indicated.

5. Provide all programming necessary to support the functional requirements of the operator graphic screens.

6. Provide complete debugging services to address issues identified by the OWNER or ENGINEER during and after startup until final acceptance.

B. Overall Station Operation. Provide the following operator adjustable settings associated with overall station pumping operations:

1. A software WET WELL 1/BOTH/WET WELL 2 select switch. While the switch is set to WET WELL 1 or WET WELL 2, use that wet well's level transducer as the process variable for control. If the selected wet well level transducer fails, turn off the PLC FAIL output to initiate back up control operations. If BOTH is selected proceed as follows:

   a. Calculate the average reading of the two level transducers and use it as the process variable for control.

   b. If either transducer fails, issue an advisory alarm and switch to the other.

   c. If the difference between the readings of the level transducers differs by a preset amount, issue an advisory alarm.

2. A software IN SERVICE/OUT OF SERVICE select switch for each wet well. If a wet well is placed out of service, automatically set the

above select switch to the wet well still in service. If both wet wells are placed out of service, disable the control strategy. Establish a LEAD/LAG sequence for the wet wells that can be manually overridden by the operator. Automatically rotate the sequence when all pumps stop or after 24 hours.

3. LSL. Lower operating limit for wet well level.

4. LS. Target operating point for wet well level.

5. LSH. Upper operating limit for wet well level.

C. Overall Pumping Control Strategy. Establish a LEAD/LAG/LAG-LAG sequence for the pumps in each wet well that can be manually overridden by the operator. Omit from the schedule those pumps not in AUTO (including those not yet installed). Automatically rotate the sequence when all pumps in a wet well stop or after 24 hours. Issue calls for pumps as follows:

1. Provide a PID control loop that adjusts pump speed to maintain the process value at LS.

2. Call for another pump if the speed signal is at 100% and the process value rises to LSH. When starting the pump, ramp down operating pump speed until the new pump's speed matches then resume PID control. Call for pumps using the LEAD pump in the LEAD wet well first, followed by the LEAD pump in the LAG wet well and so on.

3. Stop the longest running pump if the speed signal is at an operator adjustable low value and the process value falls to LSL.

4. Automatically call for the next pump in sequence if a pump fails to start or fails while running.

5. Prevent a pump starting within a preset time of it being turned off.

D. Individual Pump Control. Provide the operator with a software HAND/OFF/AUTO select switch and SPEED potentiometer (restricted to the range 55%-100%) and proceed as follows:

1. While the select switch is in HAND run the pump at the speed set by the software potentiometer.

2. While the select switch is in OFF stop the pump and prevent it from running.

3. While the select switch is in AUTO, control the pump based on the overall pumping strategy above.

4. Set a software fail and operator alarm for any pump which:

   a. Fails to run within a preset time of being called to start.

   b. Fails to stop within a preset time of being called to stop.

   c. Fails while running.

5. Provide an operator controllable reset switch for the above software faults.

6. Within the PLC accumulate the elapsed run time and number of starts for the pump. Make these figures available to the operator through the graphic screens and provide the operator the ability to individually reset them to zero.

E. Station Mixer Control. Provide a control strategy within the new PLC to operate the two mixers when its respective wetwell is in service. Refer to Division 11 specs for additional requirements.

F. Slide Gate Controls. Provide a control strategy within the new PLC to operate the three slide gates when its respective wetwell is in service. Refer to Division 11 specs for additional requirements.

3.11 MONITORING FUNCTIONS

A. Station Flow Monitoring. Provide the following functions:

1. Monitor for and record minimum and maximum daily 5-minute average values for station flow. Record the date and time of occurrence for each.

2. Accumulate running daily total flow. At midnight, transfer the total to yesterday's total then restart accumulating from zero.

B. Station Discharge Pressure Monitoring. Monitor for and record minimum and maximum daily value of station pressure signal. Record the date and time of occurrence for each.

C. Station Potable Water Monitoring. Monitor for and record minimum and maximum daily value of water pressure signal. Record the date and time of occurrence for each.

D. Analog Signal Monitoring. For all analog signals monitored by the system excluding VFD speed signals, provide operator adjustable high and low level values and issue an alarm if the analog value goes outside this range.

E. Discrete Signal Monitoring. In addition to any alarms specifically described within the previously defined Control Strategies, issue an alarm for any fail status or for any un-commanded change of state.

3.12 OPERATOR GRAPHICS

A. Ensure that all command functions require a two-step process.

B. The graphic screens shall support all the operator interface functions associated with the PLC control strategies.

3.13 PROGRAMMING DEVICES AND SOFTWARE

A. Programming Device. The SYSTEM SUPPLIER shall provide a new Siemens PG M6 to the OWNER in the OWNER'S name with all the latest projects stored on the machine. The PG shall be provided with the latest version of TIA Portal Step 7 and WinCC Advanced. The owner shall be provided with a 1-year SUS on the PG and shall be transferred to the OWNER'S name after turnover.

B. Simocode ES. The SYSTEM SUPPLIER shall provide a licensed copy of Simocode ES V15.1 in TIA Portal in the OWNER'S name. A programming cable shall be provided to the OWNER by the SYSTEM SUPPLIER. This license is to be included in the SUS provided in subsection A of 3.12.

C. PLCSIM Advanced. The SYSTEM SUPPLIER shall provide a licensed copy of the latest version of Siemens TIA Portal PLCSIM Advanced in the OWNER'S name. This license is to be included in the SUS provided in subsection A of 3.12.

End of Section

SECTION 16000

BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish all labor, materials, equipment, and incidentals required and install complete and make operational, electrical and process instrumentation systems as shown on the Drawings and as specified herein.

B. The work shall include furnishing, installing, and testing the equipment and materials specified in other Sections of the Division 16 Specifications and shown on the Drawings.

C. The work shall include furnishing and installing the following:

1. Conduit, wire and field connections for all motors, motor controllers, control devices, control panels and electrical equipment furnished under other Divisions of these specifications.
2. Conduit, wiring and terminations for all field-mounted instruments furnished under other Divisions of these specifications, including process instrumentation primary elements, transmitters, local indicators, and control panels. Lightning and surge protection equipment wiring at process instrumentation transmitters. Install vendor furnished cables specified under other Divisions of these specifications.
3. A complete raceway system for the Data Highway Cables and specialty cable systems. Install the Data Highway Cables and other specialty cable systems in accordance with the system manufacturers' installation instructions. Review the raceway layout, prior to installation, with the computer system supplier and the cable manufacturer to ensure raceway compatibility with the systems and materials being furnished. Where redundant cables are furnished, install cables in separate raceways.
4. Power wiring for all heating, ventilating, and air conditioning (HVAC) equipment furnished under other Divisions of these Specifications, including power wiring for 120V unit heater motors, thermostats, fan motors, dampers and other HVAC inline unit wiring shown on the Drawings.
5. Furnish and install precast manholes and precast handholes.
6. Furnish and install manhole and handhole frames and covers.
7. It is the intent of these Specifications that the electrical system shall be suitable in every way for the service required. All material and all work which may be reasonably implied as being incidental to the work of this Section shall be furnished at no extra cost.

D. Each bidder or their authorized representatives shall, before preparing their proposal, visit all areas of the existing site in which work under this Division is to be performed and carefully inspect the present installation. The submission of the proposal by this bidder shall be considered evidence that their representative has visited the site and noted the locations and conditions under which the work will be performed and that he/she takes full responsibility for a complete knowledge of all factors governing his/her work.

E. The CONTRACTOR shall prepare and furnish electrical and instrumentation conduit layout shop drawings for yard electrical, within and under all roads, buildings and structures to the

ENGINEER for approval prior to commencing work. Layouts shall include but not be limited to equipment, pull boxes, manholes, conduit routing, dimensioning, methods and locations of supports, reinforcing, encasement, materials, conduit sizing, equipment access, potential conflicts, building and yard lighting, and all other pertinent technical specifications for all electrical and instrumentation conduits and equipment to be furnished. All layouts shall be drawn to scale on 24 x 36 sheets. Refer to the SUBMITTALS paragraph within this specification for additional requirements.

F. The work shall include complete testing of all equipment and wiring at the completion of work and making any minor correction changes or adjustments necessary for the proper functioning of the system and equipment. All workmanship shall be of the highest quality; substandard work will be rejected.

G. A single manufacturer shall provide switchgear, motor control centers, transformers, disconnect switches, panel boards, etc. This manufacturer shall also provide the power system study as specified herein.

H. CONTRACTOR shall provide their own temporary power for miscellaneous power (drills, pumps, etc.). No facility circuits shall be used unless approved in writing by the ENGINEER. Any temporary added shall be removed at final completion.

I. Complete coordination with other CONTRACTORs. CONTRACTOR shall coordinate with all other CONTRACTORs equipment submittals and obtain all relevant submittals.

J. Mount transmitters, process instruments, operator stations, etc. furnished under other Divisions of these specifications.

K. Concrete electrical duct encasement, including but not limited to excavation, concrete, conduit, reinforcement, backfilling, grading, and seeding is included in Division 16. All work shall be done in accordance with Divisions 2 and 3 of these specifications.

L. Excavation, bedding material, forms, concrete and backfill for underground raceways; forms and concrete for electrical equipment furnished herein is included in Division 16. All work shall be done in accordance with Divisions 2 and 3 of these specifications.

1.2 RELATED WORK

A. Excavation and backfilling, including gravel or sand bedding for underground electrical work is specified in Division 2.

B. Cast in place concrete work, including concrete encasements for electrical duct banks, equipment pads, light pole bases and reinforcing steel, is specified in Division 3.

1.3 SUBMITTALS

A. Submit to the ENGINEER, in accordance with Section 01300, Submittal Procedures, for equipment, materials and other items furnished under Division 16.

B. Shop drawings shall be submitted for the following equipment:

1. Section 16110 – Raceways, Boxes and Cabinets
2. Section 16108 – Miscellaneous Equipment
3. Section 16120 – Wires and Cables
4. Section 16150 – Motors
5. Section 16160 – Panelboards
6. Section 16195 – Electrical Identification
7. Section 16370 – Variable Frequency Drives
8. Section 16440 – Group Mounted Switchboards
9. Section 16450 – Grounding System
10. Section 16500 – Lighting System
11. Section 16670 – Lightning Protection System
12. Section 16709 – Surge Protection Devices (SPD)

C. Submittals shall be required for the following items:

1. Qualifications of Electrical Contractor Superintendent
2. Concealed and buried conduit layouts
3. Preliminary Short Circuit Study
4. Final Power System Study
5. Test reports
6. Manufacturer's service reports

D. The manufacturers name and product designation or catalog numbers shall be submitted for the following material utilized:

1. Testing Equipment
2. Ground System Resistance Test Equipment

E. Check shop drawings for accuracy and contract requirements prior to submittal. Shop drawings shall be stamped with the date checked and a statement indicating that the shop drawings conform to the Specifications and the Drawings. This statement shall also list all exceptions to the Specifications and the Drawings. Shop drawings not so checked and noted shall be returned.

F. The ENGINEER's check shall be for conformance with the design concept of the project and compliance with the Specifications and the Drawings. Errors and omissions on approved shop drawings shall not relieve the CONTRACTOR from the responsibility of providing materials and workmanship required by the Specifications and the Drawings.

G. All dimensions shall be field verified at the job site and coordinated with the work of all other trades.

H. Material shall not be ordered or shipped until the shop drawings have been approved. No material shall be ordered, or shop work started if shop drawings are marked "APPROVED AS NOTED - CONFIRM", "APPROVED AS NOTED - RESUBMIT" or "NOT APPROVED".

I. In addition to manufacturer's equipment shop drawings, submit electrical installation working drawings containing the following:

1. Concealed and buried conduit layouts, shown on floor plans drawn at not less than 1/4-in = 1-ft-0-in scale. The layouts shall include locations of process equipment, motor control

centers, transformers, panelboards, control panels and equipment, motors, switches, motor starters, large junction or pull boxes, instruments and any other electrical devices connected to concealed or buried conduits.

2. Plans shall be drawn on high quality paper, size 36-in by 24-in and shall be presented in a neat, professional manner.
3. Concrete floors and/or walls containing concealed conduits shall not be poured until conduit layouts are approved.

J. Operation and Maintenance Data

1. Submit operations and maintenance data for equipment furnished under this Division, in accordance with Section 01720. The manuals shall be prepared specifically for this installation and shall include catalog data sheets, drawings, equipment lists, descriptions, parts lists, etc., to instruct operating and maintenance personnel unfamiliar with such equipment.
2. Manuals shall include the following as a minimum:

   a. A comprehensive index.
   b. A complete "As-Built" set of approved shop drawings.
   c. A complete list of the equipment supplied, including serial numbers, ranges, and pertinent data.
   d. A table listing of the "as left" settings for all timing relays and alarm and trip setpoints.
   e. System schematic drawings "As-Built", illustrating all components, piping and electric connections of the systems supplied under this Section.
   f. Detailed service, maintenance and operation instructions for each item supplied.
   g. Special maintenance requirements particular to this system shall be clearly defined, along with special calibration and test procedures.
   h. The operating instructions shall also incorporate a functional description of the entire system, with references to the systems schematic drawings and instructions.
   i. Complete parts list with stock numbers, including spare parts.

1.4 REFERENCE STANDARDS

A. Electric equipment, materials and installation shall comply with the latest edition of National Electrical Code (NEC) and with the latest edition of the following codes and standards:

1. National Electrical Safety Code (NESC)
2. Occupational Safety and Health Administration (OSHA)
3. National Fire Protection Association (NFPA)
4. National Electrical Manufacturers Association (NEMA)
5. American National Standards Institute (ANSI)
6. Insulated Cable ENGINEERs Association (ICEA)
7. Instrument Society of America (ISA)
8. Underwriters Laboratories (UL)
9. Factory Mutual (FM)
10. International Electrical Testing Association (NETA)
11. Institute of Electrical and Electronic ENGINEERs (IEEE)

B. All electrical equipment and materials shall be listed by Underwriter's Laboratories, Inc., and

shall bear the appropriate UL listing mark or classification marking. Equipment, materials, etc. utilized not bearing a UL certification shall be field or factory UL certified prior to equipment acceptance and use.

C. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.5 PRIORITY OF THE CONTRACT DOCUMENTS

A. If, during the performance of the work, the CONTRACTOR finds a conflict, error or discrepancy between or among one or more of the Sections or between or among one or more Sections and the Drawings, furnish the higher performance requirements. The higher performance requirement shall be considered the equipment, material, device or installation method which represents the most stringent option, the highest quality or the largest quantity.

B. In all cases, figured dimensions shall govern over scaled dimensions, but work not dimensioned shall be as directed by the ENGINEER and work not particularly shown, identified, sized, or located shall be the same as similar work that is shown or specified.

C. Detailed Drawings shall govern over general drawings, larger scale Drawings take precedence over smaller scale Drawings, Change Order Drawings shall govern over Contract Drawings and Contract Drawings shall govern over Shop Drawings.

D. If the issue of priority is due to a conflict or discrepancy between the provisions of the Contract Documents and any referenced standard, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence if they are more stringent or presumptively cause a higher level of performance. If there is any conflict or discrepancy between standard specifications, or codes of any technical society, organization, or association, or between Laws and Regulations, the higher performance requirement shall be binding on the CONTRACTOR, unless otherwise directed by the ENGINEER.

E. In accordance with the intent of the Contract Documents, the CONTRACTOR accepts the fact that compliance with the priority order specified shall not justify an increase in Contract Price or an extension in Contract Time nor limit in any way, the CONTRACTOR's responsibility to comply with all Laws and Regulations at all times.

1.6 ENCLOSURE TYPES

A. Unless otherwise specified herein or shown on the Drawings, electrical enclosures shall have the following ratings:

1. NEMA 1 for dry, non-process indoor locations.
2. NEMA 12 for "DUST" locations.
3. NEMA 4X 316 stainless steelfor outdoor locations, rooms below grade (including basements and buried vaults), "DAMP", "WET", “PROCESS” and "CORROSIVE" locations.
4. NEMA 7 (and listed for use in the area classifications shown) for "Class I Division 1 Group D", "Class I Division 2 Group D" and "Class II Division 1" hazardous locations shown on the Drawings.

1.7 HAZARDOUS AREAS

A. Equipment, materials and installation in areas designated as hazardous on the Drawings shall comply with NEC Articles 500, 501, 502, 503, 504 and 510.

B. Equipment and materials installed in hazardous areas shall be UL listed for the appropriate hazardous area classification.

1.8 CODES, INSPECTION AND FEES

A. Equipment, materials and installation shall comply with the requirements of the local authority having jurisdiction.

B. Obtain all necessary permits and pay all fees required for permits and inspections.

1.9 TESTS AND SETTINGS

A. Test systems and equipment furnished under Division 16 and repair or replace all defective work and equipment. Refer to the individual equipment sections for additional specific testing requirements. Employ the services of an independent recognized power systems testing company, other than the manufacturer of the switchgear or motor control centers, to perform the tests specified herein.

B. Field testing and commissioning shall be performed in accordance with the latest revisions of NETA Standard ATS "Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems" unless otherwise modified by these Sections.

C. A typed test report for each component tested shall be submitted to the ENGINEER for the project record files. The firm doing the testing shall include, in the report, their opinion whether or not the equipment being tested complies with the specification. Any discrepancies shall be noted in the concluding summary of the report. Test report forms shall be in compliance with NETA standards. A minimum of three complete copies shall be provided. Reports shall be signed by the person in responsible charge of the field testing, an officer of the firm performing the tests and an officer of the Electrical CONTRACTOR.

D. Make adjustments to the systems and instruct the OWNER's personnel in the proper operation of the systems.

E. In addition to the specific testing requirements listed in the individual sections, the following minimum tests and settings shall be performed.

1. Mechanical inspection, testing and settings of circuit breakers, disconnect switches, motor starters, overload relays, control circuits and equipment for proper operation.
2. Check the full load current draw of each motor. Where power factor correction capacitors are provided the capacitor shall be in the circuit at the time of the measurement. Check ampere rating of thermal overloads for motors and submit a typed record to the ENGINEER of the same, including MCC cubicle location and driven load designation, motor service factor, horsepower, and Code letter. If incorrect thermal overloads are installed replace same with the correct size overload.
3. Check power and control power fuse ratings. Replace fuses if they are found to be of the

incorrect size.

4. Check settings of the motor circuit protectors. Adjust settings to lowest setting that will allow the motor to be started when under load conditions.
5. Check motor nameplates for correct phase and voltage. Check bearings for proper lubrication.
6. Check rotation of motors prior to testing the driven load. Disconnect the driven equipment if damage could occur due to wrong rotation. If the rotation is incorrect for the driven equipment correct motor connections at the motor terminal box.
7. Check interlocking, control and instrument wiring for each system and/or part of a system to prove that the system will function properly as indicated by control schematic and wiring diagrams.
8. Inspect each piece of equipment in areas designated as HAZARDOUS to ensure that equipment of proper rating is installed.
9. Verify all terminations at transformers, equipment, panels and enclosures by producing a 1, 2, 3 clockwise rotation on a phase sequenced motor when connected to "A", "B" and "C" phases.
10. Verify correct wire termination positions across tie circuits, transfer switches, or other devices that normally have two sources of three-phase power present by performing a hot phase test. That is, in addition to verifying clockwise rotation, a voltage reading across both incoming circuits should measure 0 volts when phase “A” of one side is compared to phase “A” of the other side.
11. Check all wire and cable terminations. Verify to the ENGINEER connections meet the equipments torque requirements.
12. Field set all transformer taps as required to obtain the proper secondary voltage.
13. Infra-red hot spot inspection shall be made of all electrical equipment including but not limited to switchgear, motor control centers, transformers, switches, power and control panels, etc. This shall be done under representative load conditions before the equipment is used by the OWNER and again 3 months before expiration of the 1-year warranty period.

F. Make the following minimum tests and checks prior to energizing electrical equipment. Submit test reports upon final completion.

1. Test and calibrate protective relays and circuit breakers.
2. Mechanical inspection of air interrupter switches and circuit breakers to assure proper operation.

G. Testing shall be scheduled and coordinated in writing with the ENGINEER at least 2 weeks in advance. The testing firm shall provide all material, labor, equipment and technical supervision to perform the tests and inspection. Provide certified calibration sheets including dates for all equipment to be used for testing with notice of scheduled testing. Calibration sheets shall also indicate that the units have been calibrated within six months of the testing date. The CONTRACTOR shall have qualified personnel present during the testing.]

1.10 POWER SYSTEM STUDY

A. General:

1. The major electrical equipment manufacturer (i.e. switchgear and motor control centers) shall provide a computerized Power System Study for the electrical power distribution

and motor control equipment. The study shall verify adequacy of all of the existing equipment as well as new additions being implemented under these Specifications.

2. The study shall also include the utility company's protective devices, the emergency generators, the main switchgear, all feeders from the main switchgear, all substations and distribution and all associated MCC's. Graphic indication of coordination shall be furnished in the form of a clearly labeled and identified composite drawing showing time-current curves of system protective devices. Time-current curves of each device shall also be furnished.
3. The CONTRACTOR/Manufacturer shall be responsible for obtaining and verifying with the Power Company in writing all information needed to conduct this study. Provide this correspondence and information including contacts and phone numbers with the study submittal.
4. The CONTRACTOR shall set all protective devices and relays based on this coordination study to provide coordinated, selective protection for all equipment supplied or affected by the installation under this Contract.
5. The CONTRACTOR/Manufacturer shall provide data necessary to perform the study. This includes feeder cable sizes, approximate feeder length, motor data, switchgear data, existing protective relay settings, existing generator data, and any other information relevant to the study.
6. A summary of the short circuit analysis shall be provided to the CONTRACTOR at the time shop drawings for all of the new equipment is submitted for approval. This preliminary short circuit submittal shall be required in order to approve the equipment submittal.
7. The CONTRACTOR shall provide and install equipment specific arc flash warning labels per the arc flash study performed herein.

B. Scope:

1. The power system study consists of four major parts. The first part is the preliminary short circuit study. The preliminary short circuit study shall verify new and existing equipment affected on this project are being applied with design ratings. Shop drawings for new equipment will not be reviewed until the preliminary short circuit study is approved by the ENGINEER.
2. The second and third parts of the power system study include the final short circuit and protective device coordination study. New equipment will not be energized until this study is approved by the ENGINEER and devices are set in the field in accordance with the study.
3. The fourth and final part of the power system study is the arc flash study. The arc flash study labels will be added after the equipment is energized and all changes, upgrades or modifications have been made, to ensure field labeling will be accurate.
4. The short circuit study shall be in accordance with ANSI Standard C37.010 and C37.13, shall be performed to check the adequacy, and to verify the correct application of circuit protective devices and other system components specified. The study shall address the case when the system is being powered from the normal source as well as from the on-site generating facilities. Minimum as well as maximum possible fault conditions shall be adequately covered in the study.
5. Fault contribution of all motors shall be considered. The CONTRACTOR shall be responsible for obtaining all required data of equipment. All back-up calculations shall become part of the final report. The Calculations shall be in sufficient detail to allow easy

review.

C. Contents:

1. The study shall include representation of the power company's systems, the base quantities selected, impedance source-data, calculation methods and tabulations, one-line and impedance diagrams, conclusions and recommendations. Short circuit momentary duties, shall be calculated on the basis of an assumed bolted three-phase short circuit at each bus, low voltage switchboard bus, switchboards, motor control centers, distribution panelboards, pertinent branch circuit panelboards, and other significant locations through the systems. The short-circuit tabulations shall include significant X to R ratios, asymmetry factors, KVA, and symmetrical fault current.
2. A protective device time current coordination study shall be included with coordination plots of key and/or limiting devices, tabulated data, rating, and/or settings selected. The study shall present an engineering balance between the competing objectives of protection and continuity of service for the system specified, taking into account the basic factors of sensitivity, selectivity and speed.
3. Separate plots shall be provided for each mode of "normal" and "stand-by" operation. Maximum fault values shall be shown in each case. Both power sources shown in one plot will not be accepted.
4. Existing protective device settings shall be reviewed to ensure selectivity under the new conditions. Recommended changes shall be indicated in the report. The Contractor shall be made aware of required changes immediately.
5. Transformer damage curves in accordance with ANSI C57.109.
6. Feeder cable damage curves.
7. Required settings for breakers and relays shall be maximized to provide the most effective protection possible whether the system is fed from the normal or emergency source.
8. Tabulations indicating recommended set points for all protective devices shall be provided. This shall include the normal as well as the emergency source.
9. An executive summary outlining the distribution system, the information received from the utility company, assumptions made to complete the study, statement of the adequacy of the distribution equipment to safely clear or close on any fault, and identification of any problem areas with recommendations for resolving the problem.
10. Generator short circuit decrement curves and thermal limit curves shall be included.
11. Tabulation of arc flash information.

D. Motor Current-Time Characteristic Curves:

1. A complete independent set of current-time characteristic curves for all medium voltage motor drives indicating coordination between the protective relays and the thermal characteristics of the motor shall be provided.
2. The Contractor shall obtain from the motor supplier, the necessary information to perform the study. Certified curves for "safe time versus current at 100 percent voltage" and "accelerating time versus current at 100 percent voltage" shall become part of the final report.

E. Motor Starting Study:

1. A motor starting study for all large electric drives (100 horsepower and above) to

determine voltage dip or power inrush limitations at selected locations due to starting of motors shall be provided. This applies to both the normal and the emergency mode.

F. General Information for Time-Current Curves Presentations:

1. The coordination plots shall include complete titles, representative one-line diagrams, legends, associated power company's relay or system characteristics, significant motor starting characteristics, complete parameters for power, and substation transformers, and complete operating bands for low-voltage circuit breaker trip devices.
2. The coordination plots shall define the types of protective devices selected, together with the proposed coil taps, time-dial settings and pick-up settings required.
3. The short-time region shall indicate the medium voltage relay instantaneous elements, the magnetizing in-rush, and ANSI withstand transformer parameters, the low-voltage circuit breaker instantaneous trip devices, fuse manufacturing to tolerance bands, and significant symmetrical and asymmetrical fault currents.
4. Each primary protective device required for a delta-to-wye connected transformer shall be selected so that the characteristic or operating band is within the transformer parameters; which, where feasible, shall include a parameter equivalent to 58 percent of the ANSI withstand point to afford protection for secondary line-to-ground faults.
5. Low-voltage power circuit breakers shall be separated from each other and the associated primary protective device, where feasible, by a 16 percent current margin for coordination and protection in the event of secondary line-to-line faults.
6. Protective relays shall be separated, where feasible, by a 0.3 second time margin when the maximum three-phase fault flows, to assure proper selectivity.

G. Generator(s) Protective Devices:

1. The study shall address all of the new and existing protective devices provided for generator protection.
2. Protective relays requiring settings shall include, but not necessarily limited to:

    a. Differential
    b. Overcurrent with voltage restraint
    c. Ground
    d. Undervoltage
    e. Reverse power
    f. Unbalanced loading and open phase
    g. Loss of excitation

3. Contractor shall obtain all necessary new generator information to perform this study.

H. Arc Flash Study:

1. The study shall utilize the fault current values calculated in the short circuit study and the clearing time of the upstream protective device in the coordination study to calculate the incident energy at each fault location.
2. Study shall be in accordance with IEEE Standard 1584 and NFPA 70E.
3. Study shall calculate the incident energy and flash protection boundary at all significant locations in the electrical distribution system (switchgear, switchboards, motor control centers, panelboards) where work could be performed on energized parts. Include any

208 volt or 240 volt equipment that is fed from transformers greater than 125 kVA.

4. Incident energy calculations shall include maximum and minimum fault contribution scenarios, since protective device clearing times can vary greatly depending upon the fault current.
5. Tabulations shall be provided showing each fault location, the arcing fault magnitude, protective device clearing time, duration of the arc, arc flash boundary, working distance, incident energy and hazard risk category.

I. Arc Flash Mitigation and Reduction Modes

1. Where devices are furnished with alternative trip settings intended to mitigate arc flash hazards, the study engineer shall coordinate these alternative pickup settings and provide representation of their tripping characteristics via TCC's. The alternative pickup settings shall be coordinate with the associated load and shall be set to provide the fastest device response time while avoiding nuisance trips during normal plant operation.

J. The power system study shall be bound in a standard 8-1/2" x 11" size report. The completed short circuit and coordination study shall be submitted to and approved by the ENGINEER before any of the equipment is shipped. All protective devices shall be adjusted, tested, and calibrated in the field, prior to energizing the equipment, per the settings listed in the study. This work shall be performed by the manufacturer as described in this section and prior to final acceptance by the OWNER.

K. All protective devices, existing and new shall be calibrated and tested as recommended by and under the supervision of the distribution gear manufacturer's representative as specified in this section. Coordination study engineer shall review and certify that all 'As-Left' settings have been implemented to their recommendations and include certified documentation (signed & sealed letter sufficient) into the final report.

L. The coordination study shall be stamped and signed by a professional ENGINEER registered in the state in which the equipment is to be installed.

M. Arc Flash Warning Labels:

1. Provide a machine printed 3.5-inch x 5-inch thermal transfer type label of high adhesion polyester for each location identified in the arc flash study.
2. Labels shall include the following machine printed information (hand lettering is not acceptable): equipment name, flash hazard boundary, incident energy, boundaries for shock hazard, limited approach, restricted approach and prohibited approach, PPE (personal protective equipment) category and date.
3. One label shall be required at each piece of equipment rated 50 volts or greater.

1.11 INTERPRETATION OF DRAWINGS

A. The Drawings are not intended to show exact locations of conduit runs. Coordinate the conduit installation with other trades and the actual supplied equipment.

B. Install each 3-phase circuit in a separate conduit unless otherwise shown on the Drawings.

C. Unless otherwise approved by the ENGINEER, conduit shown exposed shall be installed

exposed; conduit shown concealed shall be installed concealed.

D. Where circuits are shown as "home-runs" all necessary fittings and boxes shall be provided for a complete raceway installation.

E. Verify the exact locations and mounting heights of lighting fixtures, switches, and receptacles prior to installation. Any adjustments required in the field shall be provided at no additional cost to the OWNER and coordinated and approved by the ENGINEER.

F. Except where dimensions are shown, the locations of equipment, fixtures, outlets and similar devices shown on the Drawings are approximate only. Exact locations shall be determined by the Contractor and approved by the ENGINEER during construction. Obtain information relevant to the placing of electrical work and in case of any interference with other work, proceed as directed by the ENGINEER and furnish all labor and materials necessary to complete the work in an approved manner.

G. Circuit layouts are not intended to show the number of fittings, or other installation details. Furnish all labor and materials necessary to install and place in satisfactory operation all power, lighting and other electrical systems shown. Additional circuits shall be installed wherever needed to conform to the specific requirements of the approved equipment at no additional cost to the OWNER.

H. Redesign of electrical or mechanical work, which is required due to the Contractor's use of an alternate item, arrangement of equipment and/or layout other than specified herein, shall be done by the Contractor at his/her own expense. Redesign and detailed plans shall be submitted to the ENGINEER for approval. No additional compensation will be provided for changes in the work, either his/her own or others, caused by such redesign.

I. Surface mounted panel boxes, junction boxes, conduit, etc., shall be supported by ½-inch spacers to provide a clearance between wall and equipment.

J. All floor mounted electrical equipment shall be placed on 4-inch thick (3/4-inch, 45-degree chamfer at all exposed edges) concrete pads, provide reinforcement, anchors, etc.

K. The Contractor shall harmonize the work of the different trades so that interferences between conduits, piping, equipment, architectural and structural work will be avoided. All necessary offsets shall be furnished so as to take up a minimum space and all such offsets, fittings, etc., required to accomplish this shall be furnished and installed by the Contractor without additional expense to the OWNER. In case interference develops, the ENGINEER is to decide which equipment, piping, etc., must be relocated, regardless of which was installed first.

1.12 PHASE BALANCING

A. The Drawings do not attempt to balance the electrical loads across the phases. Circuits on motor control centers and panelboards shall be field connected to result in evenly balanced loads across all phases.

B. Field balancing of circuits shall not alter the conductor color coding requirements as specified in Section 16120.

1.13 SIZE OF EQUIPMENT

A. Investigate each space in the structure through which equipment must pass to reach its final location. Coordinate shipping splits with the manufacturer to permit safe handling and passage through restricted areas in the structure.

B. The equipment shall be kept upright at all times during storage and handling. When equipment must be tilted for passage through restricted areas, brace the equipment to ensure that the tilting does not impair the functional integrity of the equipment.

1.14 RECORD DRAWINGS

A. As the work progresses, legibly record all field changes on a set of Project Contract Drawings, hereinafter called the "Record Drawings".

B. Record Drawings shall accurately show the installed condition of the following items:

1. One-line Diagram(s).
2. Equipment elevations (front views).
3. Raceways and pullboxes.
4. Conductor sizes and conduit fills.
5. Panel Schedule(s).
6. Control Wiring Diagram(s).
7. Lighting Fixture Schedule(s).
8. Lighting fixture, receptacle, and switch outlet locations.
9. Underground raceway and duct bank routing.
10. Plan view, sizes and locations of switchgear, distribution transformers, substations, motor control centers and panelboards.

C. Submit a schedule of control wiring raceways and wire numbers, including the following information:

1. Circuit origin, destination and wire numbers.
2. Field wiring terminal strip names and numbers.

D. In addition to the schedule, provide point-to-point connection diagrams showing the same information submitted in the schedule of control wiring raceways including all designations and wire numbers.

E. Submit the record drawings, schedule of control wiring raceways and wire numbers and the point-to-point connection diagrams to the ENGINEER. The schedule of control wiring raceways and wire numbers and the point-to-point connection diagrams shall be computer generated (i.e., no hand-written or drawn schedules, drawings, or diagrams will be accepted).

F. Provide electrical enclosures with a drawing jacket with laminated panel schedules and wiring schematics showing all conformed changes, updates, and record installation. This shall include, but not be limited to, PLCs, MCCs, VFDs, starters, panelboards, control panels, contactor panels, etc.

1.15 EQUIPMENT INTERCONNECTIONS

A. Review shop drawings of equipment furnished under other Divisions and prepare coordinated wiring interconnection diagrams or wiring tables. Submit copies of wiring diagrams or tables with the Record Drawings.

B. Furnish and install all equipment interconnections.

1.16 MATERIALS AND EQUIPMENT

A. Materials and equipment shall be new, except where specifically identified on the Drawings to be re-used.

B. Material and equipment of the same type shall be the product of one manufacturer and shall be UL listed.

C. Warrant all equipment furnished under Division 16 as per Division 1. Refer to individual equipment sections for additional warranty items.

1.17 EQUIPMENT IDENTIFICATION

A. Identify equipment (disconnect switches, separately mounted motor starters, control stations, etc.) furnished under Division 16 with the name of the equipment it serves. Motor control centers, control panels, panelboards, transformers, switchboards, switchgear, junction or terminal boxes, transfer switches, etc, shall have nameplate designations as shown on the Drawings.

B. Nameplates shall be engraved, laminated plastic, not less than 1/16-in thick by 3/4-in by 2-1/2-in with 3/16-in high white letters on a black background.

C. Nameplates shall be screw mounted to NEMA 1 enclosures. Nameplates shall be bonded to all other enclosure types using an epoxy or similar permanent waterproof adhesive. Two-sided foam adhesive tape is not acceptable. Where the equipment size does not have space for mounting a nameplate, the nameplate shall be permanently fastened to the adjacent mounting surface. Cemented nameplates shall not be drilled.

D. All voltages (e.g., 12,470 volts, 480 volts, etc.) within pull boxes, junction boxes etc. shall be identified on the front exterior cover. Signs shall be red background with white engraved lettering, lettering shall be a minimum of 1" high.

E. All receptacles, wall switches, lighting fixtures, photocells, emergency lights, exit lights, etc. shall be identified with the panel and circuit to which it is connected. Identification shall be with machine generated labels with ¼” high letters.

F. Provide labels at all Electrical Building entries near the doors warning “Danger High Voltage – Keep Out” and “Authorized Personnel Only” with maximum voltage noted.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SLEEVES AND FORMS FOR OPENINGS

A. Provide and place all sleeves for conduits penetrating floors, walls, partitions, etc. Locate all necessary slots for electrical work and form before concrete is poured.

B. Exact locations are required for stubbing-up and terminating concealed conduit. Obtain shop drawings and templates from equipment vendors or other sub- Contractor's and locate the concealed conduit before the floor slab is poured.

C. Where setting drawings are not available in time to avoid delay in scheduled floor slab pours, the ENGINEER may allow the installations of such conduit to be exposed. Requests for this deviation must be submitted in writing. No additional compensation for such change will be allowed.

D. Seal all openings, sleeves, penetration, and slots as specified in Section 16110.

3.2 CUTTING AND PATCHING

A. Cutting and patching shall be done in a thoroughly workmanlike manner and be in compliance with modifications and repair to concrete Division 3. Sawcut concrete and masonry prior to breaking out sections.

B. Core drill holes in existing concrete floors and walls as required.

C. Install work at such time as to require the minimum amount of cutting and patching.

D. Do not cut joists, beams, girders, columns or any other structural members.

E. Cut opening only large enough to allow easy installation of the conduit.

F. Patching to be of the same kind and quality of material as was removed.

G. The completed patching work shall restore the surface to its original appearance or better.

H. Patching of waterproofed surfaces shall render the area of the patching completely waterproofed.

I. Remove rubble and excess patching materials from the premises.

3.3 INSTALLATION

A. Any work not installed according to the Drawings and this Division or without approval by the ENGINEER shall be subject to change as directed by the ENGINEER. No extra compensation will be allowed for making these changes.

B. Electrical equipment shall at all times during construction be adequately protected against mechanical injury or damage by water. Electrical equipment shall not be stored out-of-doors. Electrical equipment shall be stored in dry permanent shelters. If an apparatus has been damaged, such damage shall be repaired at no additional cost. If any apparatus has been subject to possible injury by water, it shall be replaced at no additional cost to the OWNER, the

damaged unit(s) or systems shall remain on site and returned to the manufacturer after the replacement unit(s) or systems have been delivered to the site. Under no circumstances will electrical equipment damaged by water be rehabilitated or repaired, new equipment shall be supplied, and all cost associated with replacement shall be borne by the Contractor.

C. Equipment that has been damaged shall be replaced or repaired by the equipment manufacturer, at the ENGINEER's discretion.

D. Repaint any damage to factory applied paint finish using touch-up paint furnished by the equipment manufacturer. The entire damaged panel or section shall be repainted per the field painting requirements Division 9, at no additional cost to the OWNER.

3.4 MANUFACTURERS SERVICE

A. Provide manufacturer's services for testing and start-up of the following equipment:

1.	Variable Frequency Drives	2 days, 2 trips minimum
2.	480 Switchboards	1 day, 1 trip minimum
3.	Automatic Transfer Switches	1 day, 1 trip minimum

B. Testing and startup shall not be combined with training. Testing and start-up time shall not be used for manufacturer’s warranty repairs.

C. The manufacturers of the above listed equipment shall provide experienced Field Service ENGINEER to accomplish the following tasks:

1. The equipment shall be visually inspected upon completion of installation and prior to energization to assure that wiring is correct, interconnection complete and the installation complies with the manufacturer's criteria. Documentation shall be reviewed to assure that all Drawings, operation and maintenance manuals, parts list and other data required to check out and sustain equipment operation is available on-site. Documentation shall be red-lined to reflect any changes or modifications made during the installation so that the "as-built" equipment configuration will be correctly defined. Spare parts shall be inventoried to assure correct type and quantity.
2. The Field Service ENGINEERs shall provide engineering support during the energization and check-out of each major equipment assembly. They shall perform any calibration or adjustment required for the equipment to meet the manufacturer's performance specifications.
3. Upon satisfactory completion of equipment test, they shall provide engineering support of system tests to be performed in accordance with manufacturer's test specifications.
4. A final report shall be written and submitted to the contractor within fourteen days from completion of final system testing. The report shall document the inspection and test activity, define any open problems and recommend remedial action. The reports after review by the contractor shall be submitted to the ENGINEER.

3.5 TRAINING

A. Provide manufacturer's services for training of plant personnel in operation and maintenance of the equipment specified under Division 16.

1.	Variable Frequency Drives	2 days, 2 trips minimum
2.	480 Switchboards	1 day, 1 trip minimum
3.	Automatic Transfer Switches	1 day, 1 trip minimum

B. Conduct an electric training walk-thru of the complete electrical system: building to building, where feeders come from, etc., outside all equipment mentioned above.

C. The cost of training programs to be conducted with OWNER's personnel shall be included in the Contract Price. The training and instruction, insofar as practicable, shall be directly related to the system being supplied.

D. Provide detailed O&M manuals to supplement the training courses. The manuals shall include specific details of equipment supplied and operations specific to the project.

E. The training program shall represent a comprehensive program covering all aspects of the operation and maintenance including troubleshooting of each system.

F. All training schedules shall be coordinated with and at the convenience of the OWNER. Shift training may be required to correspond to the OWNER's working schedule. The training shall be conducted with record "as-built" drawings sufficient for a class of eight personnel.

G. Within 120 days of contract award to the CONTRACTOR, submit an overview of the proposed training plan. This overview shall include, for each course proposed:

1. An overview of the training plan.
2. Course title and objectives.
3. Prerequisite training and experience of attendees.
4. Recommended types of attendees.
5. Course Content - A topical outline.
6. Course Duration.
7. Course Location - Training center or jobsite.
8. Course Format - Lecture, laboratory demonstration, etc.
9. Schedule of training courses including dates, duration, and locations of each class.
10. Resumes of the instructors who will actually implement the plan.

H. The ENGINEER will review the training plan submittal with the OWNER.

3.6 POWER SYSTEM STUDY

A. Provide a complete system Power System Study including preliminary short circuit, final short circuit, protective device coordination and arc flash study as specified herein.

B. Provide and install arc flash warning labels at equipment identified with the arc flash study.

END OF SECTION

Section 16100

RACEWAYS, BOXES AND CABINETS

PART 1 - GENERAL

1.01 SUBMITTALS

A. Provide submittals for all electrical equipment enclosures.

1.02 REFERENCES

A. Comply with NFPA 70 "National Electrical Code" for components and installation.

B. Comply with NECA "Standard of Installation."

1.03 LISTING AND LABELING

A. Provide products specified in this Section that are UL listed and labeled.

PART 2 - PRODUCTS

2.01 CONDUIT

A. Liquid Tight Flexible Metal Conduit: Flexible steel conduit with PVC jacket.

B. PVC Conduit and Tubing Fittings: NEMA TC 3; Schedule 80, match to conduit or conduit/tubing type and material.

C. Aluminum Rigid Conduit

2.02 BOXES

A. Outlet and Device Boxes: Use 1 of the following:

1. Nonmetallic Boxes: NEMA OS2.

B. PWI and Junction Boxes: Use 1 of the following:

1. Small Boxes: NEMA OS 1, stainless steel.

2. Cast Metal Boxes: NEMA FB 1, cast aluminum with gasketed cover.

C. Hinged Cover Enclosures: Stainless steel enclosure with continuous hinge cover and flush latch. The enclosure shall be provided with stainless panel insert for mounting equipment. Outdoor enclosures shall be 316 NEMA 4X Stainless Steel.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Seal all outdoor raceways using duct seal.

B. Use the following wiring methods:

1. Exposed: Rigid Aluminum

2. Underground: PVC Schedule 80

3. Instrumentation (shielded cable): Aluminum or PVC (dependent on location)

4. Connection to Vibrating Equipment (including transformers and hydraulic, pneumatic, or electric solenoid or motor-driven equipment): Liquid tight flexible metal conduit.

5. Boxes and Enclosures:

a. 316 NEMA 4X stainless steel. All hardware shall be stainless steel.

C. Install raceways, boxes, enclosures, and cabinets as indicated, according to manufacturer's written instructions.

D. Install raceways level and square and at proper elevations. Provide adequate headroom.

E. Complete raceway installation before starting conductor installation.

F. Use temporary closures to prevent foreign matter from entering raceway.

G. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portion of bends is not visible above the finished slab.

H. Make bends and offsets so the inside diameter is not reduced. Unless otherwise indicated keep the legs of a bend in the same plane and the straight legs of offsets parallel.

I. Raceways Embedded in Slabs: Install in middle third of the slab thickness where practical, and leave at least 1-inch (25 mm) concrete cover.

1. Secure raceways to reinforcing rods to prevent sagging or shifting during concrete placement.

2. Space raceways laterally to prevent voids in the concrete.

3. Run conduit larger than 1-inch trade size parallel to or at right angles to main reinforcement. When at right angles to reinforcement, place conduit close to slab support.

J. Install underground raceways:

1. At least 18" below grade.

2. At least 24" below driveways and roads.

3. All buried ductbanks to be concrete encased 3000 psi color red concrete.

K. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.

1. Run parallel or banked raceways together, on common supports where practical.

2. Make bends in parallel or banked runs from same centerline to make bends parallel. Use factory elbows only where they can be installed parallel; otherwise, provide field bends for parallel raceways.

L. Join raceways with fittings designed and approved for the purpose and make joints tight.

1. Make raceway terminations tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight.

2. Use insulating bushings to protect conductors.

M. Terminations: Where raceways are terminated with locknuts and bushings, align the raceway to enter squarely, and install the locknuts with dished part against the box. Where terminations cannot be made secure with one locknut, use two locknuts, one inside and one outside the box.

N. Where terminating in threaded hubs, screw the raceway or fitting tight into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align the raceway so the coupling is square to the box, and tighten the chase nipple so no threads are exposed.

O. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line having not less than 200-lb (90kg) tensile strength. Leave not less than 12 inches (300 mm) of slack at each end of the pull wire.

P. Stub-Up Connections: Extend conduits through concrete floor for connection to freestanding equipment with an adjustable top or coupling, threaded inside for plugs, and set flush with the finished floor. Where equipment connections are not made under this Contract, install screwdriver-operated threaded flush plugs flush with floor.

Q. Flexible Connections: Use maximum of 6 feet (1830 mm) of flexible conduit for lighting fixtures; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquid tight flexible conduit in wet or damp locations. Install separate ground conductor across flexible connections.

R. Install hinged cover enclosures and cabinets plumb. Support at each corner.

S. Provide grounding connections for raceway, boxes, and components as indicated and instructed by manufacturer. Tighten connectors and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening torques specified in UL Standard 486A.

End of Section

SECTION 16108

MISCELLANEOUS EQUIPMENT

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install all miscellaneous equipment as shown on the Drawings and as specified herein.

B. This Section provides the requirements for miscellaneous equipment typically employed in a facility, however, not all components specified in this Section are necessarily utilized on this project.

1.2 SUBMITTALS

A. Submit to the ENGINEER, in accordance with Section 01330, detailed catalog information or drawings with sufficient detail to determine compliance with the specifications including describing electrical and physical characteristics of all equipment specified.

1.3 REFERENCE STANDARDS

A. Equipment enclosures shall have NEMA ratings suitable for the location in which they are installed, as specified in Section 16010.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Disconnect Switches

1. Disconnect switches shall be heavy-duty, quick-make, quick-break, visible blades, 600 Volt, 3 Pole with full cover interlock, interlock defeat and flange mounted operating handle unless otherwise noted. Enclosure type shall be NEMA 4X 316 stainless steel enclosures unless otherwise noted on the drawings. All current carrying parts shall be copper.
2. NEMA 7 enclosures shall be cast aluminum.
3. Lugs shall be copper.
4. All exterior hardware shall be 316 stainless steel.
5. Switches shall be as manufactured by Eaton or Square D company.

B. Manual Motor Starters

1. Manual starters shall be furnished and installed for all type of single-phase motors. Manual starters shall be non-reversing, reversing or two speed type as required. NEMA sizes shall be as required for the actual horsepower of the motor furnished. Manual starters shall be motor overload protection in each phase. Built-in control stations shall be furnished as required or as shown on the Drawings.
2. NEMA 4X enclosures shall be 316 stainless steel.
3. NEMA 7 enclosures shall be cast aluminum.
4. Manual motor starters shall be as manufactured by Eaton or Square D Company.

C. Magnetic Motor Starters

1. Motor starers shall be 2 or 3 Pole, single or 3 Phase as required, 60 Hz, 600 Volt, magnetically operated, full voltage non-reversing unless otherwise shown on the Drawings. NEMA sizes shall be as required for the horsepower shown on the Drawings.
2. Two speed starters shall be for single or two winding motors as required by the actual motor furnished or as shown on the Drawings.
3. Each motor starter shall have a 120 Volt operating coil, and control power transformer. Starters shall have motor overload protection in each phase. Auxiliary contacts shall be provided as required or as shown on the Drawings. A minimum of one N.O. and one N.C. auxiliary contacts shall be provided in addition to the contacts shown on the Drawings.
4. Overload relays shall be non-adjustable, ambient compensated and manually reset.
5. Control power transformers shall be sized for additional load where required. Transformer secondaries shall be equipped with time-delay fuses.
6. Built-in control stations and indicating light shall be furnished as specified herein, where shown on the Drawings.
7. NEMA 4X enclosures shall be 316 stainless steel.
8. NEMA Type 7 enclosures shall be cast aluminum.
9. Magnetic motor starters shall be as manufactured by Eaton or Square D Company.

D. Combination Magnetic Motor Starters

1. Motor starters shall be a combination motor circuit protector and contactor, 2 or 3 Pole, single or 3 Phase as required, 60 Hz, 600 Volt, magnetically operated, full voltage non-reversing unless otherwise shown on the Drawings. NEMA sizes shall be as required for the horsepower shown on the Drawings. Motor circuit protectors shall be molded case with adjustable magnetic trip only. They shall be specifically designed for use with magnetic motor starters. Motor circuit protectors shall be current limiting type, with additional current limiters if required. Combination motor starters shall be fully rated for 100,00 Amps RMS symmetrical.
2. Two speed starters shall be for single or two winding motors as required by the actual motor furnished or as shown on the Drawings.
3. Each motor starter shall have a 120 Volt operating coil, and control power transformer. Starters shall have motor overload protection in each phase. Auxiliary contacts shall be provided as required or as shown on the Drawings. A minimum of one N.O. and one N.C. auxiliary contacts shall be provided in addition to the contacts shown on the Drawings.
4. Overload relays shall be non-adjustable, ambient compensated and manually reset.
5. Control power transformers shall be sized for additional load where required. Transformer secondaries shall be equipped with time-delay fuses.
6. Built-in control stations and indicating lights shall be furnished as specified herein, where shown on the Drawings.
7. NEMA 4X enclosures shall be 316 stainless steel.
8. NEMA Type 7 enclosures shall be cast aluminum.
9. Combination magnetic motor starters shall be as manufactured by Eaton or Square D Company.

E. Control Stations and Indicators

1. Control stations shall be heavy-duty type, with full size (30.5mm) NEMA 4X or 7 operators, indicators, etc.
2. Indicators shall be full voltage and push-to-test type. Indicators located indoors shall be LED type and indicators located outdoors shall be incandescent lamp type.
3. NEMA 4X enclosures shall be 316 stainless steel.
4. NEMA 7 enclosures shall be cast aluminum.

5. Control stations shall be Square D Company Class 9001, similar by Eaton or General Electric Company.

F. General Purpose Dry Type Transformers

1. Transformers shall be dry type, two-winding with KVA and voltage ratings as shown on the Drawings.
2. Four full capacity taps shall be furnished, two 2-1/2 percent above and four 2-1/2 percent below rated primary voltage.
3. Maximum temperature rise shall be 80 degrees C. Windings shall be copper.
4. Transformers shall be built in accordance with ANSI C89.2 and NEMA ST-20.
5. Transformers shall be provided in NEMA 1 enclosures unless otherwise noted on the Drawings or as required by Section 16000. Where a NEMA 4X and/or stainless steel enclosure is required, the transformer shall be of the TENV type.
6. Transformers shall be furnished with hot dipped galvanized mounting hardware. Where a NEMA 4X and/or stainless steel enclosure is required, the required shall be 316 stainless steel.
7. Transformers shall be manufactured by the Eaton or Square D Company.

G. Combination Magnetic Motor Starters:

1. NEMA 1 wireway shall be gasketed painted steel with stainless steel screw covers.
2. NEMA 4Xwireway shall be 316 stainless steel with gasketed clamped covers.
3. NEMA 1 wireway shall be Square-Duct as manufactured by the Square D Co.; NEMA 4X shall be Bulletin F-22 as manufactured by the Hoffman Engineering Co. or equal.

H. Automatic Transfer Switches:

1. Automatic transfer switches shall be designed for a non-preferred source of 480 Volts, 3 Phase, 3 Wire, 60 Hz. Current ratings shall be as shown on the Drawings. Switches shall be listed under UL 1008. Transfer switches shall be molded case design.
2. The switches shall initiate transfer of the load to the source #1 when any phase of the source #2 drops below 90 percent of normal voltage and remain on that source until that source is not available.
3. The transfer switches shall be adequately constructed to carry full rated current on a continuous 24-hour basis in all approved enclosures and shall not show excessive heating or be subject to derating. The transfer switches shall be capable of withstanding inrush current vales to 20 times full load current rating without mechanical distortion of main contact poles or supports. The transfer switches shall be capable of withstanding all available system fault currents without parting of or damage to contacts during the fault clearing time of the system over current device.
4. The transfer switches shall be inherently 4 Pole double throw construction and shall have three position operation: closed to normal source, open, closed to emergency source. Transfer switches with circuit breakers or contactors are not acceptable. Time delay between opening of the closed contacts and closing of the open contacts shall be a minimum of 400 milliseconds to allow for voltage decay before transfer is complete.
5. Enclosure type shall be NEMA 1, wall mounted
6. A maintained contact test auto switch and source #1/source #2 pilot lights shall be mounted on the enclosure door.
7. Automatic transfer switches shall be Eaton ATC-900 or Russelectric, Inc., Type RMTD or equal.

I. Polyethylene Warning Tape

1. Warning tape shall be 5 mil red polyethylene film, 6-in minimum width. Tape shall be capable of being detected or located by either conductive or inductive location techniques.
2. Warning tape shall be Mutual Industries Part No. 17774 or equal.

J. Terminal Blocks

1. Terminal blocks shall be 600 Volt, channel mounted, with tubular screw and pressure plate.
2. Terminal blocks shall be Bulletin 1492-CA1 as manufactured by the Allen-Bradley Co. or equal.

K. Corrosion Inhibitors

1. All equipment enclosures, terminal boxes, etc., located in a NEMA 4X rated area (where shown on the Drawings) that contains electrical and electronic equipment or terminal strips shall be furnished with an internally mounted, chemically treated corrosion inhibitor pad.
2. The corrosion inhibitor pads shall be manufactured by Hoffman Engineering Co., 3M or equal.

L. Equipment Mounting Stands

1. Equipment mounting stands shall be custom fabricated from ¼-in 316 stainless steel plate and 3-in 316 stainless steel channel, unless otherwise shown on the Drawings
2. All hardware shall be 316 stainless steel.

M. Lighting Contactor

1. Lighting contactor shall be of the electrically operated, mechanically held type mounted in NEMA 1, enclosures (except where noted otherwise on the Drawings) with number of poles as noted on the Drawings. Operating coils shall be rated for 120 Volts unless otherwise indicated on the Drawings and shall be for momentary operation. Provide with "Hand Off-Auto" switch on cover where shown on the Drawings.
2. Contactors shall be rated for 60 Amps, 600 VAC and shall be Automatic Switch Co., Bulletin 917 RC, similar by Square D Co., Eaton/or equal.

O. Photocells

1. The photocells shall be suitable for power duty with individual fixture or for pilot duty with contactors as detailed on the Drawings. Enclosure shall be NEMA 3R or 4. Contacts shall be rated for 2,000 watts continuous at 120 Volts. The unit shall turn on at 1.5 footcandles and off at 5.5 footcandles.
2. Photocells shall be Tork, Model 2101or equal.

P. 24-Hour Programmable Timers

1. Unless otherwise specified, time switches shall be of the programmable type capable of being programmed at the intervals as noted on the Drawings over a 24-hour day. Program tabs shall be easily set by hand without tools to obtain or to change the desired programming schedule. The switching condition shall be maintained when adjacent tabs are set alike.
2. The unit shall be powered by a self-starting, enclosed, 120 Volt, synchronous motor capable of continuous accurate operation. A reserve power, precision wound spring and associated

escapement device shall be integrally mounted to maintain time settings during power failures of up to 24 hours.

3. The switch mechanism shall be a self-contained unit rated at not less than 20 Amps, 120 Volts, single pole, double throw and shall be readily replaceable in the field.
4. An omitting device shall be furnished as an integral part of the time switching operation to be skipped for any preselected day or days of the week.
5. Unless otherwise specified, time switches shall be as manufactured by Intermatic; Tork; Paragon or equal.

Q. Electrical Insulating Matting

1. Electrical Switchboard matting shall be provided in the electrical rooms and control rooms around all electrical gear including but not limited to Switchgear, Switchboard, MCC's, distribution/lighting panels, transformers and PLC's.
2. The rubber matting shall provide a floor covering to prevent shock around high voltage electrical apparatus, fuse boxes, switchgear, control panels, and heavy machinery.
3. The matting shall meet current ASTM and ASNI (plus IEC Division of ANSI, Tech Committee-78) specifications for this material.
4. The matting shall be ¼-inch thick, Class 2 as manufactured by The Mat King or approved equal.
5. Provide floor sealant, suitable of electrical/control rooms.

PART 3 – EXECUTION

3.1 INSTALLTION

A. Mounting Stand

1. Field mounted disconnects, pushbutton control stations, etc., shall be mounted on 316 stainless steel stands as specified herein or as shown on the Drawings. Where clearance requirements for stand may not be maintained, the ENGINEER may direct equipment to be wall-mounted adjacent to the motor or device, but in no case shall the distance from the motor or device to the control station exceed 3-ft.

B. Miscellaneous Equipment

1. Perform tests and adjust as required per Section 16010.
2. Provide and install identification as required per Section 16195.
3. All wiring shall be done in a neat and workmanlike manner.
4. Remove all rubbish and debris from inside and around the equipment. Remove dirt, dust or concrete spatter from the interior and exterior of the equipment using brushes, vacuum cleaner, or clean lint-free rags. Do not use compressed air.

END OF SECTION

SECTION 16110

RACEWAYS, BOXES, FITTINGS AND SUPPORTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install complete raceway systems as shown on the Drawings and as specified herein.

1.3 SUBMITTALS

A. Submit to the ENGINEER, in accordance with Section 01300, the manufacturers' names and product designation or catalog numbers with cut-sheets of all materials specified. Indicate in the submittal, the areas where specific materials are used.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Rigid Aluminum Conduit

1. Rigid aluminum conduit shall be 6063 alloy and shall be as manufactured by New Jersey Aluminum Corp.; Reynolds Aluminum International Services Inc.; Alumax Extrusions, Inc; VAW of America, Inc. or equal.
2. Rigid aluminum conduit shall be for use under the provisions of NEC Article 344.

B. Rigid Nonmetallic Conduit

1. PVC conduit shall be rigid polyvinyl chloride schedule 80 as manufactured by Carlon; An Indian Head Co.; Cantex; Queen City Plastics or equal.
2. PVC conduit used in underground concrete encased duct banks shall be polyvinyl chloride Schedule 40 as manufactured by Carlon; An Indian Head Co.; Cantex; Queen City Plastics or equal.
3. PVC conduit shall be for use under the provisions of NEC Article 352.

C. Liquidtight Flexible Metal Conduit, Couplings and Fittings

1. Liquidtight flexible metal conduit shall be Sealtite, Type UA, manufactured by the Anaconda Metal Hose Div.; Anaconda American Brass Co.; American Flexible Conduit Co., Inc.; Universal Metal Hose Co. or equal.
2. Fittings used with Liquidtight flexible metal conduit shall be of the 3-piece screw-in type malleable iron as manufactured by the O.Z. Gedney Co. or equal.
3. Liquidtight flexible metal conduit shall be for use under the provisions of NEC Article 350.

D. Flexible Couplings

1. Flexible couplings shall be type ECGJH as manufactured by the Crouse-Hinds Co.;

Appleton Electric Co.; Killark Electric Manufacturing Co. or equal.

E. Boxes and Fittings

1. Pressed steel switch and outlet boxes shall be hot-dipped galvanized with hot-dipped galvanized tile rings as manufactured by the Raco Manufacturing Co.; Adalet Co.; O.Z. Manufacturing Co. or equal.
2. NEMA 1 and NEMA 12, junction boxes, pull boxes etc., shall be sheet steel unless otherwise shown on the Drawings or located in Corrosive Areas including all pretreatment and hypochlorite facilites. Boxes shall be galvanized and have continuously welded seams. Welds shall be ground smooth and galvanized. Box bodies shall be flanged and shall not have holes or knockouts. Box bodies and covers shall not be less than 14-gauge metal. Covers shall be gasketed and fastened with stainless steel screws. Terminal boxes shall be furnished with hinged doors, terminal mounting straps and brackets (refer to Section 16108 for additional requirements). Boxes shall be as manufactured by Hoffman Engineering Co.; Lee Products Co.; ASCO Electrical Products Co., Inc., or equal. All boxes shall be shop primed and painted by the box manufacturer.
3. NEMA 4X stainless steel, junction boxes and pull boxes shall be 316 stainless steel with 316 stainless steel hardware and gasketed covers. Boxes shall have continuously welded seams and welds shall be ground smooth. Box bodies shall be flanged and shall not have holes or knockouts. Box bodies and covers shall not be less than 14-gauge metal. Covers shall be gasketed and fastened with stainless steel screws. Terminal boxes shall be furnished with hinged doors, terminal mounting straps and brackets (refer to Section 16108 for additional requirements.) Boxes shall be as manufactured by Hoffman Engineering Co.; Lee Products Co.; ASCO Electrical Products Co., Inc., or equal.
4. Explosion-proof boxes shall be designed for Class 1, Group D, Division 1 hazardous locations. They shall be cast aluminum, with stainless steel hinged covers and stainless steel hardware and bolts; Type EJB-N4 as manufactured by the Crouse-Hinds Co.; Appleton Electric Co.; Adalet-PLM or equal.
5. Cast aluminum boxes and fittings shall be copper free aluminum with cast aluminum covers and stainless steel screws as manufactured by the Killark Electric Co..; Crouse-Hinds Co.; Appleton Electric Co.; or equal.
6. Cast aluminum device boxes shall be Type FD. All cast aluminum boxes and fittings shall be copper-free aluminum with cast aluminum covers and stainless steel screws as manufactured by the Killark Electric Co.; Crouse-Hinds Co.; L. E. Mason Co. or equal.
7. Cast aluminum fittings (C's, T's, LB's, etc.) shall be of the mogul design (with rollers) as manufactured by Appleton Electric Co.
8. Conduit hubs shall be of the grounding type as manufactured by Myers Electric Products, Inc. or equal.
9. Conduit wall seals for new concrete walls below grade shall be O.Z./Gedney Co., Type WSK; Spring City Electrical Manufacturing Co., Type WDP or equal.
10. Conduit wall seals for cored holes shall be Type CSML as manufactured by the O.Z./Gedney Co. or equal.
11. Conduit wall and floor seals for sleeved openings shall be Type CSMI as manufactured by the O.Z./Gedney Co. or equal.
12. Combination expansion-deflection fittings embedded in concrete shall be Type XD as manufactured by the Crouse-Hinds Co.; O.Z./Gedney Co.; Spring City Electrical Mfg. Co. or equal.
13. Combination expansion-deflection fittings installed exposed shall be Type XJ as

manufactured by Crouse-Hinds Co.; O.Z. Gedney Co.; Spring City Electrical Mfg. Co. or equal.

14. Explosion proof fittings shall be as manufactured by the Crouse-Hinds Co.; Appleton Electric Co.; O.Z./Gedney Co. or equal.
15. Conduit sealing bushings shall be O.Z./Gedney, Type CSB or equal.
16. Elbows and couplings shall be aluminum.

F. Conduit Mounting Equipment

1. In administration and office areas, hangers, rods, backplates, beam clamps, channel, fasteners, anchors, nuts, washers, etc., shall be hot-dipped galvanized steel.
2. 316 Stainless steel channel with 316 stainless steel hardware (hangers, rods, backplates, beam clamps, fasteners, anchors, nuts, washers, etc.) shall be used in all other areas. All channel and hardware shall be resistant to the chemicals present in the area in which it is used.
3. Expansion anchors (minimum 3/8" diameter) shall be equal to Kwik-Bolt as manufactured by the McCullock Industries, Minneapolis, MI; Wej-it by Wej-it Expansion Products, Inc., Bloomfield, CO; or Kwik-Bolt II as manufactured by the Hilti Fastening Systems, Inc, Tulsa, OK. The length of expansion bolts shall be sufficient to place the wedge portion of the bolt a minimum of 1-in behind the steel reinforcement. Apply anti-seize compound to all nuts and bolts. Supports installed without the approved compound shall be dismantled and correctly installed, at no cost to the OWNER.

G. Wall and Floor Slab Opening Seals

1. Wall and floor slab openings shall be sealed with "FLAME-SAFE" as manufactured by the Thomas & Betts Corp.; Pro Set Systems; Neer Mfg. Co.; Specified Technologies, Inc. or equal.

H. Cold Galvanizing Compound

1. Cold galvanizing compound shall be 95% zinc rich paint as manufactured by ZRC Products Company, a Division of Norfolk Corp. or equal.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATIONS

A. Except where otherwise shown on the Drawings, or specified, all exposed wiring shall be in rigid aluminum conduit.

B. All underground conduits shall be encased in red concrete.

C. Schedule 80 PVC conduit shall be used underground and in chemical rooms, chlorinator rooms and chlorine storage areas or areas designated "CORROSIVE" on the Drawings, including concrete encased conduits.

D. Where schedule 80 PVC is used all elbows shall be rigid aluminum PVC coated.

E. Electrical metallic tubing and fittings may be used only in NEMA 1 administration and office

areas. Electrical metallic tubing and fittings shall not be embedded in concrete, installed outdoors, in process areas, shops, maintenance areas, electrical rooms, etc.

F. All conduit of a given type shall be the product of one manufacturer.

3.2 BOX APPLICATIONS

A. Unless otherwise specified herein or shown on the Drawings, all boxes shall be metal.

B. Exposed switch, receptacle and lighting outlet boxes and condulet fittings shall be cast aluminum.

C. Concealed switch, receptacle and lighting outlet boxes shall be pressed steel. Welded seamed boxes will not be permitted.

D. Terminal boxes, junction boxes and pull boxes shall have NEMA ratings suitable for the location in which they are installed, as specified in Section 16010.

3.3 FITTINGS APPLICATIONS

A. Combination expansion-deflection fittings shall be used where conduits cross structure expansion joints. Refer to Structural Drawings for expansion joint locations. Provide bonding jumpers around fittings.

B. Conduit wall seals shall be used where underground conduits penetrate walls or at other locations shown on the Drawings.

C. Conduit sealing bushings shall be used to seal conduit ends exposed to the weather and at other locations shown on the Drawings.

3.4 INSTALLATION

A. No conduit smaller than ¾-inch electrical trade size shall be used, nor shall any have more than the equivalent of three 90-degree bends in any one run. Pull boxes shall be provided as required or directed.

B. No wire shall be pulled until the conduit system is complete in all details; in the case of concealed work, until all rough plastering or masonry has been completed; in the case of exposed work, until the conduit system has been completed in every detail.

C. The ends of all conduits shall be tightly plugged to exclude dust and moisture during construction.

D. Conduit supports, other than for underground raceways, shall be spaced at intervals of 8-ft or less, as required to obtain rigid construction.

E. Single conduits shall be supported by means of aluminum one-hole pipe clamps in combination with aluminum one-screw back plates, to raise conduits from the surface. Multiple runs of conduits shall be supported on trapeze type hangers with steel horizontal members and threaded hanger rods. The rods shall be not less than 3/8-inch diameter. Surface mounted panel boxes,

junction boxes, conduit, etc, shall be supported by spacers to provide a minimum of 1/2-inch clearance between wall and equipment.

F. Conduit hangers shall be attached to structural steel by means of beam or channel clamps. Where attached to concrete surfaces, concrete expansion anchors shall be provided.

G. All conduits on exposed work, within partitions and above suspended ceilings, shall be run at right angles to and parallel with the surrounding wall and shall conform to the form of the ceiling. No diagonal runs will be allowed. Bends in parallel conduit runs shall be concentric. All conduits shall be run perfectly straight and true.

H. Conduit terminating in pressed steel boxes shall have double locknuts (aluminum) and insulated grounding bushings.

I. Conduit terminating in gasketed enclosures shall be terminated with grounding type conduit hubs.

J. Conduits containing equipment grounding conductors and terminating in sheet steel boxes shall have insulated throat grounding bushings with lay-in type lugs.

K. Conduits shall be installed using threaded fittings unless otherwise specified herein.

L. Liquidtight flexible metal conduit shall be used for all motor terminations, the primary and secondary of transformers, generator terminations and other equipment where vibration is present.

M. Flexible couplings shall be used in hazardous locations for all motor terminations and other equipment where vibration is present.

N. Aluminum fittings and boxes shall be used with aluminum conduit. Aluminum conduit shall not be imbedded in concrete containing chlorides, unwashed beach sand, sea water, or coral bearing aggregates. Aluminum conduit shall be isolated from other metals with heat shrink tubing (Raychem or equal) or plastic-coated hangers. Strap wrenches shall be used for tightening aluminum conduit. Pipe wrenches, channel locks, chain wrenches, pliers, etc. shall not be used.

O. All threads on aluminum conduit and fittings shall be cleaned and coated with No-Oxide compound before installing.

P. Aluminum conduit installed in concrete or below grade shall be completely covered with heat shrink tubing (Raychem or equal).

Q. Where conduits pass through openings in walls or floor slabs, the remaining openings shall be sealed against the passage of flame and smoke.

R. PVC conduit to non-metallic and metallic box connections shall be made with sealing rings, with a stainless steel retainer as manufactured by Thomas & Betts Co.

S. Conduit ends exposed to the weather shall be sealed with conduit sealing bushings.

T. Expansion fittings shall be used on exposed runs of PVC conduit where required for thermal expansion. Installation and number of fittings shall be as provided per the NEC and approved by

the PVC conduit manufacturer.

U. All conduit entering or leaving a motor control center, switchboard or other multiple compartment enclosure shall be stubbed up into the bottom horizontal wireway or other manufacturer designated area, directly below the vertical section in which the conductors are to be terminated.

V. Conduit sealing and drain fittings shall be installed in areas designated as NEMA 7.

W. Spare conduits and conduit stubouts for future construction shall be provided with threaded PVC end caps at each end.

X. No unbroken run shall exceed 300 feet in length. This length shall be reduced by 75 feet for each 90-degree elbow.

Y. Underground circuits shall be installed directly to the respective motor control centers, lighting panels, etc., except stainless steel pull boxes shall be wall mounted on structures to eliminate excessive bends. With prior written approval, below grade pull boxes may be used. Splices shall not be made in above or below grade pull boxes unless otherwise indicated on the plans and approved in writing by the ENGINEER.

Z. All conduits shall have a 4-inch concrete housekeeping pad at all slab and grade penetrations. The housekeeping pad shall have 45 degree, 3/4-inch chamfer at all exposed edges.

AA. All risers from underground, concrete pads, floors, etc. shall be provided with heat shrink tubing (Raychem Co. or equal) from a point 1 foot-0-inch below bottom of slab or grade to a point not less than 6 inches above grade or surface of slab.

BB. Existing conduits are to be reused only where specifically noted on the drawings. Mandrels shall be pulled through all existing conduits which will be reused and through all new conduits 2-in in diameter and larger prior to installing conductors.

CC. 3/16-in polypropylene pull lines shall be installed in all new conduits noted as spares or designated for future equipment.

DD. Where no size is indicated for junction boxes, pull boxes or terminal cabinets, they shall be sized in accordance with the requirements of NEC Article 314.

EE. Conduits shall not cross pipe shafts, access hatches or vent duct openings. They shall be routed to avoid such present or future openings in floor or ceiling construction.

FF. The use of running threads is prohibited. Where such threads are necessary, a 3-piece cast aluminum union shall be used.

GG. Conduits passing from heated to unheated spaces, exterior spaces, refrigerated spaces, cold air plenums, etc, shall be sealed with "Duxseal" as manufactured by Manville or seal fitting to prevent the accumulation of condensation.

HH. All underground control and instrumentation conduits shall be separated from power conduits by a minimum of 12 inches unless specifically noted otherwise. Crossing of control and

instrumentation conduits with power conduits shall be kept to a minimum and where they must cross, they shall cross at 90-degree angles.

II. Cables passing through in-ground manholes shall be neatly racked within each manhole when installed.

END OF SECTION

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SECTION 16120

WIRES AND CABLES

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish, install and test all wire, cable and appurtenances as shown on the Drawings and as specified herein.

B. Install data highway, fiber optic, coaxial and I/O cables furnished under Division 13.

1.2 RELATED WORK

A. Refer to Section 16000 for electrical testing.

B. Refer to Division 13 for fiber optic cables.

1.3 SUBMITTALS

A. Submit to the ENGINEER, in accordance with Section 01330, samples of proposed wire. Each sample shall have the size, type of insulation and voltage stenciled on the jacket.

B. Approved samples will be sent to the project location for comparison by the OWNER's RESIDENT PROJECT REPRESENTATIVE (RPR) with the wire actually installed.

C. Installed unapproved wire shall be removed and replaced at no additional cost to the OWNER.

D. Submit results of insulation resistance testing as specified herein.

1.4 DELIVERY, STORAGE AND HANDLING

A. Carefully handle all conductors to avoid kinks and damage to insulation.

1.5 WARRANTY

A. The manufacturer shall warrant the cable against defects for a period of 20 years from the date of installation and shall remove and replace defective cables at his expense during this warranty period.

PART 2 - PRODUCTS

2.1 GENERAL

A. Wires and cables shall be of annealed, 98 percent conductivity, soft drawn copper.

B. All conductors shall be stranded, except that lighting and receptacle wiring may be solid.

C. Except for control, signal and instrumentation circuits, wire smaller than No. 12 AWG shall not be used.

D. Wire shall have 600V insulation except where indicated otherwise.

E. All wire of a given type shall be the product of a single manufacturer.

F. Acceptable manufacturers (when product type is available)

1. American Insulated Wire Corp.
2. Belden
3. General Cable
4. Okonite
5. Pirelli
6. Rockbestos
7. Southwire
8. Or equal

2.2 POWER WIRE

A. Wire for lighting, receptacles, and other circuits not exceeding 150 volts to ground shall be NEC type XHHW-2. Below grade and underground the wire shall be type XHHW-2.

B. Wire for circuits over 150 volts to ground shall be NEC type XHHW-2 for sizes No. 4/0 AWG and smaller and shall be NEC type RHW-2 for sizes 250 kcmil and larger.

C. Equipment grounding conductors shall be the same NEC type as the phase conductors described previously, green and sized per NEC Table 250.122.

D. Bare copper ground wire shall be stranded, tinned soft drawn annealed copper wire.

E. Ground grid conductors shall be uninsulated unless shown otherwise on the Drawings.

F. Multi-conductor power cable shall be stranded, 600V, cross-linked polyethylene insulated with PVC jacket, Type TC (XLP) with ground.

G. Variable Frequency Drive Output cable to motors shall contain three stranded tinned copper circuit conductors, three symmetrical bare copper ground wires, with XLPE insulation, two spiral copper tape shields (100% coverage), sun- and oil-resistant PVC jacket, 2000V. CONTRACTOR shall be responsible, at no additional cost to the OWNER, to increase conduit size per NEC if another manufacturer’s cable requires a larger conduit size.

2.3 CONTROL, STATUS AND ALARM WIRE

A. Wire shall be No. 14 AWG minimum NEC type XHHW-2 stranded.

B. Multi-conductor control cable shall be NEC type TC (tray cable), stranded, No. 14 AWG, XHHW-2 600V insulated color coded conductors, bare stranded ground wire, with overall PVC cable jacket. Cable shall be rated for cable tray or direct burial use and sunlight resistant. Number of conductors as listed on the Drawings.

2.4 INSTRUMENTATION WIRE

A. Process instrumentation wire shall be twisted pair, 600V, cross linked polyethylene insulated, aluminum tape shielded, polyvinyl chloride jacketed type "XLP".

B. Cable for 4-20 mA instrumentation, potentiometer, RTD and similar analog circuits shall be multi-conductor twisted and shielded.

1. Single pair cable:

   a. Conductors: 2 No. 16 AWG stranded and twisted
   b. Insulation: XLP
   c. Shield: 100 percent tape with drain wire
   d. Jacket: PVC with UL and manufacturers identification

2. Three conductor (triad) cable:

   a. Conductors: 3 No. 16 AWG stranded and twisted
   b. Insulation: XLP
   c. Shield: 100 percent tape with drain wire
   d. Jacket: PVC with UL and manufacturers identification

3. Multiple pair cables (where shown on the Drawings):

   a. Conductor: Multiple 2 No. 16 AWG stranded and twisted
   b. Insulation: XLP
   c. Shield: Individual pairs and overall shielded with 100 percent tape and drain wire
   d. Jacket: PVC with UL manufacturers identification

2.5 COMMUNICATION CABLE

A. Ethernet cable shall be designed for use with a high-speed (1000 Mbps/1Gbps) Ethernet communications network. The twisted pair cable shall have nominal impedance of 100 ohms at 1 Mhz and a maximum attenuation of 10 dB per 1000 feet at 1 Mhz. The twisted pair cable shall be non-plenum rated and shall have a minimum of four 22 AWG solid copper conductor pairs with an overall foil shield. Cable shall be Category 6, *Ethernet/IP* compliant with a voltage insulation rating of 600V. Cable shall be able to be terminated using RJ-45 terminations. Cable shall be Rockwell Automation or equal. RJ-45 terminations shall be industrial type, for shielded 8 conductor cable, Rockwell Automation Bulletin 1585J, or equal.

B. Profibus PA cable shall be 300V, 1 pair 18 AWG, stranded tinned copper, 100% foil shield, color blue and orange, 100 ohms at 31.25 kHz, PVC jacket, Belden Type 3076F or equal.

C. Profibus DP cable shall be 300V, 1 pair 22 AWG, stranded tinned copper, 100% foil shield, color red and green, 150 ohms, PVC jacket, Belden Type 3079E or equal. DeviceNet cable shall be Class 1 (600V), with 2 pairs, 16 and 18 AWG, stranded tinned copper conductors, 100% individually foil shielded, plus a 65% overall tinned copper braid, sunlight/oil-resistant PVC jacket. Power pair (16 AWG) color blue and white. Data pair (18 AWG) color red and black. ODVA (Open DeviceNet Vendor Association) Cable V, Belden Type 7896A or equal.

D. Telephone cable shall be No. 22 AWG, 4-pairs, solid copper PVC insulation and PVC jacket. UL rated Type CMR as manufactured by American Insulated Wire Corp., or equal.

E. Telephone cable shall be No. 22 AWG, multi-twisted pair as shown on Drawings, solid annealed copper conductors, foam and solid polyolefin insulation, entire core filled with ETPR compound to provide waterproofing, non-hygroscopic dielectric tape applied over the core, 8 mil corrugated copolymer coated aluminum tape shield applied longitudinally with an overlap, black low-density polyethylene jacket. Identification on outer jacket shall include cable code, pair count, AWG, date of manufacture and sequential length markings at 2-ft intervals. Type PE-89 as manufactured by Superior Essen or equal.

2.6 TERMINATIONS AND SPLICES (POWER CONDUCTORS)

A. Unless otherwise indicated on the Drawings, splices shall not be made in the cables without prior written approval of the ENGINEER. Where splicing is approved by the ENGINEER, splicing materials for all 600V splices shall be made with long barrel, tin plated copper compression (hydraulically pressed) connectors and insulated with heavy wall heat shrinkable tubing. The conductivity of all completed connections shall be not less than that of the uncut conductor. The insulation resistance of all completed connections of insulated conductors shall be not less than that of the uncut conductor.

B. Wire lugs shall be tin plated copper, long barrel compression type (hydraulically pressed) for wire sizes No. 8 AWG and larger. Use one hole lug for sizes No. 8 AWG to No. 4/0 AWG. Use two-hole lug for sizes 250 kcmil and larger. Lugs for No. 10 AWG and smaller wire shall be locking spade type with insulated sleeve. Lugs shall be as manufactured by the Thomas and Betts Co.; Burndy; Amp; or equal.

C. Compression type connectors shall be insulated with a heat shrink boot or outer covering and epoxy filling. Splice kits shall be as manufactured by Raychem (Tyco); Ideal Industries; 3M Co. or equal.

D. Connectors (wire nuts) for pigtail splicing all wires and cables No. 10 AWG and smaller shall be solderless pressure type.

E. Connectors used at all exterior, wet or corrosive locations shall be pre-filled with silicone based sealant. Connectors shall be as manufactured by Ideal Industries, or equal.

F. All splices below grade shall be made waterproof using “Scotch-Cast”, or equal.

G. Splices in branch circuit conductors No. 8 AWG and larger shall be made with split bolt connectors.

2.7 MOTOR CONNECTIONS

A. Motor connections shall be ring type mechanical compression terminations installed on the branch circuit wires and the motor leads and secured with bolt, nut and spring washer. Connections shall be insulated with a Raychem Type RVC, roll-on stub insulator; Thomas & Betts, Shrink-Kon MSCV20; or equal. For wire sizes No. 8 AWG and larger, long barrel, tin plated copper compression (hydraulically pressed) type connections Burndy Co., or equal) shall be installed on the branch circuit wires and the motor leads. Connections shall be insulated with heavy duty heat shrinkable material (Raychem Corp., or equal).

2.8 TERMINATIONS AND SPLICES (CONTROL, STATUS AND ALARM CONDUCTORS)

A. Unless otherwise indicated on the Drawings, splices shall not be made in the cables without prior written approval of the ENGINEER. Where splicing is approved by the ENGINEER, splicing materials shall be approved by the ENGINEER and cable manufacturer. Splicing materials and installation shall be as required by the ENGINEER. The conductivity of all completed connections shall be not less than that of the uncut conductor. The insulation resistance of all completed connections of insulated conductors shall be not less than that of the uncut conductor.

B. Termination connectors shall be of the locking fork-end (upturned leg ends) type as manufactured by Ideal Industries; 3M Co.; Panduit Corp. or equal.

C. Insulated compression type connectors shall be of the expanded vinyl insulated parallel or pigtail type as manufactured by Ideal Industries; 3M Co.; Panduit Corp. or equal.

D. Solderless pressure connectors shall be self-contained, waterproof and corrosion-proof units incorporating prefilled silicone grease to block out moisture and air. Connectors shall be sized according to manufacturer's recommendations. The connectors shall be UL listed and CSA approved, as manufactured by King Innovation; Ideal Industries, Inc or equal.

2.09 TERMINATIONS AND SPLICES (INSTRUMENTATION CABLES)

A. Termination connectors shall be of the locking fork-end (upturned leg ends) type as manufactured by Ideal Industries; 3M Co.; Panduit Corp. or equal.

2.10 WIRE AND CABLE MARKERS

A. Wire and cable markers shall be type written, heat shrinkable type as manufactured by the W.H. Brady Co., Thomas & Betts Co., 3M Co., or equal.

B. Wire and cables with diameters exceeding the capacity of the heat shrinkable markers shall be marked with pre-printed, self-adhesive vinyl tapes as manufactured by the W.H. Brady Co., Panduit Corp., or equal.

2.11 WALL AND FLOOR SLAB OPENING SEALS

A. Wall and floor slab openings shall be sealed with UL approved expanding material which equals or exceeds the fire rating of the wall or floor construction such as "FLAME-SAFE" as manufactured by the Thomas & Betts Corp. or equal.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION

A. Uniquely identify all wires, cables and each conductor of multi-conductor cables (except lighting and receptacle wiring) at each end and in all manholes, hand holes and pull boxes with wire and cable markers. Label all future and spare wiring and cables.

B. Identify circuit number associated with lights, receptacles, and other miscellaneous loads at panelboards. Identify phase and neutral conductors.

C. Use lubrications to facilitate wire pulling. Pulling compound shall be nontoxic, nonflammable, noncombustible and noncorrosive. The material shall be UL listed and compatible with the cable insulation and jacket.

D. All wire and cable shall be continuous and without splices between points of connection to equipment terminals, except a splice will be permitted by the ENGINEER if the length required between the points of connection exceeds the greatest standard shipping length available from the manufacturer specified or approved by the ENGINEER as the manufacturer of the particular item or wire and cable.

E. The crimping tools used in securing the conductor in the compression type connectors or terminal lugs shall be those made for that purpose and for the conductor sizes involved. The crimping tool shall be the ratchet type which prevents the tool from opening until the crimp action is completed. Such tools shall be a product of the connector manufacturer.

F. Equipment grounding conductors shall be installed in all power and control raceways.

G. Seal openings in slabs and walls through which wires and cables pass.

H. Steel fish tapes and/or steel pulling cables shall not be used in PVC conduit runs or in raceways that terminate into energized enclosures.

I. Pull cable from direction that requires the least tension. Feed cable into raceway with zero tension and without cable crossover at raceway entrance. Use a feed-in tube and sheave designed for cable installation. Use sheaves with radii that exceed the cable manufacturer's recommended minimum bending radius. Use a dynamometer and constant velocity power pulling. Velocity should not be less than 15-ft./min or more than 50-ft/min. Do not exceed the cable manufacturer's maximum recommended tension.

J. If cable cannot be terminated immediately after installation, install heat shrinkable end caps.

K. Fireproof exposed cables in manholes, vaults, pullboxes, switchgear and other areas not protected by conduit where medium voltage cables are present. Use fire-proofing tape and glass tape in accordance with the manufacturer's instructions. Fire-proofing tape shall be with one half-lapped layer of Scotch Brand 77 Electric Arc and Fireproofing Tape by 3M Corp. or equal. Tape shall be secured with a two-layer band of Scotch Brand 69 Glass Electrical Tape by 3M Corp. or equal over the last wrap.

L. Hydraulically or manually operated cable benders shall not be used unless approved in writing by the ENGINEER.

M. To protect wires prior to installation of devices, coil slack wires at outlets, inside the outlet boxes and seal the outlet opening with cardboard or fiber plug to prevent entrance of concrete, plaster or paint.

N. When solid conductors are to be connected directly to wiring devices without the use of lugs, the wires shall be formed into a loop to fit around the terminal screw. Under no circumstance shall the wire be wrapped completely around the screw with one conductor over-lapping the other.

3.2 INSTRUMENTATION AND COMMUNICATION CABLE INSTALLATION

A. Instrumentation cables shall be installed in raceways as specified. All circuits shall be installed as twisted pairs or triads. In no case shall a circuit be made up using conductors from different pairs or triads. Triads shall be used wherever three wire circuits are required.

B. Install shielded instrumentation wire from terminal to terminal with no splicing at any intermediate point. Shielded instrumentation wire, coaxial, data highway, I/O, fiber optic and communications cables shall be run without splices between instruments, terminal boxes, or panels.

C. Terminal blocks shall be provided at all instrument cable junctions, and all circuits shall be identified at such junctions.

D. Ground shielding on instrumentation wire at one end only as recommended by the instrument manufacturer and isolated at all other locations. Terminal blocks shall be provided for inter-connecting shield drain wires at all junction boxes. Where individual circuit shielding is required, each shield circuit shall be provided with its own terminal block.

E. Install shielded instrumentation wire in conduit and pull boxes that contain only shielded instrumentation wire. Instrumentation cables shall be separated from all other (i.e., power, control, etc.) cables in manholes.

F. All shielded cable terminations at each end shall be provided with heat shrinkable tubing placed over the exposed shield and conductors. The tubing shall extend 1-in minimum over the jacket end and extend ½-in minimum from the jacket end over the exposed conductors.

3.3 FIBER OPTIC CABLES

A. Unless otherwise indicated on the plans, no splices may be made in the cables without prior written approval of the ENGINEER. Where splicing is approved, then splicing material shall be approved by the ENGINEER and cable manufacturer.

B. Provide all material, equipment and labor to install the fiber optic cables as specified in Division 13.

C. Installation shall be in accordance with the NEC.

D. Install cables in the raceway systems as indicated. Inspect raceways prior to pulling in the cables. Notify the ENGINEER of any conditions which would prevent installation of the specified cables before proceeding with the installation.

E. Lubricate cables with lubricants specially formulated for fiber cabling jackets during installation. Do not exceed cable manufacturers' specifications for pulling tension and bending radius. Pulleys used to aid in the installation of the fiber optic cable must be sized according to the minimum bending radius.

F. Installation tools and materials shall be approved by the cable manufacturer.

G. Label each termination point. Label all future and spare wiring and cables.

H. Tag each cable in junction boxes, manholes and handholes. Provide permanent nylon/plastic tie-wrap type tags with waterproof markings.

3.4 WIRE COLOR CODE

A. All wire shall be color coded or coded using electrical tape in sizes where colored insulation is not available. Where tape is used as the identification system, it shall be applied in all junction boxes, manholes and other accessible intermediate locations as well as at each termination.

B. The following coding shall be used:

System	Wire	Color
240/120 Volts	Neutral	White
Single-Phase, 3 Wire	Line 1	Black
	Line 2	Red
208Y/120, Volts	Neutral	White
3 Phase, 4 Wire	Phase A	Black
	Phase B	Red
	Phase C	Blue
240/120 Volts	Neutral	White
3 Phase, 4 Wire	Phase A	Black
delta, center tap	Phase B (High)	Orange
ground on phase	Phase C	Blue
coil A-C		
480Y/277 Volts	Neutral	Gray
3 Phase, 4 Wire	Phase A	Brown
	Phase B	Orange
	Phase C	Yellow
Control (Individual Conductors)	AC	Red
	DC	Blue

C. Neutral or ground wires that terminate in a panelboard and require color tape shall have the color tape extend at least 6-in from the termination point.

3.5 TERMINATIONS AND SPLICES

A. Power conductors: Unless otherwise indicated on the Drawings, no splices may be made in the cables without prior written approval of the ENGINEER. Where splicing is approved, terminations shall be die type or set screw type pressure connectors as specified. Splices (where allowed) shall be die type compression connector and waterproof with heat shrink boot or epoxy filling for copper conductors # 4 AWG and larger. Splices shall be solderless pressure connectors with insulating covers for copper conductors # 6 AWG and smaller. Aluminum conductors (where specified) shall employ terminations and splices specifically designed for aluminum conductors.

B. Control Conductors: Termination on saddle-type terminals shall be wired directly with a maximum of two conductors. Termination on screw type terminals shall be made with a

maximum of two spade connectors. Splices (where allowed) shall be made with insulated compression type connectors.

C. Instrumentation Signal Conductors (including graphic panel, alarm, low and high level signals): terminations same as for control conductors. Splices allowed at instrumentation terminal boxes only.

D. Except where permitted by the ENGINEER no splices will be allowed in manholes, handholes or other below grade located boxes.

E. Splices shall not be made in push button control stations, control devices (i.e., pressure switches, flow switches, etc.), conduit bodies, etc.

F. Metallic shielding of VFD output motor cables shall be grounded at both ends in accordance with the cable manufacturer's instructions.

3.6 FIELD TESTING

A. Test all 600V wire insulation with a megohm meter after installation and prior to termination. Make tests at not less than 1000 volts DC. Test duration shall be one minute. Submit a written test report of the results to the ENGINEER. Notify ENGINEER in writing 48 hours prior to testing in the presence of the Resident Project Representative.

B. Field testing and commissioning shall be done in accordance with the latest revision of the "Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems" published by the InterNational Electrical Testing Association (NETA Standard ATS) unless otherwise modified by this Section. Minimum wire insulation resistance shall not be less than 250 Megohms.

C. All service conductors shall be tested as in paragraph "A" above with the ENGINEER present.

END OF SECTION

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SECTION 16150

MOTORS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install the motors as hereinafter specified and as called for in other sections of these Specifications.

1.2 QUALIFICATIONS

A. Motor shall be sufficient size for the duty to be performed and shall not exceed their full-rated load when the driven equipment is operating at specified capacity. Unless otherwise noted, motors driving pumps shall not be overloaded at any head or discharge condition of the pump.

1.3 SUBMITTALS

A. The motor manufacturer shall submit to the Engineer certified dimension prints showing nameplate data and outline dimensions within three weeks of the date they receive the order.

B. Guarantee: All equipment furnished and installed under this Section shall be guaranteed against defects of workmanship, materials and improper installation for a period of one year from date of acceptance. All such equipment or parts proven defective, due to the above noted causes, shall be replaced in the machines by the Contractor at no expense to the Owner.

C. Provide equipment warranty in accordance with Division I, section 01740.

PART 2 - PRODUCTS

2.1 RATING

A. Unless otherwise noted, all motors shall be of the low voltage type. All motors 1/2 through 100 horsepower shall be rated 230/460 volt, 3 phase, 60 Hertz A.C.; motors 125 horsepower through 500 horsepower shall be rated 460 volt, 3-phase, 60 Hertz, and motors below 1/2 horsepower shall be rated 115/230 volt, 1 phase, 60 Hertz A.C.

2.2 THREE PHASE INDUCTION MOTORS

A. Motors 20 HP and larger shall have a 120-volt space heater for moisture control.

B. Unless specifically noted in other sections of these Specifications, all motors shall have a minimum as indicated in the table below. All motors shall be "premium efficiency" type.

TABLE 1

Motor HP	Min. Eff.	Max. dba	Motor HP	Min. Eff.	Max. dba
1-2	84.0%	74	25-30	92.0%	92
3-5	86.5%	79	40-50	93.0%	97
7.5-10	90.2%	84	60-75	94.0%	100
15-20	91.0%	89	100	94.1%	102
			200	94.3%	105

C. Motors operating with variable frequency drives shall state that they are suitable for their intended applications. Motor nameplate shall read "Inverter Duty Rated". In addition, Motors operating with Variable Frequency Drives (VFDs) shall meet the requirements of NEMA MG1 Part 31.

D. Shaft grounding rings shall be provided on all motors 200HP and larger. Grounding rings shall be maintenance free, circumferential micro fiber type, AEGIS™ SGR by electro Static Technology or equal to discharge shaft currents to ground.

E. Motors larger than 15 Hp and operating with a VFD shall have imbedded a winding temperature switch. Motors larger than 300 horsepower shall have winding resistance temperature detectors (RTD's).

2.3 CONSTRUCTION

A. General:

1. All drip-proof and weather protected Type I motors shall have epoxy encapsulated windings. Totally enclosed motors shall not be encapsulated. Motors not readily available with encapsulated windings may be standard type. Motors exposed to the outside atmosphere shall be totally enclosed fan cooled (TEFC) unless otherwise specified.
2. Squirrel-cage rotors shall be made from high-grade steel laminations adequately fastened together and to the shaft, or shall be cast aluminum or bar-type construction with brazed end rings.

B. Low Voltage, Three Phase Motors:

1. Motors shall be of the squirrel-cage or wound rotor induction type as noted. Horizontal, vertical solid shaft, vertical hollow shaft, normal thrust and high thrust types shall be furnished as specified herein. All motors shall be built in accordance with current NEMA, IEEE, ANSI and AFBMA standards where applicable. Motors shall be of the type and quality described by these Specifications, fully capable of performing in accordance with manufacturer's nameplate rating, and free from defective material and workmanship.
2. Motors shall have normal or high starting torque (as required), low starting current (not to exceed 600 percent full load current), and low slip.
3. Motors shall be totally enclosed fan-cooled construction with 1.15 service factor unless

otherwise noted. Indoor motors shall be WPI unless otherwise noted.

4. Motors shall be suitable for operation in moist air with hydrogen sulfide gas present.
5. The output shaft shall be suitable for direct connection or belt drive as required.
6. Motors shall have a Class F non-hygroscopic insulation system but shall be limited to Class B temperature rise.
7. All motors shall have a final coating of chemical resistant corrosion and fungus protective epoxy fortified enamel finish sprayed over red primer over all interior and exterior surfaces. Stator bore and rotor of all motors shall be epoxy coated.
8. All fittings, bolts, nuts, and screws shall be 316 stainless steel. Bolts and nuts shall have hex heads.
9. All machine surfaces shall be coated with rust inhibiter for easy disassembly.
10. Conduit boxes shall be gasketed. Lead wires between motor frame and conduit box shall be gasketed.
11. Totally enclosed motors shall be provided with condensate drain hole and epoxy coated motor windings to protect against moisture.
12. Nameplates shall be stainless steel. Lifting lugs or "O" type bolts shall be supplied on all frames 254T and larger. Enclosures will have stainless steel screen and motors shall be protected for corrosion, fungus and insects.
13. Low voltage, three phase motors shall be manufactured by General Electric, U.S. Motors, Westinghouse or Reliance.
14. Fractional Horsepower:

    a. Fractional horsepower motors shall be rigid, welded-steel, designed to maintain accurate alignment of motor components and provide adequate protection. End shields shall be reinforced, lightweight die-cast aluminum. Windings shall be of varnish-insulated wire with slot insulation of polyester film, baked-on bonding treatment to make the stator winding strongly resistant to heat, aging, moisture, electrical stresses and other hazards.
    b. Motor shaft shall be made from high-grade, cold-rolled shaft steel with drive-shaft extensions carefully machined to standard NEMA dimensions for the particular drive connection.
    c. For light to moderate loading, bearings shall be quiet all-angle sleeve type with large oil reservoir that prevents leakage and permits motor operation in any position.
    d. For heavy loading, bearings shall be carefully selected precision ball bearings with extra quality, long-life grease, and large reservoir providing 10 years' normal operation without relubrication.

15. Integral Horsepower:

    a. Motor frames and end shields shall be cast iron or heavy fabricated steel of such design and proportions as to hold all motor components rigidly in proper position and provide adequate protection for the type of enclosure employed.
    b. Windings shall be adequately insulated and securely braced to resist failure due to electrical stresses and vibrations.
    c. The shaft shall be made of high-grade machine steel or steel forging of size and design adequate to withstand the load stresses normally encountered in motors of the particular rating. Bearing journals shall be ground and polished.
    d. Rotors shall be made from high-grade steel laminations adequately fastened together, and to the shaft. Rotor squirrel-cage windings may be cast-aluminum or bar-type construction with brazed end rings.
    e. Motors shall be equipped with vacuum-degassed antifriction bearings made to

AFBMA Standards, and be of ample capacity for the motor rating. The bearing housing shall be large enough to hold sufficient lubricant to minimize the need for frequent lubrication, but facilities shall be provided for adding new lubricant and draining out old lubricant without motor disassembly. The bearing housing shall have long, tight, running fits or rotating seals to protect against the entrance of foreign matter into the bearings, or leakage of lubricant out of the bearing cavity.

f. Bearings of high thrust motors will be locked for momentary up thrust of 30% down thrust. All bearings shall have a minimum B10 life rating of 100,000 hours in accordance with AFBMA life and thrust values.

g. Vertical hollow-shaft motors will have non-reverse ratchets to prevent backspin.

C. Low Voltage, Single Phase Motors:

1. Single phase motors shall be split-phase and capacitor-start induction types rated for continuous horsepower at the rpm called for on the Drawings. Motors shall be rated 115/230 volts, 60 Hertz, single phase, open drip-proof, or totally enclosed fan cooled as called for on the Drawings, with temperature rise in accordance with NEMA Standards for Class B insulation.
2. Totally enclosed fan cooled motors shall be designed for severe-duty.
3. Motors shall have corrosion and fungus protective finish on internal and external surfaces. All fittings shall have a corrosion protective plating.
4. Mechanical characteristics shall be the same as specified for polyphase fractional horsepower motors.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Motor Connections: All motors shall be connected to the conduit system by means of a short section 18-inch minimum of flexible conduit unless otherwise indicated. For all motor connections, the Contractor shall install a grounding conductor in the conduit and terminate at the motor control center with an approved grounding clamp.

3.2 TESTS AND CHECKS

A. The following tests shall be performed on all motors after installation but before putting motors into service.

1. The Contractor shall megger each motor winding before energizing the motor, and, if insulation resistance is found to be low, shall notify the Engineer and shall not energize the motor. The following table gives minimum acceptable insulation resistance in meg-ohms at various temperatures and for various voltages with readings being taken after one minute of megger test run.

TABLE 2

Degree Winding Temperature		**Voltage**		
^{0}F	**^{0}C**	**115V**	**230V**	**460V**
37	3.9	60	108	210
50	10	32	60	120
68	20	13	26	50
86	30	5.6	11	21
104	45	2.4	4.5	8.8
122	50	1	2	3.7
140	60	.5	.85	1.6

2. The Contractor shall check all motors for correct clearances and alignment and for correct lubrication, and shall lubricate if required in accordance with manufacturer's instructions. The Contractor shall check direction of rotation of all motors and reverse connections if necessary.

B. The following tests shall apply to the medium voltage motors:

1. See Paragraph 3.02 A for test requirements.

2. All motors shall be given the standard short commercial test prior to shipment. This shall consist of no load current, check current balance, winding resistance, air gap measurement, high potential tests, and bearing inspection. Six (6) copies of the certified short commercial test shall be mailed to the Engineer prior to shipment.

END OF SECTION

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SECTION 16160

PANELBOARDS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required and install all panelboards as shown on the Drawings and as specified herein.

B. All panelboard wiring shall include wiring numbers and terminal point numbers cross referenced to shop drawing and subsequent record drawing submittals.

1.2 SUBMITTALS

A. Submit to the ENGINEER, in accordance with Section 01330, shop drawings and product data, for the following as a minimum:

1. Equipment outline drawings showing elevation and plan views, dimensions and weight. Indicate all options, special features, ratings and deviations from this Section.
2. Bus arrangement drawings.
3. Product data sheets and catalog numbers for circuit breakers, etc. List all options, trip adjustments and accessories furnished specifically for this project.
4. Instruction and renewal parts books.
5. Test and inspection reports.
6. Complete bill of materials list.
7. The equipment drawings, summary tables, and bill of materials list shall be computer generated (i.e., no hand-drawn drawings, sketches, lists will be accepted).

1.3 REFERENCE STANDARDS

A. Panelboards shall be in accordance with the Underwriter Laboratories (UL) "Standard for Panelboards" and "Standard for Cabinets and Boxes" and shall be so labeled where procedures exist. Panelboards shall also comply with NEMA Standard for Panelboards and the National Electrical Code (NEC).

B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.4 MANUFACTURERS

A. 120/240 Volt, single phase, 3 Wire and 120/208 Volt, 3 Phase, 4 Wire panelboards shall be Type NQ as manufactured by Square D; Type Pow-R-Line by Eaton; or Type AQ by ABB/General Electric.

B. 277/480 Volt, 3 Phase, 4 Wire panelboards shall be; Type NF as manufactured by Square D; Type Pow-R-Line by Eaton; or Type AE by ABB/General Electric.

C. 480 Volt, 3 Phase, 3 Wire panelboards shall be; I-Line series as manufactured by Square D; Type Pow-R-Line by Eaton; or Type Spectra by ABB/General Electric.

D. NEMA 3R and 4X panelboards shall be as specified herein, provided in 316 stainless steel enclosures as manufactured by the Hoffman or equal and completely assembled by the panelboard manufacturer. The door shall be provided with a pad-lockable vault type 3-point latch with no other latches provided.

E. Refer to additional requirements for manufacturers in Section 16000. Alternate suppliers must be submitted for approval to the ENGINEER in writing four weeks prior to the original bid date with supporting documentation to confirm all aspects of the specifications.

PART 2 - PRODUCTS

2.01 GENERAL

A. Rating

1. Panelboard ratings shall be as shown on the Drawings. All panelboards shall be rated for the intended voltage.
2. Circuit breaker panelboards shall be fully rated for the specified circuit breaker fault current interrupting capacity. Series connected short circuit ratings will not be acceptable.

2.2 MATERIALS (NEMA 1)

A. Interiors

1. All interiors shall be completely factory assembled with circuit breakers, wire connectors, etc. All wire connectors, except screw terminals, shall be of the anti-turn solderless type and all shall be suitable for copper wire of the sizes indicated.
2. Interiors shall be so designed that circuit breakers can be replaced without disturbing adjacent units and without removing the main bus connectors and shall be so designed that circuits may be changed without machining, drilling or tapping.
3. Branch circuits shall be arranged using double row construction except when narrow column panels are indicated. Branch circuits shall be numbered by the manufacturer.
4. A nameplate shall be provided listing manufacturer's name, panel type and rating.

B. Buses

1. Bus bars for the mains shall be of tin plated copper. Full size tin plated copper neutral bars shall be included. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of the branch circuit devices. Bussing shall be braced throughout to conform to industry standard practice governing short circuit stresses in panelboards. Phase bussing shall be full height without reduction. Cross connectors shall be tin plated copper. Each panel shall be provided with a ground bus bar, with removable link/jumper between neutral and ground bus. The ground bus shall be sized to the maximum number of circuit breakers that can be installed in the panelboard.
2. Neutral bussing shall have a suitable lug for each outgoing feeder requiring a neutral connection.
3. Spaces for future circuit breakers shall be bussed for the maximum device that can be fitted into them.
4. Tin plated copper equipment ground bars shall be furnished.

C. Boxes

1. Recessed or flush mounted boxes shall be made from galvanized code gauge steel having multiple knockouts, unless otherwise noted. Boxes shall be of sufficient size to provide a minimum gutter space of 4-in on all sides.
2. Surface mounted boxes and trims shall have an internal and external finish as specified in Paragraph 2.04,D,4 below.
3. At least four studs for mounting the panelboard interior shall be furnished.
4. All conduit entrances shall be field punched.

D. Trim

1. Hinged doors covering all circuit breaker handles shall be included in all panel trims.
2. Doors shall have semi flush type cylinder lock and catch, except that doors over 48-in in height shall have a vault handle and 3-point catch, complete with lock, arranged to fasten door at top, bottom and center. Door hinges shall be concealed. Furnish two keys for each lock. All locks shall be keyed alike; directory frame and card having a transparent cover shall be furnished on each door. All trims shall be door-in-door type construction.
3. The trims shall be fabricated from code gauge sheet steel.
4. All exterior and interior steel surfaces of the panelboard shall be properly cleaned and finished with ANSI Z55.1, No. 49 or 61 light gray paint over a rust-inhibiting phosphatized coating. The finish paint shall be of a type to which field applied paint will adhere.
5. Trims for flush panels shall overlap the box by at least 3/4-in all around. Surface mounted panel trims shall have the same width and height as the box. Trims shall be fastened with quarter turn clamps.

2.3 MATERIALS (NEMA 3R and 4X)

A. Interiors and Buses

1. Interiors and buses shall be as herein before specified for NEMA 1 construction.

B. Boxes and Covers

1. Boxes, covers and hardware shall be made from 316 stainless steel with natural finish.
2. Boxes and covers shall have continuous welded seams and shall be hinged (piano type) together and gasketed.
3. Conduit openings shall be tapped.
4. Maintain NEMA rating with all penetrations in the field.

2.4 CIRCUIT BREAKERS

A. Panelboards shall be equipped with circuit breakers with frame size and trip settings as shown on the Drawings.

B. Circuit breakers shall be molded case, bolt-in type.

C. Each circuit breaker used in 120/240 Volt and 120/208 Volt panelboards shall have an interrupting capacity of not less than 10,000 Amps, RMS symmetrical.

D. Each circuit breaker used in 277/480 Volt and 480 Volt panelboards shall have an interrupting capacity of not less than 65,000 Amps, RMS symmetrical.

E. GFCI (ground fault circuit interrupter) shall be provided for circuits as required and where indicated the Drawings. GFCI units shall be 1 Pole, 120 Volt, molded case, bolt-on breakers, incorporating a solid state ground fault interrupter circuit insulated and isolated from the breaker mechanism. The unit shall be UL listed Class A Group I device (5 milliamp sensitivity, 25 millisecond trip time) and an interrupting capacity of 65,000 Amps, RMS.

F. Circuit breakers shall be manufactured by the panelboard manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Mount boxes for surface mounted panelboards so there is at least 1/2-in air space between the box and the wall.

B. Connect panelboard branch circuit loads so that the load is distributed as equally as possible between the phase busses. Record normal base load phase voltages and currents for each phase and the total neutral current and submit to the ENGINEER for review.

C. Install markers on the front cover of all panelboards which identify the voltage rating. Markers shall be made of self sticking B-500 vinyl cloth printed with black characters on an Alert Orange background, 2-1/4-in high by 9-in wide, Style A as manufactured by W.H. Brady Co. or equal.

D. Install a 1-in by 3-in nominal laminated plastic nameplate with 1/2-in white letters on a black background on each panelboard. Nameplate lettering shall be as shown on the Drawings. Nameplates shall be stainless steel screw mounted.

E. Unless otherwise noted on the Drawings, top of cabinets shall be mounted 6 feet-0-inch above the floor, properly aligned and adequately supported independently of the connecting raceways.

F. All wiring in panelboards shall be neatly formed, grouped, and identified to provide a neat and orderly appearance. A typewritten directory card identifying all circuits shall be placed in the card holder inside the front cover.

G. All panelboards shall be protected from physical damage, water damage, moisture, corrosion, dirt and dust during construction. Any panelboard judged to be unacceptable by the ENGINEER shall be replaced by the CONTRACTOR at no additional cost to the OWNER.

H. Standard factory testing shall be performed for the equipment furnished under this section and these tests shall be in accordance with the latest version of NEMA and UL standards. Certified copies of these tests shall be provided to the ENGINEER upon request.

I. Field testing and commissioning shall be done in accordance with the latest revision of the "Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems" published by the InterNational Electrical Testing Association (NETA Standard ATS-2007) unless otherwise modified by this Section.

3.2 CLEANING

A. Remove all rubbish and debris from inside and around the equipment. Remove dirt, dust or concrete spatter from the interior and exterior of the equipment using brushes, vacuum cleaner or clean lint-

free rags. Do not use compressed air.

END OF SECTION

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SECTION 16195

ELECTRICAL IDENTIFICATION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Nameplates and tape labels.

B. Wire and cable markers.

C. Color coding.

1.2 SCOPE

A. Provide engraved nameplates for the following equipment as indicated on the drawings:

1. Label all compartments.
2. Label all outdoor junction boxes.
3. Label control system panels.
4. Label all receptacles (circuit designation)

B. All wires shall be marked and color-coded.

C. All control wiring shall have wire numbers on each end.

D. All exposed conduits to be painted to match color of back wall.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Nameplates: Engraved three-layer laminated plastic, black letters on a white background.

B. Wire and Cable Markers: Pre-printed self-sticking type.

C. Color Coding Tape: Vinyl plastic insulating tape, colors as specified in part 3.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Degrease and clean surfaces to receive nameplates and tape labels.

B. Install nameplates and tape labels parallel to equipment lines.

C. Secure nameplates to equipment fronts using screws, rivets, or adhesive. Secure nameplate to inside face of recessed panelboard doors in finished locations.

D. Provide warning labels for automatic equipment indicating “Warning: Automated Machinery. This unit may start at any time. Stay clear. Lock-out / tagout before servicing.”

3.2 WIRE IDENTIFICATION

A. Provide wire markers on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on schematic and interconnection diagrams or equipment manufacturer's shop drawings for control wiring.

B. Any color coding schemes used in existing work shall be maintained in new work.

C. Conductor Color Coding: Provide color coding for feeder, and branch circuit conductors throughout the project secondary electrical system as follows:

240/120 Volts	120/208 Volts	Phase	480/277 Volts
Black	Black	A	Brown
Blue	Blue	B	Orange
Red	Red	C	Yellow
White	White	Neutral	White
Green	Green	Ground	Green

3.3 NAMEPLATE ENGRAVING

A. Provide nameplates to identify all electrical distribution and control equipment and loads served. Letter Height: 1/8 inch for individual switches and loads served for distribution and control equipment identification.

B. Panelboards: 1/4 inch; identify equipment designation. 1/8 inch; identify voltage rating and source.

C. Individual Circuit Breakers, Switches, and Motor Starters in Panelboards, Switchboards, and Motor Control Centers: 1/8 inch; identify circuit and load served, including location.

D. Individual Circuit Breakers, Switches, and in Panelboards: 1/8 inch; identify circuit and load served, including location.

3.4 CONDUIT IDENTIFICATION

A. Exposed conduits (in use and future spares) shall be identified at the source, load, and all intermediate components of the raceway system. Examples of intermediate components include but are not limited to junction boxes, pull boxes, condulets, and disconnect switches. Identification shall be by means of an adhesive label with the following requirements:

1. Labels shall consist of an orange background with black text. Text for the label shall be the conduit number as indicated in the conduit and wire schedules.
2. In addition, at the source end of the conduit, a second line of text shall be included to indicate the load equipment name. This second line shall consist of the word “TO:” and the text in the ‘TO’ column of the conduit and wire schedule (e.g. TO: FFG-1). At the load end of the conduit, a second line of text shall be included to indicate the source equipment name. This second line shall consist of the word “FROM:” and the text in the ‘FROM’ column of the conduit and wire schedule (e.g. FROM: MCC-USKB). This requirement applies only to the source and load ends of the conduit, and not anywhere in between.

3. For conduits ¾" through 1½" in size, the text shall be a minimum 18 point font. For conduits 2" and larger, the text shall be a minimum 24 point font.
4. Label height shall be ¾" minimum, and length shall be as required to fit required text. The label shall be installed such that the text is parallel with the axis of the conduit. The label shall be oriented such that the text can be read without the use of any special tools or removal of equipment.
5. Labels shall be installed after each conduit is installed and, if applicable, after painting. Labels shall be printed in the field via the use of a portable label printing system. Handwritten labels are not acceptable.
6. Labels shall be made of permanent vinyl with adhesive backing as manufactured by Brady, Seton equivalent, Panduit equivalent, or equal. Labels made of any other material are not acceptable.

B. Conduits (in use and future spares) that are not exposed but installed beneath free standing equipment enclosures and terminated into manholes & handholes (existing and new) shall be identified by means of a plastic tag with the following requirements:

1. The tag shall be made of white Tyvek material, and have an orange label with black text, as described above, adhered to it. Text for the label shall be the conduit number as indicated in the conduit and wire schedules.
2. The tag shall be affixed to the conduit by means of a nylon cable tie. The tag shall be of suitable dimensions to achieve a minimum text size of 18 points.
3. Tags shall be White Tyvek as manufactured by Brady, Seton equivalent, Panduit equivalent, or equal.

C. All receptacles shall be labeled with the panel name and circuit number feeding the outlets.

END OF SECTION

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SECTION 16370

VARIABLE FREQUENCY DRIVES

PART 1 - GENERAL

1.1 SCOPE

A. Furnish all labor, materials, equipment and incidentals required to furnish and install variable frequency drives as shown on the Drawings and as specified herein.

B. These specifications are intended to give a general description of what is required, but do not cover all details which will vary in accordance with the requirements of the equipment furnished. They are, however, intended to cover the furnishing, the shop testing, the delivery and complete installation and field testing, of all materials, equipment and appurtenances for the variable frequency drives herein specified.

1.2 DESCRIPTION OF SYSTEM

A. The variable frequency drives shall be furnished by the Division 16 CONTRACTOR and integrated into the control system by the SYSTEM SUPPLIER specified in Division 13. The Division 16 Contractor is responsible for complete system operation and necessary coordination.

B. VFDs shall be sized as shown on the electrical drawings.

C. The variable frequency drives will operate motors as specified in Division 11 and Division 16. The drives furnished herein under shall be totally compatible and adequately sized with the new motors.

1.3 QUALIFICATIONS

A. Variable speed drives shall be of sufficient size for the duty to be performed and shall not exceed their full-rated capacity when the driven equipment is operating as specified. To assure unity of responsibility, all equipment specified in this Section of the specifications shall be furnished and coordinated by the Contractor.

B. The drives covered by these Specifications are intended to be equipment of proven ability as manufactured by reputable manufacturers having long experience in the production of identical units. The equipment furnished shall be designed, constructed and installed in accordance with the best practice and methods, and shall operate satisfactorily when installed.

C. The variable frequency control shall operate satisfactorily when connected to a bus supplying other solid state power conversion equipment which may be causing up to 10% total harmonic voltage distortion and commutation notches up to 36,500 volt microseconds, or when other variable frequency drives are operated from the same bus.

D. The variable frequency drive manufacturer shall maintain and staff engineering service and repair shops through the United States, including the State of Florida, trained to do start up service, emergency service calls, repair work, service contracts and training of customer personnel.

E. Approved Manufacturers:

1. Square D by Schneider Electric Alitvar Process 660

2. Eaton

1.4 SUBMITTALS

A. Copies of all materials required to establish compliance with the specifications shall be submitted. Submittals shall include at least the following:

1. Certified shop and erection drawings showing all important details of construction, dimensions and anchor bolt locations.
2. Descriptive literature, bulletins and/or catalogs of the equipment.
3. Data on the characteristics and performance of the variable frequency drives. Data shall include certification that the variable frequency drives are warranted for use with the motors specified in Division 11 and Division 16.
4. Complete drawings shall be furnished for approval before proceeding with manufacture and shall consists of master wiring diagrams, elementary or control schematics including coordination with other electrical control devices operating in conjunction with the variable frequency drive, and suitable outline drawings with sufficient details for locating conduit stub-ups and field wiring. Generic schematics not specific to this project shall not be acceptable.
5. A list of the manufacturer's recommended spare parts with the manufacturer's current price for each item. Include gaskets, packing, etc. on the list. List bearings by the bearing manufacturer's numbers only.

1.5 OPERATING INSTRUCTIONS

See Section 01730: Operating and Maintenance Data.

1.6 TOOLS AND SPARE PARTS

A. One (1) set of all special tools required for normal operation and maintenance shall be provided. If no special tools are required then a statement to this effect shall be provided.

B. Spare boards and cards for each type of VFD shall be provided. Each board shall be labeled and coded for ease of identification to its respective size VFD.

C. The Manufacturer shall furnish a complete list of recommended spare parts necessary for the first five (5) years of operation.

1.7 PRODUCT HANDLING

A. All parts shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installation is completed and the units and equipment are ready for operation.

B. All equipment and spare parts must be properly protected against any damage during a prolonged period at the site.

C. Factory assembled parts and components shall not be dismantled for shipment unless permission is received in writing from the Engineer.

D. Each box or package shall be properly marked to show its net weight in addition to its contents.

1.8 WARRANTY

A. Provide a five (5) year warranty for parts and labor from the date of substantial completion. All warranty work shall be performed by factory authorized technicians.

A. Capacitor-Inductor filter traps that require tuning to the power system are not acceptable. The Variable frequency drive manufacturer shall provide for the design, furnishing and installation of the filtering and appurtenances required to meet the requirements as specified herein. Any costs associated with provision of and installation, space, wiring, conduit, etc. for filtering equipment shall be provided at no additional cost to the OWNER.

B. The manufacturer shall be responsible to provide all data necessary to perform the study. This includes feeder cable sizes, approximate feeder length motor data, switchgear data, utility data, generator data, existing field data (if required) and any other information relevant to the study.

C. The report shall be provided prior to or with the variable frequency drive shop drawings for approval. Submittals for the variable frequency drives submitted prior to or without the study will be considered incomplete and returned to the CONTRACTOR unreviewed.

D. The variable frequency drive manufacturer is responsible to provide an up-to-date single line diagram with referenced data within the submittal for this study.

E. The study shall also address methods the manufacturer is providing to address the problems associated with “dv/dt” and “reflected waves” based on the installation (wiring, conduit, lengths, etc.) as required by the contract documents. The equipment to address any problems shall be included and provided at no additional cost to the OWNER.

PART 2 - PRODUCTS

2.1 GENERAL

A. The Contractor shall furnish and install complete variable frequency drives as described in this specification and as detailed on the applicable Drawings.

B. The Contractor shall be responsible for the erection, installation, and start up of the equipment covered by this specification.

C. The variable frequency drive shall be furnished by a VFD manufacturer who has actively been manufacturing variable frequency drives for a period of at least five (5) years.

D. The variable frequency drive shall comply with the latest applicable standards of ANSI, NEMA, IEEE, and the National Electric Code.

E. Variable frequency drive shall operate as specified on standby generators or normal power sources.

F. The Contractor shall provide a listing of all programmable parameters that are different from the factory default values. For each indicate:

1. The factory default and meaning.
2. The revised value and meaning.

G. The Contractor shall provide Allen Bradley auxiliary I/O cards in each VFD for monitoring and control as described in the control functional descriptions defined under Division 13 and as shown on the electrical VFD wiring diagrams included in the Drawings.

H. The Contractor shall provide a copy of PC compatible remote programming/ diagnostic software to the supplier of the control system. Refer to Division 13.

2.2 CONSTRUCTION

A. Each variable frequency drive shall consist of a 460V, 3 phase rectifier, DC link and variable frequency inverter with features, functions and options as specified. The inverter shall be voltage source design using pulse width modulation (PWM) techniques.

B. The variable frequency drives shall be rated for the HP, full load current and rpm of the motor. The variable frequency drives shall be designed to provide continuous speed adjustment of three-phase motors. The variable frequency output voltage shall provide constant volts-per-Hertz excitation to the motor terminals up to 60 Hertz.

C. Inverters shall be capable of converting incoming three phase, 460V (+10 to -5%) and 60 Hertz (+/-2) Hertz power to DC bus levels. The DC voltage shall be inverted to a variable frequency drive output.

D. Controllers shall be rated for an ambient temperature of 0ºC to 40ºC, an altitude of up to 3,300 feet above sea level and humidity of 0 to 95% non-condensing.

E. VFDs shall have complete front accessibility. All VFD components shall be front facing, no side mounted equipment, components, etc. will be permitted. VFD enclosure shall provide dedicated 15% free space within the enclosure for future use.

F. The following standard basic control features shall be provided on the inverter:

1. Unidirectional operation, coast to rest upon stop.
2. Variable linear independent timed acceleration.
3. Variable torque performance from 4 to 60 Hertz.
4. AC input power line reactors
5. Output line reactors to protect both the motor power cable and motor from elevated voltage spikes.
6. Frequency stability of 0.5% for 24 hours with voltage regulation of +2% of maximum rated output voltage.
7. 115V AC control power for operator devices.
8. Phase insensitive to input power.
9. Cooling fans shall be controlled as follows: VFD start up and operation, fans shall run continuously; on VFD shutdown, fans shall operate for a period of time necessary to remove the excess heating within the VFD. A field adjustable timing relay shall be provided and set per VFD manufacturer recommendations.
10. Automatic restart upon return of power following a utility outage. Drive shall require manual reset after three (3) attempts in a 60 second period.

G. The following protective features shall be provided on the drive:

1. Input AC circuit breaker with an interlocked, pad lockable handle mechanism and AC input line current limiting fuses for fault current protection of AC to DC converter section and circuit breaker. Minimum short circuit rating of 85,000 AIC shall be provided.
2. Electronic overcurrent trip for instantaneous overload protection.
3. Undervoltage and phase loss protection of output.
4. Over-frequency protection.
5. Over-temperature protection.
6. Surge protection from input AC line transients.
7. Electrical isolation between the power and logic circuits, as well as between the 115V AC control power and the static digital sequencing.
8. Drive to be capable of withstanding output terminal line short or open circuits without component failure.
9. Di/dt and dv/dt protection for converter semiconductors.
10. Units shall have an English language (no codes) alphanumeric diagnostic display. LED indication of over frequency, instantaneous overcurrent, DC overvoltage, AC undervoltage/loss-of-phase, emergency stop, overload, overtemperature, inverter pole trip and standby modes shall be provided and door mounted. Additional door mounted status indicating LEDs for self-diagnostic including run, phase loss, micro-processor fault, as well as board mounted LEDs including one for each inverter pole gating signal, each inverter pole status and each logic level VDC used. A comprehensive microprocessor based digital diagnostic system which monitors its own control functions and displays faults and operating conditions is also approved.

H. The following standard independent adjustments shall be provided on the inverter:

1. Minimum speed (1 to 54 HZ).
2. Maximum speed (40 to 60 HZ).
3. Acceleration time 6 to 60 Sec. (minimum).
4. Deceleration time 6 to 60 Sec. (minimum).
5. Volts per Hertz.
6. Stability adjustment, if required.
7. Voltage boost (100 to 600 percent of nominal V/HZ ratio at 1 HZ tapering to 100 percent at 20 HZ).

I. The following shall be furnished with each VFD enclosure:

1. The VFD shall be housed in a standard metal-enclosed, free-standing enclosure, not more than 90 inches in height, and fabricated from formed sheet steel of not less than No. 14 gauge thickness. The enclosure shall be NEMA 1, finished with a baked enamel power interior/exterior enclosure coating, and white enamel coated steel backplate for mounting all internal components.
2. Mounted on the enclosure door shall be:

    a. Hand/Off/Remote selector switch
    b. VFD fault light (amber)
    c. Power "ON" light (white)
    d. Motor "ON" light (red)
    e. Motor elapsed time meter
    f. Motor High Temperature light (amber)

g. Pump No Flow light (amber)
h. Alarm reset pushbutton.

3. The VFD shall include a remote operator interface panel mounted on the enclosure front door which shall provide indication of VFD speed, ability to manually adjust the speed when in HAND, drive amp and voltage readings, and indication of overcurrent, overvoltage, overtemperature, undervoltage, phase loss, along with other diagnostic information for the drive as recommended by the manufacturer.
4. The auxiliary I/O for each drive shall provide inputs for pump locked out status, high motor temperature, and pump no flow alarms.
5. The EtherNet link to the plant PLC shall communicate the following:

a. Speed reference 0-100% input signal to adjust the drive speed when in REMOTE
b. Speed 0-100% output signal for actual drive speed
c. In REMOTE status signal output
d. Motor running signal output
e. Pump locked out status signal output
f. VFD fault signal output (for all VFD alarms other than overcurrent)
g. Motor high temperature signal output
h. Motor start command signal input
i. Motor overcurrent signal output
j. Pump No Flow signal output

6. Built-in self-diagnostics
7. Nameplates, Wire Labels, and Diagrams:

a. Unit nameplates shall be black and white laminated plastic having engraved letters approximately 3/16-inch high extending through the black face into the white layer. Nameplates shall identify equipment controlled or circuit designation as applicable. Provide nameplates for each relay, timer, and other control components used in the control circuitry.
b. All wiring shall be labeled using permanent heat-shrink labeling system clearly identifying each wire with corresponding wire numbers shown on the wiring diagram.
c. Provide a laminated copy of the wiring diagram permanently adhered to the interior face of the enclosure door.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Installation shall be in strict accordance with the manufacturer's instructions and recommendations in the locations shown on the Drawings. Field wiring shall be in accordance with manufacturer's recommendations. Anchor bolts shall be stainless steel and set in accordance with the manufacturer's recommendations.

3.2 SHOP PAINTING

A. Prior to shop painting, all surfaces shall be thoroughly cleaned, dry, and free from all mill/scale, rust, grease, dirt, and other foreign matter.

B. Drives shall be shop painted.

3.3 TESTING

A. Tests and Check

1. The drive manufacturer shall test the drive controller with a motor load prior to shipment. The motor shall have equal or greater full load current than the specified motor.
2. A certified copy of all tests and checks performed in the field, complete with meter readings and recordings, where applicable, shall be submitted to the Owner.

B. The Contractor shall provide the services of a competent and experienced equipment manufacturer's factory field engineer to supervise start-up and provide training to the Owner's personnel. The factory field engineer shall be available for one (1) - eight (8) hour day to inspect the installed equipment and supervise the start-up demonstration and testing as specified in Section 01650: Start-up, and additional testing and training as specified herein. The factory field engineer shall be available for two (2) additional eight (8) hour days (a total of three (3) - eight (8) hour days) to provide factory and on-site training to the Owner's personnel as specified herein. Training of the Owner's personnel will only be considered valid for approval by the Engineer if it takes place after the successful start-up and demonstration test.

3.4 TRAINING

A. The training and instruction shall be directly related to the System being supplied.

B. The Supplier shall provide classroom training detailed manuals to supplement the training courses. The manuals shall include specific details of equipment supplied and operations specific to the project as included in the O&M manual.

C. The Supplier shall make use of teaching aids, manuals, slide/video presentations, etc. After the training services, such materials shall be delivered to Owner.

D. The training program shall represent a comprehensive program covering all aspects of the variable frequency drive and maintenance of the system.

E. All training schedules shall be coordinated with, and at the convenience of the Owner. Shift training may be required to correspond to the Owner's working schedule.

F. Factory Training: Factory training shall be conducted before the System is commissioned, and subsequent to final manual submittals. Two days of factory training shall be provided and consist of schooling and hands on experience for two people covering the following:

1. Theory of Operation
2. Use of Software
3. Troubleshooting

G. On-site Training: On-site (field) training shall be conducted at the Owner's Plant Site and shall provide detailed hands-on instruction to Owner's personnel covering: system debugging, program modification, trouble-shooting, maintenance procedures, calibration procedures, and system operation.

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SECTION 16440

GROUP-MOUNTED CIRCUIT BREAKER SWITCHBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Free standing, dead-front type metal-enclosed distribution, low voltage switchboards, utilizing group mounted circuit protective devices.

B. Related sections:

1. Section 01330 - Submittal Procedures.
2. Section 16000 – Electrical – General Provisions.
3. Section 16195 - Identification for Electrical Systems.
4. Section 16709 - Surge Protective Devices.

1.2 REFERENCES

A. As specified in Section 16000.

B. National Electrical Manufacturers' Association (NEMA):

1. PB-2 - Dead-front Distribution Switchboards.

C. Underwriters' Laboratories, Inc. (UL):

1. 50 - Standard for Enclosures for Electrical Equipment.
2. 891 - Switchboards.

1.3 DEFINITIONS

A. As specified in Section 16000.

1.4 SYSTEM DESCRIPTION

A. Factory assembled, wired, and tested switchboards, with major components being products of a single manufacturer, including but not limited to, circuit breakers, bus and enclosure with accessories and features specified in this Section and indicated on the Drawings.

1.5 SUBMITTALS

A. Furnish submittals as specified in Sections 01330 and 16000.

B. Product data:

1. Manufacturer of switchboard.
2. Manufacturer of all component parts of switchboard.
3. Weight of switchboard.

4. Dimensions:
    a. Height.
    b. Length.
    c. Width.
5. Nameplate schedule.
6. Bill of material.
7. Ratings:
    a. Voltage.
    b. Phase.
    c. Current.
    d. Interrupting rating (circuit breakers and fuses).
    e. Momentary current rating.
8. List of recommended spare parts.
9. Name and telephone number of manufacturer's authorized parts and repair provider.

C. Shop drawings:

1. Layout drawings:
    a. Complete, detailed, and scaled switchboard layout:
        1) Front panel.
        2) Sub-panels.
        3) Interior panels.
        4) Top and bottom conduit windows.
2. Complete electrical wiring diagrams:
    a. Point-to-point connections.
    b. Indicate wire numbers.

D. Installation instructions:

1. Detail the complete installation of the equipment including rigging, moving, and setting into place.

E. Operating and maintenance manuals:

1. Submit operating instructions and a maintenance manual for the switchboard(s) furnished and/or installed under this Contract.
2. Operating instructions.
3. Maintenance manual:
    a. Furnish maintenance manuals with instructions covering all details pertaining to care and maintenance of all equipment as well as data identifying all parts.
    b. Manuals to include but are not limited to the following:
        1) Adjustment and test instructions covering the steps involved in the initial test, adjustment, and start-up procedures.

F. Test forms and reports:

1. Submit complete factory acceptance test procedures and all forms used during the test.

2. Manufacturer to furnish a certified report after the shop tests.
3. Manufacturer to furnish a certified report after the start-up:

    a. Report must state that the installation is complete and satisfactory, or list items requiring additional work and a proposal for the corrective actions.

G. Certification letters:

1. Provide a letter from the switchboard manufacturer that lists every paragraph, subparagraph etc. of this Section and states compliance or non-compliance with said paragraph. If non-compliance is indicated, provide an explanation for the deviation and alternative method to address the non-compliance.

H. Calculations:

1. Detailed calculations or details of the actual physical testing performed on the switchboard to prove the switchboard is suitable for the seismic requirements at the Project Site.

1.7 QUALITY ASSURANCE

A. As specified in Section 16000.

B. Where indicated on the Drawings as service entrance equipment, the switchboard shall be UL labeled and listed “Suitable for Service Entrance”.

C. Sections and devices shall be UL listed and labeled.

D. The manufacturer of this equipment shall have produced similar electrical equipment for a minimum period of 5 years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.

1.8 DELIVERY STORAGE AND HANDLING

A. As specified in Section 16000.

B. Ship the switchboard to the job site on a dedicated air ride vehicle that will allow the Contractor to utilize onsite off-loading equipment:

1. Energize space heaters in NEMA 3R switchboards.

C. Furnish temporary equipment heaters within the switchboard to prevent condensation from forming.

1.9 PROJECT OR SITE CONDITIONS

A. As specified in Section 16000.

1.10 SEQUENCING

A. Conduct the initial fault current study as specified in Section 16000 and submit results for Engineer’s review.

B. After successful review of the initial fault current study, submit complete equipment submittal.

C. Conduct factory acceptance test and submit certified test results for Engineer's review.

D. Ship equipment to Project Site after successful completion of factory acceptance test.

E. Assemble equipment in the field.

F. Conduct field acceptance test and submit results for Engineer's review.

G. Submit manufacturer's certification that equipment has been properly installed and is fully functional for Engineer's review.

H. Conduct Owner's training sessions.

1.11 WARRANTY

A. As specified in Section 16000.

1.12 SYSTEM START-UP

A. As specified in Section 16000.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. One of the following:

1. Schneider Electric/Square D. "Power-Style QED."
2. No or equal.

B. Circuit breakers: Same manufacturer as the switchboard.

2.2 EQUIPMENT

A. Switchboard:

1. Furnish low voltage Class 1 switchboards as specified and indicated on the Drawings.
2. Provide complete and functional switchboards with required controls.
3. Furnish and install devices or accessories not described in this Section but necessary for the proper installation and operation of the equipment.

B. Voltage ratings:

1. Voltage level and configuration: As indicated on the Drawings.
2. Frequency: 60 hertz.
3. Solidly grounded system insulation level:
    a. Twice the rated voltage plus 1,000 volts.

C. Bus:

1. General:

    a. Tin-plated copper.
    b. Bus cross-section in accordance with UL heat rise requirements.
    c. Current density of 1,000 amperes per square inch.
    d. Mounted on supports of high-impact, non-tracking insulators.
    e. Phase A-B-C bus arrangement:

        1) Top-to-bottom, left-to-right, front-to-back throughout the switchboard.

    f. Symmetrical short circuit current bracing of as indicated on the Drawings.
    g. Continuous current rating as indicated on the Drawings.

2. Horizontal bus:

    a. Provisions for future connections to additional switchboard sections.

3. Ground bus:

    a. Sized per UL 891.

4. Neutral bus, if shown on drawings:

    a. Sized for 100 percent of power bus rating.

D. Enclosure:

1. General:

    a. Self-supporting structures bolted together to form the required line-up.
    b. All sections rear aligned.
    c. Dead-front.
    d. Conduit entry:

        1) Open-bottom.
        2) Removable top cover.

2. Frame:

    a. Die-formed 12 gauge steel.

3. Covers:

    a. Bolt-on.
    b. Code gauge steel.
    c. Removable front covers.

        1) Held in place by captive screws.

4. Rating:

    a. NEMA Type 1.

2.3 COMPONENTS

A. Circuit breakers:

1. General:

a. Molded case circuit breakers shall be thermal magnetic, 480 volt, with not less than 65,000 amperes, RMS interrupting capacity. All circuit breakers with 225 amperes frames and larger shall have interchangeable trips.

2. Main circuit breaker, if shown on drawings:

a. Frame, trip, and short circuit ratings as indicated on the Drawings.
b. 100 percent rated.

3. Feeder breakers:

a. Frame, trip, and short circuit ratings as indicated on the Drawings.

B. Wiring:

1. Provide all necessary internal wiring, fuse blocks, and terminal blocks as required.
2. Number all wires at each end and indicate wire numbers on shop drawings.
3. Type SIS switchboard wire with at least 26 strands.
4. Minimum wire size:

a. No. 14 for control circuits.
b. No. 12 for potential and current transformer circuits.

5. Numbered and labeled in accordance with Section 16195.

2.4 ACCESSORIES

A. Surge protective devices:

1. Provide surge protective devices as indicated on the Drawings and as specified in Section 16709.

B. Nameplates:

1. Provide engraved plastic nameplates to identify:

a. Switchboard units.
b. Door mounted components.
c. Interior mounted devices.

2. As specified in Section 16195.
3. Engraved with the circuit number and circuit name as indicated on the Drawings.
4. Manufacturers labels:

a. Each vertical section shall have a label identifying:

1) Serial number.
2) Shop order number.
3) Bus rating.
4) Vertical section reference number.
5) Date of manufacture.

C. Warning signs:

1. Voltage:

a. Provide a minimum of 2 warning signs on the front of the switchboard lineup and 2 on the back.
b. Red laminated plastic engraved with white letters approximately 1/2 inch high.
c. Signs shall read:

1) "WARNING-HIGH VOLTAGE-KEEP OUT".

2. Arc flash:

a. Provide one warning sign for each switchboard compartment.
b. Signs shall have read a minimum of:

1) “DANGER ELECTRIC ARC FLASH HAZARD.”
2) Signs shall meet the requirements of NFPA 70E and NEC Article 110.16.

D. Lugs:

1. For all external connections of No. 6 AWG or larger.
2. UL listed for copper or aluminum conductors.
3. Rated for 75-degree Celsius conductors.
4. Lugs shall be of the compression type in design requiring a hydraulic press and die for installation.

E. Power Monitors:

1. The 480V switchboard shall be equipped with a digital-metering device capable of communicating with the plant control system by an Ethernet interface using the Profinet protocol.
2. The meter shall have capability for measuring all three phases of Volts-Amps, KW, KWH, PF, for all three phases. The meter shall have wave form capture for 16 to 512 cycles of data at 512 samples/cycle and providing harmonic content up to the 255th harmonic for voltage and current on all three phases. The circuit monitor shall be accurate to .04% of readings +/- .025% of full scale for voltage and current metering and .08% of rating plus .025% for power.

a. Manufacturer, model, Siemens, PAC4200 with Profinet module

2.5 FINISHES

A. Chemically clean all steel surfaces before painting.

B. Exterior color manufacturer’s standard gray over phosphate-type rust inhibitor.

PART 3 - EXECUTION

3.1 INSTALLATION

A. As specified in Section 16000.

B. Install the equipment in accordance with the accepted installation instructions and anchorage details to meet the seismic and wind load requirements at the Project site.

C. General:

1. Furnish all cables, conduit, lugs, bolts, expansion anchors, sealants, and other accessories needed to complete the installation of the switchboard.
2. Assemble and install the switchboard in the location and layout indicated on the Drawings.
3. Perform work in accordance with manufacturer's instructions and shop drawings.
4. Furnish components and equipment as required to complete the installation.
5. Replace any hardware lost or damaged during the installation or handling to provide a complete installation.
6. Install the switchboard on a 4-inch raised concrete housekeeping pad:
    a. Provide structural leveling channels in accordance with the manufacturer's recommendations to provide proper alignment of the units.
    b. Weld and/or bolt the switchboard frame to be to the leveling channels.

3.2 ADJUSTING

A. Make all adjustments as necessary and recommended by the manufacturer, Engineer, or testing firm.

END OF SECTION

SECTION 16450

GROUNDING SYSTEM

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install a complete grounding system in strict accordance with Article 250 of the National Electrical Code and as hereinafter specified and shown on the Drawings.

1.2 RELATED WORK

A. Conduit shall be as specified under Section 16110.

B. Wire shall be as specified under Section 16120.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Ground rods: Ground rods shall be copperclad steel 3/4-inch x 20 foot. Ground rods shall be Copperweld or be an approved equal product.

PART 3 - EXECUTION

3.1 GENERAL

A. Tie into existing grounding system.

B. Grounding electrodes shall be driven as required. Where rock is encountered, grounding plates may be used in lieu of grounding rods.

C. All equipment enclosures, motor and transformer frames, conduits systems, cable armor, exposed structural steel and similar items shall be grounded.

D. Exposed connections shall be made by means of approved grounding clamps. Exposed connections between different metals shall be sealed with No-Oxide Paint Grade A or approved equal. All buried connections shall be made by welding process equal to Cadweld.

E. The grounding grid conductors shall be embedded in backfill material around the structures.

F. All underground conductors shall be laid slack and where exposed to mechanical injury shall be protected by pipes or other substantial guards. If guards are iron pipe or other magnetic material, conductors shall be electrically connected to both ends of the guard.

G. The Contractor shall exercise care to insure good ground continuity, in particular between the conduit system and equipment frames and enclosures. Where necessary, jumper wires shall be installed.

3.2 TESTS

A. The Contractor shall test the ground resistance of the system. The Engineer shall be notified forty-eight (48) hours before tests are made to enable the Owner to have designated personnel present. All test equipment shall be provided by the Contractor and approved by the Engineer. Dry season resistance of the system shall not exceed 5 ohms. If such resistance cannot be obtained with the system as shown, the Contractor shall provide additional grounding as directed by the Engineer, without additional payment. The Contractor shall submit all grounding system test results to the Engineer for review.

END OF SECTION

SECTION 16500

LIGHTING SYSTEM

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish and install complete lighting systems including panelboards, transformers, lighting fixtures, receptacles, switches, contractors, clocks and all necessary accessories and appurtenances required as hereinafter specified and shown on the Drawings.

1.2 STANDARDS

A. All lighting fixtures shall be in accordance with the National Electrical Code and shall be constructed in accordance with the latest edition of the Underwriters Laboratories "Standards for Safety, Electric Lighting Fixtures." All lighting fixtures shall be Underwriters Laboratories labeled.

1.3 RELATED WORK

A. Conduit shall be as specified under Section 16110.

B. Wire shall be as specified under Section 16120.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Switches:

1. Wall switches shall be of the indicating, toggle action, flush mounting quiet type. All switches shall conform to Federal Specification W-S-896-D.
2. Wall switches shall be ivory and of the following types and manufacturer or approved equal.

a. Single pole - Arrow-Hart No. 1991 or Leviton No. 1221-2.
b. Double pole - Arrow-Hart No. 1992 or Leviton No. 1222-2.
c. Three way - Arrow -Hart No. 1993 or Leviton No. 1223-2.
d. Four way - Arrow-Hart No. 1994 or Leviton No. 1224-2.
e. Single pole, key operated - Arrow-Hart No. 1991-L or Leviton No. 1221-2L.
f. Momentary contact, 2 circuit, center off - Arrow-Hart No. 1895 or Leviton No. 1256.
g. Weatherproof cover for Arrow-Hart 2900 series tap action switches - Arrow-Hart Catalog No. 2881-G.

B. Receptacles:

1. Wall receptacles shall be ivory and of the following types and manufacturer or approved equal.

a. Single, 20A, 125V, 1P, 3W; Arrow-Hart No. 5361 or Leviton No. 5361.
b. Duplex, 20A, 125V, 2P, 3W; Arrow-Hart No. 5362 or Leviton No. 5362.

c. Corrosion-resistant, duplex, 20A, 125V, 2P, 3W; Arrow-Hart No. 5739-CR or Leviton No. 5362CR and Crouse-Hinds WLRD-1 cover.
d. 60A, 480V, 3P, 2W; weatherproof receptacle shall be Crouse-Hinds Catalog No. ARE6324 with Crouse-Hinds Catalog No. APJ 6385 plug.
e. Ground fault interrupter, duplex, 20A, 125V, 3P, 2W; Arrow-Hart No. GF5362 or Leviton No. 6899.
f. Stainless steel indoor mounting plate for G.F.I. receptacle; Arrow-Hart Catalog No. S-26.
g. Clock hanger, 15A, 125V, 2P, 3W; Arrow-Hart No. 452 or Leviton No. 628.
h. Single, 20A, 250V, 2P, 3W; Arrow-Hart No. 5461 or Leviton No. 5461.
i. Single, 30A, 125V, 2P, 3W; Arrow-Hart No. 5716N; cap: Arrow-Hart No. 5717N or Leviton No. 5371.
j. Clothes dryer, 30A, 125/250V, 3P, 3W; Arrow-Hart No. 9344N. Cap: Arrow-Hart No. 9352AN or Leviton No. 5209 and No. 9382-P.

2. Receptacles (Weatherproof/NEMA 4 Areas/Outside)

a. General Requirements: Receptacles in wet locations shall be installed with a hinged outlet cover/enclosure clearly marked “Suitable for Wet Locations While In Use” and “UL Listed”. There must be a gasket between the enclosure and the mounting surface, and between the hinged cover and mounting plate/base to assure proper seal. Taymac; Specification Grade.

3. Special wiring devices shall be provided as noted of the drawings.

a. Tamper resistant duplex receptacle Leviton No. 5262-SG or approved equal.
b. Wall switch occupancy sensor Leviton No. 6775 or approve equal.
c. Scene select microprocessor dimmer Leviton No. 17765 or approved equal.
d. Surge protective duplex receptacle Leviton No. 5380 or approved equal.

C. Device Plates:

1. Plates for flush mounted devices shall be of the required number of gangs for the application involved and shall be 302 (18-8) high nickel stainless steel of the same manufacturer as the device.
2. Plates for surface mounted device boxes shall be of the same material as the box.

D. Lighting Fixtures:

1. Lighting fixture types shall be as shown on the "Lighting Fixture Schedule" on the Drawings.

E. Lamps:

1. All lighting fixture lamps shall be LED.
2. All lamps shall be of one manufacturer and shall be as manufactured by Hubble Lighting, Sesco Lighting, Sylvania Electric Products, Inc., General Electric Company, or Westinghouse Electric Corporation or approved equal.

F. Flexible Fixture Hangers:

1. Flexible fixture hangers used in nonhazardous areas shall be Type ARB and flexible fixture supports used in hazardous areas shall be Type ECHF as manufactured by the Crouse-Hinds Company or approved equal.
2. Steel channel, roll formed into U-shape, shall be used to span between building steel for mounting of fixtures where required by fixture location or as indicated on the Drawings. Channel shall be as manufactured by Unistrut Corporation or approved equal.

G. Lighting Contactor Enclosure

1. All conduit entry shall be from the bottom only.
2. The panel shall be provided with an isolated copper grounding bus to ground all signal shield connections.
3. Enclosure shall be NEMA 4X 316 stainless steel.
4. All internal components shall be equipped with identification tags
5. The panel shall be protected from internal corrosion by the use of corrosion – inhibiting vapor capsules. Provide:
    a. Northern Instruments Model Zerust VC-6-2
    b. Hoffman, model A-HC15E
    c. Approved equal.
6. Doors:
    a. The enclosure shall have a continuous piano hinge door for ease of access. A minimum of 80% of the panel interior shall be exposed by doors.
    b. The door shall use a lockable three-point latch mechanism and be able to accept a cyber lock with 3/8” shackle.
    c. The inside of each door shall be equipped with a print pocket.
    d. The panel nameplate shall be equipped with a screw mounted laminated plastic nameplate. The use of adhesive to mount the nameplate will not be acceptable.
7. Construction:
    a. Minimum metal thickness: 14-gauge.
    b. Stiffeners as required to prevent deflection under instrument loading and permit lifting without racking or distortion.
    c. When required, removable lifting rings and fill plugs to replace rings after installation.
    d. All components and terminals shall be accessible without removing other components except for covers.
8. The enclosure shall be a manufactured item, Hoffman Engineering, or equal.

H. Lighting Contactor:

1. Lighting contactor shall be of the electrically operated, mechanically held type in NEMA 4X stainless steel enclosures of the number of poles as called for on the Drawings.
2. Contactors shall be rated for 20A-600 volt contacts and be similar and equal to Automatic Switch Company bulletin 1255-166 RC.

I. Lighting Control Time Switches:

1. Time switches for the control of lighting shall have astronomic dials, reserve power and be similar and equal to the following types:

a. Where time switch is indicated for SPST maintained control it shall be similar and equal to Tork Time Controls Catalog No. 7100ZL (120V).
b. Where time switch is indicated for DPST maintained control it shall be similar and equal to Tork Time Controls Catalog No. 7200ZL (120V).

J. Photocell:

1. Tork 2101 or equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Each fixture shall be a finished unit with all components, mounting and/or hanging devices necessary, for the proper installation of the particular fixture in its designated location and shall be completely wired ready for connection to the branch circuit wires at the outlet.

B. When fixtures are noted to be installed flush, they shall be complete with the proper accessories for installing in the particular ceiling involved. All flush mounted fixtures shall be supported from the structure and shall not be dependent on the hung ceilings for their support.

C. Flexible fixture hangers shall be used for all pendant mounted fixtures.

D. Conduit run in areas with hung ceilings shall be installed in the space above the hung ceiling as close to the structure as possible. Conduits shall be supported from the structure.

E. Receptacles in process areas and shops shall be mounted 36 inches above the floor unless otherwise noted on the Drawings.

F. Receptacles in office and other like areas shall be mounted 18 inches above the floor unless otherwise noted on the Drawings.

3.2 SPARE LAMPS

A. Spare lamp modules shall be provided for all fixture types supplied. Quantity shall be one of each type used on project.

3.3 CLEANING UP

A. All fixtures shall be left in a clean condition, free of dirt and defects, before acceptance by the Engineer.

END OF SECTION

SECTION 16670

LIGHTNING PROTECTION SYSTEM

PART 1 - GENERAL

1.1 SCOPE

A. A Lightning Protection System shall be provided and installed as shown on the drawings and for all new buildings and structures five (5) feet above grade level. They system shall be provided and installed in compliance with provisions of Code for Lightning Protection Systems as adopted by the National Fire Protection Association and Lightning Protection Institute. All equipment to that result shall be included whether specifically called for herein. Installers shall be LPI (Lightning Protection Institute) certified, master and Journeyman in accordance with LPI standards or of equal qualifications as approved by ENGINEER. An LPI label for the system shall be required.

B. Material shall comply in weight, size and composition with the requirements of the Lightning Protection Institute and the National Fire Protection Code relating to this type of installation and shall be LPI labeled.

1. All materials, where available by any one manufacturer, shall be cast. All bolts shall have hexagonal heads, no screw heads will be permitted. Where copper is mentioned or noted, tinned copper shall be required.
2. Lightning protection cable shall be Class I tinned copper. Grounding counterpoise shall be as shown. All components, fittings and straps shall be cast tinned copper.

1.2 SUBMITTALS

A. Shop Drawings: Shop drawings shall be submitted before work is done. Drawings shall include full layout of cabling and points, and connections.

B. Product Data: Product Data shall be submitted on all equipment to show compliance with this section of the specifications and shall include manufacturer's written recommendations for installation.

PART 2 - PRODUCTS

2.1 AIR TERMINALS

A. Air terminals shall be tinned copper as required to match roof conductors. They shall have proper base support for surface on which they are attached and shall be securely anchored to this surface. Terminals shall project a minimum of 10" above top of object to which attached.

2.2 CONDUCTORS

A. Roof conductors shall consist of tinned copper complying with the weight and construction requirements of the Code, and shall be coursed to interconnect with air terminals, and in general, provide a two-way minimum path to ground. The angle of any turn shall not exceed 90 degrees and shall provide an approximately horizontal or downward course. Down conductors shall be tinned copper, concealed within the structure. Radius of bends shall not be less than 8 inches. Roof conductor's material shall match and/or be compatible with roof flashing material.

2.3 FASTENER

A. Conductor fasteners shall be of the same material as the conductor, having ample strength to support conductor. Where fasteners are to be mounted in masonry or structural work, they shall be furnished to the Masonry or Structural CONTRACTOR so they may be installed during construction of the project.

2.4 GROUND CONNECTIONS

A. Ground connections shall be made in accordance with requirements of all applicable codes. Ground rods shall be placed in a minimum of two (2) feet from building foundations. In addition to above artificial grounds, one down conductor of each two-path system shall be connected to water piping system with approved water pipe type strap connector. All ground rods shall be 3/4" diameter, with a minimum length of 20' copperweld type. Each installed ground rod shall be checked for resistance to ground. If a 0 to 5-ohm reading is not obtained, extend 10' rod lengths and continue driving rods until the required reading is obtained. No rod can be connected to the bonding cable without the required ohm reading.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Installation shall be made in an inconspicuous manner with conductors coursed to conceal equipment as much as possible. Down conductors shall be concealed within structure and shall be run in 1" PVC conduit. All metallic equipment within 6 feet of any lightning conductor shall be bonded to conductor. System shall also be tied to the main service electrical ground.

3.2 EQUIPMENT

A. Equipment shall be as manufactured by National Lightning Protection, Inc., Lightning Masters Corp., or Heary Bros Lightning Protection (premium lines).

END OF SECTION

SECTION 16709

SURGE PROTECTION DEVICES (SPD)

PART 1 – GENERAL

1.1 DESCRIPTION

A. The specified unit shall provide effective high energy transient voltage surge suppression, surge current diversion and high frequency noise attenuation in all electrical modes for equipment connected downstream from the facility's meter or load side of the main overcurrent device. The unit shall be connected in parallel with the facility's wiring system.

1.2 RELATED DOCUMENTS AND APPLICABLE STANDARDS

A. Systems shall be designed, manufactured, tested and installed in accordance with the following applicable documents and standards:

1. Underwriters Laboratories (UL1449 Latest Addition and UL 1283)
2. ANSI/IEEE (C62.41 and C62.45)
3. Military Standards (MIL – STD 220A)
4. National Electric Code (NEC)
5. Underwriter's Laboratories 248

PART 2 - PRODUCTS

2.1 DEVICES

A. Surge Protection Devices (SPD's) shall be UL listed at or above the available fault current level at the point of SPD application by UL, Per UL 1449 latest edition.

B. The SPD shall be a parallel design using fast-acting energy protection that will divert and dissipate the surge energy.

C. Units shall have:

1. Minimum 10 mode operation for all 3 phase Y and high leg Delta configurations and six modes of protection for all 3 phase Delta "no Neutral" configurations.
2. One nanosecond or less response time for any individual component, and shall be self restoring and fully automatic.
3. Extended noise filtration with a 10 kHz to 100 MHz range.
4. LED indication of unit failure to indicate the continuous positive operational status of each protected phase.
5. System Voltage shall be as indicated on the drawings.
6. The fusing system shall be capable of allowing the rated maximum single impulse surge current to pass through without fuse operation.
7. SPD's shall be installed with leads as shorts as possible (not to exceed 24 inches). SPD's may be mounted internally in Motor Control Centers, switchgear and switchboards. SPD's shall be mounted externally at panelboards and control panels.
8. All SPD panel units shall be guaranteed by the installing contractor and surge suppression manufacturer to be free of defects in materials and workmanship for a period of not less

than 10 years from the date of final completion of the system to which the suppressor is installed.

9. For each SPD type or size used on this project provide the following submittal data:

    a. Complete schematic data for suppressor, indicating part numbers, dimensional drawings and mounting arrangement.
    b. Cut sheets which include Peak Surge Current "per mode", Let Through Current, UL tested voltage protection rating (VPR) and maximum Continuous Operating Voltage (MCOV).
    c. Copy of Warranty Statement

2.2 APPLICATIONS

A. Surge Current RATING OF 40 kA PER MODE AT 208 or 240 Volt three phase or single-phase branch panels. Surge Current RATING of 80 kA PER MODE (160 kA PER PHASE) AT 480-volt three phase panels.

B. Surge Current RATING of 150 kA PER MODE (300 kA PER PHASE) AT 480-volt MCC's.

C. Surge Current RATING of 240 kA PER MODE (480 kA PER MODE) AT 480-volt MCC's with built in variable frequency drives (VFD's) or serving stand-alone variable frequency drives.

D. Surge Current RATING of 150 kA PER MODE (300 kA PER MODE) AT 480-Volt Switchgear.

E. Surge Current RATING of 40kA PER MODE (80kA PER PHASE) AT 208, 240 or 480 volt three phase or single phase Control Panels

2.3 FILTERING

A. The system shall provide a UL 1283 Listed Electromagnetic Interference Filter capable of attenuating noise levels produced by electromagnetic interference and radio frequency interference.

2.4 FUSING

A. Fuse component(s) identification and surge rating. The manufacture shall provide documentation demonstrating the tested surge current rating (8x20μsec) of the fuse. The surge rating of the fuse shall be greater than the combined surge current rating of all downstream connected suppression elements.

B. Fusing: Suppression component(s) identification and surge rating. The manufacturer shall provide documentation identifying the suppression element(s) connected in series with fuse element(s) and provide the suppression elements published 8x20μsec surge current rating. The rating of the suppression element(s) shall be less than the rating of upstream fusing element(s).

C. Fusing: Surge performance. All fusing shall be required to meet the single pulse surge current testing requirements of Section 2.2 above.

D. Fusing: Isolation. The unit shall have each MOV fused and designed to operate only in the event of an MOV failure within the SPD device.

E. Fusing Coordination: Units that can't demonstrate MOV-fuse coordination in 2.4.a and 2.4.d are not acceptable.

F. Fusing: UL Rating. All fusing shall be 200kAIC UL248 Recognized.

2.5 UL 1449 SUPPRESSED VOLTAGE RATING.

A. The unit shall be UL 1449 3rd Edition Listed and shall be as follows for L-N, L-G, N-G, and L-L, modes, inclusive of the disconnect switch (Select appropriate product rating from below):

1. 40kA – 80kA rated products/120/208V units: L-N = 400V, L-G=500, N-G=500, and L-L=700
2. 100kA – 150kA rated products/120/208V units: L-N = 400V, L-G=500, N-G=500, and L-L=700
3. 200kA – 300kA rated products/120/208V units: L-N = 400V, L-G=500, N-G=500, and L-L=700

2.6 IN-FIELD TESTING

A. The unit shall be equipped with a performance data extraction protocol allowing unit performance data, including percent of protection remaining, to be transmitted to an internal, external status analyzer.

2.7 ENCLOSURE

A. Outside - Units shall be provided in a NEMA type 4X plastic enclosure.

PART 3 – EXECUTION

3.1 SYSTEM TESTING

A. Upon completion of installation, a factory-authorized local service representative shall provide product startup testing services. The tests shall include:

1. On-line Testing: Verification that all suppression and filtering paths are operating with 100% protection as well as verification of proper facility neutral-to-ground bond by measuring neutral-to-ground current and voltage.
2. Off-line Testing: Impulse injection to verify the system tolerances as well as verification of proper facility neutral-to-ground bond. To be compared to factory benchmark test parameters supplied with each individual unit.

3.2 DOCUMENTATION AND REPORTING

A. A copy of the startup test results and the factory benchmark testing results shall be supplied to the engineer and the owner for confirmation of proper system function. This letter shall also clarify that the integrity of all neutral-to-ground bonds were verified through testing and visual inspection, and that all grounding bonds were observed to be in place.

3.3 SYSTEM WARRANTY

A. The TVSS system manufacturer shall warranty the entire system against defective materials and

workmanship for a period of ten (10) years following project final completion.

END OF SECTION

DIVISION 22

22 05 00	COMMON WORK RESULTS FOR PLUMBING
22 05 23	GENERAL-DUTY VALVES FOR PLUMBING PIPING
22 05 29	HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
22 05 53	IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
22 05 93	TESTING, ADJUSTING, AND BALANCING FOR PLUMBING
22 07 19	PLUMBING PIPING INSULATION
22 11 16	DOMESTIC WATER PIPING
22 11 19	DOMESTIC WATER PIPING SPECIALTIES
22 13 16	SANITARY WASTE AND VENT PIPING
22 13 19	SANITARY WASTE PIPING SPECIALTIES
22 13 19.13	SANITARY DRAINS

SECTION 220500 - COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Motors.
2. Packless expansion joints.
3. Alignment guides and anchors.
4. Sleeves without waterstop.
5. Grout.
6. Silicone sealants.
7. Escutcheons.
8. Thermometers, filled system, lead free.
9. Thermometers, liquid in glass, lead free.
10. Thermometers, light activated, lead free.
11. Thermowells, lead free.
12. Pressure gauges, dial type, lead free.
13. Gauge attachments, lead free.

1.2 DEFINITIONS

1.3 ACTION SUBMITTALS

A. Product Data:

1. For each type of product, excluding motors which are included in Part 1 of the plumbing equipment Sections.

a. Include construction details, material descriptions, and dimensions of individual components, and finishes.
b. Include operating characteristics and furnished accessories.

B. Delegated Design Submittals: For each anchor and alignment guide, including analysis data, signed and sealed by the qualified professional engineer responsible for their preparation.

1. Design Calculations: Calculate requirements for thermal expansion of piping systems and for selecting and designing expansion joints, loops, and swing connections.
2. Anchor Details: Detail fabrication of each anchor indicated. Show dimensions and methods of assembly and attachment to building structure.
3. Alignment Guide Details: Detail field assembly and attachment to building structure.
4. Schedule: Indicate type, manufacturer's number, size, material, pressure rating, end connections, and location for each expansion joint.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each type of expansion joint,,gauge to include in operation and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M.

B. Pipe and Pressure-Vessel Welding Qualifications: Qualify procedures and operators in accordance with 2021 ASME Boiler and Pressure Vessel Code, Section IX.

1.6 COORDINATION

A. Coordinate features of motors, installed units, and accessory devices to be compatible with the following:

1. Motor controllers.
2. Torque, speed, and horsepower requirements of the load.
3. Ratings and characteristics of supply circuit and required control sequence.
4. Ambient and environmental conditions of installation location.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Domestic water expansion fittings and loops for plumbing piping intended to convey or dispense water for human consumption are to comply with the U.S. Safe Drinking Water Act, with requirements of authorities having jurisdiction, and with NSF 61 and NSF 372, or be certified in compliance with NSF 61 and NSF 372 by an ANSI-accredited third-party certification body, in that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

B. Compatibility: Provide products suitable for piping service fluids, materials, working pressures, and temperatures.

C. Capability: Provide products and installations to accommodate maximum axial movement as scheduled or indicated on Drawings.

2.2 MOTORS

A. Motor Requirements, General:

1. Content includes motors for use on alternating-current power systems of up to 600 V and installed at equipment manufacturer's factory or shipped separately by equipment manufacturer for field installation.

2. Comply with requirements in this Section except when stricter requirements are specified in equipment schedules or Sections.
3. Comply with NEMA MG 1 unless otherwise indicated.

B. Motor Characteristics:

1. Duty: Continuous duty at ambient temperature of 40 deg C and at altitude of **3300 ft.** above sea level.
2. Capacity and Torque Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, at installed altitude and environment, with indicated operating sequence, and without exceeding nameplate ratings or considering service factor.

C. Polyphase Motors:

1. Efficiency: Premium Efficient, as defined in NEMA MG 1.
2. Service Factor: 1.15.
3. Multispeed Motors: Variable torque.

    a. For motors with 2:1 speed ratio, consequent pole, single winding.
    b. For motors with other than 2:1 speed ratio, separate winding for each speed.

4. Multispeed Motors, Two Winding: Separate winding for each speed.
5. Rotor: Random-wound, squirrel cage.
6. Bearings: Regreasable, shielded, antifriction ball bearings suitable for radial and thrust loading.
7. Insulation: Class F.
8. Code Letter Designation:

    a. Motors 15 HP and Larger: NEMA starting Code F or Code G.
    b. Motors Smaller Than 15 HP: Manufacturer's standard starting characteristic.

9. Enclosure Material: Cast iron for motor frame sizes 324T and larger; rolled steel for motor frame sizes smaller than 324T.

D. Additional Requirements for Polyphase Motors:

1. Motors Used with Reduced-Voltage and Multispeed Controllers: Match wiring connection requirements for controller with required motor leads. Provide terminals in motor terminal box, suited to control method.
2. Motors Used with Variable-Frequency Controllers: Ratings, characteristics, and features coordinated with and approved by controller manufacturer.

    a. Windings: Copper magnet wire with moisture-resistant insulation varnish, designed and tested to resist transient spikes, high frequencies, and short time-rise pulses produced by pulse-width-modulated inverters.
    b. Premium-Efficient Motors: Class B temperature rise; Class F insulation.
    c. Inverter-Duty Motors: Class F temperature rise; Class H insulation.
    d. Thermal Protection: Comply with NEMA MG 1 requirements for thermally

protected motors.

E. Single-Phase Motors:

1. Motors larger than 1/20 hp must be one of the following, to suit starting torque and requirements of specific motor application:

    a. Permanent-split capacitor.
    b. Split phase.
    c. Capacitor start, inductor run.
    d. Capacitor start, capacitor run.

2. Multispeed Motors: Variable-torque, permanent-split-capacitor type.
3. Bearings: Prelubricated, antifriction ball bearings or sleeve bearings suitable for radial and thrust loading.
4. Motors 1/20 HP and Smaller: Shaded-pole type.
5. Thermal Protection: Internal protection to automatically open power supply circuit to motor when winding temperature exceeds a safe value calibrated to temperature rating of motor insulation. Thermal-protection device will automatically reset when motor temperature returns to normal range.

F. Electronically Commutated Motors:

1. Microprocessor-Based Electronic Control Module: Converts 120 V, or, 240 V single-phase AC power to three-phase DC power to operate the brushless DC motor.
2. Three-phase power motor module with permanent magnet rotor.
3. Circuit board, or, digital speed controller/LED display.
4. Building Automation System Interface: Via DC voltage signal,Digital Serial Interface (DSI).

2.3 EXPANSION FITTINGS AND LOOPS FOR PLUMBING PIPING

A. Performance Requirements:

1. Compatibility: Provide products suitable for piping service fluids, materials, working pressures, and temperatures.
2. Capability: Provide products and installations that will accommodate maximum axial movement as scheduled or indicated on Drawings.

B. Alignment Guides and Anchors:

1. Anchor Materials:

    a. Steel Shapes and Plates: ASTM A36/A36M.
    b. Bolts and Nuts: ASME B18.10 or ASTM A183, steel hex head.
    c. Washers: ASTM F844, steel, plain, flat washers.
    d. Mechanical Fasteners: Insert-wedge-type stud with expansion plug anchor for use in hardened portland cement concrete, with tension and shear capacities appropriate for application.

1) Stud: Threaded, zinc-coated carbon steel.
2) Expansion Plug: Zinc-coated carbon steel.
3) Washer and Nut: Zinc-coated carbon steel.

e. Chemical Fasteners: Insert-type stud, bonding-system anchor for use with hardened portland cement concrete, with tension and shear capacities appropriate for application.

1) Bonding Material: ASTM C881/C881M, Type IV, Grade 3, two-component epoxy resin suitable for surface temperature of hardened concrete where fastener is to be installed.
2) Stud: ASTM A307, zinc-coated carbon steel with continuous thread on stud unless otherwise indicated.
3) Washer and Nut: Zinc-coated carbon steel.

2.4 SLEEVES AND SLEEVE SEALS

A. Sleeves without Waterstop:

1. Cast-Iron Pipe Sleeves: Cast or fabricated of cast or ductile iron, with plain ends.
2. Steel Pipe Sleeves: ASTM A53/A53M, Type E, Grade B, Schedule 40, hot-dip galvanized, with plain ends.
3. Steel Sheet Sleeves: ASTM A653/A653M, **24 gauge** minimum thickness; hot-dip galvanized, round tube closed with welded longitudinal joint.
4. PVC Pipe Sleeves: ASTM D1785, Schedule 40.
5. Molded-PVC Sleeves: With nailing flange.
6. Molded-PE or -PP Sleeves: Removable, tapered-cup shaped, and smooth outer surface with nailing flange.

B. Grout:

1. Description: Nonshrink, for interior and exterior sealing openings in non-fire-rated walls or floors.
2. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
3. Design Mix: **5000 psi**, 28-day compressive strength.
4. Packaging: Premixed and factory packaged.

2.5 METERS AND GAUGES FOR PLUMBING PIPING

A. Thermowells, Lead Free:

1. Standard: ASME B40.200.
2. Description: Pressure-tight, socket-type fitting made for insertion into piping tee fitting.
3. Material for Use with Copper Tubing: Lead-free copper <**Insert material**>.
4. Material for Use with Steel Piping: Type 304 stainless steel.
5. Type: Stepped shank unless straight or tapered shank is indicated.
6. External Threads: **NPS 1/2, NPS 3/4, or NPS 1**, or as required to match threaded

opening in pipe.

7. Internal Threads: Size and thread type as required to match thermometer mounting threads.
8. Bore: Diameter required to match thermometer bulb or stem.
9. Insertion Length: Length to extend a minimum of 2 inches into fluid.
10. Lagging Extension: Include on thermowells for insulated piping and tubing. Extension is to be of sufficient length to extend beyond finished insulation surface.
11. Bushings: For converting size of thermowell's internal screw thread to size of thermometer connection.
12. Heat-Transfer Medium: Mixture of graphite and glycerin.

B. Gauge Attachments, Lead Free:

1. Snubbers: ASME B40.100, lead-free brass; with NPS 1/4, ASME B1.20.1 pipe threads and piston-type surge-dampening device. Include extension for use on insulated piping.
2. Valves: Lead-free brass ball, with NPS 1/4, ASME B1.20.1 pipe threads.

PART 3 - EXECUTION

3.1 INSTALLATION OF EXPANSION JOINTS, GENERAL

A. Install expansion joints of sizes matching sizes of piping in which they are installed.

3.2 INSTALLATION OF PACKLESS EXPANSION JOINTS

A. Install metal-bellows expansion joints in accordance with EJMA's "Standards of the Expansion Joint Manufacturers Association, Inc."

B. Install rubber packless expansion joints in accordance with FSA-PSJ-703.

3.3 INSTALLATION OF GROOVED-JOINT EXPANSION JOINTS

A. Install grooved-joint expansion joints to grooved-end steel piping.

3.4 INSTALLATION OF ALIGNMENT GUIDES AND ANCHORS

A. Install alignment guides to guide expansion and to avoid end-loading and torsional stress.

B. Install one guide(s) on each side of pipe expansion fittings and loops. Install guides nearest to expansion joint not more than four pipe diameters from expansion joint.

C. Attach guides to pipe, and secure guides to building structure.

D. Install anchors at locations to prevent stresses from exceeding those permitted by

ASME B31.9 and to prevent transfer of loading and stresses to connected equipment.

E. Anchor Attachments:

1. Anchor Attachment to Steel Pipe: Attach by welding. Comply with ASME B31.9.
2. Anchor Attachment to Copper Tubing: Attach with pipe hangers. Use MSS SP-58, Type 24; U bolts bolted to anchor.

F. Fabricate and install steel anchors by welding steel shapes, plates, and bars. Comply with ASME B31.9 and AWS D1.1/D1.1M.

1. Anchor Attachment to Steel Structural Members: Attach by welding.
2. Anchor Attachment to Concrete Structural Members: Attach by fasteners. Follow fastener manufacturer's written instructions.
3. Use grout to form flat bearing surfaces for guides and anchors attached to concrete.

3.5 INSTALLATION OF PIPE LOOP AND SWING CONNECTIONS

A. Install pipe loops cold-sprung in tension or compression as required to partly absorb tension or compression produced during anticipated change in temperature.

B. Connect risers and branch connections to mains with at least five pipe fittings, including tee in main.

C. Connect risers and branch connections to terminal units with at least four pipe fittings, including tee in riser.

D. Connect mains and branch connections to terminal units with at least four pipe fittings, including tee in main.

3.6 INSTALLATION OF SLEEVES - GENERAL

A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.

B. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to provide 1-inch annular clear space between piping and concrete slabs and walls.

1. Sleeves are not required for core-drilled holes.

C. Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.

1. Permanent sleeves are not required for holes in slabs formed by molded-PE or -PP sleeves.
2. Cut sleeves to length for mounting flush with both surfaces.

a. Exception: Extend sleeves installed in floors of mechanical equipment

areas or other wet areas 2 inches above finished floor level.

3. Using grout, or, silicone sealant, seal the space outside of sleeves in floors/slabs/walls without sleeve-seal system. Select to maintain fire resistance of floor/slab/wall.

D. Install sleeves for pipes passing through interior partitions.

1. Cut sleeves to length for mounting flush with both surfaces.
2. Install sleeves that are large enough to provide **1/4-inch** annular clear space between sleeve and pipe or pipe insulation.
3. Seal annular space between sleeve and piping or piping insulation; use joint sealants that joint sealant manufacturer's literature indicates is appropriate for size, depth, and location of joint.

E. Fire-Resistance-Rated Penetrations, Horizontal Assembly Penetrations, and Smoke Barrier Penetrations: Maintain indicated fire or smoke rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with fire- and smoke-stop materials. Comply with requirements for firestopping and fill materials specified in Section 078413 "Penetration Firestopping."

3.7 INSTALLATION OF SLEEVES WITH WATERSTOP

A. Install sleeve with waterstop as new walls and slabs are constructed.

B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange centered across width of concrete slab or wall.

C. Secure nailing flanges to wooden concrete forms.

D. Using silicone sealant, seal space around outside of sleeves. Select to maintain fire resistance of floor/slab/wall.

3.8 INSTALLATION OF STACK-SLEEVE FITTINGS

A. Install stack-sleeve fittings in new slabs as slabs are constructed.

1. Install fittings that are large enough to provide **1/4-inch** annular clear space between sleeve and pipe or pipe insulation.
2. Secure flashing between clamping flanges for pipes penetrating floors with membrane waterproofing. Comply with requirements for flashing specified in Section 076200 "Sheet Metal Flashing and Trim."
3. Install section of cast-iron soil pipe to extend sleeve to **2 inches** above finished floor level.
4. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.
5. Using silicone sealant, seal space between top hub of stack-sleeve fitting and pipe.

B. Fire-Resistance-Rated Penetrations, Horizontal Assembly Penetrations, and Smoke Barrier Penetrations: Maintain indicated fire or smoke rating of floors at pipe penetrations. Seal pipe penetrations with fire- and smoke-stop materials. Comply with requirements for firestopping specified in Section 078413 "Penetration Firestopping."

3.9 INSTALLATION OF SLEEVE-SEAL SYSTEMS

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at service piping entries into building, and passing through exterior walls.

B. Select type, size, and number of sealing elements required for piping material and size and for sleeve ID or hole size. Assemble sleeve-seal system components, and install in annular space between piping and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make a watertight seal.

3.10 INSTALLATION OF ESCUTCHEONS

A. Install escutcheons for piping penetrations of walls, ceilings, and finished floors.

B. Install escutcheons with ID to closely fit around pipe, tube, and insulation of insulated piping and with OD that completely covers opening.

3.11 INSTALLATION OF METERS AND GAUGES

A. Install thermometer with thermowell at each required thermometer location.

B. Install thermowells in vertical position in piping tees.

C. Install thermowells of sizes required to match thermometer connectors. Include bushings if required to match sizes.

D. Install thermowells with extension on insulated piping.

E. Fill thermowells with heat-transfer medium.

F. Install direct-mounted thermometers in thermowells and adjust vertical and tilted positions.

G. Install remote-mounted thermometer bulbs in thermowells and install cases on panels; connect cases with tubing and support tubing to prevent kinks.

H. Install direct-mounted pressure gauges in piping tees with pressure gauge located on pipe at most readable position.

I. Install remote-mounted pressure gauges on panel.

J. Install valve and snubber in piping for each pressure gauge for fluids.

K. Install test plugs in piping tees.

L. Install thermometers in the following locations:

1. Inlet and outlet of each water heater.
2. Inlets and outlets of each domestic water heat exchanger.
3. Inlet and outlet of each domestic hot-water storage tank.
4. Inlet and outlet of each remote domestic water chiller.
5. Outlet side of hot-water-balancing valve.
6. Each main hot-water-recirculating line return pipe.
7. <**Insert location**>.

M. Install pressure gauges in the following locations:

1. Building water service entrance into building.
2. Inlet and outlet of each pressure-reducing valve.
3. Suction and discharge of each domestic water pump.
4. <**Insert location**>.

3.12 CONNECTIONS

A. Install meters and gauges adjacent to machines and equipment to allow space for service and maintenance of meters, gauges, machines, and equipment.

3.13 ADJUSTING

A. After installation, calibrate meters according to manufacturer's written instructions.

B. Adjust faces of meters and gauges to proper angle for best visibility.

3.14 FIELD QUALITY CONTROL

A. Sleeves and Sleeve Seals:

1. Perform the following tests and inspections:

a. Leak Test: After allowing for a full cure, test sleeves and sleeve seals for leaks. Repair leaks and retest until no leaks exist.
b. Sleeves and sleeve seals will be considered defective if they do not pass tests and inspections.

2. Prepare test and inspection reports.

B. Escutcheons:

1. Using new materials, replace broken and damaged escutcheons and floor plates.

3.15 SLEEVES APPLICATION

A. Use sleeves and sleeve seals for the following piping-penetration applications:

1. Exterior Concrete Walls above and below Grade:

    a. Sleeves with waterstops.

        1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

2. Concrete Slabs-on-Grade:

    a. Sleeves with waterstops.

        1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

3. Concrete Slabs above Grade:

    a. Sleeves with waterstops, or, stack-sleeve fittings.

4. Interior Wall and Partitions:

    a. Sleeves without waterstops.

3.16 ESCUTCHEONS APPLICATION

A. Escutcheons for New Piping and Relocated Existing Piping:

1. Piping with Fitting or Sleeve Protruding from Wall: One piece, deep pattern.
2. Chrome-Plated Piping: One piece, steel with polished, chrome-plated finish.
3. Insulated Piping:

    a. One piece, steel with polished, chrome-plated finish.
    b. One piece, stainless steel with polished stainless steel finish.
    c. One piece, cast brass with polished, chrome-plated finish.
    d. One piece, stamped steel or split plate, stamped steel with concealed hinge with polished, chrome-plated finish.

4. Bare Piping at Wall and Floor Penetrations in Finished Spaces:

    a. One piece, steel with polished, chrome-plated finish.
    b. One piece, stainless steel with polished stainless steel finish.
    c. One piece, cast brass with polished, chrome-plated finish.
    d. One piece, stamped steel or split plate, stamped steel with concealed hinge with polished, chrome-plated finish.

5. Bare Piping at Ceiling Penetrations in Finished Spaces:

    a. One piece, steel with polished, chrome-plated finish.
    b. One piece, stainless steel with polished stainless steel finish.
    c. One piece, cast brass with polished, chrome-plated finish.
    d. One piece, stamped steel or split plate, stamped steel with concealed hinge with polished, chrome-plated finish.

6. Bare Piping in Unfinished Service Spaces:

    a. One piece, steel with polished, chrome-plated finish.
    b. One piece, cast brass with polished, chrome-plated finish.
    c. One piece, stamped steel or split plate, stamped steel with concealed hinge with polished, chrome-plated finish.

7. Bare Piping in Equipment Rooms:

    a. One piece, steel with polished, chrome-plated finish.
    b. One piece, cast brass with polished, chrome-plated finish.
    c. One piece, stamped steel or split plate, stamped steel with concealed hinge with polished, chrome-plated finish.

B. Install floor plates for piping penetrations of equipment-room floors.

C. Install floor plates with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.

1. New Piping and Relocated Existing Piping: One piece, floor plate.
2. Existing Piping: Split floor plate.

3.17 THERMOMETER, LEAD FREE, APPLICATION

A. Thermometers at inlet and outlet of each domestic water heater are to be the following:

1. Sealed, bimetallic-actuated type.
2. Direct-mounted, [**metal**] [**plastic**]-case, vapor-actuated type.
3. Metal case, compact-style, liquid-in-glass type.
4. Direct-mounted, light-activated type.
5. Test plug with chlorosulfonated polyethylene synthetic self-sealing rubber inserts.

B. Thermometers at inlets and outlets of each domestic water heat exchanger are to be the following:

1. Direct-mounted, metal-case, vapor-actuated type.
2. [**Metal**] [**Plastic**] case, compact-style, liquid-in-glass type.
3. Direct-mounted, light-activated type.
4. Test plug with chlorosulfonated polyethylene synthetic self-sealing rubber inserts.

C. Thermometer stems are to be of length to match thermowell insertion length.

3.18 THERMOMETER, LEAD FREE, SCALE-RANGE APPLICATION

A. Scale Range for Domestic Cold-Water Piping:

1. 0 to 100 deg F.

B. Scale Range for Domestic Hot-Water Piping:

1. 0 to 250 deg F.

C. Insert additional paragraphs for thermometer scale ranges and applications.

3.19 PRESSURE-GAUGE APPLICATION

A. Pressure gauges at discharge of each water service into building are to be the following:

1. Liquid filled, direct mounted, metal case.
2. Sealed, direct mounted, plastic case.
3. Test plug with chlorosulfonated polyethylene synthetic self-sealing rubber inserts.

B. Pressure gauges at inlet and outlet of each water pressure-reducing valve are to be the following:

1. Liquid filled, direct mounted, metal case.
2. Sealed, direct mounted, plastic case.
3. Test plug with chlorosulfonated polyethylene synthetic self-sealing rubber inserts.

C. Pressure gauges at suction and discharge of each domestic water pump are to be the following:

1. Liquid filled, direct mounted, metal case.
2. Sealed, direct mounted, plastic case.
3. Test plug with chlorosulfonated polyethylene synthetic self-sealing rubber inserts.

3.20 PRESSURE-GAUGE SCALE-RANGE APPLICATION

A. Scale Range for Water Service Piping:

1. 0 to 100 psi.

B. Scale Range for Domestic Water Piping:

1. 0 to 100 psi.

C. Insert additional paragraphs for pressure-gauge scale ranges and applications.

END OF SECTION 220500

SECTION 220523 - GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ball valves.
2. Butterfly valves.
3. Check valves.
4. Gate valves.

1.2 DEFINITIONS

A. CWP: Cold working pressure.

B. EPDM: Ethylene propylene-diene terpolymer.

C. FKM: Fluoroelastomer.

D. NBR: Nitrile butadiene rubber (also known as Buna-N).

E. NRS: Nonrising stem.

F. OS&Y: Outside screw and yoke.

G. PTFE: Polytetrafluoroethylene.

H. RPTFE: Reinforced polytetrafluoroethylene.

I. RS: Rising stem.

1.3 ACTION SUBMITTALS

A. Product Data:

1. For each type of product.

a. Include material descriptions and dimensions of individual components.
b. Include operating characteristics and furnished accessories.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Prepare valves for shipping as follows:

1. Protect internal parts against rust and corrosion.
2. Protect threads, flange faces, grooved ends, press ends, solder ends, and weld ends.
3. Set ball valves open to minimize exposure of functional surfaces.
4. Set butterfly valves closed or slightly open.
5. Block check valves in either closed or open position.
6. Set gate valves closed to prevent rattling.

B. Use the following precautions during storage:

1. Maintain valve end protection.
2. Store valves indoors and maintain at higher-than-ambient-dew-point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.

C. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use operating handles or stems or other components as lifting or rigging points unless specifically indicated for this purpose in manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain each type of valve from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Standards:

1. Domestic-water piping valves intended to convey or dispense water for human consumption must comply with the U.S. Safe Drinking Water Act (SDWA), requirements of authorities having jurisdiction, and NSF 61/NSF 372; or to be certified in compliance with NSF 61/NSF 372 by an American National Standards Institute (ANSI)-accredited third-party certification body, that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

B. ASME Compliance:

1. ASME B1.20.1 for threads for threaded-end valves.
2. ASME B16.1 for flanges on iron valves.
3. ASME B16.5 for flanges on steel valves.
4. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
5. ASME B16.18 for cast-copper solder-joint connections.
6. ASME B16.22 for wrought-copper solder-joint connections.
7. ASME B16.34 for flanged- and threaded-end connections.
8. ASME B16.51 for press joint connections.
9. ASME B31.9 for building services piping valves.

C. AWWA Compliance: Comply with AWWA C606 for grooved-end connections.

D. Provide bronze valves made with dezincification-resistant materials. Bronze valves made with copper alloy (brass) containing more than 15 percent zinc are unacceptable.

E. Valve Pressure-Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.

F. Valve Sizes: Same as upstream piping unless otherwise indicated.

G. Valve Bypass and Drain Connections: MSS SP-45.

H. Valve Actuator Type:

1. Gear Actuator: For quarter-turn ball valves NPS 4 and larger.
2. Hand Lever: For quarter-turn ball valves smaller than NPS 4.

I. Valves in Insulated Piping:

1. Provide **2-inch** extended neck stems.
2. Provide extended operating handles with nonthermal-conductive covering material and protective sleeves that allow operation of valves without breaking vapor seals or disturbing insulation.
3. Provide memory stops that are fully adjustable after insulation is applied.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.

B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.

C. Examine threads on valve and mating pipe for form and cleanliness.

D. Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.

E. Examine press fittings to verify they have been properly pressed.

F. Do not attempt to repair defective valves; replace with new valves. Remove defective valves from site.

3.2 INSTALLATION OF VALVES

A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.

B. Provide support of piping adjacent to valves such that no force is imposed upon valves.

C. Locate valves for easy access and where not blocked by equipment, other piping, or building components.

D. For valves in horizontal piping, install valves with stem at or above center of pipe.

E. Install valves in position that does not project into aisles or block access to other equipment.

F. Install valves in position to allow full stem and actuator or manual operator movement.

G. Verify that joints of each valve have been properly installed and sealed to assure there is no leakage or damage.

H. Install check valves for proper direction of flow and as follows:

1. Check Valves: Center-guided type, in horizontal or vertical position, between flanges.
2. Check Valves, Swing Type: In horizontal position with hinge pin level.
3. Check Valves, Lift Type: With stem upright and plumb.

I. Valve Tags: Comply with requirements in Section 220553 "Identification for Plumbing Piping and Equipment" for valve tags and schedules.

J. Adhere to manufacturer's written installation instructions. When soldering or brazing valves, do not heat valves above maximum permitted temperature. Do not use solder with melting point temperature above valve manufacturer's written recommended maximum.

3.3 ADJUSTING

A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

A. If valves with specified CWP ratings are unavailable, the same types of valves with higher CWP ratings may be substituted.

B. Select valves with the following end connections:

1. For Copper Tubing, NPS 2 (DN 50) and Smaller: Threaded ends except where solder-joint valve-end option or press-end option is indicated in valve schedules

below.
2. For Copper Tubing, NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Flanged ends except where threaded valve-end option is indicated in valve schedules below.
3. For Copper Tubing, NPS 5 (DN 125) and Larger: Flanged ends.
4. For Steel Piping, NPS 2 (DN 50) and Smaller: Threaded ends.
5. For Steel Piping, NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Flanged ends except where threaded valve-end option is indicated in valve schedules below.
6. For Steel Piping, NPS 5 (DN 125) and Larger: Flanged ends.
7. For Grooved-End Copper Tubing: Valve ends may be grooved.
8. For Grooved-End Steel Piping: Valve ends may be grooved.
9. Wafer-Type Valves: Flanged connections.

3.5 DOMESTIC HOT- AND COLD-WATER BALL VALVE SCHEDULE

A. Pipe NPS 2 (DN 50) and Smaller:

1. Ball valves, lead free, threaded ends - brass, one piece.
2. Ball valves, lead free, threaded or soldered ends - brass, two piece with full port and brass trim; threaded ends.
3. Ball valves, lead free, threaded or soldered ends - brass, two piece with full port and stainless steel trim; threaded ends.
4. Ball valves, lead free, threaded or soldered ends - brass, two piece with regular port and brass trim; threaded ends.
5. Ball valves, lead free, threaded or soldered ends - brass, two piece with regular port and stainless steel trim; threaded ends.
6. Ball valves, lead free, threaded or soldered ends - brass, three piece with full port and brass trim; threaded ends.
7. Ball valves, lead free, threaded or soldered ends - brass, three piece with full port and stainless steel trim; threaded ends.
8. Ball valves, lead free, threaded ends - bronze, one piece with bronze trim.
9. Ball valves, lead free, threaded ends - bronze, one piece with stainless steel trim.
10. Ball valves, lead free, threaded or soldered ends - bronze, two piece with full port and bronze or brass trim; threaded ends.
11. Ball valves, lead free, threaded or soldered ends - bronze, two piece with full port and stainless steel trim; threaded ends.
12. Ball valves, lead free, threaded ends - bronze, two piece with regular port and bronze or brass trim.
13. Ball valves, lead free, threaded ends - bronze, two piece with regular port and stainless steel trim.
14. Ball valves, lead free, threaded ends - bronze, three piece with full port and bronze or brass trim.
15. Ball valves, lead free, threaded ends - bronze, three piece with full port and stainless steel trim.
16. Ball valves, lead free, threaded or soldered ends - bronze, three piece with regular port and bronze or brass trim; threaded ends.
17. Ball valves, lead free, threaded or soldered ends - bronze, three piece with regular port and stainless steel trim; threaded ends.
18. Ball valves, lead free, threaded or flanged ends - stainless steel, two piece with full port; threaded ends.
19. Ball valves, lead free, press ends - brass, two piece with full port and brass trim.

20. Ball valves, lead free, press ends - brass, two piece with full port and stainless steel trim.
21. Ball valves, lead free, press ends - bronze, two piece with full port and bronze or brass trim.
22. Ball valves, lead free, press ends - stainless steel, two piece with full port.
23. Ball valves, lead free, flanged or threaded ends - steel, with full port, Class 150; threaded ends.

B. Pipe NPS 2-1/2 (DN 65) and Larger:

1. Ball valves, lead free, flanged or threaded ends - iron, Class 125; flanged ends.

C. For CPVC Pipe:

1. CPVC Union-Type Ball Check Valve: NPS 2 and smaller at [**73 deg F**] <**Insert temperature**>.

a. End Connections for Valves NPS 2 (DN 50) and Smaller: Socket, or, threaded.
b. End Connections for Valves NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Threaded.

D. For PVC Pipe:

1. PVC Union-Type Ball Check Valve: NPS 2 and smaller at [**73 deg F**] <**Insert temperature**>.

a. End Connections for Valves NPS 2 (DN 50) and Smaller: Socket, or, threaded.
b. End Connections for Valves NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Socket or threaded.

3.6 DOMESTIC HOT- AND COLD-WATER BUTTERFLY VALVE SCHEDULE

A. Pipe NPS 2-1/2 (DN 65) and Larger:

1. Butterfly valves, lead free, single flange (lug type) - iron, with aluminum-bronze disc; 150 CWP, [**EPDM**] [**NBR**] seat.

B. For CPVC Pipe: CPVC butterfly valve for NPS 2-1/2 and larger.

C. For PVC Pipe: PVC butterfly valve for NPS 2-1/2 and larger.

D. For Stainless Steel Pipe: Stainless steel, grooved-end butterfly valve for **NPS 2-1/2** and larger.

3.7 DOMESTIC HOT- AND COLD-WATER CHECK VALVE SCHEDULE

A. Pipe NPS 2 (DN 50) and Smaller:

1. Check valves, lead free, swing type, threaded or soldered ends - bronze, with bronze disc, Class 125; threaded ends.

B. Pipe NPS 2-1/2 (DN 65) and Larger:

1. Check valves, lead free, swing type, flanged or threaded ends - iron, with metal seats, Class 125; flanged ends.

C. For CPVC Pipe:

1. NPS 2 (DN 50) and Smaller: Union ball valve.

D. For PVC Pipe:

1. NPS 2 (DN 50) and Smaller: Union ball valve.

3.8 PUMP-DISCHARGE CHECK VALVE SCHEDULE

A. Pipe NPS 2 (DN 50) and Smaller:

1. Check valves, lead free, swing type, threaded or soldered ends - bronze, with bronze disc, Class 125; threaded ends.

B. Pipe NPS 2-1/2 (DN 65) and Larger for Domestic Water Pumps:

1. Check valves, lead free, swing type, flanged or threaded ends - iron, with lever- and spring-closure control, Class 125; flanged ends.
2. Check valves, lead free, swing type, flanged or threaded ends - iron, with lever- and weight-closure control, Class 125; [**flanged**] [**threaded**] ends.

C. Pipe NPS 2-1/2 (DN 65) and Larger for Sanitary Waste and Storm Drainage:

1. Check valves, swing type, flanged ends - iron, with lever- and spring-closure control, Class 125.

3.9 DOMESTIC HOT- AND COLD-WATER GATE VALVE SCHEDULE

A. Pipe NPS 2 (DN 50) and Smaller:

1. Gate valves, lead free, threaded or soldered ends - bronze, NRS, Class 125; threaded ends.

B. Pipe NPS 2-1/2 (DN 65) and Larger:

1. Gate valves, lead free, flanged ends - iron, NRS, Class 125.

C. For CPVC Pipe:

1. NPS 2 (DN 50) and Smaller: Union gate valve.

D. For PVC Pipe:

1. NPS 2 (DN 50) and Smaller: Union gate valve.

END OF SECTION 220523

SECTION 220529 - HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pipe hangers and supports - metal.
2. Pipe hangers - metal, trapeze type.
3. Pipe hangers - FRP.
4. Fastener systems.
5. Equipment supports.

1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of product.

B. Shop Drawings: Show fabrication and installation details and include calculations for the following:

1. Trapeze pipe hangers.
2. Metal strut support systems.
3. Rooftop-mounted strut support systems.
4. FRP strut support systems.
5. Pipe stands.
6. Equipment supports.

1.3 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.4 QUALITY ASSURANCE

A. Structural-Steel Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M.

B. Pipe Welding Qualifications: Qualify procedures and operators in accordance with 2021 ASME Boiler and Pressure Vessel Code, Section IX.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design trapeze pipe hangers and equipment supports.

B. Structural Performance: Hangers and supports for plumbing piping and equipment are to withstand the effects of gravity loads and stresses within limits and under conditions indicated in accordance with ASCE/SEI 7.

1. Design supports for multiple pipes, including pipe stands, capable of supporting combined weight of supported systems, system contents, and test water.
2. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

2.2 PIPE HANGERS - METAL, TRAPEZE TYPE

A. Description: MSS SP-58, Type 59, shop- or field-fabricated pipe-support assembly, made from structural-carbon-steel shapes, with MSS SP-58 carbon-steel hanger rods, nuts, saddles, and U-bolts.

2.3 EQUIPMENT SUPPORTS

A. Description: Welded, shop- or field-fabricated equipment support made from structural-carbon-steel shapes.

2.4 MATERIALS

A. Aluminum: **ASTM B221**.

B. Carbon Steel: ASTM A1011/A1011M.

C. Structural Steel: ASTM A36/A36M carbon-steel plates, shapes, and bars; black and galvanized.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation, for penetrations through fire-rated walls, ceilings, and assemblies.

B. Strength of Support Assemblies: Where not indicated, select sizes of components, so

strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination is to include weight of supported components plus 200 lb.

3.2 INSTALLATION OF HANGERS AND SUPPORTS

A. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

B. Install lateral bracing with pipe hangers and supports to prevent swaying.

C. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 and larger and at changes in direction of piping. Coordinate location of concrete inserts before concrete is placed.

D. Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

E. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

F. Insulated Piping:

1. Attach clamps and spacers to piping.

    a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
    b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
    c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.

2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.

    a. Thermal-hanger shield inserts may be used as an option. Include steel weight-distribution plate for pipe **NPS 4** and larger if pipe is installed on rollers.

3. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields are to span an arc of 180 degrees.

    a. Thermal-hanger shield inserts may be used as an option. Include steel weight-distribution plate for pipe **NPS 4** and larger if pipe is installed on rollers.

4. Shield Dimensions for Pipe: Not less than the following:

    a. NPS 1/4 to NPS 3-1/2 (DN 8 to DN 90): **12 inches** long and **0.048 inch**

thick.
b. NPS 4 (DN 100): **12 inches** long and **0.06 inch** thick.
c. NPS 5 and NPS 6 (DN 125 and DN 150): **18 inches** long and **0.06 inch** thick.
d. NPS 8 to NPS 14 (DN 200 to DN 350): **24 inches** long and **0.075 inch** thick.
e. NPS 16 to NPS 24 (DN 400 to DN 600): **24 inches** long and **0.105 inch** thick.

5. Pipes NPS 8 (DN 200) and Larger: Include wood or reinforced calcium-silicate-insulation inserts of length at least as long as protective shield.

G. Metal Pipe-Hanger Installation: Comply with MSS SP-58. Install hangers, supports, clamps, and attachments as required to properly support piping from building structure.

H. Metal Trapeze Pipe-Hanger Installation: Comply with MSS SP-58. Arrange for grouping of parallel runs of horizontal piping, and support together on field-fabricated trapeze pipe hangers.

1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size, or install intermediate supports for smaller-diameter pipes as specified for individual pipe hangers.
2. Field fabricate in accordance with ASTM A36/A36M carbon-steel shapes selected for loads being supported. Weld steel in accordance with AWS D1.1/D1.1M.

I. FRP Pipe-Hanger Installation: Comply with applicable portions of MSS SP-58. Install hangers and attachments as required to properly support piping from building structure.

J. Strut System Installation: Metal; arrange for grouping of parallel runs of piping, and support together on field-assembled metal framing systems.

K. Thermal Hanger-Shield Installation: Install in pipe hanger or shield for insulated piping.

L. Fastener System Installation:

1. Install powder-actuated fasteners for use in lightweight concrete or concrete slabs less than **4 inches** thick after concrete is placed and cured. Use installers that are licensed by powder-actuated tool manufacturer.
2. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners in accordance with manufacturer's written instructions.
3. Install lag screw wood fasteners in accordance with manufacturer's written instructions.
4. Install fasteners in accordance with manufacturer's written instructions.

M. Pipe Stand Installation:

1. Pipe Stand Types, except Curb-Mounted Type: Assemble components and mount on smooth roof surface. Do not penetrate roof membrane.
2. Curb-Mounted-Type Pipe Stands: Assemble components or fabricate pipe stand

and mount on permanent, stationary roof curb. See Section 077200 "Roof Accessories" for curbs.

N. Pipe-Positioning-System Installation: Install support devices to make rigid supply and waste piping connections to each plumbing fixture.

O. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.

P. Equipment Support Installation:

1. Fabricate from welded-structural-steel shapes.
2. Fabricate structural-steel stands to suspend equipment from structure overhead or to support equipment above floor.
3. Grouting: Place grout under supports for floor-mounted equipment, and make bearing surface smooth.
4. Provide lateral bracing, to prevent swaying.

3.3 METAL FABRICATIONS

A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers, and, equipment supports.

B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded.

C. Field Welding: Comply with AWS D1.1/D1.1M procedures for shielded, metal arc welding; appearance and quality of welds; and methods used in correcting welding work; and with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. Finish welds at exposed connections, so no roughness shows after finishing and so contours of welded surfaces match adjacent contours.

3.4 ADJUSTING

A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.

B. Trim excess length of continuous-thread hanger and support rods to 1-1/2 inches.

3.5 PAINTING

A. Touchup:

1. Clean field welds and abraded, shop-painted areas. Paint exposed areas

immediately after erecting hangers and supports. Use same materials as those used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

a. Apply paint by brush or spray to provide a minimum dry film thickness of **2.0 mils**.

2. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas, and apply galvanizing-repair paint to comply with ASTM A780/A780M.

3.6 HANGER AND SUPPORT SCHEDULE

A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.

B. Comply with MSS SP-58 for pipe-hanger selections and applications that are not specified in piping system Sections.

C. Use hangers and supports with galvanized metallic coatings for piping and equipment that will not have field-applied finishes.

D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.

E. Use carbon-steel pipe hangers and supports and attachments for general service applications.

F. Use copper-plated pipe hangers and copper attachments for copper piping and tubing.

G. Use padded hangers for piping that is subject to scratching.

H. Use thermal hanger-shield inserts for insulated piping and tubing.

I. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated, stationary pipes **NPS 1/2 to NPS 30**.
2. Yoke-Type Pipe Clamps (MSS Type 2): For suspension of up to **1050 deg F** pipes **NPS 4 to NPS 24**, requiring up to **4 inches** of insulation.
3. Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes **NPS 3/4 to NPS 36**, requiring clamp flexibility and up to **4 inches** of insulation.
4. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes **NPS 1/2 to NPS 24** if little or no insulation is required.
5. Pipe Hangers (MSS Type 5): For suspension of pipes **NPS 1/2 to NPS 4**, to allow off-center closure for hanger installation before pipe erection.
6. Adjustable, Swivel Split- or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated, stationary pipes **NPS 3/4 to NPS 8**.
7. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated,

stationary pipes **NPS 1/2 to NPS 8**.

8. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated, stationary pipes **NPS 1/2 to NPS 8**.
9. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated, stationary pipes **NPS 1/2 to NPS 8**.
10. Split Pipe Ring with or without Turnbuckle Hangers (MSS Type 11): For suspension of noninsulated, stationary pipes **NPS 3/8 to NPS 8**.
11. Extension Hinged or Two-Bolt Split Pipe Clamps (MSS Type 12): For suspension of noninsulated, stationary pipes **NPS 3/8 to NPS 3**.
12. U-Bolts (MSS Type 24): For support of heavy pipes **NPS 1/2 to NPS 30**.
13. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
14. Pipe Saddle Supports (MSS Type 36): For support of pipes **NPS 4 to NPS 36**, with steel-pipe base stanchion support and cast-iron floor flange or carbon-steel plate.
15. Pipe Stanchion Saddles (MSS Type 37): For support of pipes **NPS 4 to NPS 36**, with steel-pipe base stanchion support and cast-iron floor flange or carbon-steel plate, and with U-bolt to retain pipe.
16. Adjustable Pipe Saddle Supports (MSS Type 38): For stanchion-type support for pipes **NPS 2-1/2 to NPS 36** if vertical adjustment is required, with steel-pipe base stanchion support and cast-iron floor flange.
17. Single-Pipe Rolls (MSS Type 41): For suspension of pipes **NPS 1 to NPS 30**, from two rods if longitudinal movement caused by expansion and contraction occurs.
18. Adjustable Roller Hangers (MSS Type 43): For suspension of pipes **NPS 2-1/2 to NPS 24**, from single rod if horizontal movement caused by expansion and contraction occurs.
19. Complete Pipe Rolls (MSS Type 44): For support of pipes **NPS 2 to NPS 42** if longitudinal movement caused by expansion and contraction occurs but vertical adjustment is unnecessary.
20. Pipe Roll and Plate Units (MSS Type 45): For support of pipes **NPS 2 to NPS 24** if small horizontal movement caused by expansion and contraction occurs and vertical adjustment is unnecessary.
21. Adjustable Pipe Roll and Base Units (MSS Type 46): For support of pipes **NPS 2 to NPS 30** if vertical and lateral adjustment during installation, in addition to expansion and contraction, is required.

J. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers **NPS 3/4 to NPS 24**.
2. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers **NPS 3/4 to NPS 24** if longer ends are required for riser clamps.

K. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel Turnbuckles (MSS Type 13): For adjustment of up to **6 inches** for heavy loads.
2. Steel Clevises (MSS Type 14): For **120 to 450 deg F** piping installations.

3. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11 split pipe rings.
4. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
5. Steel Weldless Eye Nuts (MSS Type 17): For **120 to 450 deg F** piping installations.

L. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel or Malleable-Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
2. Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joist construction, to attach to top flange of structural shape.
3. Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
4. Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
5. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
6. C-Clamps (MSS Type 23): For structural shapes.
7. Top-Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
8. Side-Beam Clamps (MSS Type 27): For bottom of steel I-beams.
9. Steel-Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
10. Linked-Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.
11. Malleable-Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
12. Welded-Steel Brackets: For support of pipes from below or for suspending from above by using clip and rod. Use one of the following for indicated loads:

    a. Light (MSS Type 31): **750 lb**.
    b. Medium (MSS Type 32): **1500 lb**.
    c. Heavy (MSS Type 33): **3000 lb**.

13. Side-Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
14. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
15. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.

M. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel-Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
3. Thermal Hanger-Shield Inserts: For supporting insulated pipe.

N. Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Restraint-Control Devices (MSS Type 47): Where indicated to control piping movement.
2. Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed **1-1/4 inches**.
3. Spring-Cushion Roll Hangers (MSS Type 49): For equipping Type 41 roll hanger with springs.
4. Spring Sway Braces (MSS Type 50): To retard sway, shock, vibration, or thermal expansion in piping systems.
5. Variable-Spring Hangers (MSS Type 51): Preset to indicated load, and limit variability factor to 25 percent to allow expansion and contraction of piping system from hanger.
6. Variable-Spring Base Supports (MSS Type 52): Preset to indicated load, and limit variability factor to 25 percent to allow expansion and contraction of piping system from base support.
7. Variable-Spring Trapeze Hangers (MSS Type 53): Preset to indicated load, and limit variability factor to 25 percent to allow expansion and contraction of piping system from trapeze support.
8. Constant Supports: For critical piping stress and if necessary to avoid transfer of stress from one support to another support, critical terminal, or connected equipment. Include auxiliary stops for erection, hydrostatic test, and load-adjustment capability. These supports include the following types:

    a. Horizontal (MSS Type 54): Mounted horizontally.
    b. Vertical (MSS Type 55): Mounted vertically.
    c. Trapeze (MSS Type 56): Two vertical-type supports and one trapeze member.

O. Comply with MSS SP-58 for trapeze pipe-hanger selections and applications that are not specified in piping system Sections.

P. Use powder-actuated fasteners instead of building attachments where required in concrete construction.

Q. Use pipe-positioning systems in pipe spaces behind plumbing fixtures to support supply and waste piping for plumbing fixtures.

END OF SECTION 220529

SECTION 220553 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Equipment labels.
2. Warning signs and labels.
3. Pipe labels.
4. Valve tags.
5. Warning tags.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For color, letter style, and graphic representation required for each identification material and device.

C. Equipment-Label Schedule: Include a listing of all equipment to be labeled with the proposed content for each label.

D. Valve-numbering scheme.

E. Valve Schedules: For each piping system. Include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 EQUIPMENT LABELS

A. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean piping and equipment surfaces of incompatible primers, paints, and encapsulants, as well as dirt, oil, grease, release agents, and other substances that could impair bond of identification devices.

3.2 INSTALLATION, GENERAL REQUIREMENTS

A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

B. Coordinate installation of identifying devices with locations of access panels and doors.

C. Install identifying devices before installing acoustical ceilings and similar concealment.

D. Locate identifying devices so that they are readily visible from the point of normal approach.

3.3 INSTALLATION OF EQUIPMENT LABELS, WARNING SIGNS, AND LABELS

A. Permanently fasten labels on each item of plumbing equipment.

B. Sign and Label Colors.

1. White letters on an ANSI Z535.1 safety-green background.

C. Locate equipment labels where accessible and visible.

D. Arc-Flash Warning Signs: Provide arc-flash warning signs on electrical disconnects and other equipment where are-flash hazard exists, as indicated on Drawings, and in accordance with requirements of OSHA and NFPA 70E, and other applicable codes and standards.

3.4 INSTALLATION OF WARNING TAPE

A. Warning Tape Color and Pattern: Yellow background with black diagonal stripes.

B. Install warning tape on pipes and ducts, with cross-designated walkways providing less than **6 ft.** of clearance.

C. Locate tape so as to be readily visible from the point of normal approach.

3.5 INSTALLATION OF PIPE LABELS

A. Install pipe labels showing service and flow direction with permanent adhesive on pipes.

B. Stenciled Pipe Label Option: Stenciled labels showing service and flow direction may be provided instead of manufactured pipe labels, at Installer's option. Install stenciled pipe labels, complying with ASME A13.1, with painted, color-coded bands or rectangles on each piping system.

1. Identification Paint: Use for contrasting background.
2. Stencil Paint: Use for pipe marking.

C. Pipe-Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:

1. Within **3 ft.** of each valve and control device.
2. At access doors, manholes, and similar access points that permit view of concealed piping.
3. Within **3 ft.** of equipment items and other points of origination and termination.
4. Spaced at maximum intervals of 25 ft. along each run. Reduce intervals to 10 ft. in areas of congested piping and equipment.

D. Do not apply plastic pipe labels or plastic tapes directly to bare pipes conveying fluids at temperatures of **125 deg F** or higher. Where these pipes are to remain uninsulated, use a short section of insulation or use stenciled labels.

E. Flow-Direction Flow Arrows: Use arrows, in compliance with ASME A13.1, to indicate direction of flow in pipes, including pipes where flow is allowed in both directions.

F. Pipe-Label Color Schedule:

1. Domestic Cold-Water Piping: White letters on an ANSI Z535.1 safety-green background.
2. Domestic Hot-Water Piping: White letters on an ANSI Z535.1 safety-green background
3. Domestic Hot-Water Return Piping White letters on an ANSI Z535.1 safety-green background.
4. Sanitary Waste, and, Storm Drainage Piping: White letters on a black background.
5. Nonpotable Cold Water: Black letters on an ANSI Z535.1 safety-yellow background.
6. Nonpotable Hot Water: Black letters on an ANSI Z535.1-yellow background.
7. Nonpotable Hot-Water Recirculation: Black letters on an ANSI Z535.1 safety-yellow background.

3.6 INSTALLATION OF VALVE TAGS

A. Valve-Tag Application Schedule: Tag valves according to size, shape, and color scheme and with captions similar to those indicated in "Valve-Tag Size and Shape" Subparagraph below:

1. Valve-Tag Size and Shape:

a. Domestic Cold Water: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.
b. Domestic Hot Water: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.
c. Domestic Hot-Water Return: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.
d. Nonpotable Cold Water: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.
e. Nonpotable Hot Water: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.
f. Nonpotable Hot-Water Return: 1-1/2 inches, [**round**] [**square**] <**Insert shape**>.

2. Valve-Tag Colors:

    a. For each piping system, use the same lettering and background coloring system on valve tags as used in the piping system labels and background.

3.7 INSTALLATION OF WARNING TAGS

A. Warning Tag Color: Black letters on an ANSI Z535.1 safety-yellow background.

B. Attach warning tags, with proper message, to equipment and other items where indicated on Drawings.

END OF SECTION 220553

SECTION 220593 - TESTING, ADJUSTING, AND BALANCING FOR PLUMBING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. TAB of domestic water system.
2. TAB of plumbing equipment:

a. Domestic water booster pumps.
b. Domestic hot-water in-line circulation pumps.
c. General-duty air compressors.
d. Sanitary sewage pumps.
e. Drainage pumps.
f. Laboratory air compressors.
g. Laboratory vacuum pumps.

3. Pipe-leakage test verification.

1.2 DEFINITIONS

A. AABC: Associated Air Balance Council.

B. NEBB: National Environmental Balancing Bureau.

C. TAB: Testing, adjusting, and balancing.

D. TABB: Testing, Adjusting, and Balancing Bureau.

E. TAB Specialist: An independent entity meeting qualifications to perform TAB work.

F. TDH: Total dynamic head.

1.3 PREINSTALLATION MEETINGS

A. TAB Conference: Conduct a TAB conference at Project site after approval of the TAB strategies and procedures plan, to develop a mutual understanding of the details. Provide a minimum of 14 days' advance notice of scheduled meeting time and location.

1. Minimum Agenda Items:

a. The Contract Documents examination report.
b. The TAB plan.
c. Needs for coordination and cooperation of trades and subcontractors.
d. Proposed procedures for documentation and communication flow.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: Within 30 days of Contractor's Notice to Proceed, submit documentation that the TAB specialist and this Project's TAB team members meet the qualifications specified in "Quality Assurance" Article.

B. Contract Documents Examination Report: Within 30 days of Contractor's Notice to Proceed, submit the Contract Documents review report, as specified in Part 3.

C. Strategies and Procedures Plan: Within 30 days of Contractor's Notice to Proceed, submit TAB strategies and step-by-step procedures, as specified in "Preparation" Article.

D. System Readiness Checklists: Within 30 days of Contractor's Notice to Proceed, submit system readiness checklists, as specified in "Preparation" Article.

E. Examination Report: Submit a summary report of the examination review required in "Examination" Article.

F. Certified TAB reports.

G. Sample report forms.

H. Instrument calibration reports, to include the following:

1. Instrument type and make.
2. Serial number.
3. Application.
4. Dates of use.
5. Dates of calibration.

1.5 QUALITY ASSURANCE

A. TAB Specialists Qualifications, Certified by AABC:

1. TAB Field Supervisor: Employee of the TAB specialist and certified by AABC.
2. TAB Technician: Employee of the TAB specialist and certified by AABC.

B. TAB Specialists Qualifications, Certified by NEBB, or, TABB:

1. TAB Field Supervisor: Employee of the TAB specialist and certified by NEBB, or, TABB.
2. TAB Technician: Employee of the TAB specialist and certified by NEBB, or, TABB.

C. Instrumentation Type, Quantity, Accuracy, and Calibration: Comply with requirements in ASHRAE 111, Section 4, "Instrumentation."

D. Code and Authorities Having Jurisdiction Compliance: TAB is required to comply with governing codes and requirements of authorities having jurisdiction.

1.6 FIELD CONDITIONS

A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

B. Partial Owner Occupancy: Owner may occupy completed areas of building before Substantial Completion. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

PART 2 - PRODUCTS (Not Applicable)
PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the Contract Documents to become familiar with Project requirements and to discover conditions in systems designs that may preclude proper TAB of systems and equipment.

B. Examine installed systems for balancing devices, such as test ports, gauge cocks, thermometer wells, flow-control devices, and balancing valves and fittings. Verify that locations of these balancing devices are applicable for intended purpose and are accessible.

C. Examine approved submittals for plumbing systems and equipment.

D. Examine design data, including plumbing system descriptions, statements of design assumptions for environmental conditions and systems output, and statements of philosophies and assumptions about plumbing system and equipment controls.

E. Examine equipment performance data, including pump curves.

1. Relate performance data to Project conditions and requirements, including pump system effects that can create undesired or unpredicted conditions that cause reduced capacities in all or part of a system.
2. Calculate pump system-effect factors to reduce performance ratings of plumbing equipment when installed under conditions different from the conditions used to rate equipment performance. Compare results with the design data and installed conditions.

F. Examine system and equipment installations, and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.

G. Examine test reports specified in individual system and equipment Sections.

H. Examine plumbing equipment and verify that bearings are greased, belts are aligned and tight, filters are clean, and equipment with functioning controls is ready for operation.

I. Examine temporary and permanent strainers. Verify that temporary strainer screens

used during system cleaning and flushing have been removed and permanent strainers are installed and clean.

J. Examine control valves for proper installation for their intended function of isolating, throttling, diverting, or mixing fluid flows.

K. Examine system pumps to ensure absence of entrained air in the suction piping.

L. Examine operating safety interlocks and controls on plumbing equipment.

M. Report deficiencies discovered before and during performance of TAB procedures. Observe and record system reactions to changes in conditions. Record default set points if different from indicated values.

3.2 PREPARATION

A. Prepare a TAB plan that includes the following:

1. Equipment and systems to be tested.
2. Strategies and step-by-step procedures for balancing the systems.
3. Instrumentation to be used.
4. Sample forms with specific identification for all equipment.

B. Perform system-readiness checks of plumbing systems and equipment to verify system readiness for TAB work. Include, at a minimum, the following:

1. Domestic Water System:

a. Verify leakage and pressure tests on water distribution systems have been satisfactorily completed in accordance with applicable code and authority having jurisdiction.
b. Water heaters are installed and functioning.
c. Piping is complete and all points of outlet are installed.
d. Water treatment is complete.
e. Systems are flushed, filled, and air purged.
f. Strainers are clean.
g. Control valves are functioning in accordance with the sequence of operation.
h. Shutoff and balance valves are 100 percent open.
i. Booster-, and, hot-water circulating pumps are operational and proper rotation is verified.
j. Pump gauge connections are installed directly at pump inlet and outlet flanges or in discharge and suction pipe prior to valves or strainers.
k. Variable-frequency controllers' startup is complete and safeties are verified.
l. Suitable access to balancing devices and equipment is provided.

3.3 GENERAL PROCEDURES FOR TESTING AND BALANCING

A. Perform testing and balancing procedures on each system in accordance with the

procedures contained in AABC's "National Standards for Total System Balance" and in this Section.

B. Cut insulation, pipes, and equipment casings for installation of test probes to the minimum extent necessary for TAB procedures.

1. Where holes for probes are required in piping or equipment, install pressure and temperature test plugs to seal systems.
2. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish in accordance with Section 220716 "Plumbing Equipment Insulation" and Section 220719 "Plumbing Piping Insulation."

C. Mark equipment and balancing devices, including valve position indicators and similar controls and devices, with paint or other suitable, permanent identification material to show final settings.

D. Take and report testing and balancing measurements in inch-pound (IP units.

3.4 GENERAL PROCEDURES FOR PLUMBING EQUIPMENT

A. Test, adjust, and balance plumbing equipment indicated on Drawings, including, but not limited to, the following:

1. Motors.
2. Domestic water booster pumps.
3. Domestic water in-line pumps.
4. Domestic water heaters.
5. Drainage pumps.

3.5 PROCEDURES FOR DOMESTIC WATER SYSTEMS

A. Prepare test reports for pumps and other equipment. Obtain approved submittals and manufacturer-recommended testing procedures. Crosscheck the summation of required equipment flow rates with system design flow rates.

B. Prepare schematic diagrams of systems' Record drawings piping layouts.

C. In addition to requirements in "Preparation" Article, prepare domestic water systems for testing and balancing as follows:

1. Check expansion tank for proper setting.
2. Check water heater for proper discharge temperature setting.
3. Check remotest point of outlet for adequate pressure.
4. Check flow-control valves for proper position.
5. Locate start-stop and disconnect switches, electrical interlocks, and motor controllers.
6. Verify that motor controllers are equipped with properly sized thermal protection.
7. Check that air has been purged from the system.

D. Measure and record upstream and downstream pressure of each piece of equipment.

E. Measure and record upstream and downstream pressure of pressure-reducing valves.

F. Check settings and operation of automatic temperature-control valves, self-contained control valves, and pressure-reducing valves. Record final settings.

G. Check settings and operation of each safety valve. Record settings.

3.6 PROCEDURES FOR DOMESTIC WATER SYSTEM BOOSTER PUMPS

A. Adjust pumps to deliver total design flow.

1. Measure total water flow.

    a. Position valves for full flow through coils.
    b. Measure flow by main flow meter, if installed.
    c. If main flow meter is not installed, determine flow by pump TDH or known equipment pressure drop.

2. Measure pump TDH as follows:

    a. Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
    b. Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
    c. Convert pressure to head and correct for differences in gauge heights.
    d. Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow, and verify that the pump has the intended impeller size.
    e. With valves open, read pump TDH. Adjust pump discharge valve until design water flow is achieved. If excessive throttling is required to achieve desired flow, recommend pump impellers be trimmed to reduce excess throttling.

3. Monitor motor performance during procedures, and do not operate motor in an overloaded condition.

B. Adjust flow-measuring devices installed in mains and branches to design water flows.

1. Measure flow in main and branch pipes.
2. Adjust main and branch balance valves for design flow.
3. Re-measure each main and branch after all have been adjusted.

C. Verify final system conditions as follows:

1. Re-measure and confirm that total water flow is within design.
2. Re-measure final pumps' operating data, TDH, volts, amps, and static profile.
3. Mark final settings.

D. Verify that memory stops have been set.

3.7 PROCEDURES FOR DOMESTIC HOT-WATER CIRCULATING INLINE PUMP

A. Balance system with manual or automatic balancing valves by setting at design flow.

1. Measure flow in main and branch pipes.
2. Adjust main and branch balance valves for design flow.
3. Re-measure each main and branch after all have been adjusted.

B. Adjust pump to deliver total design flow.

1. Measure pump TDH as follows:

    a. Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
    b. Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
    c. Convert pressure to head and correct for differences in gauge heights.
    d. Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow, and verify that the pump has the intended impeller size.

2. Monitor motor performance during procedures, and do not operate motor in an overloaded condition.
3. Mark final settings and verify that all memory stops have been set.
4. Verify final system conditions as follows:

    a. Re-measure and confirm that total flow is within design.
    b. Re-measure final pumps' operating data, TDH, volts, amps, speed, and static profile.
    c. Mark final settings.

3.8 PROCEDURES FOR MOTORS

A. Motors 1/2 HP and Larger: Test at final balanced conditions and record the following data:

1. Manufacturer's name, model number, and serial number.
2. Motor horsepower rating.
3. Motor rpm.
4. Phase and hertz.
5. Nameplate and measured voltage, each phase.
6. Nameplate and measured amperage, each phase.
7. Starter size and thermal-protection-element rating.
8. Service factor and frame size.

B. Motors Driven by Variable-Frequency Controllers: Test manual bypass of controller to prove proper operation.

3.9 PROCEDURES FOR WATER HEATERS

A. Electric Water Heaters:

1. Measure and record entering- and leaving-water temperatures.
2. Measure and record water flow.
3. Measure and record pressure drop.
4. Measure and Record relief valve(s) pressure setting.
5. Capacity: Calculate in **Btu/h** of heating output.
6. Efficiency: Calculate operating efficiency for comparison to submitted equipment.

B. Gas- and Oil-Fired Water Heaters:

1. Measure and record entering- and leaving-water temperatures.
2. Measure and record water flow.
3. Measure and record pressure drop.
4. Measure and Record relief valve(s) pressure setting.
5. Capacity: Calculate in **Btu/h** of heating output.
6. Fuel Consumption: If fuel supply is equipped with flow meter, measure and record consumption.
7. Efficiency: Calculate operating efficiency for comparison to submitted equipment.
8. Fan, motor, and motor controller operating data.

3.10 PROCEDURES FOR TESTING, ADJUSTING, AND BALANCING EXISTING SYSTEMS

A. Perform a preconstruction inspection of existing equipment that is to remain and be reused.

1. Measure and record flows, temperatures, and pressures of each piece of equipment. Compare the values to design or nameplate information, where information is available.
2. Measure motor voltage and amperage. Compare the values to motor nameplate information.
3. Check the condition of filters.
4. Check bearings and other lubricated parts for proper lubrication.
5. Report on the operating condition of the equipment and the results of the measurements taken. Report deficiencies.

B. TAB After Construction: Before performing testing and balancing of renovated existing systems, inspect existing equipment that is to remain and be reused to verify that existing equipment has been cleaned and refurbished in accordance with renovation scope indicated by Contract Documents. Verify the following:

1. New filters are installed.
2. Bearings and other parts are properly lubricated.
3. Deficiencies noted in the preconstruction report are corrected.

C. Perform testing and balancing of existing systems to the extent that existing systems are affected by the renovation work.

1. Compare the indicated system flows of the renovated work to the measured flows, and determine the new pump speed.
2. Verify that the indicated system flows of the renovated work result in velocities and pump speeds that are within the acceptable limits defined by equipment manufacturer.
3. If calculations increase or decrease the system flow rates by more than 5 percent, make equipment adjustments to achieve the calculated rates. If increase or decrease is 5 percent or less, equipment adjustments are not required.

3.11 TOLERANCES

A. Set plumbing system's flow rates within the following tolerances:

1. Domestic Water Flow Rate: Plus or minus 5 percent. If design value is less than **10 gpm**, within 10 percent.

3.12 PROGRESS REPORTING

A. Initial Construction-Phase Report: Based on examination of the Contract Documents as specified in "Examination" Article, prepare a report on the adequacy of design for system-balancing devices. Recommend changes and additions to system-balancing devices, to facilitate proper performance measuring and balancing. Recommend changes and additions to plumbing systems and general construction to allow access for performance-measuring and -balancing devices.

B. Status Reports: Prepare biweekly progress reports to describe completed procedures, procedures in progress, and scheduled procedures. Include a list of deficiencies and problems found in systems being tested and balanced. Prepare a separate report for each system and each building floor for systems serving multiple floors.

3.13 FINAL REPORT

A. General: Prepare a certified written report; tabulate and divide the report into separate sections for tested systems and balanced systems.

1. Include a certification sheet at the front of the report's binder, signed and sealed by the certified testing and balancing engineer.
2. Include a list of instruments used for procedures, along with proof of calibration.
3. Certify validity and accuracy of field data.

B. Final Report Contents: In addition to certified field-report data, include the following:

1. Pump curves.
2. Manufacturers' test data.
3. Field test reports prepared by system and equipment installers.
4. Other information relative to equipment performance; do not include Shop Drawings and Product Data.

C. General Report Data: In addition to form titles and entries, include the following data:

1. Title page.
2. Name and address of the TAB specialist.
3. Project name.
4. Project location.
5. Architect's name and address.
6. Engineer's name and address.
7. Contractor's name and address.
8. Report date.
9. Signature of TAB supervisor who certifies the report.
10. Table of Contents with the total number of pages defined for each section of the report. Number each page in the report.
11. Summary of contents, including the following:

    a. Indicated versus final performance.
    b. Notable characteristics of systems.
    c. Description of system operation sequence if it varies from the Contract Documents.

12. Nomenclature sheets for each item of equipment.
13. Notes to explain why certain final data in the body of reports vary from indicated values.
14. Test conditions for pump performance forms, including the following:

    a. Variable-frequency controller settings for variable-flow hydronic systems.
    b. Settings for pressure controller(s).
    c. Other system operating conditions that affect performance.

D. System Diagrams: Include schematic layouts of distribution systems. Present each system with single-line diagram and include the following:

1. Flow rates.
2. Pipe and valve sizes and locations.
3. Balancing stations.
4. Position of balancing devices.

E. Gas- and Oil-Fired Water Heaters Test Reports: In addition to manufacturer's factory startup equipment reports, include the following:

1. Unit Data:

    a. System identification.
    b. Location.
    c. Make and type.
    d. Model number and unit size.
    e. Manufacturer's serial number.
    f. Fuel type in input data.
    g. Output capacity in **Btu/h**.
    h. Ignition type.
    i. Burner-control types.

j. Motor horsepower and speed.
k. Motor volts, phase, and hertz.
l. Motor full-load amperage and service factor.
m. Sheave make, size in **inches**, and bore.
n. Center-to-center dimensions of sheave and amount of adjustments in **inches**.

2. Test Data (Indicated and Actual Values):

a. Total airflow rate in **cfm**.
b. Entering-water temperature in **deg F**.
c. Leaving-water temperature in **deg F**.
d. Low-fire fuel input in **Btu/h**.
e. High-fire fuel input in **Btu/h**.
f. High-temperature-limit setting in **deg F**.
g. Operating set point in **Btu/h**.
h. Heating value of fuel in **Btu/h**.

F. Electric Water Heater Test Reports: In addition to manufacturer's factory startup equipment reports, include the following:

1. Unit Data:

a. System identification.
b. Location.
c. Model number and unit size.
d. Manufacturer's serial number.
e. Output capacity in **Btu/h**.
f. Number of stages.
g. Connected volts, phase, and hertz.
h. Rated amperage.

2. Test Data (Indicated and Actual Values):

a. Heat output in **Btu/h**.
b. Entering-water temperature in **deg F**.
c. Leaving-water temperature in **deg F**.
d. High-temperature-limit setting in **deg F**.
e. Operating set point in **deg F**.
f. Voltage at each connection.
g. Amperage for each phase.

G. Pump Test Reports: Calculate impeller size by plotting the shutoff head on pump curves, and include the following:

1. Unit Data:

a. Unit identification.
b. Location.
c. Service.
d. Make and size.

e. Model number and serial number.
f. Water flow rate in **gpm**.
g. Water-pressure differential in **feet of head or psig**.
h. Required net positive suction head in **feet of head or psig**.
i. Pump speed.
j. Impeller diameter in **inches**.
k. Motor make and frame size.
l. Motor horsepower and rpm.
m. Voltage at each connection.
n. Amperage for each phase.
o. Full-load amperage and service factor.
p. Seal type.

2. Test Data (Indicated and Actual Values):

a. Static head in **feet of head or psig**.
b. Pump shutoff pressure in **feet of head or psig**.
c. Actual impeller size in **inches**.
d. Full-open flow rate in **gpm**.
e. Full-open pressure in **feet of head or psig**.
f. Final discharge pressure in **feet of head or psig**.
g. Final suction pressure in **feet of head or psig**.
h. Final total pressure in **feet of head or psig**.
i. Final water flow rate in **gpm**.
j. Voltage at each connection.
k. Amperage for each phase.

H. Instrument Calibration Reports:

1. Report Data:

a. Instrument type and make.
b. Serial number.
c. Application.
d. Dates of use.
e. Dates of calibration.

3.14 VERIFICATION OF TAB REPORT

A. The TAB specialist's test and balance engineer shall conduct the inspection in the presence of Construction Manager.

B. Construction Manager shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to the lesser of either 10 percent of the total measurements recorded or the extent of measurements that can be accomplished in a normal 8-hour business day.

C. If rechecks yield measurements that differ from the measurements documented in the final report by more than the tolerances allowed, the measurements shall be noted as "FAILED."

D. If the number of "FAILED" measurements is greater than 10 percent of the total measurements checked during the final inspection, the TAB shall be considered incomplete and shall be rejected.

E. If recheck measurements find the number of failed measurements noncompliant with requirements indicated, proceed as follows:

1. TAB specialists shall recheck all measurements and make adjustments. Revise the final report and balancing device settings to include all changes; resubmit the final report and request a second final inspection. All changes shall be tracked to show changes made to previous report.
2. If the second final inspection also fails, Owner may pursue other Contract options to complete TAB work.

F. Prepare test and inspection reports.

3.15 ADDITIONAL TESTS

A. Within 90 days of completing TAB, perform additional TAB to verify that balanced conditions are being maintained throughout and to correct unusual conditions.

END OF SECTION 220593

SECTION 220719 - PLUMBING PIPING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes insulating the following plumbing piping services:

1. Domestic cold-water piping.
2. Domestic hot-water piping.
3. Domestic recirculating hot-water piping.
4. Domestic chilled-water piping for drinking fountains.
5. Sanitary waste piping exposed to freezing conditions.
6. Storm-water piping exposed to freezing conditions.
7. Roof drains and rainwater leaders.
8. Supplies and drains for handicap-accessible lavatories and sinks.

B. Related Sections:

1. Section 220716 "Plumbing Equipment Insulation" for equipment insulation.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Include thermal conductivity, water-vapor permeance thickness, and jackets (both factory and field applied if any).

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
2. Detail attachment and covering of heat tracing inside insulation.
3. Detail insulation application at pipe expansion joints for each type of insulation.
4. Detail insulation application at elbows, fittings, flanges, valves, and specialties for each type of insulation.
5. Detail removable insulation at piping specialties, equipment connections, and access panels.
6. Detail application of field-applied jackets.
7. Detail application at linkages of control devices.

C. Samples: For each type of insulation and jacket indicated. Identify each Sample, describing product and intended use. Sample sizes are as follows:

1. Preformed Pipe Insulation Materials: **12 inches** long by **NPS 2**.
2. Jacket Materials for Pipe: **12 inches** long by **NPS 2**.
3. Sheet Jacket Materials: **12 inches** square.
4. Manufacturer's Color Charts: For products where color is specified, show the full range of colors available for each type of finish material.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.

B. Material Test Reports: From a qualified testing agency acceptable to authorities having jurisdiction indicating, interpreting, and certifying test results for compliance of insulation materials, sealers, attachments, cements, and jackets, with requirements indicated. Include dates of tests and test methods employed.

C. Field quality-control reports.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or another craft training program certified by the Department of Labor, Bureau of Apprenticeship and Training.

B. Comply with the following applicable standards and other requirements specified for miscellaneous components:

1. Supply and Drain Protective Shielding Guards: ICC A117.1.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation system materials are to be delivered to the Project site in unopened containers. The packaging is to include name of the manufacturer, fabricator, type, description, and size.

1.6 COORDINATION

A. Coordinate sizes and locations of supports, hangers, and insulation shields specified in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment."

B. Coordinate clearance requirements with piping Installer for piping insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

C. Coordinate installation and testing of heat tracing.

1.7 SCHEDULING

A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: For insulation and related materials, as determined by testing identical products in accordance with ASTM E84, by a testing agency acceptable to authorities having jurisdiction. Factory label insulation, jacket materials, adhesive, mastic, tapes, and cement material containers with appropriate markings of applicable testing agency.

1. All Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
2. [**All Insulation Installed Indoors; Outdoors-Installed Insulation in Contact with Airstream: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.**]
3. [**All Insulation Installed Indoors and Outdoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.**]

2.2 INSULATION MATERIALS

A. Comply with requirements in "Piping Insulation Schedule, General," "Indoor Piping Insulation Schedule," "Outdoor, Aboveground Piping Insulation Schedule," and "Outdoor, Underground Piping Insulation Schedule" articles for where insulating materials are applied.

B. Products do not contain asbestos, lead, mercury, or mercury compounds.

C. Products that come into contact with stainless steel have a leachable chloride content of less than 50 ppm when tested in accordance with ASTM C871.

D. Insulation materials for use on austenitic stainless steel are qualified as acceptable in accordance with ASTM C795.

E. Foam insulation materials do not use CFC or HCFC blowing agents in the manufacturing process.

2.3 ADHESIVES

A. Materials are compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated unless otherwise indicated.

2.4 SEALANTS

A. Materials are as recommended by the insulation manufacturer and are compatible with insulation materials, jackets, and substrates.

2.5 FACTORY-APPLIED JACKETS

A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:

1. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C1136, Type I.
2. ASJ-SSL: ASJ with self-sealing, pressure-sensitive, acrylic-based adhesive covered by a removable protective strip; complying with ASTM C1136, Type I.
3. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C1136, Type II.
4. ASJ+: Aluminum foil reinforced with glass scrim bonded to a kraft paper interleaving with an outer film leaving no paper exposed; complying with ASTM C1136 Types I, II, III, IV, and VII.
5. PSK Jacket: Aluminum foil fiberglass reinforced scrim with polyethylene backing, complying with ASTM C1136, Type II.

2.6 FIELD-APPLIED JACKETS

A. Field-applied jackets comply with ASTM C1136, Type I, unless otherwise indicated.

B. FSK Jacket: Aluminum-foil-face, fiberglass-reinforced scrim with kraft-paper backing.

2.7 SECUREMENTS

A. Staples: Outward-clinching insulation staples, nominal **3/4-inch-** wide, stainless steel or Monel.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application.

1. Verify that systems to be insulated have been tested and are free of defects.
2. Verify that surfaces to be insulated are clean and dry.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.

B. Clean and prepare surfaces to be insulated. Before insulating, apply a corrosion coating to insulated surfaces as follows:

1. Stainless Steel: Coat 300 series stainless steel with an epoxy primer **5 mils** thick and an epoxy finish **5 mils** thick if operating in a temperature range of between **140 and 300 deg F**. Consult coating manufacturer for appropriate coating materials and application methods for operating temperature range.
2. Carbon Steel: Coat carbon steel operating at a service temperature of between **32 and 300 deg F** with an epoxy coating. Consult coating manufacturer for appropriate coating materials and application methods for operating temperature range.

C. Coordinate insulation installation with the tradesman installing heat tracing. Comply with requirements for heat tracing that apply to insulation.

D. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping, including fittings, valves, and specialties.

B. Install insulation materials, forms, vapor barriers or retarders, jackets, and of thicknesses required for each item of pipe system, as specified in insulation system schedules.

C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, compress, or otherwise damage insulation or jacket.

D. Install insulation with longitudinal seams at top and bottom (12 o'clock and 6 o'clock positions) of horizontal runs.

E. Install multiple layers of insulation with longitudinal and end seams staggered.

F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.

G. Keep insulation materials dry during storage, application, and finishing. Replace insulation materials that get wet during storage or in the installation process before being properly covered and sealed in accordance with Contract Documents.

H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.

I. Install insulation with least number of joints practical.

J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.

1. Install insulation continuously through hangers and around anchor attachments.

2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends attached to structure with vapor-barrier mastic.
3. Install insert materials and insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.

K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.

L. Install insulation with factory-applied jackets as follows:

1. Draw jacket tight and smooth, but not to the extent of creating wrinkles or areas of compression in the insulation.
2. Cover circumferential joints with **3-inch-** wide strips, of same material as insulation jacket. Secure strips with adhesive and outward-clinching staples along both edges of strip, spaced **4 inches** o.c.
3. Overlap jacket longitudinal seams at least **1-1/2 inches**. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward-clinching staples along edge at **4 inches** o.c.

    a. For below-ambient services, apply vapor-barrier mastic over staples.

4. Cover joints and seams with tape, in accordance with insulation material manufacturer's written instructions, to maintain vapor seal.
5. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.

M. Cut insulation in a manner to avoid compressing insulation.

N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least [**4 inches**] <**Insert value**> beyond damaged areas. Adhere, staple, and seal patches in similar fashion to butt joints.

P. For above-ambient services, do not install insulation to the following:

1. Vibration-control devices.
2. Testing agency labels and stamps.
3. Nameplates and data plates.
4. Cleanouts.

3.4 PENETRATIONS

A. Insulation Installation at Roof Penetrations: Install insulation continuously through roof penetrations.

1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation above roof surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
3. Extend jacket of outdoor insulation outside roof flashing at least **2 inches** below top of roof flashing.
4. Seal jacket to roof flashing with flashing sealant.

B. Insulation Installation at Underground Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.

C. Insulation Installation at Aboveground Exterior Wall Penetrations: Install insulation continuously through wall penetrations.

1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation inside wall surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
3. Extend jacket of outdoor insulation outside wall flashing and overlap wall flashing at least **2 inches**.
4. Seal jacket to wall flashing with flashing sealant.

D. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.

E. Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls and partitions.

1. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping and fire-resistive joint sealers.

F. Insulation Installation at Floor Penetrations:

1. Pipe: Install insulation continuously through floor penetrations.
2. Seal penetrations through fire-rated assemblies. Comply with requirements in Section 078413 "Penetration Firestopping."

3.5 GENERAL PIPE INSULATION INSTALLATION

A. Requirements in this article generally apply to all insulation materials, except where more specific requirements are specified in various pipe insulation material installation articles below.

B. Insulation Installation on Fittings, Valves, Strainers, Flanges, Mechanical Couplings, and Unions:

1. Install insulation over fittings, valves, strainers, flanges, mechanical couplings, unions, and other specialties with continuous thermal and vapor-retarder integrity unless otherwise indicated.
2. Insulate pipe elbows using preformed fitting insulation made from same material and density as that of adjacent pipe insulation. Each piece is butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
3. Insulate tee fittings with preformed fitting insulation of same material and thickness as that used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
4. Insulate valves using preformed fitting insulation of same material, density, and thickness as that used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
5. Insulate strainers using preformed fitting insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers, so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below-ambient services, provide a design that maintains vapor barrier.
6. Insulate flanges, mechanical couplings, and unions, using a section of oversized preformed pipe insulation. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Stencil or label the outside insulation jacket of each union with the word "union" matching size and color of pipe labels.
7. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below-ambient services and a breather mastic for above-ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
8. For services not specified to receive a field-applied jacket, except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC covers to adjoining insulation facing, using PVC tape.

C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.

D. Install removable insulation covers at locations indicated. Installation conforms to the following:

1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as that of adjoining pipe insulation.
2. When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union at least 2 times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless steel or aluminum bands. Select band material compatible with insulation and jacket.
3. Construct removable valve insulation covers in same manner as for flanges, except divide the two-part section on the vertical center line of valve body.
4. When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least **2 inches** over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.
5. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.6 INSTALLATION OF CELLULAR-GLASS INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient services, secure laps with outward-clinched staples at **6 inches** o.c.
4. For insulation with jackets on below-ambient services, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of cellular-glass block insulation of same thickness as that of pipe insulation. Where voids are difficult to fill with block insulation, fill the voids with a fibrous insulation material suitable for the specific operating temperature.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least **1 inch**, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
2. When preformed sections of insulation are not available, install mitered or routed sections of cellular-glass insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated sections of cellular-glass insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.7 INSTALLATION OF FLEXIBLE ELASTOMERIC INSULATION

A. Seal longitudinal seams and end joints with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

B. Insulation Installation on Pipe Flanges:

1. Install pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of sheet insulation of same thickness as that of pipe insulation.
4. Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install sections of pipe insulation and miter if required in accordance with manufacturer's written instructions.
2. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated valve covers manufactured of same material as that of pipe insulation when available.
2. When prefabricated valve covers are not available, install cut sections of pipe and sheet insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.
4. Secure insulation to valves and specialties, and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

3.8 INSTALLATION OF GLASS-FIBER AND MINERAL WOOL INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of preformed pipe insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient surfaces, secure laps with outward-clinched staples at **6 inches** o.c.
4. For insulation with jackets on below-ambient surfaces, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with glass-fiber or mineral-wool blanket insulation.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least **1 inch**, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.
2. When prefabricated insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.
2. When prefabricated sections are not available, install fabricated sections of pipe insulation to valve body.
3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
4. Install insulation to flanges as specified for flange insulation application.

3.9 INSTALLATION OF PHENOLIC INSULATION

A. General Installation Requirements:

1. Secure single-layer insulation with stainless steel bands at **12-inch** intervals, and tighten bands without deforming insulation materials.

2. Install two-layer insulation with joints tightly butted and staggered at least **3 inches**. Secure inner layer with **0.062-inch** wire spaced at **12-inch** intervals. Secure outer layer with stainless steel bands at **12-inch** intervals.

B. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient services, secure laps with outward-clinched staples at **6 inches** o.c.
4. For insulation with jackets with vapor retarders on below-ambient services, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

C. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of block insulation of same material and thickness as that of pipe insulation. Where voids are difficult to fill with block insulation, fill the voids with a fibrous insulation material suitable for the specific operating temperature.

D. Insulation Installation on Pipe Fittings and Elbows:

1. Install preformed insulation sections of same material as that of straight segments of pipe insulation. Secure according to manufacturer's written instructions.

E. Insulation Installation on Valves and Pipe Specialties:

1. Install preformed insulation sections of same material as that of straight segments of pipe insulation. Secure according to manufacturer's written instructions.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.10 INSTALLATION OF POLYOLEFIN INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Seal split-tube longitudinal seams and end joints with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

B. Insulation Installation on Pipe Flanges:

1. Install pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of polyolefin sheet insulation of same thickness as that of pipe insulation.
4. Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install mitered sections of polyolefin pipe insulation.
2. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install cut sections of polyolefin pipe and sheet insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.
4. Secure insulation to valves and specialties, and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

3.11 INSTALLATION OF FIELD-APPLIED JACKETS

A. Where FSK jackets are indicated, install as follows:

1. Draw jacket material smooth and tight.
2. Install lap or joint strips with same material as jacket.
3. Secure jacket to insulation with manufacturer's recommended adhesive.
4. Install jacket with **1-1/2-inch** laps at longitudinal seams and **3-inch-** wide joint strips at end joints.
5. Seal openings, punctures, and breaks in vapor-retarder jackets and exposed insulation with vapor-barrier mastic.

B. Where PVC jackets are indicated, install with **1-inch** overlap at longitudinal seams and end joints. Seal with manufacturer's recommended adhesive.

1. Apply two continuous beads of adhesive to seams and joints, one bead under lap and the finish bead along seam and joint edge.

C. Where metal jackets are indicated, install with **2-inch** overlap at longitudinal seams and end joints. Overlap longitudinal seams arranged to shed water. Seal end joints with weatherproof sealant recommended by insulation manufacturer. Secure jacket with

stainless steel bands **12 inches** o.c. and at end joints.

3.12 FINISHES

A. Insulation with ASJ, Glass-Cloth, or Other Paintable Jacket Material: Paint jacket with paint system identified below and as specified in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

1. Flat Acrylic Finish: Two finish coats over a primer that is compatible with jacket material and finish coat paint. Add fungicidal agent to render fabric mildew proof.

a. Finish Coat Material: Interior, flat, latex-emulsion size.

B. Flexible Elastomeric Thermal Insulation: After adhesive has fully cured, apply two coats of insulation manufacturer's recommended protective coating.

C. Color: Final color as selected by Architect. Vary first and second coats to allow visual inspection of the completed Work.

D. Do not field paint aluminum or stainless steel jackets.

3.13 FIELD QUALITY CONTROL

A. Perform tests and inspections with the assistance of a factory-authorized service representative.

B. Tests and Inspections: Inspect pipe, fittings, strainers, and valves, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection is limited to three locations of straight pipe, [**three**] <**Insert number**> locations of threaded fittings, three locations of welded fittings, two locations of threaded strainers, two locations of welded strainers, three locations of threaded valves, and three locations of flanged valves for each pipe service defined in the "Piping Insulation Schedule, General" Article.

C. All insulation applications will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.14 PIPING INSULATION SCHEDULE, GENERAL

A. Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.

B. Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:

1. Drainage piping located in crawl spaces.

2. Underground piping.
3. Chrome-plated pipes and fittings unless there is a potential for personnel injury.

3.15 INDOOR PIPING INSULATION SCHEDULE

A. Domestic Cold Water:

1. NPS 1 and Smaller: Insulation is one of the following:

   a. Cellular Glass: 1-1/2 inches thick.
   b. Flexible Elastomeric: 1/2 inch thick.
   c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.
   d. Mineral Wool, Preformed Pipe Insulation, Type II: 1/2 inch thick.

2. NPS 1-1/4 and Larger: Insulation is one of the following:

   a. Cellular Glass: 1-1/2 inches thick.
   b. Flexible Elastomeric: 1 inch thick.
   c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
   d. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

B. Domestic Hot and Recirculated Hot Water:

1. NPS 1-1/4 and Smaller: Insulation is one of the following:

   a. Cellular Glass: 1-1/2 inches thick.
   b. Flexible Elastomeric: 3/4 inch thick.
   c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.

2. NPS 1-1/2 and Larger: Insulation is one of the following:

   a. Cellular Glass: 1-1/2 inches thick.
   b. Flexible Elastomeric: 1 inch thick.
   c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
   d. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

C. Stormwater and Overflow:

1. All Pipe Sizes: Insulation is one of the following:

   a. Cellular Glass: 1-1/2 inches thick.
   b. Flexible Elastomeric: 1 inch thick.
   c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
   d. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

D. Roof Drain and Overflow Drain Bodies:

1. All Pipe Sizes: Insulation is one of the following:

   a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
   b. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

E. Exposed Sanitary Drains, Domestic Water, Domestic Hot Water, and Stops for Plumbing Fixtures for People with Disabilities:

1. All Pipe Sizes: Insulation is one of the following:

a. Flexible Elastomeric: 3/4 inch thick.
b. Glass-Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.
c. Mineral Wool, Preformed Pipe Insulation, Type II: 1/2 inch thick.

F. Sanitary Waste Piping Where Heat Tracing Is Installed:

1. All Pipe Sizes: Insulation is one of the following:

a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1-1/2 inches thick.
b. Mineral Wool, Preformed Pipe Insulation, Type II: 1-1/2 inches thick.

G. Floor Drains, Traps, and Sanitary Drain Piping within 10 Feet of Drain Receiving Condensate and Equipment Drain Water below **60 Deg F**:

1. All Pipe Sizes: Insulation is one of the following:

a. Cellular Glass: 1-1/2 inches thick.
b. Flexible Elastomeric: 3/4 inch thick.
c. Glass-Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.
d. Mineral Wool, Preformed Pipe Insulation, Type II: 1/2 inch thick.

H. Hot Service Drains:

1. All Pipe Sizes: Insulation is one of the following:

a. Cellular Glass: 1-1/2 inches thick.
b. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
c. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

I. Hot Service Vents:

1. All Pipe Sizes: Insulation is one of the following:

a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
b. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

3.16 OUTDOOR, ABOVEGROUND PIPING INSULATION SCHEDULE

A. Domestic Water Piping:

1. All Pipe Sizes: Insulation is one of the following:

a. Cellular Glass: 2 inches thick.
b. Flexible Elastomeric: 2 inches thick.
c. Glass-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
d. Mineral Wool, Preformed Pipe Insulation, Type II: 2 inches thick.

B. Domestic Hot and Recirculated Hot Water:

1. All Pipe Sizes: Insulation is one of the following:

a. Cellular Glass: 2 inches thick.
b. Flexible Elastomeric: 2 inches thick.
c. Glass-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
d. Mineral Wool, Preformed Pipe Insulation, Type II: 2 inches thick.

C. Sanitary Waste Piping Where Heat Tracing Is Installed:

1. All Pipe Sizes: Insulation is one of the following:

a. Glass-Fiber, Preformed Pipe Insulation, Type I: 2 inches thick.
b. Mineral Wool, Preformed Pipe Insulation, Type II: 2 inches thick.

D. Hot Service Drains:

1. All Pipe Sizes: Insulation is one of the following:

a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
b. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

E. Hot Service Vents:

1. All Pipe Sizes: Insulation is one of the following:

a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
b. Mineral Wool, Preformed Pipe Insulation, Type II: 1 inch thick.

3.17 OUTDOOR, UNDERGROUND PIPING INSULATION SCHEDULE

A. Sanitary Waste Piping, All Sizes, Where Heat Tracing Is Installed: Cellular glass, 2 inches thick.

3.18 INDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Piping, Concealed:

1. None.

D. Piping, Exposed:

1. PVC: 20 mils thick.
2. Aluminum, [**Smooth**] [**Corrugated**] [**Stucco Embossed**]: 0.024 inch thick.

3. Painted Aluminum, Smooth: 0.020 inch thick.

3.19 OUTDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Piping, Concealed:

1. PVC: 30 mils thick.
2. Aluminum, [**Smooth**] [**Corrugated**] [**Stucco Embossed**]: 0.032 inch thick.
3. Painted Aluminum, Smooth: 0.024 inch thick.

D. Piping, Exposed:

1. PVC: 30 mils thick.
2. Painted Aluminum, Smooth: 0.024 inch thick.

3.20 UNDERGROUND, FIELD-APPLIED INSULATION JACKET

A. For underground direct-buried piping applications, install underground direct-buried jacket over insulation material.

END OF SECTION 220719

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copper tube and fittings - domestic water.
2. CPVC piping - domestic water.
3. PEX tube and fittings - domestic water.
4. Piping joining materials - domestic water.
5. Encasement for piping.
6. Transition fittings - domestic water.
7. Dielectric fittings - domestic water.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Copper tube and fittings - domestic water.
2. CPVC piping - domestic water.
3. PEX tube and fittings - domestic water.
4. Piping joining materials - domestic water.
5. Encasement for piping.
6. Transition fittings - domestic water.
7. Dielectric fittings - domestic water.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Piping layout, or BIM model, drawn to scale, showing the items described in this Section, and coordinated with all building trades.

B. System purging and disinfecting activities report.

C. Field quality-control reports.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Installers of pressure-sealed joints are to be certified by pressure-seal joint manufacturer as having been trained and qualified to join piping with pressure-seal pipe couplings and fittings.

1.5 FIELD CONDITIONS

A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service in accordance with requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of water service.
2. Do not interrupt water service without Owner's written permission.

1.6 WARRANTY

A. Polypropylene (PP-R and PP-RCT) Pipe and Fittings Manufacturer's Warranty: Manufacturer agrees to repair or replace PP-R and PP-RCT pipe and fittings that fail in materials or workmanship within 10 years from date of Substantial Completion.

1. Warranty is to cover labor and material costs of repairing and/or replacing defective materials and repairing any incidental damage caused by failure of piping system due to defects in materials or manufacturing.
2. Warranty is to be in effect only upon submission by Contractor to manufacturer of valid pressure/leak documentation indicating that the system was tested and passed manufacturer's pressure/leak test.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Domestic water piping, tubing, fittings, joints, and appurtenances intended to convey or dispense water for human consumption are to comply with the U.S. Safe Drinking Water Act, with requirements of authorities having jurisdiction, and with NSF 61 and NSF 372, or be certified in compliance with NSF 61 and NSF 372 by an ANSI-accredited third-party certification body, in that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

2.2 PIPING MATERIALS

A. Potable-water piping and components are to comply with NSF 14, NSF 61, and NSF 372.

2.3 COPPER TUBE AND FITTINGS - DOMESTIC WATER

A. Cast-Copper, Solder-Joint Fittings: ASME B16.18, pressure fittings. Do not use solder joints on pipe sizes greater than **NPS 4**.

B. Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends. Do not use solder joints on pipe sizes greater than **NPS 4**.

C. Cast Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces and solder-joint or threaded ends. Do not use solder joints on pipe sizes greater than **NPS 4**.

D. Wrought Copper Unions: ASME B16.22. Do not use solder joints on pipe sizes greater than **NPS 4**.

2.4 PEX TUBE AND FITTINGS - DOMESTIC WATER

A. Manifold: Multiple-outlet, plastic or corrosion-resistant-metal assembly complying with ASTM F876; with plastic or corrosion-resistant-metal valve for each outlet.

2.5 PIPING JOINING MATERIALS - DOMESTIC WATER

A. Pipe-Flange Gasket Materials:

1. AWWA C110/A21.10, rubber, flat face, **1/8 inch** thick or ASME B16.21, nonmetallic and asbestos free unless otherwise indicated.
2. Full-face or ring type unless otherwise indicated.

B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.

C. Solder Filler Metals: ASTM B32, lead-free alloys.

D. Flux: ASTM B813, water flushable.

E. Brazing Filler Metals: AWS A5.8M/A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.

F. Solvent Cements for Joining CPVC Piping and Tubing: ASTM F493.

G. Solvent Cements for Joining PVC Piping: ASTM D2564. Include primer in accordance with ASTM F656.

H. Plastic, Pipe-Flange Gaskets, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.6 TRANSITION FITTINGS - DOMESTIC WATER

A. General Requirements:

1. Same size as pipes to be joined.
2. Pressure rating at least equal to pipes to be joined.
3. End connections compatible with pipes to be joined.

B. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.

2.7 DIELECTRIC FITTINGS - DOMESTIC WATER

A. General Requirements: Assembly of copper alloy and ferrous materials with separating nonconductive insulating material. Include end connections compatible with pipes to be joined.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

B. Flanges and unions may be used for aboveground piping joints unless otherwise indicated.

C. Fitting Option: Extruded-tee connections and brazed joints may be used on aboveground copper tubing.

D. Under-building-slab, domestic water, building-service piping, NPS 3 (DN 80) and smaller is to be the following:

1. Annealed-temper copper tube, ASTM B88, Type L; wrought-copper, solder-joint fittings; and brazed joints.
2. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
3. Polypropylene (PP-R and PP-RCT), SDR 7.4 pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

E. Under-building-slab, domestic water, building-service piping, NPS 4 to NPS 8 (DN 100 to DN 200) and larger is to be the following:

1. Annealed-temper copper tube, ASTM B88, Type L; wrought-copper, solder-joint fittings; and brazed joints.
2. Mechanical-joint, ductile-iron pipe; standard-pattern, mechanical-joint fittings; and mechanical joints.
3. Push-on joint, ductile-iron pipe; standard-pattern, push-on joint fittings; and gasketed joints.
4. Plain-end, ductile-iron pipe; grooved-joint, ductile-iron-pipe appurtenances; and grooved joints.
5. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
6. Polypropylene (PP-R and PP-RCT), [**SDR 7.4**] [**SDR 11**] pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

F. Under-building-slab, combined domestic water, building-service, and fire-service-main piping, NPS 6 to NPS 12 (DN 150 to DN 300) is to be the following:

1. Mechanical-joint, ductile-iron pipe; standard-pattern, mechanical-joint fittings; and mechanical joints.
2. Push-on joint, ductile-iron pipe; standard-pattern, push-on joint fittings; and

gasketed joints.
3. Plain-end, ductile-iron pipe; grooved-joint, ductile-iron-pipe appurtenances; and grooved joints.

G. Under-building-slab, domestic water piping, NPS 2 (DN 50) and smaller is to be the following:

1. Drawn-temper, or copper tube, **ASTM B88, Type L**; wrought-copper, solder-joint fittings; and brazed joints.
2. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
3. Polypropylene (PP-R and PP-RCT), SDR 7.4 pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

H. Aboveground domestic water piping, NPS 2 (DN 50) and smaller is to be the following:

1. Galvanized-steel pipe and nipples; galvanized, gray-iron threaded fittings; and threaded joints.
2. Drawn-temper copper tube, ASTM B88, Type L; cast-,wrought-copper, solder-joint fittings; and brazed joints.
3. Drawn-temper copper tube, ASTM B88, Type L; copper pressure-seal-joint fittings; and pressure-sealed joints.
4. Drawn-temper copper tube, ASTM B88, Type L; copper push-on joint fittings; and push-on joints.
5. CPVC, Schedule 40; socket fittings; and solvent-cemented joints.
6. CPVC, Schedule 80 pipe; CPVC, Schedule 80 threaded fittings; and threaded joints.
7. CPVC Tubing System: CPVC tube; CPVC socket fittings; and solvent-cemented joints.[**NPS 1-1/2 and NPS 2 CPVC pipe with CPVC socket fittings may be used instead of tubing.**]
8. PEX tube, **NPS 1** and smaller.

    a. Fittings for PEX tube:

        1) ASTM F1807, metal insert and copper crimp rings.
        2) ASTM F1960, cold expansion fittings and reinforcing rings.
        3) ASSE 1061, push-fit fittings.

9. PEX-AL-PEX tube, **NPS 1** and smaller; fittings for PEX-AL-PEX tube; and crimped joints.
10. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
11. Polypropylene (PP-R and PP-RCT), SDR 7.4 pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

I. Aboveground domestic water piping, NPS 2-1/2 to NPS 4 (DN 65 to DN 100) is to be the following:

1. Drawn-temper copper tube, ASTM B88, Type L; [**cast-**] [**or**] [**wrought-**]copper, solder-joint fittings; and brazed joints.
2. Drawn-temper copper tube, ASTM B88, Type L; copper pressure-seal-joint fittings; and pressure-sealed joints.
3. Drawn-temper copper tube, ASTM B88, Type L; grooved-joint, copper-tube

appurtenances; and grooved joints.
4. Galvanized-steel pipe and nipples; galvanized, gray-iron threaded fittings; and threaded joints.
5. Galvanized-steel pipe; grooved-joint, galvanized-steel-pipe appurtenances; and grooved joints.
6. CPVC, Schedule 40; socket fittings; and solvent-cemented joints.
7. CPVC, Schedule 80 pipe; CPVC, Schedule 80 threaded fittings; and threaded joints.
8. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
9. Polypropylene (PP-R and PP-RCT), SDR 7.4 pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

J. Aboveground domestic water piping, NPS 5 to NPS 8 (DN 125 to DN 200), is to be the following:

1. Drawn-temper copper tube, ASTM B88, Type L; [**cast-**] [**or**] [**wrought-**]copper, solder-joint fittings; and brazed joints.
2. Drawn-temper copper tube, ASTM B88, Type L; grooved-joint, copper-tube appurtenances; and grooved joints.
3. Galvanized-steel pipe and nipples; galvanized, gray-iron threaded fittings; and threaded joints.
4. Galvanized-steel pipe; grooved-joint, galvanized-steel-pipe appurtenances; and grooved joints.
5. CPVC, Schedule 40; socket fittings; and solvent-cemented joints.
6. CPVC, Schedule 80 pipe; CPVC, Schedule 80 threaded fittings; and threaded joints.
7. PVC, Schedule 40; socket fittings; and solvent-cemented joints.
8. Polypropylene (PP-R and PP-RCT) SDR 7.4 pipe and socket fusion, butt fusion, fusion outlet, or electrofusion fittings and joints.

K. Aboveground, combined domestic water-service and fire-service-main piping, NPS 6 to NPS 12 (DN 150 to DN 300) is to be the following:

1. Plain-end, ductile-iron pipe; grooved-joint, ductile-iron-pipe appurtenances; and grooved joints.
2. Galvanized-steel pipe and nipples; galvanized, gray-iron threaded fittings; and threaded joints.
3. Galvanized-steel pipe; grooved-joint, galvanized-steel-pipe appurtenances; and grooved joints.
4. Stainless steel [**Schedule 5**] [**Schedule 10**] [**Schedule 40**] pipe, grooved-joint fittings, and grooved joints.

3.2 EARTHWORK

A. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.3 INSTALLATION OF PIPING

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. Install copper tubing under building slab in accordance with CDA's "Copper Tube Handbook."

C. Install ductile-iron piping under building slab with restrained joints in accordance with AWWA C600 and AWWA M41.

D. Install underground copper tube in PE encasement in accordance with ASTM A674 or AWWA C105/A21.5.

E. Install valves in accordance with Section 220523 "General-Duty Valves for Plumbing Piping."

F. Install water-pressure-reducing valves downstream from shutoff valves. Comply with requirements for pressure-reducing valves in Section 221119 "Domestic Water Piping Specialties."

G. Install domestic water piping level with 0.25 percent slope downward toward drain and plumb.

H. Rough-in domestic water piping for water-meter installation in accordance with utility company's requirements.

I. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.

J. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

K. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space.

L. Install piping to permit valve servicing.

M. Install nipples, unions, special fittings, and valves with pressure ratings the same as or higher than the system pressure rating used in applications below unless otherwise indicated.

N. Install piping free of sags and bends.

O. Install fittings for changes in direction and branch connections.

P. Install PEX tube with loop at each change of direction of more than 90 degrees.

Q. Install unions in copper tubing at final connection to each piece of equipment, machine, and specialty.

R. Install pressure gauges on suction and discharge piping for each plumbing pump and packaged booster pump. Comply with requirements for pressure gauges in Section 220500 "Common Work Results for Plumbing."

S. Install thermostats in hot-water circulation piping. Comply with requirements for thermostats in Section 221123.21 "Inline, Domestic Water Pumps."

T. Install thermometers on inlet and outlet piping from each water heater. Comply with requirements for thermometers in Section 220500 "Common Work Results for Plumbing."

U. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 220500 "Common Work Results for Plumbing."

V. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 220500 "Common Work Results for Plumbing."

W. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 220500 "Common Work Results for Plumbing."

3.4 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads in accordance with ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.

D. Brazed Joints for Copper Tubing: Comply with CDA's "Copper Tube Handbook," "Brazed Joints" chapter.

E. Soldered Joints for Copper Tubing: Apply ASTM B813, water-flushable flux to end of tube. Join copper tube and fittings in accordance with ASTM B828 or CDA's "Copper Tube Handbook."

F. Pressure-Sealed Joints for Copper Tubing: Join copper tube and pressure-seal fittings with tools and procedure recommended by pressure-seal-fitting manufacturer. Leave

insertion marks on pipe after assembly.

G. Push-on Joints for Copper Tubing: Clean end of tube. Measure insertion depth with manufacturer's depth gage. Join copper tube and push-on joint fittings by inserting tube to measured depth.

H. Extruded-Tee Connections: Form tee in copper tube in accordance with ASTM F2014. Use tool designed for copper tube; drill pilot hole, form collar for outlet, dimple tube to form seating stop, and braze branch tube into collar.

I. Joint Construction for Grooved-End Copper Tubing: Make joints in accordance with AWWA C606. Roll groove ends of tubes. Lubricate and install gasket over ends of tubes or tube and fitting. Install coupling housing sections over gasket with keys seated in tubing grooves. Install and tighten housing bolts.

J. Joint Construction for Grooved-End, Ductile-Iron Piping: Make joints in accordance with AWWA C606. Cut round-bottom grooves in ends of pipe at gasket-seat dimension required for specified (flexible or rigid) joint. Lubricate and install gasket over ends of pipes or pipe and fitting. Install coupling housing sections over gasket with keys seated in piping grooves. Install and tighten housing bolts.

K. Joint Construction for Grooved-End Steel Piping: Make joints in accordance with AWWA C606. Square cut groove ends of pipe as specified. Lubricate and install gasket over ends of pipes or pipe and fitting. Install coupling housing sections over gasket with keys seated in piping grooves. Install and tighten housing bolts.

L. Flanged Joints: Select appropriate asbestos-free, nonmetallic gasket material in size, type, and thickness suitable for domestic water service. Join flanges with gasket and bolts in accordance with ASME B31.9.

M. Joint Construction for Solvent-Cemented Plastic Piping: Clean and dry joining surfaces. Join pipe and fittings in accordance with the following:

1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements. Apply primer.
2. CPVC Piping: Join in accordance with ASTM D2846/D2846M.
3. PVC Piping: Join in accordance with ASTM D2855.

N. Joints for PEX Tubing, ASTM: Join in accordance with ASTM F1807 for metal insert and copper crimp ring fittings and ASTM F1960 for cold expansion fittings and reinforcing rings.

O. Joints for PEX Tubing, ASSE: Join in accordance with ASSE 1061 for push-fit fittings.

P. Joints for Dissimilar-Material Piping: Make joints using adapters compatible with materials of both piping systems.

3.5 INSTALLATION OF TRANSITION FITTINGS

A. Install transition couplings at joints of dissimilar piping.

B. Transition Fittings in Underground Domestic Water Piping:

1. Fittings for NPS 1-1/2 (DN 40) and Smaller: Fitting-type coupling.
2. Fittings for NPS 2 (DN 50) and Larger: Sleeve-type coupling.

C. Transition Fittings in Aboveground Domestic Water Piping NPS 2 (DN 50) and Smaller: Plastic-to-metal transition fittings, or, unions.

3.6 INSTALLATION OF DIELECTRIC FITTINGS

A. Install dielectric fittings in piping at connections of dissimilar metal piping and tubing.

B. Dielectric Fittings for NPS 2 (DN 50) and Smaller: Use dielectric couplings.

C. Dielectric Fittings for NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Use dielectric flanges.

D. Dielectric Fittings for NPS 5 (DN 125) and Larger: Use dielectric flange kits.

3.7 INSTALLATION OF HANGERS AND SUPPORTS

A. Comply with requirements for hangers, supports, and anchor devices in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment."

B. Install hangers for copper,and,pipe, with maximum horizontal spacing and minimum rod diameters, to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

C. Install vinyl-coated hangers for CPVC pipe, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

D. Install vinyl-coated hangers for PEX tube, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

E. Support horizontal piping within 12 inches of each fitting.

F. Support vertical runs of copper,and,pipe to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

G. Support vertical runs of CPVC pipe to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

H. Support vertical runs of PEX tube to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

3.8 PIPING CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. When installing piping adjacent to equipment and machines, allow space for service and maintenance.

C. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.

D. Connect domestic water piping to water-service piping with shutoff valve; extend and connect to the following:

1. Domestic Water Booster Pumps: Cold-water suction and discharge piping.
2. Water Heaters: Cold-water inlet and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
3. Plumbing Fixtures: Cold- and hot-water-supply piping in sizes indicated, but not smaller than that required by plumbing code.
4. Equipment: Cold- and hot-water-supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection. Use flanges instead of unions for **NPS 2-1/2** and larger.

3.9 IDENTIFICATION

A. Identify system components. Comply with requirements for identification materials and installation in Section 220553 "Identification for Plumbing Piping and Equipment."

3.10 CLEANING

A. Clean and disinfect potable domestic water piping as follows:

1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either AWWA C651 or AWWA C652 or follow procedures described below:

    a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
    b. Fill and isolate system in accordance with either of the following:

        1) Fill system or part thereof with water/chlorine solution with at least **50 ppm** of chlorine. Isolate with valves and allow to stand for 24 hours.
        2) Fill system or part thereof with water/chlorine solution with at least **200 ppm** of chlorine. Isolate and allow to stand for three hours.

    c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
    d. Repeat procedures if biological examination shows contamination.

e. Submit water samples in sterile bottles to authorities having jurisdiction.

B. Clean non-potable domestic water piping as follows:

1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
2. Use purging procedures prescribed by authorities having jurisdiction or; if methods are not prescribed, follow procedures described below:

a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
b. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedures if biological examination shows contamination.

C. Prepare and submit reports of purging and disinfecting activities. Include copies of water-sample approvals from authorities having jurisdiction.

D. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

3.11 ADJUSTING

A. Perform the following adjustments before operation:

1. Close drain valves, hydrants, and hose bibbs.
2. Open shutoff valves to fully open position.
3. Open throttling valves to proper setting.
4. Adjust balancing valves in hot-water-circulation return piping to provide adequate flow.

a. Manually adjust ball-type balancing valves in hot-water-circulation return piping to provide hot-water flow in each branch.
b. Adjust calibrated balancing valves to flows indicated.

5. Remove plugs used during testing of piping and for temporary sealing of piping during installation.
6. Remove and clean strainer screens. Close drain valves and replace drain plugs.
7. Remove filter cartridges from housings and verify that cartridges are as specified for application where used and are clean and ready for use.
8. Check plumbing specialties and verify proper settings, adjustments, and operation.

3.12 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Piping Inspections:

a. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.

b. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:

1) Roughing-in Inspection: Arrange for inspection of piping before concealing or closing in after installation and before setting fixtures.
2) Final Inspection: Arrange for authorities having jurisdiction to observe tests specified in "Piping Tests" Subparagraph below and to ensure compliance with requirements.

c. Reinspection: If authorities having jurisdiction find that piping will not pass tests or inspections, make required corrections and arrange for reinspection.
d. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

2. Piping Tests:

a. Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
b. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit a separate report for each test, complete with diagram of portion of piping tested.
c. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.
d. Cap and subject piping to static water pressure of **50 psig** above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow it to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.
e. Hydrostatic testing and documentation of test results for polypropylene (PP-R and PP-RCT) pipe to be in accordance with manufacturer's written instructions and submitted to manufacturer upon successful completion per warranty requirements.
f. Repair leaks and defects with new materials, and retest piping or portion thereof until satisfactory results are obtained.
g. Prepare reports for tests and for corrective action required.

B. Domestic water piping will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION 221116

SECTION 221119 - DOMESTIC WATER PIPING SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Water pressure-reducing valves.
2. Automatic water shutoff valve systems.
3. Balancing valves.
4. Temperature-actuated, water mixing valves.
5. Outlet boxes.
6. Hose bibbs.
7. Wall hydrants.
8. Drain valves.
9. Trap-seal primer device.
10. Flexible connectors.
11. Water meters.

1.2 DEFINITIONS

A. AMI: Advanced Metering Infrastructure.

B. AMR: Automatic Meter Reading.

C. FKM: A family of fluoroelastomer materials defined by ASTM D1418.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For domestic water piping specialties.

1. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

A. Test and inspection reports.

B. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For domestic water piping specialties to include in

emergency, operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PIPING SPECIALTIES

A. Domestic water piping specialties intended to convey or dispense water for human consumption are to comply with the SDWA, requirements of authorities having jurisdiction, and NSF 61 and NSF 372, or to be certified in compliance with NSF 61 and NSF 372 by an American National Standards Institute (ANSI)-accredited third-party certification body that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

2.2 PERFORMANCE REQUIREMENTS

A. Minimum Working Pressure for Domestic Water Piping Specialties: 125 psig unless otherwise indicated.

2.3 DRAIN VALVES

A. Ball-Valve-Type, Hose-End Drain Valves <**Insert drawing designation if any**>:

1. Standard: MSS SP-110 for standard-port, two-piece ball valves.
2. Pressure Rating: **400-psig** minimum CWP.
3. Size: **NPS 3/4**.
4. Body: Copper alloy.
5. Ball: Chrome-plated brass.
6. Seats and Seals: Replaceable.
7. Handle: Vinyl-covered steel.
8. Inlet: Threaded or solder joint.
9. Outlet: Threaded, short nipple with garden-hose thread complying with ASME B1.20.7 and cap with brass chain.

B. Gate-Valve-Type, Hose-End Drain Valves <**Insert drawing designation if any**>:

1. Standard: MSS SP-80 for gate valves.
2. Pressure Rating: Class 125.
3. Size: **NPS 3/4**.
4. Body: ASTM B62 bronze.
5. Inlet: **NPS 3/4** threaded or solder joint.
6. Outlet: Garden-hose thread complying with ASME B1.20.7 and cap with brass chain.

C. Stop-and-Waste Drain Valves <**Insert drawing designation if any**>:

1. Standard: MSS SP-110 for ball valves or MSS SP-80 for gate valves.
2. Pressure Rating: **200-psig** minimum CWP or Class 125.
3. Size: **NPS 3/4**.

4. Body: Copper alloy or ASTM B62 bronze.
5. Drain: **NPS 1/8** side outlet with cap.

PART 3 - EXECUTION

3.1 INSTALLATION OF PIPING SPECIALTIES

A. Backflow Preventers: Install in each water supply to mechanical equipment and systems and to other equipment and water systems that may be sources of contamination. Comply with authorities having jurisdiction.

1. Locate backflow preventers in same room as connected equipment or system.
2. Install drain for backflow preventers with atmospheric-vent drain connection with air-gap fitting, fixed air-gap fitting, or equivalent positive pipe separation of at least two pipe diameters in drain piping and pipe-to-floor drain. Locate air-gap device attached to or under backflow preventer. Simple air breaks are unacceptable for this application.
3. Do not install bypass piping around backflow preventers.

B. Water Regulators: Install with inlet and outlet shutoff valves. Install pressure gauges on inlet and outlet.

C. Water Control Valves: Install with inlet and outlet shutoff valves. Install pressure gauges on inlet and outlet.

D. Automatic Water Shutoff Valves: Test for signal strength before valve installation. Install automatic shutoff valve downstream from main domestic water shutoff valve. Install valve controller in an accessible location with sensors in areas where water is likely to accumulate.

E. Balancing Valves: Install in locations where they can easily be adjusted. Set at indicated design flow rates.

F. Temperature-Actuated, Water Mixing Valves: Install with check stops or shutoff valves on inlets and with shutoff valve on outlet.

1. Install cabinet-type units recessed in or surface mounted on wall as specified.

G. Y-Pattern Strainers: For water, install on supply side of each control valve,and, pump.

H. Outlet Boxes: Install boxes recessed in wall or surface mounted on wall. Install **1-1/2-by-3-1/2-inch** fire-retardant-treated-wood blocking, wall reinforcement between studs. Comply with requirements for fire-retardant-treated-wood blocking in Section 061000 "Rough Carpentry."

I. Hose Stations: Install with check stops or shutoff valves on inlets and with thermometer on outlet.

1. Install cabinet-type units recessed in or surface mounted on wall as specified. Install **1-1/2-by-3-1/2-inch** fire-retardant-treated-wood blocking, wall

reinforcement between studs. Comply with requirements for fire-retardant-treated-wood blocking in Section 061000 "Rough Carpentry."

J. Ground Hydrants: Install with 1 cu. yd. of crushed gravel around drain hole. Set ground hydrants with box flush with grade.

K. Nonfreeze, Draining-Type Post Hydrants: Install with 1 cu. yd. of crushed gravel around drain hole. Set post hydrants in concrete paving or in 1 cu. ft. of concrete block at grade.

L. Nonfreeze, Nondraining-Type Post Hydrants: Set in concrete or pavement.

M. Nonfreeze, Sanitary Yard Hydrants: Set with riser pipe in concrete or pavement. Do not encase canister in concrete.

N. Nonfreeze, Draining-Type Roof Hydrants: Install with drain connection piped to nearest floor drain or to the exterior.

O. Water-Hammer Arresters: Install in water piping in accordance with PDI-WH 201.

P. Supply-Type, Trap-Seal Primer Device: Install with outlet piping pitched down toward drain trap a minimum of 1 percent, and connect to floor-drain body, trap, or inlet fitting. Adjust valve for proper flow.

Q. Drainage-Type, Trap-Seal Primer Device: Install as lavatory trap with outlet piping pitched down toward drain trap a minimum of 1 percent, and connect to floor-drain body, trap, or inlet fitting.

R. Trap-Seal Primer Systems: Install with outlet piping pitched down toward drain trap a minimum of 1 percent, and connect to floor-drain body, trap, or inlet fitting. Adjust system for proper flow.

3.2 PIPING CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. When installing piping specialties adjacent to equipment and machines, allow space for service and maintenance.

3.3 ELECTRICAL CONNECTIONS

A. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

B. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

C. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.

3.4 CONTROL CONNECTIONS

A. Connect control wiring in accordance with Section 260523 "Control-Voltage Electrical Power Cables."

3.5 IDENTIFICATION

A. Plastic Labels for Equipment: Install engraved plastic-laminate equipment nameplate or sign on or near each of the following:

1. Vacuum breakers.
2. Backflow preventers.
3. Water pressure-reducing valves.
4. Automatic water shutoff valve systems.
5. Balancing valves.
6. Temperature-actuated, water mixing valves.
7. Outlet boxes.
8. Hose stations.
9. Wall hydrants.
10. Ground hydrants.
11. Post hydrants.
12. Roof hydrants.
13. Trap-seal primer device.
14. Trap-seal primer systems.
15. Water meters.

B. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit. Nameplates and signs are specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.6 ADJUSTING

A. Set field-adjustable pressure set points of water pressure-reducing valves.

B. Set field-adjustable flow set points of balancing valves.

C. Set field-adjustable temperature set points of temperature-actuated, water mixing valves.

D. Adjust each pressure vacuum breaker in accordance with manufacturer's written instructions, authorities having jurisdiction and the device's reference standard.

3.7 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

B. Perform the following tests and inspections with the assistance of a factory-authorized service representative.

1. Test each reduced-pressure-principle backflow preventer according to authorities having jurisdiction and the device's reference standard.
2. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
3. Operational Test: After electrical circuitry has been energized, start units to confirm unit operation.
4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Domestic water piping specialties will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

END OF SECTION 221119

SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hub-and-spigot, cast-iron soil pipe and fittings.
2. Hubless, cast-iron soil pipe and fittings.
3. Ductile-iron pipe and fittings.
4. PVC pipe and fittings.
5. Specialty pipe fittings.
6. Encasement for underground metal piping.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Hub-and-spigot, cast-iron soil pipe and fittings.
2. Hubless, cast-iron soil pipe and fittings.
3. Galvanized-steel pipe and fittings.
4. Ductile-iron pipe and fittings.
5. Copper tube and fittings.
6. PVC pipe and fittings.
7. Specialty pipe fittings.
8. Encasement for underground metal piping.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans and elevations, or Building Information Model (BIM) drawn to scale, showing items described in this Section and coordinated with all building trades.

1.4 FIELD CONDITIONS

A. Interruption of Existing Sanitary Waste Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service in accordance with requirements indicated:

1. Notify Construction Manager no fewer than two days in advance of proposed interruption of sanitary waste service.
2. Do not proceed with interruption of sanitary waste service without Owner's written permission.

1.5 WARRANTY

A. Listed manufacturers to provide labeling and warranty of their respective products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Components and installation are capable of withstanding the following minimum working pressure unless otherwise indicated:

1. Soil, Waste, and Vent Piping: 10 ft. head of water.
2. Waste, Force-Main Piping: 100 psig.

2.2 PIPING MATERIALS

A. Piping materials to bear label, stamp, or other markings of specified testing agency.

B. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.3 SPECIALTY PIPE FITTINGS

A. Transition Couplings:

1. General Requirements: Fitting or device for joining piping with small differences in ODs or of different materials. Include end connections of same size as and compatible with pipes to be joined.
2. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.

B. Dielectric Fittings:

1. General Requirements: Assembly of copper alloy and ferrous materials with separating nonconductive insulating material. Include end connections compatible with pipes to be joined.

2.4 ENCASEMENT FOR UNDERGROUND METAL PIPING

A. Standard: ASTM A674 or AWWA C105/A 21.5.

B. Material: Linear low-density polyethylene film of 0.008-inch minimum thickness.

C. Form: Sheet, or, tube.

D. Color: natural.

PART 3 - EXECUTION

3.1 EARTH MOVING

A. Comply with requirements for excavating, trenching, and backfilling specified in Section 312000 "Earth Moving."

3.2 INSTALLATION OF PIPING

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems.

1. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations.
2. Install piping as indicated unless deviations to layout are approved on coordination drawings.

B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.

C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

E. Install piping to permit valve servicing.

F. Install piping at indicated slopes.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. Install piping to allow application of insulation.

J. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends.

1. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical.
2. Use long-turn, double Y-branch, and 1/8-bend fittings if two fixtures are installed back to back or side by side with common drain pipe.

    a. Straight tees, elbows, and crosses may be used on vent lines.

3. Do not change direction of flow more than 90 degrees.
4. Use proper size of standard increasers and reducers if pipes of different sizes are connected.

a. Reducing size of waste piping in direction of flow is prohibited.

K. Lay buried building waste piping beginning at low point of each system.

1. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream.
2. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
3. Maintain swab in piping and pull past each joint as completed.

L. Install soil and waste and vent piping at the following minimum slopes unless otherwise indicated:

1. Building Sanitary Waste: Two percent downward in direction of flow for piping **NPS 3** and smaller; 1 percent downward in direction of flow for piping **NPS 4** and larger.
2. Horizontal Sanitary Waste Piping: Two percent downward in direction of flow.
3. Vent Piping: One percent down toward vertical fixture vent or toward vent stack.

M. Install cast-iron soil piping in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."

1. Install encasement on underground piping in accordance with ASTM A674 or AWWA C105/A 21.5.

N. Install steel piping in accordance with applicable plumbing code.

O. Install stainless steel piping in accordance with ASME A112.3.1 and applicable plumbing code.

P. Install aboveground copper tubing in accordance with CDA's "Copper Tube Handbook."

Q. Install aboveground ABS piping in accordance with ASTM D2661.

R. Install aboveground PVC piping in accordance with ASTM D2665.

S. Install underground ABS, and, PVC piping in accordance with ASTM D2321.

T. Install engineered soil and waste and vent piping systems as follows:

1. Combination Waste and Vent: Comply with standards of authorities having jurisdiction.
2. Hubless, Single-Stack Drainage System: Comply with ASME B16.45 and hubless, single-stack aerator fitting manufacturer's written installation instructions.
3. Reduced-Size Venting: Comply with standards of authorities having jurisdiction.

U. Install underground, ductile-iron, force-main piping according to AWWA C600.

1. Install buried piping inside building between wall and floor penetrations and connection to sanitary sewer piping outside building with restrained joints.

2. Anchor pipe to wall or floor. Install thrust-block supports at vertical and horizontal offsets.
3. Install encasement on piping in accordance with ASTM A674 or AWWA C105/A 21.5.

V. Install underground, copper, force-main tubing in accordance with CDA's "Copper Tube Handbook."

1. Install encasement on piping in accordance with ASTM A674 or AWWA C105/A 21.5.

W. Install force mains at elevations indicated.

X. Plumbing Specialties:

1. Install backwater valves in sanitary waster gravity-flow piping.

a. Comply with requirements for backwater valves specified in Section 221319 "Sanitary Waste Piping Specialties."

2. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers in sanitary waste gravity-flow piping.

a. Install cleanout fitting with closure plug inside the building in sanitary drainage force-main piping.
b. Comply with requirements for cleanouts specified in Section 221319 "Sanitary Waste Piping Specialties."

3. Install drains in sanitary waste gravity-flow piping.

a. Comply with requirements for drains specified in Section 221319 "Sanitary Waste Piping Specialties."

Y. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

Z. Install sleeves for piping penetrations of walls, ceilings, and floors.

1. Comply with requirements for sleeves specified in Section 220500 "Common Work Results for Plumbing."

AA. Install sleeve seals for piping penetrations of concrete walls and slabs.

1. Comply with requirements for sleeve seals specified in Section 220500 "Common Work Results for Plumbing."

BB. Install escutcheons for piping penetrations of walls, ceilings, and floors.

1. Comply with requirements for escutcheons specified in Section 220500 "Common Work Results for Plumbing."

3.3 JOINT CONSTRUCTION

A. Hub-and-Spigot, Cast-Iron Soil Piping Gasketed Joints: Join in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.

B. Hub-and-Spigot, Cast-Iron Soil Piping Caulked Joints: Join in accordance with CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for lead-and-oakum caulked joints.

C. Hubless, Cast-Iron Soil Piping Coupled Joints:

1. Join hubless, cast-iron soil piping in accordance with CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-piping coupling joints.

D. Threaded Joints: Thread pipe with tapered pipe threads in accordance with ASME B1.20.1.

1. Cut threads full and clean using sharp dies.
2. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

a. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
b. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
c. Do not use pipe sections that have cracked or open welds.

E. Join stainless steel pipe and fittings with gaskets in accordance with ASME A112.3.1.

F. Join copper tube and fittings with soldered joints in accordance with ASTM B828. Use ASTM B813, water-flushable, lead-free flux and ASTM B32, lead-free-alloy solder.

G. Grooved Joints: Cut groove ends of pipe in accordance with AWWA C606. Lubricate and install gasket over ends of pipes or pipe and fitting. Install coupling housing sections over gasket, with keys seated in piping grooves. Install and tighten housing bolts.

H. Flanged Joints: Align bolt holes. Select appropriate gasket material, size, type, and thickness. Install gasket concentrically positioned. Use suitable lubricants on bolt threads. Torque bolts in cross pattern.

I. Plastic, Nonpressure-Piping, Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings in accordance with the following:

1. Comply with ASTM F402 for safe-handling practice of cleaners, primers, and solvent cements.
2. ABS Piping: Join in accordance with ASTM D2235 and ASTM D2661 appendixes.
3. PVC Piping: Join in accordance with ASTM D2855 and ASTM D2665 appendixes.

J. Joint Restraints and Sway Bracing:

1. Provide joint restraints and sway bracing for storm drainage piping joints to comply with the following conditions:

    a. Provide axial restraint for pipe and fittings 5 inches and larger, upstream and downstream of all changes in direction, branches, and changes in diameter greater than two pipe sizes.
    b. Provide rigid sway bracing for pipe and fittings 4 inches and larger, upstream and downstream of all changes in direction 45 degrees and greater.
    c. Provide rigid sway bracing for pipe and fittings 5 inches and larger, upstream and downstream of all changes in direction and branch openings.

3.4 INSTALLATION OF SPECIALTY PIPE FITTINGS

A. Transition Couplings:

1. Install transition couplings at joints of piping with small differences in ODs.
2. In Waste Drainage Piping: Unshielded, nonpressure transition couplings.
3. In Aboveground Force Main Piping: Fitting-type transition couplings.
4. In Underground Force Main Piping:

    a. NPS 1-1/2 (DN 40) and Smaller: Fitting-type transition couplings.
    b. NPS 2 (DN 50) and Larger: Pressure transition couplings.

B. Dielectric Fittings:

1. Install dielectric fittings in piping at connections of dissimilar metal piping and tubing.
2. Dielectric Fittings for NPS 2 (DN 50) and Smaller: Use dielectric nipples.
3. Dielectric Fittings for NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Use dielectric flanges.
4. Dielectric Fittings for NPS 5 (DN 125) and Larger: Use dielectric flange kits.

3.5 INSTALLATION OF VALVES

A. General valve installation requirements for general-duty valve installation are specified in Section 220523 "General-Duty Valves for Plumbing Piping."

B. Shutoff Valves:

1. Install shutoff valve on each sewage pump discharge.
2. Install gate valve for piping **NPS 2** and smaller.
3. Install gate valve for piping **NPS 2-1/2** and larger.

C. Check Valves: Install swing check valve, between pump and shutoff valve, on each sewage pump discharge.

D. Backwater Valves: Install backwater valves in piping subject to backflow.

1. Horizontal Piping: Horizontal backwater valves.

2. Floor Drains: Drain outlet backwater valves unless drain has integral backwater valve.
3. Install backwater valves in accessible locations.
4. Comply with requirements for backwater valve specified in Section 221319 "Sanitary Waste Piping Specialties."

3.6 INSTALLATION OF HANGERS AND SUPPORTS

A. Comply with requirements for seismic-restraint devices specified in Section 220548 "Vibration and Seismic Controls for Plumbing Piping and Equipment."

B. Comply with requirements for pipe hanger and support devices and installation specified in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment".

1. Install carbon-steel pipe hangers for horizontal piping in noncorrosive environments.
2. Install stainless steel pipe hangers for horizontal piping in corrosive environments.
3. Install carbon-steel pipe support clamps for vertical piping in noncorrosive environments.
4. Install stainless steel pipe support clamps for vertical piping in corrosive environments.
5. Vertical Piping: MSS Type 8 or Type 42 clamps.
6. Install individual, straight, horizontal piping runs:

    a. 100 Ft. (30 m) and Less: MSS Type 1, adjustable, steel clevis hangers.
    b. Longer Than 100 Ft. (30 m): MSS Type 43, adjustable roller hangers.
    c. Longer Than 100 Ft. (30 m) if Indicated: MSS Type 49, spring cushion rolls.

7. Multiple, Straight, Horizontal Piping Runs 100 Ft. (30 m) or Longer: MSS Type 44 pipe rolls. Support pipe rolls on trapeze.
8. Base of Vertical Piping: MSS Type 52 spring hangers.

C. Install hangers for cast-iron,and, copper soil piping, with maximum horizontal spacing and minimum rod diameters, to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

D. Install hangers for ABS, and, PVC piping, with maximum horizontal spacing and minimum rod diameters, to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

E. Support horizontal piping and tubing within **12 inches** of each fitting, valve, and coupling.

F. Support vertical runs of cast-iron,and, copper soil piping to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

G. Support vertical runs of ABS, and, PVC piping to comply with manufacturer's written instructions, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

3.7 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.

C. Connect waste and vent piping to the following:

1. Plumbing Fixtures: Connect waste piping in sizes indicated, but not smaller than required by plumbing code.
2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
3. Plumbing Specialties: Connect waste and vent piping in sizes indicated, but not smaller than required by plumbing code.
4. Install test tees (wall cleanouts) in conductors near floor and floor cleanouts with cover flush with floor.
5. Install horizontal backwater valves in pit with pit cover flush with floor.
6. Comply with requirements for backwater valves, cleanouts, and, drains specified in Section 221319 "Sanitary Waste Piping Specialties."
7. Equipment: Connect waste piping as indicated.

    a. Provide shutoff valve if indicated and union for each connection.
    b. Use flanges instead of unions for connections **NPS 2-1/2** and larger.

D. Connect force-main piping to the following:

1. Sanitary Sewer: To exterior force main.
2. Sewage Pump: To sewage pump discharge.

E. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.

F. Make connections in accordance with the following unless otherwise indicated:

1. Install unions, in piping **NPS 2** and smaller, adjacent to each valve and at final connection to each piece of equipment.
2. Install flanges, in piping **NPS 2-1/2** and larger, adjacent to flanged valves and at final connection to each piece of equipment.

3.8 IDENTIFICATION

A. Identify exposed sanitary waste and vent piping.

B. Comply with requirements for identification specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.9 FIELD QUALITY CONTROL

A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.

1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test sanitary waste and vent piping in accordance with procedures of authorities having jurisdiction or, in absence of published procedures, as follows:

1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired.

    a. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.

2. Leave uncovered and unconcealed new, altered, extended, or replaced waste and vent piping until it has been tested and approved.

    a. Expose work that was covered or concealed before it was tested.

3. Roughing-in Plumbing Test Procedure: Test waste and vent piping except outside leaders on completion of roughing-in.

    a. Close openings in piping system and fill with water to point of overflow, but not less than **10 ft. head of water**.
    b. From 15 minutes before inspection starts to completion of inspection, water level must not drop.
    c. Inspect joints for leaks.

4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight.

    a. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of **1 inch wg**.
    b. Use U-tube or manometer inserted in trap of water closet to measure this pressure.
    c. Air pressure must remain constant without introducing additional air throughout period of inspection.
    d. Inspect plumbing fixture connections for gas and water leaks.

5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
6. Prepare reports for tests and required corrective action.

E. Test force-main piping in accordance with procedures of authorities having jurisdiction or, in absence of published procedures, as follows:

1. Leave uncovered and unconcealed new, altered, extended, or replaced force-main piping until it has been tested and approved.

    a. Expose work that was covered or concealed before it was tested.

2. Cap and subject piping to static-water pressure of **50 psig** above operating pressure, without exceeding pressure rating of piping system materials.

    a. Isolate test source and allow to stand for four hours.
    b. Leaks and loss in test pressure constitute defects that must be repaired.

3. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
4. Prepare reports for tests and required corrective action.

3.10 CLEANING AND PROTECTION

A. Clean interior of piping. Remove dirt and debris as work progresses.

B. Protect sanitary waste and vent piping during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.

C. Place plugs in ends of uncompleted piping at end of day and when work stops.

D. Exposed Plastic Piping: Protect ABS, PVC plumbing vents exposed to sunlight with two coats of water-based latex paint.

E. Repair damage to adjacent materials caused by waste and vent piping installation.

3.11 PIPING SCHEDULE

A. Flanges and unions may be used on aboveground pressure piping unless otherwise indicated.

B. Aboveground, soil and waste piping NPS 4 (DN 100) and smaller are to be the following:

1. Service cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Hubless, cast-iron soil pipe and fittings and hubless, single-stack aerator fittings; CISPI hubless-piping couplings; and coupled joints.
3. Galvanized-steel pipe, drainage fittings, and threaded joints.
4. Stainless steel pipe and fittings, sealing rings, and gasketed joints.
5. Copper Type DWV tube, copper drainage fittings, and soldered joints.

6. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
7. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
8. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

C. Aboveground, soil and waste piping NPS 5 (DN 125) and larger are to be the following:

1. Service cast iron, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Hubless, cast-iron soil pipe and fittings and hubless, single-stack aerator fittings; CISPI hubless-piping couplings; and coupled joints.
3. Galvanized-steel pipe, drainage fittings, and threaded joints.
4. Stainless steel pipe and fittings, sealing rings, and gasketed joints.
5. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
6. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

D. Aboveground, vent piping NPS 4 (DN 100) is to be the following:

1. Service cast iron, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.
3. Galvanized-steel pipe, drainage fittings, and threaded joints.
4. Stainless steel pipe and fittings gaskets, and gasketed joints.
5. Copper Type DWV tube, copper drainage fittings, and soldered joints.

    a. Option for Vent Piping, NPS 2-1/2 and NPS 3-1/2 (DN 65 and DN 90): Hard copper tube, **Type M**; copper pressure fittings; and soldered joints.

6. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.
7. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
8. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

E. Aboveground, vent piping NPS 5 (DN 125) and larger is to be the following:

1. Service cast iron, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.
3. Galvanized-steel pipe, drainage fittings, and threaded joints.
4. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
5. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

F. Underground, soil, waste, and vent piping NPS 4 (DN 100) and smaller are to be the following:

1. Extra-heavy cast-iron soil piping; gaskets; and gasketed joints.
2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; and coupled joints.
3. Stainless steel pipe and fittings, gaskets, and gasketed joints.
4. Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.

5. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
6. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

G. Underground, soil and waste piping NPS 5 (DN 125) and larger are to be the following:

1. Extra-heavy, cast-iron soil piping; [**gaskets; and gasketed**] [**caulking materials; and caulked**] joints.
2. Hubless, cast-iron soil pipe and fittings; CISPI hubless-piping couplings; coupled joints.
3. Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.
4. Dissimilar Pipe-Material Couplings: Unshielded, nonpressure transition couplings.

H. Aboveground sanitary-sewage force mains NPS 1-1/2 and NPS 2 (DN 40 and DN 50) are to be the following:

1. Hard copper tube, **Type L**; copper pressure fittings; and soldered joints.
2. Galvanized-steel pipe, pressure fittings, and threaded joints.

I. Aboveground sanitary-sewage force mains NPS 2-1/2 to NPS 6 (DN 65 to DN 150) are to be the following:

1. Hard copper tube, **Type L**; copper pressure fittings; and soldered joints.
2. Galvanized-steel pipe, pressure fittings, and threaded joints.
3. Grooved-end, galvanized-steel pipe; grooved-joint, galvanized-steel-pipe appurtenances; and grooved joints.

J. Underground sanitary-sewage force mains NPS 4 (DN 100) and smaller are to be the following:

1. Hard copper tube, **Type L**; [**wrought-**]copper pressure fittings; and soldered joints.
2. Ductile-iron, mechanical-joint piping and mechanical joints.
3. Ductile-iron, push-on-joint piping and push-on joints.
4. Ductile-iron, grooved-joint piping and grooved joints.
5. Fitting-type transition coupling for piping smaller than **NPS 1-1/2** and pressure transition coupling for **NPS 1-1/2** and larger if dissimilar pipe materials.

K. Underground sanitary-sewage force mains NPS 5 (DN 125) and larger are to be the following:

1. Hard copper tube, **Type L**; wrought-copper pressure fittings; and soldered joints.
2. Ductile-iron, mechanical-joint piping and mechanical joints.
3. Ductile-iron, push-on-joint piping and push-on joints.
4. Ductile-iron, grooved-joint piping and grooved joints.
5. Pressure transition couplings if dissimilar pipe materials.

END OF SECTION 221316

SECTION 221319.13 - SANITARY DRAINS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Floor drains.
2. Floor sinks.
3. Trench drains.
4. Channel drainage systems.

1.2 DEFINITIONS

A. ABS: Acrylonitrile-butadiene styrene.

B. FRP: Fiberglass-reinforced plastic.

C. HDPE: High-density polyethylene.

D. PE: Polyethylene.

E. PP: Polypropylene.

F. PVC: Polyvinyl chloride.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 DRAIN ASSEMBLIES

A. Sanitary drains shall bear label, stamp, or other markings of specified testing agency.

B. Comply with NSF 14 for plastic sanitary piping specialty components.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.

1. Position floor drains for easy access and maintenance.
2. Set floor drains below elevation of surrounding finished floor to allow floor drainage.
3. Set with grates depressed according to the following drainage area radii:

a. Radius, **30 Inches** or Less: Equivalent to 1 percent slope, but not less than **1/4-inch** total depression.
b. Radius, **30 to 60 Inches**: Equivalent to 1 percent slope.
c. Radius, **60 Inches** or Larger: Equivalent to 1 percent slope, but not greater than **1-inch** total depression.

4. Install floor-drain flashing collar or flange, so no leakage occurs between drain and adjoining flooring.

a. Maintain integrity of waterproof membranes where penetrated.

5. Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.

B. Install trench drains at low points of surface areas to be drained.

1. Set grates of drains flush with finished surface, unless otherwise indicated.

C. Comply with ASME A112.3.1 for installation of stainless steel channel drainage systems.

1. Install on support devices, so that top will be flush with adjacent surface.

D. Install FRP channel drainage system components on support devices, so that top will be flush with adjacent surface.

E. Install plastic channel drainage system components on support devices, so that top will be flush with adjacent surface.

F. Install open drain fittings with top of hub 1 inch above floor.

3.2 CONNECTIONS

A. Comply with requirements in Section 221316 "Sanitary Waste and Vent Piping" for piping installation requirements. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Comply with requirements in Section 221319 "Sanitary Waste Piping Specialties" for

backwater valves, air admittance devices and miscellaneous sanitary drainage piping specialties.

C. Comply with requirements in Section 221323 "Sanitary Waste Interceptors" for grease interceptors, grease-removal devices, oil interceptors, sand interceptors, and solid interceptors.

D. Install piping adjacent to equipment to allow service and maintenance.

E. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

F. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.3 LABELING AND IDENTIFYING

A. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit. Nameplates and signs are specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.4 PROTECTION

A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.

B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221319.13

SECTION 22 13 29.16

SUBMERSIBLE SEWERAGE PUMPS

PART 1 GENERAL

1.1 SECTION INCLUDES

Submersible pumps, motors, and accessories

1.2 RELATED SECTIONS

A. Section 02240 - Dewatering
B. Section 02315 - Excavation and Fill
C. Section 02530 - Sanitary Sewer Systems
D. Section 02535 - Sanitary Sewer Force Main Systems
E. Section 02605 - Precast Structures and Accessories
F. Section 13300 - Instrumentation and Controls

1.3 PERFORMANCE REQUIREMENTS

A. Provide all material, labor, equipment, tools, and incidentals to install a submersible sewage pump and related appurtenances and all items shown or inferred on the drawings and reasonably specified herein. It is the intent of these documents that operatable submersible sewage pumps be installed. If any items for a complete job are omitted or not shown, the Contractor shall furnish and install the same without additional cost to the Owner.
B. The Contractor shall have the sole responsibility for proper functioning of the equipment.

1.4 SUBMITTALS

A. Manufacturer's specification data and descriptive literature.
B. Performance curves showing capacity of GPM, NPSH, head, and pump horsepower from 0 GPM to 110 percent of design capacity
C. Motor efficiencies and power factors at all design operating points.
D. The following data shall be submitted for each motor:

1. Manufacturers designation
2. Number of phases
3. Horsepower output
4. Voltage
5. Time rating
6. Full load amperes
7. Temperature rise
8. Code
9. RPM at full load
10. Design letter
11. Frequency
12. Service factor

E. Drawings showing general dimensions, openings, connections, construction details of the equipment, wiring diagrams, piping drawings, and weights of major components.
F. Procedures for proper installation.
G. Manufacturer's guarantee.
H. Provide a notarized statement by the pump supplier which shall certify that the pump supplier shall at all times maintain in stock at least one set of spare parts for each model of pump furnished, and that if any of the parts are not in stock when ordered by the Utility, the pump supplier shall either provide a pump or reimburse the Utility for rental of a pump to maintain the station in operation until the ordered part(s) are delivered.

1.5 QUALIFICATIONS

The equipment specified under this section shall be provided by manufacturers who are fully experienced, reputable, qualified, and regularly engaged in the manufacture of the components and equipment to be furnished. All equipment and manufacturers shall be approved by the utility that will own and operate the lift station.

1.6 CERTIFICATIONS

After all installation is complete, the equipment manufacturer shall provide a field service specialist to completely inspect all related work for proper operation. The manufacturer shall notify the Engineer, in writing, when this service is complete and any/all deficiencies corrected.

1.7 DELIVERY TIMES

The equipment shall be placed into production as soon as the shop drawings have been approved. The Engineer shall be notified of the estimated length of time until the delivery of equipment in the shop drawings submitted.

1.8 STORAGE AND PROTECTION

All parts and equipment shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installation is completed and the units and equipment are ready for operation. Finished surfaces of all exposed pump openings shall be protected by wooded planks, strongly built and securely bolted thereto. Finished iron or steel surfaces not painted shall be properly protected to prevent rust and corrosion.

1.9 WARRANTY

The pump manufacturer shall warrant the pumps being supplied to the Owner and Utility against defects in workmanship and materials for a period of five years under normal use, operation, and service. In addition, the manufacturer shall replace certain parts which shall become defective through normal use and wear on a progressive schedule of cost for a period of five years; parts included are the mechanical seal, impeller, pump housing, wear ring, and ball bearings. The warranty shall be in published form and apply to all similar units.

1.10 OPERATION AND MAINTENANCE MANUALS

The manual shall include, but not be limited to, installation, operation, maintenance instructions, spare parts lists giving manufacturer's stock or part number for each replaceable item, approval submittals and drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The pumps, motors, guide bars, and discharge elbows shall be supplied by the pump supplier to insure unit responsibility.
B. Pump manufacturer shall be Xylem Flygt exclusively.

2.2 GENERAL

A. The pumps and motors shall be capable of handling raw, unscreened, sanitary sewage containing heavy sludge and fibrous materials without injurious damage during normal operation. The pump design shall be such that pumping units will be automatically connected to the discharge piping when lowered into place on the discharge connection.
B. The pumps shall be easily removable for inspection or service, requiring no bolts, nuts, or other fastening to be removed for this purpose and no need for personnel to enter the lift station wet well. Each pump shall be supplied with a stainless-steel grip ring-type lifting system of adequate strength and length to permit raising the pump for inspection and removal.
C. Each pump motor cable shall be suitable for submersible pump application as indicated on the pump cable. The cable shall be sized in accordance with the NEC Standards for the actual motor load.
D. The submersible pumping units, complete with motor, to be furnished and installed in the pumping station shall satisfy the operating conditions, electric power requirements, and control requirements of these specifications.
E. The pumps shall be capable of running continuously in a non-submerged condition under full load without damage for extended periods.
F. The pumps shall be automatically controlled by a liquid level transducer that shall signal the motor control panel alternator for pump operation.
G. The motor shall be capable of a minimum of ten (10) starts per hour.
H. If required by the Owner or Engineer, before final acceptance, a field running test demonstrating this ability, with 24 hours of continuous operation under the above conditions, shall be performed for all pumps being supplied.

2.3 PUMP OPERATING CONDITIONS AND CONTROL REQUIREMENTS

A. Pump Discharge Size = 6 in
B. Pump Speed (Max) = 1760 RPM
C. Single Pump Design Operating Condition = 1,150 GPM at 50.6 ft of head
D. Dual Pump Design Operating Condition = 2,030 GPM at 54.9 ft of head

1. Single Pump Operating point with Dual Pump Operation = 1,015 GPM

2.4 PUMPS

A. Major pump components shall be of ASTM A-48, Class 35-B, gray cast iron construction. All gray iron components shall have smooth surfaces and be devoid of blow holes and other irregularities.
B. All parts coming into contact with wastewater shall be protected by a coat of rubber asphalt paint. All exposed nuts, bolts, washers and other fastening devices shall be Type 304 stainless steel.
C. Pump exterior shall be sprayed with an epoxy primer and two (2) coats of a polyamide cured epoxy finish coating. Minimum total finish coating thickness shall be 30 mils, dry film thickness.
D. All mating surfaces requiring watertight sealing shall be machined and fitted with nitrile rubber O-rings.
E. Each pumping unit shall be provided with a cooling system allowing unsubmerged continuous operation at any power output to and including rated power in ambient air of 40°C.
F. Each pump shall be provided with a tandem mechanical shaft seal system. The seals, both upper and lower shall be of the lapped silicone carbide design and operating in an oil bath.
G. Seal faces shall be self-aligning, positively driven. Each seal shall be held by separate spring systems. The seals shall require neither maintenance nor adjustment and shall be easily replaceable. Conventional double mechanical seals with a single or double spring between the rotating faces, requiring constant differential pressure to effect sealing shall not be considered equal to the tandem seal specified.
H. The pump/motor shaft shall be AISA Type 420 stainless steel and shall rotate on two grease lubricated bearings.

I. The shaft and bearings shall be adequately designed to meet the maximum torque required for any start-up or operating condition and to minimize vibration and shaft deflection.
J. The upper bearing shall be single row ball or roller bearing and the lower bearing shall be a double row angular contact bearing to compensate for axial thrust and radial forces.
K. Each pump shall be provided with an oil chamber for the shaft sealing system. The drain and inspection plug, with positive anti-leak seal, shall be easily accessible from the outside. The oil chamber shall be designed to prevent overfilling and to provide oil expansion capacity.
L. The impeller shall be of gray cast iron, ASTM A-48, Class 35-B, statically and dynamically balanced, double shrouded non-clogging design having a long thrulet without acute turns. All external hardware shall be Type 316 stainless steel. The impeller shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in normal raw, unscreened wastewater applications. The pump manufacturer shall furnish mass moment of inertia data for the proposed impeller. The fit between the impeller and the shaft shall be a sliding fit with one key.
M. A wear ring system shall be installed to provide efficient sealing between the volute and impeller. The wear ring system shall consist of a stationary ring made of nitrile rubber molded over a steel ring insert which is drive fitted to the volute inlet and a rotating ring made of Type 316 stainless steel which is drive fitted to the impeller skirt.
N. A sliding guide bracket shall be an integral part of the pumping unit and the pump casing shall have a machined connecting flange to connect with the cast iron discharge connection. The discharge connection shall be bolted to the floor of the pump chamber and so designed as to receive the pump connecting flange without the need of any bolts or nuts.
O. Sealing of the pumping unit to the discharge connection shall be accomplished by a simple linear downward motion of the pump with the entire weight of the pumping unit guided by no less than two stainless steel guide rails and pressed tightly against the discharge connection elbow; no portion of the pump shall bear directly on the floor of the sump and no rotary motion of the pump shall be required for sealing.

2.5 CABLES AND CABLE CONNECTION

A. Cables shall be designed specifically for submersible pump applications and shall be properly sealed.
B. A type CGB watertight connector with a neoprene gland shall be furnished with each pump to seal the cable entry at the control panel. The pump cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall be comprised of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the entry body containing a strain relief function, separate from the function of sealing the cable. The assembly shall bear against a shoulder in the pump top. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the motor interior from foreign material gaining access through the pump top. Secondary sealing systems utilizing epoxy potting compounds may be used. When this type of sealing system is used, the manufacturers shall supply a cable cap as part of the spare parts for each pump.
C. All cables shall be continuous, without splices from the motor to the control panel, unless otherwise approve by the Owner.

2.6 MOTORS

A. All motors shall be built in accordance with latest NEMA, IEEE, ANSI, and AFBMA Standards where applicable.
B. The pump motor shall be of the induction type with a squirrel cage rotor, shell type, NEMA B design housed in a watertight chamber. The motor shall be designed for use with a VFD. The stator shall be copper wound and insulated with Class F insulation rated for 115°F rise over 40°C minimum.
C. A minimum of three (3) thermal sensors shall be provided to sense excessive motor temperatures or seal leakage. These sensors shall be wired to the control panel for use in conjunction with the external

motor overload protection. Moisture sensors shall be provided to sense excessive seal leakage if recommended by the pump manufacturer for complying with the pump warranty.

D. The pump motor shall be suitable for operation on a power supply as specified in Article 2.02(A) with a service factor of 1.15 or greater.
E. Pump motors shall have cooling characteristics suitable to permit continuous operation in a totally, partially, or non-submerged condition.
F. Lift Station Pump Motors shall be 20 Hp, 480V, 3-phase.
G. The pump motor shall be air cooled and guaranteed to run continuously in a totally, partially, or non-submerged condition without damage to the pump motor. The motor shall be designed for continuous duty, capable of sustaining a minimum of ten (10) starts per hour. The pump motor shall be of sufficient horsepower as to be non-overloading, over the entire range of the pump curve without the use of the service factor. Pump motors shall be rated for the horsepower and motor speed (RPM) specified herein.

2.7 PUMP MOTOR CABLE

A. The pump motor cable shall be sized according to NEC and ICEA and shall be installed with a double-jacketed protection system suitable for submersible pump application and the rating shall be indicated by a code or legend permanently embossed on the cable.
B. Provide adequate length of submersible cable for the intended installation without splices. The outer jacket of the cable shall be oil resistant chloroprene rubber.
C. Provide conductors for power, thermal shutdown, and seal fail.

2.8 PUMP GUIDE RAILS

A. A sliding guide bracket shall be an integral part of the pump casing and shall have a machined connecting flange to connect with the cast iron discharge connection, which shall be bolted to the floor of the wet well with Type 316 stainless steel anchor bolts and so designed as to receive the pump discharge flange without the need of any bolts or nuts. Sealing of the pumps to the discharge connection shall be accomplished by a simple linear downward motion of the pump with the entire weight of the pumping unit guided by no less than two (2) parallel Type 316 seamless tubular stainless steel guides which will press it tightly against the discharge connection. No portion of the pump shall bear directly on the floor of the wet well and no rotary motion of the pump shall be required for sealing. Sealing at the discharge connection by means of a diaphragm or similar method of sealing will not be accepted as an equal to a metal to metal contact of the pump discharge and mating discharge connection specified and required. Approved pump manufacturers, if necessary to meet the above specification, shall provide a sliding guide bracket adapter. The design shall be such that the pumps shall be automatically connected to the discharge piping when lowered into place on the discharge connection. The pumps shall be easily removable for inspection or service, requiring no bolts, nuts, or fastenings to be removed for this purpose, and no need for personnel to enter the wet well.
B. The guide rail system shall be seamless, tubular, Schedule 40, Type 316 stainless steel suitably sized for the pumps furnished. The minimum rail size shall be two (2) inches in diameter.
C. Lower guide holders shall be integral to the pump discharge elbow connection.
D. Upper and intermediate guide brackets shall be Type 316 stainless steel mounted with Type 316 stainless steel anchor bolts or hardware. Provide intermediate guide brackets as recommended by the pump manufacturer.

2.9 PUMP LIFTING CABLES

A. Lift cables shall be of Type 316 stainless steel with a minimum diameter of 5/16- inch. Cables shall have adequate strength to lift the pump out of the wet well with a safety factor of three (3).
B. Lift cables shall be shackled to a yoke attached to the stator housing for removal and installation of the unit. A shackle shall be provided on the upper end of the cable to fasten the cable to a hook on the cable holder.

C. Provide five (5) feet of excess cable above the top of the wet well over to facilitate the removal of the pumping units.
D. Cable holders of Type 316 stainless steel shall be suitably sized to accommodate lift cables provided without deformation.
E. A cable holder shall be provided with an adequate number of hoods to secure float control cables and pump lifting system tethers/ chains.
F. The cable holder shall be suitable for wall or access door frame mounting. The cable holder shall be Type 316 stainless steel mounted with Type 316 stainless steel anchor bolts.

2.10 PUMP DISCHARGE ELBOW

A. The pump discharge fitting shall be a quick disconnect type compatible with the guide rail system and allowing the pump to be lifted from the wet well for service and lowered in place for pumping without unbolting any flange, lowering the liquid level, or requiring personnel to enter the wet well.
B. The entire weight of the pump shall rest on the discharge elbow; no part of the pump shall bear directly on the floor of the wet well sump. The pump discharge shall seal to the discharge elbow by a metal to metal contact. Sealing at the discharge elbow by means of a rubber diaphragm or O- ring will not be acceptable. Discharge elbows shall be fastened to J-type anchor bolts grouted in the bottom of the wet well. The length and diameter of anchor bolts shall be as required by the pump manufacturer.
C. Each anchor bolt shall be furnished with a flat washer, lock washer and nut. All materials for anchor bolts, washers and nuts shall be Type 316 stainless steel.

2.11 VALVES AND PIPING

A. Provide valves and piping as required on the Contract Drawings and specified in Section 33 31 23, “Sanitary Sewer Force Main Piping”.
B. The emergency pump bypass blind flange shall be compatible with the Owner’s equipment.

2.12 SHOP PAINT

A. Before exposure to weather and prior to shop painting, all surfaces shall be thoroughly cleaned dry and free from all mill-scale, rust, grease, dirt, and other foreign matter. All pumps and motors shall be shop coated with a corrosion resistant paint proven to withstand an environment of raw wastewater. All nameplates shall be properly protected during painting.
B. Gears, bearing surfaces, and other similar surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating as recommended by the manufacturer for the service to be provided. This coating shall be maintained as necessary to prevent corrosion during periods of storage and erection and shall be satisfactory to the Owner and Engineer up to the time of the final acceptance test.

2.13 TOOLS AND SPARE PARTS

A. One (1) set of all special tools required for normal operation and maintenance shall be provided. All such tools shall be furnished in a suitable steel tool chest complete with lock and duplicate keys. The manufacturer shall furnish the following spare parts for each pump supplied:

1. 1 - Upper bearing
2. 1 - Lower bearing
3. 1 - Set of upper and lower shaft seals
4. 1 - Set of o-rings or gaskets required for replacement of bearings and seals
5. 1 - Set of impeller wear ring
6. 1 - Shaft sleeve (if applicable)

B. Cable cap (if applicable) Spare parts shall be properly packaged and labeled for easy identification without opening the packaging and suitably protected for long term storage under humid conditions. Spare parts and tools shall be delivered to the Owner or Utility at or prior to the time of pump station start-up.

2.14 SOURCE QUALITY CONTROL

A. The pump manufacturer shall perform the following tests on each pump before shipment from the factory:

1. Impeller, motor rating, and electrical connections shall first be checked out for compliance to the customer's purchase order.
2. Perform motor and cable insulation test for moisture content or insulation defects.
3. Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.
4. The pump shall be run for 30 minutes submerged, a minimum of six feet under water.
5. After operational test (item 4), the insulation test (item 2) is to be performed again.
6. A written certified test report giving the above information shall be supplied with each pump at the time of shipment.
7. All end of pump cables will then be fitted with a rubber shrink fit boot to protect cable prior to electrical installation.

PART 3 - EXECUTION

3.1 GENERAL

All equipment shall be installed and mounted as shown in the drawings and in accordance with the manufacturer's recommendations. Piping shall be run as shown on the plans and be connected to all units in a manner to prevent leakage of water or sewage. Any departures from the locations or arrangements of units or connections thereto, as shown on the plans, shall be detailed by the Contractor and approval thereof obtained from the Engineer.

3.2 MOUNTING

The manufacturer shall provide cast-iron or galvanized steel fast-out fixtures which shall be permanently mounted in the wet well as shown on the plans. The fixtures shall incorporate stainless steel rails that will guide the pump into position. The pump shall be automatically connected to discharge piping by means of leakproof sealing system. The pumps shall be equipped with stainless steel lifting chains that have a normal working load of 300 percent of the pumps' operating weight. In addition, the pumps shall be equipped with an attachment system for attaching the hoist to the lifting chains. The system shall be the Flygt "Grip-Eye" system, or equal.

3.3 FLOAT CONTROLS

Install away from pump leads and out of the flow of influent sewage.

3.4 MANUFACTURER'S FIELD SERVICES

A. Provide two working days of mechanical start-up services. Operate the pump station a minimum of one day after all system checks to verify proper operation.
B. Provide one working day of initial instruction in one trip.

C. Provide one trip of one working day each of follow-up instruction.

END OF SECTION

DIVISION 23

230010	Basic Mechanical Requirements
230500	Common Work Results for HVAC
230517	Sleeves and Sleeve Seals for HVAC Piping
230518	Escutcheons for HVAC Piping
230529	Hangers and Supports for HVAC Piping and Equipment
230546	Coatings for HVAC
230553	Identification for HVAC Piping and Equipment
230593	Testing, Adjusting, and Balancing for HVAC
230719	HVAC Piping Insulation
232300	Refrigerant Piping
237313.13	Indoor, Basic Air-Handling Units
238126	Split-System Air-Conditioners

SECTION 230010 - BASIC MECHANICAL REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Basic Requirements: Requirements of the Contract Forms, Conditions of the Contract, Specifications, Drawings, and Addenda and Contract Modifications (the Contract Documents), apply to the requirements of each Section of Division 23.

B. Conflicts: Nothing contained in this Section shall be construed to conflict in any way with other provisions or requirements of the Contract documents. The intent is that this Section will take precedence. Where differences arise, the Architect shall decide which directions or instructions take precedence.

1.02 SUMMARY

A. General: Unless an item is specifically mentioned as being provided by others, the requirements of Division 23 Contract Documents shall be completed. The systems, equipment, devices, and accessories shall be installed, finished, tested and adjusted for continuous and proper operation. Any apparatus, material or device not shown on the Drawings but mentioned in these Specifications, or vice versa, or any incidental accessories necessary to make the project complete and operational in all respects, shall be furnished, delivered, and installed without additional expense to the Owner. Include all materials, equipment, supervision, operation, methods and labor for the fabrication, installation, start-up and tests necessary for complete and properly functioning systems.

1.03 APPLICABLE STANDARDS

A. Code Compliance: Refer to Division 1. As a minimum, unless otherwise indicated, comply with all rules, regulations, standards, codes, ordinances and laws of local, state and federal governments and the amendments and interpretation of such rules, regulations, standards, codes, ordinances and laws of local, state and federal governments by the authorities having lawful jurisdiction.

B. ADA: Comply with the requirements of the Americans with Disabilities Act (ADA).

C. Comply: With the International Fire Code (IFC) Standards and other Codes and Standards as adopted by the Local Authority having Jurisdiction.

D. Comply: With the International Fire Code (NFPA) Standards and other Codes and Standards indicated.

E. International Building Code 2018: Conform in strict compliance to the International Building Code (IBC) and the amendments which are enforced by the local authority having jurisdiction.

1. International Building Code – Mechanical (2018)
2. International Building Code – Plumbing (2018)
3. International Building Code – Fuel Gas (2018)
4. International Building Code – Energy Conservation (2018)
5. International Fire Code – Fire (2018)

F. NATIONAL FIRE PROTECTION (NFPA) Standards:

1. NFPA-1, Uniform Fire Code™, 2006 Revision
2. NFPA-10, Standard for Portable Fire Extinguishers, 2002 Revision
3. NFPA-13, Standard for the Installation of Sprinkler Systems, 2002 Revision
4. NFPA-14, Standard for the Installation of Standpipe and Hose Systems, 2003 Revision
5. NFPA-15, Standard for Water Spray Fixed Systems for Fire Protection, 2001 Revision
6. NFPA-20, Standard for the Installation of Stationary Pumps for Fire Protection, 2003 Revision
7. NFPA-70, National Electrical Code, 2005 Revision
8. NFPA-72, National Fire Alarm Code, 2002 Revision
9. NFPA-75, Standard for the Protection of Information Technology Equipment, 2003 Revision
10. NFPA-88A, Standard for Parking Structures, 2002 Revision
11. NFPA-90A, Standard for the Installation of Air Conditioning and Ventilation Systems, 2002 Revision
12. NFPA-90B, Standard for the Installation of Warm Air Heating and Air Conditioning Systems, 2006 Revision
13. NFPA-91, Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists and Noncombustible Particulate Solids, 2004 Revision
14. NFPA-92A, Recommended Practice for Smoke-Control Systems, 2006 Edition
15. NFPA-101B, Standard on Means of Egress for Buildings and Structures, 2002 Revision
16. NFPA-780, Installation of Lightning Protection Systems, 2004 Revision
17. NFPA-1963, Standard for Fire Hose Connections, 2003 Revision

G. Notification: Comply with all of the requirements of the Federal "Right-To-Know" Regulations and provide notification to all parties concerned as to the use of toxic substances.

H. Owner Design Guidelines: Comply with all the requirements of the latest Owner MEP Engineering Design Guidelines and the latest Owner Architectural Construction Standards.

1.04 DRAWINGS AND SPECIFICATIONS

A. Intent: The intent of the drawings and specifications is to establish minimum acceptable quality standards for materials, equipment and workmanship, and to provide operable mechanical systems complete in every respect.

B. Equipment Placement: The drawings are diagrammatic, intended to show general arrangement, capacity and location of various components, equipment and devices. Each location shall be

determined by reference to the general building plans and by actual measurements in the building as built. Reasonable changes in locations ordered by the Architect prior to the performance of the affected Work shall be provided at no additional cost to the Owner.

C. Drawing Scale: Due to the small scale of the drawings, and to unforeseen job conditions, all required offsets, transitions and fittings may not be shown but shall be provided at no additional cost.

D. Conflict: In the event of a conflict, the Architect will render an interpretation in accordance with the General Conditions.

1.05 DEFINITIONS

A. Provide/Install: The word "provide" shall mean furnish, install, connect, test, complete, and leave ready for operation. The word "install" where used in conjunction with equipment furnished by the Owner or under another contract shall mean mount, connect, complete, and leave ready for operation.

B. Concealed: The surface of insulated or non-insulated piping, ductwork or equipment is concealed from view when standing inside a finished room, such as inside a chase or above a ceiling.

C. Exposed: The surface of insulated or non-insulated piping, ductwork or equipment is seen from inside a finished room, such as inside an equipment or air handling unit room.

D. Protected: The surface of insulated or non-insulated piping, ductwork or equipment on the exterior of the building but protected from direct exposure to rain by an overhang, eave, in an unconditioned parking garage or building crawl space.

E. Unprotected: The surface of insulated or non-insulated piping, ductwork or equipment on the exterior of the building and exposed to rain.

F. Abbreviations: Abbreviations, where not defined in the Contract Documents, shall be interpreted to mean the normal construction industry terminology, as determined by the Architect. Plural words shall be interpreted as singular and singular words shall be interpreted as plural where applicable for context of the Contract Documents.

1.06 SHOP DRAWINGS

A. General: Refer to paragraph entitled "SUBMITTAL" in this section. Include the following data:

1. Shop Drawings:

a. Submit shop drawings for the following:

(1) Each piping system
(2) Coordination drawings

1.07 RECORD DRAWINGS

A. Production: Maintain one set of black or blue line on white project record "as-built" drawings at the site. At all times the set shall be accurate, clear, and complete, indicating the actual installation. Record drawings shall be updated weekly to record the present stage of progress. These drawings shall be available to the Architect at all times. Equipment schedules, control diagrams, sequences of operation shall also be updated.

B. Completion: Prior to substantial completion, transfer onto an unmarked second set of drawings all changes, marked in colored pencil, and submit them to the Architect. Upon completion of all punch lists, transfer all "As-Built" conditions to the AutoCAD drawing files, package three (3) print sets of full size drawings and two (2) CDs of the AutoCAD drawing files with associated reference files and submit them to the Architect for review and approval.

1.08 SUBMITTAL

A. General: The provisions of this section are supplemental to the requirements in Division 1, and only apply to the material and equipment covered in Division 23.

B. Time: Submit manufacturer's literature, performance data and installation instructions covered in each Section of Division 23 under an individual letter of transmittal within 30 days after Notice to Proceed unless otherwise indicated.

C. Submitter's Review: All items required for each section shall be reviewed before submittal. Submittal information for each item shall bear a review stamp of approval, indicating the name of the Contractor and Subcontractor (where applicable), the material suppliers, the initials of submitter and date checked. Responsibility for errors or omissions in submittals shall not be relieved by the Architect's review of submittals. Responsibility for submittals cannot be subrogated to material suppliers by Contractors or Subcontractors.

1. Review of the submittal data, whether indicated with "APPROVED" or with review comments, does not constitute authorization for or acceptance of a change in the contract price.

D. Architect's Review: The submittal data shall be reviewed only for general conformance with the design concept of the project and for general compliance with the Contract Documents. Any action indicated is subject to the requirements of the Contract Documents. Reviews of submittal data review shall not include quantities; dimensions (which shall be confirmed and correlated at the job site); fabrication processes; techniques of construction; and co-ordination of the submittal data with all other trades. Copies of the submittal data will be returned marked "ACCEPTED AS SUBMITTED", "ACCEPTED AS NOTED", "REVISED AS NOTED AND RESUBMIT", "REJECTED, REVISED AS NOTED AND RESUBMIT".

E. Submittal Items: Submittal items shall be inserted in a Technical Information Brochure. Mark the appropriate specification section or drawing reference number in the right hand corner of each item. All typewritten pages shall be on the product or equipment manufacturer's printed letterhead.

1. Manufacturer's Literature: Where indicated, include the manufacturer's printed literature. Literature shall be clearly marked to indicate the item intended for use.

2. Performance Data: Provide performance data, wiring and control diagrams and scale drawings which show that proposed equipment will fit into allotted space (indicate areas required for service access, connections, etc.), and other data required for the Architect to determine that the equipment complies with the Contract Documents. Where noted, performance data shall be certified by the manufacturer at the design rating points.

3. Installation Instructions: Where requested, each product submittal shall include the manufacturer's installation instructions. Generic installation instructions are not acceptable. Instructions shall be the same as those included with the product when it is shipped from the factory.

4. Written Operating Instructions: Instructions shall be the manufacturer's written operating instructions for the specified product. If the instructions cover more than one model or type of

product they shall be clearly marked to identify the instructions that cover the product delivered to the project. Operating Instructions shall be submitted immediately after the product or equipment submittal has been returned from the Architect marked "APPROVED" or "APPROVED AS NOTED".

5. Maintenance Instructions: Information shall be the manufacturer's printed instructions and parts lists for the equipment furnished. If the instructions cover more than one model or type of equipment they shall be marked to identify the instructions for the furnished product. Submit maintenance instructions immediately after the product or equipment submittal has been returned from the Architect marked "APPROVED" or "APPROVED AS NOTED".

F. Substitutions:

1. General: Refer to Division 1. Substitutions may be considered for any product or equipment of a manufacturer. See paragraph entitled "MANUFACTURER" in this Section. Any product or equipment may be submitted for review; however, only one substitution per item will be considered. If a substituted product or equipment item is rejected, provide the specified product or equipment.

    a. Submittal shall include the name of the material or equipment to be substituted, equipment model numbers, drawings, catalog cuts, performance and test data and any other data or information necessary for the Architect to determine that the equipment meets the specification requirements. If the Architect accepts any proposed substitutions, such acceptance will be set forth in writing.
    b. Substituted equipment with all accessories installed or optional equipment where permitted and found acceptable, must conform to space requirements. Substituted equipment that cannot meet space requirements, whether accepted or not, shall be replaced at no additional expense to the Owner. If the substituted item affects the work of other trades, the Request for Substitution form shall include a list of the necessary modifications.

2. Deviations: The Request for Substitution form shall include a complete list of deviations from the scheduled item stating both the features and functions of the scheduled item and the comparable features and functions of the proposed substitution.

    a. Any deviation not indicated in writing will be assumed to be identical to the specified item even if it is shown otherwise on the submittal data.
    b. If a deviation not listed is found anytime after review and acceptance by the Architect and that deviation, in the opinion of the Architect, renders the substituted item as unacceptable, the item shall be removed and replaced by the scheduled item at no additional cost to the Owner.
    c. The Architect shall retain the right to specify modifications to the substituted item, correcting or adjusting for the deviation, if the Architect deems it to be in the best interest of the Owner.

3. Scheduled Item: A scheduled item is a product or item of equipment indicated in the Contract Documents by manufacturer's name and model number identifying a single item. The manufacturer's trade name for a group of products that does not signify a single item including type, style, quality, performance, and sound rating shall not be classified as a scheduled item. Where more than one manufacturer and product model number are indicated, each shall be considered as a scheduled item.

4. Form: When a product or item of equipment is proposed as a substitution a "REQUEST FOR SUBSTITUTION" form shall be completed and submitted with the required data. A copy of the form is included after the end of this section.

5. Rejection: Substituted products or equipment will be rejected if, in the opinion of the Architect, the submittal does not meet any one of the following conditions or requirements:

   a. The submittal data is insufficient or not clearly identified. The Architect may or may not request additional information.
   b. The product or equipment will not fit the space available and still provide the manufacturers published service area requirements.
   c. The product or equipment submitted is not equivalent to or better than the specified item. Products or equipment of lesser quality may be considered provided an equitable financial rebate, satisfactory to the Architect, is to be returned to the Owner.
   d. The product or equipment submitted has less capacity, efficiency and safety provisions than the specified item.
   e. The product or equipment submitted does not have warranty, service and factory representation equivalent to that specified.
   f. The Owner prefers not to accept the submitted product.

G. Technical Information Brochure:

1. Binder: Include binders with the first submittal for the Technical Information Brochure. Each binder shall be size 3 inch, hardcover, 3-ring type for 8-1/2" X 11" sheets. Provide correct designation on outside cover and on spine of each binder, i.e., MECHANICAL SUBMITTAL DATA, MECHANICAL OPERATION INSTRUCTION and MECHANICAL MAINTENANCE INSTRUCTIONS.

2. Number: Submit not less than five sets of binders for each of the three mechanical brochures indicated above. Each set shall consist of a minimum of two binders for submittal data and 1 binder each for operating instructions and for maintenance instructions. Additional binders shall be submitted at the request of the Architect. One set of binders shall be retained by the Architect. Three sets of binders shall be maintained for the Owner and the remaining set shall become the property of the Engineer.

3. Index: First sheet in each brochure shall be a photocopy of the "Division 23 Index" of the specifications. Second sheet shall list the firm name, address, phone number, superintendent's name for the contractor and all major subcontractors and suppliers associated with the project.

4. Dividers: Provide reinforced separation sheets tabbed with the appropriate specifications Section reference number for each Section in which submittal data or operation and maintenance instructions is required.

5. Specifications: Insert a copy of the specifications for each Section and all addenda applicable to the Section between each of the Section dividers.

1.09 SHOP DRAWINGS FOR PIPING SYSTEMS

A. Requirements: Make Shop Drawings for piping systems at a minimum scale of 1/4 inch per foot in AutoCAD Version 2010 (or later) and print on reproducible transparencies to verify clearances and equipment locations. Show required maintenance and operational clearances. Identify Shop Drawings by project name and include names of Architect, Engineer, Contractors, Subcontractors and supplier, date in Shop Drawing title block. Number drawings sequentially and indicate:

1. Architectural and structural backgrounds with room names and numbers, etc., including but not limited to plans, sections, elevations, details, etc.
2. Fabrication and erection dimensions.
3. Arrangements and sectional views.
4. Necessary details, including complete information for making connections to equipment.
5. Descriptive names of equipment.
6. Modifications and options to standard equipment required by Contract Documents.

B. Stamp Area: Leave 4 inch by 2-1/2 inch blank area near title block for Architect's shop drawing stamp. The acceptance of a shop drawing by indicating "APPROVED" does not relieve the contractor from full compliance with the sizes and equipment connections shown on the contract documents unless the changes are specifically indicated on the shop drawing.

C. Reference Key: Indicate by cross-reference the Contract Drawings, notes, or Specification paragraph numbers where item(s) occur in the Contract Documents.

D. Additional Requirements: See specific Sections for additional requirements.

1.10 COORDINATION DRAWINGS

A. General: Provide detailed (minimum 1/4 inch per foot) scaled coordination drawings showing locations and positions of all architectural, structural, (FF&E) equipment, electrical, plumbing, fire protection and mechanical elements for all installations. Provide overlay drawings, prior to beginning work, indicating work in and above ceilings and in mechanical and electrical rooms with horizontal and vertical dimensions, to avoid interference with structural framing, ceilings, partitions and other services. Accommodate phasing and temporary conditions indicated on the contract drawings as necessary to complete the work without disruption to the Owner's use of the existing occupied areas of the building(s).

B. Coordination of Space: Coordinate use of project space and sequence of installation of mechanical and electrical work which is indicated diagrammatically on drawings. Follow routings shown for pipes, ducts and conduits as closely as practicable, with due allowance for available physical space; make runs parallel with lines of building. Utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
In finished areas except as otherwise shown, conceal pipes, ducts, and wiring in construction. Coordinate locations of fixtures and outlets with finish elements. Contractor shall provide background drawings showing partitions, ceiling heights, and structural framing locations and elevations, and existing obstructions. Contractor shall resolve major interferences at initial coordination meeting prior to production of coordination drawings.

C. Precedence of Services: In event of conflicts and interferences involving location and layout of work, use the following priority to resolve interferences:

1. Structure has highest priority.
2. Walls systems.
3. Ceiling grid/light fixtures.
4. Gravity drainage lines.
5. Large pipe mains.
6. Ductwork/diffusers, registers and grilles.
7. Sprinkler heads.
8. Small piping and tubing/electrical conduit.
9. Access panels.

D. Drawings shall be developed on AutoCAD Version 2010 (or later), and utilize AIA Standard layering conventions. At the completion of the project construction, the Contractor shall provide two (2) full-sized print sets and two (2) CDs of all drawing files with related reference files representing as-built installations for Architect review. Upon approval that the submitted information is complete, a similar submittal shall be provided to the Owner.

E. Stamp Area: Leave 4 inch by 2-1/2 inch blank area near title block for Architect's shop drawing stamp.

F. Reference Key: Indicate by cross-reference the Contract Drawings, notes, or Specification paragraph numbers where item(s) occur in the Contract Documents.

G. Additional Requirements: See specific Sections for additional requirements.

1.11 MANUFACTURER'S CHECKOUT

A. Start-up and Checkout: At completion of installation and prior to performance verification, a factory-trained representative of the manufacturer shall provide start-up and checkout service. After the performance verification the manufacturer's representative shall examine performance information and check the equipment in operation, and sign "Check-Out Memo" for the record. Submit a copy of Memo on each item of equipment where indicated in individual sections of these specifications for inclusion in each Technical Information Brochure. The "Check-Out Memo" shall be included with the performance verification data. Do not request "Instruction in Operation Conference" or request final inspection until Memos have been submitted and found acceptable.

1.12 INSTRUCTION TO OWNER

A. General: Instructions to the Owner shall be by competent representatives of the manufacturers involved, with time allowed for complete coverage of all operating procedures. Provide classroom instruction and field training in the design, operation and maintenance of the equipment and troubleshooting procedures. Explain the identification system, operational diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety, efficiency and similar provisions of the systems. On the date of substantial completion, turn over the prime responsibility for operation of the mechanical equipment and systems to the Owner's operating personnel.

B. Training Period: Unless otherwise indicated training periods shall encompass the following number of hours of classroom and hands-on instructions with a maximum period of 4 hours per day for either. Mixing classroom instructions and hands on training in the same day is unacceptable.

1. Training periods:
    a. 4 hours Classroom
    b. 6 hours Classroom
    c. 8 hours Classroom
    d. 12 hours Classroom
    e. 4 hours Hands-on
    f. 6 hours Hands-on
    g. 8 hours Hands-on
    h. 12 hours Hands-on

C. Scheduling: Submit any remaining required items for checking at least one week before final inspection of building. When submittal items are found acceptable, notify Owner, in writing, that an "Instruction in Operation Conference" may proceed. Conference will be scheduled by the Owner. After the conference, copies of a memo certifying that the "Instruction in Operation Conference" and

"Completed Demonstration" have been made will by signed by Owner and the instructors, and one copy will be inserted in each Technical Information Brochure.

1.13 ALLOWANCES

A. General: Division 1.

1.14 ALTERNATES

A. Refer to Division 1.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Specified Products: Manufacturer's names and product model numbers indicated on the drawings and in these specifications establish the type, style, quality, performance, and sound rating of the desired product. Listing of other manufacturers indicates that their equivalent products would be acceptable if they meet the specification requirements, the specific use and installation shown on the drawings, including space and clearance requirements, and the energy consumption and efficiency of the specified product. The listing of additional manufacturers in no way indicates that the manufacturer can provide an acceptable product.

B. Space Requirements: All manufactured products furnished on this project must have the required space and service areas indicated in the manufacturer's printed literature or shown on their shop drawing. When the manufacturer does not indicate the space required for servicing the equipment, the space shown on the drawings or as required by the Architect must be provided.

2.02 MATERIAL AND EQUIPMENT

A. General: Material and equipment used shall be produced by manufacturers regularly engaged in the production of similar items, and with a history of satisfactory use as judged by the Architect.

B. Specified Equipment: Equipment shall be the capacity and types indicated or shall be equivalent in the opinion of the Architect. Material and equipment furnished and installed shall be new, recently manufactured, of standard first grade quality and designed for the specific purpose. Equipment and material furnished shall be the manufacturer's standard item of production unless specified or required to be modified to suit job conditions. Sizes, material, finish, dimensions and the capacities for the specified application shall be published in catalogs for national distribution. Ratings and capacities shall be certified by a recognized rating bureau. Products shall be complete with accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

C. Compatibility: Material and equipment of one and the same kind, type or classification and used for identical or similar purposes shall be made by the same manufacturer. Where more than one choice is available, select the options which are compatible with other products already selected. Compatibility is a basic general requirement of product selection.

PART 3 - EXECUTION

3.01 WORKMANSHIP

A. General: The installation of materials and equipment shall be done in a neat, workmanlike and timely manner by an adequate number of craftsmen knowledgeable of the requirements of the Contract Documents. They shall be skilled in the methods and craftsmanship needed to produce a first-quality

installation. Personnel who install materials and equipment shall be qualified by training and experience to perform their assigned tasks. All materials and equipment shall be installed per the manufacturer's written requirements.

B. Acceptable Workmanship: Acceptable workmanship is characterized by first-quality appearance and function which conforms to applicable standards of building system construction and exhibits a degree of quality and proficiency which is judged by the Architect as equivalent or better than that ordinarily produced by qualified industry tradesmen.

C. Performance: Personnel shall not be used in the performance of the installation of material and equipment who, in the opinion of the Architect, are deemed to be careless or unqualified to perform the assigned tasks. Material and equipment installations not in compliance with the Contract Documents, or installed with substandard workmanship in the opinion of the Architect, shall be removed and reinstalled by qualified craftsmen at no change in the contract price.

3.02 AIR CONVEYANCE SYSTEM MECHANICAL CLEANING (NEW DUCT INSTALLATION)

A. General: The following criteria shall be used for the installation of all new HVAC air conveyance systems (ACS).

B. Qualifications: The enhanced air conveyance system cleaning procedures shall be performed by the Contractor. Microbiological analysis shall be performed by a firm which is acceptable to the Architect and which can demonstrate their ability to conduct the required analysis and reporting according to the NADCA and National Institute for Occupational Safety and Health (NIOSH) Methods. Submit for review and acceptance by the Architect the proposed procedure methodologies to be utilized, a listing of the proposed equipment to be used, and the proposed chemical agents to be used. A mock-up cleaning station and procedural presentation of cleaning process shall be performed at least three months prior to any ductwork installation for review by the Architect

C. Cleaning Procedure: All ductwork transported to the project shall be protected from weather and debris. Each HVAC duct section shall, prior to installation, be cleaned and disinfected at an approved cleaning station established on-site. Exhaust ductwork shall only require surface preparation from Note 1 below. All air distribution devices (diffusers, grilles, registers) including backpans of supply devices in critical areas, as defined by AIA, shall be decontaminated pursuant to Note 3 below. Four stages of ACS cleaning shall occur:

1. Surface dirt shall be removed by mechanical means, HEPA filtered vacuum and washed down with disposable cleaning cloths and 1:200 solution of trisodium phosphate (TSP) detergent.
2. Wipe down surface with TSP solution again, frequently disposing contaminated cloths.
3. Decontaminate duct section with a diluted solution (4-6 tablespoons per gallon or as directed by manufacturer for use) of chlorhexidine diacetate, similar to Aveco Company Nolvasan, for an appropriate contact period then wipe down and rinse with clean cloths per the application processes defined by manufacturer guidelines.
4. Cap ducts with a 6 mil. plastic fastened completely to duct openings.

D. Cleaning Station: Provide a conditioned, positively pressurized, ventilated temporary enclosure to perform duct cleaning procedures. Perform all work and use protective measures as prescribed by cleaning, decontaminating solution manufacturer guidelines.

E. Sterilization, Occupied Facility: After the ACS has been cleaned and installed, provide surface sampling shall be performed by firm to confirm absence of Aspergillis fumigatus. Upon installation of a zone, the entire ACS shall then be flooded with Bioclean, or another low-odor dual quaternary ammonium compound, EPA registered for use in HVAC systems, and acceptable to the Architect, to

sterilize the ACS. The ACS shall be tested in compliance with NADCA Level III sampling protocol until all air samples indicate a colony forming unit (CFU) count of 1.0 CFU per cubic meter or less; re-clean, re-sterilize and retest until all samples achieve results at or below this threshold level.

F. Reporting: Provide a complete report detailing the above processes. The report shall contain, as a minimum, the procedure methodologies utilized; the listing of the equipment used; a description of the portions of the ACS which were treated; the chemical agents which were used; the test results from the analysis.

3.03 CLEANING AND PROTECTION

A. General: Refer to Division 1.

B. Emergency Contacts: Prior to the beginning of the project, provide the Owner with a list of names, emergency telephone and beeper numbers of individuals who can be contacted during working and non-working hours, including weekends, for assistance throughout the warranty period if leaks, equipment failure or other damages occur. Update the list throughout installation and warranty to provide continuous availability of responsible parties to the Owner. If the Owner cannot contact the responsible party during an emergency situation, the Owner may effect emergency repairs through other means and may backcharge for the costs of repair material and labor incurred.

C. Emergency Contacts: Along with the operating and maintenance manual submittal, provide the Owner with a list of the names and emergency telephone and beeper numbers of individuals who can be contacted during working and non-working hours, including weekends, for assistance throughout the warranty period should leaks, equipment failure or other damage occur. Update the list throughout warranty to provide continuous availability of responsible parties to the Owner. If the Owner cannot contact the responsible party during an emergency situation, the Owner may effect emergency repairs through other means and may backcharge for the costs of repair material and labor incurred.

D. Housekeeping: Keep interiors of duct and pipe systems clean and free from dirt, rubbish and foreign matter. Close open ends of piping and ductwork at all times throughout the installation. Install 30% efficient filter media over each return air grille and open return duct opening; change media regularly during construction when dirty to keep duct interiors clean. Prevent dust, debris and foreign material from entering the piping and ductwork.

E. Equipment Protection: Protect fan motors, switches, equipment, fixtures, and other items from dirt, rubbish and foreign matter. Do not operate air-handling equipment if the building is not clean or if dust can enter the coils or the fan housings.

F. Equipment Cleaning: Thoroughly clean equipment and entire piping systems internally upon completion of installation and immediately prior to final acceptance. Open dirt pockets and strainers, blow down each piping system and clean strainer screens of accumulated debris. Remove accumulated dirt, scale, oil and foreign substances. Thoroughly wipe clean internal surfaces of ductwork and air handling units prior to request for substantial completion. (See para. 3.2 above.)

G. Building Cleanup: Remove debris, rubbish, leftover materials, tools and equipment from work areas and site. Clean tunnels and closed off spaces of packing boxes, wood frame members and other waste materials used in the installation. Final acceptance shall not be approved until site is cleaned.

H. Fixture Cleanup: Remove temporary labels, stickers, etc., from fixtures and equipment. Do not remove permanent nameplates, equipment model numbers, ratings, etc.

I. Filter Replacement: Provide filters, with the same efficiency rating as required for the final installation, for the protection of the air moving equipment and ductwork continuously throughout the construction phase. Provide a new set of clean filters for the test and balance of the air side equipment.

J. Protection of Finished Installation: Where installation is required in areas previously finished by other trades, protect the area from marring, soiling or other damage.

K. Air Handling Unit Operation During Construction Phase: Do not operate air handling equipment during building construction phase unless filter fabric is fastened to all duct systems' inlets and all specified and scheduled air filters are installed to minimize dirt entry into ductwork and air moving equipment. When running air handling units to dry out the building, control the building temperature to drop very slowly, and verify all HVAC insulation is completed and doors and windows are installed and closed, to prevent condensation of water from humid air on building interior surfaces, equipment, materials and ductwork.

3.04 CORRECTION OF WORK

A. General: At no additional cost to the Owner, rectify discrepancies between the actual installation and contract documents when in the opinion of the T&B Agency or the Architect the discrepancies will affect system balance and performance.

B. Drive Changes: Include the cost of all pulley, belt, and drive changes, as well as balancing dampers, valves and fittings, and access panels to achieve proper system balance recommended by the T&B Agency.

3.05 COORDINATION AND ASSISTANCE

A. General: Provide all labor, equipment, tools and material required to operate the equipment and systems necessary for the testing and balancing of the systems and for the adjustment, calibration or repair of all electric or pneumatic automated control devices and components. These services shall be available on each working day during the period of final testing and balancing.

B. Drawings and Specifications: Provide to the T&B Agency a complete set of project record drawings and specifications and an approved copy of all HVAC shop drawings and equipment submittals. The T&B Agency shall be informed of all changes made to the system during construction, including applicable change orders.

C. Coordination: Coordinate the work of all trades and equipment suppliers to complete the modifications recommended by the T&B Agency and accepted by the Architect. Cut or drill holes for the insertion of air measuring devices as directed for test purposes; repair to as-new condition, inserting plastic caps or covers to prevent air leakage. Repair or replace insulation and re-establish the integrity of the vapor retardant.

3.06 PREPARATIONS FOR PERFORMANCE VERIFICATION

A. Verification: Prior to commencement of the balancing by the T&B Agency, the Contractor shall verify in writing:

1. That air filters have been replaced and are in clean condition.

2. That linkages between dampers and their actuators are secure, non-overloading and non-binding.

3. That ductwork specialties are in their normal operating positions.

4. That fans are operating at the correct rotation and specified RPM.

5. That ductwork has been pressure tested and accepted.

6. That strainers have been removed, cleaned and replaced, and that temporary construction strainers have been removed.

7. That compression or expansion tanks have been inspected, are not air-bound or water-logged and are pre-charged, and that the piping systems have been completely vented and filled with water.

8. That air vents at coils and high points of the piping systems have been inspected and installed and operating freely.

9. That automatic valves, hand valves, and balancing valves have been placed in a fixed open position for full flow through all devices.

10. That linkages between valves and their actuators are secure, non-overloading and non-binding.

11. That pressures for hydronic reducing valves have been set.

12. That operating temperatures have been set for chillers, regulating valves, etc.

13. That pumps are operating at the correct rotation and specified horsepower.

14. That piping has been pressure tested and accepted and piping systems have been cleaned, flushed, sterilized and refilled with chemicals and prescribed treated water and vented.

15. That pressures for steam reducing valves have been set.

16. That operating temperatures have been set for boilers, regulating valves, etc.

17. That the operating safeties (thermal overloads, firestat/freezestats, smoke detectors, relief valves, etc.), are installed and fully functional.

18. That equipment has been lubricated and can be operated without damage.

19. That the systems are operational and complete.

20. That no latent residual work remains to be completed.

3.07 ACCEPTANCE TESTING PROCEDURE

A. General: Each HVAC system shall be tested to confirm proper operation and function in accordance with the construction documents and control sequence of operations.

B. The enclosed checklists shall be completed for each system and signed off by the mechanical sub-contractor project representative, then verified and signed-off by the mechanical sub-contractor project supervisor and the construction manager systems engineer. All checklists shall be incorporated into the project's close-out manuals submitted for Owner record.

C. On-site testing by the Architect and Engineer shall be performed at the discretion of the Architect/Engineer for any or all systems to confirm test results and system function.

D. The Contractor is responsible to provide adequate time in the completion of the construction to perform these system tests prior to final inspections in the affected areas/systems.

E. The Contractor is responsible for ensuring all required system tests are conducted successfully and recording associated test data and results.

F. The Contractor is responsible for contacting the Architect and Engineer at least two weeks prior to system test availability and schedule acceptable to Architect/Engineer for on-site testing.

G. If, in the Architect's and Engineer's opinion, the test results indicate that the systems' installation is not adequately complete for testing, the testing shall be re-scheduled and the Contractor shall be responsible to prepare for such re-test.

H. Prior to Owner occupancy, all system testing shall be completed and approved.

3.08 PROTECTION OF MATERIALS AND EQUIPMENT

A. Requirements: Do not store fiberglass insulation or any equipment within the building until it has been "dried in". If dry space is unavailable and the insulation and equipment must be installed or stored before the building is "dried in" and completely enclosed, provide polyethylene film cover for protection.

B. Replacement of Damaged Stored Material and Equipment: Any material and equipment that has been wet or otherwise damaged prior to installation, in the opinion of the Architect, shall be replaced with new material regardless of the condition of the material and equipment at the time of installation.

C. Repair of Damaged Installed Material and Equipment: After installation correct or repair dents, scratches and other visible blemishes. At the direction of Architect replace or repair to "as new" condition equipment which has been damaged during construction.

D. During construction, all piping and ductwork system openings shall be capped with at least two layers of polyethylene film, fastened tightly in place with banding material or foil tape until connection of the continuation of such piping or ductwork is occurring.

3.09 ASBESTOS AND HAZARDOUS MATERIALS

A. General: Should asbestos or other hazardous material be encountered during execution of the work, or should the presence of asbestos or other hazardous material be suspected, immediately notify the Architect and suspend work in the affected area. The Owner will initiate a study to determine if asbestos or other hazardous materials are present and will determine what action will be taken. Removal of asbestos or other hazardous materials will be done under a separate contract.

3.10 COORDINATION OF SERVICES

A. General: Coordinate interruption of services to Owner-occupied areas in writing in advance with the Architect. Shutdown time and duration of services interruption shall be decided by the Owner. Provide shutoff valves at points of interconnection to minimize downtime. Procedures incidental to the outage shall be prepared in advance to minimize downtime.

B. General: Coordinate interruption of existing services in writing at least 1 week in advance with the Architect. Shutdown time and duration of services interruption shall be decided by the Owner. Provide shutoff valves at points of interconnection to minimize downtime. Procedures incidental to the outage shall be prepared in advance to minimize downtime.

C. Fire Safety in Existing facilities: Do not decrease the fire rating of walls, partitions, ceilings, floors, doors or combinations thereof in adjacent areas or means of egress. Do not interrupt fire sprinkling or life safety systems without prior coordination with the Architect. Inform all necessary parties (Fire Department, Owner's insurance carrier, etc.) in advance, prior to and immediately after shutdown, disconnection or isolation of any portion of life safety or fire sprinkler system.

D. Protection of Facilities: Portions of the building may be operational during construction. Maintain operation of the equipment and systems whenever the installation interfaces with existing equipment or systems. Provide protection for the building, its contents and occupants wherever installation under the contract is performed. As necessary, move, store, and protect furniture, office fixtures and carpets. Provide acoustical isolation of the work area with temporary doors, partitions, etc., to allow normal work functions. Provide exhaust fans, temporary dust barrier partitions and any containment measures required to prevent dirt, dust or fumes from reaching adjacent occupied spaces as required by the Owner or Architect. Access to the building, including exit stairs, doors and passageways, and loading dock and other delivery areas shall be kept open and continuously accessible to the occupants. Workmen shall be confined to those areas directly involved in the project installation, and only during time periods indicated and approved by the Owner.

3.11 OWNERSHIP OF REMOVED EQUIPMENT

A. General: Construction materials and items of mechanical and electrical equipment which are removed and not reused shall be removed from the job-site unless indicated as to be retained for the Owner. Include rigging, removal and hauling cost, as well as any salvage value, in the contract.

3.12 CLEAN-UP

A. General: Debris and rubbish shall not be disposed into the Owner's containers.

END OF SECTION 230010

REQUEST FOR SUBSTITUTION (Must be Submitted Prior to Bid)

Project Name: _____ Location: _____

Date of Request: _____

Name of Party Requesting Substitute:

_____

Reason for Substitution Request:

_____

Drawing	Spec. Sect. No.	Paragraph	Specified Item	Manu	Model
_____	_____	_____	_____	_____	_____

Proposed Substitute: _____

Manufacturer and Model Number:

_____

Deviations from the Specified Item: (See paragraph entitled "Deviations".)

Reason for Substitution:

Changes to Other Systems to Permit Use of Proposed Substitute:
(List changes. Submit drawings if required for clarity.)

Technical Data to Support Request for Acceptance:
(List ASTM or other standards designations, testing laboratory reports, experience records, etc.)

Other Supporting Data:
(Submit brochures, samples, drawings, etc.)

REQUEST FOR SUBSTITUTION (Continued)

Certification: In making request for substitution, the party whose authorized signature appears below, certifies that all of the following statements are correct and are accepted without exception:

The proposed substitution has been personally investigated and is equal or superior in all significant respects to the product specified for the specific applications required;

The proposed substitution will be warranted under the same terms required for the specified product;

Coordination aspects necessitated by the proposed substitution will be accomplished in a complete and proper fashion by the party signing this form without any additional cost to the Owner; and

Claims against the Owner for additional costs related to the proposed substitution which subsequently become apparent after acceptance by the Architect are hereby waived.

Credit: If this substitution is acceptable the following credit shall be given to the Owner;

$_____

CERTIFICATION OF EQUIVALENT PERFORMANCE AND ASSUMPTION OF LIABILITY FOR EQUIVALENT PERFORMANCE

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Submitted by: _____
Signature Title

Typed Name: _____

Company: _____

Signature shall be by person having authority to legally bind his firm to the above terms. Failure to provide a legally binding signature will invalidate this request.

SECTION 230500 - COMMON WORK RESULTS FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Piping materials and installation instructions common to most piping systems.
2. Dielectric fittings.
3. Mechanical sleeve seals.
4. Sleeves.
5. Escutcheons.
6. Grout.
7. Equipment installation requirements common to equipment sections.
8. Painting and finishing.
9. Concrete bases.
10. Supports and anchorages.

1.3 DEFINITIONS

A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.

B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.

C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.

D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and chases.

E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

F. The following are industry abbreviations for plastic materials:

1. CPVC: Chlorinated polyvinyl chloride plastic.

2. PVC: Polyvinyl chloride plastic.

G. The following are industry abbreviations for rubber materials:

1. EPDM: Ethylene-propylene-diene terpolymer rubber.

2. NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. Product Data: For the following:

1. Dielectric fittings.

2. Mechanical sleeve seals.

3. Escutcheons.

B. Welding certificates.

1.5 QUALITY ASSURANCE

A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."

B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."

1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."

2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

C. Electrical Characteristics for HVAC Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

1.7 COORDINATION

A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for HVAC installations.

B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.

C. Coordinate requirements for access panels and doors for HVAC items requiring access that are concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section "Access Doors and Frames."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.

2.2 PIPE, TUBE, AND FITTINGS

A. Refer to individual Division 23 piping Sections for pipe, tube, and fitting materials and joining methods.

B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.3 JOINING MATERIALS

A. Refer to individual Division 23 piping Sections for special joining materials not listed below.

B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.

1. ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is indicated.

a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.

b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.

2. AWWA C110, rubber, flat face, 1/8 inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.

C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.

D. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.

E. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.

F. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.

G. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

H. Solvent Cements for Joining Plastic Piping:

1. CPVC Piping: ASTM F 493.

2. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

2.4 DIELECTRIC FITTINGS

A. Description: Combination fitting of copper alloy and ferrous materials with threaded, solder-joint, plain, or weld-neck end connections that match piping system materials.

B. Insulating Material: Suitable for system fluid, pressure, and temperature.

C. Dielectric Unions: Factory-fabricated, union assembly, for 250-psig minimum working pressure at 180 deg F.

1. Manufacturers:

a. Epco Sales, Inc.

b. Watts Industries, Inc.; Water Products Div.

c. Zurn Industries, Inc.; Wilkins Div.

D. Dielectric Flanges: Factory-fabricated, companion-flange assembly, for 150- or 300-psig minimum working pressure as required to suit system pressures.

1. Manufacturers:

a. Capitol Manufacturing Co.

b. Epco Sales, Inc.

c. Watts Industries, Inc.; Water Products Div.

E. Dielectric-Flange Kits: Companion-flange assembly for field assembly. Include flanges, full-face- or ring-type neoprene or phenolic gasket, phenolic or polyethylene bolt sleeves, phenolic washers, and steel backing washers.

1. Manufacturers:

a. Advance Products & Systems, Inc.

b. Calpico, Inc.

c. Central Plastics Company.

d. Pipeline Seal and Insulator, Inc.

2. Separate companion flanges and steel bolts and nuts shall have 150- or 300-psig minimum working pressure where required to suit system pressures.

F. Dielectric Couplings: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining; threaded ends; and 300-psig minimum working pressure at 225 deg F.

1. Manufacturers:

a. Calpico, Inc.

b. Lochinvar Corp.

G. Dielectric Nipples: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining; plain, threaded, or grooved ends; and 300-psig minimum working pressure at 225 deg F.

1. Manufacturers:

a. Perfection Corp.

b. Precision Plumbing Products, Inc.

c. Sioux Chief Manufacturing Co., Inc.

d. Victaulic Co. of America.

2.5 MECHANICAL SLEEVE SEALS

A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.

1. Manufacturers:

a. Advance Products & Systems, Inc.

b. Calpico, Inc.

c. Metraflex Co.

d. Pipeline Seal and Insulator, Inc.

2. Sealing Elements: EPDM or NBR interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.

3. Pressure Plates: Stainless steel. Include two for each sealing element.

4. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.6 SLEEVES

A. Galvanized-Steel Sheet: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.

B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

C. Cast Iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

D. Stack Sleeve Fittings: Manufactured, cast-iron sleeve with integral clamping flange. Include clamping ring and bolts and nuts for membrane flashing.

1. Underdeck Clamp: Clamping ring with set screws.

2.7 ESCUTCHEONS

A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, tube, and insulation of insulated piping and an OD that completely covers opening.

B. One-Piece, Deep-Pattern Type: Deep-drawn, box-shaped brass with polished chrome-plated finish.

C. One-Piece, Cast-Brass Type: With set screw.

1. Finish: Polished chrome-plated.

D. Split-Casting, Cast-Brass Type: With concealed hinge and set screw.

1. Finish: Polished chrome-plated.

E. One-Piece, Stamped-Steel Type: With set screw or spring clips and chrome-plated finish.

F. Split-Plate, Stamped-Steel Type: With concealed hinge, set screw or spring clips, and chrome-plated finish.

2.8 GROUT

A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.

1. Characteristics: Post-hardening, volume-adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.

2. Design Mix: 5000-psi, 28-day compressive strength.

3. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 PIPING SYSTEMS - COMMON REQUIREMENTS

A. Install piping according to the following requirements and Division 23 Sections specifying piping systems.

B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction

loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.

C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.

D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

F. Install piping to permit valve servicing.

G. Install piping at indicated slopes.

H. Install piping free of sags and bends.

I. Install fittings for changes in direction and branch connections.

J. Install piping to allow application of insulation.

K. Select system components with pressure rating equal to or greater than system operating pressure.

L. Install escutcheons for penetrations of walls, ceilings, and floors according to the following:

1. New Piping:

    a. Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.

    b. Insulated Piping: One-piece, stamped-steel type with spring clips.

    c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.

    d. Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece or split-casting, cast-brass type with polished chrome-plated finish.

2. Existing Piping: Use the following:

    a. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-casting, cast-brass type with chrome-plated finish.

    b. Bare Piping at Ceiling Penetrations in Finished Spaces: Split-casting, cast-brass type with chrome-plated finish.

M. Sleeves are not required for core-drilled holes.

N. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.

1. Cut sleeves to length for mounting flush with both surfaces.

    a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.

2. Install sleeves in new walls and slabs as new walls and slabs are constructed.

3. Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation. Use the following sleeve materials:

    a. Steel Pipe Sleeves: For pipes smaller than NPS 6.

    b. Steel Sheet Sleeves: For pipes NPS 6 and larger, penetrating gypsum-board partitions.

    c. Stack Sleeve Fittings: For pipes penetrating floors with membrane waterproofing. Secure flashing between clamping flanges. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor level. Refer to Division 07 Section "Sheet Metal Flashing and Trim" for flashing.

        1) Seal space outside of sleeve fittings with grout.

4. Except for underground wall penetrations, seal annular space between sleeve and pipe or pipe insulation, using joint sealants appropriate for size, depth, and location of joint. Refer to Division 07 Section "Joint Sealants" for materials and installation.

O. Aboveground, Exterior-Wall Pipe Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

1. Install steel pipe for sleeves smaller than 6 inches in diameter.

2. Install cast-iron "wall pipes" for sleeves 6 inches and larger in diameter.

3. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

P. Underground, Exterior-Wall Pipe Penetrations: Install cast-iron "wall pipes" for sleeves. Seal pipe penetrations using mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

1. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

Q. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Refer to Division 07 Section "Penetration Firestopping" for materials.

R. Verify final equipment locations for roughing-in.

S. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

3.2 PIPING JOINT CONSTRUCTION

A. Join pipe and fittings according to the following requirements and Division 23 Sections specifying piping systems.

B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

D. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.

E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.

F. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.

2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

G. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.

H. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

I. Plastic Piping Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.

2. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.

3. PVC Nonpressure Piping: Join according to ASTM D 2855.

J. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.

K. Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.

3.3 PIPING CONNECTIONS

A. Make connections according to the following, unless otherwise indicated:

1. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.

2. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.

3. Wet Piping Systems: Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals.

3.4 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

A. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.

B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.

C. Install HVAC equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.

D. Install equipment to allow right of way for piping installed at required slope.

3.5 PAINTING

A. Painting of HVAC systems, equipment, and components is specified in Division 09 Sections "Interior Painting" and "Exterior Painting."

B. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.6 CONCRETE BASES

A. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to seismic codes at Project.

1. Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.

2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of the base.

3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.

4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

5. Install anchor bolts to elevations required for proper attachment to supported equipment.

6. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

7. Use 3000-psi , 28-day compressive-strength concrete and reinforcement as specified in Division 03 Section "Cast-in-Place Concrete."

3.7 ERECTION OF METAL SUPPORTS AND ANCHORAGES

A. Refer to Division 5 Section "Metal Fabrications" for structural steel.

B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor HVAC materials and equipment.

C. Field Welding: Comply with AWS D1.1.

3.8 GROUTING

A. Mix and install grout for HVAC equipment base bearing surfaces, pump and other equipment base plates, and anchors.

B. Clean surfaces that will come into contact with grout.

C. Provide forms as required for placement of grout.

D. Avoid air entrapment during placement of grout.

E. Place grout, completely filling equipment bases.

F. Place grout on concrete bases and provide smooth bearing surface for equipment.

G. Place grout around anchors.

H. Cure placed grout.

END OF SECTION 230500

SECTION 230517 - SLEEVES AND SLEEVE SEALS FOR HVAC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Sleeves.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Grout.
5. Silicone sealants.

B. Related Requirements:

1. Section 078413 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Cast-Iron Pipe Sleeves: Cast or fabricated of cast or ductile iron and equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop collar.

B. Steel Pipe Sleeves: ASTM A53/A53M, Type E, Grade B, Schedule 40, **anti-corrosion coated or zinc coated**, with plain ends and integral welded waterstop collar.

C. Galvanized-Steel Sheet Sleeves: 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint.

D. PVC Pipe Sleeves: ASTM D1785, Schedule 40.

E. Molded-PVC Sleeves: With nailing flange for attaching to wooden forms.

F. Molded-PE or -PP Sleeves: Removable, tapered-cup shaped, and smooth outer surface with nailing flange for attaching to wooden forms.

2.2 SLEEVE-SEAL SYSTEMS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Advance Products & Systems, Inc.
2. CALPICO, Inc.
3. Metraflex Company (The).
4. Pipeline Seal and Insulator, Inc.
5. Proco Products, Inc.

B. Description:

1. Modular sealing-element unit, designed for field assembly, for filling annular space between piping and sleeve.
2. Designed to form a hydrostatic seal of 20-psig (137-kPa) minimum).
3. Sealing Elements: **EPDM-rubber** or **Nitrile (Buna N)** interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size.
4. Pressure Plates: **Stainless steel**.
5. Connecting Bolts and Nuts: **Stainless steel** of length required to secure pressure plates to sealing elements.

2.3 SLEEVE-SEAL FITTINGS

A. Description:

1. Manufactured plastic, sleeve-type, waterstop assembly, made for imbedding in concrete slab or wall.
2. Plastic or rubber waterstop collar with center opening to match piping OD.

2.4 GROUT

A. Description: Nonshrink, recommended for interior and exterior sealing openings in nonfire-rated walls or floors.

B. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

2.5 SILICONE SEALANTS

A. Silicone, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant, ASTM C920, Type S, Grade NS, Class 25, use NT.

B. Silicone, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade P, Class 25, Uses T and NT. Grade P Pourable (self-leveling) formulation is for opening in floors and other horizontal surfaces that are not fire rated.

C. Silicone Foam: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION

A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.

B. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to provide **1-inch (25-mm)** annular clear space between piping and concrete slabs and walls.

1. Sleeves are not required for core-drilled holes.

C. Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.

1. Permanent sleeves are not required for holes in slabs formed by molded-PE or -PP sleeves.
2. Cut sleeves to length for mounting flush with both surfaces.

a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas **2 inches (50 mm)** above finished floor level.

3. Using **grout or silicone sealant**, seal space outside of sleeves in slabs and walls without sleeve-seal system.

D. Install sleeves for pipes passing through interior partitions.

1. Cut sleeves to length for mounting flush with both surfaces.
2. Install sleeves that are large enough to provide 1/4-inch (6.4-mm) annular clear space between sleeve and pipe or pipe insulation.
3. Seal annular space between sleeve and piping or piping insulation; use sealants appropriate for size, depth, and location of joint.

E. Fire-Resistance-Rated Penetrations, Horizontal Assembly Penetrations, and Smoke-Barrier Penetrations: Maintain indicated fire or smoke rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with fire- and smoke-stop materials. Comply with requirements for firestopping and fill materials specified in Section 078413 "Penetration Firestopping."

3.2 STACK-SLEEVE-FITTING INSTALLATION

A. Install stack-sleeve fittings in new slabs as slabs are constructed.

1. Install fittings that are large enough to provide 1/4-inch (6.4-mm) annular clear space between sleeve and pipe or pipe insulation.
2. Secure flashing between clamping flanges for pipes penetrating floors with membrane waterproofing. Comply with requirements for flashing specified in Section 076200 "Sheet Metal Flashing and Trim."
3. Install section of cast-iron soil pipe to extend sleeve to 3 inches (76 mm) above finished floor level.
4. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.
5. Using waterproof silicone sealant, seal space between top hub of stack-sleeve fitting and pipe.

B. Fire-Resistance-Rated, Horizontal Assembly, and Smoke Barrier Penetrations: Maintain indicated fire or smoke rating of floors at pipe penetrations. Seal pipe penetrations with fire- and smoke-stop materials. Comply with requirements for firestopping specified in Section 078413 "Penetration Firestopping."

3.3 SLEEVE-SEAL-SYSTEM INSTALLATION

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at service piping entries into building.

B. Select type, size, and number of sealing elements required for piping material and size and for sleeve ID or hole size. Position piping in center of sleeve. Center piping in penetration, assemble sleeve-seal-system components, and install in annular space between piping and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make a watertight seal.

3.4 SLEEVE-SEAL-FITTING INSTALLATION

A. Install sleeve-seal fittings as new walls and slabs are constructed.

B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange to be centered in concrete slab or wall.

C. Secure nailing flanges to concrete forms.

D. Using **grout or silicone sealant**, seal space around outside of sleeve-seal fittings.

3.5 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Leak Test: After allowing for a full cure, test sleeves and sleeve seals for leaks. Repair leaks and retest until no leaks exist.

B. Sleeves and sleeve seals will be considered defective if they do not pass tests and inspections.

3.6 SLEEVE AND SLEEVE-SEAL SCHEDULE

A. Use sleeves and sleeve seals for the following piping-penetration applications:

1. Exterior Concrete Walls above Grade:
   a. Piping Smaller Than NPS 6: Galvanized-steel wall sleeves.
2. Interior Partitions:
   a. Piping Smaller Than NPS 6: PVC-pipe sleeves.

B.

END OF SECTION 230517

SECTION 230518 - ESCUTCHEONS FOR HVAC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Escutcheons.
2. Floor plates.

1.3 DEFINITIONS

A. Existing Piping to Remain: Existing piping that is not to be removed and that is not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 ESCUTCHEONS

A. One-Piece, Steel Type: With [**polished, chrome-plated**] finish and setscrew fastener.

B. One-Piece, Stainless-Steel Type: With polished stainless-steel finish.

C. One-Piece, Cast-Brass Type: With [**polished, chrome-plated**] finish and setscrew fastener.

D. One-Piece, Deep-Pattern Type: Deep-drawn, box-shaped [**brass**] with polished, chrome-plated finish and spring-clip fasteners.

E. One-Piece, Stamped-Steel Type: With polished, chrome-plated finish and spring-clip fasteners.

F. Split-Plate, Stamped-Steel Type: With polished, chrome-plated finish; [and spring-clip fasteners.

2.2 FLOOR PLATES

A. Split Floor Plates: Steel with concealed hinge.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install escutcheons for piping penetrations of walls, ceilings, and finished floors.

B. Install escutcheons with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.

1. Escutcheons for New Piping:

a. Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep pattern.
b. Chrome-Plated Piping: One-piece **split-plate steel** with polished, chrome-plated finish.
c. Insulated Piping: One-piece steel with [**polished, chrome-plated**] finish.
d. Insulated Piping: One-piece cast brass with [**polished brass**] finish.
e. Insulated Piping: One-piece stamped steel [**or split-plate, stamped steel with concealed hinge**] with polished, chrome-plated finish.
f. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece steel with p**olished, chrome-plated** finish.
g. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece stainless steel with polished stainless-steel finish.
h. Bare Piping in Unfinished Service Spaces: One-piece steel with polished, chrome-plated finish.
i. Bare Piping in Equipment Rooms: One-piece steel with polished, chrome-plated finish.

C. Install floor plates for piping penetrations of equipment-room floors.

D. Install floor plates with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.

1. New Piping: Split floor plate.

3.2 FIELD QUALITY CONTROL

A. Using new materials, replace broken and damaged escutcheons and floor plates.

END OF SECTION 230518

SECTION 230529 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Metal pipe hangers and supports.
2. Trapeze pipe hangers.
3. Fiberglass pipe hangers.
4. Metal framing systems.
5. Fiberglass strut systems.
6. Thermal-hanger shield inserts.
7. Fastener systems.
8. Pipe stands.
9. Equipment supports.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for structural-steel shapes and plates for trapeze hangers for pipe and equipment supports.
2. Section 230516 "Expansion Fittings and Loops for HVAC Piping" for pipe guides and anchors.
3. **Section 230548.13 "Vibration Controls for HVAC"** for vibration isolation devices.
4. **Section 233113 "Metal Ducts" and Section 233116 "Nonmetal Ducts"** for duct hangers and supports.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: fabrication and installation details and include calculations for the following; include Product Data for components:

1. Trapeze pipe hangers.
2. Metal framing systems.
3. Fiberglass strut systems.
4. Pipe stands.
5. Equipment supports.

C. Delegated-Design Submittal: For trapeze hangers indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Detail fabrication and assembly of trapeze hangers.
2. Include design calculations for designing trapeze hangers.

1.4 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.5 QUALITY ASSURANCE

A. Structural-Steel Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code, Section IX.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design trapeze pipe hangers and equipment supports.

B. Structural Performance: Hangers and supports for HVAC piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to [**ASCE/SEI 7**]

1. Design supports for multiple pipes, including pipe stands, capable of supporting combined weight of supported systems, system contents, and test water.
2. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
3. Design seismic-restraint hangers and supports for piping and equipment[**and obtain approval from authorities having jurisdiction**].

2.2 METAL PIPE HANGERS AND SUPPORTS

A. Copper Pipe and Tube Hangers:

1. Description: MSS SP-58, Types 1 through 58, copper-plated steel, factory-fabricated components.
2. Hanger Rods: Continuous-thread rod, nuts, and washer made of **copper-plated steel**

2.3 TRAPEZE PIPE HANGERS

A. Description: MSS SP-58, Type 59, shop- or field-fabricated pipe-support assembly made from structural carbon-steel shapes with MSS SP-58 carbon-steel hanger rods, nuts, saddles, and U-bolts.

2.4 PLASTIC PIPE HANGERS

A. Description: Similar to MSS SP-58, Types 1 through 58, factory-fabricated steel pipe hanger except hanger is made of plastic.

B. Hanger Rods: Continuous-thread rod, nuts, and washer made of [**galvanized steel**] [**stainless steel**] <**Insert material**>.

C. Flammability: ASTM D635, ASTM E84, and UL 94.

2.5 PIPE STANDS

A. General Requirements for Pipe Stands: Shop- or field-fabricated assemblies made of manufactured corrosion-resistant components to support roof-mounted piping.

B. Compact Pipe Stand:
1. Description: Single base unit with integral-rod roller, pipe clamps, or V-shaped cradle to support pipe, for roof installation without membrane penetration.
2. Base: Single, vulcanized rubber, molded polypropylene, or polycarbonate.
3. Hardware: Galvanized steel or polycarbonate.
4. Accessories: Protection pads.

C. Low-Profile, Single Base, Single-Pipe Stand:
1. Description: Single base with vertical and horizontal members, and pipe support, for roof installation without membrane protection.
2. Base: Single, vulcanized rubber, molded polypropylene, or polycarbonate.
3. Vertical Members: Two, [**galvanized**] steel, continuous-thread 1/2-inch (12-mm) rods.
4. Horizontal Member: Adjustable horizontal, [**galvanized**] -steel pipe support channels.
5. Pipe Supports: **Strut clamps**
6. Hardware: [**Galvanized**] steel.
7. Accessories: Protection pads.
8. Height: [**12 inches (300 mm) above roof**]

D. Curb-Mounted-Type Pipe Stands: Shop- or field-fabricated pipe supports made from structural-steel shapes, continuous-thread rods, and rollers, for mounting on permanent stationary roof curb.

2.6 EQUIPMENT SUPPORTS

A. Description: Welded, shop- or field-fabricated equipment support made from structural carbon-steel shapes.

2.7 MATERIALS

A. Aluminum: ASTM B221 (ASTM B221M).

B. Carbon Steel: ASTM A1011/A1011M.

C. Structural Steel: ASTM A36/A36M, carbon-steel plates, shapes, and bars; galvanized.

D. Stainless Steel: ASTM A240/A240M.

E. Threaded Rods: Continuously threaded. Zinc-plated or galvanized steel for indoor applications and stainless steel for outdoor applications. Mating nuts and washers of similar materials as rods.

F. Grout: ASTM C1107/C1107M, factory-mixed and -packaged, dry, hydraulic-cement, nonshrink and nonmetallic grout; suitable for interior and exterior applications.

1. Properties: Nonstaining, noncorrosive, and nongaseous.
2. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.

B. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus [**200 lb (90 kg)**].

3.2 HANGER AND SUPPORT INSTALLATION

A. Metal Pipe-Hanger Installation: Comply with MSS SP-58. Install hangers, supports, clamps, and attachments as required to properly support piping from the building structure.

B. Metal Trapeze Pipe-Hanger Installation: Comply with MSS SP-58. Arrange for grouping of parallel runs of horizontal piping, and support together on field-fabricated trapeze pipe hangers.

1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified for individual pipe hangers.
2. Field fabricate from ASTM A36/A36M, carbon-steel shapes selected for loads being supported. Weld steel according to AWS D1.1/D1.1M.

C. Fiberglass Pipe-Hanger Installation: Comply with applicable portions of MSS SP-58. Install hangers and attachments as required to properly support piping from building structure.

D. **Metal** framing System Installation: Arrange for grouping of parallel runs of piping, and support together on field-assembled strut systems.

E. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.

F. Fastener System Installation:

1. Install powder-actuated fasteners for use in lightweight concrete or concrete slabs less than 4 inches (100 mm) thick in concrete after concrete is placed and completely cured. Use operators that are licensed by powder-actuated tool manufacturer. Install fasteners according to powder-actuated tool manufacturer's operating manual.
2. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.

G. Pipe Stand Installation:

1. Pipe Stand Types except Curb-Mounted Type: Assemble components and mount on smooth roof surface. Do not penetrate roof membrane.
2. Curb-Mounted-Type Pipe Stands: Assemble components or fabricate pipe stand and mount on permanent, stationary roof curb. See Section 077200 "Roof Accessories" for curbs.

H. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.

I. Equipment Support Installation: Fabricate from welded-structural-steel shapes.

J. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.

K. Install lateral bracing with pipe hangers and supports to prevent swaying.

L. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, [**NPS 2-1/2 (DN 65)**] <**4”**> and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.

M. Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.

N. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

O. Insulated Piping:

1. Attach clamps and spacers to piping.

a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.

b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.

2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.

a. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 (DN 100) and larger if pipe is installed on rollers.

3. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.

a. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 (DN 100) and larger if pipe is installed on rollers.

4. Shield Dimensions for Pipe: Not less than the following:

a. NPS 1/4 to NPS 3-1/2 (DN 8 to DN 90): 12 inches (305 mm) long and 0.048 inch (1.22 mm) thick.
b. NPS 4 (DN 100): 12 inches (305 mm) long and 0.06 inch (1.52 mm) thick.
c. NPS 5 and NPS 6 (DN 125 and DN 150): 18 inches (457 mm) long and 0.06 inch (1.52 mm) thick.
d. NPS 8 to NPS 14 (DN 200 to DN 350): 24 inches (610 mm) long and 0.075 inch (1.91 mm) thick.
e. NPS 16 to NPS 24 (DN 400 to DN 600): 24 inches (610 mm) long and 0.105 inch (2.67 mm) thick.

5. Pipes NPS 8 (DN 200) and Larger: Include wood or reinforced calcium-silicate-insulation inserts of length at least as long as protective shield.
6. Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

3.3 EQUIPMENT SUPPORTS

A. Fabricate structural-steel stands to suspend equipment from structure overhead or to support equipment above floor.

B. Grouting: Place grout under supports for equipment and make bearing surface smooth.

C. Provide lateral bracing, to prevent swaying, for equipment supports.

3.4 ADJUSTING

A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.

B. Trim excess length of continuous-thread hanger and support rods to 1**-1/2 inches (40 mm)**] .

3.5 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

1. Apply paint by brush or spray to provide a minimum dry film thickness of 2.0 mils (0.05 mm).

B. Touchup: Comply with requirements in architectural plans and specifications for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A780/A780M.

3.6 HANGER AND SUPPORT SCHEDULE

A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.

B. Comply with MSS SP-58 for pipe-hanger selections and applications that are not specified in piping system Sections.

C. Use hangers and supports with galvanized metallic coatings for piping and equipment that will not have field-applied finish.

D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.

E. Use carbon-steel **pipe hangers and supports** and attachments for general service applications.

F. Use **stainless-steel pipe hangers** and **stainless-steel or corrosion-resistant** attachments for hostile environment applications.

G. Use copper-plated pipe hangers and [**copper**] attachments for copper piping and tubing.

H. Use padded hangers for piping that is subject to scratching.

I. Use thermal-hanger shield inserts for insulated piping and tubing.

J. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated, stationary pipes NPS 1/2 to NPS 30 (DN 15 to DN 750).
2. Yoke-Type Pipe Clamps (MSS Type 2): For suspension of up to 1050 deg F (566 deg C), pipes NPS 4 to NPS 24 (DN 100 to DN 600), requiring up to 4 inches (100 mm) of insulation.

3. Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes NPS 3/4 to NPS 36 (DN 20 to DN 900), requiring clamp flexibility and up to 4 inches (100 mm) of insulation.
4. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes NPS 1/2 to NPS 24 (DN 15 to DN 600) if little or no insulation is required.
5. Pipe Hangers (MSS Type 5): For suspension of pipes NPS 1/2 to NPS 4 (DN 15 to DN 100), to allow off-center closure for hanger installation before pipe erection.
6. Adjustable, Swivel Split- or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated, stationary pipes NPS 3/4 to NPS 8 (DN 20 to DN 200).
7. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8 (DN 15 to DN 200).
8. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8 (DN 15 to DN 200).
9. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8 (DN 15 to DN 200).
10. Split Pipe Ring with or without Turnbuckle Hangers (MSS Type 11): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 8 (DN 10 to DN 200).
11. Extension Hinged or Two-Bolt Split Pipe Clamps (MSS Type 12): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 3 (DN 10 to DN 80).
12. U-Bolts (MSS Type 24): For support of heavy pipes NPS 1/2 to NPS 30 (DN 15 to DN 750).
13. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
14. Pipe Saddle Supports (MSS Type 36): For support of pipes NPS 4 to NPS 36 (DN 100 to DN 900), with steel-pipe base stanchion support and cast-iron floor flange or carbon-steel plate.
15. Pipe Stanchion Saddles (MSS Type 37): For support of pipes NPS 4 to NPS 36 (DN 100 to DN 900), with steel-pipe base stanchion support and cast-iron floor flange or carbon-steel plate, and with U-bolt to retain pipe.
16. Adjustable Pipe Saddle Supports (MSS Type 38): For stanchion-type support for pipes NPS 2-1/2 to NPS 36 (DN 65 to DN 900) if vertical adjustment is required, with steel-pipe base stanchion support and cast-iron floor flange.
17. Single-Pipe Rolls (MSS Type 41): For suspension of pipes NPS 1 to NPS 30 (DN 25 to DN 750), from two rods if longitudinal movement caused by expansion and contraction might occur.
18. Adjustable Roller Hangers (MSS Type 43): For suspension of pipes NPS 2-1/2 to NPS 24 (DN 65 to DN 600), from single rod if horizontal movement caused by expansion and contraction might occur.
19. Complete Pipe Rolls (MSS Type 44): For support of pipes NPS 2 to NPS 42 (DN 50 to DN 1050) if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is unnecessary.
20. Pipe Roll and Plate Units (MSS Type 45): For support of pipes NPS 2 to NPS 24 (DN 50 to DN 600) if small horizontal movement caused by expansion and contraction might occur and vertical adjustment is unnecessary.
21. Adjustable Pipe Roll and Base Units (MSS Type 46): For support of pipes NPS 2 to NPS 30 (DN 50 to DN 750) if vertical and lateral adjustment during installation might be required in addition to expansion and contraction.

K. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers NPS 3/4 to NPS 24 (DN 24 to DN 600).
2. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers NPS 3/4 to NPS 24 (DN 20 to DN 600) if longer ends are required for riser clamps.

L. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches (150 mm) for heavy loads.
2. Steel Clevises (MSS Type 14): For 120 to 450 deg F (49 to 232 deg C) piping installations.
3. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
4. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
5. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450 deg F (49 to 232 deg C) piping installations.

M. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
2. Top-Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joist construction, to attach to top flange of structural shape.
3. Side-Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
4. Center-Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
5. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
6. C-Clamps (MSS Type 23): For structural shapes.
7. Top-Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
8. Side-Beam Clamps (MSS Type 27): For bottom of steel I-beams.
9. Steel-Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
10. Linked-Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.
11. Malleable-Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
12. Welded-Steel Brackets: For support of pipes from below or for suspending from above by using clip and rod. Use one of the following for indicated loads:

    a. Light (MSS Type 31): 750 lb (340 kg).
    b. Medium (MSS Type 32): 1500 lb (680 kg).
    c. Heavy (MSS Type 33): 3000 lb (1360 kg).

13. Side-Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
14. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
15. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.

N. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Steel-Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
3. Thermal-Hanger Shield Inserts: For supporting insulated pipe.

O. Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Restraint-Control Devices (MSS Type 47): Where indicated to control piping movement.
2. Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed 1-1/4 inches (32 mm).
3. Spring-Cushion Roll Hangers (MSS Type 49): For equipping Type 41, roll hanger with springs.
4. Spring Sway Braces (MSS Type 50): To retard sway, shock, vibration, or thermal expansion in piping systems.
5. Variable-Spring Hangers (MSS Type 51): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from hanger.
6. Variable-Spring Base Supports (MSS Type 52): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from base support.
7. Variable-Spring Trapeze Hangers (MSS Type 53): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from trapeze support.
8. Constant Supports: For critical piping stress and if necessary to avoid transfer of stress from one support to another support, critical terminal, or connected equipment. Include auxiliary stops for erection, hydrostatic test, and load-adjustment capability. These supports include the following types:

    a. Horizontal (MSS Type 54): Mounted horizontally.
    b. Vertical (MSS Type 55): Mounted vertically.
    c. Trapeze (MSS Type 56): Two vertical-type supports and one trapeze member.

P. Comply with MSS SP-58 for trapeze pipe-hanger selections and applications that are not specified in piping system Sections.

Q. Comply with MFMA-103 for metal framing system selections and applications that are not specified in piping system Sections.

R. Use **mechanical-expansion anchors** instead of building attachments where required in concrete construction.

END OF SECTION 230529

SECTION 230546 - COATINGS FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. General provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes application of coating systems on internal HVAC components and external equipment surfaces, including the following systems:

1. Bake-cured corrosion-resistant coating systems.
2. Air-dried corrosion-resistant coating systems.

1.3 DEFINITIONS

A. Salt Water Acetic Acid Test (SWAAT): A salt fog-spray test of corrosion resistance performed in accordance with ASTM G85, Annex 3.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include Safety Data Sheets, preparation requirements, and application instructions.

1.5 INFORMATIONAL SUBMITTALS

A. Source Quality-Control Reports:

1. Certification of coating material testing.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in clean, dry, well-ventilated areas with ambient temperatures continuously maintained between 50 and 75 deg F (10 and 24 deg C).

1. Keep containers out of direct sunlight; avoid excessive heat and keep from freezing.
2. Maintain containers in clean condition, free of foreign materials and residue.
3. Remove rags and waste from storage areas daily.

1.8 CONDITIONS FOR COATING APPLICATION

A. Comply with manufacturer's recommendations.

B. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between [**50 and 75 deg F (10 and 24 deg C)**]

C. Do not apply coatings when temperature of surfaces to be coated or surrounding air temperatures are below 45 deg F (7 deg C).

D. Do not apply coatings when relative humidity exceeds 85 percent or at temperatures of less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 CORROSION-RESISTANT COATING SYSTEMS, GENERAL

A. Material Compatibility:

1. Provide materials for application within each coating system that are compatible with one another and with metal substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coating material in coating system, submit compatibility certification from manufacturer of each coating product that products are compatible with substrate base material and with substrate-coating products applied as earlier coats.
3. Products shall be of same manufacturer for each coat in a coating system.

2.2 BAKE-CURED CORROSION-RESISTANT COATING SYSTEMS

A. Base Coat Performance Requirements:

1. Corrosion Resistance: ASTM B117: 4000 hours.
2. Cross-Hatch Adhesion: ASTM D3359: **5B** .
3. Cyclic Weathering: ISO 12944-9, **4200** hours.
4. Mandrel Flexibility: ASTM D522/D522M: 1**/4 inch** without cracking or delamination of film after full cure.
5. Adhesion - Elcometer: ASTM D4541: **1100 psi**.
6. pH Range: 14-Day Liquid Spot Test: **3 to 12**.
7. Dry Heat Resistance: ASTM D2485: **320 deg F** maximum.
8. Dry Film Thickness: **0.6 to 1.5 mils**.
9. Heat-Transfer Reduction: **1 percent maximum**
10. Hardness: ASTM D3363 Pencil Test: **5H-6H**.

B. Acceptable for Equipment Serving Food-Preparation Areas: In accordance with **NSF 51 or 21 CFR 175.300**.

C. Top Coat Performance Requirements: Provide product with UV shielding properties, color stability, and maintenance of manufacturer's standard sheen, after exposure to outdoor conditions.

D. Baked-Cured, Immersion-Applied Coating System.

2.3 SOURCE QUALITY CONTROL

A. Certification of Coating Material Testing: Submit manufacturer's test report of corrosion-resistance performance testing, as performed by a nationally recognized testing laboratory.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with coating manufacturer's requirements and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions applicable to substrates and coating systems indicated.

1. Thinning: Thin coating material with manufacturer's recommended thinning products when recommended or permitted by coating system manufacturer.

B. Comply with coating system manufacturer's recommendations to clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

3.3 APPLICATION

A. Verify with coating manufacturer whether coatings required must be applied and cured in factory-certified application shop.

B. Apply coating systems with equipment designed to deposit coating of specified uniform thickness over HVAC components, in complex, three-dimensional geometries.

1. Apply coatings with manufacturer-recommended tools and techniques suited for specified coating system and each coated HVAC component.
2. Do not apply coatings over labels or equipment name, identification, performance rating, or nomenclature plates.

C. Perform inspection and coating system manufacturer's recommended tests to verify coating integrity and thickness. Where coating was damaged by testing, repair damage in accordance with coating system manufacturer's written recommendations.

END OF SECTION 230546

SECTION 230553 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Equipment labels.
2. Warning signs and labels.
3. Pipe labels.
4. Duct labels.
5. Stencils.
6. Valve tags.
7. Warning tags.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For color, letter style, and graphic representation required for each identification material and device.

C. Equipment Label Schedule: Include a listing of all equipment to be labeled with the proposed content for each label.

D. Valve numbering scheme.

E. Valve Schedules: For each piping system to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 EQUIPMENT LABELS

A. Metal Labels for Equipment:

1. Material and Thickness: **anodized aluminum, 0.032-inch (0.8-mm)**] minimum thickness, and having predrilled or stamped holes for attachment hardware.
2. Letter Color: **White**.
3. Background Color: **Black**.

4. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
5. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.
6. Fasteners: Stainless-steel **rivets**.
7. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

B. Plastic Labels for Equipment:
1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, **1/8 inch** thick, and having predrilled holes for attachment hardware.
2. Letter Color: **White**
3. Background Color: **Black**.
4. Maximum Temperature: Able to withstand temperatures up to 160 deg F
5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch
6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.
7. Fasteners: Stainless-steel **rivets**.
8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

C. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.

D. Equipment Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch (A4) bond paper. Tabulate equipment identification number, and identify Drawing numbers where equipment is indicated (plans, details, and schedules) and the Specification Section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

2.2 WARNING SIGNS AND LABELS

A. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, **1/8 inch** thick, and having predrilled holes for attachment hardware.

B. Letter Color: **Red**.

C. Background Color: **Yellow**

D. Maximum Temperature: Able to withstand temperatures up to 160 deg F.

E. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch .

F. Minimum Letter Size: 1/4 inch or name of units if viewing distance is less than 24 inches , 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater

viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.

G. Fasteners: Stainless-steel **rivets**.

H. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

I. Label Content: Include caution and warning information plus emergency notification instructions.

2.3 PIPE LABELS

A. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction according to ASME A13.1.

B. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to **partially cover** circumference of pipe and to attach to pipe without fasteners or adhesive.

C. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.

D. Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings; also include pipe size and an arrow indicating flow direction.

1. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.
2. Lettering Size: **At least 1/2 inch (13 mm) for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances**.

2.4 DUCT LABELS

A. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, **1/8 inch** thick, and having predrilled holes for attachment hardware.

B. Letter Color: **Black**

C. Background Color: **White**.

D. Maximum Temperature: Able to withstand temperatures up to 160 deg F

E. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch

F. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches , and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-quarters the size of principal lettering.

G. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

H. Duct Label Contents: Include identification of duct service using same designations or abbreviations as used on Drawings; also include duct size and an arrow indicating flow direction.

1. Flow-Direction Arrows: Integral with duct system service lettering to accommodate both directions or as separate unit on each duct label to indicate flow direction.

2.5 STENCILS

A. Stencils for Piping:

1. Lettering Size: **At least 1/2 inch for viewing distances up to 72 inches and proportionately larger lettering for greater viewing distances**].
2. Stencil Material: **Fiberboard or metal**.
3. Stencil Paint: Exterior, gloss, **acrylic enamel**in colors complying with recommendations in ASME A13.1 unless otherwise indicated. Paint may be in pressurized spray-can form.
4. Identification Paint: Exterior, **acrylic enamel** in colors according to ASME A13.1 unless otherwise indicated. Paint may be in pressurized spray-can form.

B. Stencils for Ducts:
1. Lettering Size: Minimum letter height of 1-1/4 inches (32 mm) for viewing distances up to 15 feet (4-1/2 m) and proportionately larger lettering for greater viewing distances.
2. Stencil Material: **Fiberboard or metal.**
3. Stencil Paint: Exterior, gloss, **acrylic enamel**. Paint may be in pressurized spray-can form.
4. Identification Paint: Exterior, **acrylic enamel**. Paint may be in pressurized spray-can form.

C. Stencils for Access Panels and Door Labels, Equipment Labels, and Similar Operational Instructions:
1. Lettering Size: Minimum letter height of 1/2 inch (13 mm) for viewing distances up to 72 inches (1830 mm) and proportionately larger lettering for greater viewing distances.
2. Stencil Material: **Fiberboard or metal**.
3. Stencil Paint: Exterior, gloss, **acrylic enamel**. Paint may be in pressurized spray-can form.
4. Identification Paint: Exterior, **acrylic enamel**. Paint may be in pressurized spray-can form.

2.6 VALVE TAGS

A. Description: Stamped or engraved with 1/4-inch (6.4-mm) letters for piping system abbreviation and 1/2-inch (13-mm) numbers.

1. Tag Material: **Brass, 0.032-inch** minimum thickness, and having predrilled or stamped holes for attachment hardware.
2. Fasteners: Brass **beaded chain**.

B. Valve Schedules: For each piping system, on 8-1/2-by-11-inch (A4) bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or

space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.

1. Valve-tag schedule shall be included in operation and maintenance data.

2.7 WARNING TAGS

A. Description: Preprinted or partially preprinted accident-prevention tags of plasticized card stock with matte finish suitable for writing.

1. Size: **3 by 5-1/4 inches minimum Approximately 4 by 7 inches**.
2. Fasteners: **Brass grommet and wire**.
3. Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."
4. Color: Safety-yellow background with black lettering.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

3.2 GENERAL INSTALLATION REQUIREMENTS

A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

B. Coordinate installation of identifying devices with locations of access panels and doors.

C. Install identifying devices before installing acoustical ceilings and similar concealment.

3.3 EQUIPMENT LABEL INSTALLATION

A. Install or permanently fasten labels on each major item of mechanical equipment.

B. Locate equipment labels where accessible and visible.

3.4 PIPE LABEL INSTALLATION

A. Piping Color Coding: Painting of piping is specified in “**Section 099123 Interior Painting**”

B. Stenciled Pipe Label Option: Stenciled labels may be provided instead of manufactured pipe labels, at Installer's option. Install stenciled pipe labels, complying with ASME A13.1,[**with painted, color-coded bands or rectangles**] on each piping system.

1. Identification Paint: Use for contrasting background.
2. Stencil Paint: Use for pipe marking.

C. Pipe Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:

1. Near each valve and control device.
2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
3. Near penetrations and on both sides of through walls, floors, ceilings, and inaccessible enclosures.
4. At access doors, manholes, and similar access points that permit view of concealed piping.
5. Near major equipment items and other points of origination and termination.
6. Spaced at maximum intervals of [**50 feet (15 m)**] along each run. Reduce intervals to [**25 feet (7.6 m)**] in areas of congested piping and equipment.
7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.

D. Directional Flow Arrows: Arrows shall be used to indicate direction of flow in pipes, including pipes where flow is allowed in both directions.

E. Pipe Label Color Schedule:

1. Chilled-Water Piping: **White letters on a blue background**.
2. Condenser-Water Piping: **White letters on a safety-green background**.
3. Heating Water Piping: [**White letters on a-red background**]
4. Refrigerant Piping: **Black letters on a safety-white background**.

3.5 DUCT LABEL INSTALLATION

A. Install **self-adhesive** duct labels with permanent adhesive on air ducts in the following color codes:

1. **Blue**: For cold-air supply ducts.
2. **Yellow:** For hot-air supply ducts.
3. **Green**: For exhaust-, outside-, relief-, return-, and mixed-air ducts.

B. Stenciled Duct Label Option: Stenciled labels showing service and flow direction may be provided instead of plastic-laminated duct labels, at Installer's option.

C. Locate labels near points where ducts enter into and exit from concealed spaces and at maximum intervals of **25 feet** in each space where ducts are exposed or concealed by removable ceiling system.

3.6 VALVE-TAG INSTALLATION

A. Install tags on valves and control devices in piping systems, except check valves, valves within factory-fabricated equipment units, shutoff valves, faucets, convenience and lawn-watering hose

connections, and HVAC terminal devices and similar roughing-in connections of end-use fixtures and units. List tagged valves in a valve schedule.

B. Valve-Tag Application Schedule: Tag valves according to size, shape, and color scheme and with captions similar to those indicated in the following subparagraphs:

1. Valve-Tag Size and Shape:

a. Chilled Water: **1-1/2 inches**, **round**.
b. Condenser Water: **1-1/2 inches**, **round**.
c. Refrigerant: **1-1/2 inches**, **round**.
d. Hot Water: **1-1/2 inches**, **round**.
e. Gas: **1-1/2 inches**, **round**.

2. Valve-Tag Colors:

a. Toxic and Corrosive Fluids: Black letters on a safety-orange background.
b. Flammable Fluids: Black letters on a safety-yellow background.
c. Combustible Fluids: White letters on a safety-brown background.
d. Potable and Other Water: White letters on a safety-green background.
e. Compressed Air: White letters on a safety-blue background.
f. Defined by User: White letters on a safety-purple background, black letters on a safety-white background, white letters on a safety-gray background, and white letters on a safety-black background

3.7 WARNING-TAG INSTALLATION

A. Write required message on, and attach warning tags to, equipment and other items where required.

END OF SECTION 230553

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Balancing Air Systems:

a. Constant-volume air systems.
b. Dual-duct systems.
c. Variable-air-volume systems.
d. Multizone systems.
e. Induction-unit systems.

2. Balancing Hydronic Piping Systems:

a. Constant-flow hydronic systems.
b. Variable-flow hydronic systems.
c. Primary-secondary hydronic systems.

3. Balancing steam systems.
4. Testing, Adjusting, and Balancing Equipment:

a. Heat exchangers.
b. Motors.
c. Chillers.
d. Cooling towers.
e. Condensing units.
f. Boilers.
g. Heat-transfer coils.

5. Testing, adjusting, and balancing existing systems and equipment.
6. Sound tests.
7. Vibration tests.
8. Duct leakage tests.
9. Control system verification.

1.3 DEFINITIONS

A. AABC: Associated Air Balance Council.

B. BAS: Building automation systems.

C. NEBB: National Environmental Balancing Bureau.

D. TAB: Testing, adjusting, and balancing.

E. TABB: Testing, Adjusting, and Balancing Bureau.

F. TAB Specialist: An independent entity meeting qualifications to perform TAB work.

G. TDH: Total dynamic head.

1.4 PREINSTALLATION MEETINGS

A. TAB Conference: If requested by the Owner, conduct a TAB conference at **Project site** after approval of the TAB strategies and procedures plan to develop a mutual understanding of the details. Provide a minimum of **14** days' advance notice of scheduled meeting time and location.

1. Minimum Agenda Items:

a. The Contract Documents examination report.
b. The TAB plan.
c. Needs for coordination and cooperation of trades and subcontractors.
d. Proposed procedures for documentation and communication flow.

1.5 ACTION SUBMITTALS

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: Within **30** days of Contractor's Notice to Proceed, submit documentation that the TAB specialist and this Project's TAB team members meet the qualifications specified in "Quality Assurance" Article.

B. Contract Documents Examination Report: Within **30** days of Contractor's Notice to Proceed, submit the Contract Documents review report as specified in Part 3.

C. Strategies and Procedures Plan: Within **30** days of Contractor's Notice to Proceed, submit TAB strategies and step-by-step procedures as specified in "Preparation" Article.

D. System Readiness Checklists: Within **30** days of Contractor's Notice to Proceed, submit system readiness checklists as specified in "Preparation" Article.

E. Examination Report: Submit a summary report of the examination review required in "Examination" Article.

F. Certified TAB reports.

G. Sample report forms.

H. Instrument calibration reports, to include the following:

1. Instrument type and make.
2. Serial number.
3. Application.
4. Dates of use.
5. Dates of calibration.

1.7 QUALITY ASSURANCE

A. TAB Specialists Qualifications: Certified by AABC.

1. TAB Field Supervisor: Employee of the TAB specialist and certified by AABC.
2. TAB Technician: Employee of the TAB specialist and certified by AABC as a TAB technician.

B. TAB Specialists Qualifications: Certified by **NEBB or TABB** .

1. TAB Field Supervisor: Employee of the TAB specialist and certified by **NEBB or TABB** .
2. TAB Technician: Employee of the TAB specialist and certified by **NEBB or TABB** as a TAB technician.

C. Instrumentation Type, Quantity, Accuracy, and Calibration: Comply with requirements in ASHRAE 111, Section 4, "Instrumentation."

D. ASHRAE/IES 90.1 Compliance: Applicable requirements in ASHRAE/IES 90.1, Section 6.7.2.3 - "System Balancing."

1.8 FIELD CONDITIONS

A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

B. Partial Owner Occupancy: Owner may occupy completed areas of building before Substantial Completion. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the Contract Documents to become familiar with Project requirements and to discover conditions in systems designs that may preclude proper TAB of systems and equipment.

B. Examine installed systems for balancing devices, such as test ports, gage cocks, thermometer wells, flow-control devices, balancing valves and fittings, and manual volume dampers. Verify that locations of these balancing devices are applicable for intended purpose and are accessible.

C. Examine the approved submittals for HVAC systems and equipment.

D. Examine design data including HVAC system descriptions, statements of design assumptions for environmental conditions and systems output, and statements of philosophies and assumptions about HVAC system and equipment controls.

E. Examine ceiling plenums and underfloor air plenums used for supply, return, or relief air to verify that they are properly separated from adjacent areas. Verify that penetrations in plenum walls are sealed and fire-stopped if required.

F. Examine equipment performance data including fan and pump curves.

1. Relate performance data to Project conditions and requirements, including system effects that can create undesired or unpredicted conditions that cause reduced capacities in all or part of a system.
2. Calculate system-effect factors to reduce performance ratings of HVAC equipment when installed under conditions different from the conditions used to rate equipment performance. To calculate system effects for air systems, use tables and charts found in AMCA 201, "Fans and Systems," or in SMACNA's "HVAC Systems - Duct Design." Compare results with the design data and installed conditions.

G. Examine system and equipment installations and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.

H. Examine test reports specified in individual system and equipment Sections.

I. Examine HVAC equipment and verify that bearings are greased, belts are aligned and tight, filters are clean, and equipment with functioning controls is ready for operation.

J. Examine terminal units, such as variable-air-volume boxes, and verify that they are accessible and their controls are connected and functioning.

K. Examine strainers. Verify that startup screens have been replaced by permanent screens with indicated perforations.

L. Examine control valves for proper installation for their intended function of throttling, diverting, or mixing fluid flows.

M. Examine heat-transfer coils for correct piping connections and for clean and straight fins.

N. Examine system pumps to ensure absence of entrained air in the suction piping.

O. Examine operating safety interlocks and controls on HVAC equipment.

P. Report deficiencies discovered before and during performance of TAB procedures. Observe and record system reactions to changes in conditions. Record default set points if different from indicated values.

3.2 PREPARATION

A. Prepare a TAB plan that includes the following:

1. Equipment and systems to be tested.
2. Strategies and step-by-step procedures for balancing the systems.
3. Instrumentation to be used.
4. Sample forms with specific identification for all equipment.

B. Perform system-readiness checks of HVAC systems and equipment to verify system readiness for TAB work. Include, at a minimum, the following:

1. Airside:

a. Verify that leakage and pressure tests on air distribution systems have been satisfactorily completed.
b. Duct systems are complete with terminals installed.
c. Volume, smoke, and fire dampers are open and functional.
d. Clean filters are installed.
e. Fans are operating, free of vibration, and rotating in correct direction.
f. Variable-frequency controllers' startup is complete and safeties are verified.
g. Automatic temperature-control systems are operational.
h. Ceilings are installed.
i. Windows and doors are installed.
j. Suitable access to balancing devices and equipment is provided.

2. Hydronics:

a. Verify leakage and pressure tests on water distribution systems have been satisfactorily completed.
b. Piping is complete with terminals installed.
c. Water treatment is complete.
d. Systems are flushed, filled, and air purged.
e. Strainers are pulled and cleaned.
f. Control valves are functioning per the sequence of operation.
g. Shutoff and balance valves have been verified to be 100 percent open.
h. Pumps are started and proper rotation is verified.
i. Pump gage connections are installed directly at pump inlet and outlet flanges or in discharge and suction pipe prior to valves or strainers.
j. Variable-frequency controllers' startup is complete and safeties are verified.
k. Suitable access to balancing devices and equipment is provided.

3.3 GENERAL PROCEDURES FOR TESTING AND BALANCING

A. Perform testing and balancing procedures on each system according to the procedures contained in **AABC's "National Standards for Total System Balance"** and in this Section.

B. Cut insulation, ducts, pipes, and equipment cabinets for installation of test probes to the minimum extent necessary for TAB procedures.

1. After testing and balancing, patch probe holes in ducts with same material and thickness as used to construct ducts.
2. After testing and balancing, install test ports and duct access doors that comply with requirements in Section 233300 "Air Duct Accessories."
3. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish according to Section 230713 "Duct Insulation," Section 230716 "HVAC Equipment Insulation," and Section 230719 "HVAC Piping Insulation."

C. Mark equipment and balancing devices, including damper-control positions, valve position indicators, fan-speed-control levers, and similar controls and devices, with paint or other suitable, permanent identification material to show final settings.

D. Take and report testing and balancing measurements in **inch-pound (IP)** units.

3.4 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS

A. Prepare test reports for both fans and outlets. Obtain manufacturer's outlet factors and recommended testing procedures. Cross-check the summation of required outlet volumes with required fan volumes.

B. Prepare schematic diagrams of systems' "as-built" duct layouts.

C. For variable-air-volume systems, develop a plan to simulate diversity.

D. Determine the best locations in main and branch ducts for accurate duct-airflow measurements.

E. Check airflow patterns from the outdoor-air louvers and dampers and the return- and exhaust-air dampers through the supply-fan discharge and mixing dampers.

F. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.

G. Verify that motor starters are equipped with properly sized thermal protection.

H. Check dampers for proper position to achieve desired airflow path.

I. Check for airflow blockages.

J. Check condensate drains for proper connections and functioning.

K. Check for proper sealing of air-handling-unit components.

L. Verify that air duct system is sealed as specified in Section 233113 "Metal Ducts."

3.5 PROCEDURES FOR CONSTANT-VOLUME AIR SYSTEMS

A. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.

1. Measure total airflow.

a. Set outside-air, return-air, and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
b. Where duct conditions allow, measure airflow by main Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses, close to the fan and prior to any outlets, to obtain total airflow.
c. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.

2. Measure fan static pressures as follows:

a. Measure static pressure directly at the fan outlet or through the flexible connection.
b. Measure static pressure directly at the fan inlet or through the flexible connection.
c. Measure static pressure across each component that makes up the air-handling system.
d. Report artificial loading of filters at the time static pressures are measured.

3. Review Record Documents to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
4. Obtain approval from **Construction Manager** for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in HVAC Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
5. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload occurs. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.

B. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows.

1. Measure airflow of submain and branch ducts.
2. Adjust submain and branch duct volume dampers for specified airflow.
3. Re-measure each submain and branch duct after all have been adjusted.

C. Adjust air inlets and outlets for each space to indicated airflows.

1. Set airflow patterns of adjustable outlets for proper distribution without drafts.
2. Measure inlets and outlets airflow.
3. Adjust each inlet and outlet for specified airflow.
4. Re-measure each inlet and outlet after they have been adjusted.

D. Verify final system conditions.

1. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to design if necessary.
2. Re-measure and confirm that total airflow is within design.
3. Re-measure all final fan operating data, rpms, volts, amps, and static profile.
4. Mark all final settings.
5. Test system in economizer mode. Verify proper operation and adjust if necessary.

6. Measure and record all operating data.
7. Record final fan-performance data.

3.6 PROCEDURES FOR DUAL-DUCT SYSTEMS

A. Adjust the dual-duct systems as follows:

1. Verify that the system static pressure sensor is located two-thirds of the distance down the duct from the fan discharge. On systems with separate hot-deck and cold-deck fans, verify the location of the sensor on each deck.
2. Verify that the system is under static pressure control.
3. Select the terminal unit that is most critical to the supply-fan airflow. Measure inlet static pressure, and adjust system static pressure control set point so the entering static pressure for the critical terminal unit is not less than the sum of the terminal-unit manufacturer's recommended minimum inlet static pressure plus the static pressure needed to overcome terminal-unit discharge system losses.
4. Calibrate and balance each terminal unit's hot deck and cold deck for maximum and minimum design airflow as follows:

    a. Adjust controls so that terminal is calling for full cooling. Some controllers require starting with minimum set point. Verify calibration procedure for specific project.
    b. Measure airflow and adjust calibration factors as required for design cold-deck maximum airflow and hot-deck minimum airflow. Record calibration factors.
    c. When maximum airflow is correct, balance the air outlets downstream from terminal units.
    d. Adjust controls so that terminal is calling for full heating.
    e. Measure airflow and adjust calibration factors as required for design cold-deck minimum airflow and hot-deck maximum airflow. Record calibration factors. If no minimum calibration is available, note any deviation from design airflow.

5. After terminals have been calibrated and balanced, test and adjust system for total airflow. Adjust fans to deliver total design airflows within the maximum allowable fan speed listed by fan manufacturer.

    a. Set outside-air, return-air, and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
    b. Set terminals for maximum airflow. If system design includes diversity (cooling coil or fan), adjust terminals for maximum and minimum airflow so that connected total matches cooling coil or fan selection and simulates actual load in the building. In systems with separate hot-deck and cold-deck fans, diversity consideration applies to each individual fan.
    c. Where duct conditions allow, measure airflow by Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses to obtain total airflow.
    d. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
    e. If a reliable Pitot-tube traverse or coil traverse is not possible, measure airflow at terminals and calculate the total airflow.

6. Measure the fan(s) static pressures as follows:

a. Measure static pressure directly at the fan outlet or through the flexible connection.
b. Measure static pressure directly at the fan inlet or through the flexible connection.
c. Measure static pressure across each component that makes up the air-handling system.
d. Report any artificial loading of filters at the time static pressures are measured.

7. Set final return and outside airflow to the fan(s) while operating at maximum return airflow and minimum outdoor airflow.

    a. Balance the return-air ducts and inlets the same as described for constant-volume air systems.
    b. Verify that all terminal units are meeting design airflow under system maximum flow.

8. Re-measure the inlet static pressure at the most critical terminal unit and adjust the system static pressure set point to the most energy-efficient set point to maintain the optimum system static pressure. Record set point and give to controls contractor.
9. Verify final system conditions as follows:

    a. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to match design if necessary.
    b. Re-measure and confirm that total airflow is within design.
    c. Re-measure final fan operating data, rpms, volts, amps and static profile.
    d. Mark final settings.
    e. Test system in economizer mode. Verify proper operation and adjust if necessary. Measure and record all operating data.
    f. Verify tracking between supply and return fans.

10. Record final fan-performance data.

3.7 PROCEDURES FOR VARIABLE-AIR-VOLUME SYSTEMS

A. Adjust the variable-air-volume systems as follows:

1. Verify that the system static pressure sensor is located two-thirds of the distance down the duct from the fan discharge.
2. Verify that the system is under static pressure control.
3. Select the terminal unit that is most critical to the supply-fan airflow. Measure inlet static pressure, and adjust system static pressure control set point so the entering static pressure for the critical terminal unit is not less than the sum of the terminal-unit manufacturer's recommended minimum inlet static pressure plus the static pressure needed to overcome terminal-unit discharge system losses.
4. Calibrate and balance each terminal unit for maximum and minimum design airflow as follows:

    a. Adjust controls so that terminal is calling for maximum airflow. Some controllers require starting with minimum airflow. Verify calibration procedure for specific project.
    b. Measure airflow and adjust calibration factor as required for design maximum airflow. Record calibration factor.

c. When maximum airflow is correct, balance the air outlets downstream from terminal units.
d. Adjust controls so that terminal is calling for minimum airflow.
e. Measure airflow and adjust calibration factor as required for design minimum airflow. Record calibration factor. If no minimum calibration is available, note any deviation from design airflow.
f. When in full cooling or full heating, ensure that there is no mixing of hot-deck and cold-deck airstreams unless so designed.
g. On constant volume terminals, in critical areas where room pressure is to be maintained, verify that the airflow remains constant over the full range of full cooling to full heating. Note any deviation from design airflow or room pressure.

5. After terminals have been calibrated and balanced, test and adjust system for total airflow. Adjust fans to deliver total design airflows within the maximum allowable fan speed listed by fan manufacturer.

    a. Set outside-air, return-air, and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
    b. Set terminals for maximum airflow. If system design includes diversity, adjust terminals for maximum and minimum airflow so that connected total matches fan selection and simulates actual load in the building.
    c. Where duct conditions allow, measure airflow by Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses to obtain total airflow.
    d. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
    e. If a reliable Pitot-tube traverse or coil traverse is not possible, measure airflow at terminals and calculate the total airflow.

6. Measure fan static pressures as follows:

    a. Measure static pressure directly at the fan outlet or through the flexible connection.
    b. Measure static pressure directly at the fan inlet or through the flexible connection.
    c. Measure static pressure across each component that makes up the air-handling system.
    d. Report any artificial loading of filters at the time static pressures are measured.

7. Set final return and outside airflow to the fan while operating at maximum return airflow and minimum outdoor airflow.

    a. Balance the return-air ducts and inlets the same as described for constant-volume air systems.
    b. Verify that terminal units are meeting design airflow under system maximum flow.

8. Re-measure the inlet static pressure at the most critical terminal unit and adjust the system static pressure set point to the most energy-efficient set point to maintain the optimum system static pressure. Record set point and give to controls contractor.
9. Verify final system conditions as follows:

    a. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to match design if necessary.
    b. Re-measure and confirm that total airflow is within design.

c. Re-measure final fan operating data, rpms, volts, amps, and static profile.
d. Mark final settings.
e. Test system in economizer mode. Verify proper operation and adjust if necessary. Measure and record all operating data.
f. Verify tracking between supply and return fans.

3.8 PROCEDURES FOR MULTIZONE SYSTEMS

A. Position the unit's automatic zone dampers for maximum flow through the cooling coil.

B. The procedures for multizone systems will utilize the zone balancing dampers to achieve the indicated airflow within the zone.

C. After balancing, place the unit's automatic zone dampers for maximum heating flow. Retest zone airflows and record any variances.

D. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.

1. Measure total airflow.

   a. Set outside-air, return-air and relief-air dampers for proper position that simulates minimum outdoor air conditions.
   b. Where duct conditions allow, measure airflow by Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses to obtain total airflow.
   c. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
   d. If a reliable Pitot-tube traverse or coil traverse is not possible, measure airflow at terminals and calculate the total airflow.

2. Measure fan static pressures as follows:

   a. Measure static pressure directly at the fan outlet or through the flexible connection.
   b. Measure static pressure directly at the fan inlet or through the flexible connection.
   c. Measure static pressure across each component that makes up the air-handling system.
   d. Report artificial loading of filters at the time static pressures are measured.

3. Review Record Documents to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
4. Obtain approval from **Construction Manager** for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in HVAC Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
5. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload occurs. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.

E. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows.

1. Measure airflow of submain and branch ducts.
2. Adjust submain and branch duct volume dampers for specified airflow.
3. Re-measure each submain and branch duct after all have been adjusted.

F. Adjust air inlets and outlets for each space to indicated airflows.

1. Set airflow patterns of adjustable outlets for proper distribution without drafts.
2. Measure inlets and outlets airflow.
3. Adjust each inlet and outlet for specified airflow.
4. Re-measure each inlet and outlet after they have been adjusted.

G. Verify final system conditions.

1. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to match design if necessary.
2. Re-measure and confirm that total airflow is within design.
3. Re-measure all final fan operating data, rpms, volts, amps, and static profile.
4. Mark all final settings.
5. Test system in economizer mode. Verify proper operation and adjust if necessary.
6. Measure and record all operating data.
7. Record final fan-performance data.

3.9 PROCEDURES FOR INDUCTION-UNIT SYSTEMS

A. Balance primary-air risers by measuring static pressure at the nozzles of the top and bottom units of each riser to determine which risers must be throttled. Adjust risers to indicated airflow within specified tolerances.

B. Adjust each induction unit.

C. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.

1. Measure total airflow.

    a. Set outside-air, return-air, and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
    b. Where duct conditions allow, measure airflow by Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses to obtain total airflow.
    c. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
    d. If a reliable Pitot-tube traverse or coil traverse is not possible, measure airflow at terminals and calculate the total airflow.

2. Measure fan static pressures as follows:

    a. Measure static pressure directly at the fan outlet or through the flexible connection.

b. Measure static pressure directly at the fan inlet or through the flexible connection.
c. Measure static pressure across each component that makes up the air-handling system.
d. Report artificial loading of filters at the time static pressures are measured.

3. Review Record Documents to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
4. Obtain approval from **Construction Manager** for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in HVAC Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
5. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload occurs. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.

D. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows.

1. Measure airflow of submain and branch ducts.
2. Adjust submain and branch duct volume dampers for specified airflow.
3. Re-measure each submain and branch duct after all have been adjusted.

E. Balance airflow to each induction unit by measuring the nozzle pressure and comparing it to the manufacturer's published data for nozzle pressure versus cfm. Adjust the unit's inlet damper to achieve the required nozzle pressure for design cfm.

F. Verify final system conditions.

1. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to match design if necessary.
2. Re-measure and confirm that total airflow is within design.
3. Re-measure all final fan operating data, rpms, volts, amps, and static profile.
4. Mark all final settings.
5. Test system in economizer mode. Verify proper operation and adjust if necessary.
6. Measure and record all operating data.
7. Record final fan-performance data.

3.10 GENERAL PROCEDURES FOR HYDRONIC SYSTEMS

A. Prepare test reports for pumps, coils, and heat exchangers. Obtain approved submittals and manufacturer-recommended testing procedures. Crosscheck the summation of required coil and heat exchanger flow rates with pump design flow rate.

B. Prepare schematic diagrams of systems' "as-built" piping layouts.

C. In addition to requirements in "Preparation" Article, prepare hydronic systems for testing and balancing as follows:

1. Check liquid level in expansion tank.
2. Check highest vent for adequate pressure.
3. Check flow-control valves for proper position.
4. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.
5. Verify that motor starters are equipped with properly sized thermal protection.
6. Check that air has been purged from the system.

3.11 PROCEDURES FOR CONSTANT-FLOW HYDRONIC SYSTEMS

A. Adjust pumps to deliver total design gpm.

1. Measure total water flow.

    a. Position valves for full flow through coils.
    b. Measure flow by main flow meter, if installed.
    c. If main flow meter is not installed, determine flow by pump TDH or exchanger pressure drop.

2. Measure pump TDH as follows:

    a. Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
    b. Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
    c. Convert pressure to head and correct for differences in gage heights.
    d. Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow, and verify that the pump has the intended impeller size.
    e. With valves open, read pump TDH. Adjust pump discharge valve until design water flow is achieved.

3. Monitor motor performance during procedures and do not operate motor in an overloaded condition.

B. Adjust flow-measuring devices installed in mains and branches to design water flows.

1. Measure flow in main and branch pipes.
2. Adjust main and branch balance valves for design flow.
3. Re-measure each main and branch after all have been adjusted.

C. Adjust flow-measuring devices installed at terminals for each space to design water flows.

1. Measure flow at terminals.
2. Adjust each terminal to design flow.
3. Re-measure each terminal after it is adjusted.
4. Position control valves to bypass the coil, and adjust the bypass valve to maintain design flow.
5. Perform temperature tests after flows have been balanced.

D. For systems with pressure-independent valves at terminals:

1. Measure differential pressure and verify that it is within manufacturer's specified range.
2. Perform temperature tests after flows have been verified.

E. For systems without pressure-independent valves or flow-measuring devices at terminals:

1. Measure and balance coils by either coil pressure drop or temperature method.
2. If balanced by coil pressure drop, perform temperature tests after flows have been verified.

F. Verify final system conditions as follows:

1. Re-measure and confirm that total water flow is within design.
2. Re-measure final pumps' operating data, TDH, volts, amps, and static profile.
3. Mark final settings.

G. Verify that memory stops have been set.

3.12 PROCEDURES FOR VARIABLE-FLOW HYDRONIC SYSTEMS

A. Balance systems with automatic two- and three-way control valves by setting systems at maximum flow through heat-exchange terminals, and proceed as specified above for hydronic systems.

B. Adjust the variable-flow hydronic system as follows:

1. Verify that the differential-pressure sensor is located as indicated.
2. Determine whether there is diversity in the system.

C. For systems with no diversity:

1. Adjust pumps to deliver total design gpm.

a. Measure total water flow.

1) Position valves for full flow through coils.
2) Measure flow by main flow meter, if installed.
3) If main flow meter is not installed, determine flow by pump TDH or exchanger pressure drop.

b. Measure pump TDH as follows:

1) Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
2) Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
3) Convert pressure to head and correct for differences in gage heights.
4) Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow and verify that the pump has the intended impeller size.
5) With valves open, read pump TDH. Adjust pump discharge valve until design water flow is achieved.

c. Monitor motor performance during procedures and do not operate motor in an overloaded condition.

2. Adjust flow-measuring devices installed in mains and branches to design water flows.

   a. Measure flow in main and branch pipes.
   b. Adjust main and branch balance valves for design flow.
   c. Re-measure each main and branch after all have been adjusted.

3. Adjust flow-measuring devices installed at terminals for each space to design water flows.

   a. Measure flow at terminals.
   b. Adjust each terminal to design flow.
   c. Re-measure each terminal after it is adjusted.
   d. Position control valves to bypass the coil and adjust the bypass valve to maintain design flow.
   e. Perform temperature tests after flows have been balanced.

4. For systems with pressure-independent valves at terminals:

   a. Measure differential pressure and verify that it is within manufacturer's specified range.
   b. Perform temperature tests after flows have been verified.

5. For systems without pressure-independent valves or flow-measuring devices at terminals:

   a. Measure and balance coils by either coil pressure drop or temperature method.
   b. If balanced by coil pressure drop, perform temperature tests after flows have been verified.

6. Prior to verifying final system conditions, determine the system differential-pressure set point.
7. If the pump discharge valve was used to set total system flow with variable-frequency controller at 60 Hz, at completion open discharge valve 100 percent and allow variable-frequency controller to control system differential-pressure set point. Record pump data under both conditions.
8. Mark final settings and verify that all memory stops have been set.
9. Verify final system conditions as follows:

   a. Re-measure and confirm that total water flow is within design.
   b. Re-measure final pumps' operating data, TDH, volts, amps, and static profile.
   c. Mark final settings.

10. Verify that memory stops have been set.

D. For systems with diversity:

1. Determine diversity factor.
2. Simulate system diversity by closing required number of control valves, as approved by the design engineer.

3. Adjust pumps to deliver total design gpm.

    a. Measure total water flow.

        1) Position valves for full flow through coils.
        2) Measure flow by main flow meter, if installed.
        3) If main flow meter is not installed, determine flow by pump TDH or exchanger pressure drop.

    b. Measure pump TDH as follows:

        1) Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
        2) Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
        3) Convert pressure to head and correct for differences in gage heights.
        4) Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow and verify that the pump has the intended impeller size.
        5) With valves open, read pump TDH. Adjust pump discharge valve until design water flow is achieved.

    c. Monitor motor performance during procedures and do not operate motor in an overloaded condition.

4. Adjust flow-measuring devices installed in mains and branches to design water flows.

    a. Measure flow in main and branch pipes.
    b. Adjust main and branch balance valves for design flow.
    c. Re-measure each main and branch after all have been adjusted.

5. Adjust flow-measuring devices installed at terminals for each space to design water flows.

    a. Measure flow at terminals.
    b. Adjust each terminal to design flow.
    c. Re-measure each terminal after it is adjusted.
    d. Position control valves to bypass the coil, and adjust the bypass valve to maintain design flow.
    e. Perform temperature tests after flows have been balanced.

6. For systems with pressure-independent valves at terminals:

    a. Measure differential pressure, and verify that it is within manufacturer's specified range.
    b. Perform temperature tests after flows have been verified.

7. For systems without pressure-independent valves or flow-measuring devices at terminals:

    a. Measure and balance coils by either coil pressure drop or temperature method.

b. If balanced by coil pressure drop, perform temperature tests after flows have been verified.

8. Open control valves that were shut. Close a sufficient number of control valves that were previously open to maintain diversity, and balance terminals that were just opened.
9. Prior to verifying final system conditions, determine system differential-pressure set point.
10. If the pump discharge valve was used to set total system flow with variable-frequency controller at 60 Hz, at completion open discharge valve 100 percent and allow variable-frequency controller to control system differential-pressure set point. Record pump data under both conditions.
11. Mark final settings and verify that memory stops have been set.
12. Verify final system conditions as follows:

    a. Re-measure and confirm that total water flow is within design.
    b. Re-measure final pumps' operating data, TDH, volts, amps, and static profile.
    c. Mark final settings.

13. Verify that memory stops have been set.

3.13 PROCEDURES FOR PRIMARY-SECONDARY HYDRONIC SYSTEMS

A. Balance the primary circuit flow first.

B. Balance the secondary circuits after the primary circuits are complete.

C. Adjust pumps to deliver total design gpm.

1. Measure total water flow.

    a. Position valves for full flow through coils.
    b. Measure flow by main flow meter, if installed.
    c. If main flow meter is not installed, determine flow by pump TDH or exchanger pressure drop.

2. Measure pump TDH as follows:

    a. Measure discharge pressure directly at the pump outlet flange or in discharge pipe prior to any valves.
    b. Measure inlet pressure directly at the pump inlet flange or in suction pipe prior to any valves or strainers.
    c. Convert pressure to head and correct for differences in gage heights.
    d. Verify pump impeller size by measuring the TDH with the discharge valve closed. Note the point on manufacturer's pump curve at zero flow and verify that the pump has the intended impeller size.
    e. With valves open, read pump TDH. Adjust pump discharge valve until design water flow is achieved.

3. Monitor motor performance during procedures and do not operate motor in an overloaded condition.

D. Adjust flow-measuring devices installed in mains and branches to design water flows.

1. Measure flow in main and branch pipes.
2. Adjust main and branch balance valves for design flow.
3. Re-measure each main and branch after all have been adjusted.

E. Adjust flow-measuring devices installed at terminals for each space to design water flows.

1. Measure flow at terminals.
2. Adjust each terminal to design flow.
3. Re-measure each terminal after it is adjusted.
4. Position control valves to bypass the coil and adjust the bypass valve to maintain design flow.
5. Perform temperature tests after flows have been balanced.

F. For systems with pressure-independent valves at terminals:

1. Measure differential pressure and verify that it is within manufacturer's specified range.
2. Perform temperature tests after flows have been verified.

G. For systems without pressure-independent valves or flow-measuring devices at terminals:

1. Measure and balance coils by either coil pressure drop or temperature method.
2. If balanced by coil pressure drop, perform temperature tests after flows have been verified.

H. Verify final system conditions as follows:

1. Re-measure and confirm that total water flow is within design.
2. Re-measure final pumps' operating data, TDH, volts, amps, and static profile.
3. Mark final settings.

I. Verify that memory stops have been set.

3.14 PROCEDURES FOR STEAM SYSTEMS

A. Measure and record upstream and downstream pressure of each piece of equipment.

B. Measure and record upstream and downstream steam pressure of pressure-reducing valves.

C. Check settings and operation of automatic temperature-control valves, self-contained control valves, and pressure-reducing valves. Record final settings.

D. Check settings and operation of each safety valve. Record settings.

E. Verify the operation of each steam trap.

3.15 PROCEDURES FOR HEAT EXCHANGERS

A. Adjust water flow to within specified tolerances.

B. Measure inlet and outlet water temperatures.

C. Measure inlet steam pressure.

D. Check settings and operation of safety and relief valves. Record settings.

3.16 PROCEDURES FOR MOTORS

A. Motors 1/2 HP and Larger: Test at final balanced conditions and record the following data:

1. Manufacturer's name, model number, and serial number.
2. Motor horsepower rating.
3. Motor rpm.
4. Phase and hertz.
5. Nameplate and measured voltage, each phase.
6. Nameplate and measured amperage, each phase.
7. Starter size and thermal-protection-element rating.
8. Service factor and frame size.

B. Motors Driven by Variable-Frequency Controllers: Test manual bypass of controller to prove proper operation.

3.17 PROCEDURES FOR CHILLERS

A. Balance water flow through each evaporator **and condenser** to within specified tolerances of indicated flow with all pumps operating. With only one chiller operating in a multiple chiller installation, do not exceed the flow for the maximum tube velocity recommended by the chiller manufacturer. Measure and record the following data with each chiller operating at design conditions:

1. Evaporator-water entering and leaving temperatures, pressure drop, and water flow.
2. For water-cooled chillers, condenser-water entering and leaving temperatures, pressure drop, and water flow.
3. Evaporator and condenser refrigerant temperatures and pressures, using instruments furnished by chiller manufacturer.
4. Power factor if factory-installed instrumentation is furnished for measuring kilowatts.
5. Kilowatt input if factory-installed instrumentation is furnished for measuring kilowatts.
6. Capacity: Calculate in tons of cooling.
7. For air-cooled chillers, verify condenser-fan rotation and record fan and motor data including number of fans and entering- and leaving-air temperatures.

3.18 PROCEDURES FOR COOLING TOWERS

A. Balance total condenser-water flows to towers. Measure and record the following data:

1. Condenser-water flow to each cell of the cooling tower.
2. Entering- and leaving-water temperatures.
3. Wet- and dry-bulb temperatures of entering air.

4. Wet- and dry-bulb temperatures of leaving air.
5. Condenser-water flow rate recirculating through the cooling tower.
6. Cooling-tower spray pump discharge pressure.
7. Condenser-water flow through bypass.
8. Fan and motor operating data.

3.19 PROCEDURES FOR CONDENSING UNITS

A. Verify proper rotation of fans.

B. Measure entering- and leaving-air temperatures.

C. Record fan and motor operating data.

3.20 PROCEDURES FOR BOILERS

A. Hydronic Boilers:

1. Measure and record entering- and leaving-water temperatures.
2. Measure and record water flow.
3. Record relief valve pressure setting.

B. Steam Boilers:

1. Measure and record entering-water temperature.
2. Measure and record feed water flow.
3. Measure and record leaving-steam pressure and temperature.
4. Record relief valve pressure setting.

3.21 PROCEDURES FOR HEAT-TRANSFER COILS

A. Measure, adjust, and record the following data for each water coil:

1. Entering- and leaving-water temperature.
2. Water flow rate.
3. Water pressure drop for major (more than 20 gpm) equipment coils, excluding unitary equipment such as reheat coils, unit heaters, and fan-coil units.
4. Dry-bulb temperature of entering and leaving air.
5. Wet-bulb temperature of entering and leaving air for cooling coils.
6. Airflow.

B. Measure, adjust, and record the following data for each electric heating coil:

1. Nameplate data.
2. Airflow.
3. Entering- and leaving-air temperature at full load.
4. Voltage and amperage input of each phase at full load.
5. Calculated kilowatt at full load.
6. Fuse or circuit-breaker rating for overload protection.

C. Measure, adjust, and record the following data for each steam coil:

1. Dry-bulb temperature of entering and leaving air.
2. Airflow.
3. Inlet steam pressure.

D. Measure, adjust, and record the following data for each refrigerant coil:

1. Dry-bulb temperature of entering and leaving air.
2. Wet-bulb temperature of entering and leaving air.
3. Airflow.

3.22 DUCT LEAKAGE TESTS

A. Witness the duct pressure testing performed by Installer.

B. Verify that proper test methods are used and that leakage rates are within specified tolerances.

C. Report deficiencies observed.

3.23 CONTROLS VERIFICATION

A. In conjunction with system balancing, perform the following:

1. Verify temperature control system is operating within the design limitations.
2. Confirm that the sequences of operation are in compliance with Contract Documents.
3. Verify that controllers are calibrated and function as intended.
4. Verify that controller set points are as indicated.
5. Verify the operation of lockout or interlock systems.
6. Verify the operation of valve and damper actuators.
7. Verify that controlled devices are properly installed and connected to correct controller.
8. Verify that controlled devices travel freely and are in position indicated by controller: open, closed, or modulating.
9. Verify location and installation of sensors to ensure that they sense only intended temperature, humidity, or pressure.

B. Reporting: Include a summary of verifications performed, remaining deficiencies, and variations from indicated conditions.

3.24 PROCEDURES FOR TESTING, ADJUSTING, AND BALANCING EXISTING SYSTEMS

A. Perform a preconstruction inspection of existing equipment that is to remain and be reused.

1. Measure and record the operating speed, airflow, and static pressure of each fan.
2. Measure motor voltage and amperage. Compare the values to motor nameplate information.
3. Check the refrigerant charge.
4. Check the condition of filters.
5. Check the condition of coils.

6. Check the operation of the drain pan and condensate-drain trap.
7. Check bearings and other lubricated parts for proper lubrication.
8. Report on the operating condition of the equipment and the results of the measurements taken. Report deficiencies.

B. Before performing testing and balancing of existing systems, inspect existing equipment that is to remain and be reused to verify that existing equipment has been cleaned and refurbished. Verify the following:

1. New filters are installed.
2. Coils are clean and fins combed.
3. Drain pans are clean.
4. Fans are clean.
5. Bearings and other parts are properly lubricated.
6. Deficiencies noted in the preconstruction report are corrected.

C. Perform testing and balancing of existing systems to the extent that existing systems are affected by the renovation work.

1. Compare the indicated airflow of the renovated work to the measured fan airflows, and determine the new fan speed and the face velocity of filters and coils.
2. Verify that the indicated airflows of the renovated work result in filter and coil face velocities and fan speeds that are within the acceptable limits defined by equipment manufacturer.
3. If calculations increase or decrease the airflow rates and water flow rates by more than 5 percent, make equipment adjustments to achieve the calculated rates. If increase or decrease is 5 percent or less, equipment adjustments are not required.
4. Balance each air outlet.

3.25 TOLERANCES

A. Set HVAC system's airflow rates and water flow rates within the following tolerances:

1. Supply, Return, and Exhaust Fans and Equipment with Fans: **Plus or minus 10 percent**
2. Air Outlets and Inlets: **Plus or minus 10 percent**
3. Heating-Water Flow Rate: **Plus or minus 10 percent**
4. Cooling-Water Flow Rate: **Plus or minus 10 percent**

B. Maintaining pressure relationships as designed shall have priority over the tolerances specified above.

3.26 PROGRESS REPORTING

A. Initial Construction-Phase Report: Based on examination of the Contract Documents as specified in "Examination" Article, prepare a report on the adequacy of design for systems balancing devices. Recommend changes and additions to systems balancing devices to facilitate proper performance measuring and balancing. Recommend changes and additions to HVAC systems and general construction to allow access for performance measuring and balancing devices.

B. Status Reports: Prepare **weekly** progress reports to describe completed procedures, procedures in progress, and scheduled procedures. Include a list of deficiencies and problems found in systems being tested and balanced. Prepare a separate report for each system and each building floor for systems serving multiple floors.

3.27 FINAL REPORT

A. General: Prepare a certified written report; tabulate and divide the report into separate sections for tested systems and balanced systems.

1. Include a certification sheet at the front of the report's binder, signed and sealed by the certified testing and balancing engineer.
2. Include a list of instruments used for procedures, along with proof of calibration.
3. Certify validity and accuracy of field data.

B. Final Report Contents: In addition to certified field-report data, include the following:

1. Pump curves.
2. Fan curves.
3. Manufacturers' test data.
4. Field test reports prepared by system and equipment installers.
5. Other information relative to equipment performance; do not include Shop Drawings and Product Data.

C. General Report Data: In addition to form titles and entries, include the following data:

1. Title page.
2. Name and address of the TAB specialist.
3. Project name.
4. Project location.
5. Architect's name and address.
6. Engineer's name and address.
7. Contractor's name and address.
8. Report date.
9. Signature of TAB supervisor who certifies the report.
10. Table of Contents with the total number of pages defined for each section of the report. Number each page in the report.
11. Summary of contents including the following:

    a. Indicated versus final performance.
    b. Notable characteristics of systems.
    c. Description of system operation sequence if it varies from the Contract Documents.

12. Nomenclature sheets for each item of equipment.
13. Data for terminal units, including manufacturer's name, type, size, and fittings.
14. Notes to explain why certain final data in the body of reports vary from indicated values.
15. Test conditions for fans and pump performance forms including the following:

    a. Settings for outdoor-, return-, and exhaust-air dampers.

b. Conditions of filters.
c. Cooling coil, wet- and dry-bulb conditions.
d. Face and bypass damper settings at coils.
e. Fan drive settings including settings and percentage of maximum pitch diameter.
f. Inlet vane settings for variable-air-volume systems.
g. Settings for supply-air, static-pressure controller.
h. Other system operating conditions that affect performance.

D. System Diagrams: Include schematic layouts of air and hydronic distribution systems. Present each system with single-line diagram and include the following:

1. Quantities of outdoor, supply, return, and exhaust airflows.
2. Water and steam flow rates.
3. Duct, outlet, and inlet sizes.
4. Pipe and valve sizes and locations.
5. Terminal units.
6. Balancing stations.
7. Position of balancing devices.

E. Air-Handling-Unit Test Reports: For air-handling units with coils, include the following:

1. Unit Data:

a. Unit identification.
b. Location.
c. Make and type.
d. Model number and unit size.
e. Manufacturer's serial number.
f. Unit arrangement and class.
g. Discharge arrangement.
h. Sheave make, size in inches , and bore.
i. Center-to-center dimensions of sheave and amount of adjustments in inches .
j. Number, make, and size of belts.
k. Number, type, and size of filters.

2. Motor Data:

a. Motor make, and frame type and size.
b. Horsepower and rpm.
c. Volts, phase, and hertz.
d. Full-load amperage and service factor.
e. Sheave make, size in inches , and bore.
f. Center-to-center dimensions of sheave and amount of adjustments in inches .

3. Test Data (Indicated and Actual Values):

a. Total airflow rate in cfm .
b. Total system static pressure in inches wg .
c. Fan rpm.
d. Discharge static pressure in inches wg .
e. Filter static-pressure differential in inches wg .

f. Preheat-coil static-pressure differential in inches wg .
g. Cooling-coil static-pressure differential in inches wg .
h. Heating-coil static-pressure differential in inches wg .
i. Outdoor airflow in cfm .
j. Return airflow in cfm .
k. Outdoor-air damper position.
l. Return-air damper position.
m. Vortex damper position.

F. Apparatus-Coil Test Reports:

1. Coil Data:

a. System identification.
b. Location.
c. Coil type.
d. Number of rows.
e. Fin spacing in fins per inch o.c.
f. Make and model number.
g. Face area in sq. ft.
h. Tube size in NPS
i. Tube and fin materials.
j. Circuiting arrangement.

2. Test Data (Indicated and Actual Values):

a. Airflow rate in cfm .
b. Average face velocity in fpm .
c. Air pressure drop in inches wg .
d. Outdoor-air, wet- and dry-bulb temperatures in deg F .
e. Return-air, wet- and dry-bulb temperatures in deg F .
f. Entering-air, wet- and dry-bulb temperatures in deg F .
g. Leaving-air, wet- and dry-bulb temperatures in deg F .
h. Water flow rate in gpm .
i. Water pressure differential in feet of head or psig (kPa).
j. Entering-water temperature in deg F .
k. Leaving-water temperature in deg F .
l. Refrigerant expansion valve and refrigerant types.
m. Refrigerant suction pressure in psig (kPa).
n. Refrigerant suction temperature in deg F .
o. Inlet steam pressure in psig (kPa).

G. Gas- and Oil-Fired Heat Apparatus Test Reports: In addition to manufacturer's factory startup equipment reports, include the following:

1. Unit Data:

a. System identification.
b. Location.
c. Make and type.
d. Model number and unit size.

e. Manufacturer's serial number.
f. Fuel type in input data.
g. Output capacity in Btu/h (kW).
h. Ignition type.
i. Burner-control types.
j. Motor horsepower and rpm.
k. Motor volts, phase, and hertz.
l. Motor full-load amperage and service factor.
m. Sheave make, size in inches , and bore.
n. Center-to-center dimensions of sheave and amount of adjustments in inches .

2. Test Data (Indicated and Actual Values):

a. Total airflow rate in cfm .
b. Entering-air temperature in deg F .
c. Leaving-air temperature in deg F .
d. Air temperature differential in deg F .
e. Entering-air static pressure in inches wg .
f. Leaving-air static pressure in inches wg .
g. Air static-pressure differential in inches wg .
h. Low-fire fuel input in Btu/h (kW).
i. High-fire fuel input in Btu/h (kW).
j. Manifold pressure in psig (kPa).
k. High-temperature-limit setting in deg F .
l. Operating set point in Btu/h (kW).
m. Motor voltage at each connection.
n. Motor amperage for each phase.
o. Heating value of fuel in Btu/h (kW).

H. Electric-Coil Test Reports: For electric furnaces, duct coils, and electric coils installed in central-station air-handling units, include the following:

1. Unit Data:

a. System identification.
b. Location.
c. Coil identification.
d. Capacity in Btu/h (kW).
e. Number of stages.
f. Connected volts, phase, and hertz.
g. Rated amperage.
h. Airflow rate in cfm .
i. Face area in sq. ft.
j. Minimum face velocity in fpm (m/s).

2. Test Data (Indicated and Actual Values):

a. Heat output in Btu/h (kW).
b. Airflow rate in cfm .
c. Air velocity in fpm (m/s).
d. Entering-air temperature in deg F .

e. Leaving-air temperature in deg F .
f. Voltage at each connection.
g. Amperage for each phase.

I. Fan Test Reports: For supply, return, and exhaust fans, include the following:

1. Fan Data:

a. System identification.
b. Location.
c. Make and type.
d. Model number and size.
e. Manufacturer's serial number.
f. Arrangement and class.
g. Sheave make, size in inches , and bore.
h. Center-to-center dimensions of sheave and amount of adjustments in inches .

2. Motor Data:

a. Motor make, and frame type and size.
b. Horsepower and rpm.
c. Volts, phase, and hertz.
d. Full-load amperage and service factor.
e. Sheave make, size in inches , and bore.
f. Center-to-center dimensions of sheave, and amount of adjustments in inches .
g. Number, make, and size of belts.

3. Test Data (Indicated and Actual Values):

a. Total airflow rate in cfm .
b. Total system static pressure in inches wg .
c. Fan rpm.
d. Discharge static pressure in inches wg .
e. Suction static pressure in inches wg .

J. Round, Flat-Oval, and Rectangular Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:

1. Report Data:

a. System and air-handling-unit number.
b. Location and zone.
c. Traverse air temperature in deg F .
d. Duct static pressure in inches wg .
e. Duct size in inches .
f. Duct area in sq. ft.
g. Indicated airflow rate in cfm .
h. Indicated velocity in fpm (m/s).
i. Actual airflow rate in cfm .
j. Actual average velocity in fpm (m/s).
k. Barometric pressure in psig .

K. Air-Terminal-Device Reports:

1. Unit Data:

   a. System and air-handling unit identification.
   b. Location and zone.
   c. Apparatus used for test.
   d. Area served.
   e. Make.
   f. Number from system diagram.
   g. Type and model number.
   h. Size.
   i. Effective area in sq. ft.

2. Test Data (Indicated and Actual Values):

   a. Airflow rate in cfm .
   b. Air velocity in fpm (m/s).
   c. Preliminary airflow rate as needed in cfm .
   d. Preliminary velocity as needed in fpm (m/s).
   e. Final airflow rate in cfm .
   f. Final velocity in fpm (m/s).
   g. Space temperature in deg F .

L. System-Coil Reports: For reheat coils and water coils of terminal units, include the following:

1. Unit Data:

   a. System and air-handling-unit identification.
   b. Location and zone.
   c. Room or riser served.
   d. Coil make and size.
   e. Flowmeter type.

2. Test Data (Indicated and Actual Values):

   a. Airflow rate in cfm .
   b. Entering-water temperature in deg F .
   c. Leaving-water temperature in deg F .
   d. Water pressure drop in feet of head or psig (kPa).
   e. Entering-air temperature in deg F .
   f. Leaving-air temperature in deg F .

M. Pump Test Reports: Calculate impeller size by plotting the shutoff head on pump curves and include the following:

1. Unit Data:

   a. Unit identification.
   b. Location.
   c. Service.

d. Make and size.
e. Model number and serial number.
f. Water flow rate in gpm .
g. Water pressure differential in feet of head or psig (kPa).
h. Required net positive suction head in feet of head or psig (kPa).
i. Pump rpm.
j. Impeller diameter in inches .
k. Motor make and frame size.
l. Motor horsepower and rpm.
m. Voltage at each connection.
n. Amperage for each phase.
o. Full-load amperage and service factor.
p. Seal type.

2. Test Data (Indicated and Actual Values):

a. Static head in feet of head or psig (kPa).
b. Pump shutoff pressure in feet of head or psig (kPa).
c. Actual impeller size in inches .
d. Full-open flow rate in gpm .
e. Full-open pressure in feet of head or psig (kPa).
f. Final discharge pressure in feet of head or psig (kPa).
g. Final suction pressure in feet of head or psig (kPa).
h. Final total pressure in feet of head or psig (kPa).
i. Final water flow rate in gpm .
j. Voltage at each connection.
k. Amperage for each phase.

N. Instrument Calibration Reports:

1. Report Data:

a. Instrument type and make.
b. Serial number.
c. Application.
d. Dates of use.
e. Dates of calibration.

3.28 VERIFICATION OF TAB REPORT

A. The TAB specialist's test and balance engineer shall conduct the inspection in the presence of **Construction Manager** .

B. **Construction Manager** shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to either 10 percent of the total measurements recorded or the extent of measurements that can be accomplished in a normal 8-hour business day.

C. If rechecks yield measurements that differ from the measurements documented in the final report by more than the tolerances allowed, the measurements shall be noted as "FAILED."

D. If the number of "FAILED" measurements is greater than 10 percent of the total measurements checked during the final inspection, the testing and balancing shall be considered incomplete and shall be rejected.

E. If TAB work fails, proceed as follows:

1. TAB specialists shall recheck all measurements and make adjustments. Revise the final report and balancing device settings to include all changes; resubmit the final report and request a second final inspection.
2. If the second final inspection also fails, Owner may contract the services of another TAB specialist to complete TAB work according to the Contract Documents and deduct the cost of the services from the original TAB specialist's final payment.
3. If the second verification also fails, **Owner** may contact AABC Headquarters regarding the AABC National Performance Guaranty.

F. Prepare test and inspection reports.

3.29 ADDITIONAL TESTS

A. Within 90 days of completing TAB, perform additional TAB to verify that balanced conditions are being maintained throughout and to correct unusual conditions.

B. Seasonal Periods: If initial TAB procedures were not performed during near-peak summer and winter conditions, perform additional TAB during near-peak summer and winter conditions.

END OF SECTION 230593

SECTION 230719 - HVAC PIPING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes insulation for HVAC piping systems.

B. Related Requirements:

1. Section 230713 "Duct Insulation" for duct insulation.
2. Section 230716 "HVAC Equipment Insulation" for equipment insulation.
3. Section 232113.13 "Underground Hydronic Piping" loose-fill pipe insulation in underground piping outside the building.
4. Section 232213.13 "Underground Steam and Condensate Heating Piping" for steam and condensate piping for steam-type tank heaters.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product. Include thermal conductivity, water-vapor permeance thickness, and jackets (both factory and field applied, if any).

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
2. Detail attachment and covering of heat tracing inside insulation.
3. Detail insulation application at pipe expansion joints for each type of insulation.
4. Detail insulation application at elbows, fittings, flanges, valves, and specialties for each type of insulation.
5. Detail removable insulation at piping specialties.
6. Detail application of field-applied jackets.
7. Detail application at linkages of control devices.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.

B. Field quality-control reports.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or craft training program.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation system materials are to be delivered to the Project site in unopened containers. The packaging is to include name of manufacturer, fabricator, type, description, and size.

1.6 COORDINATION

A. Coordinate sizes and locations of supports, hangers, and insulation shields specified in Section 230529 "Hangers and Supports for HVAC Piping and Equipment."

B. Coordinate clearance requirements with piping Installer for piping insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

C. Coordinate installation and testing of heat tracing.

1.7 SCHEDULING

A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: For insulation and related materials, as determined by testing identical products in accordance with ASTM E84 by a testing agency acceptable to authority having jurisdiction. Factory label insulation, jacket materials, adhesive, mastic, tapes, and cement material containers with appropriate markings of applicable testing agency.

1. All Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
2. [**All Insulation Installed Indoors; Outdoors-Installed Insulation in Contact with Airstream: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.**]
3. [**All Insulation Installed Indoors and Outdoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.**]

2.2 INSULATION MATERIALS

A. Comply with requirements in "Piping Insulation Schedule, General," "Indoor Piping Insulation Schedule," "Outdoor, Aboveground Piping Insulation Schedule," and "Outdoor, Underground Piping Insulation Schedule" articles for where insulating

materials are applied.

B. Products do not contain asbestos, lead, mercury, or mercury compounds.

C. Products that come into contact with stainless steel have a leachable chloride content of less than 50 ppm when tested in accordance with ASTM C871.

D. Insulation materials for use on austenitic stainless steel are qualified as acceptable in accordance with ASTM C795.

E. Foam insulation materials do not use CFC or HCFC blowing agents in the manufacturing process.

2.3 ADHESIVES

A. Materials are compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated unless otherwise indicated.

2.4 MASTICS AND COATINGS
2.5 SEALANTS

A. Materials are as recommended by the insulation manufacturer and are compatible with insulation materials, jackets, and substrates.

2.6 FACTORY-APPLIED JACKETS

A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:

1. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C1136, Type I.
2. ASJ-SSL: ASJ with self-sealing, pressure-sensitive, acrylic-based adhesive covered by a removable protective strip; complying with ASTM C1136, Type I.
3. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C1136, Type II.
4. ASJ+: Aluminum foil reinforced with glass scrim bonded to a kraft paper interleaving with an outer film leaving no paper exposed; complying with ASTM C1136, Types I, II, III, IV, and VII.
5. PSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with polyethylene backing; complying with ASTM C1136, Type II.

2.7 FIELD-APPLIED JACKETS

A. Field-applied jackets comply with ASTM C1136, Type I, unless otherwise indicated.

B. FSK Jacket: Aluminum-foil-face, fiberglass-reinforced scrim with kraft-paper backing.

2.8 SECUREMENTS

A. Staples: Outward-clinching insulation staples, nominal **3/4 inch** wide, stainless steel or Monel.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application.

1. Verify that systems to be insulated have been tested and are free of defects.
2. Verify that surfaces to be insulated are clean and dry.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.

B. Coordinate insulation installation with the tradesman installing heat tracing. Comply with requirements for heat tracing that apply to insulation.

C. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping, including fittings, valves, and specialties.

B. Install insulation materials, forms, vapor barriers or retarders, jackets, and of thicknesses required for each item of pipe system, as specified in insulation system schedules.

C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, compress, or otherwise damage insulation or jacket.

D. Install insulation with longitudinal seams at top and bottom (12 o'clock and 6 o'clock positions) of horizontal runs.

E. Install multiple layers of insulation with longitudinal and end seams staggered.

F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and

specialties.

G. Keep insulation materials dry during storage, application, and finishing. Replace insulation materials that get wet during storage or in the installation process before being properly covered and sealed in accordance with the Contract Documents.

H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.

I. Install insulation with least number of joints practical.

J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.

1. Install insulation continuously through hangers and around anchor attachments.
2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends attached to structure with vapor-barrier mastic.
3. Install insert materials and insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.

K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.

L. Install insulation with factory-applied jackets as follows:

1. Draw jacket tight and smooth, but not to the extent of creating wrinkles or areas of compression in the insulation.
2. Cover circumferential joints with **3-inch-** wide strips, of same material as insulation jacket. Secure strips with adhesive and outward-clinching staples along both edges of strip, spaced **4 inches** o.c.
3. Overlap jacket longitudinal seams at least **1-1/2 inches**. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward-clinching staples along edge at 2 inches o.c.
4. For below-ambient services, apply vapor-barrier mastic over staples.
5. Cover joints and seams with tape, in accordance with insulation material manufacturer's written instructions, to maintain vapor seal.
6. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.

M. Cut insulation in a manner to avoid compressing insulation.

N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

O. Repair damaged insulation facings by applying same facing material over damaged

areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches in similar fashion to butt joints.

P. For above-ambient services, do not install insulation to the following:

1. Vibration-control devices.
2. Testing agency labels and stamps.
3. Nameplates and data plates.

3.4 PENETRATIONS

A. Insulation Installation at Roof Penetrations: Install insulation continuously through roof penetrations.

1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation above roof surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
3. Extend jacket of outdoor insulation outside roof flashing at least **2 inches** below top of roof flashing.
4. Seal jacket to roof flashing with flashing sealant.

B. Insulation Installation at Underground Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.

C. Insulation Installation at Aboveground Exterior Wall Penetrations: Install insulation continuously through wall penetrations.

1. Seal penetrations with flashing sealant.
2. For applications requiring only indoor insulation, terminate insulation inside wall surface and seal with joint sealant. For applications requiring indoor and outdoor insulation, install insulation for outdoor applications tightly joined to indoor insulation ends. Seal joint with joint sealant.
3. Extend jacket of outdoor insulation outside wall flashing and overlap wall flashing at least **2 inches**.
4. Seal jacket to wall flashing with flashing sealant.

D. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.

E. Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls and partitions.

1. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping and fire-resistive joint sealers.

F. Insulation Installation at Floor Penetrations:

1. Pipe: Install insulation continuously through floor penetrations.

2. Seal penetrations through fire-rated assemblies. Comply with requirements in Section 078413 "Penetration Firestopping."

3.5 GENERAL PIPE INSULATION INSTALLATION

A. Requirements in this article generally apply to all insulation materials, except where more specific requirements are specified in various pipe insulation material installation articles below.

B. Insulation Installation on Fittings, Valves, Strainers, Flanges, Mechanical Couplings, and Unions:

1. Install insulation over fittings, valves, strainers, flanges, mechanical couplings, unions, and other specialties with continuous thermal and vapor-retarder integrity unless otherwise indicated.
2. Insulate pipe elbows using prefabricated fitting insulation, or, mitered or routed fittings made from same material and density as that of adjacent pipe insulation. Each piece is butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
3. Insulate tee fittings with prefabricated fitting insulation, or, sectional pipe insulation of same material and thickness as that used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
4. Insulate valves using prefabricated fitting insulation, or, sectional pipe insulation of same material, density, and thickness as that used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
5. Insulate strainers using prefabricated fitting insulation, or, sectional pipe insulation of same material, density, and thickness as that used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers, so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below-ambient services, provide a design that maintains vapor barrier.
6. Insulate flanges, mechanical couplings, and unions using a section of oversized preformed pipe insulation to fit. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Stencil or label the outside insulation jacket of each union with the word "union" matching size and color of pipe labels.
7. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below-ambient services and a breather mastic for above-ambient services. Reinforce the mastic with reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
8. For services not specified to receive a field-applied jacket, except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC

covers to adjoining insulation facing, using PVC tape.

C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.

D. Install removable insulation covers at locations indicated. Installation conforms to the following:

1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as that of adjoining pipe insulation.
2. When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union at least 2 times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless steel or aluminum bands. Select band material compatible with insulation and jacket.
3. Construct removable valve insulation covers in same manner as for flanges, except divide the two-part section on the vertical center line of valve body.
4. When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least **2 inches** over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.
5. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.6 INSTALLATION OF CELLULAR-GLASS INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient services, secure laps with outward-clinched staples at **6 inches** o.c.
4. For insulation with jackets on below-ambient services, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus

twice the thickness of pipe insulation.

3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of cellular-glass block insulation of same thickness as that of pipe insulation. Where voids are difficult to fill with block insulation, fill the voids with a fibrous insulation material suitable for the specific operating temperature.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least **1 inch**, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
2. When preformed sections of insulation are not available, install mitered or routed sections of cellular-glass insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated sections of cellular-glass insulation to valve body.
2. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.

3.7 INSTALLATION OF FLEXIBLE ELASTOMERIC INSULATION

A. Seal longitudinal seams and end joints with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

B. Insulation Installation on Pipe Flanges:

1. Install pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of sheet insulation of same thickness as that of pipe insulation.
4. Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install sections of pipe insulation and miter if required in accordance with manufacturer's written instructions.
2. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated valve covers manufactured of same material as that of pipe insulation when available.
2. When prefabricated valve covers are not available, install cut sections of pipe and sheet insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
3. Install insulation to flanges as specified for flange insulation application.
4. Secure insulation to valves and specialties, and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

3.8 INSTALLATION OF GLASS-FIBER AND MINERAL WOOL INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of preformed pipe insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient surfaces, secure laps with outward-clinched staples at **6 inches** o.c.
4. For insulation with jackets on below-ambient surfaces, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with glass-fiber or mineral-wool blanket insulation.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least **1 inch**, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.
2. When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.

2. When prefabricated sections are not available, install fabricated sections of pipe insulation to valve body.
3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
4. Install insulation to flanges as specified for flange insulation application.

3.9 INSTALLATION OF FIELD-APPLIED JACKETS

A. Where metal jackets are indicated, install with **2-inch** overlap at longitudinal seams and end joints. Overlap longitudinal seams arranged to shed water. Seal end joints with weatherproof sealant recommended by insulation manufacturer. Secure jacket with stainless steel bands **12 inches** o.c. and at end joints.

3.10 FINISHES

A. Insulation with ASJ, Glass-Cloth, or Other Paintable Jacket Material: Paint jacket with paint system identified below and as specified in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

1. Flat Acrylic Finish: Two finish coats over a primer that is compatible with jacket material and finish coat paint. Add fungicidal agent to render fabric mildew proof.

a. Finish Coat Material: Interior, flat, latex-emulsion size.

B. Flexible Elastomeric Thermal Insulation: After adhesive has fully cured, apply two coats of insulation manufacturer's recommended protective coating.

C. Do not field paint aluminum or stainless steel jackets.

3.11 FIELD QUALITY CONTROL

A. Perform tests and inspections with the assistance of a factory-authorized service representative.

B. Tests and Inspections: Inspect pipe, fittings, strainers, and valves, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection is limited to three locations of straight pipe, three locations of threaded fittings, three locations of welded fittings, two locations of threaded strainers, two locations of welded strainers, three locations of threaded valves, and [**three**] <**Insert number**> locations of flanged valves for each pipe service defined in the "Piping Insulation Schedule, General" Article.

C. All insulation applications will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.12 PIPING INSULATION SCHEDULE, GENERAL

A. Insulation conductivity and thickness per pipe size comply with schedules in this Section or with requirements of authorities having jurisdiction, whichever is more stringent.

B. Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.

C. Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:

1. Underground piping.
2. Chrome-plated pipes and fittings unless there is a potential for personnel injury.

3.13 INDOOR PIPING INSULATION SCHEDULE

A. Condensate and Equipment Drain Water below **60 Deg F**:

1. All Pipe Sizes: Insulation is the following:

a. Flexible Elastomeric: 3/4 inch thick.

B. Chilled Water and Brine, **40 Deg F** and below:

1. NPS 3 and Smaller: Insulation is the following:

a. Cellular Glass: 1-1/2 inches thick.

2. NPS 4 to NPS 12: Insulation is the following:

a. Cellular Glass: 2 inches thick.

3. NPS 14 and Larger: Insulation is one of the following:

a. Cellular Glass: 3 inches thick.

C. Chilled Water and Brine, Above **40 Deg F**:

1. NPS 12 and Smaller: Insulation is the following:

a. Cellular Glass: 2 inches thick.

2. NPS 14 and Larger: Insulation is the following:

a. Cellular Glass: 3 inches thick.

D. Refrigerant Suction and Hot-Gas Piping:

1. All Pipe Sizes: Insulation is the following:

a. Flexible Elastomeric: 1 inch thick.

E. Refrigerant Liquid Piping:

1. All Pipe Sizes: Insulation is the following:

a. Flexible Elastomeric: 1 inch thick.

3.14 OUTDOOR, ABOVEGROUND PIPING INSULATION SCHEDULE

A. Refrigerant Suction and Hot-Gas Piping:

1. All Pipe Sizes: Insulation is the following:

a. Flexible Elastomeric: 2 inches thick.

B. Refrigerant Liquid Piping:

1. All Pipe Sizes: Insulation is the following:

a. Flexible Elastomeric: 1 inch thick.

3.15 INDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Piping, Concealed:

1. None.
2. Aluminum, Stucco Embossed: 0.016 inch thick.
3. Painted Aluminum, Smooth: 0.016 inch thick.

D. Piping, Exposed:

1. None.
2. Aluminum, Smooth: 0.016 inch thick.
3. Painted Aluminum, Smooth: 0.016 inch thick.

3.16 OUTDOOR, FIELD-APPLIED JACKET SCHEDULE

A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.

B. If more than one material is listed, selection from materials listed is Contractor's option.

C. Piping, Exposed:

1. PVC: 30 mils thick.
2. [**Painted**]Aluminum, Stucco Embossed, with Z-Shaped Locking Seam: 0.016 inch thick.

3.17 UNDERGROUND, FIELD-APPLIED INSULATION JACKET

A. For underground direct-buried piping applications, install underground direct-buried jacket over insulation material.

END OF SECTION 230719

SECTION 232300 - REFRIGERANT PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copper tube and fittings.
2. Refrigerants.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Solenoid valves.
2. Thermostatic expansion valves.
3. Filter dryers.

B. Product Data Submittals: For each product.

1. Submit data for each type of refrigerant piping, fitting, valve, piping specialty, and refrigerant.

C. Delegated Design Submittals: For refrigerant piping size and layout, including oil traps, double risers, specialties, and pipe and tube sizes to accommodate, as a minimum, equipment provided, elevation difference between compressor and evaporator, and length of piping to ensure proper operation and compliance with warranties of connected equipment.

D. Shop Drawings:

1. Show piping size and piping layout, including oil traps, double risers, specialties, and pipe and tube sizes to accommodate, as a minimum, equipment provided, elevation difference between compressor and evaporator, and length of piping to ensure proper operation and compliance with warranties of connected equipment.
2. Show interface and spatial relationships between piping and equipment.
3. Shop Drawing Scale: 1/4 inch equals 1 foot.

1.3 INFORMATIONAL SUBMITTALS

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For refrigerant valves and piping specialties to include in maintenance manuals.

1.5 QUALITY ASSURANCE
1.6 DELIVERY, STORAGE, AND HANDLING

A. Store piping with end caps in place to ensure that piping interior and exterior are clean when installed.

B. Prepare valves and specialties for shipping as follows:

1. Protect internal parts against rust and corrosion.
2. Protect threads and other end connections.

C. Use the following precautions during storage:

1. Maintain valve and specialty end protection.
2. Store valves and specialties indoors and maintain at higher-than-ambient-dew-point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," for refrigerant piping size and layout, including oil traps, double risers, specialties, and pipe and tube sizes to accommodate, as a minimum, equipment provided, elevation difference between compressor and evaporator, and length of piping to ensure proper operation and compliance with warranties of connected equipment.

B. Comply with ASHRAE 15.

C. Comply with ASME B31.5.

D. Test Pressure for Refrigerant R-410A:

1. Suction Tubing for Refrigeration and Air-Conditioning Applications Other than Heat Pumps: 300 psig.
2. Suction Tubing for Heat-Pump Applications: 535 psig.
3. Hot-Gas and Tubing Lines: 535 psig.

2.2 COPPER TUBE AND FITTINGS

A. Copper Tube: ASTM B88, Type K or L.

B. Wrought-Copper Fittings, Solder Joint: ASME B16.22.

C. Wrought-Copper Fittings, Brazed Joint: ASME B16.50.

D. Wrought-Copper Unions: ASME B16.22.

E. Solder Filler Metals: ASTM B32. Use 95-5 tin antimony or alloy HB solder to join copper socket fittings on copper pipe.

F. Brazing Filler Metals: AWS A5.8M/A5.8.

G. Flexible Connectors:

1. Body: Tin-bronze bellows with woven, flexible, tinned-bronze-wire-reinforced protective jacket.
2. End Connections: Socket ends.
3. Offset Performance: Capable of minimum **3/4-inch** misalignment in minimum **7-inch-** long assembly.
4. Working Pressure Rating: Factory test at minimum 500 psig.
5. Maximum Operating Temperature: 250 deg F.

PART 3 - EXECUTION

3.1 PIPING APPLICATION SCHEDULES

A. Refrigerant: R-410A

B. Suction, Hot-Gas, and Liquid Tubing for Conventional Air-Conditioning (Cooling-Only) Applications, NPS 1-1/2 (DN 40) and Smaller: Copper, Type ACR, annealed-temper tubing and wrought-copper fittings with or joints.

C. Suction, Hot-Gas, and Liquid Tubing for Conventional Air-Conditioning (Cooling-Only) Applications, NPS 4 (DN 100) and Smaller: Copper, [**Type ACR**] [**Type L**], drawn-temper tubing and wrought-copper fittings with or joints.

D. Suction, Hot-Gas, and Liquid Tubing for Conventional Air-Conditioning (Cooling-Only) Applications, NPS 2 to NPS 4 (DN 50 to DN 100): Copper, [**Type ACR**] [**Type L**], drawn-temper tubing and wrought-copper fittings with or joints.

E. Safety-Relief-Valve Discharge Tubing for Conventional Air-Conditioning (Cooling-Only) Applications, Copper: or, or tubing and wrought-copper fittings with or joints.

F. Suction, Hot-Gas, and Liquid Tubing for Heat-Pump Applications, NPS 1-1/2 (DN 40) and Smaller: Copper, Type ACR, annealed-temper tubing and wrought-copper fittings with or joints.

G. Safety-Relief-Valve Discharge Tubing for Heat-Pump Applications, Copper: Type K,Type L, or tubing and wrought-copper fittings with or joints

H. Safety-Relief-Valve Discharge Piping for Heat-Pump Applications, Steel: Schedule 40, black steel and wrought-steel fittings with welded joints.

3.2 VALVE AND SPECIALTY APPLICATIONS

A. Install service valves for gauge taps at inlet and outlet of hot-gas bypass valves and

strainers if they are not an integral part of valves and strainers.

B. Install a check valve at the compressor discharge and a liquid accumulator at the compressor suction connection.

C. Except as otherwise indicated, install packed-angle valves on inlet and outlet side of filter dryers.

D. Install a full-size, three-valve bypass around filter dryers.

E. Install solenoid valves upstream from each expansion valve and hot-gas bypass valve. Install solenoid valves in horizontal lines with coil at top.

F. Install thermostatic expansion valves as close as possible to distributors on evaporators.

1. Install valve so diaphragm case is warmer than bulb.
2. Secure bulb to clean, straight, horizontal section of suction line using two bulb straps. Do not mount bulb in a trap or at bottom of the line.
3. If external equalizer lines are required, make connection where it will reflect suction-line pressure at bulb location.

G. Install safety-relief valves where required by ASME Boiler and Pressure Vessel Code. Pipe safety-relief-valve discharge line to outside in accordance with ASHRAE 15.

H. Install moisture/liquid indicators in liquid line at the inlet of the thermostatic expansion valve or at the inlet of the evaporator coil capillary tube.

I. Install strainers upstream from and adjacent to the following unless they are furnished as an integral assembly for the device being protected:

1. Solenoid valves.
2. Thermostatic expansion valves.
3. Hot-gas bypass valves.
4. Compressor.

J. Install filter dryers in liquid line between compressor and thermostatic expansion valve, and in the suction line at the compressor.

K. Install receivers sized to accommodate pump-down charge.

L. Install flexible connectors at compressors.

M. Provide refrigerant locking caps on refrigerant charging ports that are located outdoors unless otherwise protected from unauthorized access by a means acceptable to authority having jurisdiction.

3.3 INSTALLATION OF PIPING, GENERAL

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems; indicated locations and arrangements were used to size pipe and

calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Shop Drawings.

B. Install refrigerant piping in accordance with ASHRAE 15.

C. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.

D. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.

F. Install piping adjacent to machines to allow service and maintenance.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. Select system components with pressure rating equal to or greater than system operating pressure.

J. Refer to Section 230923 "Direct Digital Control (DDC) System for HVAC" and Section 230993.11 "Sequence of Operations for HVAC DDC" for solenoid valve controllers, control wiring, and sequence of operation.

K. Install piping as short and direct as possible, with a minimum number of joints, elbows, and fittings.

L. Arrange piping to allow inspection and service of refrigeration equipment. Install valves and specialties in accessible locations to allow for service and inspection. Install access doors or panels as specified in Section 083113 "Access Doors and Frames" if valves or equipment requiring maintenance is concealed behind finished surfaces.

M. Install refrigerant piping in protective conduit where installed belowground.

N. Install refrigerant piping in rigid or flexible conduit in locations where exposed to mechanical injury.

O. When brazing or soldering, remove solenoid-valve coils and sight glasses; also remove valve stems, seats, packing, and accessible internal parts of refrigerant specialties. Do not apply heat near expansion-valve bulb.

P. Install piping with adequate clearance between pipe and adjacent walls and hangers or between pipes for insulation installation.

Q. Identify refrigerant piping and valves in accordance with Section 230553 "Identification for HVAC Piping and Equipment."

R. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with

requirements for sleeves specified in Section 230500 "Common Work Results for HVAC."

S. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 230500 "Common Work Results for HVAC."

T. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 230500 "Common Work Results for HVAC."

3.4 PIPE JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Fill pipe and fittings with an inert gas (nitrogen or carbon dioxide), during brazing or welding, to prevent scale formation.

D. Soldered Joints: Construct joints in accordance with ASTM B828 or CDA's "Copper Tube Handbook."

E. Brazed Joints: Construct joints in accordance with AWS BRH, "Brazing Handbook," Ch. 35, "Pipe and Tubing."

1. Use Type BCuP (copper-phosphorus) alloy for joining copper socket fittings with copper pipe.
2. Use Type BAg (cadmium-free silver) alloy for joining copper with bronze or steel.

F. Threaded Joints: Thread steel pipe with tapered pipe threads in accordance with ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and to restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry-seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

G. Steel pipe can be threaded, but threaded joints must be seal brazed or seal welded.

H. Welded Joints: Construct joints in accordance with AWS D10.12M/D10.12.

I. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.5 INSTALLATION OF HANGERS AND SUPPORTS

A. Comply with Section 230529 "Hangers and Supports for HVAC Piping and Equipment" for hangers, supports, and anchor devices.

B. Install the following pipe attachments:

1. Adjustable steel clevis hangers for individual horizontal runs less than **20 ft.** long.
2. Roller hangers and spring hangers for individual horizontal runs **20 ft.** or longer.
3. Pipe Roller: MSS SP-58, Type 44 for multiple horizontal piping **20 ft.** or longer, supported on a trapeze.
4. Spring hangers to support vertical runs.
5. Copper-clad hangers and supports for hangers and supports in direct contact with copper pipe.

C. Install hangers for and, with maximum horizontal spacing and minimum rod diameters, to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

D. Support horizontal piping within 12 inches of each fitting.

E. Support vertical runs of and to comply with MSS SP-58, locally enforced codes, and authorities having jurisdiction requirements, whichever are most stringent.

3.6 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Comply with ASME B31.5, Chapter VI.
2. Test refrigerant piping, specialties, and receivers. Isolate compressor, condenser, evaporator, and safety devices from test pressure if they are not rated above the test pressure.
3. Test high- and low-pressure side piping of each system separately at not less than the pressures indicated in "Performance Requirements" Article.

    a. Fill system with nitrogen to the required test pressure.
    b. System must maintain test pressure at the manifold gauge throughout duration of test.
    c. Test joints and fittings with electronic leak detector or by brushing a small amount of soap and glycerin solution over joints.
    d. Remake leaking joints using new materials, and retest until satisfactory results are achieved.

B. Prepare test and inspection reports.

3.7 SYSTEM CHARGING

A. Charge system using the following procedures:

1. Install core in filter dryers after leak test but before evacuation.

2. Evacuate entire refrigerant system with a vacuum pump to **500 micrometers**. If vacuum holds for 12 hours, system is ready for charging.
3. Break vacuum with refrigerant gas, allowing pressure to build up to **2 psig**.
4. Charge system with a new filter-dryer core in charging line.

3.8 ADJUSTING

A. Adjust thermostatic expansion valve to obtain proper evaporator superheat.

B. Adjust high- and low-pressure switch settings to avoid short cycling in response to fluctuating suction pressure.

C. Adjust set-point temperature of air-conditioning or chilled-water controllers to the system design temperature.

D. Perform the following adjustments before operating the refrigeration system, in accordance with manufacturer's written instructions:

1. Open shutoff valves in condenser water circuit.
2. Verify that compressor oil level is correct.
3. Open compressor suction and discharge valves.
4. Open refrigerant valves but not bypass valves that are used for other purposes.
5. Check open compressor-motor alignment and verify lubrication for motors and bearings.

E. Replace core of replaceable filter dryer after system has been adjusted and after design flow rates and pressures are established.

END OF SECTION 232300

SECTION 237313.13 - INDOOR, BASIC AIR-HANDLING UNITS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Indoor, basic air-handling units.
2. Unit casings.
3. Fan, drive, and motor section.
4. Coil section.
5. Air filtration section.
6. Dampers.

1.2 ACTION SUBMITTALS

A. Product Data: For each air-handling unit.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
3. Include unit dimensions and weight.
4. Include cabinet material, metal thickness, finishes, insulation, and accessories.
5. Fans:

    a. Include certified fan-performance curves with system operating conditions indicated.
    b. Include certified fan-sound power ratings.
    c. Include fan construction and accessories.
    d. Include motor ratings, electrical characteristics, and motor accessories.

6. Include certified coil-performance ratings with system operating conditions indicated.
7. Include filters with performance characteristics.
8. Include dampers, including housings, linkages, and operators.

B. Shop Drawings: For each type and configuration of indoor, basic, air-handling unit.

1. Include plans, elevations, sections, and mounting details.
2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Detail fabrication and assembly of indoor, basic air-handling units, as well as procedures and diagrams.
4. Include diagrams for power, signal, and control wiring.

C. Delegated Design Submittal: For vibration isolation, supports, indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Design Calculations: Calculate requirements for selecting vibration isolators, supports, and for designing vibration isolation bases.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Floor plans and other details, or BIM model, drawn to scale, showing the items described in this Section, and coordinated with all building trades.

B. Source quality-control reports.

C. Startup service reports.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For air-handling units to include in emergency, operation, and maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Filters: 2 set(s) for each air-handling unit.
2. Gaskets: 2 set(s) for each access door.
3. Fan Belts: 2 set(s) for each air-handling unit fan.

1.6 WARRANTY

A. Warranty: Manufacturer agrees to repair or replace components of indoor, basic, air-handling units that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Manufacturer's standard, but not less than one year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. NFPA Compliance: Comply with NFPA 90A for design, fabrication, and installation of air-handling units and components.

2.2 CAPACITIES AND CHARACTERISTICS

A. Filters:

1. Minimum Efficiency Reporting Value:

2.3 SOURCE QUALITY CONTROL

A. AHRI 430 Certification: Test, rate, and label air-handling units and their components in accordance with AHRI 430.

B. AHRI 260 or AMCA 311 Sound Performance Rating Certification: Test, rate, and label in accordance with AHRI 260 or AMCA 311.

C. Fan Operating Limits: Classify fans in accordance with AMCA 99, Section 14.

D. Water Coils: Factory tested to **300 psig** in accordance with AHRI 410 and ASHRAE 33.

E. Refrigerant Coils: Factory tested to minimum **450-psig** internal pressure, and to minimum **300-psig** internal pressure while underwater, in accordance with AHRI 410 and ASHRAE 33.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine casing insulation materials and filter media before air-handling unit installation. Replace with new insulation materials and filter media that are wet, moisture damaged, or mold damaged.

C. Examine roughing-in for steam, hydronic, and condensate drainage piping systems and electrical services to verify actual locations of connections before installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF INDOOR, BASIC AIR-HANDLING UNITS

A. Equipment Mounting:

1. Install air-handling units on cast-in-place concrete equipment bases. Coordinate

sizes and locations of concrete bases with actual equipment provided. Comply with requirements for equipment bases and foundations specified in Section 033000 "Cast-in-Place Concrete."

2. Comply with requirements for vibration isolation devices specified in Section 230548.13 "Vibration Controls for HVAC."

B. Suspended Units: Suspend and brace units from structural-steel support frame using threaded steel rods and spring hangers. Coordinate sizes and locations of structural-steel support members with actual equipment provided. Comply with requirements for vibration isolation devices specified in Section 230548.13 "Vibration Controls for HVAC."

C. Arrange installation of units to provide access space around air-handling units for service and maintenance.

D. Do not operate fan system until filters (temporary or permanent) are in place. Replace temporary filters used during construction and testing with new, clean filters.

E. Connect duct to air-handling units with flexible connections. Comply with requirements in Section 233300 "Air Duct Accessories."

3.3 PIPING CONNECTIONS

A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Where installing piping adjacent to air-handling unit, allow for service and maintenance.

C. Connect piping to air-handling units mounted on vibration isolators with flexible connectors.

D. Connect condensate drain pans using NPS 1-1/4, **ASTM B88, Type M** copper tubing. Extend to nearest equipment or floor drain. Construct deep trap at connection to drain pan and install cleanouts at changes in direction.

E. Hot- and Chilled-Water Piping: Comply with applicable requirements in Section 232113 "Hydronic Piping" and Section 232116 "Hydronic Piping Specialties." Install shutoff valve and union or flange at each coil supply connection. Install balancing valve and union or flange at each coil return connection.

F. Steam and Condensate Piping: Comply with applicable requirements in Section 232213 "Steam and Condensate Heating Piping" and Section 232216 "Steam and Condensate Heating Piping Specialties." Install shutoff valve at steam supply connections, float and thermostatic trap, and union or flange at each coil return connection.

G. Refrigerant Piping: Comply with applicable requirements in Section 232300 "Refrigerant Piping." Install shutoff valve and union or flange at each supply and return connection.

3.4 ELECTRICAL CONNECTIONS

A. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

B. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

C. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.

D. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.

1. Nameplate is to be laminated acrylic or melamine plastic signs, as specified in Section 260553 "Identification for Electrical Systems."
2. Nameplate is to be laminated acrylic or melamine plastic signs with a black background and engraved white letters at least **1/2 inch** high.

3.5 CONTROL CONNECTIONS

A. Install control and electrical power wiring to field-mounted control devices.

B. Connect control wiring in accordance with Section 260523 "Control-Voltage Electrical Power Cables."

3.6 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks in accordance with manufacturer's written instructions.
2. Verify that shipping, blocking, and bracing are removed.
3. Verify that unit is secure on mountings and supporting devices and that connections to piping, ducts, and electrical systems are complete. Verify that proper thermal-overload protection is installed in motors, controllers, and switches.
4. Verify proper motor rotation direction, free fan wheel rotation, and smooth bearing operations. Reconnect fan drive system, align belts, and install belt guards.
5. Verify that bearings, pulleys, belts, and other moving parts are lubricated with factory-recommended lubricants.
6. Verify that outdoor- and return-air mixing dampers open and close, and maintain minimum outdoor-air setting.
7. Comb coil fins for parallel orientation.
8. Verify that proper thermal-overload protection is installed for electric coils.
9. Install new, clean filters.
10. Verify that manual and automatic volume control and fire and smoke dampers in connected duct systems are in fully open position.

B. Starting procedures for air-handling units include the following:

1. Energize motor; verify proper operation of motor, drive system, and fan wheel. Adjust fan to indicated rpm.
2. Measure and record motor electrical values for voltage and amperage.
3. Manually operate dampers from fully closed to fully open position and record fan performance.

3.7 ADJUSTING

A. Adjust damper linkages for proper damper operation.

B. Comply with requirements in Section 230593 "Testing, Adjusting, and Balancing for HVAC" for air-handling system testing, adjusting, and balancing.

C. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

3.8 CLEANING

A. After completing system installation and testing, adjusting, and balancing of air-handling unit and air-distribution systems, and after completing startup service, clean air-handling units internally to remove foreign material and construction dirt and dust. Clean fan wheels, cabinets, dampers, coils, and filter housings, and install new, clean filters.

3.9 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

3.10 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain air-handling units.

END OF SECTION 237313.13

SECTION 238126 - SPLIT-SYSTEM AIR-CONDITIONERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Split-system air-conditioners.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. Include performance data in terms of capacities, outlet velocities, static pressures, sound power characteristics, motor requirements, and electrical characteristics.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

C. Samples for Initial Selection: For units with factory-applied color finishes.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For split-system air-conditioning units to include in emergency, operation, and maintenance manuals.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Filters: One set(s) for each air-handling unit.
2. Gaskets: One set(s) for each access door.
3. Fan Belts: One set(s) for each air-handling unit fan.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and

application.

1.6 COORDINATION

A. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork are specified in Section 033000 "Cast-in-Place Concrete."

B. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of split-system air-conditioning units that fail in materials or workmanship within specified warranty period.

1. Warranty Period:

a. For Compressor: Five year(s) from date of Substantial Completion.
b. For Parts: One year(s) from date of Substantial Completion.
c. For Labor: One year(s) from date of Substantial Completion.

PART 2 - PRODUCTS
PART 3 - EXECUTION

3.1 INSTALLATION OF SPLIT-SYSTEM AIR-CONDITIONERS

A. Install units level and plumb.

B. Install evaporator-fan components using manufacturer's standard mounting devices securely fastened to building structure.

C. Install roof-mounted, compressor-condenser components on equipment supports specified in Section 077200 "Roof Accessories." Anchor units to supports with removable, cadmium-plated fasteners.

D. Equipment Mounting:

1. Install ground-mounted, compressor-condenser components on cast-in-place concrete equipment base(s). Comply with requirements for equipment bases and foundations specified in Section 033000 "Cast-in-Place Concrete."
2. Install ground-mounted, compressor-condenser components on polyethylene mounting base.
3. Comply with requirements for vibration isolation and seismic control devices specified in Section 230548 "Vibration and Seismic Controls for HVAC."
4. Comply with requirements for vibration isolation devices specified in Section 230548.13 "Vibration Controls for HVAC."

E. Install and connect precharged refrigerant tubing to component's quick-connect fittings. Install tubing to allow access to unit.

3.2 CONNECTIONS

A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Where piping is installed adjacent to unit, allow space for service and maintenance of unit.

C. Duct Connections: Duct installation requirements are specified in Section 233113 "Metal Ducts." Drawings indicate the general arrangement of ducts. Connect supply and return ducts to split-system air-conditioning units with flexible duct connectors. Flexible duct connectors are specified in Section 233300 "Air Duct Accessories."

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

B. Perform tests and inspections.

1. Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

C. Tests and Inspections:

1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Remove and replace malfunctioning units and retest as specified above.

E. Prepare test and inspection reports.

3.4 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain units.

END OF SECTION 238126

SECTION 31 10 00
SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Removing surface debris.
2. Removing designated paving, curbs, sidewalks, and other existing features.
3. Removing designated trees, shrubs, and other plant life.
4. Removing abandoned utilities.
5. Excavating topsoil.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit data for herbicide. Indicate compliance with applicable codes for environmental protection.

1.3 QUALITY ASSURANCE

A. Conform to applicable code for environmental requirements and disposal of debris.
B. Perform Work in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction and as shown and specified herein.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
B. Verify existing plant life designated to remain is tagged or identified.
C. Identify waste area and salvage area for placing removed materials.

3.2 PREPARATION

A. Contractor shall contact Sunshine 811 for location of existing utilities at 811 or 1-800-432-4770 a minimum of 48 hours prior beginning Work.

1. Request underground utilities to be located and marked within and surrounding construction areas.

3.3 PROTECTION

A. Locate, identify, and protect utilities indicated to remain, from damage.
B. Protect trees, plant growth, and features designated to remain.
C. Protect benchmarks, survey control points, and existing structures from damage or displacement.

3.4 CLEARING

A. Remove trees and shrubs within the clearing limits shown. Remove stumps and main root ball.
B. Clear undergrowth and deadwood, without disturbing subsoil.
C. Apply herbicide to remaining stumps to inhibit growth.

3.5 REMOVAL

A. Remove debris, rock, and extracted plant life from Site.
B. Partially remove paving, curbs, sidewalks, and other existing features as indicated on Drawings. Neatly saw cut concrete edges at right angle to surface.
C. Remove abandoned utilities as shown. Indicated removal termination point for underground utilities on Record Documents.
D. Continuously clean-up and remove waste materials from site. Do not allow materials to accumulate on site.
E. Do not burn or bury materials on site. Leave site in clean condition.

3.6 TOPSOIL EXCAVATION

A. Excavate topsoil from areas as shown to be further excavated, landscaped, or regraded, without mixing with foreign materials for use in finish grading.
B. Do not excavate wet topsoil.
C. Stockpile topsoil in storage piles in areas shown, or where otherwise approved by Engineer. Construct storage piles to freely drain surface water. Cover storage piles to prevent windblown dust.
D. Remove excess topsoil not intended for reuse from Site.

END OF SECTION

SECTION 31 23 16
EXCAVATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general requirements for excavation activities as shown and specified.
B. Related Requirements:

1. Section 31 23 23 - Fill.

1.2 REFERENCE STANDARDS

A. Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

1.3 DEFINITIONS

A. Rock: Material encountered in excavation that cannot be dislodged by a track-type hydraulic excavator, equipped with a 42-inch wide short-tip radius rock bucket, rated at not less than 120 horsepower flywheel power with bucket-curling force of not less than 25,000 lbs and stick-crowd force of not less than 18,000 lbs.

1. Rock shall not include materials such as hardpan, loose rock, concrete or other materials that can be removed by means other than drilling and blasting, but which for reasons of economy in excavating the Contractor chooses to remove by drilling or other means.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Shop Drawings:

1. Excavation Protection Plan:

a. Describe sheeting, shoring, and bracing materials and installation, as required, to protect excavations and adjacent structures and property.
b. Submit signed and sealed Shop Drawings with design calculations and assumptions to support plan.

C. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
D. Qualifications Statement:

1. Submit qualifications for licensed professional.

1.5 QUALITY ASSURANCE

A. Perform Work according to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

1.6 QUALIFICATIONS

A. Licensed Professional: Professional engineer experienced in design of specified Work and licensed in State of Florida.

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION

3.1 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.

B. Utility Service Locator:

1. Contractor shall contact Sunshine 811 for location of existing utilities at 811 or 1-800-432-4770 a minimum of 48 hours prior to beginning Work.
2. Request that underground utilities be located and marked within and immediately surrounding construction areas.
3. Identify required lines, levels, contours, and data.
4. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.
5. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility Owner immediately for directions. Coordinate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility Owner.

C. Existing Utilities:

1. Notify utility companies and coordinate protection or relocation of utilities.
2. Protect from damage utilities not indicated to be removed.
3. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Engineer and then only after acceptable temporary utility services have been provided.
4. Provide minimum of 48-hour notice to Engineer and receive written notice to proceed before interrupting any utility.
5. Demolish and completely remove from site existing under-ground utilities indicated to be removed. Coordinate with utility Owner for shut-off of services if lines are active.
6. In the event that an existing utility is broken, Contractor shall contact utility owner, Owner, and Engineer immediately. Coordinate repair with utility owner at their direction. The Contractor shall be responsible for all costs associated with damaged utilities.
7. Utility Poles: Contractor shall communicate directly with utility companies when performing work around utility poles. Contractor shall bear all costs associated with work, including expense of temporarily supporting poles.

D. When performing trench excavation in excess of 5-feet in depth, comply with OSHA requirements for trench safety standards, 29 CFR 1926, subpart b, and all subsequent revisions or updates adopted by the Department of Labor. Submission of bid and subsequent execution of Contract will serve as certification that all excavation in excess of 5-feet in depth will be in compliance with section 55 3. 62, Florida Statutes.
E. Use of explosives is not allowed.
F. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
G. Protect plant life, lawns, and other features designated to remain as portion of final landscaping.
H. Protect benchmarks, survey control points, existing structures, fences, sidewalks, paving, curbs, and other existing facilities and objects from excavating equipment and vehicular traffic.
I. Do not close or obstruct driveways, roadways, sidewalks, or hydrants without permits.

J. Erect and maintain temporary barriers and security devices, including warning signs, warning lights, and similar measures, for protection of public, Owner, and existing improvements indicated to remain.

1. Temporary barriers shall be installed and maintained in compliance with authorities having jurisdiction.

3.2 EXCAVATION

A. Underpin adjacent structures which may be damaged by excavation Work.
B. Excavate subsoil to accommodate slabs on grade, paving, Site structures, and construction operations.
C. Coordinate excavation requirements with Drawings and geotechnical report for working elevation to install pile foundations.
D. Compact disturbed load-bearing soil in direct contact with foundations to original bearing capacity, as specified in Section 31 23 23 - Fill.
E. Slope banks with machine to angle of repose or less until shored.
F. Do not interfere with 45-degree bearing splay of foundations.
G. Grade top perimeter of excavation to prevent surface water from draining into excavation.
H. Trim excavation and remove loose matter.
I. Removal of Deleterious Materials:

1. Remove excess and unsuitable material from Site.
2. Notify Engineer of unexpected subsurface conditions.

J. No payment will be made for correction of unauthorized excavation. Correct over-excavated areas as directed by Engineer.
K. Remove excavated material from Site.
L. Stockpile excavated material in area designated on Site.
M. Repair or replace items indicated to remain that have been damaged by excavation.
N. Except where otherwise authorized, shown or specified, all materials excavated below the bottom of concrete walls, footings, slabs on grade and foundations shall be replaced by, and at the expense of, the Contractor, with concrete placed at the same time and monolithic with the concrete above.

3.3 ROCK REMOVAL

A. Excavate and remove rock by mechanical method.

1. Drill holes and use expansive tools or wedges to fracture rock.

B. Cut away rock at bottom of excavation to form level bearing.
C. Remove shaled layers to provide sound and unshattered base.
D. In utility trenches, excavate to twelve (12) inches below invert elevation of pipe and twenty-four (24) inches wider than pipe diameter.
E. Remove excavated materials from site.
F. Correct unauthorized rock removal in accordance with backfilling and compacting requirements of Section 31 23 23 unless otherwise directed by the Engineer. No payment will be made for unauthorized rock removal or correction thereof.

3.4 EROSION CONTROL, DRAINAGE, AND DEWATERING

A. Erosion Control:

1. In general, the construction procedures outlined herein shall be implemented to assure minimum damage to the environment during construction. Contractor shall take any and all

additional measures required to conform to the requirements of applicable codes and regulations.

2. Whenever possible, access and temporary roads shall be located and constructed to avoid environmental damage. Provisions shall be made to regulate drainage, avoid erosion, and minimize damage to vegetation.
3. Where areas must be cleared for storage of materials or temporary structures, provisions shall be made for regulating drainage and controlling erosion, subject to the Engineer's approval.
4. Temporary measures shall be applied to control erosion and to minimize the silting of the existing waterways, and natural ponding areas. Such measures shall include, but are not limited to, the use of berms, silt barriers, gravel or crushed stone, mulch, slope drains and other methods. These temporary measures shall be applied to erodible materials exposed by any activities associated with the Work.
    a. Special care shall be taken to eliminate depressions that could serve as mosquito pools.
    b. Temporary measures shall be coordinated with the construction of permanent drainage facilities and other Work to the extent practicable to assure economical, effective, and continuous erosion and silt control.
    c. Contractor shall provide special care in areas with steep slopes. Disturbance of vegetation shall be kept to a minimum to maintain stability.
5. Remove only those shrubs and grasses that must be removed for construction. Protect the remainder to preserve their erosion-control value.
6. Install erosion and sediment control practices where shown on the Drawings and according to applicable standards, codes, and specifications. The practices shall be maintained in effective working condition during construction and until the drainage area has been permanently stabilized.
7. After stabilization, remove all silt barriers, debris, etc., from the Site.
8. In the event of any temporary Work stoppage, Contractor shall take steps to stabilize the Site and prevent erosion.
9. In the event Contractor repeatedly fails to satisfactorily control erosion and siltation, the Owner reserves the right to employ outside assistance or to use its own forces to provide the corrective measures indicated. The Contractor shall be responsible for all costs associated with such corrective measures.
10. Contractor shall prevent blowing and movement of dust from exposed soil surfaces and access roads to reduce on and off-site damage and health hazards. Control may be achieved by irrigation in which the Site shall be sprinkled with water until the surface is moist. The process shall be repeated, as required.

B. Drainage and Dewatering:

1. Contractor shall provide and maintain adequate drainage and dewatering equipment to remove and dispose of all surface water and groundwater entering excavations, or other parts of the Work. Each excavation shall be kept dry during subgrade preparation and continually thereafter until the pipe or structure to be built, therein is inspected by the Engineer and backfill operations have been completed and approved.
    a. The different working areas on the Site shall be kept free of surface water at all times. Contractor shall install drainage ditches and dikes and shall perform all pumping and other Work necessary to divert or remove rainfall and all other accumulations of surface water from the excavations and fill areas. The diversion and removal of surface water shall be performed in a manner that will prevent the accumulation of water behind temporary structures or at any other locations within the construction area where it may be detrimental.
    b. Water used for working or processing, resulting from dewatering operations, or containing

oils or sediments that will reduce the quality of the water downstream of the point of discharge, shall not be directly discharged. Such waters shall be diverted through a settling basin or filter before being discharged.

c. Contractor will be held responsible for the condition of any pipe, conduit, or channel used for drainage purposes and all such pipes, conduits, or channels shall be left clean and free of sediment.

d. Remove water from excavations as fast as it collects.

2. Contractor shall provide, install and operate sufficient trenches, sumps, pumps, hose, piping, well points, deep wells, etc., necessary to depress and maintain the ground water level below the base of the excavations during all stages of construction operations. The groundwater table shall be lowered in advance of excavation, for a sufficient period of time to permit dewatering of fine grain soils, and maintained two feet below the lowest subgrade excavation made until the structure has sufficient strength and weight to withstand horizontal and vertical soil and water pressures from natural ground water.

a. Design of dewatering system, including both drawings and calculations, shall be performed by a Registered Professional Engineer in the State of Florida and shall be employed by Contractor. Dewatering system shall be designed to avoid settlement or damage to existing structures and utilities.

b. The system shall be operated on a 24-hour basis and standby pumping facilities and personnel shall be provided to maintain the continued effectiveness of the system.

c. If, in the opinion of the Engineer, the water levels are not being lowered or maintained as required, Contractor shall install additional or alternate dewatering devices as necessary, at no additional cost to the Owner.

d. Elements of the system shall be located to allow a continuous dewatering operation without interfering with the construction of the permanent Work. Where portions of the dewatering system are located in the area of permanent construction, Contractor shall submit details of the methods proposed to construct the permanent Work in this location for the approval of the Engineer.

e. Controls of groundwater shall continue until the permanent construction provides sufficient dead load to withstand the hydrostatic uplift of the normal groundwater, until concrete has attained sufficient strength to withstand earth and hydrostatic loads, and until all waterproofing Work has been completed.

f. Dispose of all water removed from the excavation in a manner that does not endanger any portion of the Work under construction or completed.

g. Disposal of water removed shall comply with all State and Federal regulations.

h. Before discontinuing dewatering operations or permanently permitting the rise of the ground water level, computations shall be made to show that any structure affected by the water level rise is protected by backfill or other means to sustain uplift. Use a safety factor of 1.25 when making these computations.

i. Dewatering operations shall not be discontinued without the prior authorization of the Engineer.

3.5 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.

A. Inspecting: Request visual inspection of bearing surfaces by Engineer before installing subsequent Work.

3.6 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished

Work.

B. Prevent displacement or loose soil from falling into excavation, and maintain soil stability.
C. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
D. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

END OF SECTION

SECTION 31 23 23
FILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general requirements for backfill activities as shown and specified.

1. Fill under paving.
2. Fill around manhole structures
3. Fill for Open cut piping

B. Related Requirements:

1. Section 02 32 00 – Trenching, Bedding and Backfill
2. Section 31 23 16 – Excavation.

1.2 REFERENCE STANDARDS

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg Rammer and a 457-mm Drop.
2. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3).
3. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.
4. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3).
5. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
6. ASTM D6031/D6031M - Standard Test Method for Logging In Situ Moisture Content and Density of Soil and Rock by the Nuclear Method in Horizontal, Slanted, and Vertical Access Tubes.
7. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit manufacturer information for geotextile fabric, indicating fabric and construction.
C. Samples: Submit, in airtight containers, one 10-lb. sample of each type of fill to testing laboratory.
D. Materials Source: Submit name of imported materials suppliers.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.4 QUALITY ASSURANCE

A. Perform Work according to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Select Fill: Type S1, as specified in Section 02 32 00 – Trenching, Bedding and Backfill
B. Granular Fill: Type S3, as specified in Section 02 32 00 – Trenching, Bedding and Backfill
C. Concrete:

1. Description:

a. Structural, as specified in the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

b. Compressive Strength: 4,000 psi.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that subdrainage, damp proofing, and waterproofing installations have been inspected.
C. Verify that underground structures are properly anchored to avoid flotation after backfilling.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Compact subgrade to specified density requirements for subsequent backfill materials.
C. Soft Subgrade:

1. Cut out soft areas of subgrade not capable of compaction in place.
2. Backfill with granular fill and compact to density equal to or greater than specified requirements for subsequent fill material.

3.3 BACKFILLING

A. Backfill areas to contours and elevations.
B. Systematically backfill to allow maximum time for natural settlement.
C. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces, and do not backfill with frozen materials.
D. Maximum Compacted Depths:

1. The Engineer may grant permission to increase lift depth to 12 inches upon proof of successful compaction to the specified densities at the lift depths specified.

E. Compaction:
   1. Fill under roadways: 98-percent Standard Proctor Density.
   2. Fill outside of roadways: 95-percent Standard Proctor Density elsewhere.

F. Use placement method that does not disturb or damage foundation perimeter drainage or utilities in trench.

G. Maintain optimum moisture content of fill materials to attain required compaction density.

H. Structures:
   1. Backfill simultaneously on each side of unsupported manhole.

I. Make gradual grade changes and blend slope into level areas.

1.2 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.

B. Top Surface of Backfilling under Paved Areas: Plus or minus 1 inch from required elevations.

C. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

1.3 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.

B. Inspecting: Request visual inspection of bearing surfaces by Engineer before installing subsequent Work.

C. Testing:
   1. Laboratory Material Testing: Comply with AASHTO T 180.
   2. In-Place Compaction Testing:
      a. Density Tests: Comply with ASTM D6938.
      b. Moisture Tests: Comply with ASTM D6031/D6031M.
   3. If tests indicate that Work does not meet specified requirements, remove Work, replace, compact, and retest.
   4. Testing Frequency: One (1) moisture and one (1) density test per lift for each 100 feet along the alignment shown.

D. The Contractor shall be responsible for all settlement of backfill, fills, and embankments which may occur within the correction period stipulated in the General Conditions.

E. The Contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after notice from the Engineer or Owner.

1.4 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Reshape and recompact fills subjected to vehicular traffic during construction. ill under Asphalt Paving:

1. Compact subsoil to 95 percent of maximum density.

END OF SECTION

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for furnishing and installing erosion and sedimentation controls.
B. Related Sections:

1. Section 31 23 23 – Fill.
2. Section 33 05 61 – Concrete Manholes.
3. Section 33 31 11 – Public Sanitary Sewerage Gravity Piping.
4. Section 33 31 23 – Sanitary Sewerage Force Main Piping.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials:

1. AASHTO T88 - Standard Specification for Particle Size Analysis of Soils.
2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. American Concrete Institute:

1. ACI 301 - Specifications for Structural Concrete.

C. ASTM International:

1. ASTM C127 - Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate.
2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3).
3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3).
4. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit data on geotextile.
C. Samples:

1. Submit two samples or rock, minimum 5 tons each or one-half total project quantity, whichever is smaller. Provide one sample in place at construction site and provide other sample at quarry. Construction site sample may be incorporated into the Work. Samples will be used as reference for judging size, and graduation of rock supplied and placed.

D. Test Reports: Indicate certified tests results for precast concrete at manufacturing facility, cast-in-place concrete in field, and granular backfill.
E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

1.5 QUALITY ASSURANCE

A. Perform Work according to Florida Department of Transportation and Florida Department of Environmental Protection standards.

1.6 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
B. Convene minimum one (1) week prior to commencing work of this section.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
B. Do not place grout when air temperature is below freezing.
C. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 - PRODUCTS

2.1 ROCK AND GEOTEXTILE MATERIALS

A. Furnish rock and geotextile materials according to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.2 CONCRETE MATERIALS AND REINFORCEMENT

A. Furnish cement, aggregate, admixtures, and reinforcement in per Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
B. Water: Clean and not detrimental to concrete.

1.2 BLOCK, STONE, AGGREGATE, AND SOIL MATERIALS

A. Furnish block, stone, aggregate, and soil materials according to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.3 PLANTING MATERIALS

A. Seeding, Soil Supplements, and Mulch: Furnish according to Florida Department of Transportation standards.

2.4 PIPE MATERIALS

A. Pipe: Furnish according to Florida Department of Transportation standards.

2.5 ACCESSORIES

A. Furnish the following accessories in accordance with Florida Department of Transportation standards:

1. Joint Sealers.
2. Joint Fillers.
3. Building Paper.
4. Grout.
5. Steel Plate Vortex Device.
6. Welding Material.
7. Anti-Seep Collar.
8. Trash Racks.

2.6 MIXES

A. Concrete: Furnish according to Florida Department of Transportation standards.

2.7 SOURCE QUALITY CONTROL (AND TESTS)

A. Section 01 40 00 - Quality Requirements: Testing, inspection, and analysis requirements.
B. Perform tests on cement, aggregates, and mixes to ensure conformance with specified requirements.
C. Test samples in accordance with ACI 301.
D. Make rock available for inspection at producer's facility prior to shipment. Notify Engineer at least seven (7) days before inspection is allowed.
E. Allow witnessing of inspections and test at manufacturer's test facility. Notify Engineer at least seven (7) days before inspections and tests are scheduled.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
B. Verify compacted material is acceptable and ready to support devices and imposed loads.
C. Verify gradients and elevations of base or foundation for other work are correct.

1.3 INSTALLATION OF EROSION AND SEDIMENT CONTROLS

A. All erosion and sediment controls shall be installed as shown and in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

3.2 SITE STABILIZATION

A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.
B. Construct, stabilize, and activate erosion controls before site disturbance within tributary areas of

those controls.

C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.
D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.

1. During non-germinating periods, apply mulch at recommended rates.
2. Stabilize disturbed areas which are not at finished grade, and which will be disturbed within one year with temporary seeding.
3. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year with permanent seeding and/or sodding as shown and specified.

E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

3.3 FIELD QUALITY CONTROL

A. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.
B. Field test concrete in accordance with Florida Department of Transportation standards.
C. Compaction Testing: As specified in Section 31 23 23 - Fill.
D. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
E. Frequency of Compaction Testing: As specified in Section 31 23 23 - Fill.

3.4 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
B. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove, and dispose of sediment.
C. Do not damage structure or device during cleaning operations.
D. Do not permit sediment to erode into construction or site areas or natural waterways.
E. Clean channels when depth of sediment reaches approximately one-half channel depth.

3.5 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
B. Immediately after placement, protect paving from premature drying, excessive hot or cold temperatures, and mechanical injury.
C. Do not permit construction traffic over paving until 75 percent design strength of concrete has been achieved.
D. Protect paving from elements, flowing water, or other disturbance until curing is completed.

END OF SECTION

SECTION 32 12 16
ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section general requirements for asphalt paving.
B. Related Requirement:

1. Section 31 23 16 – Excavation.
2. Section 31 23 23 – Fill.
3. Section 33 05 61 – Concrete Manholes.

1.2 REFERENCE STANDARDS

A. AASHTO M17 - Standard Specification for Mineral Filler for Bituminous Paving Mixtures.
B. AASHTO M29 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
C. AASHTO M140 - Standard Specification for Emulsified Asphalt.
D. AASHTO M208 - Standard Specification for Cationic Emulsified Asphalt.
E. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
F. AASHTO M320 - Standard Specification for Performance-Graded Asphalt Binder.
G. AASHTO M324 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
H. AASHTO MP1a - Standard Specification for Performance-Graded Asphalt Binder.
I. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
J. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
K. ASTM D242 - Standard Specification for Mineral Filler For Bituminous Paving Mixtures.
L. ASTM D692 - Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
M. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
N. ASTM D977 - Standard Specification for Emulsified Asphalt.
O. ASTM D1073 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
P. ASTM D1188 - Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
Q. ASTM D2027 - Standard Specification for Cutback Asphalt (Medium-Curing Type).
R. ASTM D2397 - Standard Specification for Cationic Emulsified Asphalt.
S. ASTM D2726 - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
T. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
U. ASTM D3381 - Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
V. ASTM D3515 - Standard Specification for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
W. ASTM D3549 - Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
X. ASTM D3910 - Standard Practices for Design, Testing, and Construction of Slurry Seal.
Y. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete

and Asphalt Pavements.

Z. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.

AA. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.

BB. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.

CC. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data:

1. Submit data for milling and paving equipment to be used.
2. Submit product information for asphalt and aggregate materials.
3. Submit mix design with laboratory test results supporting design.
4. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Mixing Plant: Certified by State of Florida.

B. Obtain materials from same source throughout.

C. Perform Work in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

1.5 QUALIFICATIONS

A. Installer: Company specializing in performing Work of this section with minimum five (5) years of documented experience.

B. AMBIENT CONDITIONS

C. Section 01 50 00 - Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.

D. Do not place asphalt mixture when ambient air or base surface temperature is less than Florida Department of Transportation requirements.

PART 2 - PRODUCTS

2.1 ASPHALT PAVING

A. Performance / Design Criteria:

1. Pavement Design: Superpave Type SP-9.5 or Type SP-12.5 as shown or specified and in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Asphalt Materials:
3. Materials for asphalt paving shall comply with Florida Department of Transportation Standard

Specifications for Road and Bridge Construction.

2.2 MIXES

A. Asphalt Paving Mixtures:

1. Asphalt Paving Mixtures shall comply with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Use dry material to avoid foaming. Mix uniformly.

2.3 ACCESSORIES

1. Geotextile Fabric: AASHTO M288; non-woven, polypropylene.
2. SOURCE QUALITY CONTROL
3. Section 01 40 00 - Quality Requirements: Testing, inspection, and analysis requirements.
4. Submit proposed mix design of each class of mix for review prior to beginning of Work.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify utilities indicated under paving are installed with excavations and trenches backfilled and compacted.
C. Verify compacted subbase is dry and ready to support paving and imposed loads.

1. Proof roll subbase with a vibratory roller weighing a minimum of eight (8) tons or a sheepsfoot roller, where appropriate, exerting a compression of at least 250 pounds psi on the tamper foot for at least five (5) passes in minimum two (2) perpendicular passes to identify soft spots.
2. Remove soft subbase and replace with compacted fill as specified in Section 31 23 23.
3. Verify gradients and elevations of base are correct.

D. Verify manhole frames and drainage structures are installed in correct position and elevation.

3.2 PREPARATION

A. Prepare subbase in accordance with Florida Department of Transportation standards.

3.3 DEMOLITION

A. Saw cut and notch existing paving as indicted on Drawings.
B. Clean existing paving to remove foreign material, excess joint sealant and crack filler from paving surface.
C. Repair surface defects in existing paving to provide uniform surface to receive new paving.
D. Remove demolished asphalt from Site and dispose of properly.

3.4 MILLING OF EXISTING ASPHALT PAVEMENT

A. Perform all milling operations in accordance with Florida Department of Transportation standards.

B. Remove existing raised pavement markers prior to milling.
C. Do not disfigure adjacent Work.
D. Provide a milling machine capable of maintaining a depth of cut and cross slope that will achieve the results specified in the Contract Documents.

1. Milling machine shall have a minimum overall length (out to out measurement excluding the conveyor) of eighteen (18) feet and a minimum cutting width of six (6) feet.
2. Milling machine shall be equipped with a built-in automatic grade control system that can control the transverse slope and the longitudinal profile to produce the specified results.
3. The Engineer will approve any commercially manufactured milling machine that meets the above requirements. If it becomes evident after starting milling that the milling machine cannot consistently produce the specified results, the Engineer will reject the milling machine for further use.
4. The Contractor may use a smaller milling machine when milling to lower the grade adjacent to existing curb or other areas where it is impractical to use the above-described equipment.
5. Milling machine shall be equipped with means to effectively limit the amount of dust escaping during the removal operation.
6. For complete pavement removal, the Engineer may approve the use of alternate removal and crushing equipment.
7. Execute removal to depth not less than the depth(s) shown on the Drawing(s) at each point across full width of surface without detrimental aggregate degradation.

E. Remove milled asphalt from Site and dispose of properly.

3.5 INSTALLATION

A. Subbase: Prepare subbase in accordance with Florida Department of Transportation standards.
B. Prime Coat and Tack Coat: Install in accordance with Florida Department of Transportation standards.
C. Single Course Asphalt Paving:

1. Install Work in accordance with Florida Department of Transportation standards.
2. Place asphalt within 24 hours of applying primer or tack coat.
3. Place asphalt wearing course to thickness indicated on Drawings.
4. Compact paving by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
5. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.
6. Double Course Asphalt Paving:
7. Install Work in accordance with Florida Department of Transportation standards.

8. Place asphalt binder course within 24 hours of applying primer or tack coat.
9. Place binder course to thickness indicated on Drawings.
10. Place wearing course within 24 hours of placing and compacting binder course.
    a. When binder course is placed more than 24 hours before placing wearing course, clean surface and apply tack coat before placing wearing course.
    b. Place wearing course to thickness indicated on Drawings.
    c. Compact each course by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
    d. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.
    e. Asphalt Paving Overlay
    f. Install Work in accordance with Florida Department of Transportation standards.
    g. Apply tack coat to existing paving surface at rate recommended by geotextile fabric manufacturer.
    h. Install geotextile fabric in accordance with manufacturer's instructions to permit asphalt saturation of fabric. Lap fabric edge and end joints 4 inches.
    i. Place wearing course to thickness indicated on Drawings.
    j. Compact overlay by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
    k. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.
    l. Place asphalt mixture when temperature is not more than 15 degrees F less than initial mixing temperature.

3.6 CURBS

A. Install extruded asphalt curbs of profile as indicated on Drawings.

3.7 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.
B. Flatness: Maximum variation of 1/4 inch measured with 10-foot straight edge.
C. Scheduled Compacted Thickness: Within 3/16 inch.
D. Variation from Indicated Elevation: Within 1/2 inch.

3.8 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Asphalt Paving Mix Temperature: Measure temperature at time of placement.
C. Asphalt Paving Thickness: ASTM D3549; test one core sample from every 1,000 square yards

compacted paving.

D. Asphalt Paving Density: Monitor the roadway density per Florida Department of Transporation standards with either 6-inch diameter roadway cores, a nuclear density gauge, or other density measuring device, at a minimum frequency of once per 1,500 feet of pavement.

3.9 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
B. Immediately after placement, protect paving from mechanical injury until surface temperature is less than 160 degrees F.
C. Keep sections of newly compacted asphalt concrete, which are to be covered by additional courses, clean until the successive course is laid.
D. Do not dump embankment or base material directly on the pavement. Dress shoulders before placing the friction course on adjacent pavement.

END OF SECTION

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SECTION 32 13 13
CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Aggregate subbase.
2. Concrete paving for:

a. Concrete sidewalks.
b. Concrete integral curbs and gutters.
c. Concrete parking areas and roads.

B. Related Requirements:

1. Section 31 23 23 - Fill.
2. Section 32 12 16 - Asphalt Paving.

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO M324 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

B. American Concrete Institute:

1. ACI 301 - Specifications for Structural Concrete.
2. ACI 304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete.

C. ASTM International:

1. ASTM A184 - Standard Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement.
2. ASTM A185 - Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
3. ASTM A497 - Standard Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement.
4. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
5. ASTM A706 - Standard Specification for Low-Alloy Steel Deformed and Plain Bars for

Concrete Reinforcement.

6. ASTM A767 - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement.
7. ASTM A775 - S Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
8. ASTM A884 - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement.
9. ASTM A934 - Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.
10. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
11. ASTM C33 - Standard Specification for Concrete Aggregates.
12. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
13. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
14. ASTM C143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
15. ASTM C150 - Standard Specification for Portland Cement.
16. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
17. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
18. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
19. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
20. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
21. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
22. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
23. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
24. ASTM C979 - Standard Specification for Pigments for Integrally Colored Concrete.
25. ASTM C989 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars.
26. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
27. ASTM C1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
28. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete and Shotcrete.

29. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
30. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
31. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
32. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
33. ASTM D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
34. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
35. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
36. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.
37. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
38. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

1.3 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
B. Convene minimum one week prior to commencing work of this section.

1.4 SUBMITTALS

A. Only request submittals needed to verify compliance with Project requirements.
B. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
C. Product Data:

1. Submit data on concrete materials, joint filler, admixtures, and curing compounds.

D. Design Data:

1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:

a. Hot and cold weather concrete work.

2. Identify mix ingredients and proportions, including admixtures.

3. Chloride can contribute to corrosion of metals embedded in concrete. Admixture manufacturers are not required to identify chloride content, unless requested.
4. Identify chloride content of admixtures and whether chloride was added during manufacture.

E. Source Quality Control Submittals: Indicate results of factory tests and inspections.

1.5 QUALITY ASSURANCE

A. Perform Work according to ACI 30 and in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
B. Obtain cementitious materials from same source throughout.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum five (5) years documented experience.
B. Installer: Company specializing in performing work of this section with minimum five (5) years documented experience.

1.7 MOCKUP

A. Section 01 40 00 - Quality Requirements: Requirements for mockup.
B. Construct mockup, 5 x 5 feet, including paving, joints, surface texture, and exposed aggregate, as required.
C. Locate where shown on the Drawings or directed by Engineer.
D. Remove mockup when directed by Engineer.

1.8 AMBIENT CONDITIONS

A. Section 01 50 00 - Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.
B. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 - PRODUCTS

2.1 AGGREGATE SUBBASE

A. Aggregate Subbase: As specified in Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.2 CONCRETE PAVING

A. Performance / Design Criteria:

1. Pavement shall be designed for the intended service as shown on the Drawings in accordance with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

B. All concrete, reinforcement, and formwork shall conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.3 FABRICATION

A. Fabricate reinforcing according to Florida Department of Transportation standards.
B. Form standard hooks for 180-degree bends, 90-degree bend, and seismic hooks as indicated on Drawings.

2.4 MIXES

A. Concrete mix shall be in accordance with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.5 CONCRETE CURB AND GUTTER

A. Concrete curb and gutter shall be in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.6 CONCRETE MATERIALS

A. Concrete:

1. All concrete shall be Class I as specified in Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Section 346, "Portland Cement Concrete".

B. Forms:

1. Description: Forms shall be either wood or metal.
2. Forms shall be straight, free from warps or bends, and of sufficient strength and rigidity to resist the pressure of the concrete without distortion.
3. Height: Equal to full depth of finished sidewalk.
4. Flexible forms shall be used for all headers constructed on a radius.

C. Steel Reinforcement:

1. Deformed Reinforcing:

a. Steel: Comply with ASTM A615/A615M.
b. Yield Grade: 60 ksi.
c. Billet Bars: Deformed.
d. Finish: Uncoated.

2. Deformed Bar Mats:

a. Description: Steel bars.
b. Comply with ASTM A184/A184M.
c. Fabrication: Comply with ASTM A615 or ASTM A706.
d. Yield Strength: 60 ksi.
e. Finish: Uncoated.

3. Welded Plain-Wire Fabric:

   a. Comply with ASTM A1064/A1064M.

   b. Finish: Uncoated.

4. Dowels:

   a. Description: Plain steel bars.

   b. Comply with ASTM A615.

   c. Yield Strength: 60 ksi.

   d. Length: As indicated on Drawings.

   e. Ends: Square, with burrs removed.

   f. Finish: Uncoated.

5. Tie Wire:

   a. Type: Annealed.

   b. Minimum Size: 16 gauge.

   c. Finish: Uncoated.

6. Glass-Fiber Reinforcement:

   a. Description: Alkali-resistant, glass-fiber rovings specifically formulated for use in concrete.

   b. Length: Varying from 1-1/2 to 2 inches.

2.7 ACCESSORIES

A. Joint materials, curing compounds, liquid surface sealers, surface retarders, and joint sealers shall comply with Florida Department of Transportation standards.

2.8 SOURCE QUALITY CONTROL

A. Section 014000 - Quality Requirements: Testing and Inspection Services.
B. Submit proposed mix design of each class of concrete to appointed firm for review prior to commencement of Work.
C. Tests on cement, aggregates, and mixes will be performed to ensure conformance with specified requirements.
D. Test samples according to ACI 301.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. When performance specifying is used coordinate section specifying compacted subbase section to suit intended loads.

C. Verify compacted subbase is dry and ready to support paving and imposed loads.
D. Identify type of vehicle or compactor and minimum load required for proof rolling subbase.
E. Verify gradients and elevations of base are correct.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Moisten substrate to minimize absorption of water from fresh concrete.
C. Coat surfaces of manhole, catch basin, and inlet frames with oil to prevent bond with concrete paving.
D. Notify Engineer minimum 24 hours prior to commencement of concreting operations.

3.3 INSTALLATION

A. Base Course:

1. Prepare base course according to Florida Department of Transportation standards.

B. Forms:

1. Place and secure forms and screeds to correct location, dimension, profile, and gradient.
2. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Reinforcement:

1. Place reinforcing as indicated on Drawings.
2. Interrupt reinforcing at expansion joints.
3. Place dowels to achieve paving and curb alignment as detailed.
4. Quantity of doweled joints requires consideration for frequency of traffic.
5. Provide doweled joints as shown on the Drawings
6. Repair damaged reinforcement finish to match shop finish.

D. Placing Concrete:

1. Place concrete according to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Ensure reinforcing, inserts, embedded parts, and formed joints are not disturbed during concrete placement.
3. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
4. Place concrete to pattern indicated.

E. Joints

1. Place expansion joints at 20-foot intervals unless otherwise shown. Align curb, gutter, and sidewalk joints.

2. Place joint filler between paving components and building or other appurtenances. Recess top of filler 1/4 inch for sealant installation.
3. Provide scored joints at 3 feet intervals between sidewalks and curbs, and between curbs and paving.
4. Provide keyed joints as indicated.
5. Seal joints as indicated on Drawings.

F. Exposed Aggregate:

1. Apply surface retarder where exposed aggregate finish is required.
2. Wash exposed aggregate surface with clean water and scrub with stiff bristle brush exposing aggregate.

G. Finishing:

1. Concrete finish shall be as shown on the Drawings.

H. Curing and Protection

1. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
2. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.4 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.
B. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.
C. Maximum Variation from True Position: 1/4 inch.

3.5 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for inspecting, testing.
B. Perform field inspection and testing according to Florida Department of Transportation standards.
C. Inspect reinforcing placement for size, spacing, location, support.
D. Testing firm will take cylinders and perform slump and air entrainment tests according to ACI 301.
E. Strength Test Samples:

1. Sampling Procedures: ASTM C172.
2. Cylinder Molding and Curing Procedures: ASTM C31/C31M, cylinder specimens, standard cured.
3. Sample concrete and make one set of three cylinders for every 50 cu yds or less of each class of concrete placed each day and for every 2,000 sf of surface area paving.
4. Make one additional cylinder during cold weather concreting, and field cure.

F. Field Testing:

1. Slump Test Method: ASTM C143.
2. Air Content Test Method: ASTM C173.
3. Temperature Test Method: ASTM C1064.
4. Measure slump and temperature for each compressive strength concrete sample.
5. Measure air content in air entrained concrete for each compressive strength concrete sample.

G. Cylinder Compressive Strength Testing:

1. Test Method: ASTM C39.
2. Test Acceptance: Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
3. Test one (1) cylinder at 7 days.
4. Test three (3) cylinders at 28 days.
5. Dispose remaining cylinders when testing is not required.

H. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.6 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
B. Immediately after placement, protect paving from premature drying, excessive hot or cold temperatures, and mechanical injury.
C. Coordinate minimum requirements for concrete strength with expected traffic conditions.
D. Do not permit traffic over paving until 75 percent design strength of concrete has been achieved.

END OF SECTION

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fence framework, fabric, and accessories.
2. Excavation for post bases.
3. Concrete foundation for posts.
4. Manual gates and related hardware.
5. Privacy slats.

1.2 REFERENCES

A. ASTM International:

1. ASTM A121 - Standard Specification for Metallic-Coated Carbon Steel Barbed Wire.
2. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
4. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
5. ASTM A491 - Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric.
6. ASTM A817 - Standard Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric and Marcelled Tension Wire.
7. A1011/ Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
8. ASTM B429 - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
9. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
10. ASTM F552 - Standard Terminology relating to Chain Link Fencing.
11. ASTM F567 - Standard Practice for Installation of Chain-Link Fence.
12. ASTM F626 - Standard Specification for Fence Fittings.
13. ASTM F668 - Standard Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain-Link Fence Fabric.
14. ASTM F900 - Standard Specification for Industrial and Commercial Swing Gates.
15. ASTM F934 - Standard Specification for Standard Colors for Polymer-Coated Chain Link

Fence Materials.

16. ASTM F1043 - Standard Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.
17. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
18. ASTM F1183 - Standard Specification for Aluminum Alloy Chain Link Fence Fabric.
19. ASTM F1184 - Standard Specification for Industrial and Commercial Horizontal Slide Gates.
20. ASTM F1345 - Standard Specification for Zinc - 5% Aluminum -Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric.

B. Chain Link Fence Manufacturers Institute:

1. CLFMI - Product Manual.

1.3 SYSTEM DESCRIPTION

A. Fence Height: as indicated on Drawings.
B. Line Post Spacing: At intervals not exceeding 10 feet.
C. Fence Post and Rail Strength: Conform to ASTM F1043 Light Industrial Fence quality.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, gates, and schedule of components.
C. Product Data: Submit data on fabric, posts, accessories, fittings, and hardware.
D. Samples: Submit two 12x12 inch samples of fence fabric.
E. Manufacturer's Installation Instructions: Submit installation requirements.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
B. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines and easements.
C. Operation and Maintenance Data: Procedures for submittals.

1.6 QUALITY ASSURANCE

A. Perform Work according to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum five (5) years of documented experience.
B. Installer: Company specializing in performing work of this section with minimum five (5) years of documented experience.

1.8 DELIVERY, STORAGE AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and

protecting products.
B. Deliver fence fabric and accessories in packed cartons or firmly tied rolls.
C. Identify each package with manufacturer's name.
D. Store fence fabric and accessories in secure and dry place.

PART 2 - PRODUCTS

2.1 MATERIALS AND COMPONENTS

A. Materials and Components: Conform to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.2 COMPONENTS

A. Line posts, corner and terminal posts, gate posts, top and brace rails, gate frames, fabric, tension wires, tension bands, tension straps and tie wire shall be in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.3 ACCESSORIES

A. Caps, fittings, extension arms, and gate hardware shall be in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.4 GATES

A. General:

1. Gate Types, Opening Widths and Directions of Operation: As indicated on Drawings.
2. Factory assemble gates.
3. Gates shall conform to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.5 FINISHES

A. Chain link fencing finishes shall be in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install framework, fabric, accessories, and gates according to Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
B. Set intermediate, terminal, and gate posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
C. Line Post Footing Depth Below Finish Grade: As shown on the Drawings.
D. Corner, Gate and Terminal Post Footing Depth Below Finish Grade: As shown on the Drawings.
E. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gate posts.

F. Install top rail through line post tops and splice with 6-inch long rail sleeves.
G. Install center and bottom brace rail on corner gate leaves.
H. Place fabric on outside of posts and rails.
I. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
J. Position bottom of fabric 2 inches above finished grade.
K. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
L. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
M. Install bottom tension wire stretched taut between terminal posts.
N. Install support arms sloped outward and attach barbed wire; tension and secure.
O. Support gates from gate posts. Do not attach hinged side of gate from building wall.
P. Install gate with fabric and barbed wire overhang to match fence. Install three (3) hinges on each gate leaf.
Q. Install posts with 6 inch maximum clear opening from end posts to buildings, fences and other structures.
R. Excavate holes for posts to diameter and spacing indicated on Drawings without disturbing underlying materials.
S. Center and align posts. Place concrete around posts, and vibrate or tamp for consolidation. Verify vertical and top alignment of posts and make necessary corrections.
T. Extend concrete footings 2 inches above grade, and trowel, forming crown to shed water.
U. Allow footings to cure minimum 7 days before installing fabric and other materials attached to posts.

3.2 ERECTION TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.
B. Maximum Variation From Plumb: 1/4 inch.
C. Maximum Offset From Indicated Position: 1 inch.
D. Minimum distance from property line: 6 inches.

END OF SECTION

SECTION 33 05 05.31
HYDROSTATIC TESTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Hydrostatic testing of pressure piping.
B. Related Requirements:

1. Section 33 31 23 - Sanitary Sewerage Force Main Piping.

1.2 REFERENCE STANDARDS

A. American Water Works Association:

1. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
2. AWWA C605 - Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Submit following items prior to start of testing:

1. Testing procedures.
2. List of test equipment.
3. Testing sequence schedule.
4. Provisions for disposal of flushing and test water.
5. Certification of test gage calibration.

C. Test and Evaluation Reports: Indicate results of piping tests.
D. Qualifications Statement:

1. Submit qualifications of field personnel responsible for supervising hydrostatic testing.

1.4 QUALITY ASSURANCE

A. Perform Work according to Florida Department of Environmental Protection (FDEP) standards.

1.5 QUALIFICATIONS

A. Applicator: Company specializing in performing Work of this Section with minimum five (5) years of documented experience.

PART 2 - PRODUCTS

2.1 HYDROSTATIC TESTING

A. Equipment:

1. Pressure pump.
2. Pressure hose.
3. Water meter.
4. Test connections.
5. Pressure relief valve.
6. Pressure Gage: Calibrated to 0.1 psi.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that piping is ready for testing.
C. Verify that trenches are backfilled.
D. Verify that pressure piping thrust restraints have been installed.

3.2 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Testing of Pressure Piping:

1. Test system according to AWWA C600 and following:

a. Test Pressure: Not less than 150 psig or 50 psi in excess of maximum static pressure, whichever is greater.
b. Conduct hydrostatic test for a minimum of two (2) hours.
c. Slowly fill section to be tested with water of approved quality; expel air from piping at high points. If hydrants, blowoffs, or other outlets are not available at high points for releasing air, the Contractor shall make the necessary taps at such points, and shall plug said holes after completion of the test.
d. Install corporation cocks at high points.
e. Close air vents and corporation cocks after air is expelled.
f. Raise pressure to specified test pressure.
g. Observe joints, fittings, and valves under test.

h. Remove and renew cracked pipes, joints, fittings, and valves showing visible leakage, and retest.

i. Correct visible deficiencies and continue testing at same test pressure for additional two hours to determine leakage rate.

j. Maintain pressure within plus or minus 5 psi of test pressure.

k. Leakage is defined as quantity of water supplied to piping necessary to maintain test pressure during period of test.

l. Compute maximum allowable leakage using following formula:

   1) L = SD x sqrt(P)/C.
   2) L = testing allowance, gph.
   3) S = length of pipe tested, feet.
   4) D = nominal diameter of pipe, inches.
   5) P = average test pressure during hydrostatic test, psig.
   6) C = 133,200.

m. If pipe under test contains sections of various diameters, calculate allowable leakage from sum of computed leakage for each size.

n. Leakage:

   1) If test of pipe indicates leakage greater than allowed, locate source of leakage, make corrections, and retest until leakage is within allowable limits.
   2) Correct visible leaks regardless of quantity of leakage.

2. HDPE Pipe Testing:

   a. In addition to the leakage requirements above, HDPE pipe shall not exceed the following allowable expansion rates:

HDPE Pipe Diameter	Allowable Expansion
2”	0.10 gallons/100 feet of pipe
3”	0.15 gallons/100 feet of pipe
4”	0.25 gallons/100 feet of pipe
6”	0.55 gallons/100 feet of pipe
8”	0.95 gallons/100 feet of pipe
10”	1.25 gallons/100 feet of pipe
12”	2.25 gallons/100 feet of pipe
14”	2.75 gallons/100 feet of pipe
16”	3.25 gallons/100 feet of pipe
18”	4.25 gallons/100 feet of pipe
20”	5.45 gallons/100 feet of pipe
24”	8.75 gallons/100 feet of pipe

3. If testing of piping indicates leakage greater than that allowed, locate source of leakage, make corrections, and retest until leakage is within acceptable limits.
4. Correct visible leaks regardless of quantity of leakage.
5. If, in the judgement of the Engineer, it is impractical to follow the foregoing procedures exactly for any reason, modifications to the procedure shall be made as required and approved by the Engineer. This shall not relieve the Contractor of the responsibility to meet the leakage and expansion requirements specified herein.

END OF SECTION

SECTION 33 05 05.33
INFILTRATION AND EXFILTRATION TESTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Testing of Manholes: Exfiltration testing.

B. Related Requirements:

1. Section 33 05 61 - Concrete Manholes.
2. Section 33 31 11 - Public Sanitary Sewerage Gravity Piping.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Submit following items prior to start of testing:

1. Testing procedures.
2. List of test equipment.
3. Testing sequence schedule.
4. Provisions for disposal of flushing and test water.
5. Certification of test gauge calibration.

C. Test and Evaluation Reports: Indicate results of manhole and piping tests.
D. Qualifications Statement:

1. Submit qualifications for applicator.

1.3 QUALITY ASSURANCE

A. Perform Work according to Florida Department of Environmental Protection standards.

1.4 QUALIFICATIONS

A. Company specializing in performing Work of this Section with minimum five (5) years of documented experience.

PART 2 - PRODUCTS

2.1 EXFILTRATION TESTING

A. Equipment:

1. Plugs.
2. Pump.
3. Measuring device.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that manholes and piping are ready for testing.
C. Verify that trenches are backfilled.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for preparation.
B. Plugs:

1. Plug outlets, wye branches, and laterals.
2. Brace plugs to resist test pressures.

3.3 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Manhole Testing:

1. Repair both outside and inside of joint to ensure permanent seal.
2. Test manholes with manhole frame set in place.
3. Plug pipes in manhole.
4. Remove water from manhole.
5. Observe plugs over period of not less than two hours to ensure that there is no leakage into manhole.
6. Determine ground water level outside manhole.
7. Fill manhole with water within 4 inches of top of cover frame.
8. Prior to testing, allow manhole to soak from minimum of four (4) hours to maximum of 72 hours.
9. After soak period, adjust water level inside manhole to within 4 inches of top of cover frame.
10. Measure water level from top of manhole frame.
11. At end of 4-hour testing period, again measure water level from top of manhole frame; compute

drop in water level during testing period.

12. Manhole exfiltration test is considered satisfactory when drop in water level is less than 0.1 percent (0.1%) of the water surface elevation within the manhole.
13. If unsatisfactory testing results are achieved, repair manhole and retest until result meets criteria.
14. Repair visible leaks regardless of quantity of leakage.

END OF SECTION

SECTION 33 05 05.36
VACUUM TESTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Vacuum testing of manholes.
B. Related Requirements:

1. Section 33 05 61 - Concrete Manholes.
2. Section 33 31 11 - Public Sanitary Sewerage Gravity Piping.

1.2 REFERENCE STANDARDS

A. ASTM International:

1. ASTM C1244 - Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Submit following items prior to start of testing:

1. Testing procedures.
2. List of test equipment.
3. Testing sequence schedule.
4. Provisions for disposal of flushing and test water.
5. Certification of test gauge calibration.

C. Test and Evaluation Reports: Indicate results of manhole tests.
D. Qualifications Statement:

1. Submit qualifications for applicator.

1.4 QUALIFICATIONS

A. Company specializing in performing Work of this Section with minimum five (5) years of documented experience.

PART 2 - PRODUCTS

2.1 VACUUM TESTING

A. Equipment:

1. Vacuum pump.
2. Vacuum line.

3. Vacuum Tester Base:

    a. Compression band seal.

    b. Outlet port.

4. Shutoff valve.
5. Stopwatch.
6. Plugs.
7. Vacuum Gauge: Calibrated to 0.1 in. Hg.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that manholes are ready for testing.
C. Verify that manholes are backfilled.

3.2 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Manhole Testing:

1. Repair both outside and inside of joint to ensure permanent seal.
2. Test manholes with manhole frame set in place.
3. Vacuum Testing:

    a. Comply with ASTM C1244.

    b. Plug pipe openings; securely brace plugs and pipe.

    c. Inflate compression band to create seal between vacuum base and structure.

    d. Connect vacuum pump to outlet port with valve open, then draw vacuum to 10 in. Hg.

    e. Close valve.

    f. Manhole Test Duration in Seconds:

        1) Manhole Diameter of 4 Feet: 60.

        2) Manhole Diameter of 5 Feet: 75.

        3) Manhole Diameter of 6 Feet: 90.

    g. Record vacuum drop during test period.

    h. If vacuum drop is greater than 1 in. Hg during testing period, repair and retest manhole.

    i. If vacuum drop of 1 in. Hg does not occur during test period, manhole is acceptable; discontinue testing.

j. If vacuum test fails to meet 1-in. Hg drop in specified time after repair, repair and retest manhole.

4. If unsatisfactory testing results are achieved, repair manhole and retest until result meets criteria.
5. Repair visible leaks regardless of quantity of leakage.

END OF SECTION

SECTION 33 05 61
CONCRETE MANHOLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Modular precast concrete manholes and structures with tongue-and-groove joints and transition to cover frame, covers, anchorage, and accessories.
2. Doghouse manhole connections to existing sanitary sewer lines.
3. Bedding and cover materials.
4. Modification of existing manholes and structures.

B. Related Requirements:

1. Section 33 05 05.33 - Infiltration and Exfiltration Testing.
2. Section 33 05 05.36 – Vacuum Testing.
3. Section 33 31 11 - Public Sanitary Sewerage Gravity Piping.

1.2 REFERENCE STANDARDS

A. American Association of State Highway Transportation Officials:

1. AASHTO M91 - Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale).
2. AASHTO M306 - Standard Specification for Drainage, Sewer, Utility, and Related Castings.

B. American Concrete Institute:

1. ACI 530/530.1 - Building Code Requirements and Specification for Masonry Structures.

C. ASTM International:

1. ASTM A48/A48M - Standard Specification for Gray Iron Castings.
2. ASTM C478 - Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.
3. ASTM C497 - Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
4. ASTM C877 - Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections.
5. ASTM C913 - Standard Specification for Precast Concrete Water and Wastewater Structures.
6. ASTM C923 - Standard Specification for Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes, and Laterals.

7. ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
8. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
9. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.

1.3 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
B. Coordinate Work of this Section with connection to existing sewer facilities.

1.4 SUBMITTALS

A. Only request submittals needed to verify compliance with Project requirements.
B. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
C. Product Data: Submit manufacturer information for manhole covers, component construction, features, configuration, and dimensions.
D. Shop Drawings:

1. Indicate structure locations and elevations.
2. Indicate sizes and elevations of piping, penetrations, and manhole inverts.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
F. Include separate Paragraphs for additional certifications.
G. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
H. Source Quality-Control Submittals: Indicate results of factory tests and inspections.
I. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
J. Qualifications Statement:

1. Submit qualifications for manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Project Record Documents: Record actual locations of manholes and connections, and record invert elevations.

1.6 QUALITY ASSURANCE

A. Perform Work as shown and specified and according to applicable Florida Department of Environmental Protection and Florida Department of Transportation standards.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years of documented experience.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

C. Handling: Comply with precast concrete manufacturer instructions and ASTM C913 for unloading and moving precast manholes and drainage structures.
D. Storage:

1. Store materials according to manufacturer instructions.
2. Store precast concrete manholes and drainage structures to prevent damage to Owner's property or other public or private property.
3. Repair property damaged from materials storage.

E. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Provide additional protection according to manufacturer instructions.

1.9 AMBIENT CONDITIONS

A. Section 01 50 00 - Temporary Facilities and Controls: Requirements for ambient condition control facilities for product storage and installation.
B. Maintain materials and surrounding air temperature to minimum 50 degrees F prior to, during, and 48 hours after completion of masonry Work.

1.10 EXISTING CONDITIONS

A. Field Measurements:

1. Verify field measurements prior to fabrication.
2. Indicate field measurements on Shop Drawings.

1.11 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.
B. Furnish five (5) year manufacturer's warranty for concrete manholes.

PART 2 - PRODUCTS

2.1 CONCRETE MANHOLES

A. Manhole Sections:

1. General: Manholes shall be fabricated only from eccentric tapered sections or eccentric flat top sections and standard cylinder units with the proper internal diameter.
2. Materials:

a. Reinforced Precast Concrete: Comply with ASTM C478, with the exclusion of Section 10 (a) and as modified herein.
b. Cement shall meet the requirements of ASTM C150 for Portland Cement Type II.
c. Concrete shall meet the minimum requirements for Class III.

d. Minimum wall thickness shall be as shown on the Drawings.

e. The required minimum strength of concrete and conformance to the design parameters shall be confirmed by testing in accordance with ASTM C14. Contractor shall be responsible for all testing.

f. Use a minimum allowable steel hoop of No. 4 wire to be cast into each unit at adequate places as a precautionary measure for handling.

3. Gaskets: Comply with ASTM C923.

4. Joints:

a. Joint contact surfaces shall be formed exactly parallel with a 2-degree slope and nominal 1/16-inch clearance with the tongue equipped with a proper recess for the installation of an o-ring rubber gasket or pre-molded plastic joint sealer.

b. Pre-molded plastic joint sealer, if used, shall be Ramnek or approved equal and joints shall be pre-primed and wrapped on the exterior to provide a sealed manhole.

c. Comply with ASTM C913.

d. Maximum Leakage: 0.025 gal. per hour per foot of joint at 3 feet of head.

e. Manufacturers:

1) Del Zotto,

2) Taylor Precast,

3) or approved equal.

B. Coatings and Liners:

1. Coatings shall cover the interior and exterior surfaces of the manhole except the joint contact surfaces and the annular openings for pipe connections.

a. Exterior coating shall be bituminous coating as specified in Section 09 90 00 – Painting and Coating.

2. For mildly corrosive environments, interior coating shall be coal tar epoxy as specified in Section 09 90 00 – Painting and Coating.

3. For highly corrosive environments, manholes shall include a polyurea or high density polyethylene liner as shown on the Drawings or specified.

a. HDPE Liner:

1) HDPE liner shall be embedded into pre-cast concrete with anchoring ribs during manufacturing process. Anchoring ribs shall be placed a minimum of 30 per square foot of liner in one piece with the HDPE sheet and shall be of the same material.

2) Liner shall be 80 mils. thick minimum, with a minimum resistance to pull out of 125 pounds per square foot, and withstand a back pressure of 30 psi.
3) The HDPE material shall have a maximum working temperature of 140° F, fire classification of V2 as defined by UL-94, density of 0.945 g/cc as defined in ASTM D792-86, and puncture resistance of 170 lbs. as defined by ASTM D4833.
4) The liner shall be flexible to elongate to bridge up to a 1/4-inch setting or expansion.

b. Polyurea Liner:

1) Liner shall be a two component, 100% solids, zero (0) volatile organic compound, pure polyurea.
2) Liner system shall be designed for highly corrosive wastewater environments.
3) Liner system shall consist of the following:

a) Primer/Moisture Barrier: Minimum 30 to 100 mils dry film thickness (DFT)
b) Top Coat: Minimum 125 mils DFT.

4) Primer/Moisture Barrier shall be designed specifically for the lining system.
5) Surfaces shall be prepared in accordance with the manufacturer's requirements.
6) Lining shall be applied in accordance with the manufacturer's requirements.
7) Manufacturers:

a) GML Coatings, Inc., Green Monster Liner,
b) or approved equal.

4. For existing manholes undergoing modification, the Monoform™ lining process by Hydro-Klean Solutions Group, or approved process of similar effect, shall be utilized to modify the existing manholes to meet the requirements outlined within the contract drawings.

a. Requirements and installation process for liner shall be as outlined by the manufacturer.

C. Mortar and Grout shall be Embeco 167 and 381 or approved equal.

1. The Contractor shall apply Master Builders' Master Seal or approved equal membrane curing compound, conforming to ASTM C309, Type I, Class B, to interior and exterior finished grout.

D. Clear Inside Dimensions shall be as indicated on Drawings.

1. In no case shall the inside diameter be less than 48-inches.

E. Design Depth shall be as indicated on Drawings.
F. Clear Cover Opening:

1. As indicated on Drawings.

G. Pipe Entry:

1. Furnish openings as indicated on Drawings.
2. Pipes shall be connected to manholes with heavy duty flexible rubber connector boots conforming to ASTM C923 with stainless steel bands and hardware.

2.2 FRAMES AND COVERS

A. Standard Manhole Ring and Cover:

1. Manhole frames and covers shall be constructed of close-grained gray iron, smooth, clean, free from blisters and defects.
2. Material: Cast iron.
3. Comply with the following:
   a. ASTM A48/A48M, Class 30B.
   b. Federal Specification RR-F-621-C.
4. Manhole frames and covers shall meet or exceed requirements for AASHTO H-20 load rating and AASHTO M306.
5. Surface: Machined flat bearing.
6. Cover Design: Closed.
7. All components shall be black epoxy coated.
8. Cover shall be molded and marked as shown on the Drawings.
9. Manufacturers:
   a. U.S. foundry, USF 170CE (22-inch), USF 655CW-M (32-inch)
   b. Vulcan Foundry V-1337-2 (22-inch),
   c. or approved equal.

B. Hinged Manhole Ring and Cover:

1. Hinged manhole ring and cover shall be constructed of sound ductile iron, smooth, clean, free from blisters and defects.
2. Frames shall be circular and incorporate a seating gasket.
3. Cover hinge system shall include a 90-degree blocking system.
4. Hinge box shall be self-cleaning with dual wiper infiltration plug.
5. Covers shall include locks.
6. Comply with the following:

a. ASTM A48/A48M, Class 30B.

b. Federal Specification RR-F-621-C.

c. ISO 1083.

7. Manhole frames and covers shall meet or exceed requirements for AASHTO H-20 load rating and AASHTO M306.
8. Cover Design: Closed.
9. All components shall be black epoxy coated.
10. Cover shall be molded and marked as shown on the Drawings.
11. Manufacturers:

a. U.S. foundry, USF 750 (24-inch), USF 751 (32-inch)

b. East Jordan Iron Works, ERGO,

c. Pamrex,

d. or approved equal.

2.3 RISER RINGS:

A. Precast adjusting rings shall have 22-inch or 32-inch access entrance diameter.
B. Ring shall be constructed of 4,000 psi concrete, using 1/4-inch round steel ring, 1/4-inch diameter for reinforcing.
C. Thickness of 2 Inches, 4-inches, or 6 Inches
D. Comply with ASTM C478.
E. Manufacturers:

1. Del Zotto,
2. Taylor Precast,
3. or approved equal.
4. Accessories:

a. Joint Sealant: Comply with ASTM C990.

b. Bolts: Stainless steel; ASTM F593.

2.4 MATERIALS

A. Cover, Bedding, and Backfill:

1. Bedding, cover, and soil backfill materials shall be in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

2.5 ACCESSORIES

A. Foundation Slab:

1. Cast-in-place concrete as specified in Section 03 30 00 - Cast-in-Place Concrete.
2. Top Surface: Level.

B. Joint Sealant: Comply with ASTM C990.
C. Fasteners: Stainless steel; ASTM F593.
D. Concrete: As specified in Section 03 30 00 - Cast-in-Place Concrete.

2.6 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.
B. Provide shop inspection and testing of completed assembly.
C. Owner Inspection:

1. Make completed manholes available for inspection at manufacturer's factory prior to packaging for shipment.
2. Notify Owner at least seven days before inspection is allowed.

D. Owner Witnessing:

1. Allow witnessing of factory inspections and tests at manufacturer's test facility.
2. Notify Owner at least seven days before inspections and tests are scheduled.

E. Certificate of Compliance:

1. If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.
2. Specified shop tests are not required for Work performed by approved manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that items provided by other Sections of Work are properly sized and located.
C. Verify that built-in items are in proper location and are ready for roughing into Work.
D. Verify that excavation base is ready to receive Work and excavations and that dimensions and elevations are as indicated on Drawings.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers as indicated on Drawings to indicate its intended use.
C. Coordinate placement of inlet and outlet pipe or duct sleeves as required by other Sections.
D. Do not install manholes and structures where Site conditions induce loads exceeding structural capacity of manholes or structures.
E. Inspect precast concrete manholes and structures immediately prior to placement in excavation to

verify that they are internally clean and free from damage; remove and replace damaged units.

3.3 INSTALLATION

A. Manholes are considered confined spaces and the Contractor shall follow the requirements of the owner and all associated regulations for confined space entry.

1. Confined space is defined as large enough for a person to work with restricted means of entry and exit.
2. The Contractor is responsible for the safety of his/her personnel. The Contractor shall use a gas detector to measure the gases present. If no gases are present the structure may be entered. When gases are detected, fresh air shall be forced into the area until acceptable levels of air quality are obtained.
3. A tripod/hoist unit shall be set up and manned.

B. Conduct operations not to interfere with, interrupt, damage, destroy, or endanger integrity of surface structures or utilities in immediate or adjacent areas.
C. Correct over-excavation in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
D. Remove large stones or other hard matter impeding consistent backfilling or compaction.
E. Protect manhole from damage or displacement while backfilling operation is in progress.
F. Excavating:

1. Excavation and backfill shall be performed in accordance with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction to the locations and depths shown.
2. Excavate undesirable material to a minimum depth of 12-inches below the proposed grade and backfill as specified.
3. Place gravel under manholes located in wet soil conditions.
4. Provide clearance around sidewalls of manhole or structure for construction operations.
5. If ground water is encountered, prevent accumulation of water in excavations; place manhole or structure in dry trench.
6. Where possibility exists of watertight manhole or structure becoming buoyant in flooded excavation, anchor manhole or structure to avoid flotation as approved by Engineer.

G. Base and Alignment:

1. Place foundation slab and trowel top surface level.
2. Grout base of shaft sections to achieve slope to exit piping, trowel smooth, and contour as indicated on Drawings.
3. Place manhole sections plumb and level, trim to correct elevations, and anchor to foundation slab.

H. Attachments:

1. Set cover frames and covers level to correct elevations without tipping.

I. Backfilling:

1. As specified in the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches and compacted to the following requirements:

   a. Backfill under roadways: 98% Standard Proctor Density.
   b. Backfill not under roadways: 95% Standard Proctor Density.

J. Coating: All coating shall be factory applied.

K. Precast Concrete Manholes:

1. Precast manholes shall be installed in accordance with the manufacturer's recommendations.
2. Lift precast components at lifting points designated by manufacturer.
3. When lowering manholes and structures into excavations and joining pipe to units, take precautions to ensure that interior of pipeline and structure remains clean.
4. Assembly:

   a. Assemble multi-section manholes and structures by lowering each section into excavation.
   b. Install gasket joints between precast sections according to manufacturer recommendations.
   c. Lower, set level, and firmly position base section before placing additional sections.

5. Remove foreign materials from joint surfaces and verify that sealing materials are placed properly.
6. Maintain alignment between sections by using guide devices affixed to lower section.
7. Joint sealing materials may be installed on Site or at manufacturer's plant.
8. Verify that installed manholes meet required alignment and grade.
9. Remove knockouts or cut structure to receive piping without creating openings larger than required to receive pipe; fill annular spaces with mortar.
10. Cut pipe flush with interior of structure.

L. Doghouse Manholes and Structures:

1. Stake out location and burial depth of existing sewer line in area of proposed manhole or structure.
2. Carefully excavate around existing sewer line to adequate depth for foundation slab installation.

3. Protect existing pipe from damage.
4. Cut out soft spots and replace with granular fill compacted to 95 percent maximum density.
5. Bear firmly and fully on compacted crushed stone bedding.
6. Precast slabs must have keyways to connect walls to slab.
7. Formed-in-place slabs shall be a minimum of 12-inches thick.
    a. Concrete reinforcement shall be sized by the manufacturer.
8. Grout pipe entrances per grout manufacturer's installation procedures.
9. Coordinate with the Engineer to determine time of day for connections to existing facilities.
10. Block upstream flow at existing manhole or structure with expandable plug.
11. Use hydraulic saw to cut existing pipe at manhole or structure entrance and exit and along pipe length at a point halfway up OD on each side of pipe.
12. Bottom half of pipe is to remain as manhole flow channel.
13. Saw cut to smooth finish with top half of pipe flush with interior of manhole or structure.
14. Grout base of manhole or structure to achieve slope to manhole or structure channel and trowel smooth.

M. All grouting shall be performed in accordance with the grout manufacturer's recommended procedures so that there is zero leakage through openings or around pipes.
    1. The grout and/or mortar shall be finished smooth and flush with the adjoining interior and exterior manhole wall surfaces.
    2. Grout mixed on-site shall be used with potable water and masonry sand from concrete supplier. Dirty pond water and existing excavated sand shall not be used.

N. Manhole Inverts:
    1. Manhole bases shall be formed of Class I concrete while the manholes are under construction.
        a. The Contractor shall not use fill, stone, brick, or other materials below concrete invert. The entire invert shall be constructed of concrete.
    2. Cut off pipes at inside face of the manhole and construct the invert to the shape and size of the pipe indicated.
    3. All inverts shall follow the grades of the pipe entering the manholes.
    4. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is targeted to the centerlines of adjoining pipelines.
    5. Regardless of differences in entrance and exit elevations, flow channels for all pipes are to be formed to present a smooth transition of flow and shall be subject to the approval of the

Engineer.

6. Flow channels shall be constructed in accordance with the Drawings.

O. Entire interior of manhole shall be coated with coal tar epoxy or liner as specified, including adjustment rings.
P. Connect pipes to new manholes using pipe boots and clamps.
Q. Connect pipes to lined manholes after liners have been completed and sealed.
R. Sanitary Manhole Drop Connections:

1. Bottom 90-degree bend shall be cast in place using concrete.
2. Pipes shall be held firmly in place while concrete is being formed.
3. Drop connections shall be constructed in accordance with the Drawings.

S. Castings:

1. Set frames using mortar and masonry to the elevations indicated on Drawings. If specified tolerances cannot be met, manhole shall be modified.
2. Install radially laid concrete brick with 1/4-inch-thick, vertical joints at inside perimeter.
3. If more than one course of concrete brick is required, stagger vertical joints.
4. The Contractor shall prepare the base for the manhole frame to a condition satisfactory to the Engineer. All loose, broken or cracked brick shall be removed along with excess grout to provide a smooth, solid, level surface to receive the new buildup of the manhole top.
5. Frame shall be set concentric with the masonry and in a full bed of grout or mortar so that the space between the top of the manhole masonry and the bottom flange of the frame shall be completely filled and made watertight.
    a. The frame shall be completely embedded and sealed to the manhole with grout or mortar.
    b. Grout or mortar shall be applied so as to leave no air pockets or voids and shall cover the area from the top of the frame to the outside edge of the manhole.
6. Manhole frames and covers shall be set to conform accurately to the finished ground or pavement surface as established by the Contract Drawings, unless otherwise directed by the Engineer.
7. Only clean brick shall be used in brick adjustment. If required, the bricks shall be moistened prior to application of the grout or mortar.
    a. Each brick shall be laid in a full bed and joint of grout or mortar without requiring subsequent grouting, flushing, or filling, and shall be thoroughly bonded as directed.
    b. Grout shall be one-part cement and two parts sand. Lime shall not be used.
    c. Grout shall be coated with epoxy.

8. Outside faces of brick masonry or concrete adjusting rings shall be covered with grout or mortar from 3/8-inch to 1/2-inch thick. If required, brick concrete shall be properly moistened prior to application of the grout or mortar. The mortar or grout shall be carefully spread and troweled so that all cracks are thoroughly worked out. After hardening, the grout or mortar shall be thoroughly checked for bond and soundness by being tapped. Unbonded or unsound grout or mortar shall be removed and replaced.

T. Unless otherwise directed by the Engineer, the Contractor may elect to remove the manhole top completely to facilitate construction or leave in place until the base course is constructed.

1. The manhole shall be protected from damage if it is to be left in place until final adjustment.
2. If the Contractor elects to remove the manhole top, he shall place sufficient covering over the manhole, to the satisfaction of the Engineer, to eliminate infiltration of dirt, limerock, stone, brick, debris, etc., until the top is adjusted to grade.
3. In either of the cases above, the Contractor will be responsible for any undesirable material entering the manhole or sewer system as a result of the Work.

3.4 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Testing:

1. Cast-in-Place Concrete: As specified in Section 03 30 00 - Cast-in-Place Concrete.
2. Concrete Manhole Sections: As specified in Section 33 05 05.33 - Infiltration or Exfiltration Testing.

C. At least one compaction density test shall be made on the prepared base for each manhole. It is expressly agreed and understood that the Owner reserves the right to perform additional compaction tests on its own or to increase or decrease the frequency of compaction testing.

2. Compaction tests shall be in accordance with the specifications. Should the test fail, the Contractor shall be required to take the appropriate action to satisfy the compaction requirement and at no time shall the manhole base be set in place without an approved compaction test or until satisfactory test is acquired.

D. Equipment Acceptance: Adjust, repair, modify, or replace components failing to perform as specified and retest.

3.5 ADJUSTING

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for starting and adjusting.
B. Vertical Adjustment of Existing Manholes and Structures:

1. Manhole frame and covers shall be adjusted with brick masonry or precast concrete adjusting rings.
2. Frames shall be adjusted to conform accurately to the grades shown on the Drawings and

specified herein.

3. The manhole shall be modified if tolerances cannot be met.
4. Frames, Grates, and Covers:
    a. Remove frames, grates, and covers and clean of mortar fragments.
    b. Reset to required elevation according to requirements specified for installation of castings.
5. Reinforcing Bars:
    a. Remove concrete without damaging existing vertical reinforcing bars if removal of existing concrete wall is required.
    b. Clean vertical bars of concrete and bend into new concrete top slab or splice to required vertical reinforcement as indicated on Drawings.
6. Clean and apply sand-cement bonding compound on existing concrete surfaces to receive cast-in-place concrete as specified in Section 033000 - Cast-in-Place Concrete.

END OF SECTION

S SECTION 33 05 97
IDENTIFICATION AND SIGNAGE FOR UTILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plastic ribbon tape for placement above direct-buried utility.
2. Trace wire for placement above direct-buried utility.

B. Related Requirements:

1. Section 33 31 11 - Public Sanitary Sewerage Gravity Piping.
2. Section 33 31 23 - Sanitary Sewerage Force Main Piping.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit manufacturer catalog information for each specified product.
C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
D. Qualifications Statement:

1. Submit qualifications for manufacturer.

1.3 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance materials.

1.5 QUALITY ASSURANCE

A. Perform Work according to AWWA standards.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years of experience.

PART 2 - PRODUCTS

2.1 MARKING TAPE, DETECTABLE UNDERGROUND

A. Description:

1. Underground Detectable Marking Tape shall be aluminum foil to mark the location of water mains, sewage force mains, reuse mains, and gravity sewers.
2. Tape shall have a minimum 5 mil overall thickness with 0.35 mil solid aluminum foil core.

3. Construction shall be 0.8 mil clear fiber, reverse print laminated to aluminum foil to 3.75 mil clear fiber, making a film permanently printed.
4. Tape shall meet the thickness requirements of ASTM D2103, 5.0 mil, and tensile strength meeting requirements of ASTM D882, 15,000 psi.
5. Color shall be blue for water, green for sewage force mains and gravity sewer, and purple for reuse mains, with “Potable Water”, “Sewer Force Main”, “Sewer”, or “Reclaimed Water” written on the tape accordingly.

2.2 TRACE WIRE

A. Locating Wire for Bored Mains:

1. Conductor: Magnetically detectable tracer wire shall be a #12 AWG (0.0808” diameter) fully annealed, high carbon 1055 grade steel, high strength solid copper clad steel conductor (HS-CCS).
2. Covering: Tracer wire shall be insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts.
3. Color:
    a. Color shall be blue for water, green for sewage force mains, and purple for reuse mains.
4. Manufacturers:
    a. Copperhead Industries, SoloShot, Pro Trace HF-CCS PE45,
    b. or approved equal.

B. Locating Wire for Open Cut Mains:

1. Conductor: Magnetically detectable tracer wire shall be a #14 AWG (0.0641” diameter) fully annealed, low carbon 1010 grade steel, solid copper-clad steel (CCS) conductor.
2. Covering: Tracer wire shall be insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts.
3. Color:
    a. Color shall be blue for water, green for sewage force mains and gravity sewer, and purple for reuse mains.
4. Manufacturers:
    a. Copperhead Industries, SoloShot, Pro Trace HF-CCS 30,
    b. or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION

A. The Contractor shall install Marking Tape 12 inches to 18 inches above the top of the pipe.
B. Trace Wire shall be installed on the top and bottom of all nonmetallic pipe.

END OF SECTION

SECTION 33 31 11

PUBLIC SANITARY SEWERAGE GRAVITY PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. General: This section includes the minimum requirements for installing sanitary sewer gravity systems, which includes the furnishing, installing, laying, jointing, and testing of all sewer lines, manholes, fittings and appurtenances, including necessary service connections required for a complete system to connect to City sewer and as shown on the Drawings and specified herein. The Work shall also include such connections, reconnections, relocations, temporary services, abandonments, and all other provisions in regard to existing sewer operations and modifications as required.

B. Section Includes:

1. Sanitary sewerage piping.
2. Connection to existing manholes.
3. Wye branches and tees.
4. Sanitary laterals.
5. Bedding and cover materials.

C. Related Requirements:

1. Section 31 05 13 - Soils for Earthwork.
2. Section 31 05 16 - Aggregates for Earthwork.
3. Section 31 23 16 - Excavation.
4. Section 31 23 23 - Fill.
5. Section 33 05 05.33 - Infiltration and Exfiltration Testing.
6. Section 33 05 61 - Concrete Manholes.
7. Section 33 05 97 - Identification and Signage for Utilities.

1.2 DEFINITIONS

A. ABS: Acrylonitrile butadiene styrene.
B. Bedding: Fill placed under, beside, and directly over pipe, prior to subsequent backfill operations.
C. EPDM: Ethylene-propylene-diene monomer.

1.3 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. American Water Works Association:

1. AWWA C105 - Polyethylene Encasement for Ductile-Iron Pipe Systems.
2. AWWA C110 - Ductile-Iron and Gray-Iron Fittings.
3. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
4. AWWA C150 - Thickness Design of Ductile-Iron Pipe.
5. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast.
6. AWWA C153 - Ductile-Iron Compact Fittings.

C. ASTM International:

1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM A123 – Standard Specification for Zinc (Hot-Dip Galvanized) coatings on Iron and Steel products.
3. ASTM C14 - Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.
4. ASTM C14M - Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (Metric).
5. ASTM C443 - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
6. ASTM C443M - Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets (Metric).
7. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
8. ASTM C923M - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals (Metric).
9. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3).
10. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3).
11. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
12. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
13. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
14. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl

Chloride) (PVC) Pipe and Fittings.

15. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
16. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
17. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

1.4 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
B. Coordinate Work of this Section with the Owner and all authorities having jurisdiction.
C. Contractor shall contact Sunshine 811 for location of existing utilities at 811 or 1-800-432-4770 a minimum of 48 hours prior beginning work.

1.5 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit manufacturer catalog cuts and other information indicating proposed materials, accessories, details, and construction information.
C. Permits: Submit three (3) copies of all permits required for completion of the Work shown and specified.
D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
E. Test and Evaluation Reports: Submit reports indicating field tests made and results obtained.
F. The pipe or fitting manufacturer shall supply a "Certificate of Application" that the lining applicator has met the specified requirements.
G. Manufacturer Instructions:

    1. Indicate special procedures required to install specified products.
    2. Submit detailed description of procedures for connecting new sewer to existing sewer line and directional drilling installation.

H. Source Quality-Control Submittals: Indicate results of factory tests and inspections.
I. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
J. Qualifications Statement:

    1. Submit qualifications for manufacturer(s) and installer(s).

1.6 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Project Record Documents: Record invert elevations and actual locations of pipe runs, connections, manholes, cleanouts, existing utilities adjacent to new utilities, and all other pertinent features associated with the Work.
C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.7 QUALITY ASSURANCE

A. Perform Work according to applicable Federal, State, and Local standards.

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years of documented experience.
B. Installer: Company specializing in performing Work of this Section with minimum five (5) years of documented experience.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

1. Pipe with cracked or chipped linings or defects in the pipe will be rejected.

C. Storage:

1. Store materials according to manufacturer instructions.
2. Store valves in shipping containers with labeling in place.

D. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Block individual and stockpiled pipe lengths to prevent moving.
3. Provide additional protection according to manufacturer instructions.

1.10 EXISTING CONDITIONS

A. Field Measurements:

1. Verify field measurements prior to fabrication.
2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 SANITARY SEWERAGE PIPING

A. Polyvinyl Chloride (PVC) Pipe:

1. Gravity sewer PVC pipe shall conform to ASTM 3034, SDR-26.
2. Color: Green.
3. Pipe manufacturer shall supply a Certificate of Application that the pipe has met requirements of ASTM 3034, SDR-26.
4. PVC fittings shall conform to ASTM 1336, SDR-26.

a. Fittings shall be gasketed bell joint type and green in color.

B. Ductile Iron Pipe:

1. Comply with AWWA C150 and AWWA C151.
2. Pipe shall be rated for a minimum working pressure of 200 psi plus a 100 psi minimum surge allowance, and a two to one (2:1) factor of safety, using a Type II laying condition and a depth of cover of 4 feet.
    a. Pipe diameters 4-inch through 12-inch shall be Class 350, minimum.
    b. Pipe diameters 14-inch through 20-inch shall be Class 250, minimum.
    c. Pipe diameters 24-inches and larger shall be Class 200, minimum.
3. End Connections: Bell and spigot.
4. Ductile iron pipe shall be manufactured in the U.S.A. and each piece shall be subjected to a hydrostatic pressure test of at least 500 psi at the point of manufacture.
5. The class or nominal thickness, new weight without lining, and casting period shall be clearly marked on each length of pipe. Additionally, the manufacturer's mark, country where cast, year in which the pipe was produced, and the letters "DI" or "Ductile" shall be cast or stamped on each length of pipe.
6. Pipe shall have an exterior bituminous coating applied by airless spray method.
7. Pipe shall have an interior Amine Cured Epoxy Lining.
8. PE Encasement: Comply with AWWA C105 for installation of PE Encasement when pipe is installed in corrosive soils.
9. Fittings:
    a. Material: Ductile iron with a pressure rating that meets, but does not exceed the specified pressure rating of connected pipe.
    b. Comply with AWWA C153 or AWWA C110.
    c. Lining: Factory applied amine cured epoxy.
    d. Coating: Exterior of fittings shall be epoxy coated as specified in Section 09 90 00 - Painting and Coating.
10. Joints:
    a. Push-On Joints:
        1) Comply with AWWA/ANSI C111/A21.11.
        2) Furnish complete with all accessories required.
    b. Restrained Joint:
        1) Restrained joints shall be restrained using grip gaskets of locking rings.

2) All restraints shall comply with applicable AWWA standards.

3) Manufacturers:

a) American, Fast-Grip Restrained Gaskets, Lok-Ring Restrained Rings,

b) McWane, Sure Stop Restrained Gaskets, Super Lok Restrained Rings,

c) Griffin, Talon Restrained Gaskets, Snap-Lok Restrained Rings,

d) U.S. Pipe, Field-Lok Restrained Gaskets, TR Flex Gripper Restrained Rings,

e) EBAA Iron, Mega-Lug Restraint Harness, Series 1700,

f) Sigma, Bell Joint Restraint Series PVP (16-inch and smaller), Series SLDH (18-inch and larger),

g) Tyler Union, Tuff Grip MJ Fitting Restraints,

h) or approved equal.

2.2 MANHOLES

A. As specified in Section 33 05 61 - Concrete Manholes.

2.3 FLEXIBLE COUPLINGS

A. Flexible Couplings for connection of Clay Pipe to Ductile Iron Pipe:

1. Couplings shall be constructed of heavy-duty rubber and conform to applicable AWWA standards.
2. Manufacturers:

a. Fernco, 1003,

b. Indiana Seal, 103,

c. Dallas Specialty, DS 03,

d. or approved equal.

B. Flexible Couplings for connection of Clay Pipe to PVC Pipe:

1. Couplings shall be constructed of heavy-duty rubber and conform to applicable AWWA standards.
2. Manufacturers:

a. Fernco, 1002,

b. Indiana Seal, 102,

c. Dallas Specialty, DS 02,

d. or approved equal.

2.4 FLEXIBLE PIPE BOOTS FOR MANHOLE PIPE ENTRANCES

A. Description:

1. Material: Heavy-duty rubber.
2. Comply with ASTM C923.
3. Attachment: Series-300 stainless-steel clamp and hardware.

2.5 MATERIALS

A. Bedding and Cover:

1. Excavation, trenching, and backfilling shall be in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches, tamp in place, and compact to 95 percent of maximum density.
3. Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement.
4. Maintain optimum moisture content of bedding material to attain required compaction density.
5. Where so indicated on the drawings or where directed by the Engineer, the pipe shall be supported by compacted granular fill or concrete cradle or encasement according to the applicable detail shown on the Drawings.

    a. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material.
    b. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement.
    c. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

2.6 MIXES

A. Grout: Grout shall be Embeco 167 or approved equal.

B. Mortar: Mortar shall be Embeco 381 or approved equal.

2.7 FINISHES

A. Galvanizing:

1. Hot-dip galvanize after fabrication.
2. Comply with ASTM A123/A123M.

2.8 ACCESSORIES

A. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.

2.9 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.
B. Provide shop inspection and testing of pipe.
C. Include one or both of following Paragraphs to require Owner's inspection or witnessing of test at factory.
D. Owner Inspection:

1. Make completed pipe sections available for inspection at manufacturer's factory prior to packaging for shipment.
2. Notify Owner at least seven days before inspection is allowed.

E. Owner Witnessing:

1. Allow witnessing of factory inspections and tests at manufacturer's test facility.
2. Notify Owner at least seven days before inspections and tests are scheduled.

F. Certificate of Compliance:

1. If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.
2. Specified shop tests are not required for Work performed by approved manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that trench cut or excavation base is ready to receive Work of this Section.
C. Verify that excavations, dimensions, and elevations are as indicated on Drawings or as directed by the Engineer.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Correct over-excavation with coarse aggregate.
C. Remove large stones or other hard materials that could damage pipe or impede consistent backfilling or compaction.
D. Protect and support existing sewer lines, utilities, and appurtenances.
E. Utilities:

1. Maintain profiles of utilities.
2. Coordinate with existing utilities to eliminate interference.
3. Notify Engineer if crossing conflicts occur.

3.3 INSTALLATION

A. Bedding and Backfill:

1. Excavation, trenching, and backfilling shall be in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches and compacted to the following requirements:
    a. Backfill under roadways: 98% Standard Proctor Density.
    b. Backfill not under roadways: 95% Standard Proctor Density.
3. Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement.
4. Maintain optimum moisture content of bedding material to attain required compaction density.
5. Where so indicated on the drawings or where directed by the Engineer, the pipe shall be supported by compacted granular fill or concrete cradle or encasement according to the applicable detail shown on the Drawings.
    a. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material.
    b. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement.
    c. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

B. Piping:
1. Install pipe, fittings, and accessories according to ASTM D2321, and seal joints watertight.
2. Lay pipe to slope gradients as indicated on Drawings.
3. Begin at downstream end of system and progress upstream.
4. Bedding: As indicated on Drawings.
5. Lay bell-and-spigot pipe with bells upstream.
6. PE Pipe Encasement: Comply with AWWA C105, Method A.
7. Backfill and compact as specified in Section 02 32 00 - Trenching, bedding, and backfill and 31 23 23 – Fill.
8. Do not displace or damage pipe when compacting.
9. Connect pipe to existing facilities as shown on the Drawings.
10. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.

C. Manholes: As specified in Section 33 05 61 - Concrete Manholes.
D. Connections to Existing Manholes:

1. Drilling:
    a. Core drill existing manhole to clean opening.
    b. Use of pneumatic hammers, chipping guns, and sledgehammers are not permitted.
2. Install watertight neoprene gasket and seal with non-shrink concrete grout.
3. Encasement:
    a. Concrete encase new sewer pipe as shown on the Drawings.
    b. Use epoxy binder between new and existing concrete.
4. Prevent construction debris from entering existing sewer line when making connection.

E. Wye Branches and Tees:

1. Concurrent with pipe-laying operations, install wye branches and pipe tees at locations indicated on Drawings.
2. Use standard fittings of same material and joint type as sewer main.
3. Maintain minimum 5-foot separation distance between wye connection and manhole.
4. Use saddle wye or tee with stainless-steel clamps for taps into existing piping.
5. Mount saddles with solvent cement or gasket and secure with metal bands.
6. Lay out holes with template, and cut holes with mechanical cutter.

F. Bypassing Sewage:

1. The Contractor, when required, shall provide for the flow of sewage around a section or sections of pipe as required to complete the Work.
2. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
3. The Contractor shall submit a detailed bypass plan to the Engineer prior to performing any bypassing activities.

G. Sanitary Laterals:

1. Construct laterals from wye branch to terminal point at right-of-way.
2. Where depth of main pipeline warrants, construct riser-type laterals from wye branch.
3. Minimum Depth of Cover over Piping: 4 feet.
4. Minimum Separation Distance between Laterals: 5 feet.
5. Install watertight plug, braced to withstand pipeline test pressure thrust, at termination of lateral.

6. Install temporary marker stake as shown on the Drawings.

H. Backfilling:

1. Excavation, trenching, and backfilling shall be in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches and compacted to the following requirements:
   a. Backfill under roadways: 98% Standard Proctor Density.
   b. Backfill not under roadways: 95% Standard Proctor Density.
3. Place and compact material immediately adjacent to pipes to avoid damage to pipe and prevent pipe misalignment.
4. Maintain optimum moisture content of bedding material as required to attain specified compaction density.

3.4 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.
B. Maximum Variation from Indicated Slope: 1/8 inch in 10 feet.

3.5 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Request inspection by Engineer prior to and immediately after placing bedding.
C. Testing:

1. If tests indicate that Work does not meet specified requirements, remove Work, replace, and retest.
2. Pipe Testing:
   a. Pressure Testing: As specified in Section 33 05 05.41 - Air Testing.
   b. Infiltration and Exfiltration Testing: As specified in Section 33 05 05.33 - Infiltration and Exfiltration Testing.
   c. Deflection Testing: As specified in Section 33 05 05.43 - Mandrel Testing.
3. Compaction testing shall comply with FDOT Standard Specifications.

1.2 PROTECTION

D. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
E. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.
F. Cap open ends of piping during periods of Work stoppage.

END OF SECTION

SECTION 33 31 11.05
INSIDE DROP SYSTEM SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. General: This section includes the minimum requirements for installing an inside drop system for a sanitary wet-well structure, which includes the furnishing, installing, laying, jointing, and testing of all piping, fittings and appurtenances as shown on the Drawings and specified herein. The Work shall also include such connections, reconnections, relocations, temporary services, abandonments, and all other provisions in regard to existing sewer operations and modifications as required.

B. Section Includes:

1. Sanitary sewerage piping.
2. Drop Bowl Fitting

C. Related Requirements:

1. Section 33 05 05.33 - Infiltration and Exfiltration Testing.
2. Section 33 05 61 - Concrete Manholes.
3. Section 33 05 97 - Identification and Signage for Utilities.
4. Section 33 31 11 – Public Sanitary Sewerage Gravity Piping

1.2 DEFINITIONS – NOT USED

1.3 REFERENCE STANDARDS

A. ASTM International:

1. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
2. ASTM C923M - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals (Metric).
3. ASTM D638 – Standard Test Method for Tensile Properties of Plastics
4. ASTM D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
5. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
6. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
7. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

8. ASTM D2583 – Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
9. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings.
10. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
11. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

1.4 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
B. Coordinate Work of this Section with the Owner and all authorities having jurisdiction.

1.5 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit manufacturer catalog cuts and other information indicating proposed materials, accessories, details, and construction information.
C. Permits: Submit three (3) copies of all permits required for completion of the Work shown and specified.
D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
E. Test and Evaluation Reports: Submit reports indicating field tests made and results obtained.
F. The pipe or fitting manufacturer shall supply a "Certificate of Application" that the lining applicator has met the specified requirements.
G. Manufacturer Instructions:

1. Indicate special procedures required to install specified products.
2. Submit detailed description of procedures for connecting new sewer line.

H. Source Quality-Control Submittals: Indicate results of factory tests and inspections.
I. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
J. Qualifications Statement:

1. Submit qualifications for manufacturer(s) and installer(s).

1.6 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Project Record Documents: Record invert elevations and all other pertinent features associated with the Work.

1.7 QUALITY ASSURANCE

A. Perform Work according to applicable Federal, State, and Local standards.

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing product specified in this Section with minimum five (5) years of documented experience.
B. Installer: Company specializing in performing Work of this Section with minimum five (5) years of documented experience.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
    1. Pipe, fittings, and drop bowl with cracked or chipped linings or defects will be rejected.
C. Storage:
    1. Store materials according to manufacturer instructions.
D. Protection:
    1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
    2. Block individual and stockpiled pipe lengths to prevent moving.
    3. Provide additional protection according to manufacturer instructions.

1.10 EXISTING CONDITIONS

A. Field Measurements:
    1. Verify field measurements prior to fabrication.
    2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 INSIDE DROP SYSTEM

1. Drop Bowl
    a. Shall be manufactured by Reliner ®/Duran or approved equal.
    b. Shall be fabricated from fiberglass
    c. Shall be sized in accordance with design indicated on plans.
    d. Shall have protective liner applied resistant to corrosive effects of hydrogen sulfide.
2. Clamping Pipe Support
    a. Shall be 304 SS or 316 SS with 18-8 Stainless nuts and bolts

2.2 SANITARY SEWERAGE PIPING

1. High Density Polyethylene Pipe (HDPE):
    a. Comply with AWWA C901 and C906, PE 3408.
    b. HDPE pipe shall DR-9 or DR-11.
    c. HDPE pipe shall have a pressure rating of not less than 160 psi.

d. Pipe Outside Diameter: Iron Pipe Sizes (IPS).

e. Comply with AWWA C901 and C906.

f. Type: Molded or fabricated.

g. Joints: Butt fusion.

2. Polyvinyl Chloride (PVC) Pipe:

a. Gravity sewer PVC pipe shall conform to ASTM 3034, SDR-26.

b. Color: Green.

c. Pipe manufacturer shall supply a Certificate of Application that the pipe has met requirements of ASTM 3034, SDR-26.

d. PVC fittings shall conform to ASTM 1336, SDR-26.

e. Fittings shall be gasketed bell joint type and green in color.

f. Joints:

1) Push-On Joints:

a) Comply with AWWA/ANSI C111/A21.11.

b) Furnish complete with all accessories required.

2) Restrained Joint:

a) Restrained joints shall be restrained using grip gaskets of locking rings.

b) All restraints shall comply with applicable AWWA standards.

3) Manufacturers:

a) American, Fast-Grip Restrained Gaskets, Lok-Ring Restrained Rings,

b) McWane, Sure Stop Restrained Gaskets, Super Lok Restrained Rings,

c) Griffin, Talon Restrained Gaskets, Snap-Lok Restrained Rings,

d) U.S. Pipe, Field-Lok Restrained Gaskets, TR Flex Gripper Restrained Rings,

e) EBAA Iron, Mega-Lug Restraint Harness, Series 1700,

f) Sigma, Bell Joint Restraint Series PVP (16-inch and smaller), Series SLDH (18-inch and larger),

g) Tyler Union, Tuff Grip MJ Fitting Restraints,

h) or approved equal.

2.3 MANHOLES

A. As specified in Section 33 05 61 - Concrete Manholes.

2.4 FLEXIBLE PIPE BOOTS FOR MANHOLE PIPE ENTRANCES

A. Description:

1. Material: Heavy duty rubber.
2. Comply with ASTM C923.
3. Attachment: Series-300 stainless-steel clamp and hardware.

2.5 ACCESSORIES

A. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.

2.6 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Requirements for testing, inspection, and analysis.
B. Provide shop inspection and testing of all products pertaining to installation of drop bowl system.
C. Include one or both of following Paragraphs to require Owner's inspection or witnessing of test at factory.
D. Owner Inspection:

1. Make completed pipe sections available for inspection at manufacturer's factory prior to packaging for shipment.
2. Notify Owner at least seven days before inspection is allowed.

E. Owner Witnessing:

1. Allow witnessing of factory inspections and tests at manufacturer's test facility.
2. Notify Owner at least seven days before inspections and tests are scheduled.

F. Certificate of Compliance:

1. If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.
2. Specified shop tests are not required for Work performed by approved manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Verify that dimensions and elevations are as indicated on Drawings or as directed by the Engineer.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Protect and support existing sewer lines, utilities, and appurtenances.
C. Utilities:

1. Maintain profiles of utilities.

2. Coordinate with existing utilities to eliminate interference.
3. Notify Engineer if crossing conflicts occur.

3.3 INSTALLATION

A. Drop Bowl

1. Install per manufacturer guidelines.

B. Piping:

1. Install pipe, fittings, and accessories according to ASTM D2321, and seal joints watertight.
2. Lay pipe to slope gradients as indicated on Drawings.
3. Begin at downstream end of system and progress upstream.
4. Bedding: As indicated on Drawings.
5. Lay bell-and-spigot pipe with bells upstream.
6. PE Pipe Encasement: Comply with AWWA C105, Method A.
7. Backfill and compact as specified in Section 31 23 16.13 - Trenching.
8. Do not displace or damage pipe when compacting.
9. Connect pipe to existing facilities as shown on the Drawings.
10. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.

C. Manholes: As specified in Section 33 05 61 - Concrete Manholes.
D. Bypassing Sewage:

1. The Contractor, when required, shall provide for the flow of sewage around a section or sections of pipe as required to complete the Work.
2. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
3. The Contractor shall submit a detailed bypass plan to the Engineer prior to performing any bypassing activities.

3.4 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.
B. Maximum Variation from Indicated Slope: 1/8 inch in 10 feet.

3.5 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Request inspection by Engineer prior to and immediately after placing bedding.
C. Testing:

1. If tests indicate that Work does not meet specified requirements, remove Work, replace, and retest.
2. Pipe Testing:
    a. Pressure Testing: As specified in Section 33 05 05.41 - Air Testing.
    b. Infiltration and Exfiltration Testing: As specified in Section 33 05 05.33 - Infiltration and Exfiltration Testing.
    c. Deflection Testing: As specified in Section 33 31 11.00 – Public Sanitary Sewerage Gravity Piping

END OF SECTION

SECTION 33 31 23
SANITARY SEWERAGE FORCE MAIN PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. General: This section includes the minimum requirements for installing sanitary sewer force mains, which includes the furnishing, installing, laying, jointing, and testing of all force mains, fittings, air release valves, plug valves, and appurtenances required for a complete system as shown on the Drawings and specified herein. The Work shall also include such connections, reconnections, relocations, temporary force mains, temporary pumping, abandonments, and all other provisions in regard to existing force main operations and modifications required to perform the Work.

B. Section Includes:

1. Force mains.
2. Valves.
3. Valve Boxes and Lids.
4. Couplings and Adaptors.
5. Tapping Saddles.
6. Bedding and cover materials.
7. Accessories.

C. Related Requirements:

1. Section 33 05 05.31 - Hydrostatic Testing.
2. Section 33 05 61 - Concrete Manholes
3. Section 33 05 97 - Identification and Signage for Utilities.

1.2 REFERENCE STANDARDS

A. American Association of State Highway and Transportation Officials:

1. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. American Water Works Association:

1. AWWA C110 - Ductile-Iron and Gray-Iron Fittings.
2. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
3. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast.
4. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. Through 12 In., for Water Transmission and Distribution.
5. AWWA C905 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In.

Through 48 In., for Water Transmission and Distribution.

C. ASTM International:

1. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3).
2. ASTM F 714-05 Standard Specification for Polyethylene (PE) Pipe (SDR-PR) Based on Outside Diameter.
3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3).
4. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
5. ASTM D2241 - Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
6. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
7. ASTM D2467 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
8. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

1.3 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
B. Coordinate Work of this Section with connection to existing sanitary sewer system.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
B. Product Data: Submit manufacturer information indicating pipe material used, pipe accessories, valves, and restrained joint details and materials.
C. Shop Drawings:

1. Indicate piping piece numbers and locations.
2. Indicate restrained joint locations.

D. The Contractor shall submit certificates of inspection in triplicate from the manufacturer that the pipe, valves, and fittings to be supplied have been inspected at the plant and meet the requirements of the Contract Documents. These certificates shall be submitted prior to beginning Work.
E. Manufacturer Instructions: Submit special procedures required to install specified products.
F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
G. Qualifications Statement:

1. Submit qualifications for manufacturer, installer, and licensed professional.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
B. Project Record Documents: Record invert elevations and actual locations of pipe runs and connections.
C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.6 QUALITY ASSURANCE

A. Perform Work according to Florida Department of Environmental Protection and Florida Department of Transportation standards.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years of documented experience.
B. Installer: Company specializing in performing Work of this Section with minimum five (5) years of documented experience.
C. Licensed Professional: Professional engineer, if required, experienced in design of specified Work and licensed in State of Florida.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
C. Storage:

1. Store materials according to manufacturer instructions.
2. Do not place materials on private property without written permission of property owner.
3. Do not stack pipe higher than recommended by pipe manufacturer.

D. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Store gaskets for mechanical and push-on joints in cool and dry location, out of direct sunlight, and not in contact with petroleum products.
3. Provide additional protection according to manufacturer instructions.

1.9 EXISTING CONDITIONS

A. Field Measurements:

1. Verify field measurements prior to fabrication.
2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 FORCE MAIN

A. Ductile Iron Pipe:

1. Flanged ductile iron pipe shall comply with AWWA C115.
2. Bell and spigot ductile iron pipe shall comply with AWWA C150 and AWWA C151.
3. Pipe shall be rated for a minimum working pressure of 200 psi or specified project requirements, whichever is greater, plus a two to one (2:1) factor of safety, using a Type II laying condition and a depth of cover of 4 feet.
    a. Pipe diameters 4-inch through 12-inch shall be Class 350, minimum.
    b. Pipe diameters 14-inch through 20-inch shall be Class 250, minimum.
    c. Pipe diameters 24-inches and larger shall be Class 200, minimum.
4. End Connections: Bell and spigot.
5. Ductile iron pipe shall be manufactured in the U.S.A. and each piece shall be subjected to a hydrostatic pressure test of at least 500 psi at the point of manufacture.
6. The class or nominal thickness, new weight without lining, and casting period shall be clearly marked on each length of pipe. Additionally, the manufacturer's mark, country where cast, year in which the pipe was produced, and the letters "DI" or "Ductile" shall be cast or stamped on each length of pipe.
7. Pipe shall have an exterior bituminous coating applied by airless spray method.
8. Pipe shall have an interior Amine Cured Epoxy Lining.
9. PE Encasement: Comply with AWWA C105 for installation of PE Encasement when pipe is installed in corrosive soils.
10. Fittings:
    a. Material: Ductile iron with a pressure rating that meets, but does not exceed the specified pressure rating of connected pipe.
    b. Comply with AWWA C153 or AWWA C110.
    c. Lining: Factory applied amine cured epoxy.
    d. Coating: Exterior of fittings shall be epoxy coated as specified in Section 09 90 00 - Painting and Coating.
11. Joints:
    a. Push-On Joints:
        1) Comply with AWWA/ANSI C111/A21.11.

2) Furnish complete with all accessories required.

b. Restrained Joint:

1) Restrained joints shall be restrained using grip gaskets or locking rings.
2) All restraints shall comply with applicable AWWA standards.
3) Manufacturers:

a) American, Fast-Grip Restrained Gaskets, Lok-Ring Restrained Rings,
b) McWane, Sure Stop Restrained Gaskets, Super Lok Restrained Rings,
c) Griffin, Talon Restrained Gaskets, Snap-Lok Restrained Rings,
d) U.S. Pipe, Field-Lok Restrained Gaskets, TR Flex Gripper Restrained Rings,
e) EBAA Iron, Mega-Lug Restraint Harness, Series 1700,
f) Sigma, Bell Joint Restraint Series PVP (16-inch and smaller), Series SLDH (18-inch and larger),
g) Tyler Union, Tuff Grip MJ Fitting Restraints,
h) or approved equal.

c. Restrained Mechanical Joints:

1) Restraint shall be ductile iron conforming to ANSI/AWWA C151/A21.51.
2) All restrained mechanical joints shall be furnished with accessories and have a minimum pressure resistance of 200 psi.
3) Manufacturers:

a) EBAA Iron Works, Megalug,
b) Tyler Union, Tuflock,
c) Sigma, SLD Series,
d) or approved equal.

d. Flanged Joints:

1) Comply with AWWA/ANSI 115/A21.51.
2) Pipe shall be furnished complete with all accessories.
3) Gaskets: Unless otherwise shown or specified, gaskets shall be minimum 1/8-inch thick, full-face type. Gaskets shall be suitable for the service conditions specified, specifically designed for use with ductile iron pipe and fittings.

B. PVC Pipe (Push on Joint, 4” and Larger):

1. Comply with AWWA C900 and C905.

2. PVC pipe shall be DR-18, minimum, and have a pressure rating of no less than 200 psi.
3. PVC pipe shall be green in color.
4. Fittings: Mechanical joint ductile iron, complying with AWWA C111.
    a. Restraint system shall be non-penetrating type specifically designed for PVC pipe.
5. Push-On Joints:
    a. Comply with ASTM D3139 and ASTM F477.
    b. Seals: PVC flexible elastomeric.
    c. Solvent-cement couplings are not permitted.
6. Restrained Joints:
    a. Where required, joints shall be restrained using restrained joint PVC piping system or bell restraint harnesses complying with all applicable AWWA specifications.
    b. Manufacturers:
        1) Certain Teed: Certa-Lok C900/RJ Restrained Joint, Mechanical Gland Adapters for DR 14 and DR 18 pipe;
        2) EBAA Iron Works: Bell Restraint Harness for C900 PVC Pipe, Series 1600 for DR 14 and DR 18 pipe;
        3) Sigma: PVP-LOK Restraint;
        4) S&B Technical Products: Bull Dog Joint Restraints;
        5) Tyler Union: Tuff Grip MJ Fitting Restraint.

C. PVC Pipe (Thermal Butt-Fusion Joint):

1. Thermal Butt-Fusion Joint PVC Pipe shall be utilized for horizontal directional drills 4" diameter and larger, and shall conform to AWWA C900 and C905 standards.
2. PVC pipe shall be DR-18 and have a pressure rating of no less than 200 psi.
3. PVC pipe shall be green in color.

D. PVC Pipe (Solvent Weld):

1. Solvent Weld PVC Pipe shall conform to ASTM D1785, Schedule 80.
2. Pipe shall be green in color and shall be labeled in accordance with FDEP requirements.
3. Pipe shall have a pressure rating of no less than 200 psi.
4. Solvent Weld PVC Fittings shall conform to ASTM D2467.
5. Fittings:
    a. Solvent Weld PVC Fittings shall conform to ASTM D2466, ASTM D2467, and applicable

AWWA standards.

b. Fittings shall have a pressure rating of no less than 200 psi.

E. High Density Polyethylene Pipe (HDPE):

1. Comply with AWWA C906, PE 3408.
2. HDPE pipe shall DR-9 or DR-11.
3. HDPE pipe shall have a pressure rating of not less than 160 psi.
4. Pipe Outside Diameter: Iron Pipe Sizes (IPS).
5. HDPE pipe shall include green striping.
6. Fittings:

   a. Comply with AWWA C901 and C906.
   b. Type: Molded or fabricated.

7. Joints: Butt fusion.

F. Mechanical Joint Restraints:

1. Mechanical joint restraints shall include a restraining mechanism, which when activated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases.
2. Flexibility of the joint shall be maintained after burial.
3. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80.
4. Restraining devices shall be of ductile iron, heat treated to a minimum hardness of 370 BHN.
5. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-headed bolts conforming to ANSI/AWWA A21.11 and ANSI/AWWA C153/A21.53.
6. Twist off nuts shall be used to insure proper actuating of the restraining devices.
7. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1.
8. Manufacturers:

   a. EBAA Iron Works, Megalug,
   b. Sigma, SLD Series,
   c. Tyler Union, Tuflock
   d. or approved equal.

2.2 VALVES

A. Eccentric Plug Valves:

1. Resilient plug valve shall be permanently lubricated eccentric type with resilient faced plugs.
2. The resilient plug shall be Buna- N or neoprene coated.
3. Plug valves up to 12-inch diameter shall have a minimum pressure rating of 175 psi and plug valves 14-inch and larger shall have a minimum pressure rating of 150 psi.
4. Plug valves shall conform to ANSI/AWWA C517 and be able to shut off flow from both directions.
5. Plug valves shall have a port opening not be less than 81% on valves up to 24-inch diameter.
6. Valve bodies shall be constructed of ASTM A-126 Class B semi-steel.
7. Valve Stem: Type 304 or 431 Stainless Steel.
8. All valves shall be equipped with two (2) inch square operating nut on all sizes through 24-inch diameter and shall be equipped with gear actuators.
9. Eccentric plug valves shall be mechanical joint or flanged joint as shown on the Drawings.
10. All bolts and nuts shall be stainless steel for non-buried service valves.
11. Shall be epoxy coated inside and out.
12. Manufacturers:
    a. Clow, F-5413,
    b. Val-Matic, Series 5000,
    c. DeZurik, Series 100,
    d. Pratt, Ballcentric,
    e. Milliken Camcentric,
    f. or approved equal.

B. Insertion Valves:

1. Insertion valves shall meet or exceed the testing requirements of AWWA C509 or C515.
2. Valve body may be cast iron, ductile iron, or Type 304 stainless steel.
3. Valve shall be pressure rated for 175 psi.
4. Valve Stem: Type 304 or 431 Stainless Steel.
5. Operating nut shall be 2" square and turn counterclockwise to open the valve with an operating rate of three (3) turns per inch of nominal pipe size.
6. Interior Lining: Epoxy.
7. Exterior Coating: Tar.
8. Manufacturers:
    a. Advanced Valve Technologies, EZ Valve,
    b. Rangeline, Hydro Stop Valve,

c. Team Industrial Services, Insert Valve,

d. or approved equal.

C. Air Release Valves (Stainless Steel Body):

1. Stainless Steel Body Air Release Valves shall be of the type designed for use in sanitary sewage force mains to exhaust entrapped air and shall conform to all applicable AWWA standards.
2. Valve shall be simple lever type and be constructed and tested to 175 psi working pressure.
3. Air release valves shall be furnished with backwash accessories.
4. Materials:

   a. Body and Cover: Stainless Steel

   b. Interior Working Parts: Stainless Steel

5. Air release valve inlets and outlets shall be threaded to NPT standards.
6. Manufacturers:

   a. Val-Matic, Model 48ASV,

   b. or approved equal.

D. Air/Vacuum Valves (Stainless Steel Body):

1. Stainless Steel Body Air/Vacuum Valves shall be of the type designed for use in sanitary sewage force mains to exhaust entrapped air while the pipe is being filled and allow air to reenter during draining to prevent vacuum conditions within the pipe.
2. Valve shall be spherical float operated and shall close drop tight against replaceable rubber seat.
3. Minimum working pressure: 175 psi.
4. Air/vacuum valves shall be furnished with backwash accessories.
5. Materials:

   a. Body and Cover: Stainless Steel

   b. Interior Working Parts: Stainless Steel

6. Air/vacuum valve inlets and outlets shall be threaded to NPT standards.
7. Manufacturers:

   a. Empire / GA Industries, Figure 935-F (1-inch), Figure 935-A (2-inch),

   b. or approved equal.

E. Combination Air Valves (Plastic Body):

1. Plastic Body Combination Air Valves shall be of the type designed for use in sanitary sewage

force mains to exhaust entrapped air while the pipe is being filled, allow air to reenter during draining to prevent vacuum conditions within the pipe, and release air from the system while operating under pressure.

2. Valve shall be tested to 175 psi working pressure.
3. Air release valves shall be furnished with required backwash accessories.
4. Materials:
    a. Body and Cover: PVC
    b. Interior Working Parts: PVC and stainless steel.
5. Air release valve inlets and outlets shall be threaded to NPT standards.
6. Manufacturers:
    a. A.R.I. Flow Control Accessories, Ltd., D-025-PN10,
    b. or approved equal.

F. Check Valves (Lever and Spring Type)

1. Lever and spring type check valves shall conform to AWWA C508.
2. Flanges shall conform to ANSI B16.1, Class 125.
3. Materials:
    a. Disc: Bronze.
    b. Valve Body: Ductile iron, bronze mounted.
4. Valve shall be pressure rated for 175 psi.
5. Stuffing box shall be o-ring sealed.
6. Lever and spring with adjustable tension shall be included to control opening and closing of the clapper.
    a. Lever and spring shall be capable of being installed on either side of valve.
7. Interior Lining: Factory applied amine cured epoxy.
8. Exterior Coating: Exterior of fittings shall be epoxy coated as specified in Section 09 90 00 - Painting and Coating.
9. Manufacturers:
    a. Clow, F-5382,
    b. Mueller, A-2600-6-02,
    c. M & H, Style 259-02,
    d. AMI, Series 504,

e. or approved equal.

G. Check Valves (Flanged Swing-Flex Type)

1. Flanged swing-flex type check valves shall conform to AWWA C508.
2. Flanges shall conform to ANSI B16.1, Class 125.
3. Materials:

a. The flexible disc shall be one piece and precision molded with alloy steel and Nylon reinforcement and an integral O-ring style seat for drop tight seating at low pressure.
b. Valve Body: Ductile iron, bronze mounted.

4. Valve shall be pressure rated for 175 psi and include a mechanical position indicator.
5. Interior Lining: Factory applied amine cured epoxy.
6. Exterior Coating: Exterior of fittings shall be epoxy coated as specified in Section 09 90 00 - Painting and Coating.
7. Manufacturers:

a. Val-Matic, 500A Swing-Flex,
b. Clow, Ken-Flex,
c. Pratt, Flex Check,
d. Mueller, Flex Check,
e. or approved equal.

2.3 VALVE BOXES AND LIDS

A. Valve Box:

1. Valve boxes shall not deeper than five (5) feet without Owner approval.
2. Bottom Section:

a. Cast iron, ASTM A48, heavy duty screw type.
b. Cast iron screw valve box will be only type allowed in asphalt pavement.
c. Cast iron screw or sliding type valve box may be used in right of way as specified per project.

3. Valve Box Extension:

a. Cast iron, ASTM A48, heavy duty screw type extension.
b. For deep valves use six (6) inch ductile or cast iron pipe cut to proper length so only one valve box extension is used.

4. Valve Box Tops shall be cast iron, screw type and conform to ASTM A48.

5. Valve Box Tops shall be rated for H-20 traffic in conformance with AASHTO M-306.
6. Manufacturers:
    a. Tyler, #6850-5625-24B (Bottom), #6050-5625-585C (Extension), #6850-5625-16T (Top),
    b. Opelika Foundry, #4908-5562-S-625 (Bottom), #4906X-64E (Extension), #4905-5562-S-55S (Top),
    c. Sigma, VB 2622 (Bottom), VB302-18 (Extension), VB2621X (Top),
    d. Star Pipe Products, VBB24SHD (Bottom), VBEX14S (Extension), VBT16SHD (Top),
    e. or approved equal.

B. Valve Box Lid:

1. Provide cast iron, ASTM A48, heavy duty, screw type, valve box, 5 ¼" shaft for non-pavement installations.
2. Valve Box Lids shall be rated for H-20 traffic in conformance with AASHTO M-306.
3. Cover shall be marked "SEWER".
4. Manufacturers:
    a. Sigma, VB2600X,
    b. Tyler, 5 1/4" Drop Lid,
    c. Opelika Foundry, #4908-562 Lid,
    d. Star Pipe Products, VBLIOHD,
    e. or approved equal.

C. Lockable Valve Box Lid:

1. Provide cast iron, ASTM A48, heavy duty, screw type, lockable type, valve box, 5 ¼" shaft
2. Lockable Valve Box Lids shall be for installation in low traffic pavement areas.
3. Valve Box Lids shall be rated for H-20 traffic in conformance with AASHTO M-306.
4. Cover shall be marked "SEWER".
5. Manufacturers:
    a. Sigma, VB2600X,
    b. Tyler, 5 1/4" Drop Lid,
    c. Opelika Foundry, #4908-562 Lid,
    d. Star Pipe Products, VBLIOHD,
    e. or approved equal.

D. Non-Pop Valve Box Lid:

1. Provide high tech molded polymer lid, ASTM A48, heavy duty, screw type, valve box, 5 ¼"

shaft cast iron valve box top.

2. Non-Pop Valve Box Lids shall be installed in heavy traffic pavement areas.
3. Valve Box Lids shall be rated for H-20 traffic in conformance with AASHTO M-306.
4. All boxes shall conform to applicable AWWA standards.
5. Cover shall be marked "SEWER".
6. Manufacturers:

    a. SW Services, 5 1/4" Non-Pop Lid,
    b. or approved equal.

2.4 FLOW METERS

A. Electromagnetic Flow Meter:

1. Electromagnetic Flow Meters shall meet or exceed requirements of AWWA C703 standards.
2. Materials:

    a. Body: Stainless Steel.
    b. Electrodes: Hastelloy C, platinum, stainless steel, titanium, tantalum, or low noise (with low noise coating).

3. Electromagnetic Flow Meters shall be rated for 200 psi working pressure.
4. Connection: Flanged.

    a. Flanged connections shall include companion flanges, gaskets, bolts, and nuts.

5. Electronic Display

    a. Electronic display shall be included with Electromagnetic Flow Meter.
    b. Display shall include three (3) outputs for pulses and alarm shall display usage and total.
    c. Electronic display shall be mounted in a secure location.
    d. Manufacturers:

        1) Krohne
        2) pre-approved equal.

2.5 METER VAULT AND ACCESS HATCH

a. Access Hatches:

    1) Provide access hatches as shown on the Drawings.
    2) Access hatches shall be constructed of one-quarter inch (1/4"), minimum, Floor Diamond Plate Aluminum with one-quarter inch (1/4"), minimum, extruded aluminum angle frame with concrete anchors and integral neoprene gasket strip.

3) Aluminum shall be mill finished with coal tar epoxy applied to surfaces to be in contact with concrete.
4) Hinges, bolts, and fasteners shall be stainless steel.
5) All stainless steel is to be 316 grade stainless steel.
6) Minimum design loading: H-20 Load Rating.
7) Hatch shall include hold-open arm mechanism and cast aluminum drop handle and safety hasp.
8) Single Door Access Hatch:
    a) Manufacturers:
        (1) U.S. Foundry, AHS,
        (2) Halliday, H1R,
        (3) or approved equal.
9) Double Door Access Hatch:
    a) Manufacturers:
        (1) U.S. Foundry, AHD,
        (2) Halliday, H2R,
        (3) or approved equal.

B. Box, Utility, Precast Concrete Vault:

1. Precast Concrete Utility Box shall meet the requirements of ASTM C478, with the exclusion of Section 10 (a), except as modified herein.
2. Cement shall meet the requirements of ASTM C150, Specification for Portland Cement, Type I/II.
3. Concrete for utility boxes shall be 4,000 PSI and meet the minimum requirements for Class III.
4. Minimum wall thickness shall be six inches.
5. The required minimum strength of concrete and conformance to the design parameters shall be confirmed by testing in accordance with Section 345 of the FDOT Standard Specifications except that the CONTRACTOR shall be responsible for all testing.
6. Reinforcing steel shall be #4 GR60 rebar 12” O.C. both ways.
7. Utility box shall be constructed with open bottom.
8. Where a top slab is required, it shall be six inches (6”) thick, 4,000 PSI concrete with #4 GR60 rebar 12” O.C. both ways.

2.6 COUPLINGS AND ADAPTORS

A. Flange Adaptors:

1. Flange adaptors shall be cast iron with iron pipe threads.
2. Flange adaptors shall conform to applicable AWWA standards and shall receive the same interior and exterior coating as the pipe receiving the flange.
3. Lining: Factory applied amine cured epoxy.
4. Coating: Exterior of fittings shall be epoxy coated as specified in Section 09 90 00 - Painting and Coating.

B. Sleeve-Type Couplings:

1. Sleeve-type couplings shall be stainless steel couplings for plain-end cast iron and ductile iron pipe.
2. The couplings shall be furnished with the pipe stop removed.
3. Couplings shall be provided with plain, Grade 27, rubber gaskets and with stainless steel, track-head bolts with nuts.
4. To ensure correct fitting of pipe and couplings, all sleeve-type couplings, and accessories shall be furnished by the supplier of the pipe.

2.7 TAPPING SADDLES

A. Stainless Steel Tapping Saddles:

1. Tapping saddle shall be all Type 304 stainless steel, per ASTM A-240.
2. All welds and metal surfaces shall be chemically passivated to meet ASTM A-380.
3. Saddles to be two-piece construction with two (2) inch outlet with IPS thread.
4. Saddles to have double bolt and received bars. Bolts and nuts shall be 18-8 stainless steel.
5. Saddle shall be rated for 150 psi.
6. Manufacturers:

   a. Ford, FRS202,
   b. Cascade, CS22,
   c. or approved equal.

2.8 MATERIALS

A. Select bedding and cover material type based on Project conditions. If more than one type is required, edit following Paragraph. Consider using material "Type" coding from Section 310516 in this Section for uniformity of reference.

B. Bedding and Cover:

1. Excavation, trenching, and backfilling shall be in accordance with Section 125 of the Florida

Department of Transportation Standard Specifications for Road and Bridge Construction.

2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches, tamp in place, and compact to 95 percent of maximum density.
3. Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement.
4. Maintain optimum moisture content of bedding material to attain required compaction density.
5. Where so indicated on the drawings or where directed by the Engineer, the pipe shall be supported by compacted granular fill or concrete cradle or encasement according to the applicable detail shown on the Drawings.

    a. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material.
    b. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement.
    c. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

2.9 MIXES

A. Concrete: As specified in the FDOT Standard Specifications for Road and Bridge Construction.

2.10 ACCESSORIES

A. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
B. Contractor shall contact Sunshine 811 for location of existing utilities at 811 or 1-800-432-4770 a minimum of 48 hours prior beginning Work.
C. The Contractor shall field verify vertical and horizontal locations of all underground facilities in advance of construction to verify that no conflicts exist with the proposed pipe alignment and depth.

    1. Should a conflict be discovered, the Contractor shall contact the Engineer immediately and provide all pertinent information for preparation of a remedial design.

D. Verify that excavation base is ready to receive Work.
E. Verify that excavations, dimensions, and elevations are as indicated on the Drawings.

3.2 PREPARATION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
B. Preconstruction Site Photos:

1. As specified in Section 01 70 00 - Execution and Closeout Requirements.
2. Take photographs along centerline of proposed pipe trench; minimum one photograph for each 50 feet of pipe trench.
3. Show mailboxes, curbing, lawns, driveways, signs, culverts, and other existing Site features.
4. Include Project description, date taken, and sequential number on back of each photograph.

C. Pipe Cutting and Lining Repair:

1. Cut pipe ends square, ream pipe and tube ends to full pipe diameter, and remove burrs.
2. Use only equipment specifically designed for pipe cutting; use of chisels or hand saws is not permitted.
3. Grind edges smooth with beveled end for push-on connections.
4. Remove all traces of oil, grease, asphalt, dust, dirt, etc.
5. Remove damaged lining and clean any exposed metal by sanding or scraping. Sandblasting and power tool cleaning is also acceptable.

    a. Remove any loose lining by chiseling, cutting, or scraping to well adhered lined area before patching.
    b. Lining patch shall overlap remaining lining at least one (1) inch.

6. With the area to be sealed or repaired absolutely cleaned and thoroughly roughened, apply a coat of repair compound specified in the applicator's "Certificate of Application" as furnished and approved with the pipe submittal. The Contractor shall apply the repair compound in strict accordance with the manufacturer's written instructions.
7. The Contractor shall repair damaged coating and lining immediately, using the repair compound recommended by the manufacturer.
8. The cost of repair to cut pipe ends or damaged linings shall be incidental to construction and the Contractor shall absorb the cost thereof in the unit price specified for related items.

D. Remove scale and dirt on inside and outside before assembly.
E. Prepare pipe connections to equipment with flanges or unions.

3.3 INSTALLATION

A. Bedding and installation shall be Class B as shown on the Drawings unless otherwise specified or directed by the Engineer.
B. Handling and Cutting Pipe:

1. The Contractor shall exercise extreme care in handling and laying pipe and fittings to avoid damaging, scratching or marring machined surfaces, and abrasion of the pipe or fitting coating.
2. Any fitting showing a crack and any fitting or pipe that has received a severe blow that may have resulted in an incipient fracture, even though no such fracture can be seen, shall be marked as rejected and immediately removed from the Work.
3. Any pipe showing a distinct crack and in which it is believed there is no incipient fracture beyond the limits of the visible crack, the cracked portion, if so approved by the Engineer, may be cut off by and at the expense of the Contractor before the pipe is laid so that the pipe used may be perfectly sound. The cut shall be made in the sound barrel at a point at least twelve (12) inches from the visible limits of the crack.
4. Except as otherwise approved, all cuttings shall be done with a machine having rolling wheel cutters, or pipe saw adapted for that purpose. All cut ends shall be examined for possible cracks caused by cutting.

C. Abandoning Sewer Force Mains:

1. Sewer Force Mains Abandoned in Place: The Contractor shall cut the sewer force main as required to make connections or install plugs. That portion of the pipe to be abandoned and left in place shall be plugged at locations where the pipe was cut or punctured. Plugging shall be accomplished by grouting the end or punctured area to the satisfaction of the Engineer.
2. Sewer Force Mains Abandoned in Place with Grout Fill: The Contractor shall cut the sewer force main as required, install plugs, and fill the pipe with grout as shown on the Drawings.
3. Sewer force mains to be abandoned and removed shall be cut or disconnected as required.

D. Pipe Installation:

1. Comply with AWWA C600 and C605 as applicable.
2. Handle and assemble pipe according to pipe and gasket manufacturer instructions and as indicated on Drawings.
3. Steel Rods, Bolts, Lugs, and Brackets: Coat buried steel before backfilling.
4. No sanitary sewer force main shall be installed within six (6) feet of a potable water line, unless the crown of the sewer main is at least six (6) inches lower than the bottom of the water line, or unless special permission is obtained from the Engineer and the Florida Department of Environmental Protection. In no case shall a sanitary sewer main be placed in the same trench with a water main.
5. Sanitary Sewer Force Main Location:

    a. Sanitary sewer force mains shall be installed as shown on the Drawings.

b. Every effort shall be made to avoid creation of low or high points in the force main other than those shown on the Drawings.
c. Minimum depth of installation shall be three (3) feet, measured from the top of the pipe to the finished grade or centerline of roadway directly above the pipe.
d. Minimum depth of installation at air release valve locations shall be four (4) feet.

6. Route pipe in straight line, and re-lay pipe that is out of alignment or grade.
7. Ductile-Iron Piping and Fittings: Comply with AWWA C600.
8. PVC Pipe Piping and Fittings: Comply with AWWA C605.
9. Field Welding Materials: Comply with AWWA C206.
10. Flanged Joints: Do not use in underground installations except within structures.
11. To ensure correct fitting of pipe and couplings, all sleeve-type couplings and accessories shall be furnished by the supplier of the pipe.
12. High Points:
    a. Install pipe with no high points other than shown on the Drawings.
    b. If approved by the Engineer, minor changes in alignment may be permitted to avoid underground facilities.
    c. If unforeseen field conditions arise that necessitate high points, install air-release valves as specified or as directed by the Engineer.
13. Bearing:
    a. The pipe shall be laid on an unyielding foundation with uniform bearing under the full length of the barrel of the pipe.
    b. Excavate bell holes to permit proper joint installation.
    c. The spigot end of the pipe shall abut the base of the socket of the adjacent pipe in such a manner that there will be no gaps along the perimeter of the mating halves.
14. Do not lay pipe in wet or frozen trench.
15. The Contractor shall take all necessary precautions to prevent flotation of the pipe from flooding of the trench.
16. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object.
17. Immediately before jointing the pipe, the mating ends shall be thoroughly cleaned of all dirt, debris, and foreign material.
18. Prevent mud, sand, or other foreign material from entering pipe during placement.

19. At all times when pipe laying is not actually in progress, the open ends of the pipe shall be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug shall not be removed until all danger of water entering the pipe has passed.
20. Allow for expansion and contraction without stressing pipe or joints.
21. Close pipe openings with watertight plugs during Work stoppages.
22. Cover:
    a. Establish elevations of buried piping with not less than four (4) feet of cover.
    b. Measure depth of cover from final surface grade to top of pipe barrel.
23. Pipe Markers: As specified in Section 33 05 97 - Identification and Signage for Utilities.
24. Any defective pipe that may have been installed shall be removed and replaced with sound pipe at no additional cost to the Owner.

E. Pipe Joint Assembly:

1. Assemble all joints in accordance with recommendations of the manufacturer.
2. If a lubricant is required to facilitate assembly, it shall have no detrimental effect on the gasket or on the pipe when subjected to prolonged exposure.
3. Proper jointing may be verified by rotation of the spigot by hand or with a strap wrench.
4. If unusual jointing resistance is encountered or if the insertion mark does not reach the flush position, disassemble the joint, inspect for damage, re-clean the joint components, and repeat the assembly steps.
5. Note that fitting bells may permit less insertion depth than pipe bells.
6. When mechanical equipment is used to assemble joints, care should be taken to prevent over-insertion.

F. Valves

1. Valves shall be installed as indicated on Drawings and according to manufacturer instructions.
2. Valves shall be set vertically so that stems form a vertical line. Care shall be taken to keep out dirt and sand, and no valve shall be operated until it has been cleaned of sand, grit, or other foreign material.
3. No valve operating nut shall be deeper than five (5) feet without Owner approval.
4. Valve Boxes:
    a. All valves shall be fitted with heavy duty traffic rated valve box and cover as specified herein.

b. Valve boxes shall be long enough to reach from the valve to finished ground level and shall be installed as recommended by the manufacturer.

c. Valve boxes shall have suitable barrel and shaft extension sections to cover and protect the valve bonnet section.

d. Extension sections fabricated by one piece of ductile iron are allowed. No more than one (1) shaft extension shall be used in any one (1) valve installation.

e. Valve box extensions shall be by same manufacturer as valve box or ductile iron pipe.

f. Valve boxes shall be installed in vertical alignment and positioned to facilitate the operation of the valve with a standard valve wrench. The box shall be installed as shown on the drawings and shall be set on firmly packed soil or bricks to prevent settlement and to prevent bearing on the valve or the main at any point.

g. Adjustment of valve boxes shall be subject to the approval of the Engineer. The Contractor shall maintain vertical alignment and position to permit operation of the valve with a standard valve wrench.

h. All valve boxes located in heavy traffic pavement areas shall include non-pop covers as specified.

i. Terminate locating wire for all sizes of PVC and HDPE water mains in the valve boxes in accordance with the Drawings.

j. Valve Box Adjustment:

1) All valve boxes within the area of finished construction shall be adjusted to finish grade as shown and specified.

2) Valve boxes damaged during construction shall be replaced by the Contractor at no additional cost to the Owner. Removal and replacement of valve boxes during construction may be authorized, provided the Contractor insures that sufficient valve ties are available and on site in order to quickly locate the valve.

3) Adjustment of valve boxes shall be subject to approval of the Engineer.

G. Tapping Sleeves and Valves: As indicated on Drawings and according to manufacturer instructions.

H. Double continuous tracing wires shall be installed on all non-metallic pipes per Specification Section 33 05 97 – Identification and Signage for Utilities.

I. Early warning tape, as specified in Section 33 05 97 – Identification and Signage for Utilities, shall be installed 12-inches to 18-inches above all sanitary sewer force mains.

J. PE Encasement:

1. Encase ductile iron piping in PE to prevent contact with surrounding backfill material when pipe is installed in corrosive soils as shown on the Drawings.

2. Comply with AWWA C105.
3. Terminate encasement 3 to 6 inches above ground where pipe is exposed.

K. Bedding and Backfilling:

1. Excavation, trenching, and backfilling shall be in accordance with Section 125 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
2. Backfill around sides and to top of pipe with cover fill in minimum lifts of six (6) inches and compacted to the following requirements:
    a. Backfill under roadways: 98% Standard Proctor Density.
    b. Backfill not under roadways: 95% Standard Proctor Density.
3. Immediately after the pipe has been jointed and inspected, sufficient backfill shall be performed to protect the pipe adequately from injury and movement.
4. Maintain optimum moisture content of bedding material to attain required compaction density.
5. Where so indicated on the drawings or where directed by the Engineer, the pipe shall be supported by compacted granular fill or concrete cradle or encasement according to the applicable detail shown on the Drawings.
    a. Pipe bedded in compacted granular backfill shall not be supported on blocking, wedges, bricks, or anything except the bedding material.
    b. Where concrete cradle or encasement is required, the pipe shall be supported on solid concrete blocks or pre-cast concrete saddles which shall become part of the completed cradle or encasement.
    c. Where no other bedding is indicated, pipe shall be placed on a shaped bed of undisturbed material.

L. Cleaning and Flushing:

1. As the Work progresses, the interior of the piping shall be cleaned of all dirt, jointing material, and superfluous materials of every description.
2. Prior to the pressure and leakage tests, all piping shall be thoroughly cleaned of all dirt, dust, oil, grease, and other foreign matter. This work shall be done with care to avoid damage to any inside coating.
3. All lines shall be thoroughly flushed with clean water to clear the lines of all foreign matter.

3.4 PIPE SUPPORT AND THRUST RESTRAINT

A. The Contractor shall furnish and install all supports necessary to hold the piping and appurtenances in a firm, substantial manner at the lines and grades indicated on the Drawings or specified.

B. Where buried piping contains fittings, which raise or lower the centerline of the pipe, suitable socket clamps, tie rods, or other approved restraining devices shall be used to prevent movement of the fittings. The restraining devices shall be coated thoroughly and heavily with an approved bituminous paint.
C. All bends, tees, and other fittings in pipelines, and sleeve-coupled pipelines buried in the ground shall be backed with Class 1 concrete placed against undisturbed earth where firm support can be obtained or by the use of restrained joints. If the soil does not provide firm support, then suitable clamps, and accessories or restrained joints shall be provided to brace the fitting properly. Such items shall be coated thoroughly and heavily with an approved bituminous paint after assembly or, if necessary, before assembly.
D. Thrust blocks and joint restraints shall be provided as shown on the Drawings.

3.5 CONNECTION TO EXISTING SANITARY SEWER FORCE MAINS

A. Connections to existing force mains shall be performed as shown on the Drawings or as directed by the Engineer.
B. Connection of new force mains to existing shall be performed in the normal accepted method for connecting mains and shall be done without unduly disrupting service. All connections are subject to the approval of the Engineer as to method, time, and location.
C. Where existing lines are connected to proposed lines, the Contractor shall take appropriate action to ensure that the existing lines do not interfere with the pressure testing portions of the work. Failure to do so will not relieve the Contractor of the responsibility of properly pressure testing the entire system installed. The Contractor shall bear full responsibility for the action or inaction on this matter and shall not claim damages, injuries, or additional compensation for said action or inaction.
D. At least 48 hours prior to excavating for the actual connection operation, the Contractor shall excavate and expose the main to be cut at the proposed location and shall advise the Engineer, so that the exposed area may be inspected by the Engineer to verify that no conditions are present that would hamper the connection operation.
E. Damage caused by sewage from an accidentally cut force main or gravity sewer shall be mitigated by either pumping the sewage back into the gravity sewer system or cleaned by flushing with either fire hoses or tank trucks. Where practical, the affected area shall be treated with a disinfectant, such as Calcium Hypochlorite (HTH). Disinfectant shall be approved by the Engineer.
F. The Contractor shall notify the City of Ocala Water Resources Department, Lift Station Division at least 48 hours prior to making connections to existing force mains.

3.6 CONNECTION TO SANITARY SEWER MANHOLES

A. Where force mains are to be connected to manholes, the complete interior of the manhole shall be protected.
B. The Contractor shall take upstream measurements necessary to properly install boots, grout pipe openings, and thoroughly clean the walls.
C. Apply lining as shown and specified in accordance with Section 33 05 61 - Concrete Manholes. The application shall be installed in strict accordance with the manufacturer's written instructions.

3.7 PAVEMENT CROSSINGS

A. Bases, Sidewalk, Curb, and Driveway Repairs – The Contractor shall replace any and all bases, sidewalks, curbs and gutter, and driveways with materials and workmanship sufficient to give an equal and similar surface to the disturbed areas as existed before construction.
B. Pavement removal and replacement shall be in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction and as shown on the Drawings.

3.8 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.
B. Install pipe to indicated elevation within tolerance of 5/8 inch.

3.9 FIELD QUALITY CONTROL

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for testing, adjusting, and balancing.
B. Testing:

1. All testing shall be performed in the presence of the Engineer or a designated representative thereof.
2. All parts of the Work including, but not being limited to, pipe, fittings, joints, valves, and any other appurtenances shall be subjected to testing as described herein. To achieve this, all methods of testing shall be approved by the Engineer and FDEP.
3. Except as otherwise directed, all pipelines shall be tested. Pipelines installed in excavation or bedded in concrete shall be tested prior to the backfilling of the excavation or placing of the concrete and exposed piping shall be tested prior to field painting.
4. All piping to operate under liquid pressure shall be tested in sections of approved length. The section of pipe being tested shall be limited to a maximum length of 2000 feet. For these tests the Contractor shall furnish clean water, suitable temporary testing plugs or caps, and other necessary equipment and all labor required, without additional compensation. The Contractor shall furnish suitable pressure gauges, pumps, and measuring tank.
5. The Contractor shall be responsible for the cost of all water used for testing and flushing. The Contractor shall make suitable arrangements with the Owner for the monitoring of water consumption and locations to which water may be made available. Water charges shall be in accordance with City of Winter Springs Fees and Rate Schedule.
6. Pressure test piping system as specified in Section 33 05 05.31 – Hydrostatic Testing.

C. Compaction Testing:

1. Comply with Florida Department of Transportation requirements for compaction testing.
2. If tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
3. The Owner shall provide density testing. The Contractor shall be responsible for the cost of any retesting required.

3.10 PROTECTION

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
B. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

END OF SECTION

EXHIBIT 2

Bid Set – Geotechnical Report Lift Station 7W Replacement

Geotechnical Engineering Report

Winter Springs Lift Station 7W
Winter Springs, Florida
April 14, 2023
Terracon Project No. H1225387

Prepared for:
Kimley-Horn Association
Orlando, Florida

Prepared by:
Terracon Consultants, Inc.
Winter Park, Florida

April 14, 2023

Kimley-Horn Association
189 Orange Avenue, Suite 1000
Orlando, Florida 32801

Attn: Ms. Julia Felter, P.E.
P: (407) 768 3239
E: Julia.Felter@kimley-horn.com

Re: Geotechnical Engineering Report
Winter Springs Lift Station 7W
Next to 605 S. Edgemon Drive
Winter Springs, Florida
Terracon Project No. H1225387

Dear Ms. Felter:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. PH1225387 dated October 31, 2022. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and floor slabs, pavement grading and stormwater facilities for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.
Certificate of Authorization No. 8330

Liming Xue, EI
Project Engineer

Jay W. Casper, PE
Senior Principal
Florida PE # 36330

This item has been digitally signed and sealed by Jay W. Casper, P.E. on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REPORT TOPICS

INTRODUCTION 1

SITE CONDITIONS 1

PROJECT DESCRIPTION 2

GEOTECHNICAL CHARACTERIZATION 3

GEOTECHNICAL OVERVIEW 5

EARTHWORK 5

MONOLITHIC FOUNDATIONS 7

LIFT STATION RECOMMENDATIONS 9

GENERAL COMMENTS 11

Note: This report was originally delivered in a web-based format. For more interactive features, please view your project online at client.terracon.com.

FIGURE

GEO MODEL

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report

Winter Springs Lift Station 7W
Next to 605 S. Edgemon Drive
Winter Springs, Florida

Terracon Project No. H1225387

April 14, 2023

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for proposed lift station replacement to be located Next to 605 S. Edgemon Drive in Winter Springs, Florida. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Dewatering
- Site preparation and earthwork
- Lift Station Recommendations

The geotechnical engineering Scope of Services for this project included the advancement of three test borings to depths ranging from approximately 8 to 25 feet below existing site grades.

Maps showing the site and boring locations are shown in the Site Location and Exploration Plan sections. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the Exploration Results section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at Next to 605 S. Edgemon Drive in Winter Springs, Florida, Latitude/Longitude (approximate): 28.688478° N, 81.305719° W See Site Location
Existing Improvements	An existing lift station and support structures are currently present on the site.

Item	Description
Existing Topography (Provided)	The provided plan shows existing ground elevation near +42 ft.
Surface Water	The USGS topographic quadrangle maps "Casselberry, Florida" depicts site is adjacent to the Gee Creek. Groundwater levels are dependent on seasonal fluctuation of the water levels in the creek.
Potentiometric Level	The potentiometric level of the project area is near +35 feet.

Soil Survey

The Soil Survey of Seminole County, Florida, as prepared by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS; later renamed the Natural Resource Conservation Service - NRCS), dated March 1990, identifies the soil type at the subject site as Urban land, 0 to 2 percent slopes. It should be noted that the Soil Survey is not intended as a substitute for site-specific geotechnical exploration; rather it is a useful tool in planning a project scope in that it provides information on soil types likely to be encountered. Boundaries between adjacent soil types on the Soil Survey maps are approximate. A Soils Map is included with this *GeoReport*, depicting the applicable Soil Survey map portion for the subject site.

34 – Urban land, 0 to 2 percent slopes. This soil map unit has slopes of generally less than 2 percent, though some areas range in slope up to 12 percent. It is covered by urban facilities such as shopping centers, parking lots, industrial buildings, houses, streets, sidewalks, airports, and related structures. The natural soil profile has been altered or obscured, including by the overlying structures, to such a point that the natural soil profile may not be observed. Drainage systems have been established in most areas of this soil map unit, thereby affecting the natural drainage. Seasonal high groundwater table conditions are dependent upon the functioning of the drainage system.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description[1]
Information Provided	General description of existing structure, site location and requested boring locations and depths (2 @ 25ft and 2 @ 8ft) were provided via email on 10/25/2022.

Item	Description[1]
Project Description	The project consists of replacing the existing lift station with a new wet well, at or near the existing lift station facility. We anticipate a maximum depth of the new wet well of 20 feet below the existing grade, or 5 ft above our boring depth.
Proposed Structure	The proposed structure is a lift station with a new wet well at or near the lift station facility.
Finished Floor Elevation	Assumed to be near existing grade.
Below-Grade Structures	Not anticipated with the exception of utilities and/or stormwater drainage features
Free-Standing Retaining Walls	Retaining walls are not expected to be constructed as part of site development to achieve final grades.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	SP, SP-SM	Fine Sand to Fine Sand with Silt
2	SM, SC	Silty Sand

Generally, boring found fine sand to fine sand with silt (SP, SP-SM) to about 13 feet, underlain by silt sand (SM) to the explored depth of 25 feet. Note that planned Boring B-1 could not be performed due to a combination of the density of buried utilities and site access. Boring B-2 terminated at 10 ft due to an apparent underground obstacle, possibly concrete. Advancing the boring by hand auger was performed at B-3 to about 10 feet due to utility concerns, then continued with SPT to a depth of 25 feet.

Conditions encountered at each exploration point are indicated on the individual logs. The individual logs can be found in the Exploration Results section and the GeoModel can be found in the Figures section of this report.

Groundwater Conditions

The borings were observed during drilling for the presence and level of groundwater. Groundwater was observed at approximate 6 feet below existing surface at the time of exploration (April 2023), Longer term monitoring in cased holes or piezometers would be required to better define groundwater conditions at the site. The water levels observed from the boring can be found on the boring logs in **Exploration Results**, and are summarized in the following table.

It should be recognized that fluctuations of the groundwater table will occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the boring was performed. In addition, perched water can develop within higher permeability soils overlying less permeable soils. Therefore, groundwater levels during construction or at other times in the future may be higher or lower than the levels indicated on the boring logs.

We estimate that during the normal wet season (typically June through October) with rainfall and recharge at a maximum, groundwater levels will be about 3 feet above the observed depths. Our estimates of the seasonal groundwater conditions are based on the USDA Soil Survey, the encountered soil types, antecedent weather conditions, and the interpreted water levels. The water levels observed in the borings can be found on the boring logs in **Exploration Results**, and are summarized below along with the estimated normal seasonal high groundwater table.

Boring Number	Approximate depth to encountered water table (feet)	Approximate depth to estimated seasonal high groundwater table (feet)
B-2	5.9	3
B-3	6	3
B-4	5.9	3

These seasonal water table estimates do not represent the temporary rise in water table that occurs immediately following a storm event, including adjacent to other stormwater management facilities. This is different from static groundwater levels in wet ponds and/or drainage canals which can affect the design water levels of new, nearby ponds. The seasonal high groundwater table may vary from normal when affected by extreme weather changes, localized or regional flooding, karst activity, future grading, drainage improvements, or other construction that may occur on or around the site following the date of this report.

GEOTECHNICAL OVERVIEW

Borings encountered sand to sand with silt to silty sand to the explored depths. These materials are generally suitable for construction of proposed lift station following site preparation according to the recommendations provided in the Earthwork section.

The Lift Station Recommendations section addresses support of the monolithic slab or mat foundation for lift station bearing on medium dense to dense sand with silt or engineered fill.

The General Comments section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include demolition, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work.

Demolition

Demolition of the existing structures should include complete removal of all foundation systems and below-grade structural elements within the proposed construction area. This should include removal of any utilities to be abandoned along with any loose utility trench backfill or loose backfill found adjacent to existing foundations.

Dewatering

Groundwater was observed at depths of about 6 feet below existing grade. The seasonal high groundwater level is anticipated to be about 3 feet below existing grade at the explored locations. Depending on the groundwater level at the time of construction and proposed pipe embedment depth, temporary dewatering may be required to facilitate construction, backfilling, and compaction in the dry. Regarding dewatering, we offer the following recommendations:

- Dewatering operations at this site for pipe installation should be accomplished with a properly designed dewatering system operating outside the excavation limits.
- The dewatering system should be adequate to lower groundwater levels to at least 2 feet below the lowest compaction surface and keep it there during backfilling to facilitate excavations in the dry and proper compaction of bedding and backfill soils.
- The Contractor should review the boring profiles prior to implementing the dewatering system.
- The construction should be sequenced so that the dewatering system is not turned off until the pipe has enough weight placed over it to counteract an uplift force equivalent

to the height of standing water above the base of the pipe. The resisting weight of soil over the pipe should be calculated using a buoyant unit weight of the soil of 50 pounds per cubic foot.

Site Preparation

The subgrade should be compacted with an adequately compaction equipment. The compaction should be performed under the direction of the Geotechnical Engineer. Areas excessively deflecting under the compaction should be delineated and subsequently addressed by the Geotechnical Engineer. Excessively wet or dry material should either be removed, or moisture conditioned and recompacted.

Fill Material Types

Earthen materials used should meet the following material property requirements:

Soil Quality[1]	USCS Classification	Acceptable Location for Placement	Maximum Lift Thickness (in.)
Preferred [1]	SP (fines content < 5%)	All locations and elevations	12 [3]
	SP-SM (fines content between 5 and 12%) [2]	All locations and elevations. Strict moisture control will be required during placement, particularly during the rainy season.	8 to 12 [3]

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris.
2. If fines contents are greater than 12 percent, special design and construction procedures may be necessary.
3. Loose thickness when heavy compaction equipment is used in vibratory mode. Lift thickness should be decreased if static compaction is being used, typically to no more than 8 inches, and the required compaction must still be achieved. Use 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is required.

Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	
Minimum Compaction Requirements [1]	95 percent of the material's maximum modified Proctor dry density (ASTM D 1557).
Moisture Content [2]	Within ±2 percent of optimum moisture content as determined by the Modified Proctor test, at the time of placement and compaction.
Minimum Testing	One test per lift thicknesses.

1. We recommend that engineered fill be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the cohesionless fill material pumping when proofrolled.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Terracon Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, compaction, and mitigation of areas delineated by the compaction to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Terracon Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content as recommended in Fill compaction Requirements.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Terracon Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

MONOLITHIC FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in Earthwork, After the subgrade soils have been prepared as recommended above, the lift station may be supported on a monolithic slab or mat foundation. the following design parameters are applicable.

Design Parameters – Compressive Loads

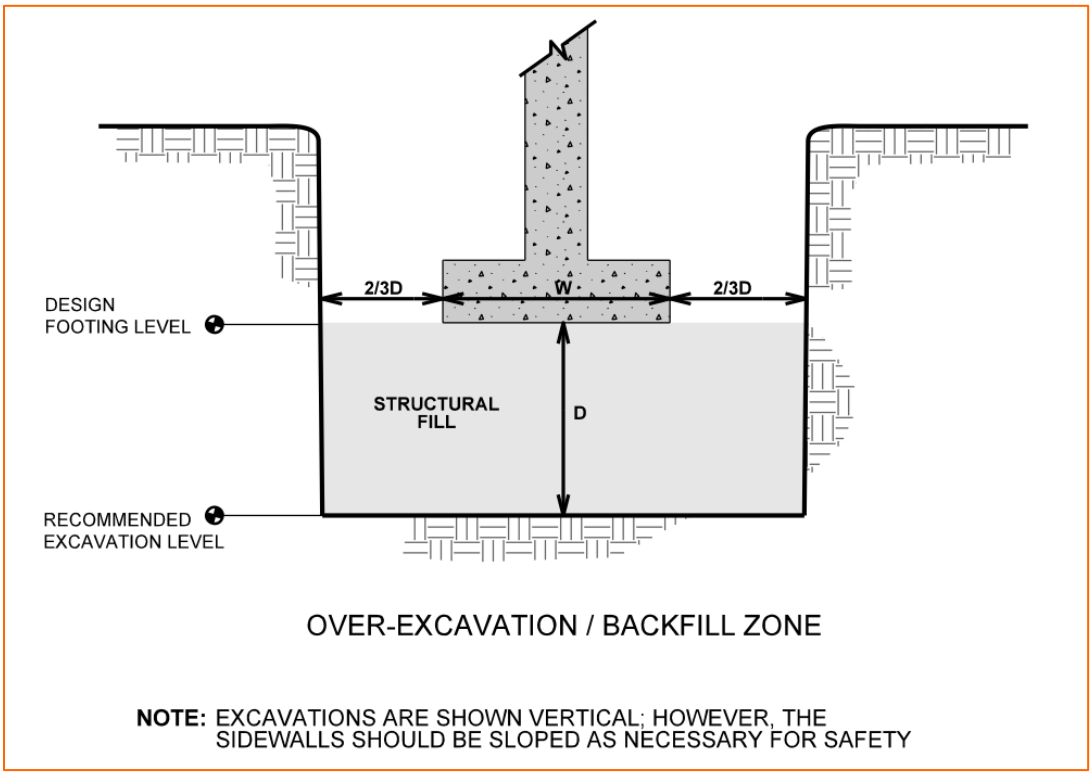
Description	Monolithic Slab Foundation
Net allowable bearing pressure [1]	2,000 psf
Minimum width	12 inches
Minimum embedment below finished grade [2]	12 inches
Compaction requirements	95 percent of the materials maximum Modified Proctor dry density for a depth of 12 inches below footing.
Minimum Testing Frequency	One field density test per 50 linear feet for a minimum depth of 1 foot below the footing subgrade.

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Assumes any unsuitable fill or soft soils, if encountered, will be undercut and replaced with engineered fill.
2. For erosion protection and to reduce effects of seasonal moisture variations in subgrade soils.
3. The foundation settlement will depend upon the variations within the subsurface soil profile, the structural loading conditions, the embedment depth of the footings, the thickness of compacted fill, and the quality of the earthwork operations.

Foundation Construction Considerations

As noted in Earthwork, the foundation excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating and compaction/verification of subgrade density to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with engineered fill placed, as recommended in the Earthwork section.



LIFT STATION RECOMMENDATIONS

Geotechnical engineering recommendations for lift station and other earth connected phases of the project are outlined below. These are not intended to supersede more stringent requirements which may be mandated by City or County specifications.

- All excavation should be performed in accordance with appropriate Occupational Safety and Health Administration (OSHA) standards. These standards typically include side slopes for temporary excavation no steeper than 1.5 horizontal to 1 vertical (1.5H: 1V) with adequate dewatering to provide adequate worker safety.

- If these side slopes cannot be maintained or are not desired due to other considerations, a properly designed and braced excavation or sheet piling would be required. All shoring and bracing systems or sheet piling should be designed and reviewed by an experienced Professional Engineer registered in the State of Florida.

- Although not observed during our field exploration, if encountered during construction, soils with high fines content (clay, silts, etc.) and/or or unsuitable material (organics, muck, debris, etc.) should be removed to a minimum depth of 12 inches below the pump station bottom, to provide a stable construction platform, and replaced with well-draining granular sands with fines contents of 5 percent or less passing the No.

200 U.S. Standard sieve by weight. The soils below the base of the pump station should be compacted to a firm and unyielding state. (This is illustrated on the sketch in Foundation Construction Considerations section)

- Compaction of backfilled soils around the lift station should be accomplished in lift thicknesses no greater than 8 inches. The fill material should consist of relatively clean granular sands with no more than 5 percent passing the No. 200 U.S. Standard sieve by weight.

- Compaction can likely be accomplished in these areas with a small plate or hand guided drum type vibratory compactor and loose lift thicknesses should be limited to 8 inches. Density test should be performed as recommended in Fill Compaction Requirements.

- After the subgrade soils have been prepared as recommended above, the lift station may be supported on a monolithic slab or mat foundation. Design parameters are provided in Monolithic Foundation section.

- If compaction difficulties arise during construction, the geotechnical engineer should be consulted to provide further recommendations.

- For calculations of resistance to the uplift force, 50 pounds per cubic foot may be used for the buoyant unit weight of the soil. The buoyant weight of the concrete and overlying soils should be used in calculating the necessary amount of ballast required.

Pipe Subgrade (Bedding) Soils

Regarding the pipe subgrade soils, we offer the following recommendations:

- Soils encountered in the boring generally appear suitable to support the proposed force main. If unsuitable soils are encountered at the pipe subgrade (bedding) depth in open cut installation areas, these soils should be removed and replaced with sand and/or stone (gravel) to a depth that provides a firm and unyielding subgrade (bedding) surface.
- The bedding soil beneath the pipe should be properly shaped to completely support the pipe section and areas should be excavated to accommodate any bells or other raised portions of the pipe to help avoid point loading conditions.
- If dense or cemented soils are encountered within 1 foot below the pipe bottom, it is recommended that these soils be removed to a depth of 1 foot below the pipe bottom and replaced with clean granular fill material to avoid uneven loading (point loads) of pipes and fittings.
- A minimum separation of 2 feet between the bottom of the subgrade level and the groundwater level is recommended during construction and backfilling operations. A

properly designed temporary dewatering system may be required to maintain this minimum separation.

- After the subgrade soils have been prepared as recommended above, the pipe may be installed.

Pipe Backfill Soils

Regarding the pipe subgrade soils we offer the following recommendations:

- Once the pipe has been laid in the excavation trench and approved, backfill should be carefully deposited and compacted to the centerline of the pipe on both sides.
- Compaction of backfilled soils above the centerline of the pipe to the proposed final grade should be accomplished in lift thicknesses no thicker than 12 inches.
- All fill should be non-plastic, granular soils (clean sands) free of roots, organic content and debris. Inorganic fine sand (SP) and fine sand with silt (SP-SM) are acceptable for this use.
- From 1 foot above the pipe to the finished grade elevation, compaction should be accomplished with a small plate or hand-guided drum type vibratory compactor. Extreme caution should be exercised when operating vibratory equipment near existing structures. Smaller hand compactors should be utilized in all restricted areas, such as beneath pipe haunches and to 1 foot above the pipe to help provide uniform compaction around the pipe.
- At least one (1) density test per 300 lineal feet of pipe length per lift should be performed to verify that the soil has been compacted to at least 98 percent of its modified Proctor maximum dry density (ASTM D-1557). Care should be taken to also test the haunch area and to 1 foot above the pipe on this same frequency of one (1) test per 300 lineal feet of pipe installed.
- If compaction difficulties arise during construction, the Geotechnical Engineer should be consulted to provide further recommendations.

GENERAL COMMENTS

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by

Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

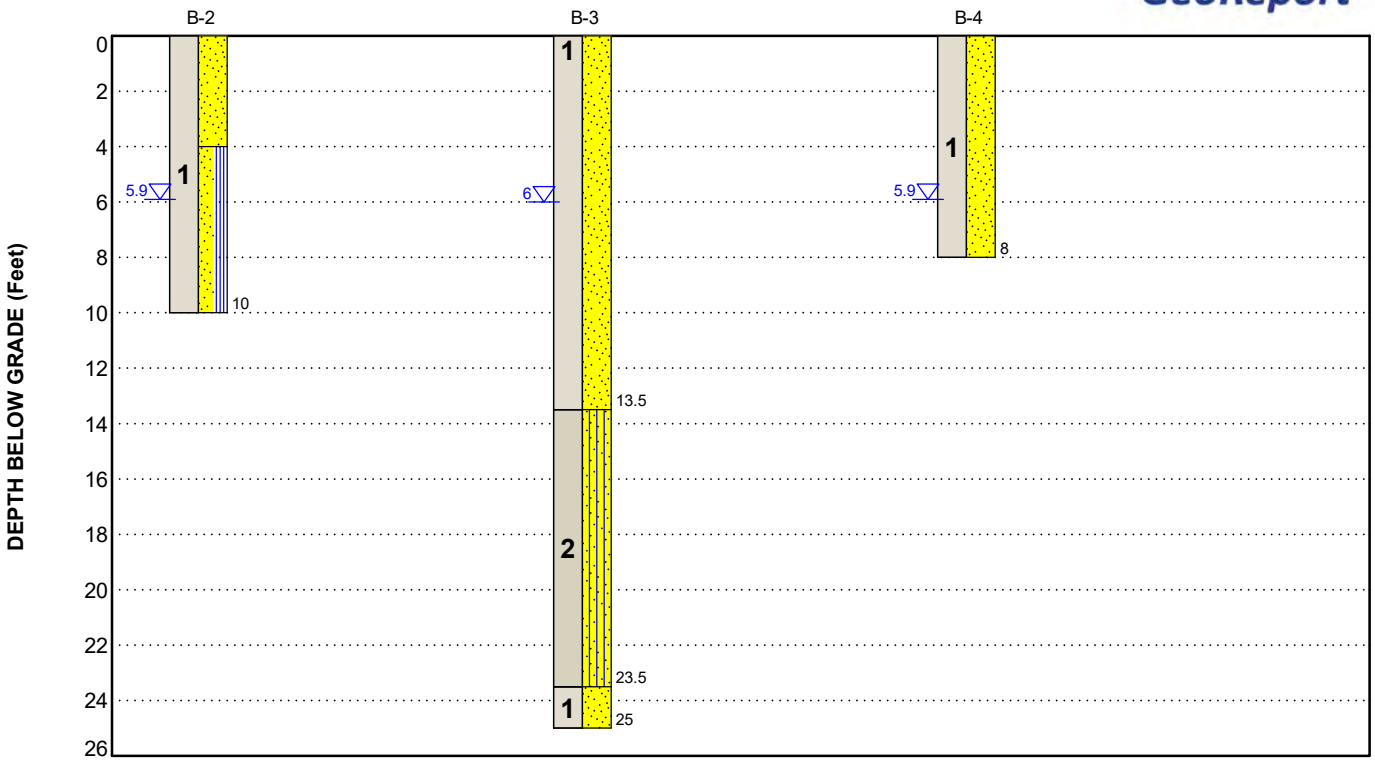
FIGURES

Contents:

GeoModel

GEOMODEL

Winter Springs Lift Station 7W ■ Winter Springs, FL
Terracon Project No. H1225387



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	SP, SP-SM	Fine Sand, Fine Sand with Silt
2	SM, SC	Silty Fine Sand, Clayey FIne Sand

LEGEND

- Poorly-graded Sand
- Poorly-graded Sand with Silt
- Silty Sand

▽ First Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet) [1]	Location
1	10	Provided locations
1	8	
1	25	

1. Below ground surface.

Boring Layout: We used handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features were used.

Subsurface Exploration Procedures: We advanced soil borings with a truck-mounted drill rig using rotary wash techniques as necessary depending on soil conditions. Five samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. We obtained representative samples primarily by the split-barrel sampling procedure. In the split-barrel sampling procedure, a standard, 2-inch O.D., split-barrel sampling spoon is driven into the boring with a 140-pound automatic SPT (Standard Penetration Test) hammer falling 30 inches. We recorded the number of blows required to advance the sampling spoon the last 12 inches of an 18-inch sampling interval as the standard penetration resistance value, N.

The samples were placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we observed and record groundwater levels during drilling and sampling.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations

to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil by Mass
- ASTM D1140 Standard Test Method for Amount of Material in Soils Finer than No. 200 (75-µm) Sieve

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

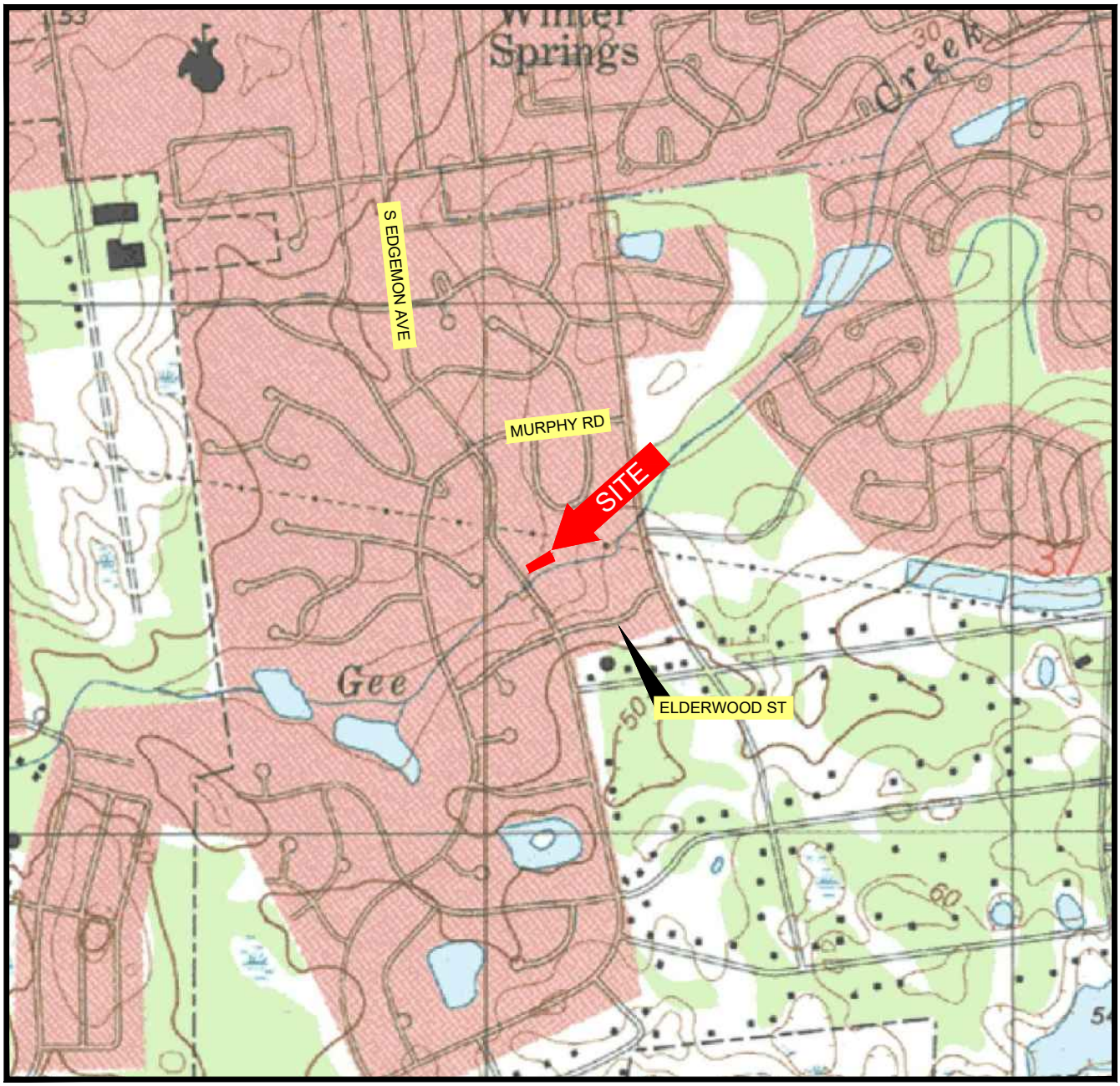
SITE LOCATION AND EXPLORATION PLANS

Contents:

Topographic Vicinity Map
Soils Map
Location Plan

Note: All attachments are one page unless noted above.

UNITED STATES – DEPARTMENT OF THE INTERIOR – GEOLOGICAL SURVEY



SCALE 1"=1000'

FEET

500 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

CASSELBERRY, FLORIDA
ISSUED: 1994
7.5 MINUTE SERIES (QUADRANGLE)

N

N:\Projects\2022\H1225387\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Cad\H1225387 Quad Map.dwg

Project Mngr:	LX
Drawn By:	AS
Checked By:	LX
Approved By:	JWC

Project No.	H1225387
Scale:	AS SHOWN
File No.	H1225387
Date:	3-28-23

Terracon
Explore with us
1675 LEE ROAD WINTER PARK, FLORIDA 32789
PH. (407) 740-6110 FAX. (407) 740-6112

TOPOGRAPHIC VICINITY MAP

GEOTECHNICAL ENGINEERING REPORT
WINTER SPRINGS L7W
NEXT TO 605 SOUTH EDGEMON DRIVE
WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

EXHIBIT



SCALE 1"=1000'

FEET

500 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

U.S.D.A. SOIL SURVEY FOR SEMINOLE COUNTY, FLORIDA

N

SOIL LEGEND

34 URBAN LAND, 0 TO 2 PERCENT SLOPES

Project Mngr:	LX
Drawn By:	AS
Checked By:	LX
Approved By:	JWC

Project No.	H1225387
Scale:	AS SHOWN
File No.	H1225387
Date:	3-28-23

Terracon
Explore with us
1675 LEE ROAD WINTER PARK, FLORIDA 32789
PH. (407) 740-6110 FAX. (407) 740-6112

SOILS MAP

GEOTECHNICAL ENGINEERING REPORT
WINTER SPRINGS L7W
NEXT TO 605 SOUTH EDGEMON DRIVE
WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

EXHIBIT

N:\Projects\2022\H1225387\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Cad\H1225387 Soil Map.dwg



LEGEND

APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

N

APPROXIMATE SCALE IN FEET

0 20 40

N:\Projects\2022\H1225387\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Cad\H1225387 Loc. Plan.dwg

Project Mngr:	LX
Drawn By:	AS
Checked By:	LX
Approved By:	JWC

Project No.	H1225387
Scale:	AS SHOWN
File No.	H1225387
Date:	3-28-23

Terracon
Explore with us
1675 LEE ROAD WINTER PARK, FLORIDA 32789
PH. (407) 740-6110 FAX. (407) 740-6112

LOCATION PLAN

GEOTECHNICAL ENGINEERING REPORT
WINTER SPRINGS L7W

NEXT TO 605 SOUTH EDGEMON DRIVE
WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

EXHIBIT

EXPLORATION RESULTS

Contents:

Boring Logs (B-2 through B-4)

Note: All attachments are one page unless noted above.

BORING LOG NO. B-2

PROJECT: Winter Springs Lift Station 7W

CLIENT: Kimley-Horn and Associates Inc
Orlando, FL

SITE: 605 S Edgemon Drive
Winter Springs, FL

LOCATION See Exhibit A-2

Latitude: 28.6885° Longitude: -81.3059°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	PERCENT FINES
	POORLY GRADED SAND (SP), trace asphalt, dark brown				6-10-11-11 N=21		
	dark brown				6-5-4-4 N=9		
	4.0	5	▽		4-3-3-3 N=6	16.9	8
	POORLY GRADED SAND WITH SILT (SP-SM), gray				2-3-3-3 N=6		
	10.0				3-2-2-3 N=4		
	Boring Terminated at 10 Feet	10					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
SPT

Abandonment Method:
Boring backfilled with soil cuttings and bentonite chips upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater observed at 5.9 feet*

Terracon
1675 Lee Rd
Winter Park, FL

Boring Started: 03-31-2023 | Boring Completed: 03-31-2023

Drill Rig: #898 | Driller:

Project No.: H1225387 | Exhibit: A-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL H1225387 WINTER SPRINGS LI.GPJ TERRACON_DATATEMPLATE.GDT 4/11/23

BORING LOG NO. B-3

PROJECT: Winter Springs Lift Station 7W

CLIENT: Kimley-Horn and Associates Inc
Orlando, FL

SITE: 605 S Edgemon Drive
Winter Springs, FL

LOCATION See Exhibit A-2

Latitude: 28.6884° Longitude: -81.3059°

DEPTH	GRAPHIC LOG		WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	PERCENT FINES
0		**POORLY GRADED SAND (SP)**, brown					
		gray brown					
		gray					
		dark brown	▽				
13.5		**SILTY SAND (SM)**, gray to light gray			5-5-5 N=10		
					4-4-5 N=9	24.4	13
23.5		**POORLY GRADED SAND (SP)**, light gray			13-13-15 N=28		
25.0		***Boring Terminated at 25 Feet***					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hand Auger to 10 feet,
SPT to 25 Feet

Abandonment Method:
Boring backfilled with soil cuttings and bentonite chips upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater observed at 6 feet*

Terracon
1675 Lee Rd
Winter Park, FL

Boring Started: 03-31-2023 | Boring Completed: 03-31-2023

Drill Rig: #898 | Driller:

Project No.: H1225387 | Exhibit: A-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL H1225387 WINTER SPRINGS LI.GPJ TERRACON_DATATEMPLATE.GDT 4/11/23

BORING LOG NO. B-4

PROJECT: Winter Springs Lift Station 7W

CLIENT: Kimley-Horn and Associates Inc
Orlando, FL

SITE: 605 S Edgemon Drive
Winter Springs, FL

LOCATION See Exhibit A-2

Latitude: 28.6883° Longitude: 81.3060°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	PERCENT FINES
	POORLY GRADED SAND (SP), gray				3-4-6-5 N=10		
					3-4-4-4 N=8	3.1	1
	dark brown	5	▽		3-3-2-2 N=5		
					3-4-4-4 N=8		
	8.0						
	Boring Terminated at 8 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
SPT to 8 feet

Abandonment Method:
Boring backfilled with soil cuttings and bentonite chips upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Groundwater observed at 5.9 feet*

Terracon
1675 Lee Rd
Winter Park, FL

Boring Started: 03-31-2023 | Boring Completed: 03-31-2023

Drill Rig: #898 | Driller:

Project No.: H1225387 | Exhibit: A-3

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL H1225387 WINTER SPRINGS LI.GPJ TERRACON_DATATEMPLATE.GDT 4/11/23

SUPPORTING INFORMATION

Contents:

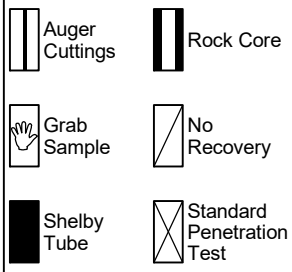
General Notes
Unified Soil Classification System

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING



WATER LEVEL



Water Initially Encountered

Water Level After a Specified Period of Time

Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(DCP)	Dynamic Cone Penetrometer
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Automatic Hammer SPT N-Value (Blows/Ft.)**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (psf)**	**Automatic Hammer SPT N-Value (Blows/Ft.)**
Very Loose	< 3	Very Soft	less than 500	< 1
Loose	3 - 8	Soft	500 to 1,000	1 - 3
Medium Dense	8 - 24	Medium Stiff	1,000 to 2,000	3 - 6
Dense	24 - 40	Stiff	2,000 to 4,000	6 - 12
Very Dense	> 40	Very Stiff	4,000 to 8,000	12 - 24
		Hard	> 8,000	> 24

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

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UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [Cc<1 or Cc>3.0] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [Cc<1 or Cc>3.0] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.

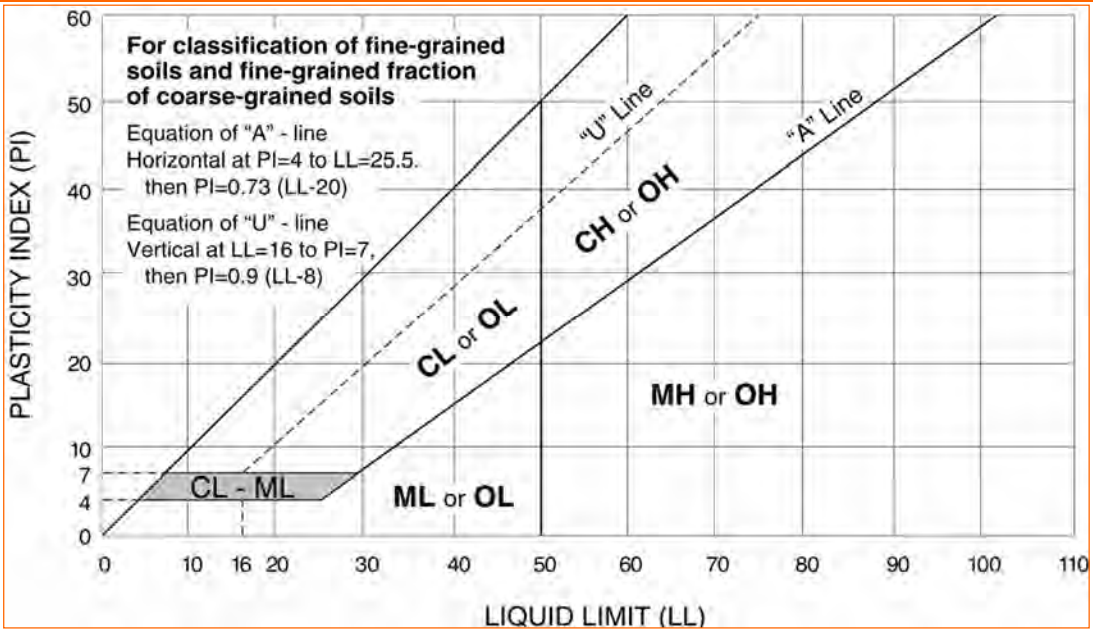


EXHIBIT 3

Bid Set – Construction Drawings Lift Station 7W Replacement

EXHIBIT 3
CONSTRUCTION DRAWINGS

LIFT STATION 7W REPLACEMENT

PREPARED FOR

CITY OF WINTER SPRINGS

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C1.0	GENERAL NOTES
C1.1	GENERAL NOTES
C2.0	EXISTING CONDITIONS
C2.1	DEMOLITION AND EROSION CONTROL PLAN
C3.0	PROPOSED SITE PLAN
C4.0	PAVING GRADING AND DRAINAGE PLAN
C4.1	PAVING AND EROSION CONTROL DETAILS
C5.0	KEY SHEET
C5.1	PLAN AND PROFILE
C5.2	PLAN AND PROFILE
C5.3	PLAN AND PROFILE
C5.4	PLAN AND PROFILE
C5.5	PLAN AND PROFILE
C6.0	MANHOLE CONNECTION DETAILS
M01	EXISTING CONDITIONS AND DEMOLITION PLAN
M02	EXISTING CONDITIONS AND DEMOLITION DETAILS
M03	EXISTING CONDITIONS AND DEMOLITION DETAILS
M04	PROPOSED ELECTRICAL BUILDING
M05	PROPOSED LIFT STATION PLAN
M06	PROPOSED LIFT STATION SECTION
M07	MECHANICAL DETAILS
E01	ELECTRICAL SYMBOLS, NOTES, & ABBREVIATIONS
E02	DEMOLITION SITE & GENERATOR BUILDING DEMOLITION PLAN
E03	ELECTRICAL SITE DEMOLITION AND MODIFICATIONS
E04	SINGLE LINE DIAGRAM
E05	PROPOSED ELECTRICAL BUILDING POWER & LIGHTING PLAN
E06	PROPOSED WET WELL ELECTRICAL PLAN
E07	PROPOSED GENERATOR BUILDING AND LIGHTING PLAN
E08	ELECTRICAL SITE GROUNDING PLAN
E09	ELEMENTARY CONTROL AND RISER DIAGRAMS
E10	ELECTRICAL LIGHTING, FIXTURE SCHEDULE & PANELBOARD SCHEDULE
E11	ELECTRICAL DETAILS
E12	ELECTRICAL DETAILS
I01	INSTRUMENTATION SYMBOLS & ABBREVIATIONS
I02	P&ID
I03	ELECTRICAL DETAILS
P01	PLUMBING GENERAL NOTES & SYMBOLS
P02	PLUMBING BUILDING PLAN
P03	PLUMBING DETAILS
H01	HVAC GENERAL NOTES & SYMBOLS
H02	HVAC NEW BUILDING PLAN

JUNE 2024



PROJECT VICINITY MAP
N.T.S.

400 S EDGEMON AVE
WINTER SPRINGS, FL 32708

PARCEL ID: 03-21-30-509-0E00-0030

100% DESIGN PLANS

PREPARED BY
Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
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PHONE (407) 898-1511
WWW.KIMLEY-HORN.COM CA 00035106

PROJECT TEAM

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PHONE: (727) 235-6062

SURVEYOR:
ECHO UES, INC
400 STATE ROAD 434, SUITE 1024
OVIEDO, FLORIDA 32765
PHONE: (888) 778-3246

THE SITE CONSTRUCTION STAKEOUT SHALL BE PERFORMED UNDER THE DIRECTION OF A FLORIDA REGISTERED SURVEYOR. AUTOCAD FILES WILL BE FURNISHED TO AID IN THE SITE CONSTRUCTION STAKEOUT. ANY DISCREPANCIES FOUND BETWEEN AUTOCAD FILES AND SITE CONSTRUCTION PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION PRIOR TO THAT STAKEOUT.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

No.	REVISIONS	DATE	BY

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JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER: 91121
DATE:

DATE 04/05/24
PROJECT NO. 049553018
SHEET NUMBER C0.0

Drawing name: K:\ORL_Utilities\049553 -Winter Springs\018 - LS 7W Improvements\CADD\PlanSheets\C0.0 COVER SHEET.dwg C0.0 COVER SHEET Jun 26, 2024 4:37pm by: Waldo.irizarry
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By:Irizarry, Wanda Sheet Set:LS 7W IMPROVEMENTS Layout:C1.0 GENERAL NOTES June 26, 2024 04:37:45pm K:\ORL_Utilities\049553 - Winter Springs\D18 - LS 7W improvements\CAD\PlanSheets\C1.0 GENERAL NOTES.dwg
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GENERAL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS DEWATERING PERMITS, RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY PROVIDED BY ECHO UES, INC. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS AREA PRIOR TO CONSTRUCTION WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OF THE SURVEY. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE OWNER, ENGINEER, AND APPLICABLE GOVERNING AGENCY IMMEDIATELY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES (DURING STANDARD BUSINESS HOURS) TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. THE CONTRACTOR SHALL COOPERATE WITH UTILITY COMPANY (DURING STANDARD BUSINESS HOURS) DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.
4. ALL DISTURBED AREAS (ON-SITE AND/OR OFF-SITE) NOT DESIGNED OR NOTED TO BE LANDSCAPED OR SODDED, SHALL BE MULCHED AND SEEDED.
5. THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE, OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES, OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS, OR SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
6. ALL WORK AND MATERIALS FURNISHED SHALL BE IN CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS, AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT PLANS OR SPECIFICATIONS.
7. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION, AS APPLICABLE AT THE TIME ALL PERMITS HAVE BEEN OBTAINED.
8. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
9. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW.

    SHOP DRAWINGS OF ALL DRAINAGE STRUCTURES, MATERIALS, AND COMPONENTS TO BE INSTALLED WITHIN CITY OF WINTER SPRINGS PUBLIC RIGHTS-OF-WAY, SHALL BE SUBMITTED TO THE CITY OF WINTER SPRINGS FOR REVIEW AND APPROVAL. UPON ENGINEER OR RECORD'S COMPLETION OF REVIEW AND APPROVAL OF SHOP DRAWINGS FOR WORK WITHIN THE CITY OF WINTER SPRINGS'S JURISDICTION THE ENGINEER OF RECORD SHALL COORDINATE SHOP DRAWING SUBMITTALS TO THE CITY OF WINTER SPRINGS FOR THEIR REVIEW AND APPROVAL.
11. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
15. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
16. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARD PLANS FOR ROAD CONSTRUCTION" (ED. 2020-21) FOR DETAILS AND SPECIFICATIONS OF ALL CURB AND GUTTERS CALLED FOR IN THESE PLANS WITHIN PUBLIC RIGHTS OF WAY.
17. WHERE ASPHALT PAVING MEETS CONCRETE PAVING SUCH AS AT CONCRETE CURBING, THE ASPHALT SHOULD BE FINISHED ¼" TO ½" ABOVE THE CONCRETE SURFACE TO ALLOW FOR FURTHER TRAFFIC COMPACTION OF THE ASPHALT.
18. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND/OR PAVEMENT TESTING WITH THE GEOTECHNICAL ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE GEOTECHNICAL SOILS REPORT. UPON COMPLETION OF WORK, THE GEOTECHNICAL ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
19. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
20. ALL CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER FDOT DESIGN INDEX (THE LATEST) #522-001.
21. SITEWORK SHALL COMPLY WITH 2023 FLORIDA BUILDING CODE AND FLORIDA ACCESSIBILITY CODE.
22. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED AND SHALL COPY THE CITY OF WINTER SPRINGS ON ANY WELL ABANDONMENT PERMITS.
23. . ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

TREES AND VEGETATION

1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT OWNER'S APPROVAL. TREES IN CLOSE PROXIMITY TO CONSTRUCTION SHALL BE PROTECTED BY ORANGE FENCING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
3. REFER TO LANDSCAPE PLANS FOR DETAILS REGARDING TREE REMOVAL AND TREE PRESERVATION.

PAVEMENT MARKING AND SIGNAGE

1. THE INSTALLATION, SHAPE, AND SIZE OF ALL SIGNS AND THEIR LETTERING SHALL COMPLY WITH THE LATEST EDITIONS OF THE U.S. DEPARTMENT OF TRANSPORTATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ED. 2009" (MUTCD), AND THE F.D.O.T. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ED. 2020-2021", AND THE F.D.O.T. "DESIGN STANDARDS, ED. 2019/2020". WHERE CONFLICTS EXIST BETWEEN THE PLANS AND THE ABOVE MENTIONED SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL PREVAIL.
2. STOP BARS AND STOP SIGNS ARE TO BE PROVIDED AT ALL INTERNAL, ONSITE INTERSECTIONS, WITH THE EXCEPTION OF SIGNALIZED INTERSECTIONS (UNLESS OTHERWISE NOTED).
3. ALL PAVEMENT MARKINGS SHALL COMPLY WITH F.D.O.T. STANDARD INDEX #711-001 (ED. 2020/2021).

STORM DRAINAGE SYSTEM

1. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS" (ED. 2020/2021) IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.
2. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.
4. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
5. CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.
6. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH F.D.O.T. AND THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.
8. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD DESIGN INDEX (ED. 2020/2021) #430-001.
9. THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE STORMWATER COLLECTION SYSTEM (INLETS, PIPES) FROM EXCESSIVE MUD, SILT, DIRT, DEBRIS, TRASH, ETC. UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL CLEAN AND FLUSH STORM PIPES AND INLETS OF ALL EXCESSIVE SILT, DEBRIS, ETC. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED OF THE FINAL INSPECTION OF THE STORMWATER SYSTEM SHOULD A REPRESENTATIVE WANT TO ATTEND.

SAFETY

1. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
2. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL PROVIDE FOR THE SAFETY AND CONTROL OF LOCAL TRAFFIC DURING CONSTRUCTION. ADDITIONAL INFORMATION MAY BE REQUIRED IF LANE CLOSURE DURATIONS ARE LONGER THAN DAYTIME OPERATIONS.

DEMOLITION

1. CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES.
2. EXTENT OF SITE CLEARING IS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL CONDUCT SITE DEMOLITION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
4. CONTRACTOR SHALL PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED ON PLAN "EXISTING TO REMAIN".
5. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
6. CONTRACTOR SHALL REMOVE WASTE MATERIALS AND UNSUITABLE AND EXCESS TOPSOIL FROM PROPERTY AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
7. CONTRACTOR SHALL DEMOLISH, AND COMPLETELY REMOVE FROM SITE, MATERIAL INDICATED ON PLAN OR NOTES "TO BE REMOVED".
8. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY THE DEMOLITION OPERATION.

DEWATERING NOTES

1. DURING THE EXCAVATION OF THE WASTEWATER FACILITIES, AND IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL CONSTRUCT A SEDIMENT BASIN TO PROVIDE A DISCHARGE POINT FOR DEWATERING. THE SEDIMENT BASIN CAN BE IN THE PROPOSED EXCAVATION AREA OF A POND OR IT CAN BE A BERMED AREA ABOVE GROUND. ALL DEWATERING MUST BE HELD IN THE SEDIMENT AREA UNTIL THE WATER IS CLEAN SUCH THAT THERE WOULD BE NO TURBID DISCHARGE. AFTER THE WATER IN THE SEDIMENT BASIN IS CLEAN, THE WATER MAY BE RELEASED INTO THE ON-SITE POND PROVIDED THERE IS NO ADVERSE IMPACT TO THE EXISTING WATER QUALITY.
2. UNDER NO CIRCUMSTANCES WILL THE DISCHARGE FROM THE ON-SITE DEWATERING BE DIRECTLY DISCHARGED OFFSITE.
3. IF CONTRACTOR ENCOUNTERS SILTY/CLAY SAND, WHICH CAUSES THE WATER TO BECOME TURBID, HE/SHE SHALL TREAT THE SEDIMENT BASIN WITH CHEMICAL ADDITIVE SUCH AS ALUM IN ORDER TO PROMOTE THE COAGULATION OF THE PARTICLES WHICH ALLOW THE SEDIMENT TO SETTLE AND THE WATER TO BECOME LESS TURBID. IF TURBID WATER IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY TO DETERMINE THE COURSE OF ACTION THAT IS APPROPRIATE TO ELIMINATE THE TURBIDITY AND ALLOW DISCHARGE THAT MEETS WATER QUALITY STANDARDS.

EARTHWORK / GRADING / DEMUCKING PROCEDURES

1. A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT HAS BEEN PREPARED, OF WHICH COPIES ARE AVAILABLE THROUGH THE OWNER OR THEIR SOIL TESTING COMPANY. A GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PROVIDE ON-SITE INSPECTIONS DURING EXCAVATION/FILL OPERATIONS AND TESTING OF THE COMPACTED FILL SO THAT PROPER DOCUMENTATION OF THE REQUIRED COMPACTING CRITERIA CAN BE PROVIDED. THE CITY OF WINTER SPRINGS SHALL BE COPIED ON ALL INSPECTION REPORTS.
2. CONTRACTOR TO FOLLOW THE GUIDANCE OF THE REFERENCED GEOTECHNICAL ENGINEERING INVESTIGATION REPORT OR INDICATE WHETHER ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE DEPTH OF DEMUCKING AND/OR REMOVAL OF UNSUITABLE FILL.
3. ALL EXISTING DEBRIS (ABOVE OR BELOW GROUND), CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS IN A LEGAL MANNER.
4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
5. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE OWNER OR THEIR SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
7. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
8. THE CONTRACTOR SHALL INSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR PLACEMENT OF ALL HEADWALL/ENDWALL FOOTINGS, RETAINING WALL FOOTINGS, AND IN GENERAL, ANY FOOTING SUPPORT DESCRIBED ON THESE PLANS. IT WILL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SUFFICIENT SOILS TESTING HAS BEEN PERFORMED PRIOR TO FINAL INSTALLATION OF IMPROVEMENTS.
9. ANY UNSUITABLE ORGANIC SOIL SHALL BE EXCAVATED TO A MINIMUM MARGIN OF 6 FEET BEYOND ITS PERIPHERY EXCAVATED TO EXPOSE THE UNDERLYING NON-ORGANIC FINE SAND.
10. IF DETERMINED NECESSARY, DEWATERING DURING EXCAVATING/BACKFILLING OPERATIONS MAY BE ACCOMPLISHED BY DITCHING AND THE USE OF SUMP PUMPS AND/OR OTHER METHODS (WELL POINTS), AS NECESSARY. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR DEWATERING ACTIVITIES THAT MAY BE REQUIRED.
11. UPON APPROVAL OF THE GEOTECHNICAL ENGINEER, THE EXCAVATED AREAS MAY BE BACKFILLED WITH CLEAN FINE SAND FREE OF UNSUITABLE OR DELETERIOUS MATERIAL. HOWEVER, THE FILL SHOULD NOT BE PLACED IN MORE THAN 6 INCHES OF STANDING WATER. ONCE THE FILL IS AT LEAST 2 FEET ABOVE THE DEWATERED LEVEL, BACKFILLING MAY PROCEED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
12. SEDIMENT CONTROL MEASURES SHOULD BE EMPLOYED DURING THE CONSTRUCTION PROCESS TO KEEP NEARBY WATER BODIES FROM RECEIVING SIGNIFICANT AMOUNTS OF STORMWATER RUNOFF FROM THE SURROUNDING CONSTRUCTION SITE. THIS RUNOFF IS LIKELY TO CONTAIN SUSPENDED FINE-GRAINED SOIL PARTICLES THAT CAN IMPEDE THE INFILTRATION CAPACITY OF THE WATER BODIES IF ALLOWED TO SETTLE OUT ON THE BOTTOMS. IF DEWATERING EFFLUENT OR STORMWATER RUNOFF FROM THE ACTIVE CONSTRUCTION SITE IS DISCHARGED TO NEARBY WATER BODIES, CONTRACTOR SHALL SCRAPE AND REMOVE FINE-GRAINED SEDIMENTS THAT HAVE ACCUMULATED ON THE BOTTOM, AND REPLACE WITH SUITABLE SOIL TO THE PLAN SPECIFIED GRADE ELEVATIONS. REQUIRED DEPTH OF SCRAPE AND REMOVAL SHALL BE DETERMINED BY GEOTECHNICAL ENGINEER.

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LICENSED PROFESSIONAL
JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER
91121
DATE:

KHA PROJECT
049553018
DATE
04/05/24
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

GENERAL NOTES

SHEET NUMBER
C1.0

PAVING, GRADING AND DRAINAGE

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS, ETC.) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD OR THE OWNERS ENGINEERS. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS AND PER THE GEOTECHNICAL REPORT. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.
5. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
6. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
7. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.
8. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.
9. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER POURED).
10. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #711-001.
11. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A REGISTERED LAND SURVEYOR AT CONTRACTORS EXPENSE.
15. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
16. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND JURISDICTIONAL PERMITTING AGENCIES.
17. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
18. CONTRACTOR TO OPEN CUT AND PATCH EXISTING ASPHALT PAVEMENT. MINIMUM 7.5 FEET OFFSET FROM CENTERLINE OF EXISTING SEWER LINE.
19. CONTRACTOR TO UTILIZE FDOT STANDARD INDEX FOR M.O.T.
20. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER TO TAKE BORING OF EXISTING ASPHALT SECTION IN ORDER TO PATCH WITH SAME PAVEMENT SECTION.

PAVING/GRADING TESTING AND INSPECTION

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND GEOTECHNICAL REPORT, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THESE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.
3. A COPY OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS.

POTABLE WATER SYSTEM

1. POTABLE WATER SERVICE FOR USE IN CONSTRUCTION AND INSTALLATION OF PROPOSED IMPROVEMENTS SHALL BE PROVIDED BY THE CITY OF WINTER SPRINGS.

SANITARY SYSTEM

1. SANITARY WASTEWATER SERVICE SHALL BE PROVIDED BY THE CITY OF WINTER SPRINGS. THE WASTEWATER COLLECTION SYSTEM SHOWN ON THESE PLANS SHALL BE INSTALLED BY THE CONTRACTOR, AND CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS. ONSITE WASTEWATER COLLECTION SYSTEM SHALL BE OWNED AND MAINTAINED BY THE CITY OF WINTER SPRINGS AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

SANITARY TESTING AND INSPECTION

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A CLOSED CIRCUIT TELEVISED INSPECTION (CCTV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE CCTV INSPECTION TAPE TO THE ENGINEER, THE OWNER, AND THE APPLICABLE MUNICIPALITY/AGENCY.
2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATON TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
3. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT:
   A. THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
   B. EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET
   C. AIR TESTS, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES.
4. CONTRACTOR TO PERFORM APPROPRIATE DEFLECTION TESTS FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY:
   A. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
   B. USING A RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
   C. PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.
5. CONTRACTOR TO INSPECT & TEST MANHOLE FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE. AIR TESTING, IF SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.
6. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED ABOUT THE TESTING SO THAT THEY MAY WITNESS. COPIES OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS. A COPY OF THE FDEP CLEARANCE CERTIFICATE SHALL ALSO BE FURNISHED TO THE CITY OF WINTER SPRINGS.

CONTRACTOR'S AS-BUILT

1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA. AT A MINIMUM, THIS "AS-BUILT" INFORMATION SHALL INCLUDE: TOP OF PIPE/INVERT ELEVATIONS AND HORIZONTAL LOCATIONS OF ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES INSTALLED (AS APPLICABLE); PAVEMENT GRADE BREAK LOCATIONS AND SUFFICIENT ELEVATIONS OF FINISHED GRADE SURFACES WHICH ALLOW THE ENGINEER TO DETERMINE COMPLIANCE WITH THE PROPOSED DESIGN; TOP, GRATE, & INVERT ELEVATIONS OF THE STORMWATER COLLECTION SYSTEM, INCLUDING THE POND GRADES (TOP, BANK, BOTTOM), POND CONTROL STRUCTURE, & SWALES; ANY IMPROVEMENTS WITHIN FDOT OR COUNTY RIGHT-OF-WAYS.
2. THE DIGITAL "AS-BUILT" FILE, PROVIDED IN AUTOCAD FORMAT, SHALL ALSO BE PROVIDED IN THE FLORIDA STATE PLANE COORDINATE SYSTEM. NO ENGINEER'S CERTIFICATIONS OF COMPLETION OR REQUESTS FOR FINAL ACCEPTANCE WILL BE SUBMITTED UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.
3. SURVEYOR AS-BUILT SHALL CONTAIN COMPLETED ASSET TABLE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS UTILITY STANDARDS AND SPECIFICATIONS.

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

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LICENSED PROFESSIONAL
JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER
91121
DATE: ____

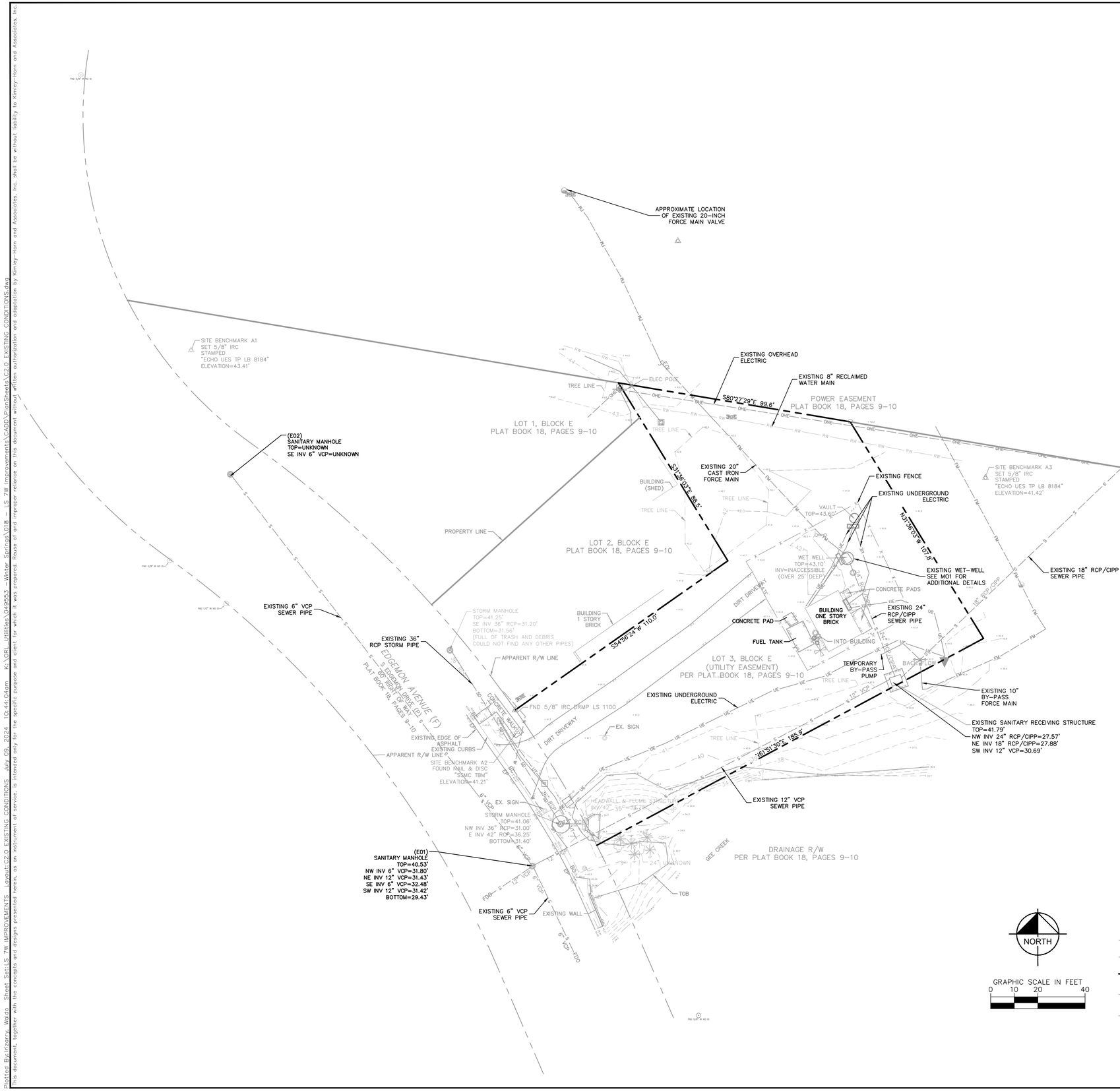
KHA PROJECT	049553018
DATE	04/05/24
SCALE	AS SHOWN
DESIGNED BY	LDA
DRAWN BY	CPV
CHECKED BY	JCF

LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

GENERAL NOTES

SHEET NUMBER
C1.1

Plotted By:Irizarry, Wanda Sheet Set:LS 7W IMPROVEMENTS Layout:C1.1 GENERAL NOTES June 26, 2024 04:37:48pm K:\ORL_Utilities\049553 - Winter Springs\V18 - LS 7W Improvements\CADD\PlanSheets\C1.0 GENERAL NOTES.dwg
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Marcus I. Geiger
FLORIDA LICENSE NUMBER
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DATE: ———

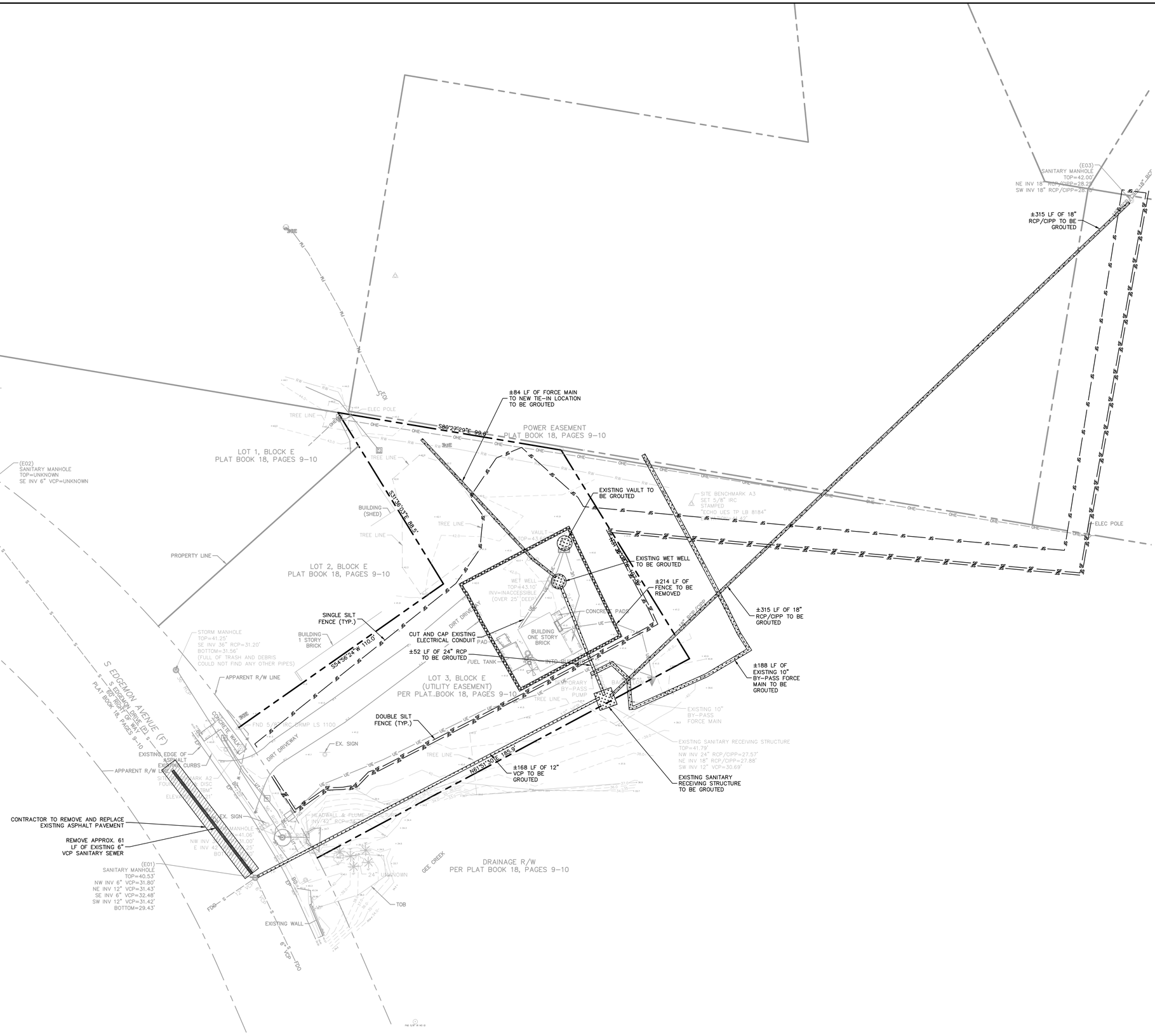
KHA PROJECT 049553018	DATE 04/05/24	SCALE AS SHOWN	
DESIGNED BY LDA	DRAWN BY CPV	CHECKED BY JCF	

LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

EXISTING CONDITIONS

SHEET NUMBER
C2.0

Plotted By: Irizarry, Waldo Sheet Set: LS 7W IMPROVEMENTS Layout: C2.0 EXISTING CONDITIONS July 09, 2024 10:44:04am K:\ORL_Utilities\049553 - Winter Springs\018 - LS 7W Improvements\CAD\DWG\PlanSheets\C2.0 EXISTING CONDITIONS.dwg
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BEST MANAGEMENT PRACTICES (BMP) GUIDELINES:

1. ALL BMP LOCATIONS SHOWN ARE FOR GRAPHIC DEPICTION AND GENERAL LOCATION ONLY. ITEMS ARE TO BE INSTALLED PER DETAILS ON SHEET C4.1.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES THROUGH THE DURATION OF ALL CONSTRUCTION OPERATIONS IN ACCORDANCE WITH THE N.P.D.E.S. PROGRAM.
3. PRIOR TO ANY EARTHMOVING OPERATIONS, THE CONTRACTOR SHALL INSTALL BMP DEVICES IN THE LOCATIONS SHOWN HEREON AND CONTACT RESOURCE PROTECTION SERVICES TO INSPECT ANY INSTALLATION OF THE REQUIRED SILT FENCING AROUND ANY PRESERVE AREAS.
4. ALL GRASSING BY EITHER SEED OR SOD SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER THE COMPLETION OF FINAL GRADING OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL GRASSING IN A HEALTHY GROWING ENVIRONMENT UNTIL ACCEPTANCE BY THE APPROPRIATE AGENCY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF WIND AND DUST DURING ALL PHASES OF CONSTRUCTION BY USING WATER TRUCKS, WIND FENCING OR OTHER DEVICES AS APPROVED BY THE APPROPRIATE AGENCY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY STORING EQUIPMENT, FUEL, OIL AND OTHER HAZARDOUS DEVICES IN A MANNER TO PREVENT GREASE, OILS, FUEL AND OTHER HAZARDOUS SUBSTANCES FROM CONTAMINATING THE STORMWATER MANAGEMENT AND COLLECTION SYSTEMS AND PRESERVATION AREAS.
7. THE SILT FENCING AND OTHER BMP DEVICES SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE AND ACCEPTED BY THE OWNER.

NOTES:

1. CONTRACTOR SHALL CONFIRM THE LOCATION AND DEPTH OF THE EXISTING UTILITIES ON SITE PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL DETERMINE MEANS AND METHODS OF GROUTING PER CITY OF WINTER SPRINGS AND FDEP STANDARDS.
3. BMP MEASURES SHOWN ARE A MINIMUM.
4. BEST MANAGEMENT PRACTICES FOR OPEN THROAT AND GRATED SWALE INLETS SHALL BE INSTALLED AS APPROPRIATE.
5. THE PROJECT OPERATOR/RESPONSIBLE AUTHORITY SHALL BE RESPONSIBLE FOR THE ROUTINE INSPECTION, MAINTENANCE, REPAIR AND REMOVAL OF BMP DEVICES IN ACCORDANCE WITH CURRENT RULES AND REGULATIONS OF SEMINOLE COUNTY, THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT PROGRAM.
6. *ADDITIONAL BMP MEASURES MAY BE NECESSARY TO ENSURE THAT TURBID WATER IS NOT DISCHARGED FROM CONSTRUCTION SITE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING COMPLIANCE WITH STORMWATER POLLUTION PREVENTION PLAN, THE N.P.D.E.S. PERMIT AND THE CONDITIONS OF THE SJRWMD ENVIRONMENTAL RESOURCE PERMIT.
7. LOCATION OF SILT FENCE IS SCHEMATIC AND NOT TO BE USED FOR STAKE OUT PURPOSES.
8. SEE PLANS AND SECTIONS FOR TERMINATION OF ALL PROPOSED SLOPES TO DETERMINE LOCATIONS OF SILT FENCES.
9. ANY CONSTRUCTION ADJACENT TO A PRESERVE AREA SHALL BE PERFORMED FROM THE UPLAND SIDE OF THE AREA. CONSTRUCTION ENCROACHMENT INTO A PRESERVE AREA IS NOT ALLOWED UNLESS PERMITTED BY SJRWMD AND SEMINOLE COUNTY NATURAL SCIENCES.

DEWATERING NOTES:

1. THE CONTRACTOR, IF REQUIRED, IS RESPONSIBLE FOR SUBMITTING TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT FOR REVIEW A DEWATERING PLAN AND SUPPORTING CALCULATIONS. THIS PLAN SHALL DETAIL THE DEWATERING METHODS PROPOSED, THE DURATION OF DEWATERING, FLOW PATHS, AND POINTS OF DISCHARGE.

100% DESIGN PLANS

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LICENSED PROFESSIONAL
Marcus I. Geiger
FLORIDA LICENSE NUMBER
89199
DATE: ——

KHA PROJECT
049553018
DATE
04/05/24
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

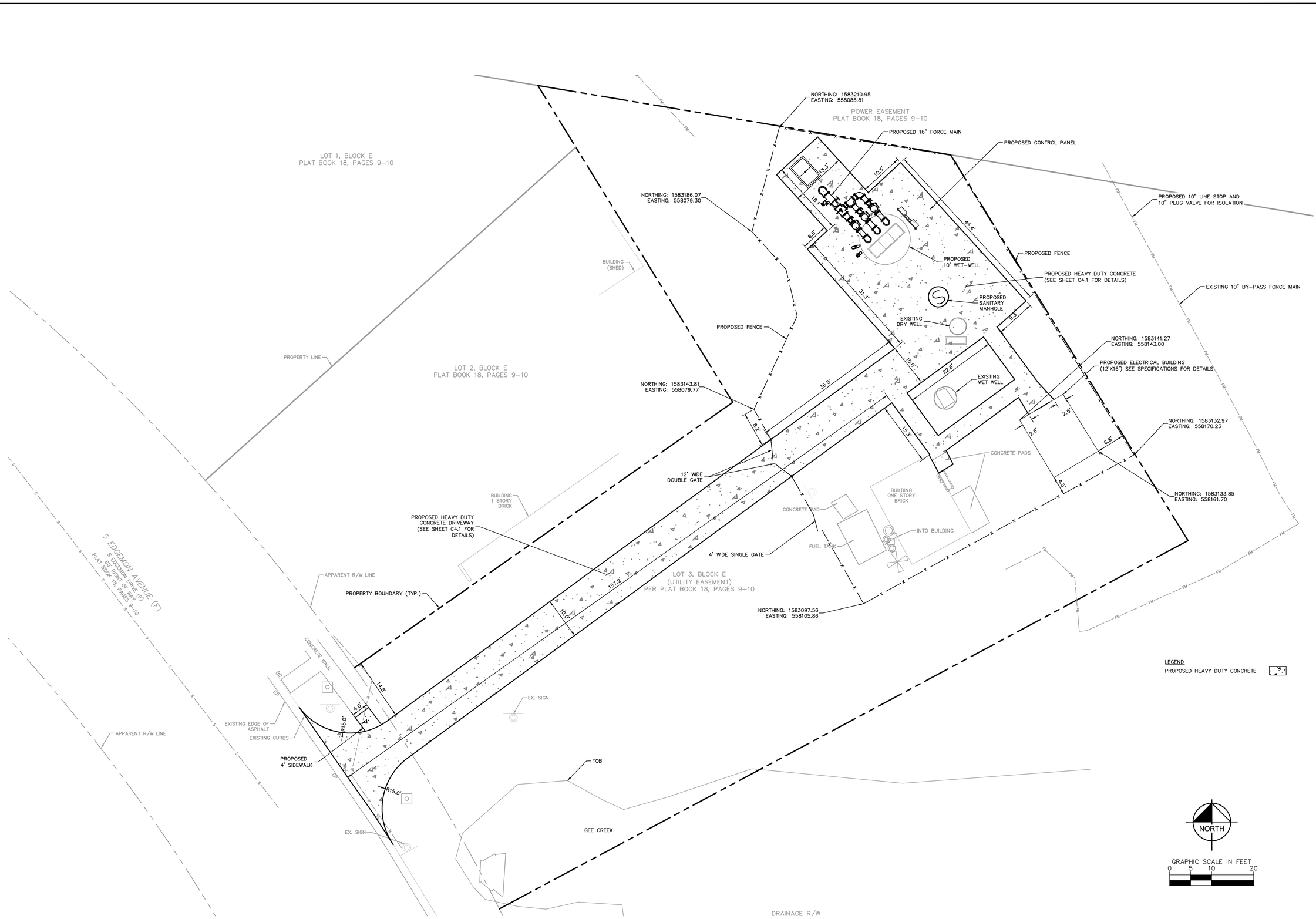
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DEMOLITION AND EROSION CONTROL PLAN

SHEET NUMBER
C2.1

Plotted By:Irizarry, Waldo Sheet Set:LS 7W (MEP/CIVIL/IMPROVEMENTS) Layout:C2.1 Wednesday, May 29, 2024 - 09:43:58 am K:\ORL_Utilities\049553 - Winter Springs\CIVIL — LS 7W Improvements\CAD\Plans\Sheets\C2.1 (DEMOLITION AND EROSION CONTROL PLAN).dwg
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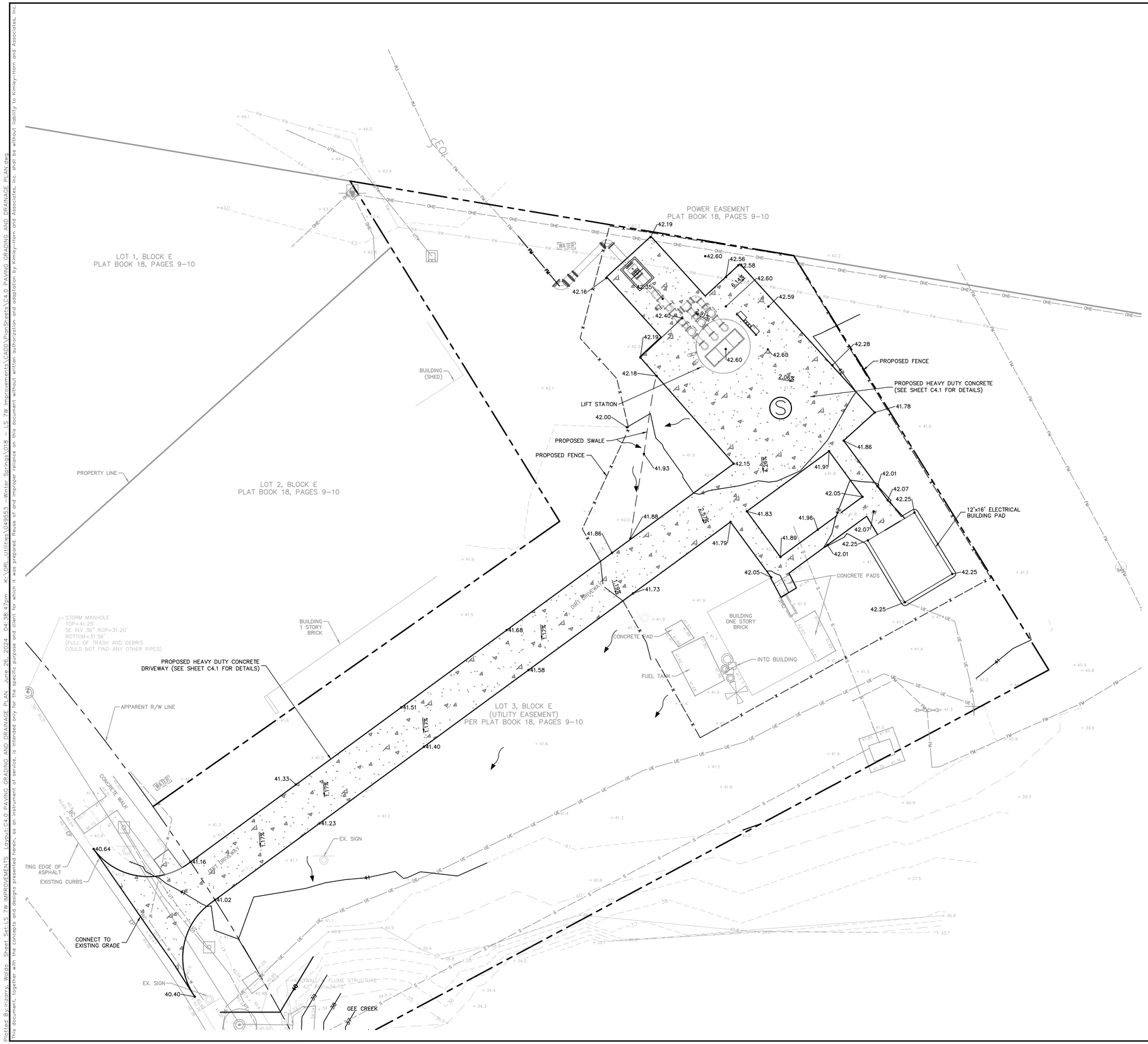
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LS 7W REPLACEMENT
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FLORIDA
CITY OF WINTER SPRINGS

PROPOSED SITE PLAN

SHEET NUMBER
C3.0



LEGEND

- PROPOSED HEAVY DUTY CONCRETE
- FLOW ARROW
- +26.00 EXISTING SPOT ELEVATION
- 41.53 PROPOSED PAVED SPOT ELEVATION

1. ALL ELEVATIONS ARE RELATIVE TO NSRS 2011.

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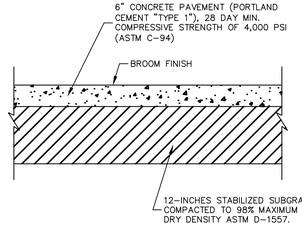
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PAVING GRADING AND DRAINAGE PLAN

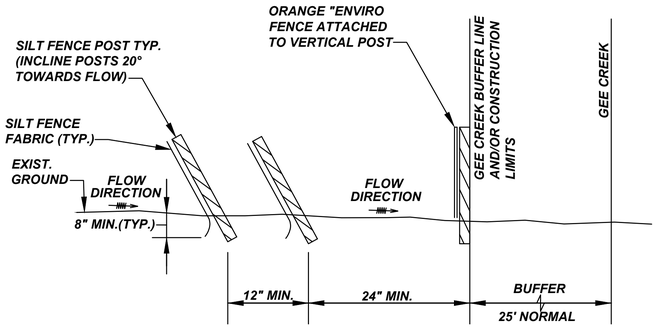
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TYPICAL "HEAVY DUTY" CONCRETE PAVEMENT DETAIL

NOTE: NTS
2-1/3 SAW CUT DEPTH.
MAXIMUM CONTROL JOINT SPACING = 10-FT X 10-FT



FDOT APPROVED TEMPORARY SILT FENCE PRE-ASSEMBLED IN 100' ROLLS UTILIZING 2" X 2" X 4' WOODEN POSTS @ 8' C/C MAX. w/3' OF WOVEN GEOTEXTILE MATERIAL MEETING THE REQUIREMENTS OF SEC. 985-4, SIMILAR & EQUAL TO THAT SUPPLIED BY FIFEPIPE CO. OF TAMPA FLA.

NOTES:

CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AS FOLLOWS:

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

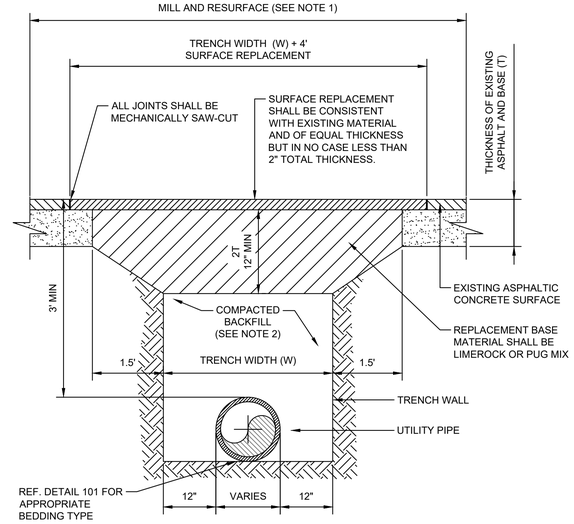
2.SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF ITS USE, IT SHALL BE REPLACED PROMPTLY.

3.SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT.

4.ANY SEDIMENT DEPOSITS LEFT IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE FINISHED GRADE, PREPARED AND SEEDED.

TYPICAL DOUBLE SILT FENCE DETAIL

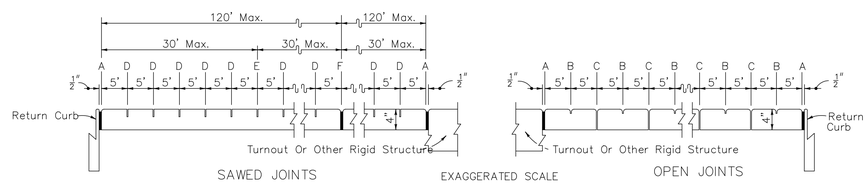
N.T.S.



NOTES:
1. MILL AND RESURFACING REQUIREMENTS PER SEMINOLE COUNTY PUBLIC WORKS REQUIREMENTS OR WHICH EVER GOVERNING MUNICIPALITY.
2. BACKFILL SHALL BE PLACED IN 6" LAYERS FROM BENEATH THE HAUNCHES OF THE PIPE TO THE BASE AND COMPACTED TO 98% DENSITY PER AASHTO T-180 MODIFIED PROCTER.
3. BASE MATERIALS SHALL BE PLACED IN TWO OR THREE LAYERS ROLLED AND TAMPED TO ABOVE SPECIFIED DENSITY.
4. PARTIAL LANE REPLACEMENT SHALL HAVE FULL LANE WIDTH MILLED AND RESURFACED.
5. REF. DETAIL 104 FOR PIPE RESTRAINT REQUIREMENTS.

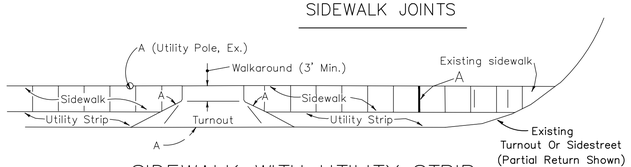
TRENCHING DETAIL

NTS



EXAGGERATED SCALE
LONGITUDINAL SECTION

SIDEWALK JOINTS



SIDEWALK WITH UTILITY STRIP

NTS

JOINT LEGEND

A- 1" EXPANSION JOINTS (PREFORMED JOINT FILLER)
B- 8" DUMMY JOINTS, TOOLED
C- 8" FORMED OPEN JOINTS
D- 8" SAW CUT JOINTS, 1/4" DEEP (96 HOUR) MAX. 5' CENTERS
E- 8" SAW CUT JOINTS, 1/4" DEEP (12 HOUR) MAX. 30' CENTERS
F- 1" EXPANSION JOINT WHEN RUN OF SIDEWALK EXCEEDS 120'
G- COLD JOINT WITH BOND BREAKER, TOOLED

FOOTNOTES:

ALL 1/2" JOINTS SHALL BE CONSTRUCTED WITH PREFORMED JOINT FILLER.

* 1/8" OPEN JOINTS PLACED AT EQUAL (20' MAX.) INTERVALS FOR DRIVEWAYS OVER 20' WIDE. JOINTS IN CURB AND GUTTER TO MATCH JOINTS IN DRIVEWAYS.

◊ DRIVEWAYS (6" CONCRETE) SHALL BE OF A UNIFORM WIDTH (W) AS SHOWN ON SHT. P-1.

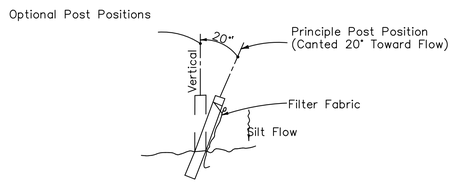
GENERAL NOTES

SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION NO. 522 EXCEPT FOR CURB CUT RAMP RUNS WHICH SHALL BE FINISHED IN ACCORDANCE WITH INDEX NO. 304.

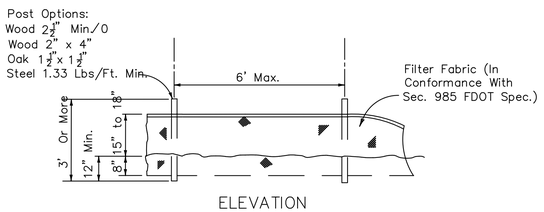
BOND BREAKER MATERIAL CAN BE ANY IMPERMEABLE COATED OR SHEET MEMBRANE OR PREFORMED MATERIAL HAVING A THICKNESS OF NOT LESS THAN 6 MILS NOR MORE THAN 1/2".

CONCRETE SIDEWALK DETAIL

NTS



SECTION



ELEVATION

TYPE III SILT FENCE

NTS

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049553018	LDA	JCF
DATE	DESIGNED BY	
04/05/24	CPV	
SCALE AS SHOWN		

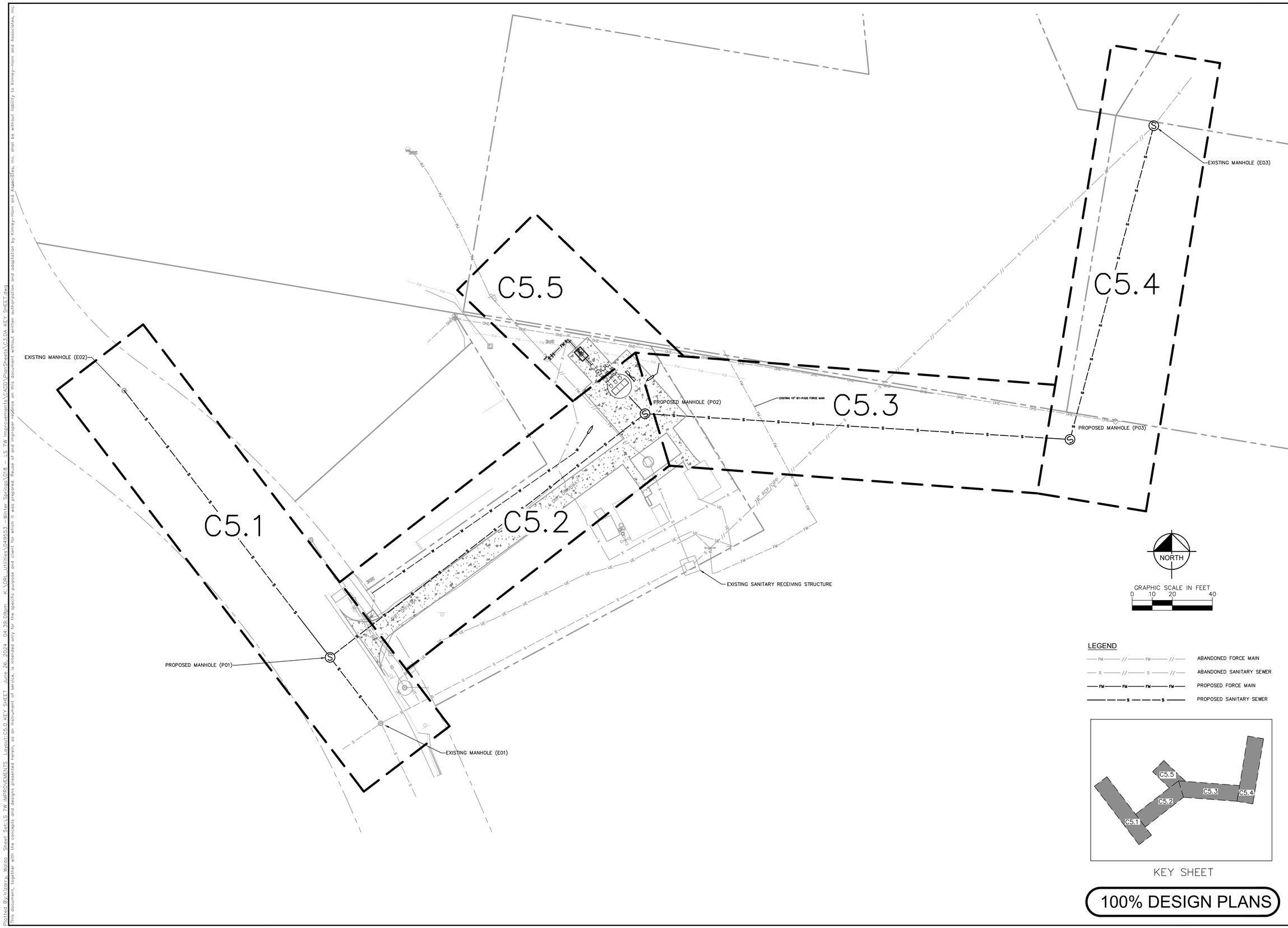
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PAVING AND EROSION CONTROL DETAILS

SHEET NUMBER
C4.1

Plotted By:Irizarry,Waldo Sheet Set:LS 7W IMPROVEMENTS Layout:C4.1 PAVING AND EROSION CONTROL DETAILS June 26, 2024 04:38:57pm K:\ORL_Utilities\049553 - Winter Springs\018 - LS 7W Improvements\CADD\PlanSheets\C4.1 PAVING AND EROSION CONTROL DETAILS.dwg
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LEGEND

- ABANDONED FORCE MAIN
- ABANDONED SANITARY SEWER
- PROPOSED FORCE MAIN
- PROPOSED SANITARY SEWER

KEY SHEET

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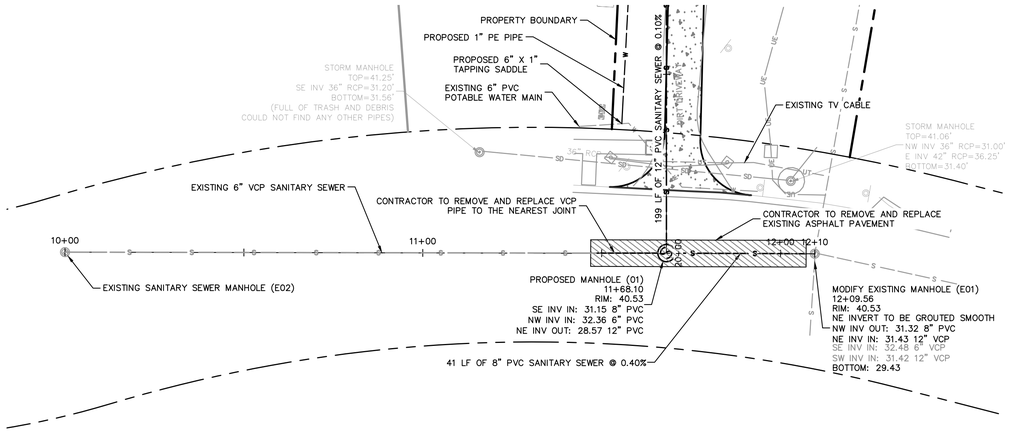
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JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER
91121
DATE: ——

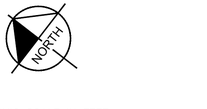
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DATE 04/05/24
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

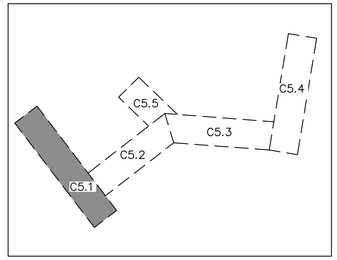
LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

KEY SHEET

SHEET NUMBER
C5.0







KEY SHEET

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED FORCE MAIN
- PROPERTY BOUNDARY
- EXISTING WATER
- EXISTING SANITARY
- EXISTING FORCE MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING SANITARY (ABANDONED)
- EXISTING FORCE MAIN (ABANDONED

NOTES:

1. SANITARY, WATER, AND STORM PIPE ARE IN PARALLEL IN THIS ALIGNMENT.
2. CONTRACTOR TO CORE DRILL THE PROPOSED INVERTS FOR STRUCTURE E01.

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91121
DATE: ——

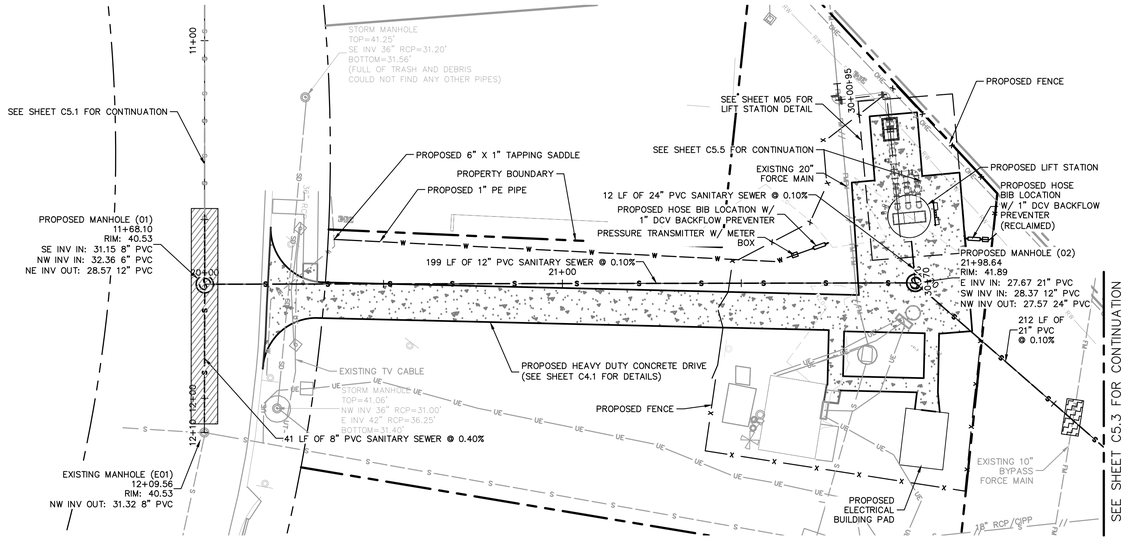
KHA PROJECT 049553018		DESIGNED BY	LDA
DATE	04/05/24	DRAWN BY	CPV
SCALE	AS SHOWN	CHECKED BY	JCF

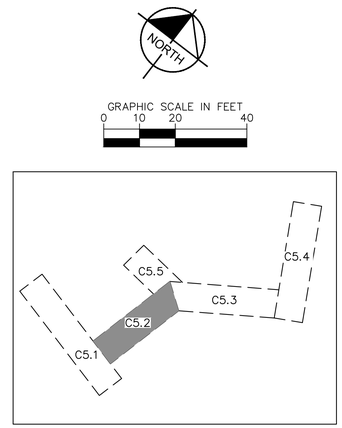
LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

PLAN AND PROFILE

SHEET NUMBER
C5.1

Plotted By:Irizarry, Waldo Sheet Set:LS 7W IMPROVEMENTS Layout:C5.1 PLAN AND PROFILE June 26, 2024 04:39:12pm K:\ORL_Utilities\049553 - Winter Springs\018 - LS 7W Improvements\CADD\PlanSheets\C5.1 PLAN AND PROFILE.dwg
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KEY SHEET

LEGEND

— S — S —	PROPOSED SANITARY SEWER
— FM — FM —	PROPOSED FORCE MAIN
———	PROPERTY BOUNDARY
— W — W —	EXISTING WATER
— S — S —	EXISTING SANITARY
— FM — FM —	EXISTING FORCE MAIN
— UE — UE —	EXISTING UNDERGROUND ELECTRIC
— X — X —	EXISTING FENCE
— S —//—	EXISTING SANITARY (ABANDONED)
— FM —//—	EXISTING FORCE MAIN (ABANDONED

NOTES:

1. CONTRACTOR TO SUPPORT AND PROTECT 36" STORM SEWER PIPE DURING INSTALLATION OF GRAVITY SEWER CROSSING.

100% DESIGN PLANS

No.	REVISIONS	DATE	BY

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LICENSED PROFESSIONAL
JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER
91121
DATE: ———

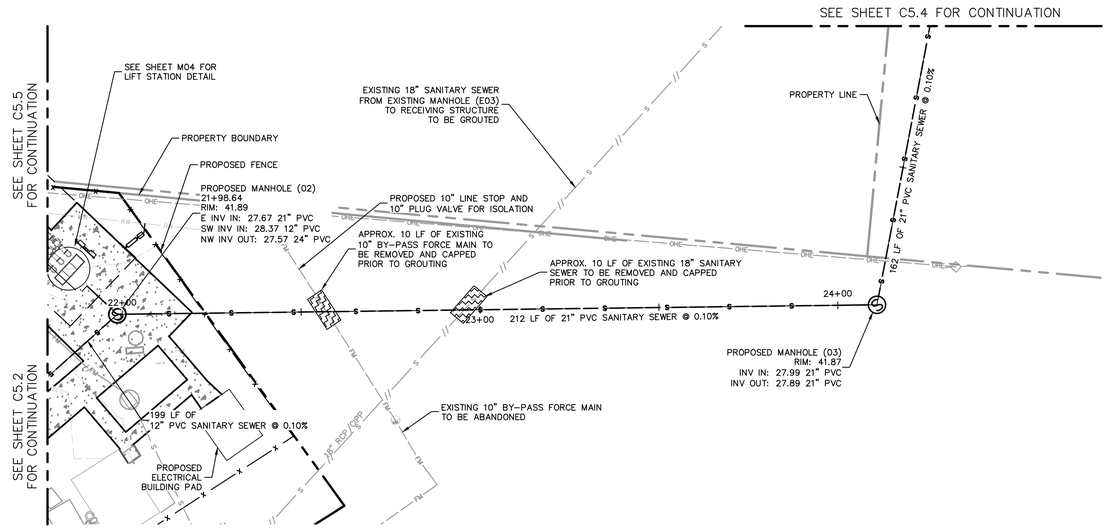
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049553018
DATE
04/05/24
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

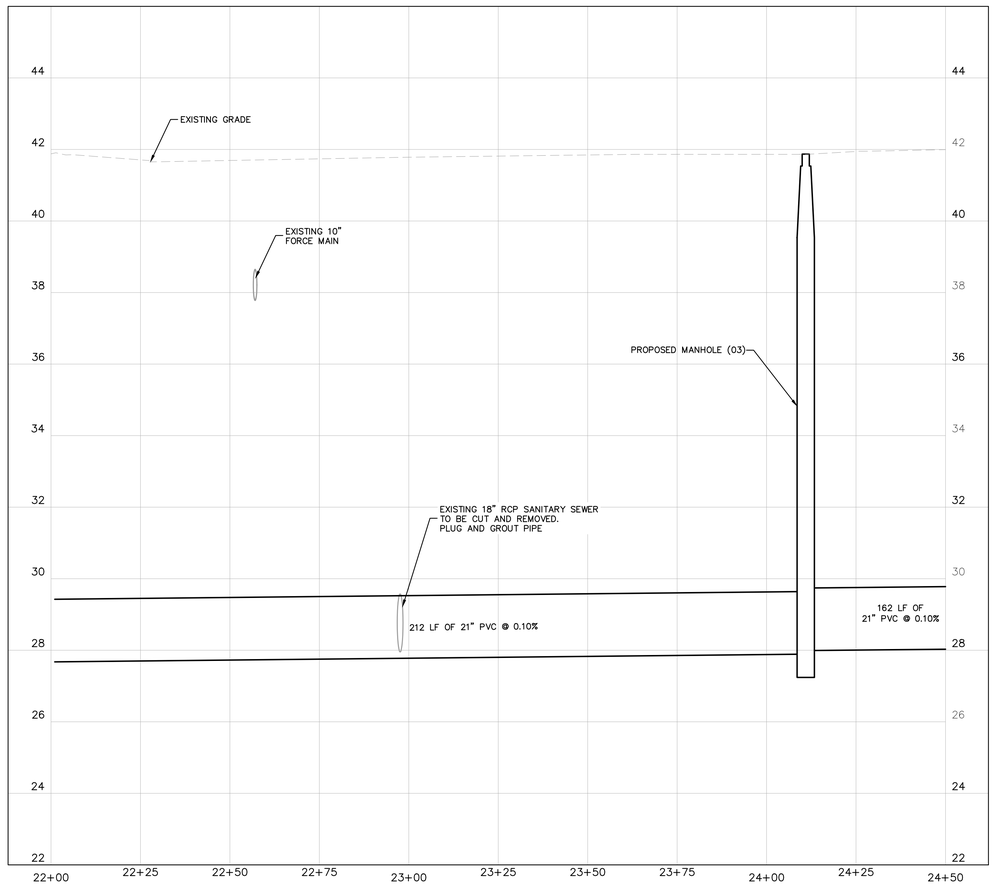
LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

PLAN AND PROFILE

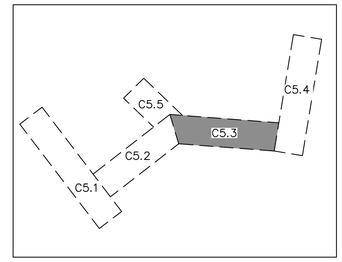
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GRAPHIC SCALE IN FEET
0 10 20 40



KEY SHEET

LEGEND

— S — S —	PROPOSED SANITARY SEWER
— FM — FM —	PROPOSED FORCE MAIN
	PROPERTY BOUNDARY
— W — W —	EXISTING WATER
— S — S —	EXISTING SANITARY
— FM — FM —	EXISTING FORCE MAIN
— UE — UE —	EXISTING UNDERGROUND ELECTRIC
— X — X —	EXISTING FENCE
— S — // —	EXISTING SANITARY (ABANDONED)
— FM — // —	EXISTING FORCE MAIN (ABANDONED

NOTES:

1. CONTRACTOR TO SUBMIT BY-PASS PLAN DURING CONSTRUCTION PHASE.
2. CONTRACTOR TO SUPPORT AND MAINTAIN 10" FORCE MAIN DURING CONSTRUCTION.

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FLORIDA LICENSE NUMBER
91121
DATE: ——

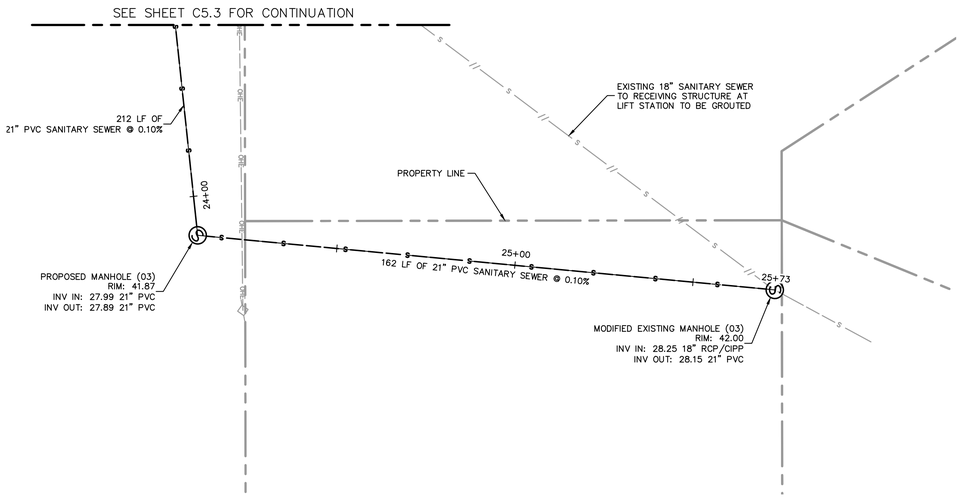
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DRAWN BY CPV	CHECKED BY JCF		

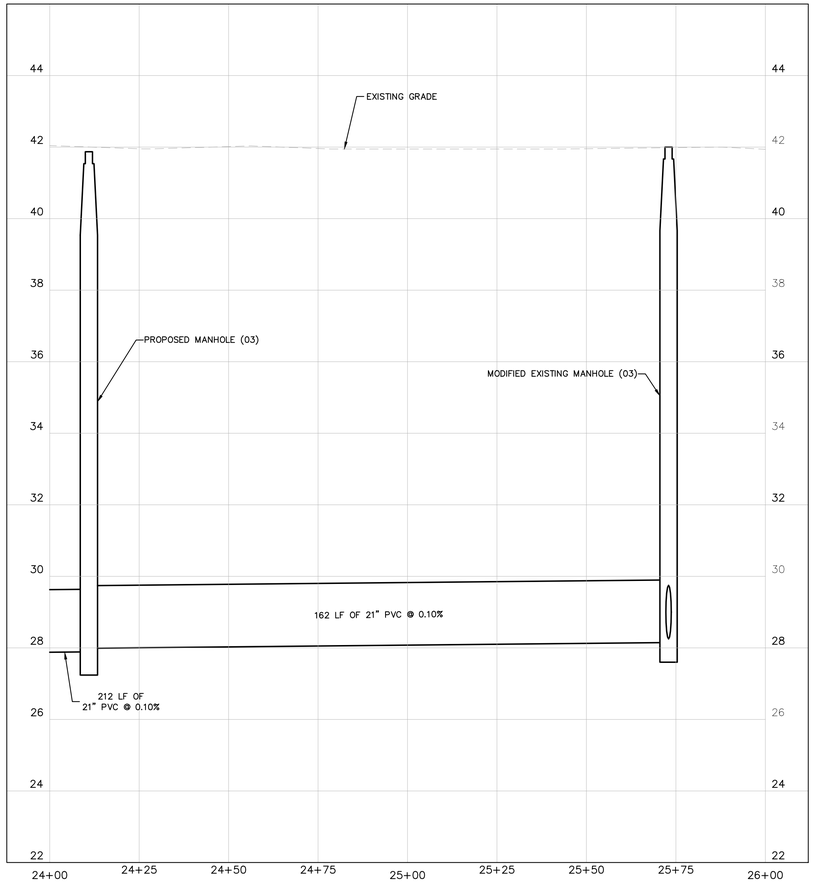
LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

PLAN AND PROFILE

SHEET NUMBER
C5.3

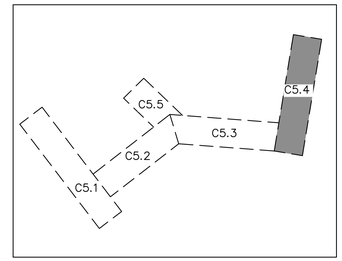
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GRAPHIC SCALE IN FEET
0 10 20 40



KEY SHEET

LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED FORCE MAIN
- PROPERTY BOUNDARY
- EXISTING WATER
- EXISTING SANITARY
- EXISTING FORCE MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FENCE
- EXISTING SANITARY (ABANDONED)
- EXISTING FORCE MAIN (ABANDONED)

100% DESIGN PLANS

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FLORIDA LICENSE NUMBER
91121
DATE: ———

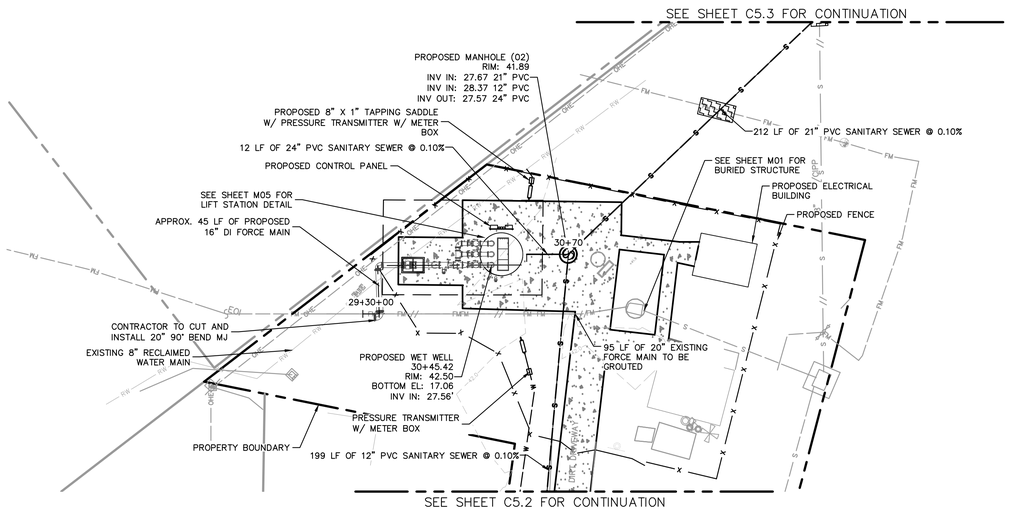
KHA PROJECT
049553018
DATE
04/05/24
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

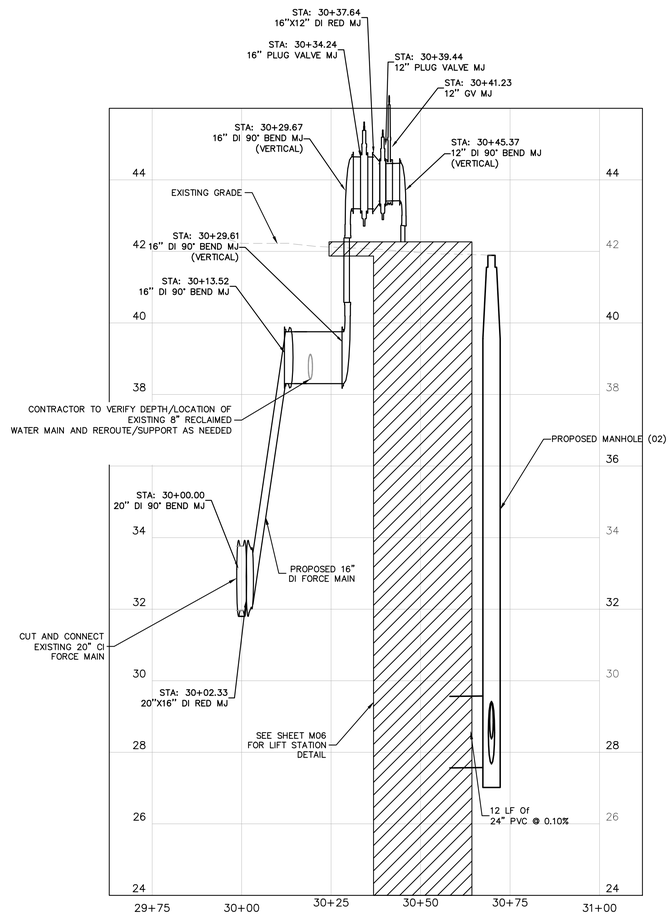
LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

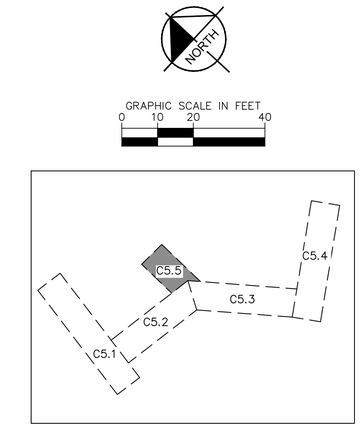
PLAN AND PROFILE

SHEET NUMBER
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KEY SHEET

LEGEND

— S — S —	PROPOSED SANITARY SEWER
— FM · — · FM —	PROPOSED FORCE MAIN
———	PROPERTY BOUNDARY
— W — W —	EXISTING WATER
— S — S —	EXISTING SANITARY
— FM · — · FM —	EXISTING FORCE MAIN
— UE · — · UE —	EXISTING UNDERGROUND ELECTRIC
— X — X —	EXISTING FENCE
— S — // —	EXISTING SANITARY (ABANDONED)
— FM — // —	EXISTING FORCE MAIN (ABANDONED

NOTES:

1. CONTRACTOR TO VERIFY ELEVATION OF EXISTING 20" CAST IRON FORCE MAIN PRIOR TO CONNECTION.

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JULIA FELTER, P.E.
FLORIDA LICENSE NUMBER
91121
DATE: ———

KHA PROJECT 049553018			
DATE 04/05/24	SCALE AS SHOWN	DESIGNED BY LDA	DRAWN BY CPV
		CHECKED BY JCF	

LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

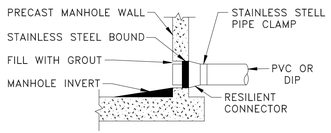
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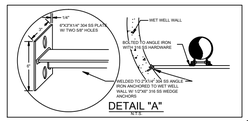
NOTES:

1. PENETRATION TO EXISTING MANHOLES SHALL BE CORE BORED
2. OUTSIDE DROP CONNECTION SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET OR MORE ABOVE THE MAIN INVERT CHANNEL

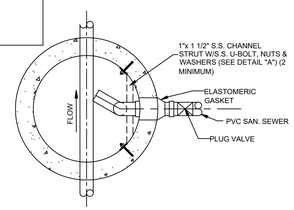


TYPICAL CONNECTION

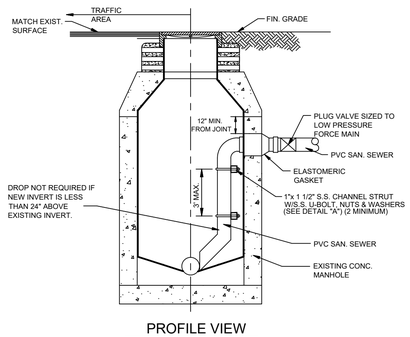
TYPICAL MANHOLE CONNECTIONS



DETAIL "A"
NTS



TOP VIEW



PROFILE VIEW

INSIDE DROP CONNECTION

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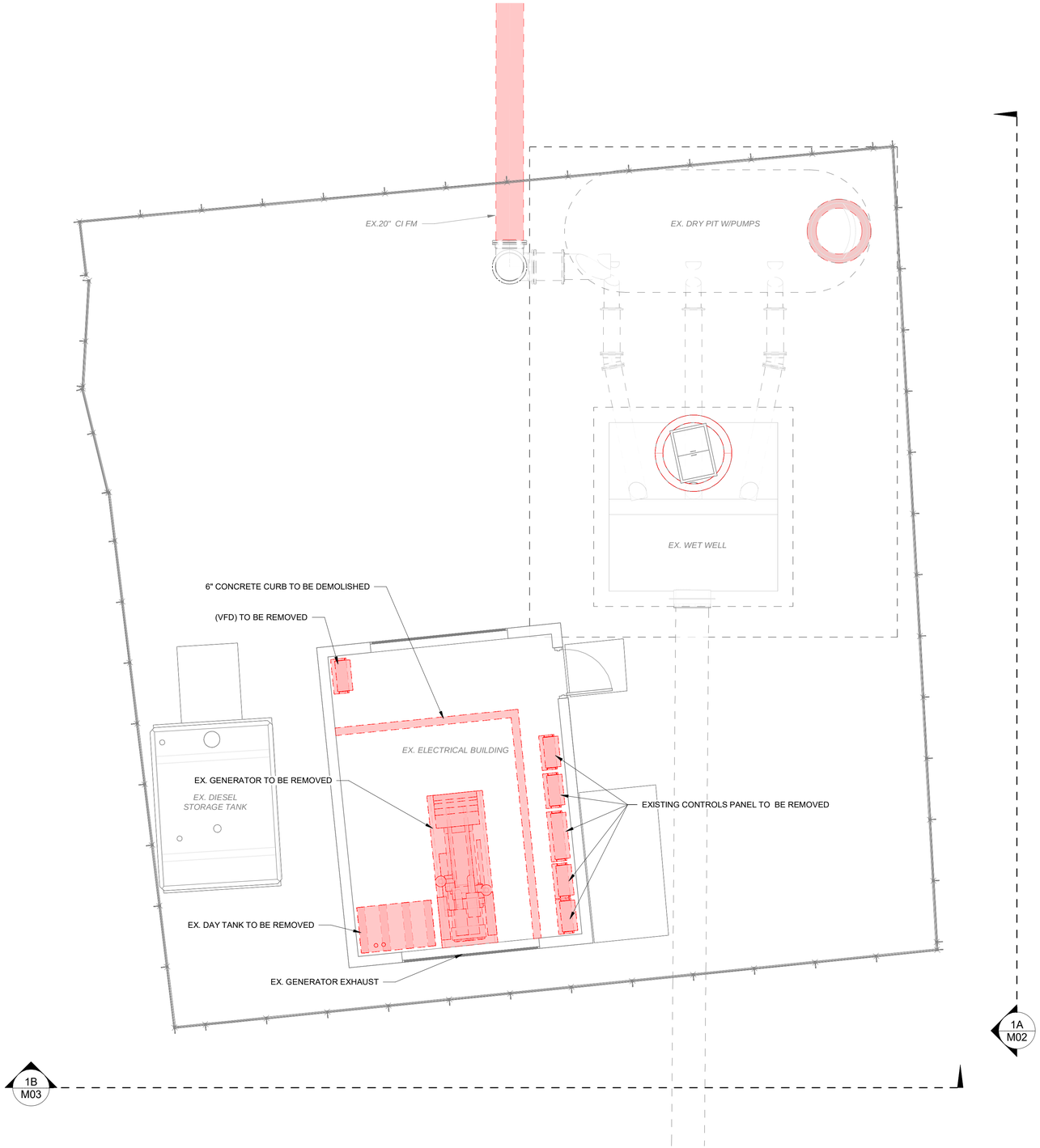
KHA PROJECT	049553018
DATE	04/05/24
SCALE	AS SHOWN
DESIGNED BY	LDA
DRAWN BY	CPV
CHECKED BY	JCF

LS 7W REPLACEMENT
PREPARED FOR
CITY OF WINTER SPRINGS
CITY OF WINTER SPRINGS FLORIDA

MANHOLE CONNECTION DETAILS

SHEET NUMBER
C6.0

Plotted By:Irizarry, Waldo Sheet Set:LS 7W IMPROVEMENTS Layout:(SCO) June 26, 20224 09:39:29pm I:\KIMLEY-HORN\PROJECTS\WINTER SPRINGS\049553 - Winter Springs\108 - LS 7W\Improvements\CAD\Xrefs\VERTICAL\SCO.dwg
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EXISTING PLAN
1/4" = 1'-0"

NORTH

GRAPHIC SCALE IN INCHES
0 1/2" 1" 2"
0 4' 8'

No.	Revisions	By	Date

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FL LICENSE NUMBER
91121
DATE: 03/29/24

KHA PROJECT
049553018
DATE
MARCH 2024
SCALE: AS SHOWN
DESIGNED BY: JCF
DRAWN BY: LDA
CHECKED BY: JCF

LIFT STATION 7W IMPROVEMENTS

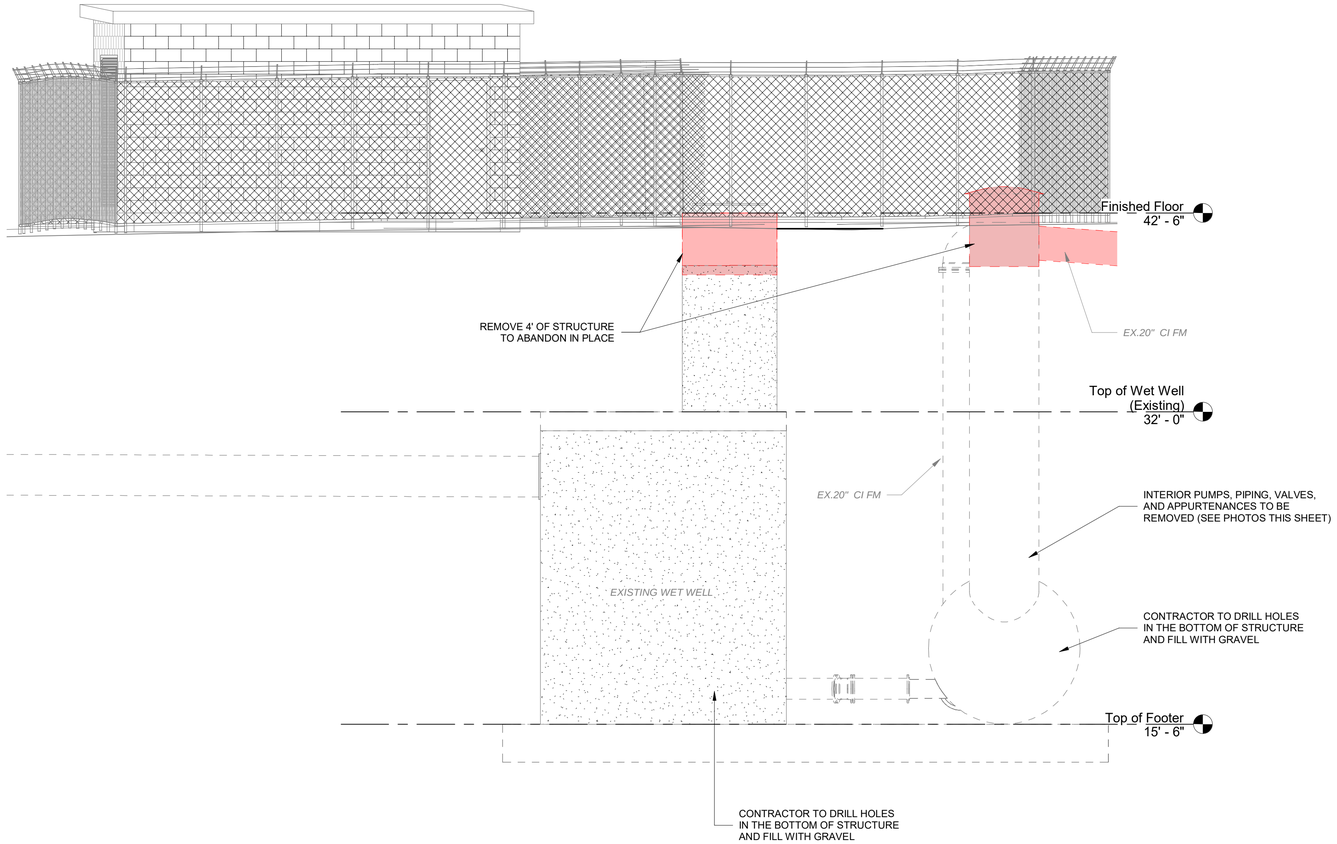
PREPARED FOR
CITY OF WINTER SPRINGS

EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET NUMBER
M01

100% DESIGN PLANS

Autodesk Docs://049553018 - CoWS LS7W/LS7W.rvt



1A / M01 EXISTING CONDITIONS - EAST ELEVATION
1/4" = 1'-0"





INTERIOR PUMPS, PIPING, VALVES, AND APPURTENANCES TO BE REMOVED

NOT TO SCALE

100% DESIGN PLANS

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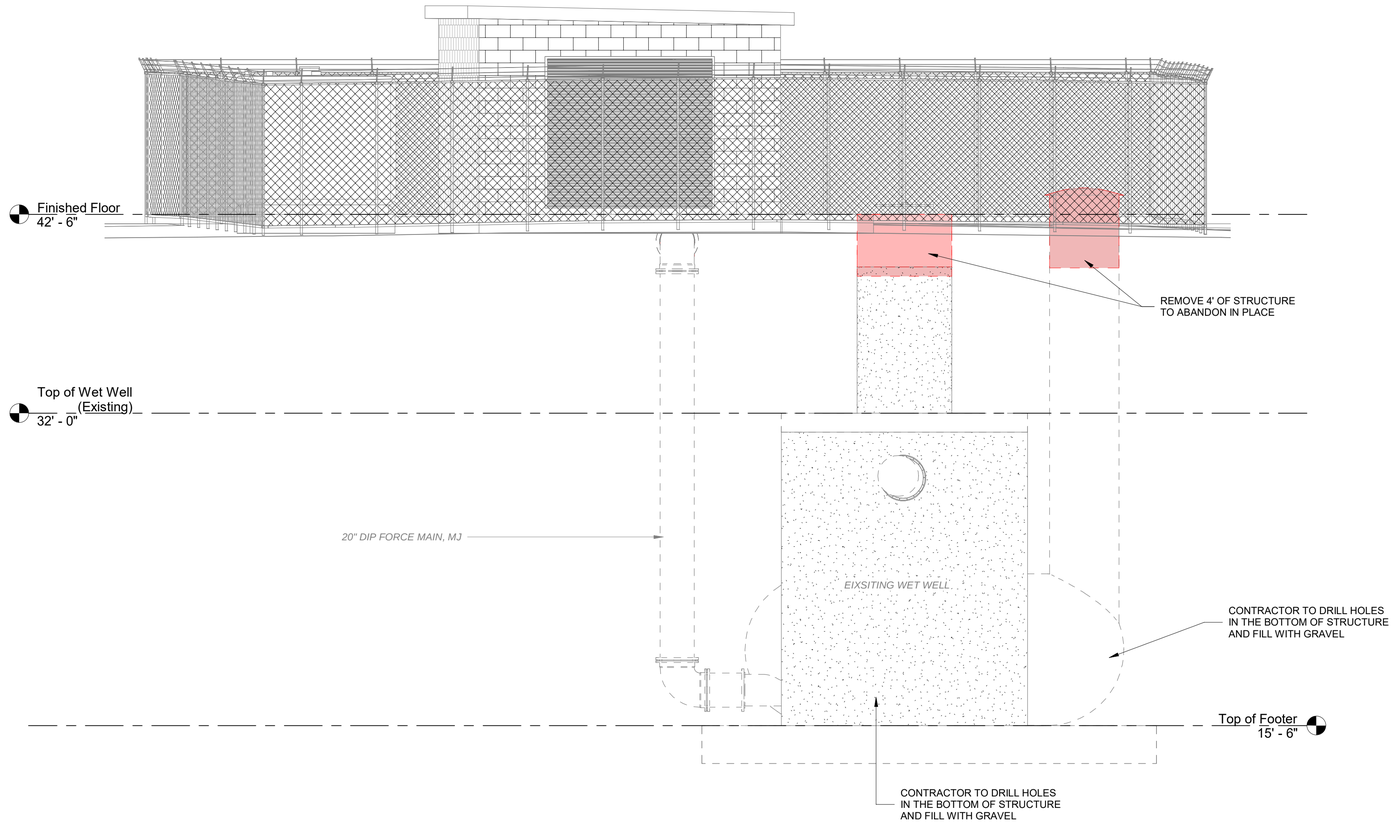
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FL LICENSE NUMBER
91121
DATE: 03/29/24

KHA PROJECT
049553018
DATE
MARCH 2024
SCALE: AS SHOWN
DESIGNED BY: JCF
DRAWN BY: LDA
CHECKED BY: JCF

LIFT STATION 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS

EXISTING CONDITIONS AND DEMOLITION DETAILS

SHEET NUMBER
M02



1B / M01 EXISTING CONDITIONS - SOUTH ELEVATION
1/4" = 1'-0"

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FL. LICENSE NUMBER
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DATE: 03/29/24

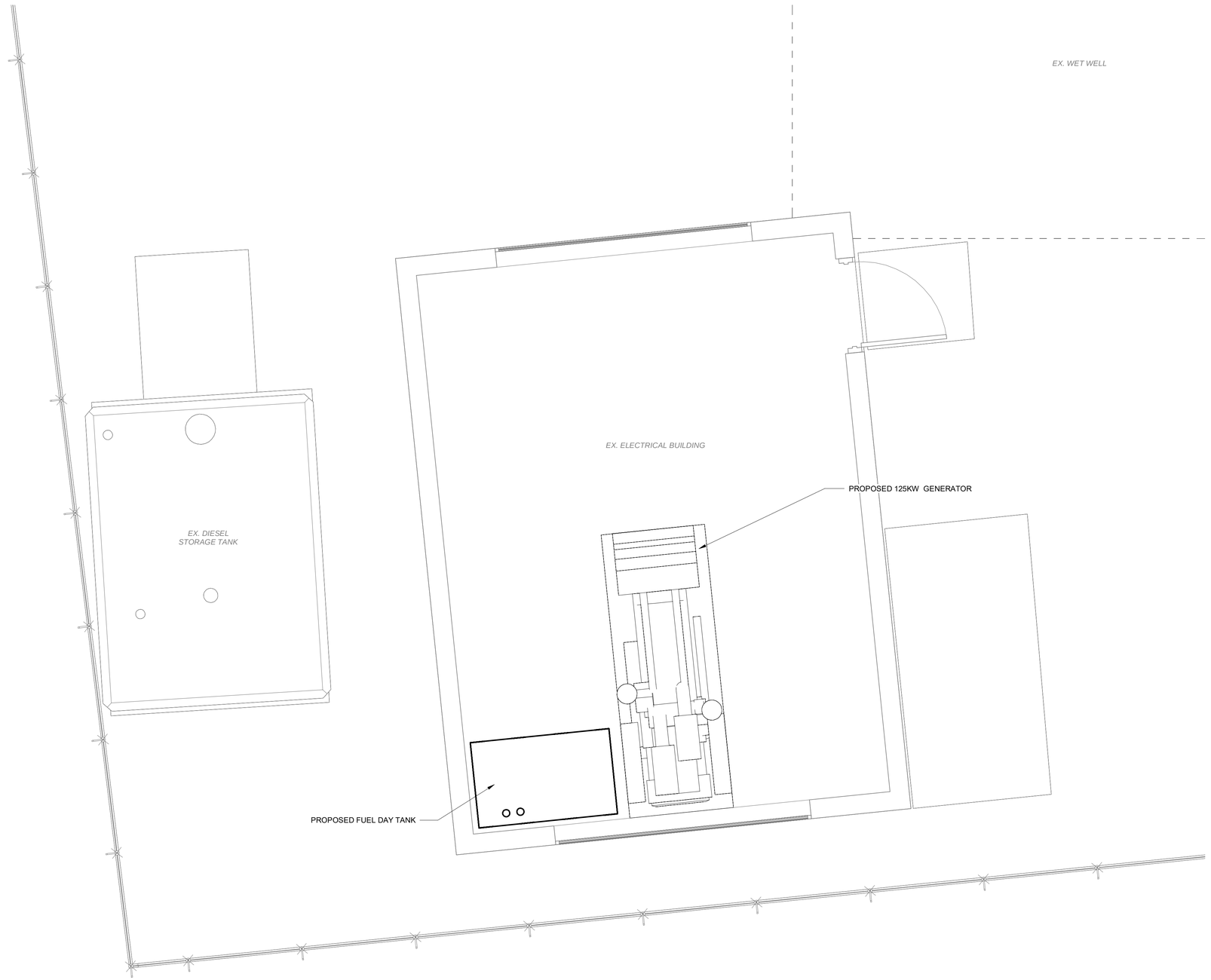
KHA PROJECT	049553018
DATE	MARCH 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCF
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LIFT STATION 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS

EXISTING CONDITIONS AND DEMOLITION DETAILS

SHEET NUMBER
M03

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PROPOSED ELECTRICAL BUILDING
1/2" = 1'-0"

NORTH

GRAPHIC SCALE IN INCHES
0 1/2" 1" 2"
0 2' 4'

100% DESIGN PLANS

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FL LICENSE NUMBER
91121
DATE: 03/29/24

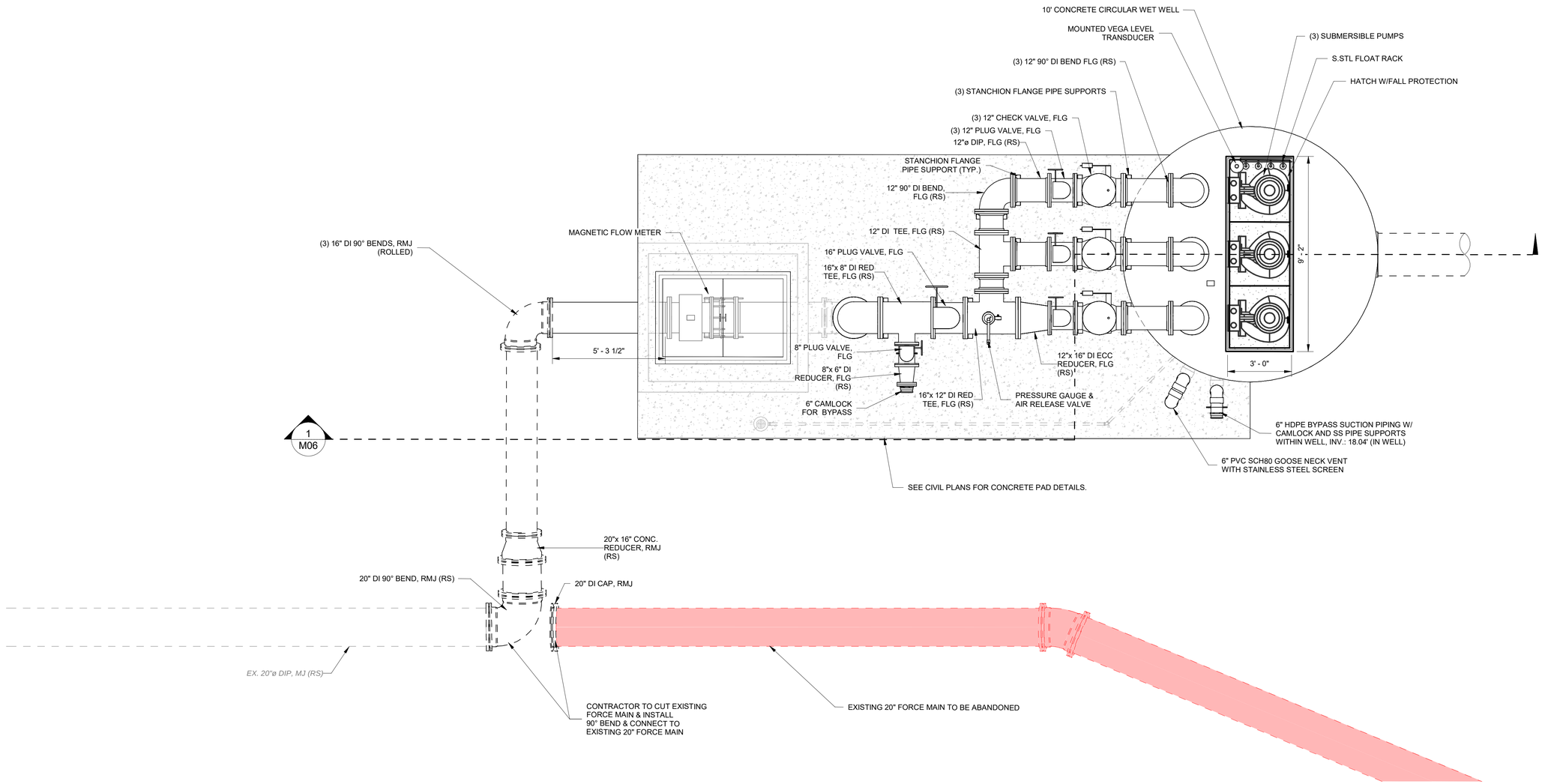
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DATE	MARCH 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCF
DRAWN BY:	LDA
CHECKED BY:	JCF

LIFT STATION 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS

PROPOSED ELECTRICAL BUILDING

SHEET NUMBER
M04

Autodesk Docs://049553018 - CoWS LS7W/LS7W.rvt



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JULIA C. FELTER, P.E.
FL LICENSE NUMBER 91121
DATE: 03/29/24

KHA PROJECT 049553018
DATE MARCH 2024
SCALE: AS SHOWN
DESIGNED BY: JCF
DRAWN BY: LDA
CHECKED BY: JCF

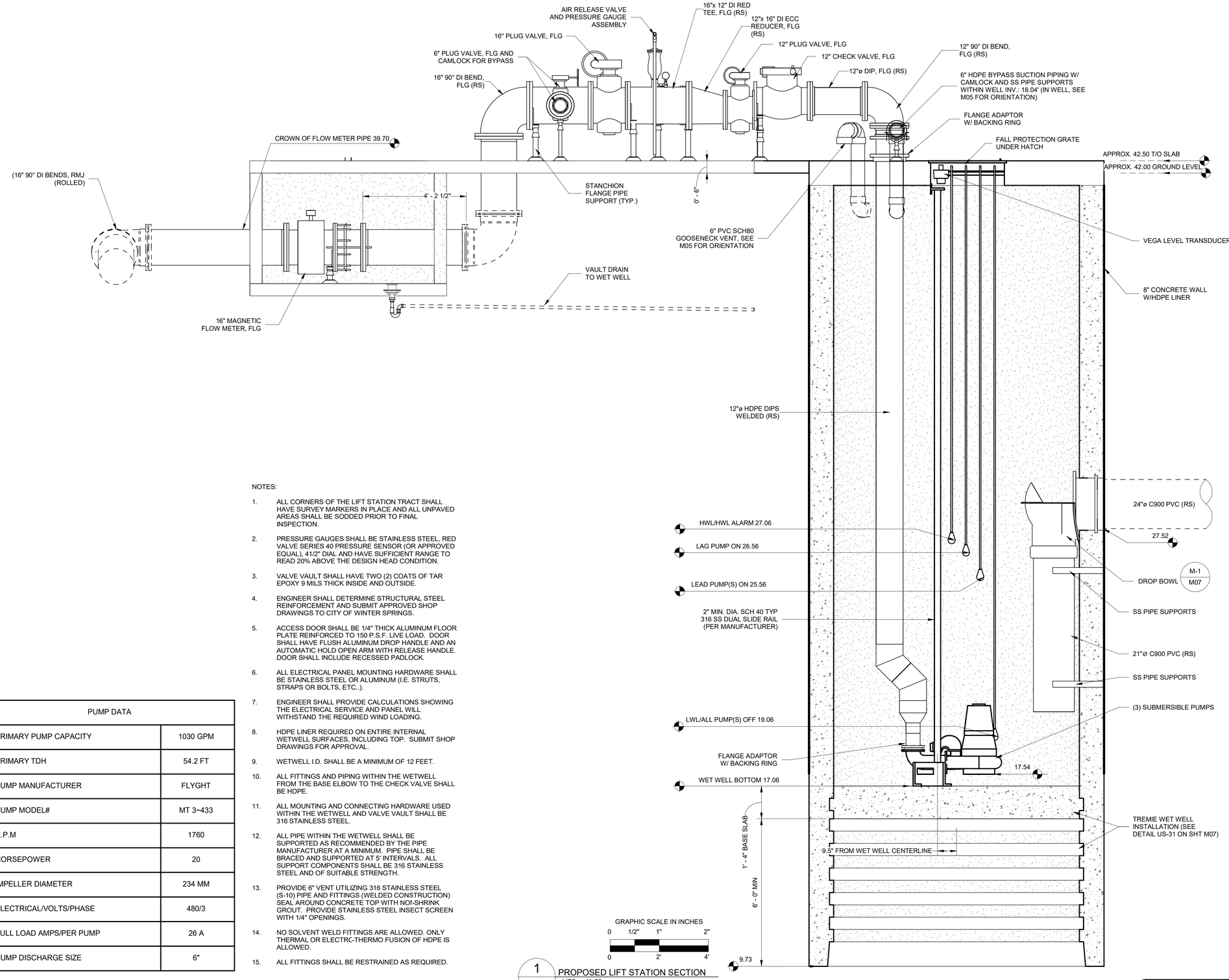
LIFT STATION 7W IMPROVEMENTS

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CITY OF WINTER SPRINGS

PROPOSED LIFT STATION PLAN

SHEET NUMBER
M05

Autodesk Docs://049553018 - CoWS LS7W/LS7W.rvt



1 / M05 PROPOSED LIFT STATION SECTION
1/2" = 1'-0"

NOTES:

1. ALL CORNERS OF THE LIFT STATION TRACT SHALL HAVE SURVEY MARKERS IN PLACE AND ALL UNPAVED AREAS SHALL BE SODDED PRIOR TO FINAL INSPECTION.
2. PRESSURE GAUGES SHALL BE STAINLESS STEEL, RED VALVE SERIES 40 PRESSURE SENSOR (OR APPROVED EQUAL), 41/2" DIAL AND HAVE SUFFICIENT RANGE TO READ 20% ABOVE THE DESIGN HEAD CONDITION.
3. VALVE VAULT SHALL HAVE TWO (2) COATS OF TAR EPOXY 9 MILS THICK INSIDE AND OUTSIDE.
4. ENGINEER SHALL DETERMINE STRUCTURAL STEEL REINFORCEMENT AND SUBMIT APPROVED SHOP DRAWINGS TO CITY OF WINTER SPRINGS.
5. ACCESS DOOR SHALL BE 1/4" THICK ALUMINUM FLOOR PLATE REINFORCED TO 150 P.S.F. LIVE LOAD. DOOR SHALL HAVE FLUSH ALUMINUM DROP HANDLE AND AN AUTOMATIC HOLD OPEN ARM WITH RELEASE HANDLE. DOOR SHALL INCLUDE RECESSED PADLOCK.
6. ALL ELECTRICAL PANEL MOUNTING HARDWARE SHALL BE STAINLESS STEEL OR ALUMINUM (I.E. STRUTS, STRAPS OR BOLTS, ETC..).
7. ENGINEER SHALL PROVIDE CALCULATIONS SHOWING THE ELECTRICAL SERVICE AND PANEL WILL WITHSTAND THE REQUIRED WIND LOADING.
8. HDPE LINER REQUIRED ON ENTIRE INTERNAL WETWELL SURFACES, INCLUDING TOP. SUBMIT SHOP DRAWINGS FOR APPROVAL.
9. WETWELL I.D. SHALL BE A MINIMUM OF 12 FEET.
10. ALL FITTINGS AND PIPING WITHIN THE WETWELL FROM THE BASE ELBOW TO THE CHECK VALVE SHALL BE HDPE.
11. ALL MOUNTING AND CONNECTING HARDWARE USED WITHIN THE WETWELL AND VALVE VAULT SHALL BE 316 STAINLESS STEEL.
12. ALL PIPE WITHIN THE WETWELL SHALL BE SUPPORTED AS RECOMMENDED BY THE PIPE MANUFACTURER AT A MINIMUM. PIPE SHALL BE BRACED AND SUPPORTED AT 5' INTERVALS. ALL SUPPORT COMPONENTS SHALL BE 316 STAINLESS STEEL AND OF SUITABLE STRENGTH.
13. PROVIDE 6" VENT UTILIZING 316 STAINLESS STEEL (S-10) PIPE AND FITTINGS (WELDED CONSTRUCTION) SEAL AROUND CONCRETE TOP WITH NOI-SHRINK GROUT. PROVIDE STAINLESS STEEL INSECT SCREEN WITH 1/4" OPENINGS.
14. NO SOLVENT WELD FITTINGS ARE ALLOWED. ONLY THERMAL OR ELECTRC-THERMO FUSION OF HDPE IS ALLOWED.
15. ALL FITTINGS SHALL BE RESTRAINED AS REQUIRED.

PUMP DATA	
PRIMARY PUMP CAPACITY	1030 GPM
PRIMARY TDH	54.2 FT
PUMP MANUFACTURER	FLYGHT
PUMP MODEL#	MT 3~433
R.P.M	1760
HORSEPOWER	20
IMPELLER DIAMETER	234 MM
ELECTRICAL/VOLTS/PHASE	480/3
FULL LOAD AMPS/PER PUMP	26 A
PUMP DISCHARGE SIZE	6"

100% DESIGN PLANS

No.	Revisions	By	Date

Kimley»Horn
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LICENSED PROFESSIONAL:
JULIA C. FELTER, P.E.
FL. LICENSE NUMBER 91121
DATE: 03/29/24

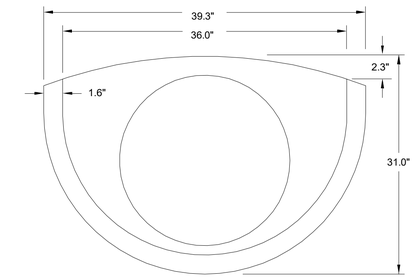
K'HA PROJECT 049553018
DATE MARCH 2024
SCALE: AS SHOWN
DESIGNED BY: JCF
DRAWN BY: LDA
CHECKED BY: JCF

LIFT STATION 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS

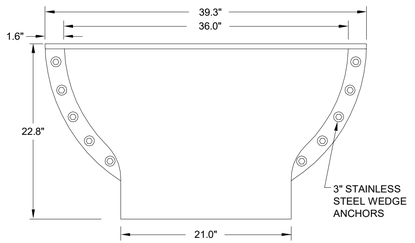
PROPOSED LIFT STATION SECTION

SHEET NUMBER
M06

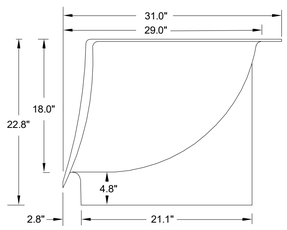
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TOP VIEW



FRONT VIEW

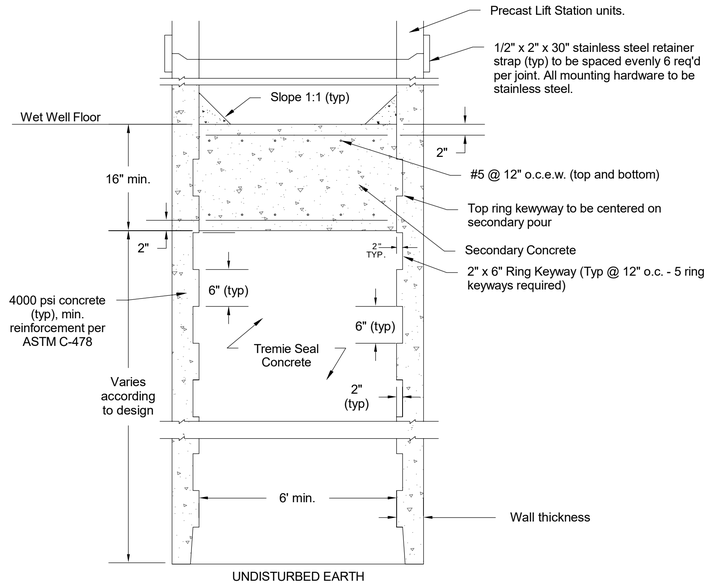


SIDE VIEW

NOTES:

1. USE 8 - 3" WEDGE ANCHORS TO ATTACH DROP BOWL TO MANHOLE WALL.
2. USE STAINLESS STEEL PIPE BRACKETS TO SUPPORT DOWN PIPE. EXTERNAL PIPE COUPLER REQUIRED.

M-1 DROP BOWL DETAIL
N.T.S.



Notes:

1. Structures and sections shall be inspected by Owner prior to installation
2. Structures shall be designed to minimize the numbers of sections within the structure; i.e.: 6 or 8 foot sections where possible.
3. No section joints permitted within limits of secondary concrete.
4. No more than one layer of joint seal permitted on each joint.
5. The seal between joints shall be fully compressed prior to retainer straps being installed.
6. Top of tremie seal must be clean, dry and inspected by Owner prior to placement of secondary concrete. No joints allowed within 2' of the wet well floor elevation.
7. All section joints shall be leak free prior to placement of secondary concrete.
8. If approved by Owner, leak repair of tremie seal will be by pressure injected epoxy only. Lead wool, water plug, acrylamide grout, etc. are not permitted. Secondary concrete is to be finished as per Note 10, US-30.
9. Tremie seal concrete shall have a minimum compressive strength of 4,000 psi at seven (7) days and testing laboratory results shall be submitted to Authority for approval prior to placement of the secondary pour.
10. Secondary concrete shall have a minimum compressive strength of 4,000 psi at twenty-eight (28) days and testing laboratory results shall be submitted to Authority for approval before completion of lift station.

* Modified Brevard County detail.

US-31 TREMIE WET WELL INSTALLATION DETAIL
N.T.S.

100% DESIGN PLANS

No.	Revisions	By	Date

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FL LICENSE NUMBER 91121
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KHA PROJECT 049553018
DATE MARCH 2024
SCALE: AS SHOWN
DESIGNED BY Designer
DRAWN BY: RLL
CHECKED BY: Checker

LIFT STATION 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS

MECHANICAL DETAILS

SHEET NUMBER
M07

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PLAN SYMBOLS

	HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2#12 CONDUCTORS & 1#12 GND IN 3/4" CONDUIT.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.
	CONCRETE ENCASED DUCTBANK.
	WALL MOUNTED LIGHTING FIXTURE.
	LED LIGHTING FIXTURE, CEILING MOUNTED.
	EXTERIOR LUMINAIRE AND MOUNTING STANDARD.
	EXISTING EXTERIOR LIGHTING.
	EMERGENCY BATTERY PACK LIGHTING FIXTURE.
J	JUNCTION BOX N.E.C. SURFACE MOUNTED UNLESS INDICATED OTHERWISE.
J	NEMA 4X 316 STAINLESS STEEL JUNCTION BOX PER N.E.C., RACK MOUNTED UNLESS INDICATED OTHERWISE.
	FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD.
	FLUSH OR SURFACE MOUNTED POWER PANELBOARD.
30	DRY TYPE TRANSFORMER. NO. INDICATES KVA RATING.
30	LIQUID FILLED TRANSFORMER, KVA RATING AS SHOWN
	SINGLE RECEPTACLE, RATING AS SHOWN
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 6" ABOVE FINISHED COUNTER AS REQUIRED (AFC)
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH, FLOOR MOUNTED OUTLET BOX.
	20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED.
	SURFACE MOUNTED GROUND FAULT DUPLEX WEATHERPROOF RECEPTACLE 20A, 125V, 3W – MOUNTED 48" ABOVE FINISHED GRADE, UNLESS OTHERWISE NOTED.
	20A, 125, 3W DOUBLE DUPLEX RECEPTACLE IN FLUSH OUTLET BOX.
	FLUSH MOUNTED GROUND FAULT DUPLEX RECEPTACLE 20A, 125V, 3W –MOUNTED 48" ABOVE FINISHED FLOOR.
	DISCONNECT RACK MOUNTED.
	HANDS/OFF/AUTOMATIC & DISCONNECT RACK MOUNTED WITH JUNCTION BOX MOUNTED BELOW OFF/REMOTE, SEE DETAIL
S	SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL).
S	SINGLE POLE SWITCH, SURFACE MOUNTED.
S_3	THREE–WAY SWITCH IN FLUSH OUTLET BOX.
S_4	FOUR–WAY SWITCH IN FLUSH OUTLET BOX.
	NON–FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.
30/20	NON–FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.
10	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
F	FUSED DISCONNECT SWITCH(30/20: 30=SWITCH RATING, 20=FUSE RATING) 3 POLE–UNLESS NOTED OTHERWISE.
M	MOTORIZED VALVE AND GATE
T	DUCT SMOKE DETECTOR REMOTE TEST SWITCH AND INDICATING LIGHT
VFD	VARIABLE FREQUENCY DRIVE
T	THERMOSTAT
	ELECTRIC HEATER
	FLUSH OUTLET BOX AND TELEPHONE COVER PLATE AND SUITABLE FOR DATA DEVICE CONNECTION 48" ABOVE FINISHED FLOOR.
	FLUSH FLOOR MOUNTED OUTLET BOX AND TELEPHONE COVER PLATE.
C	CONTROL PULLBOX
P	POWER MANHOLE.

PLAN SYMBOLS (CONTINUED)

S_M	MOTOR DUTY, SINGLE PHASE DISCONNECT, NEMA 1
FS	FLOW SWITCH
FE	FLOW ELEMENT
LE	LEVEL ELEMENT
ZSC	CHECK VALVE LIMIT SWITCH
PS	PRESSURE SWITCH
PSH	PRESSURE SWITCH HIGH
SV	SOLENOID VALVE
LLS	LIQUID LEVEL SWITCH
PSL	LOW PRESSURE SWITCH
AIT	ANALYZING INDICATING TRANSMITTER
FIT	FLOW INDICATING TRANSMITTER
LIT	LEVEL INDICATING TRANSMITTER
TS	TEMPERATURE SWITCH
WSH	TORQUE SWITCH
SH	SPACE HEATER
AE	ANALYTICAL ELEMENT
OOR	ON/OFF/REMOTE
HOA	HAND/OFF/AUTO
OCA	OPEN/CLOSE/AUTO SWITCH
LOS	LOCKOUT SWITCH
PDS	PRESSURE DIFFERENTIAL SWITCH
HD	HEAT DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
DD	DUCT DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
SD	SMOKE DETECTOR w/ FORM A (SPST) N.O. CONTACTS FOR CONNECTION TO ALARM OUTPUT CIRCUITRY
ES	EMERGENCY STOP
S/S	START/STOP

SINGLE LINE DIAGRAM SYMBOLS

2	COMBINATION MOTOR STARTER, NO. INDICATES STARTER SIZE
V	VOLTMETER
A	AMMETER
ST	SHUNT TRIP
PM	PHASE MONITOR
GFI	GROUND FAULT INTERRUPTER
	FUSE
	CAPACITOR
	DRAW–OUT CIRCUIT BREAKER
	MOLDED CASE CIRCUIT BREAKER
	TYPICAL SELECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE.
10	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	SERVICE OR EQUIPMENT GROUND.
	NON–FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED.
	NON–FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.
	LIGHTING PANELBOARD
	POWER PANELBOARD

CONTROL DIAGRAM SYMBOLS

	DUPLEX RECEPTACLE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	LIMIT SWITCH, NORMALLY OPEN
	LIMIT SWITCH, NORMALLY CLOSED
	PRESSURE SWITCH, NORMALLY OPEN
	PRESSURE SWITCH, NORMALLY CLOSED
	FLOAT SWITCH, NORMALLY OPEN
	FLOAT SWITCH, NORMALLY CLOSED
	FLOW SWITCH, NORMALLY OPEN
	FLOW SWITCH, NORMALLY CLOSED
	TEMPERATURE SWITCH, NORMALLY OPEN
	TEMPERATURE SWITCH, NORMALLY CLOSED
	NORMALLY OPEN, TIMED TO CLOSE CONTACT
	NORMALLY CLOSED, TIMED TO OPEN CONTACT
	NORMALLY CLOSED, TIMED TO CLOSE CONTACT
	NORMALLY OPEN, TIMED TO OPEN CONTACT
ZSC	LIMIT SWITCH
FS	FLOW SWITCH
PS	PRESSURE SWITCH
SV	SOLENOID VALVE
LLS	LIQUID LEVEL SWITCH
VS	VIBRATION SWITCH
AR	ALARM RELAY
AT	ALARM TIMER
CR	CONTROL RELAY
M	MOTOR STARTER
TR	TIMING RELAY
XS	TORQUE SWITCH
A	ALARM INDICATING LIGHT
R	RUN INDICATING LIGHT
	MOMENTARY CONTACT PUSHBUTTON
	MOMENTARY BREAK PUSHBUTTON OR RESET
	EMERGENCY LOCKOUT SWITCH. LOCKABLE IN THE OFF POSITION
K	KEYED SWITCH
	MAINTAINED CONTACT ON–OFF SWITCH
	START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT
	THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	CONTROL POWER TRANSFORMER
	REMOTE TERMINAL BLOCK POINT

ABBREVIATIONS

A	AMPERES
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CURRENT
BKR	BREAKER
BLDG	BUILDING
BNR	BIOLOGICAL NUTRIENT REMOVAL
BPCP	BELT FILTER PRESS CONTROL PANEL
BSCP	BAR SCREEN CONTROL PANEL
CCC	CHLORINE CONTACT CHAMBER
CCP	CLARIFIER CONTROL PANEL
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
DH	DATA HIGHWAY
DISC	DISCONNECT
DO	DISSOLVED OXYGEN
EFF	EFFLUENT
EM	EMERGENCY
ENCL	ENCLOSURE
ESB	ENERGY SAVING BALLAST
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FO	FIBER OPTIC
FOTC	FIBER OPTIC TERMINATION PANEL
FPP	FIBER PATCH PANEL
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON–REVERSING
GCP	GRIT CONTROL PANEL
GFR	GROUND FAULT RECEPTACLE
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND–OFF–AUTOMATIC
HOR	HAND–OFF–REMOTE
HCP	HEADWORKS CONTROL PANEL
HP	HORSEPOWER
HPU	HYDRAULIC POWER UNIT
HWY	HIGHWAY
IR	INTERNAL RECYCLE
KVA	KILO VOLT–AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LBCP	LOCAL BLOWER CONTROL PANEL
LF	LINEAR FEET
LTG	LIGHTING
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOV	MOTORIZED VALVE
MSC	MANUFACTURER SUPPLIED CABLE
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRICAL CODE
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OOR	ON/OFF REMOTE
P	POLE
PCP	PROCESS CONTROL PANEL
PCTB	PUMP CABLE TERMINATION BOX
PEC	POWER EQUIPMENT CENTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	PHASE MONITOR
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RIO	REMOTE I/O PANEL
RVSS	REDUCED VOLTAGE SOLID STATE STARTER
SH	SHIELDED
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SSS	SOLID STATE STARTER
STR	STARTER
SWGR	SWITCHGEAR
TBR	TO BE REMOVED
TC	TERMINATION CABINET
TYP	TYPICAL
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
Ø	PHASE

NOTES

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
2. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING ELECTRICAL INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRICAL CODE, 2023 FLORIDA BUILDING CODE AND SHALL COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
4. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING, UNLESS OTHERWISE NOTED.
5. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
6. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE 2020 EDITION OF THE N.E.C. OR LOCAL CODES. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250–122 OF THE 2020 NATIONAL ELECTRICAL CODE.
7. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
8. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/OWNER.
9. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN THREE YEARS FROM DATE OF ACCEPTANCE.
10. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF THEIR WORK.
12. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/ TYPE WRITTEN DIRECTORIES (NEW & EXISTING).
13. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
14. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS & THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
15. NON–SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. *SHADED AND SLANTED* TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES.
16. ALL CONTROL PANELS SHALL BE UL LISTED AND SHALL COMPLY WITH ARTICLE 409 OF THE NEC.
17. EXISTING FACILITY TO REMAIN IN OPERATION AT ALL TIMES. SEQUENCE WORK AND PROVIDE TEMPORARY EQUIPMENT AS REQUIRED.

BID PLANS- NOT FOR CONSTRUCTION

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FL LICENSE NUMBER
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DATE: _____

KHA PROJECT 049553018			
DATE 06/05/2024	SCALE	AS SHOWN	
	DESIGNED BY	MJC	
	DRAWN BY	SDV	
	CHECKED BY	WCN	

FL

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY

ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS

SHEET NUMBER
E01

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LIFT STATION 7W FIGURE ONE

ELECTRICAL RACK TO BE DISCONNECTED AND REMOVED

EXISTING PUMP CABLE TERMINATION BOX TO BE DISCONNECTED AND REMOVED

EXISTING VAULT TO BE ABANDONED

EXISTING ELECTRICAL EQUIPMENT TO BE DISCONNECTED AND REMOVED

EXISTING WETWELL TO BE ABANDONED

② EXISTING UNDERGROUND ELECTRIC TO BE REMOVED

① ELECTRICAL EQUIPMENT WITHIN THE EXISTING GENERATOR BUILDING SHALL BE DISCONNECTED AND REMOVED. SEE DETAILS ON THIS SHEET.

EXISTING UNDERGROUND ② ELECTRIC TO BE REMOVED

EXISTING FUEL PIPING TO BE REMOVED AND REPLACED (REFER TO PLUMBING SHEET)

EXISTING DUKE ENERGY PAD MOUNTED TRANSFORMER

EXISTING FUEL STORAGE TANK

EXISTING TELEMETRY TOWER

② EXISTING ELECTRICAL EQUIPMENT AND GENERATOR ROOM

EXISTING SANITARY RECEIVING STRUCTURE TO BE ABANDONED

DEMOLITION SITE PLAN

SCALE: 1/8"=1'-0"

8 6 4 2 0 8'

EXISTING LOUVER

DISTRIBUTION PANEL (TO BE REMOVED)

MAIN BREAKER OVER DUKE CT PANEL (TO BE REMOVED)

TRANSFER SWITCH (TO BE REMOVED)

LIGHTING PANEL (TO BE REMOVED)

TRANSFORMER OVER VFD (TO BE REMOVED)

GENERATOR (TO BE REMOVED)

DAY TANK (TO BE REMOVED)

BATTERY BOX (TO BE REMOVED)

PCP (TO BE REMOVED)

EXISTING RTU TO BE SALVAGED AND RETURNED TO THE CITY

VFD (TO BE REMOVED)

6" CONCRETE CURB TO BE DEMOLISHED

EXISTING LOUVER

GENERATOR BUILDING DEMOLITION PLAN

SCALE: 3/4"=1'-0"

6" 0 1 2'

NOTES:

① COORDINATE ALL SALAVAGE AND DEMOLITION REQUIREMENTS WITH THE OWNER. REMOVE ALL NOTED ELECTRICAL EQUIPMENT, EXPOSED CONDUIT, WIRE, BOXES, ETC. REMOVE ALL EXISTING RECEPTACLES AND LIGHTING. CUT CONCEALED CONDUIT TO FLOOR/WALL LEVEL AND CAP.

② FIELD LOCATE AND DEMOLISH ALL EXISTING EXPOSED CONDUIT WIRE, BOXES, ETC. TO EXISTING ELECTRICAL BUILDING FOR EXISTING ELECTRICAL SERVICE. DO NOT REMOVE EXSITING SERVICE UNTIL NEW SERVICE HAS BEEN INSTALLED, TESTED, AND ENERGIZED.

BID PLANS- NOT FOR CONSTRUCTION

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DATE: ____

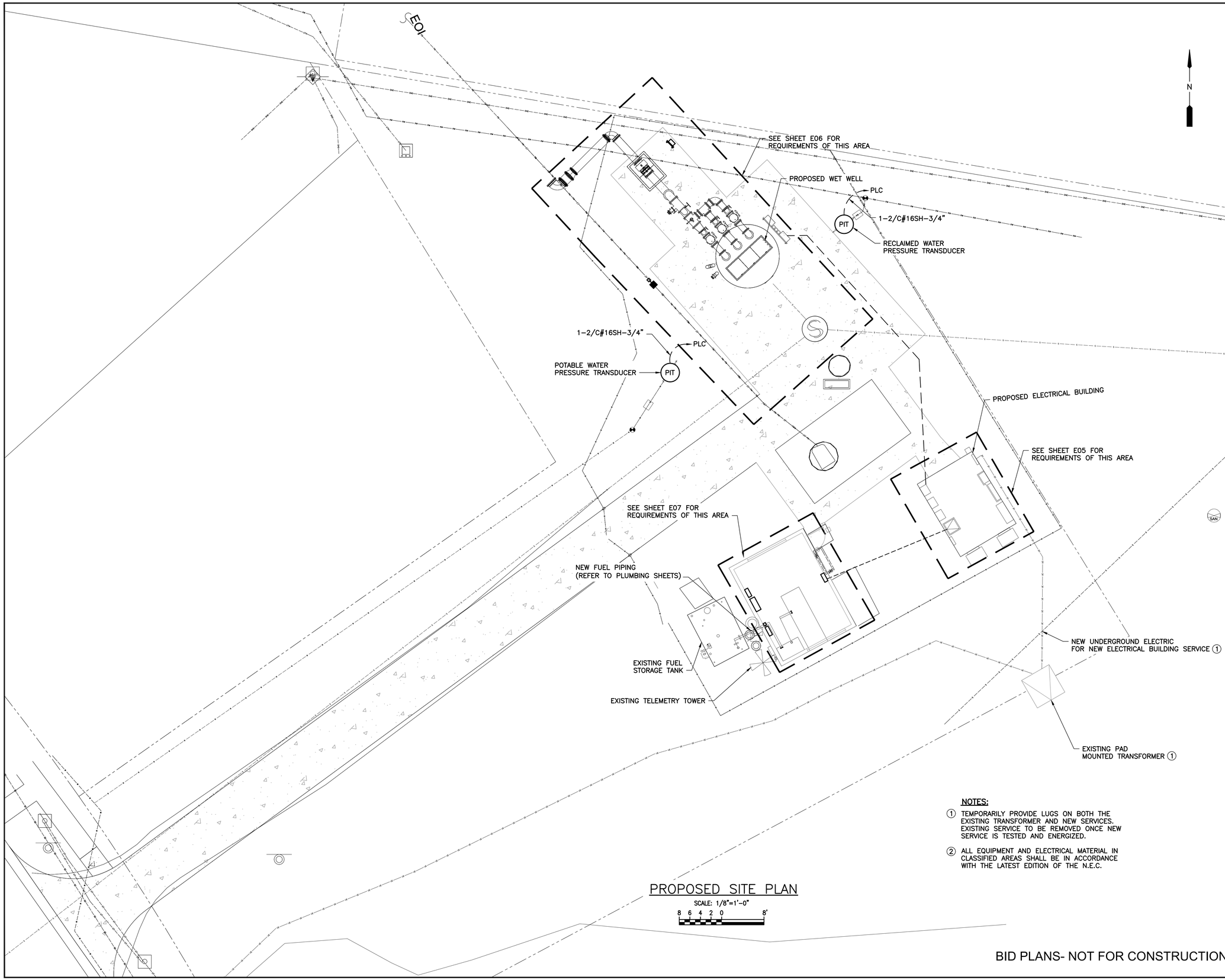
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DATE	06/05/2024
SCALE	AS SHOWN
DESIGNED BY	MJC
DRAWN BY	SDV
CHECKED BY	WCN

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

DEMOLITION SITE & GENERATOR BUILDING DEMOLITION PLAN

SHEET NUMBER
E02

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NOTES:

(1) TEMPORARILY PROVIDE LUGS ON BOTH THE EXISTING TRANSFORMER AND NEW SERVICES. EXISTING SERVICE TO BE REMOVED ONCE NEW SERVICE IS TESTED AND ENERGIZED.

(2) ALL EQUIPMENT AND ELECTRICAL MATERIAL IN CLASSIFIED AREAS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C.

PROPOSED SITE PLAN

SCALE: 1/8"=1'-0"

8 6 4 2 0 8'

BID PLANS- NOT FOR CONSTRUCTION

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WWW.KIMLEY-HORN.COM REGISTRY No. 35106

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Michael J. Cahill
FL LICENSE NUMBER
70837
DATE: ____

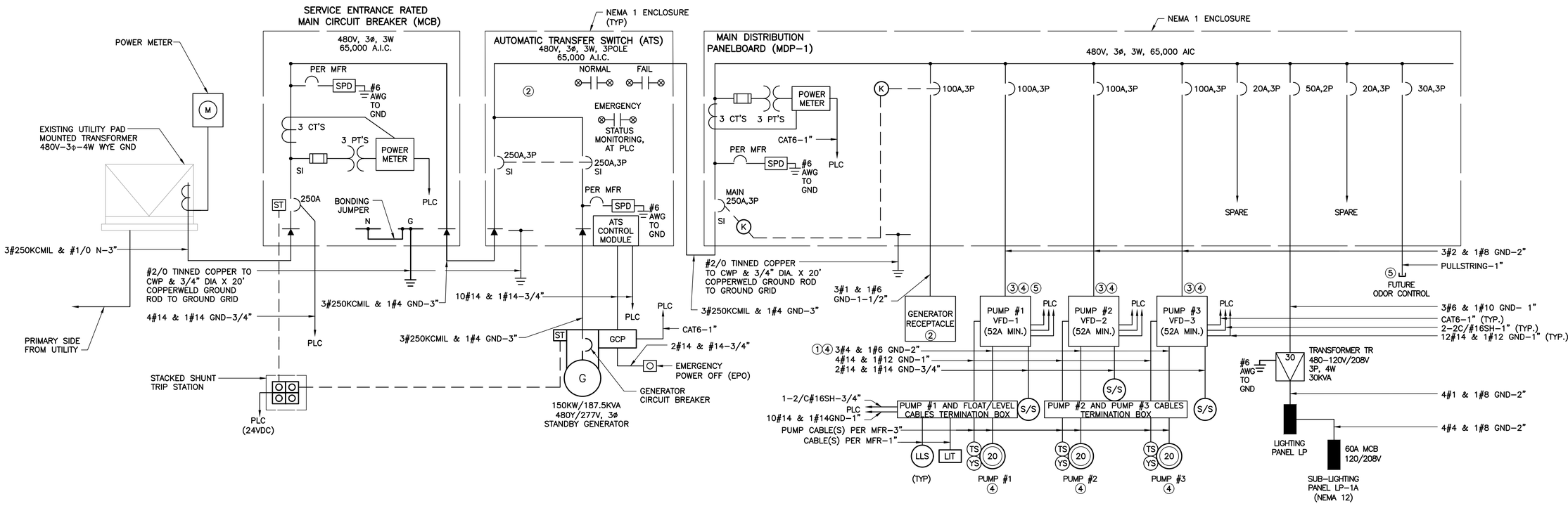
KHA PROJECT 049553018
DATE 06/05/2024
SCALE AS SHOWN
DESIGNED BY MJC
DRAWN BY SDV
CHECKED BY WCN

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

ELECTRICAL SITE DEMOLITION AND MODIFICATIONS

SHEET NUMBER
E03

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MDP–1 SINGLE LINE DIAGRAM

NOTES:

1. VFD RATED CABLES
2. PROVIDE 100 AMP, 480 VOLT, 3–PHASE GENERATOR RECEPTACLE ON EXTERIOR OF BUILDING WITH NEMA 4X 316 SS JUNCTION BOX. COORDINATE PIN ARRANGEMENT AND CONFIGURATION WITH OWNER.
3. REFER TO SHEET E–09 FOR VFD/PUMP WIRING DETAILS.
4. EQUIPMENT IS SIZED FOR FUTURE 34HP MOTORS. PROVIDE ADDITIONAL LUGS AS NECESSARY FOR 20HP MOTORS TO BE INSTALLED UNDER THIS PROJECT.
5. COORDINATE CONDUIT STUB UP LOCATION FOR FUTURE ODOR CONTROL WITH OWNER.

MDP–1 LOAD TABULATION

480V, 3ϕ

DESCRIPTION	LOAD	AMPACITY
① PUMPS	3 @ 34 HP	= 80.00 AMPS
30 KVA XMFR.	1 @ 30 KVA	= 36.08 AMPS
	CONNECTED LOAD	= 116.08 AMPS
② SERVICE ENTRANCE = 116.08 AMPS + (0.25)(40.00)		= (126.08) AMPS

NOTES:

① AMPACITIES PER TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

② SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 230 OF THE NATIONAL ELECTRICAL CODE.

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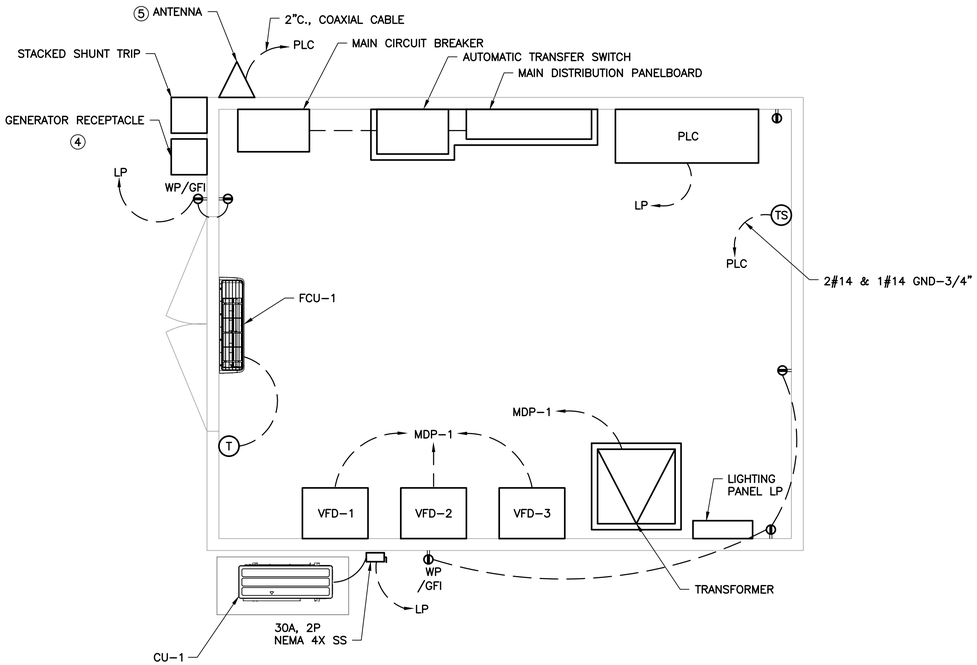
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DATE	06/05/2024
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DESIGNED BY	MJC
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LS 7W IMPROVEMENTS
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CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

SINGLE LINE DIAGRAM

SHEET NUMBER
E04

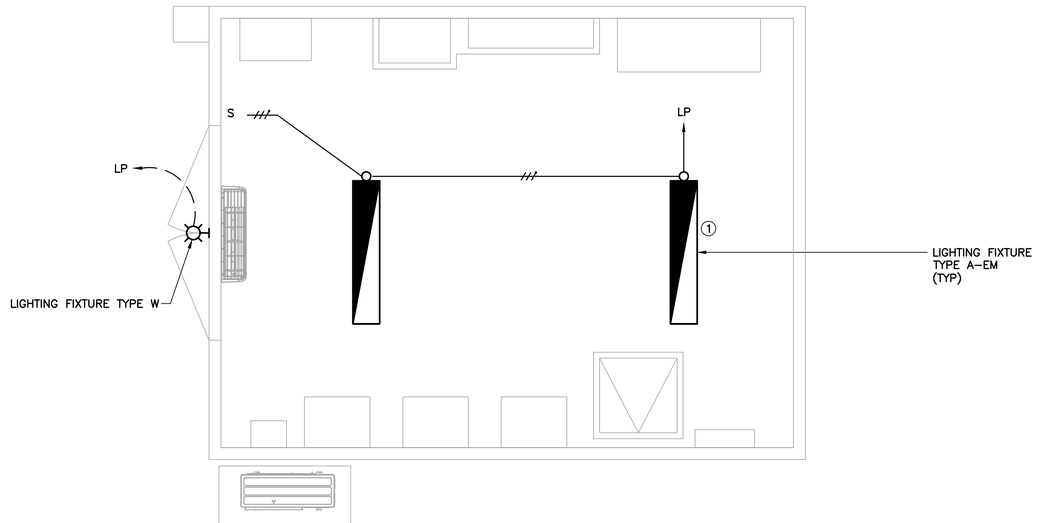
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PROPOSED ELECTRICAL BUILDING POWER PLAN

SCALE: 1/2"=1'-0"

2' 1' 0 2'



PROPOSED ELECTRICAL BUILDING LIGHTING PLAN

SCALE: 1/2"=1'-0"

2' 1' 0 2'

NOTES:

1. SEE SHEET E10 FOR LIGHTING FIXTURE SCHEDULE.
2. WIRE EXIT LIGHT TO THE LINE SIDE OF THE LIGHT SWITCH PER NEC.
3. SEE SHEET E-04 FOR SINGLE LINE DIAGRAM, WIRE SIZES, CONDUIT, AND ADDITIONAL INFORMATION.
4. PROVIDE PLACARD: GENERATOR RECEPTACLE INTERLOCKED WITH MAIN DISTRIBUTION PANELBOARD.
5. FIELD LOCATE PER RADIO SURVEY REQUIREMENTS.

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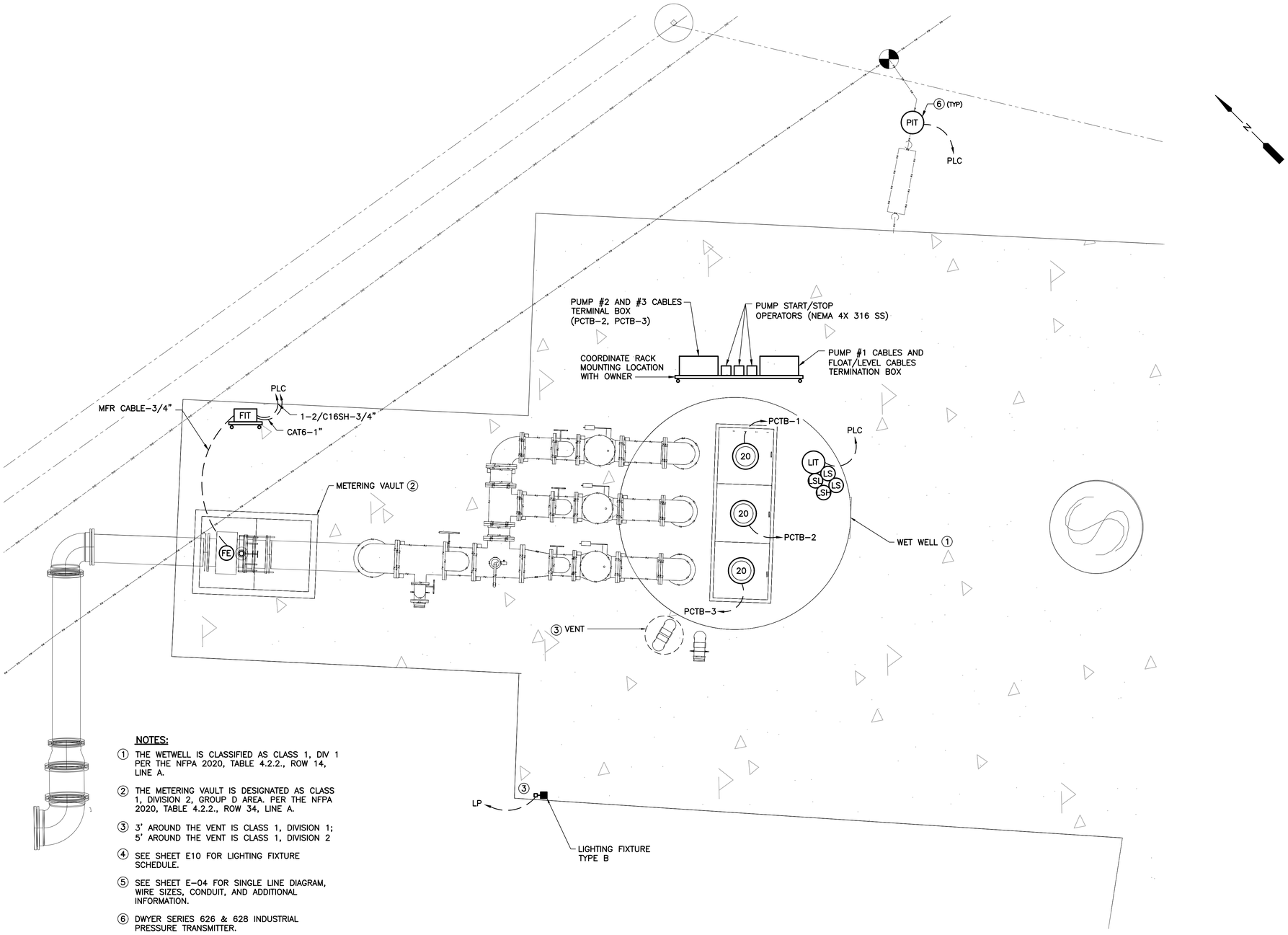
LS 7W IMPROVEMENTS
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CITY OF WINTER SPRINGS

SEMINOLE COUNTY

PROPOSED ELECTRICAL BUILDING POWER & LIGHTING PLAN

SHEET NUMBER
E05

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NOTES:

1. THE WETWELL IS CLASSIFIED AS CLASS 1, DIV 1 PER THE NFPA 2020, TABLE 4.2.2., ROW 14, LINE A.
2. THE METERING VAULT IS DESIGNATED AS CLASS 1, DIVISION 2, GROUP D AREA. PER THE NFPA 2020, TABLE 4.2.2., ROW 34, LINE A.
3. 3' AROUND THE VENT IS CLASS 1, DIVISION 1; 5' AROUND THE VENT IS CLASS 1, DIVISION 2
4. SEE SHEET E10 FOR LIGHTING FIXTURE SCHEDULE.
5. SEE SHEET E-04 FOR SINGLE LINE DIAGRAM, WIRE SIZES, CONDUIT, AND ADDITIONAL INFORMATION.
6. DWYER SERIES 626 & 628 INDUSTRIAL PRESSURE TRANSMITTER.

PROPOSED WET WELL ELECTRICAL PLAN

SCALE: 3/8"=1'-0"

12" 0 1 2 4'

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KHA PROJECT	049553018
DATE	06/05/2024
SCALE	AS SHOWN
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LS 7W IMPROVEMENTS

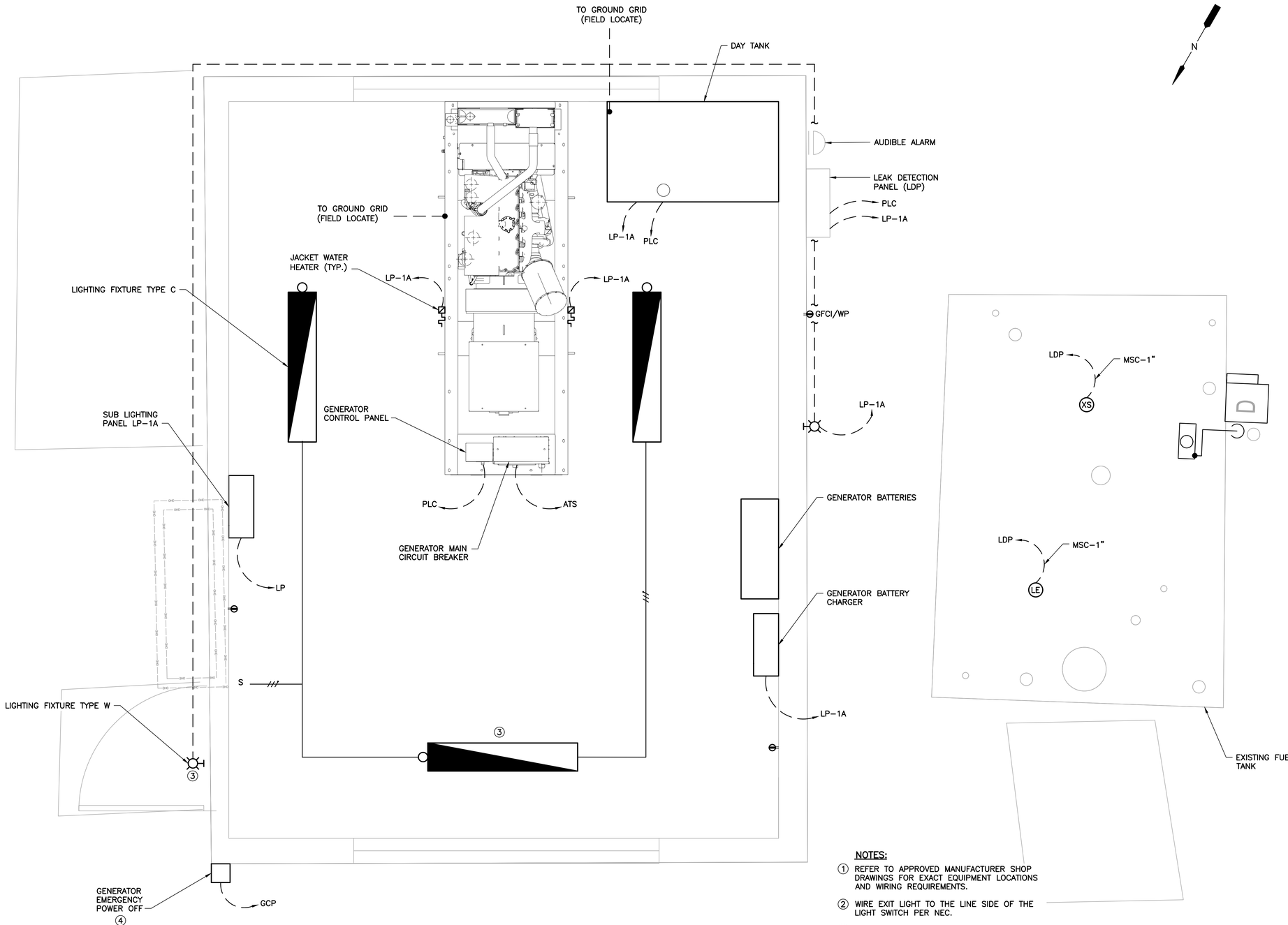
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SEMINOLE COUNTY FL

PROPOSED WET WELL ELECTRICAL PLAN

SHEET NUMBER
E06

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PROPOSED GENERATOR BUILDING AND LIGHTING PLAN

SCALE: 3/4"=1'-0"

6" 0 1 2'

NOTES:

1. REFER TO APPROVED MANUFACTURER SHOP DRAWINGS FOR EXACT EQUIPMENT LOCATIONS AND WIRING REQUIREMENTS.
2. WIRE EXIT LIGHT TO THE LINE SIDE OF THE LIGHT SWITCH PER NEC.
3. SEE SHEET E-04 FOR SINGLE LINE DIAGRAM, WIRE SIZES, CONDUIT, AND ADDITIONAL INFORMATION.
4. PROVIDE PLACARD: GENERATOR EMERGENCY STOP.

BID PLANS- NOT FOR CONSTRUCTION

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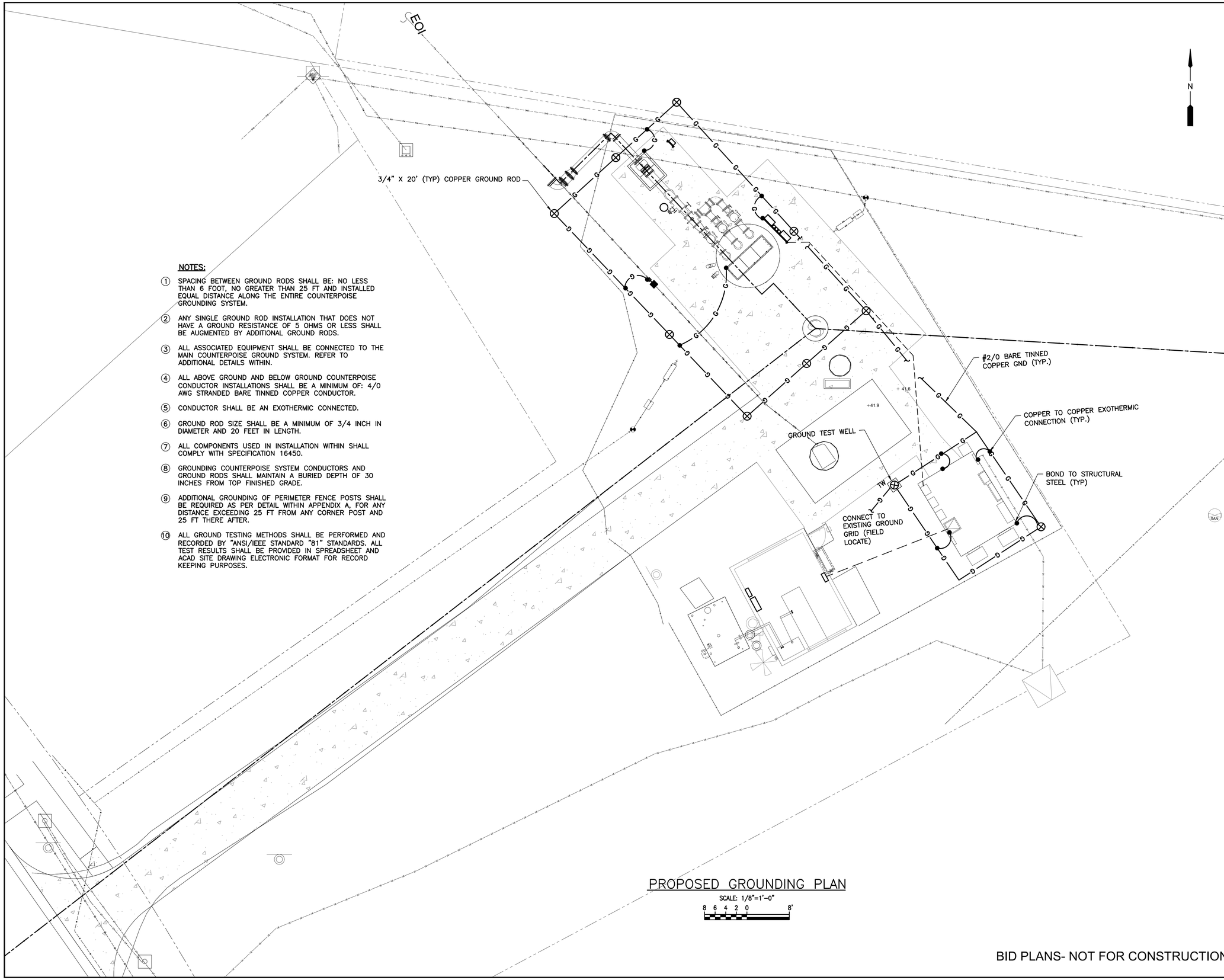
KHA PROJECT	049553018
DATE	06/05/2024
SCALE	AS SHOWN
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LS 7W IMPROVEMENTS
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SEMINOLE COUNTY FL

PROPOSED GENERATOR BUILDING AND LIGHTING PLAN

SHEET NUMBER
E07

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NOTES:

1. SPACING BETWEEN GROUND RODS SHALL BE: NO LESS THAN 6 FOOT, NO GREATER THAN 25 FT AND INSTALLED EQUAL DISTANCE ALONG THE ENTIRE COUNTERPOISE GROUNDING SYSTEM.
2. ANY SINGLE GROUND ROD INSTALLATION THAT DOES NOT HAVE A GROUND RESISTANCE OF 5 OHMS OR LESS SHALL BE AUGMENTED BY ADDITIONAL GROUND RODS.
3. ALL ASSOCIATED EQUIPMENT SHALL BE CONNECTED TO THE MAIN COUNTERPOISE GROUND SYSTEM. REFER TO ADDITIONAL DETAILS WITHIN.
4. ALL ABOVE GROUND AND BELOW GROUND COUNTERPOISE CONDUCTOR INSTALLATIONS SHALL BE A MINIMUM OF: 4/0 AWG STRANDED BARE TINNED COPPER CONDUCTOR.
5. CONDUCTOR SHALL BE AN EXOTHERMIC CONNECTED.
6. GROUND ROD SIZE SHALL BE A MINIMUM OF 3/4 INCH IN DIAMETER AND 20 FEET IN LENGTH.
7. ALL COMPONENTS USED IN INSTALLATION WITHIN SHALL COMPLY WITH SPECIFICATION 16450.
8. GROUNDING COUNTERPOISE SYSTEM CONDUCTORS AND GROUND RODS SHALL MAINTAIN A BURIED DEPTH OF 30 INCHES FROM TOP FINISHED GRADE.
9. ADDITIONAL GROUNDING OF PERIMETER FENCE POSTS SHALL BE REQUIRED AS PER DETAIL WITHIN APPENDIX A, FOR ANY DISTANCE EXCEEDING 25 FT FROM ANY CORNER POST AND 25 FT THERE AFTER.
10. ALL GROUND TESTING METHODS SHALL BE PERFORMED AND RECORDED BY "ANSI/IEEE STANDARD "81" STANDARDS. ALL TEST RESULTS SHALL BE PROVIDED IN SPREADSHEET AND ACAD SITE DRAWING ELECTRONIC FORMAT FOR RECORD KEEPING PURPOSES.

PROPOSED GROUNDING PLAN

SCALE: 1/8"=1'-0"

8 6 4 2 0 8'

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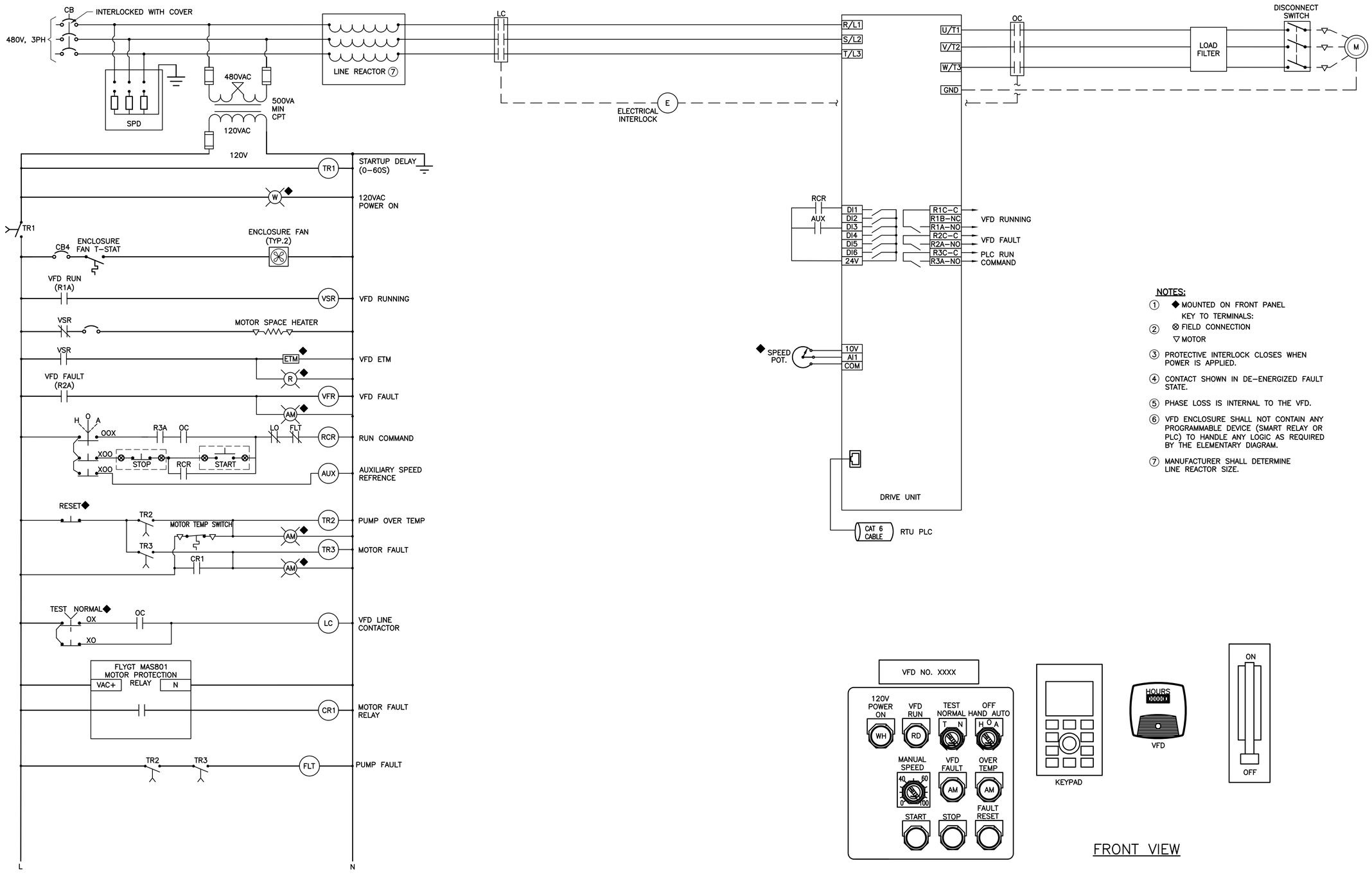
KHA PROJECT 049553018			
DATE 06/05/2024			
SCALE AS SHOWN			
DESIGNED BY MJC	DRAWN BY SDV	CHECKED BY WCN	

LS 7W IMPROVEMENTS
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SEMINOLE COUNTY FL

ELECTRICAL SITE DEMOLITION AND MODIFICATIONS

SHEET NUMBER
E08

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NOTES:

1. ◆ MOUNTED ON FRONT PANEL
   KEY TO TERMINALS:
   ⊗ FIELD CONNECTION
   ▽ MOTOR
2. PROTECTIVE INTERLOCK CLOSES WHEN POWER IS APPLIED.
3. CONTACT SHOWN IN DE–ENERGIZED FAULT STATE.
4. PHASE LOSS IS INTERNAL TO THE VFD.
5. VFD ENCLOSURE SHALL NOT CONTAIN ANY PROGRAMMABLE DEVICE (SMART RELAY OR PLC) TO HANDLE ANY LOGIC AS REQUIRED BY THE ELEMENTARY DIAGRAM.
6. MANUFACTURER SHALL DETERMINE LINE REACTOR SIZE.

FRONT VIEW

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Michael J. Cahill
FL LICENSE NUMBER
70837
DATE:

KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
049553018	06/05/2024	AS SHOWN	MJC	SDV	WCN

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SEMINOLE COUNTY FL

ELEMENTARY CONTROL AND RISER DIAGRAMS

SHEET NUMBER
E09

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LIGHTING FIXTURE SCHEDULE

TYPE	WATT	DESCRIPTION	MANUFACTURER	SERIES TYPE
A/A–EM	55.6	22–GAUGE DIE–FORMED CRS HOUSING 4 FEET LONG, 7,400 LUMENS, 3500K, 80 CRI, 120V TYPE A–EM SHALL HAVE EMERGENCY BATTERY BACKUP.	WILLIAMS	AW–4–L74–835–RA MTD 10' AFF
B	54	SINGLE POLE LED FIXTURE, 40 LEDS, 70 CRI, 4000K, TYPE 3 DISTRIBUTION	WILLIAMS	OPF–S–A03–740–T3M 25' AFG
C	40.2	22–GAUGE DIE–FORMED CRS HOUSING 4 FEET LONG, 7,400 LUMENS, 4000K, 80 CRI, 120V.	WILLIAMS	AW–4–L54–840–RA MTD 8' AFF
W	30	WALL MOUNTED, LED SCONCE. 5,000 LUMENS, 400K, 70 CRI, 120V. TYPE 4M DISTRIBUTION.	GARDCO GEOFORM	GWM–A08–740–T4M 8' AFG

PANEL: LP — **BUS:** 125 AMP — **VOLT:** 120/208, 3P, 4W
LOCATION: ELECTRICAL ROOM — **MAIN:** 125 — **REMARKS:** –
MOUNTING: SURFACE — **POLES:** 42– — **A.I.C. SYMM:** 22,000 AMPS

	AMPS	POLE	WIRE	GND.	COND.	LOAD SERVED	BUS KVA A	BUS KVA B	BUS KVA C	BUS A B C		BUS KVA A	BUS KVA B	BUS KVA C	LOAD SERVED	WIRE	GND.	COND.	POLE	AMPS
	20	1	12	12	3/4"	ELEC. BLDG. RECEPTACLES	0.54			1	2	0.03			ELEC. BLDG. EXT. LIGHTING	12	12	3/4"	1	20
	20	1	12	12	3/4"	ELEC. BLDG. RECEPTACLES		0.54		3	4		0.06		SITE LIGHTING	12	12	3/4"	1	20
	20	1	–	–	–	SPARE			–	5	6			0.13	ELEC. BLDG. INT. LIGHTING	12	12	3/4"	1	20
	20	1	–	–	–	SPARE	–			7	8	0.66			SUB–PANEL LP–1A	–	–	–	3	60
	15	3	12	12	3/4"	CU–1		1.04		9	10		0.66		–	–	–	–	–	–
	–	–	–	–	–	–			1.04	11	12			0.66	–	–	–	–	–	–
	20	1	12	12	3/4"	PLC	1.00			13	14	0.10			FIT	12	12	3/4"	1	20
①	20	1	–	–	3/4"	FUTURE ODOR CONTROL		–		15	16		–		SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE			–	17	18			–	SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE	–			19	20	–			SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE		–		21	22		–		SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE			–	23	24			–	SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE	–			25	26	–			SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE		–		27	28		–		SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE			–	29	30			–	SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE	–			31	32	–			SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE		–		33	34		–		SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE			–	35	36			–	SPARE	–	–	–	1	20
	20	1	–	–	–	SPARE	–			37	38	–			SURGE PROTECTION DEVICE	–	–	–	PER	MFR
	20	1	–	–	–	SPARE		–		39	40		–		–	–	–	–	–	–
	20	1	–	–	–	SPARE			–	41	42			–	–	–	–	–	–	–

TOTAL (PHASE):	1.54	1.58	1.04	0.79	0.72	0.79	**NOTES:**
TOTAL KVA:			6.46				–
TOTAL AMPS:			17.93				
TOTAL DEMAND AMPS:			17.93				

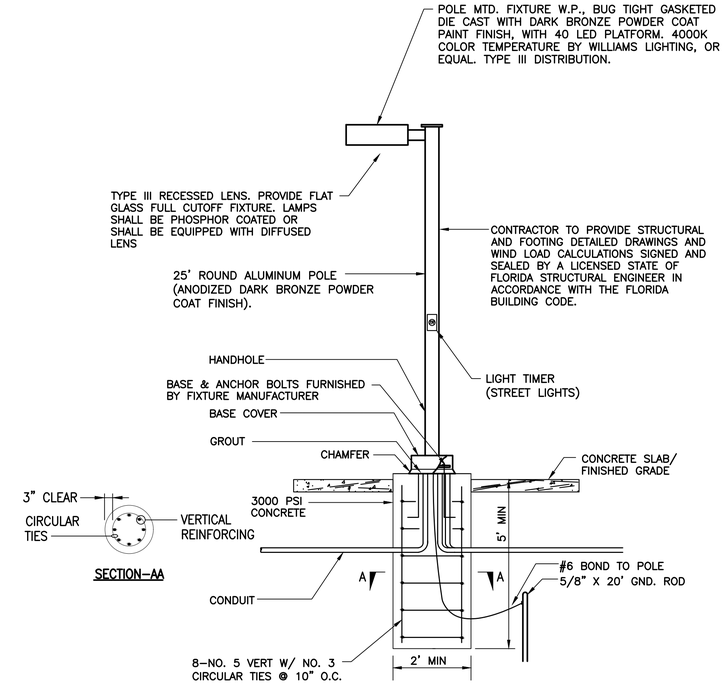
PANEL LP
SCALE: N.T.S.

PANEL: LP–1A — **BUS:** 100 AMP — **VOLT:** 120/208, 3P 4W
LOCATION: GENERATOR BUILDING — **MAINS:** 60A,3P — **REMARKS:** –
MOUNTING: SURFACE — **POLES:** 24 — **A.I.C. SYMM:** 10,000

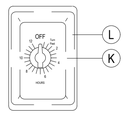
AMPS	POLE	WIRE	GND.	COND.	LOAD SERVED	BUS KVA A	BUS KVA B	BUS KVA C	BUS A B C		BUS KVA A	BUS KVA B	BUS KVA C	LOAD SERVED	WIRE	GND.	COND.	POLE	AMPS
20	1	12	12	3/4"	GEN. BLDG. RECEPTACLES	0.54			1	2	0.13			GEN. BLDG. INT. LIGHTS	12	12	3/4"	1	20
20	1	12	12	3/4"	DAY TANK		0.10		3	4		0.10		GEN. BATTERY CHARGER	12	12	3/4"	1	20
20	1	12	12	3/4"	LEAK DETECTION PANEL			0.10	5	6			1.00	GEN. HEATER	12	12	3/4"	1	20
20	1	–	–	–	SPARE	–			7	8	–			SPARE	–	–	–	1	20
20	1	–	–	–	SPARE		–		9	10		–		SPARE	–	–	–	1	20
20	1	–	–	–	SPARE			–	11	12			–	SPARE	–	–	–	1	20
20	1	–	–	–	SPARE	–			13	14	–			SPARE	–	–	–	1	20
20	1	–	–	–	SPARE		–		15	16		–		SPARE	–	–	–	1	20
20	1	–	–	–	SPARE			–	17	18			–	SPARE	–	–	–	1	20
20	1	–	–	–	SPARE	–			19	20	–			SURGE PROTECTION DEVICE	–	–	–	PER	MFR
20	1	–	–	–	SPARE		–		21	22		–		–	–	–	–	–	–
20	1	–	–	–	SPARE			–	23	24			–	–	–	–	–	–	–

TOTAL (PHASE):	0.54	0.10	0.10	0.13	0.10	1.00	**NOTES:**
TOTAL KVA:			1.97				–
TOTAL AMPS:			5.47				
TOTAL DEMAND AMPS:			5.47				

PANEL LP
SCALE: N.T.S.



POLE MOUNTED FIXTURE DETAIL



TIMER SHIPPED LOOSE AND MOUNTED ON LIGHT POLE

K	1	INTERMATIC	FF30MC	SPRING–WOUND TIMER, 30 min. NO HOLD
L	1	INTERMATIC	WP1030C	SINGLE GANG WEATHER–PROOF COVER, CLEAR

NOTES:
① COORDINATE CONDUIT STUB UP LOCATION FOR FUTURE ODOR CONTROL WITH OWNER.

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FL LICENSE NUMBER 70837
DATE: _____

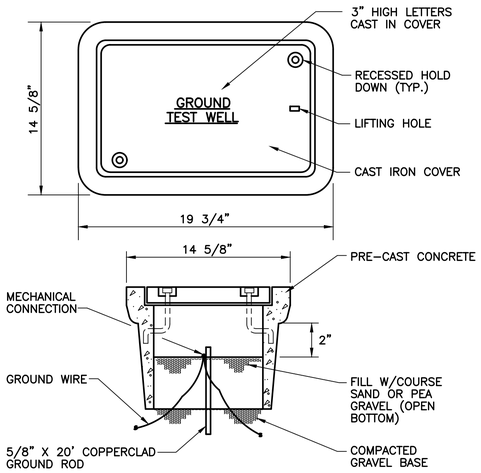
KHA PROJECT 049553018
DATE 06/05/2024
SCALE AS SHOWN
DESIGNED BY MJC
DRAWN BY SDV
CHECKED BY WCN

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

ELECTRICAL LIGHTING, FIXTURE SCHEDULE & PANELBOARD SCHEDULE

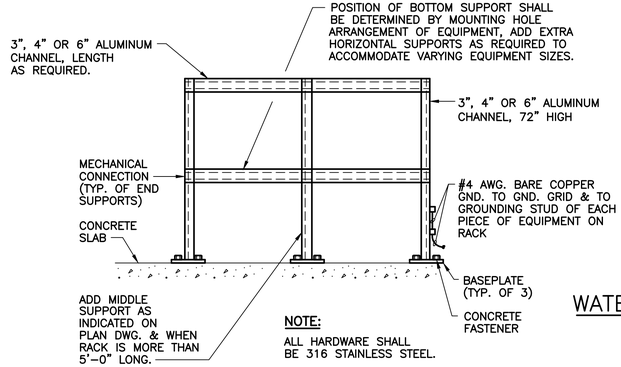
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E10

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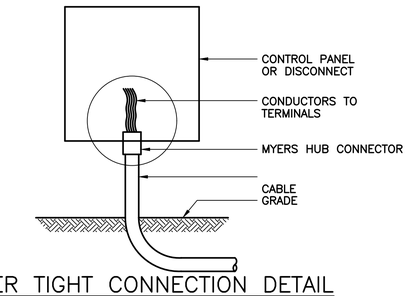
GROUND TEST WELL

N.T.S.



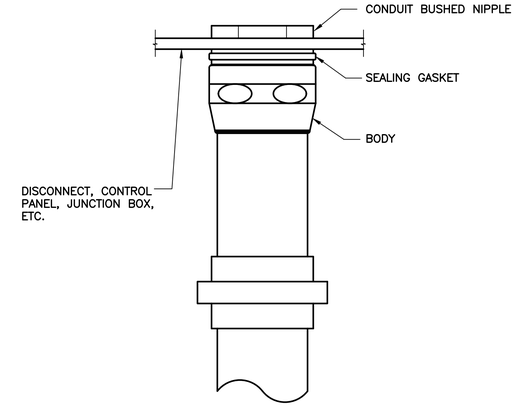
EQUIPMENT RACK DETAIL

N.T.S.



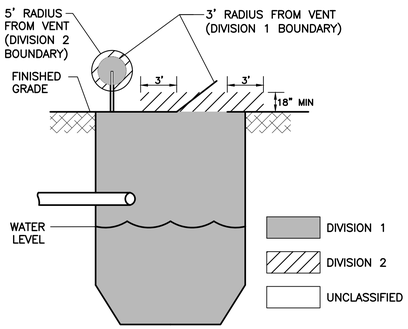
WATER TIGHT CONNECTION DETAIL

N.T.S.



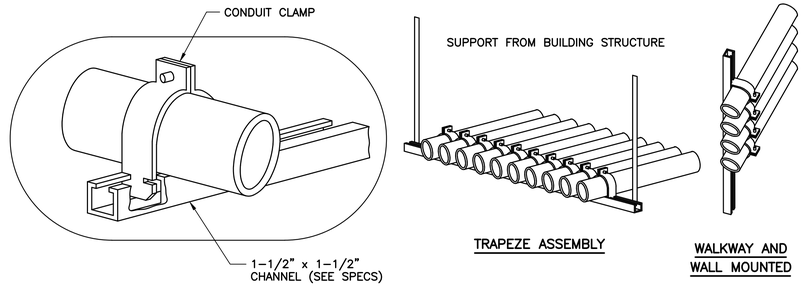
CONDUIT HUB CONNECTION DETAIL

N.T.S.



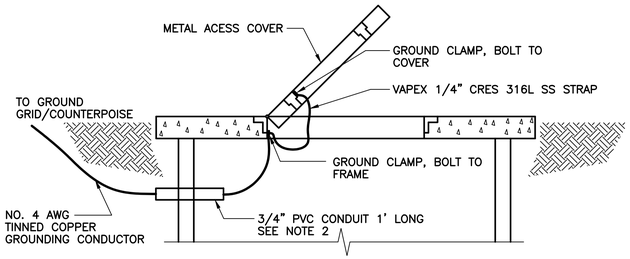
NFPA 820 BOUNDARY CLASSIFICATION

N.T.S.



CONDUIT PIPE STRAP MOUNTING DETAILS

N.T.S.



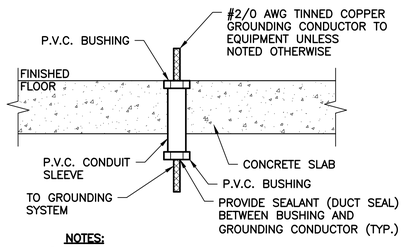
1. ON COVERS WITH MULTIPLE DOORS, PROVIDE BRAID FROM FRAME TO DOOR ON EACH DOOR.
2. PROVIDE WATERPROOF CAULKING WHERE GROUND CABLE AND CONDUIT PENETRATES WETWELL TO PREVENT INTRUSION OF GROUND WATER AND ESCAPE OF VAPORS FROM WETWELL.
3. INSTALL GROUND WIRE SO THAT IT WILL NOT CROSS CLEAR OPENING OR PREVENT OR IMPEDE NORMAL METHOD OF REMOVING FLOATS OR PUMPS.
4. COUNTERPOISE CABLE TO INSTALLED A MINIMUM 30" BELOW GRADE.

COVER & DOOR GROUNDING DETAIL

N.T.S.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 1 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 1 LOCATION. THE AREA BEYOND A 3 FOOT RADIUS FROM THE VENT OPENING BUT NOT GREATER THAN A 5 FOOT RADIUS IS A HAZARDOUS CLASS 1, DIV 2. LOCATION.
4. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
5. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 1 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYS CONDUIT SEALING FITTING.
6. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
7. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
8. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. PVC COATED THREADED RIGID ALUMINUM CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH N.EC. 70, ARTICLE 501, PART II, 501.10.



NOTES:

1. EXTEND PVC CONDUIT TO TOP OF BASE, OR PEDESTAL FOR BASE OR PEDESTAL MOUNTED EQUIPMENT. SUPPORT AT (2) PLACES (MINIMUM).

GROUNDING CONDUIT SLEEVE DETAIL

N.T.S.

BID PLANS- NOT FOR CONSTRUCTION

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MICHAEL J. CAHILL, P.E.
Florida P.E. No. 70837

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LICENSED PROFESSIONAL
Michael J. Cahill
FL LICENSE NUMBER 70837
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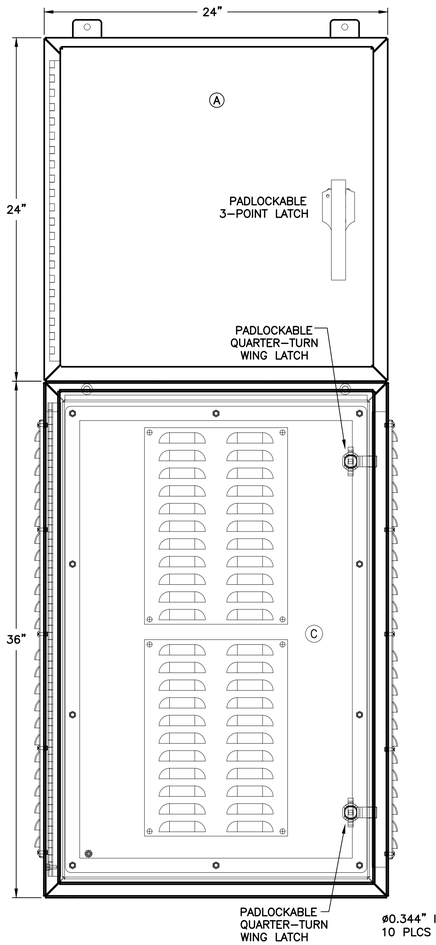
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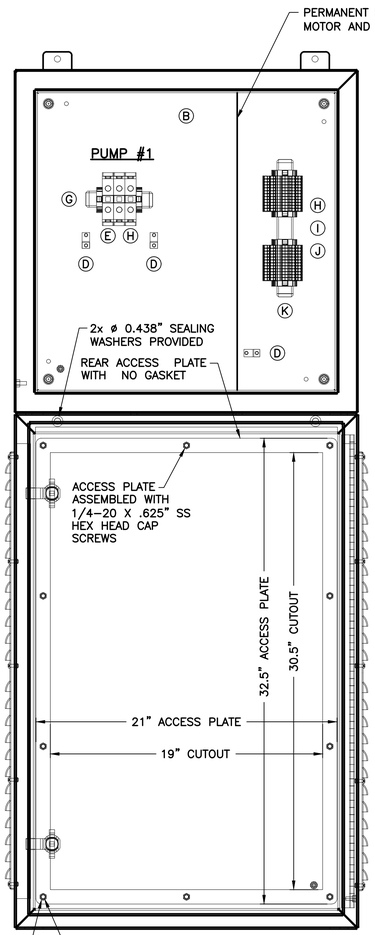
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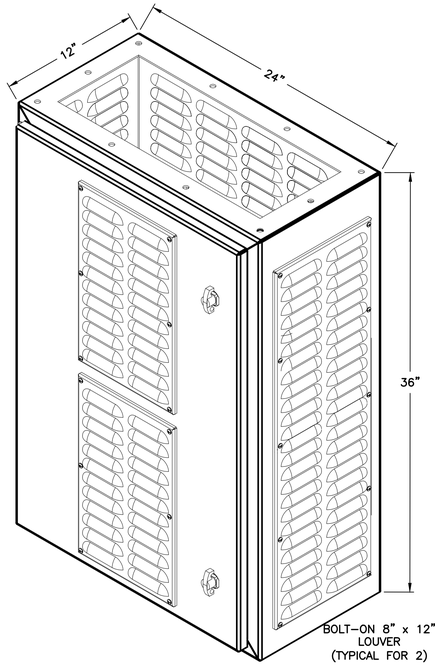
ELECTRICAL DETAILS

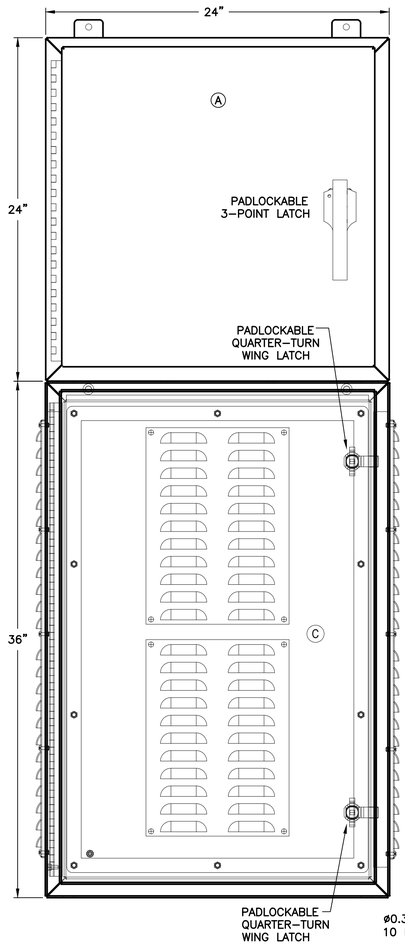
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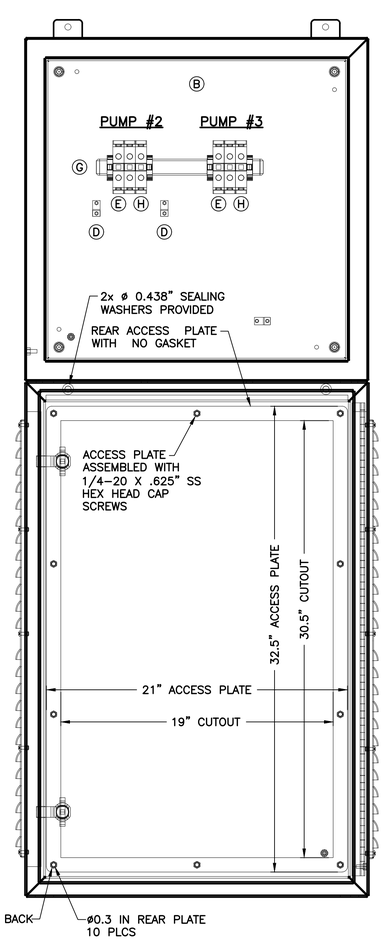
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PUMP CABLE TERMINAL BOX AND PEDESTAL – PUMP #1 AND FLOAT/LEVEL

N.T.S.

ENCLOSURE:
(24"H x 24"W x 12"D) NEMA 4X RATED, FABRICATED FROM .125 MARINE GRADE ALUMINUM. OUTER DOOR IS FITTED WITH A PADLOCKABLE 3-POINT LATCH.

BACK PANEL:
FABRICATED FROM 12ga. CARBON STEEL WITH WHITE POLYESTER POWDER COAT FINISH.

PEDESTAL:
(36"H x 24"W x 12"D) NEMA 12 RATED, FABRICATED FROM .125 MARINE GRADE ALUMINUM. OUTER DOOR IS FITTED WITH TWO PADLOCKABLE QUARTER-TURN LATCHES.

NOTES:
MINIMUMUM SIZES ARE SHOWN FOR DEMARCATION BOX AND PEDESTAL. SIZE SHALL BE INCREASED AS REQUIRED TO MEET NATIONAL ELECTRICAL CODE REQUIREMENTS.

BILLS OF MATERIAL

DEMARCATION BOX AND PEDESTAL

		QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
A		1	SCHAEFER	SPN4AL-242412	ENCLOSURE, NEMA 4X ALUMINUM, 3-PT.-24"H X 24"W X 12"D
B		1	SCHAEFER	SPP-2424	MOUNTING PANEL, 12ga. PAINTED STEEL
C		1	SCHAEFER	SPN12AL-362412	PEDESTAL, NEMA 12 ALUMINUM, LOUVERS-36"H X 24"W X 12"D
D		3	PANDUIT	LAMA2-14-QY	GROUND LUG, DUAL-RATED, #2-14 AWG
③②①	E	6	WAGO	285-135	TERMINAL BLOCK, 1 POLE, 115A
			WAGO	285-150	TERMINAL BLOCK, 1 POLE, 150A
			WAGO	285-195	TERMINAL BLOCK, 1 POLE, 200A
			WAGO	285-1185	TERMINAL BLOCK, 1 POLE, 310A
②	F	–	WAGO	285-435	ADJACENT JUMPER, 115A
			WAGO	285-450	ADJACENT JUMPER, 150A
			WAGO	285-495	ADJACENT JUMPER, 200A
			WAGO	285-1171	ADJACENT JUMPER, 310A
G		1	WAGO	210-118	2M CARRIER RAIL, STEEL, UNSLOTTED
H		8	WAGO	249-197	TERMINAL END STOP, GRAY
I		24	WAGO	2002-1401	CONTROL TERMINALS, 24A, 800V, SPRING
J		2	WAGO	2002-1492	TERMINAL END / PARTITION PLATE, ORANGE
K		1	WAGO	210-112	2M DIN RAIL, GALVANIZED, SLOTTED

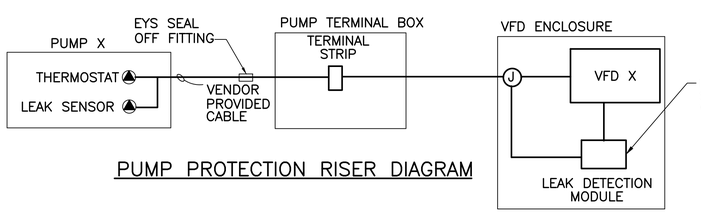
NOTES:

① SELECT APPROPRIATELY SIZED TERMINAL BLOCK BASED ON MOTOR LOAD

② INSERTING MULTIPLE CABLES INTO A SINGLE TERMINAL IS PROHIBITED. USE A SECOND BLOCK AND THE ASSOCIATED ADJACENT JUMPER

③ USE PRINTED GUIDE ON TERMINAL BLOCKS TO MEASURE CORRECT CABLE STRIP LENGTH

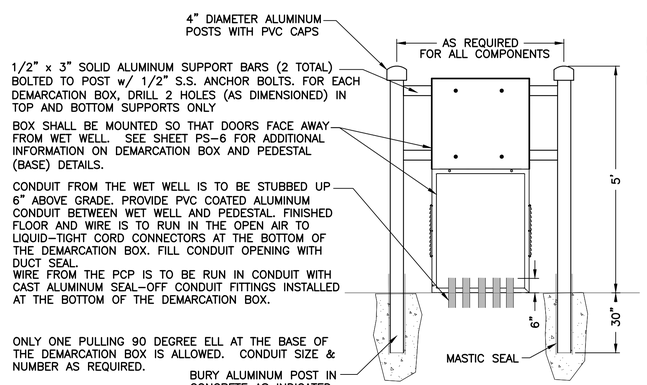
④ ENGINEER APPROVED EQUAL COMPONENT MAY BE SUBSTITUTED



PUMP PROTECTION RISER DIAGRAM

PUMP CABLE TERMINAL BOX AND PEDESTAL – PUMPS #2 AND #3

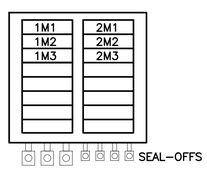
N.T.S.



DEMARCATION BOX DETAILS

N.T.S.

MOTOR TERMINAL BLOCKS SHALL BE WAGO "POWER CAGE CLAMP" SERIES. CONDUCTOR AMPACITY, VOLTAGE, AND WIRE SIZE SHALL DETERMINE FINAL SELECTION.



SEAL-OFF DETAIL

N.T.S.

BID PLANS- NOT FOR CONSTRUCTION

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FL LICENSE NUMBER
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LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

ELECTRICAL DETAILS

SHEET NUMBER
E12

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GENERAL INSTRUMENT OR FUNCTION SYMBOLS

	DISCRETE INSTRUMENT – FIELD MOUNTED
	DISCRETE INSTRUMENT – PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR
	DISCRETE INSTRUMENT – AUXILLARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR
	INSTRUMENTS SHARING COMMON HOUSING
	INSTRUMENT FURNISHED WITH SPECIFIC FIELD COMPONENT (E.G. PUMP, NLOWER, VALVE, CONVEYOR, ETC.)
XXX	EXISTING EQUIPMENT
XXX	FUTURE EQUIPMENT
I	CONTROL INTERLOCK
A	CONTROL SYSTEM I/O INTERFACE – ANALOG SIGNAL. TRIANGLE DENOTES WHETHER INPUT OR OUTPUT.
D	CONTROL SYSTEM I/O INTERFACE – DISCRETE SIGNAL. TRIANGLE DENOTES WHETHER INPUT OR OUTPUT.
	PNEUMATIC SIGNAL
	PNEUMATIC SIGNAL
	DIAPHRAGM SEAL

PROCESS DEVICE SYMBOLS

	REDUCER OR ENLARGER
	PRIMARY ELEMENT VENTURI TUBE
M	PRIMARY ELEMENT MAGNETIC FLOWMETER
	PRIMARY ELEMENT ULTRASONIC DOPPLER FLOWMETER
	PRIMARY ELEMENT PARSCHALL FLUME
	PRIMARY ELEMENT ORIFICE PLATE
	PRIMARY ELEMENT WEIR FLOWMETER
	PRIMARY ELEMENT TURBINE OR PROPELLER TYPE METER
	PRIMARY ELEMENT PITOT TUBE
	PRIMARY ELEMENT ROTAMETER
	PRIMARY ELEMENT ULTRASONIC TRANSIT TIME METER
	PRIMARY ELEMENT ULTRASONIC DOPPLER METER
	PRIMARY ELEMENT ULTRASONIC FLOW OR LEVEL METER
	FLOAT SWITCH
	DRAIN
	CHEMICAL INJECTION POINT
	MIXER

PROCESS DEVICE SYMBOLS (CONTINUED)

	VALVE: GLOBE OR OTHER IN–LINE TYPE, UNLESS OTHERWISE INDICATED.
	BUTTERFLY VALVE
	CHECK VALVE WITH FLOW DIRECTION AS INDICATED
	PLUG VALVE
	BALL VALVE
REGULATED SIDE	PRESSURE REGULATING VALVE – SELF CONTAINED
	FLOW CONTROL GATE OR GATE VALVE
	CENTRIFUGAL BLOWER
	POSITIVE DISPLACEMENT BLOWER
	CENTRIFUGAL PUMP
M	SUBMERSIBLE PUMP
M	DIAPHRAGM PUMP & MOTOR
	DISC FLOW OR PROGRESSIVE CAVITY PUMP
	VERTICAL PUMP
M	MOTOR – MAY BE ELECTRIC, HYDRAULIC, OR PNEUMATIC. ARROW DENOTES VARIABLE SPEED.

FUNCTION SYMBOLS & ABBREVIATIONS

Σ	SUMMING
Σ/n	AVERAGING
△	SUBTRACTING
√‾	EXACT SQUARE ROOT
÷	DIVIDE
x	MULTIPLY
S	INTEGRATE
+	BIAS POSITIVE
–	BIAS NEGATIVE
f(x)	NONLINEAR OR UNSPECIFIED FUNCTION
>	HIGH SELECT
<	LOW SELECT
⟩	HIGH LIMIT
⟨	LOW LIMIT
✱/✱	SIGNAL TRANSDUCER OR CONVERTER (INPUT/OUTPUT) ✱ DEFINED AS FOLLOWS:

E	VOLTAGE
H	HYDRAULIC
I	CURRENT
PD	PULSE DURATION
O	ELECTROMAGNETIC, SONIC
P	PNEUMATIC
PD	PULSE DURATION
R	RESISTANCE (ELECTRIC)

CHEMICAL ABBREVIATIONS:
(STANDARD CHEMICAL FORMULAS ARE USED)

HAND SWITCH ABBREVIATIONS:

A	AUTOMATIC
C	COMPUTER OR CLOSE
H	HAND
L	LOCAL
M	MODULATE
O	OFF OR OPEN
R	REMOTE
S	START OR STOP

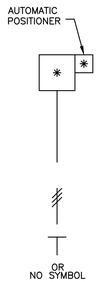
OTHER ABBREVIATIONS:

AI	ANALOG INPUT
AO	ANALOG OUTPUT
AS	AIR SUPPLY
COND	CONDUCTIVITY
CR	CHLORINE RESIDUAL
CTU	CENTRAL TELEMETRY UNIT
DCU	DISTRIBUTED CONTROL UNIT
DI	DIGITAL OR DISCRETE INPUT
DO	DISSOLVED OXYGEN OR DIGITAL OUTPUT
ES	ELECTRIC SUPPLY
FC	FAIL CLOSED
FLP	FAIL LAST POSITION
FO	FAIL OPEN
MC	MOTOR CONTROLLER
NC	NORMALLY CLOSED
pH	HYDROGEN ION CONCENTRATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
POLM	POLYMER
RTU	REMOTE TERMINAL UNIT
TURB	TURBIDITY
VIB	VIBRATION
VSD	VARIABLE SPEED DRIVE

GENERAL NOTES

1. THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS & ABBREVIATIONS MAY NOT APPLY TO THIS SPECIFIC PROJECT.
2. THIS LEGEND APPLIES TO INSTRUMENTATION DIAGRAMS ONLY, & ITS SYMBOLS MAY NOT BE APPLICABLE TO NON–INSTRUMENTATION DRAWINGS.
3. THIS LEGEND SHEET & THE INSTRUMENTATION DIAGRAMS & I–DRAWINGS ARE GENERALLY BASED ON THE INSTRUMENT SOCIETY OF AMERICA'S STANDARDS FOR PRACTICES IN INSTRUMENTATION. SOME MODIFICATIONS, ADDITIONS, & ALTERATIONS MAY HAVE BEEN MADE TO ACCOMMODATE INDIVIDUAL PROJECT REQUIREMENTS.
4. SOME PROCESS ITEMS (SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC.) WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE INSTRUMENTATION SHEETS.
5. SEE ELECTRICAL SHEETS & SPECIFICATIONS FOR ADDITIONAL CONTROL & INTERLOCK REQUIREMENTS FOR EQUIPMENT NOT SHOWN OR NOT PROVIDED BY THE INSTRUMENTATION SUPPLIER.
6. SLANTED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES. NON–SLANTED TEXT DENOTES NEW EQUIPMENT, STRUCTURES, & WORK. SLANTED TEXT (NOT SHADED) DENOTES FUTURE EQUIPMENT STRUCTURES & WORK.

VALVE ACTUATOR SYMBOLS



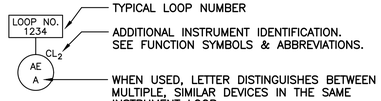
VALVE OR GATE ACTUATOR WITH DEFINED AS FOLLOWS:

P:	AIR CYLINDER
S:	SOLENOID
P/O:	AIR/OIL CYLINDER
E:	ELECTRIC MOTOR
H:	HYDRAULIC CYLINDER
EH:	ELECTROHYDRAULIC
Z:	MISCELLANEOUS

FOR PRESSURE RELIEF OR SAFETY VALVES ONLY

MANUALLY (HAND) OPERATED

TAG NUMBER & DESIGNATION EXAMPLE



INSTRUMENTATION IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		EMERGENCY	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE		CLEANER	CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGING (DIMENSIONAL)		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH OR OPEN
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW OR CLOSED
M	USER'S CHOICE	MOMENTARY			MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE OR TOTALIZE			
R	RUN		RECORD		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY, VIBRATION			VALVE, DAMPER, OR LOUVER	
W	WEIGHT OR TORQUE		WELL		
X	FAILURE	X AXIS			
Y	EVENT, STATE, OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVE, ACTUATE, OR UNCLASSIFIED CONTROL ELEMENT	

BID PLANS- NOT FOR CONSTRUCTION

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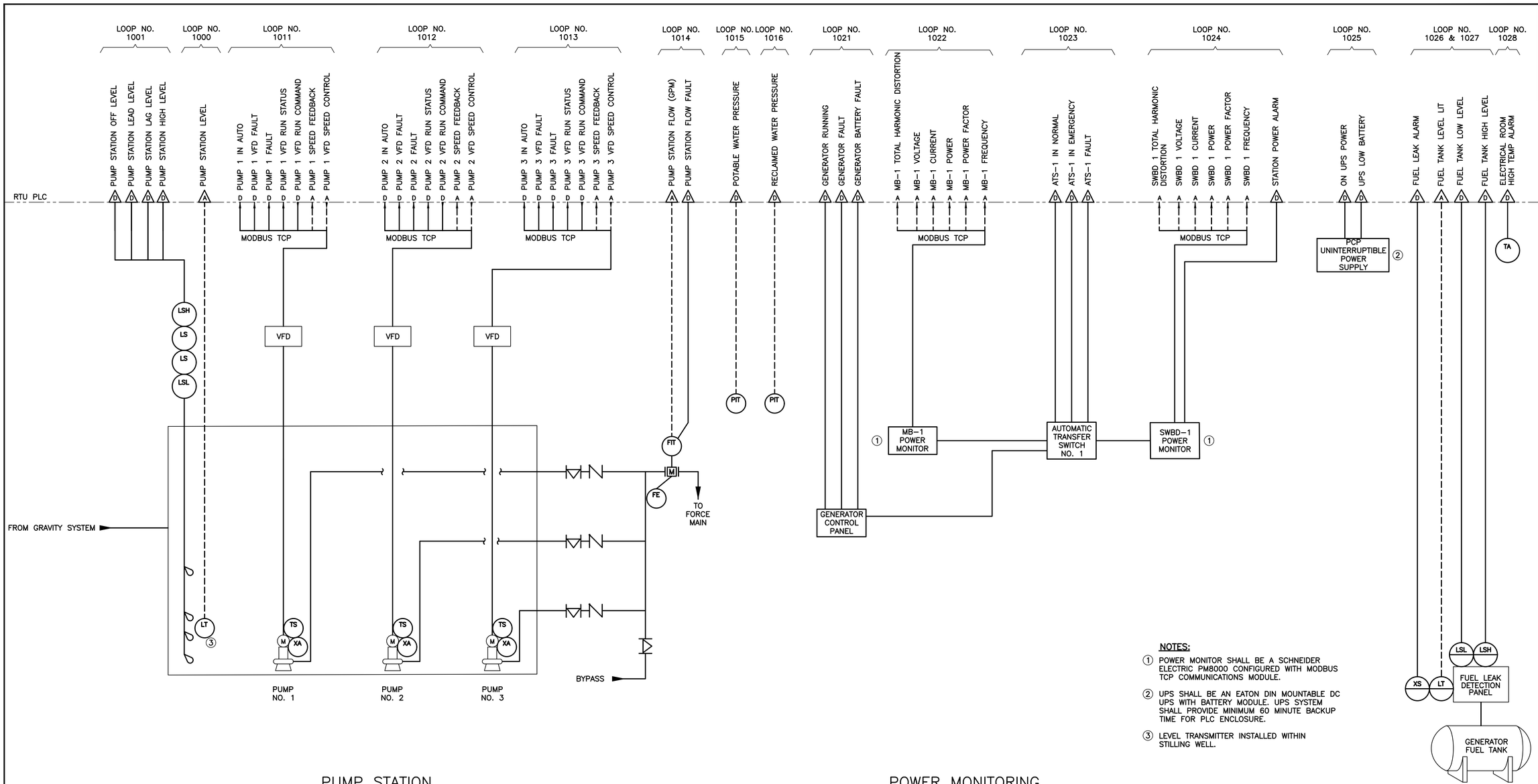
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DATE 06/05/2024	SCALE AS SHOWN	DESIGNED BY MJC	CHECKED BY WCN
		DRAWN BY SDV	

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

INSTRUMENTATION SYMBOLS & ABBREVIATIONS

SHEET NUMBER
I01

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PUMP STATION

POWER MONITORING

FUEL SYSTEM

NOTES:

1. POWER MONITOR SHALL BE A SCHNEIDER ELECTRIC PM8000 CONFIGURED WITH MODBUS TCP COMMUNICATIONS MODULE.
2. UPS SHALL BE AN EATON DIN MOUNTABLE DC UPS WITH BATTERY MODULE. UPS SYSTEM SHALL PROVIDE MINIMUM 60 MINUTE BACKUP TIME FOR PLC ENCLOSURE.
3. LEVEL TRANSMITTER INSTALLED WITHIN STILLING WELL.

BID PLANS- NOT FOR CONSTRUCTION

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Michael J. Cahill
FL LICENSE NUMBER 70837
DATE: ____

KHA PROJECT	049553018
DATE	06/05/2024
SCALE	AS SHOWN
DESIGNED BY	MJC
DRAWN BY	SDV
CHECKED BY	WCN

LS 7W IMPROVEMENTS

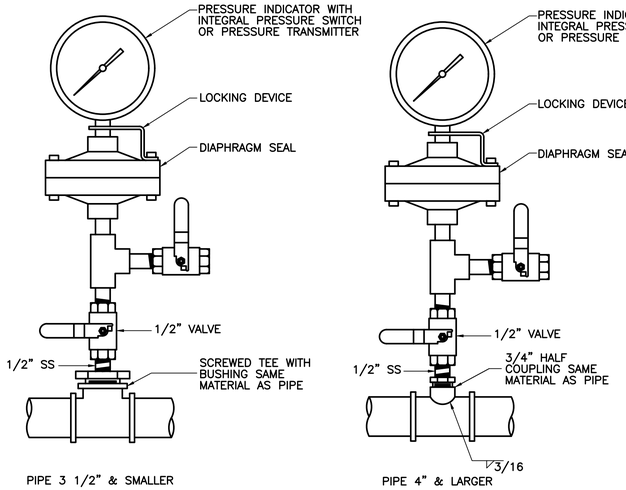
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P&ID

SHEET NUMBER
I02

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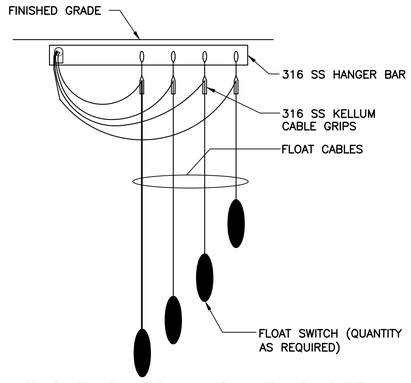


NOTE:

1) FOR PRESSURE GAUGE IN STAINLESS STEEL LINES PROVIDE 316 SST PIPING AND VALVES. FOR PLASTIC LINES PROVIDE PLASTIC VALVES AND PIPING. FOR OTHER LINES PROVIDE BRASS OR BRONZE SEE DIVISION 15.

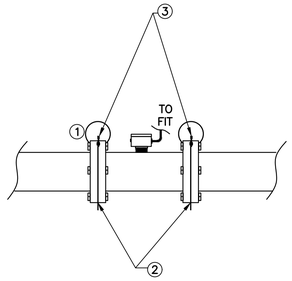
PRESSURE GAUGE WITH PRESSURE SWITCH OR PRESSURE TRANSMITTER

SCALE: N.T.S.



FLOAT SWITCH MOUNTING DETAIL

NOT TO SCALE

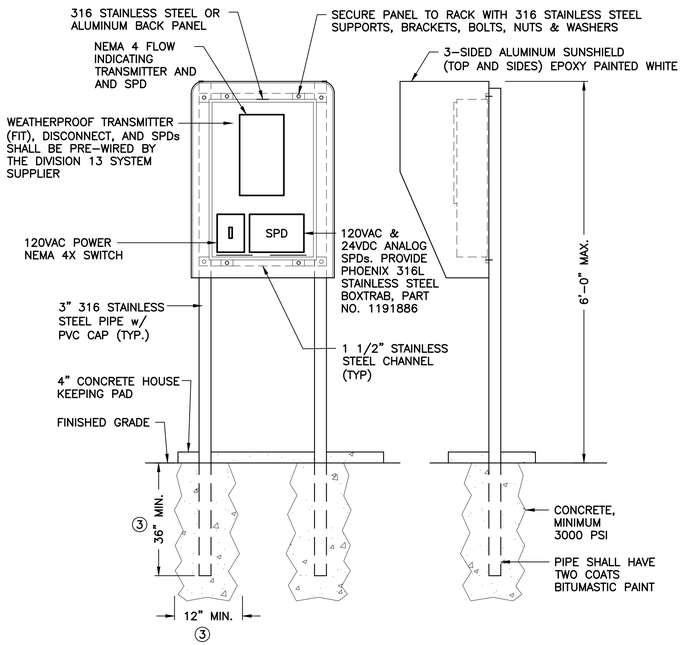


NOTES:

1. ALL LUG SURFACES WHERE GROUNDING WIRES ARE LANDED MUST BE SANDED CLEAN TO PROVIDE A COMPLETE METAL-TO-METAL CONNECTION.
2. MANUFACTURER'S RECOMMENDED INSTALLATION GUIDELINES MUST BE FOLLOWED: HOWEVER, TWO GROUNDING RINGS MUST BE PROVIDED FOR ALL INSTALLATIONS.
3. INSTALL GROUNDING RINGS AT AN ANGLE, IF NECESSARY, TO AVOID INTERFERING WITH SCREW DRIVER ACCESS TO SENSOR OR OTHER HARDWARE.
4. FLOW TUBE TO HAVE 5 STRAIGHT PIPE DIAMETERS MINIMUM UPSTREAM AND 3 DOWNSTREAM.
5. DETAIL SHOWN IS FOR NON-CONDUCTIVE PIPE APPLICATION. FOR APPLICATIONS USING CONDUCTIVE LINED PIPES, INCLUDE GROUNDING STRAPS FROM THE PIPE FLANGE TO THE GROUNDING RING ON EACH SIDE OF THE METER.
6. THE GROUNDING CONNECTIONS SHOWN ON THIS DRAWING ARE FOR MITIGATING STRAY ELECTRICAL NOISE, NOT FOR PROTECTION OF EQUIPMENT/PERSONNEL. USE 12 AWG WIRE FOR ALL CONNECTIONS AND FOLLOW MANUFACTURER'S RECOMMENDED GROUNDING PROCEDURES.
7. GROUNDING RING MATERIAL MUST BE COMPATIBLE WITH LIQUID APPLICATION.

MAGNETIC FLOWMETER GROUNDING DETAIL

N.T.S.



RACK NOTES:

1. RACK STRUCTURE TO BE CERTIFIED PER FLORIDA BUILDING CODE. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED WIND LOAD CALCULATIONS FROM A STRUCTURAL ENGINEER LICENSED IN THE STATE OF FLORIDA.
2. ALL HARDWARE SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.

NOTES:

1. ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.
2. CONTRACTOR TO PROVIDE STRUCTURAL AND FOOTING DETAILED DRAWINGS AND WIND LOAD CALCULATIONS SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.
3. DEPTH AND WIDTH AS REQUIRED TO MEET STRUCTURAL CALCULATIONS.

TRANSMITTER MOUNTING DETAIL

SCALE: NTS

BID PLANS- NOT FOR CONSTRUCTION

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LICENSED PROFESSIONAL
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DATE 06/05/2024	SCALE AS SHOWN	DESIGNED BY MJC	FL
		DRAWN BY SDV	
		CHECKED BY WCN	

LS 7W IMPROVEMENTS
PREPARED FOR
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SEMINOLE COUNTY

ELECTRICAL DETAILS

SHEET NUMBER
I03

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PLUMBING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2021 FLORIDA PLUMBING CODE (IPC), 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2021 INTERNATIONAL FIRE CODE (IFC), 2021 FLORIDA MECHANICAL CODE (IMC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARDS, AND ALL OTHER APPLICABLE CODES, RULES, AND LOCAL AMENDMENTS.
2. THE INFORMATION INDICATED ON THESE DRAWINGS IS BASED UPON INFORMATION TAKEN FROM AS-BUILT DRAWINGS, FIELD INVESTIGATION, AND INFORMATION OBTAINED FROM EXISTING SUBMITTAL DATA, ETC. THE PLANS DO NOT GUARANTEE ACCURACY BUT ARE ONLY AN INDICATION OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT CONDITIONS SUCH AS FIXTURE AND EQUIPMENT PLACEMENT, PIPING (SIZE, ROUTING, AND ELEVATION), ETC. THE DRAWINGS ARE INTENDED TO PROVIDE THE CONTRACTOR AN INDICATION OF THE SYSTEM INSTALLED IN THE FACILITY TO DATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ADJUSTMENTS TO THE DRAWING INFORMATION AS REQUIRED TO MATCH EXISTING FIELD CONDITIONS.
3. THE CONTRACTOR SHALL INSTALL THE NEW FIXTURES, EQUIPMENT, AND PIPING AROUND ALL EXISTING OBSTACLES INCLUDING: ELECTRICAL CONDUIT, DUCTWORK, CHILLED AND HEATING WATER PIPING, AND FIRE SPRINKLER PIPING. PROVIDE OFFSETS TO AVOID RELOCATION OF OTHER UTILITIES. THE UTILITIES WILL NEED TO BE RELOCATED IF THEY ARE IN CONFLICT WITH THE INSTALLATION OF THE PLUMBING SYSTEMS CAUSING DEVIATIONS IN THE DESIGN INTENT, UNSATISFACTORY OPERATION, NOISY CONDITIONS, OR INTERFERE WITH MAINTENANCE. IT IS THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO COORDINATE ANY UTILITY RELOCATION WITH THE APPROPRIATE SUBCONTRACTOR.
4. PROVIDE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, SERVICES AND INSURANCES TO COMPLETE THE PLUMBING WORK WITHIN THE FULL INTENT OF THE DRAWINGS AND SPECIFICATIONS CONTAINED HEREON AND TO THE ENTIRE SATISFACTION OF THE ARCHITECT/ENGINEER.
5. PROVIDE ALL PERMITS AND FEES AS REQUIRED FOR THE PLUMBING WORK. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE PROJECT BEFORE BIDDING.
6. GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR.
7. ALL DIMENSIONS AND MEASUREMENTS SHALL BE VERIFIED AT THE JOBSITE BEFORE FABRICATION AND/OR INSTALLATION OF THE FIXTURES.
8. DRAWINGS ARE DIAGRAMMATIC TO SHOW BASIC SIZING. COORDINATE THE RUNNING OF ALL MAINS WITH THE ENGINEER. ANY MAJOR REROUTING SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE FOR APPROVAL.
9. DRAWINGS ARE DIAGRAMMATIC: DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
10. UTILITY LOCATIONS ARE SHOWN FOR REFERENCE ONLY AND LOCATIONS ON DRAWINGS ARE NOT GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING UTILITY IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
11. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC PROCESS PIPING, SPRINKLER, PLUMBING, STRUCTURAL, AND GENERAL ARCHITECTURE.
12. ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
13. NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
14. MANUFACTURER'S MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
15. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
16. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
17. FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR.
18. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE.
19. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN HEREIN.
20. PROVIDE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLIES TO INDIVIDUAL FIXTURES AND EQUIPMENT. PROVIDE BALL VALVES ON ALL WATER MAIN BRANCHES IN ACCESSIBLE LOCATIONS AND WHERE INDICATED ON DRAWINGS. ALL VALVES SHALL BE ACCESSIBLE.
21. ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THE CONTRACTOR.
22. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERENCE WITH FIRE-PROOFING WORK.
23. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
24. RUN PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS.
25. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
26. PROVIDE BALANCING VALVES AT SYSTEM LOOP RETURNS AND AT RETURN RISERS. PROVIDE SHUT-OFF VALVES AT SYSTEM LOOP SUPPLIES AND SUPPLY RISERS.
27. PROVIDE VENTS AT HIGH POINTS IN PIPING SYSTEMS AND DRAIN VALVES AT LOW POINTS.
28. PROVIDE GAUGE FITTINGS AND THERMOMETER WELLS AT HOT WATER SUPPLY AND RETURN BRANCHES.
29. VERIFY EXACT SIZES, LOCATIONS, INVERTS AND ELEVATIONS PRIOR TO RUNNING ANY PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.
30. PIPING SHALL NOT RUN OVER ELECTRICAL PANELS AND SHALL BE COORDINATED WITH WORK OF OTHER TRADES.
31. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
32. FLOW CONTROL VALVES SHALL BE SIZE 1/2" AND SET AT 0.5 GPM UNLESS NOTED OTHERWISE.
33. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
34. PROVIDE DIELECTRIC UNIONS ON ALL CONNECTION BETWEEN DISSIMILAR METALS.
35. FLUSH AND DISINFECT ALL POTABLE WATER SYSTEMS AFTER FINAL INSTALLTION AND PRIOR TO BUILDING OCCUPANCY PER PLUMBING CODE.
36. ALL PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES. MATERIALS SHALL BE UL LISTED AND COMPLY WITH PLUMBING CODE.
37. CALL FOR INSPECTION AND TEST FROM AUTHORITY HAVING JURISDICTION OF ALL WASTE PIPE, WATER PIPE, AND NATURAL GAS PIPE PRIOR TO BACKFILL AND COVER PER PLUMBING CODE.

PLUMBING SYMBOL LIST

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL SYMBOLS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.

ITEM TO BE REMOVED	PRIMARY STORM DRAIN – ABOVE GRADE (ST)
POINT OF CONNECTION/DISCONNECTION	PRIMARY STORM DRAIN – BELOW GRADE (ST)
REVISION NUMBER	SECONDARY STORM DRAIN – ABOVE GRADE (STS)
EQUIPMENT MARK	REVERSE OSMOSIS (RO)
ACCESS PANEL	REVERSE OSMOSIS REMINERALIZATION (ROR)
CLEAN OUT (CO)	TRAP PRIMER LINE (T)
WALL CLEAN OUT (WCO)	TEMPERED WATER PIPING
EXTERIOR CLEAN OUT (ECO)	VENT PIPING
FLOOR DRAIN (FD), SIZE AND TYPE	VENT BELOW GRADE (VBG)
FLOOR SINK (FS), SIZE AND TYPE	VENT BELOW GRADE (VBF)
ROOF DRAIN	BALANCING VALVE W/ PRESSURE PORTS
OVERFLOW ROOF DRAIN	2-WAY ELECTRONIC CONTROL VALVE
VENT THRU ROOF	3-WAY ELECTRONIC CONTROL VALVE
FLOW SWITCH	SOLENOID VALVE
GAS REGULATOR	BUTTERFLY VALVE
GAS METER	PLUG VALVE
WATER METER	GAS COCK
WATER HAMMER ARRESTOR	BALL VALVE
SHUT-OFF VALVE IN IRRIGATION BOX	CHECK VALVE
BACKFLOW PREVENTION STATION	GATE VALVE
HOSE BIBB	HOSE END DRAIN VALVE
A – COMPRESSED AIR LINES	PRESSURE REDUCING VALVE
CD – CONDENSATE DRAIN (CD)	RELIEF VALVE
D – DRAIN PIPING	TEMPERATURE PRESSURE RELIEF VALVE
CW – DOMESTIC COLD WATER (CW)	THERMOMETER
SCW – SOFTENED COLD WATER (CW)	PRESSURE GAUGE WITH GAUGE COCK
HW – DOMESTIC HOT WATER (HW)	MANUAL AIR VENT
HWR – HOT WATER RETURN (HWR)	PRESSURE TEMPERATURE PORT
GV – GAS VENT PIPING	Y-STRAINER WITH BLOWDOWN
HPG – HIGH PRESSURE NATURAL GAS (HPG)	PIPE GUIDE
MPG – MEDIUM PRESSURE NATURAL GAS (MPG)	UNION
G – LOW PRESSURE NATURAL GAS (G)	PIPE ANCHOR
LPG – LIQUIFIED PETROLEUM GAS (LPG)	FLEXIBLE CONNECTOR
GW – ABOVE GROUND GREASE WASTE (GW)	PIPE CAP/STUB-OUT
GW – BELOW GRADE GREASE WASTE (GW)	DIRECTION OF FLOW
W – WASTE PIPING – ABOVE GRADE (W)	PIPE DOWN
W – WASTE PIPING – BELOW GRADE (W)	PIPE UP
	PIPE TEE UP
	PIPE TEE DOWN

PLUMBING ABBREVIATIONS

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL ABBREVIATIONS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.

ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
BFD	BACKFLOW PREVENTION DEVICE
BFF	BELOW FINISHED FLOOR
BHP	BRAKE HORSE POWER
BOP	BOTTOM OF PIPE
BTU/H	BRITISH THERMAL UNIT PER HOUR
CD	CONDENSATE DRAIN
CO	CLEANOUT
CP	CONDENSATE PYMP
CPVC	CHLORINATED POLYVINLY CHLORIDE
CU	COPPER
CW	COLD WATER
(D)	DEMOLISHED
DI	DUCTILE IRON
DIA	DIAMETER
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
(E)	EXISTING
ECO	EXTERIOR CLEANOUT
EFF	EFFICIENCY
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FPM	FEET PER MINUTE
G	NATURAL GAS
GA	GAGE OR GAUGE
GAL	GALLONS
GI	GREASE INTERCEPTOR
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HD	HEAD, HUB DRAIN
HP	HORSEPOWER
HPG	HIGH PRESSURE GAS
HW	HOT WATER
IBC	INTERNATIONAL BUILDING CODE
IE	INVERT ELEVATION
IPC	INTERNATIONAL PLUMBING CODE
KW	KILOWATT
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPS
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
MPG	MEDIUM PRESSURE GAS
N/A	NOT APPLICABLE
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
(R)	EXISTING TO BE RELOCATED
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
SOI	SAND OIL INTERCEPTOR
SP	SUMP PUMP
SS	STAINLESS STEEL, SANITARY SEWER, SOIL STACK
TDH	TOTAL DYNAMIC HEAD
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TW	TEMPERED WATER
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LABORATORIES, INC.
UMC	UNIFORM MECHANICAL CODE
UNO	UNLESS NOTED OTHERWISE
UPC	UNIFORM PLUMBING CODE
V	VENT
V/PH/HZ	VOLTAGE/PHASE/HERTZ
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W/	WTH
W/O	WITHOUT
WC	WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE
WSFU	WATER SUPPLY FIXTURE UNIT
WVS	WASTE VENT STACK

PLUMBING SHEET INDEX

P01 – PLUMBING NOTES AND SYMBOLS
P02 – PLUMBING PIPING PLAN
P03 – PLUMBING DETAILS

PLUMBING EQUIPMENT SCHEDULE

SYM	DESCRIPTION	MANUFACTURER & MODEL NO.	STANDARD ACCESSORIES / REQUIRED OPTIONS	ELECTRICAL HP	ELECTRICAL POWER	REMARKS
FD-1	FUEL FILL DISPENSER CABINET	FILL-RITE MODEL # FR902CRU, OR EQUAL	DIESEL FUEL FILL DISPENSER CABINET W/ 30'-0" FUEL HOSE AND DISPENSING NOZZLE, MOUNTED WITH FACTORY BRACKET MOUNTED TO THE SIDE OF THE FUEL TANK, MOUNTING HEIGHT TO BE FIELD VERIFY WITH CLIENT, 2" INLET AND 1" OUTLET, MECHANICAL GAUGES	N/A	N/A	SEE PLAN VIEW AND DETAIL FOR ALL POINTS OF CONNECTIONS FOR FUEL SUPPLY PIPING AND REQUIRED VENTS
FP-1	REMOTE TANK MOUNTED FUEL FILL PUMP SERVING DISPENSER CABINET	FILL-RITE MODEL # FR700, OR EQUAL	DIESEL FUEL RATED, TANK MOUNTED REMOTE PUMP, 20 GPM FLOW CAPACITY, RAINPROOF CAST IRON PUMP HOUSING, EXPLOSION PROOF UL LISTED MOTOR, SEALED BEARINGS, HEAVY DUTY SWITCH AND THERMAL OVERLOAD PROTECTION, BUILT-IN JUNCTION BOX, AUTOMATIC BYPASS VALVE, PRESSURE RELIEF VALVE, STRAINER, 2" NPT STANDARD TANK FITTING MOUNT	¾ HP	120V 1~ 60HZ	SEE PLAN VIEW AND DETAIL FOR PUMP MOUNTING LOCATIONS
H-1	YARD HYDRANT	WOODFORD Y1, OR EQUAL	FROST PROOF, TAMPER PROOF YARD HYDRANT. 1" CW INLET. 125 PSI MAX PRESSURE. INSTALL DOWNSTREAM OF BACKFLOW. 24" MIN. ABOVE FINISHED GROUND.	N/A	N/A	SEE PLAN VIEW AND DETAIL FOR PUMP MOUNTING LOCATIONS

100% DESIGN PLANS

No.	REVISIONS	DATE	BY

Kimley»Horn

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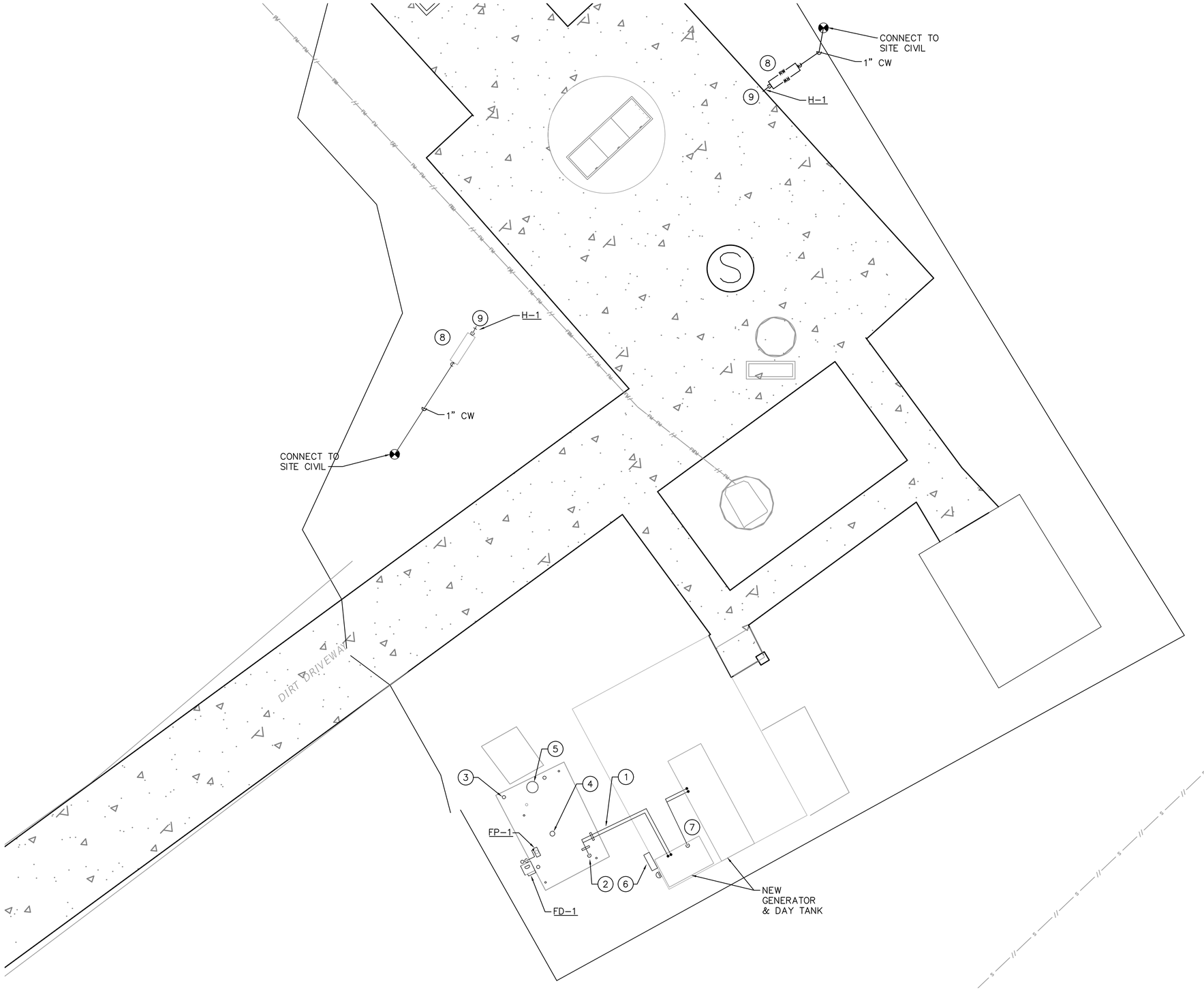
KHA PROJECT	049553018
DATE	APRIL, 2024
SCALE	AS SHOWN
DESIGNED BY	LDA
DRAWN BY	CPV
CHECKED BY	JCF

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

PLUMBING GENERAL NOTES & SYMBOLS

SHEET NUMBER
P01

Plotted By:Shukla, Sakshi Sheet Set:LS 7W IMPROVEMENTS Layout:P01 June 26, 2024 04:15:43pm K:\ORL_Utilities\049553 -Winter Springs\018 – LS 7W Improvements\CADD\PlanSheets\P01 GENERAL NOTES.dwg
K:\ORL_Utilities\049553 -Winter Springs\018 – LS 7W Improvements\CADD\PlanSheets\P01 GENERAL NOTES.dwg
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PLUMBING PIPING PLAN

SCALE: 1" = 5'-0"

KEY NOTES

1. 1/2" FOS & FOR. PIPING TO BE THREADED SCHEDULE 40 BLACK STEEL.
2. 1/2" FOS AND 1/2" FOR WITH FOOT VALVE AND ANTI SIPHONING VALVE, REFER TO DETAILS.
3. ROUTE VENT PIPING WITH A PRESSURE VACUUM CAP TO A MINIMUM HEIGHT OF 12'-0" AFG.
4. EMERGENCY PRESSURE / VACUUM CAP.
5. SEVEN GALLON SPILL CONTAINMENT WITH FILL PORT LOCATED ON TOP OF THE TANK.
6. LEAK DETECTION CONTROL PANEL AND AUDIBLE ALARM. FIELD VERIFY EXACT LOCAITON IN FIELD WITH OWNER.
7. PROVIDE GENERATOR WITH FLEXIBLE STAINLESS STEEL OIL DRAIN HOSE 3/8" NPT WITH 18" LENGTH FOR CRANKCASE.
8. BACKFLOW PREVENTER. SEE CIVIL DRAWINGS FOR DETAILS.
9. PROVIDE YARD DOWNSTREAM OF BACKFLOW, 24" AFG.

100% DESIGN PLANS

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FL LICENSE NUMBER 92845
DATE: ———

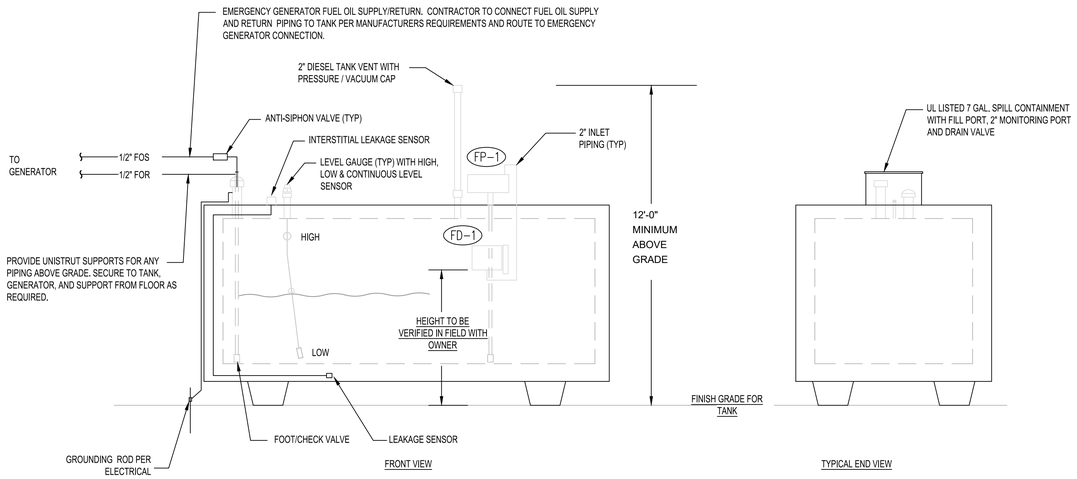
KHA PROJECT 049553018			
DATE APRIL, 2024			
SCALE AS SHOWN	DESIGNED BY	LDA	
	DRAWN BY	CPV	
	CHECKED BY	JCF	

LS 7W IMPROVEMENTS
PREPARED FOR CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

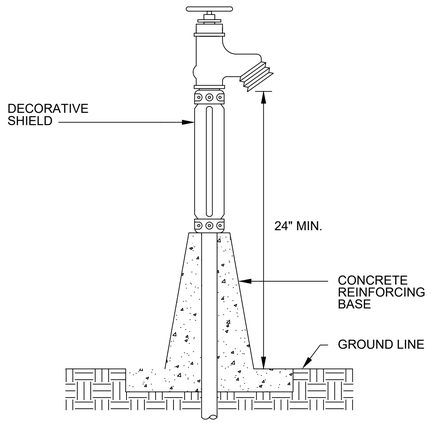
PLUMBING BUILDING PLAN

SHEET NUMBER P02

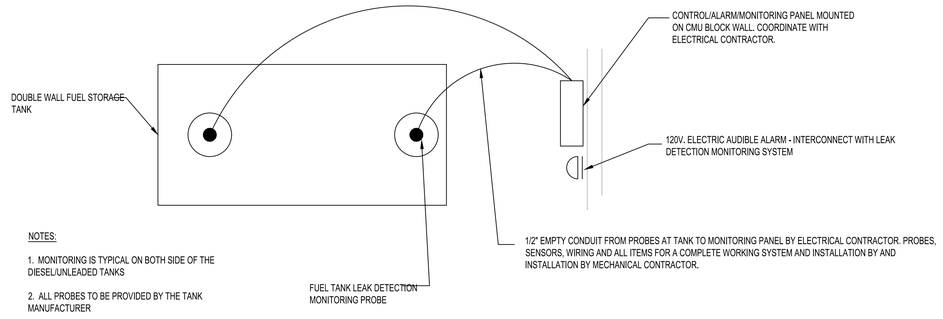
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1 FUEL STORAGE TANK DETAIL (EXISTING)
SCALE: NTS



3 YARD HYDRANT – POST TYPE DETAIL
SCALE: NTS



NOTES:

1. MONITORING IS TYPICAL ON BOTH SIDE OF THE DIESEL/UNLEADED TANKS
2. ALL PROBES TO BE PROVIDED BY THE TANK MANUFACTURER

2 LEAK DETECTION MONITORING / ALARM DETAIL
SCALE: NTS

100% DESIGN PLANS

No.	REVISIONS	DATE	BY

Kimley»Horn
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LICENSED PROFESSIONAL
ERIC TSIGULOFF, P.E.
FL LICENSE NUMBER 92845
DATE: ——

KHA PROJECT 049553018
DATE APRIL, 2024
SCALE AS SHOWN
DESIGNED BY LDA
DRAWN BY CPV
CHECKED BY JCF

LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

PLUMBING DETAILS

SHEET NUMBER
P03

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MECHANICAL NOTES LIST

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
3. COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
5. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
6. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
7. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.
8. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY DIVISION 23 UNLESS OTHERWISE NOTED.
9. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
10. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION, DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER. THE INTERNAL SURFACES AND ASSOCIATED COILS OF ANY HVAC UNITS THAT WERE OPERATED SHALL ALSO BE CLEANED.
11. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
12. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
13. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
14. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
15. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
16. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
17. PAINT PORTIONS OF DUCTWORK AND INSULATION THAT ARE EXPOSED TO VIEW BY THE INSTALLATION OF DIFFUSERS, REGISTERS, AND GRILLES IN CEILINGS OR WALLS FLAT BLACK. PORTIONS INCLUDE BOTH THE INTERIOR OF UNLINED DUCTWORK AND THE EXTERIOR OF DUCTWORK AND INSULATION.
18. DUCTWORK CROSSING FIRE RATED WALLS OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
19. PROVIDE FIRE OR FIRE/SMOKE DAMPERS, AS APPLICABLE, IN DUCTWORK AT CEILINGS AND WALLS AT LOCATIONS SHOWN ON THE PLANS. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE. COORDINATE SLEEVE LENGTH WITH REQUIREMENTS OF INSTALLED LOCATION.
20. PROVIDE WALL OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO FIRE AND FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 10" BY 10" AND SHALL BE INSTALLED WITHIN 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR A 10" BY 10" ACCESS DOOR.
21. LOCATE AND SET THERMOSTATS AND HUMIDISTATS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS. PROVIDE INSULATED BACKING FOR THERMOSTATS MOUNTED ON EXTERIOR BUILDING WALLS. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 26. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6" ABOVE THE CEILING.
22. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH PRESENTATION BOARDS, DISPLAY CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
23. PROVIDE A MANUAL BALANCING DAMPER IN EACH DUCT TAKEOFF FROM SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
24. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES. PROVIDE WITH INTEGRAL MANUAL BALANCING DAMPER AND LOCKING QUADRANT WHERE INDICATED ON PLANS.
25. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
26. REFER TO MANUFACTURER SPECS FOR PIPING INSULATION REQUIREMENTS. 1-1/2" INSULATION FOR LIQUID PIPING AND 1/2" FOR SUCTION PIPING. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS.
27. PROVIDE EQUIPMENT VENTS AND FLUES PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND EQUIPMENT SPECIFICATIONS. KEEP PENETRATIONS THROUGH ROOF A MINIMUM OF 10'-0" FROM HVAC EQUIPMENT FRESH AIR INLETS AND 2'-0" FROM ROOF PARAPETS.
28. PROVIDE WALL MOUNTED LOUVERS AND DAMPERS WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.
29. PROVIDE A NEW SET OF AIR FILTERS IN UNITS PRIOR TO TESTING, ADJUSTING AND BALANCING AND BEFORE TURNING SYSTEM(S) OVER TO OWNER.
30. FULLY CHARGE EXISTING REFRIGERANT SYSTEMS BEING REUSED FOR THIS PROJECT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. CHARGE SYSTEMS WITH NEW REFRIGERANT MATCHING EXISTING.

MECHANICAL SYMBOLS LIST

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL SYMBOLS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.

- ITEM TO BE REMOVED
- ACCESS PANEL
- SUPPLY AIR DUCT UP/DOWN
- RETURN AIR DUCT UP/DOWN
- EXHAUST AIR DUCT UP/DOWN
- RETURN GRILLE
- EXHAUST GRILLE
- 4-WAY BLOW SUPPLY DIFFUSER
- 3-WAY BLOW SUPPLY DIFFUSER
- 2-WAY BLOW SUPPLY DIFFUSER
- 1-WAY BLOW SUPPLY DIFFUSER
- AIRFLOW DIRECTION
- --"Ø ROUND DUCTWORK (INCHES)
- --"X--" RECTANGULAR DUCTWORK (INCHES)
- ROUND FLEXIBLE DUCT
- SQUARE TO ROUND TRANSITION
- SINGLE LINE RIGID DUCT
- SINGLE LINE RIGID DUCT (ACOUSTICALLY LINED)
- DOUBLE LINE RIGID DUCT
- DOUBLE LINE RIGID DUCT (ACOUSTICALLY LINED)
- EXISTING DUCTWORK
- (FD) FIRE DAMPER
- (SD) SMOKE DAMPER
- (FSD) FIRE/SMOKE DAMPER
- (BD) BACKDRAFT DAMPER
- MANUAL VOLUME DAMPER
- (MD) MOTORIZED DAMPER
- MANUAL VOLUME DAMPER
- REMOTE VOLUME DAMPER
- (S)RD DUCT SMOKE DETECTOR (SD = SUPPLY, RD = RETURN)
- (U) DOOR UNDERCUT

MECHANICAL ABBREVIATIONS

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL ABBREVIATIONS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.

AABC	AMERICAN AIR BALANCE COUNCIL
A/C	AIR CONDITIONING
ACC	AIR COOLED CHILLER
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BD	BACKDRAFT DAMPER
BFD	BACKFLOW PREVENTION DEVICE
BFF	BELOW FINISHED FLOOR
BHP	BRAKE HORSE POWER
BI	BINARY INPUT
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT
BTU/H	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CLG	COOLING
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CU	CONDENSING UNIT
CV	CONTROL VALVE
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
dB	DECIBLES
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DI	DIGITAL INPUT
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
FFA	FINISHED FLOOR ABOVE
FFB	FINISHED FLOOR BELOW
FF	FINISHED FLOOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
GA	GAGE OR GAUGE
GAL	GALLONS
GPM	GALLONS PER MINUTE
HD	HEAD
HP	HORSEPOWER
HSPF	HEATING SEASONAL PERFORMANCE FACTOR
HTG	HEATING
IBC	INTERNATIONAL BUILDING CODE
IMC	INTERNATIONAL MECHANICAL CODE
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
MVD	MANUAL VOLUME DAMPER
N/A	NOT APPLICABLE
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NC	NOISE CRITERIA
NEBB	NATIONAL ENVIROMENTAL BALANCING BUREAU
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PROVIDE	FURNISH & INSTALL
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH GAUGE
QTY	QUANTITY
(R)	EXISTING TO BE RELOCATED
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RL/S	REFRIGERANT LIQUID/SUCTION
RPM	REVOLUTIONS PER MINUTE
RPPA	REDUCED PRESSURE PRINCIPAL ASSEMBLY
SA	SUPPLY AIR
SD	SMOKE DAMPER
SD	SUPPLY DUCT
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SH	SENSIBLE HEAT CAPACITY
"SP	STATIC PRESSURE (INCHES OF)
SPECS	SPECIFICATIONS
SQFT	SQUARE FEET
SS	STAINLESS STEEL
T	TEMPERATURE
TAB	TEST AND BALANCE WORK AND REPORT
TBD	TO BE DETERMINED
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TH	TOTAL HEAT CAPACITY
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
U/G	UNDERGROUND
UBC	UNIFORM BUILDING CODE
UMC	UNIFORM MECHANICAL CODE
UNO	UNLESS NOTED OTHERWISE
V/PH/HZ	VOLTAGE/PHASE/HERTZ
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
XP	EXPLOSION PROOF

MECHANICAL CONTROL DEVICES

- (T) THERMOSTAT
- (H) HUMIDISTAT
- [C] TEMPERATURE SENSOR
- [C] HUMIDITY SENSOR
- [C] STATIC PRESSURE SENSOR
- [C] DIFFERENTIAL PRESSURE SENSOR
- [C] FLOW SWITCH
- [C] CARBON MONOXIDE SENSOR
- [C] CARBON DIOXIDE SENSOR

GENERAL NOTE: ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE FREE DIMENSIONS. REFER TO SPECIFICATIONS FOR INSULATION WRAP AND LINER TYPES & SIZES.

THERMOSTATS (USER ADJUSTABLE) – TOP OF DEVICE	48" AFF
CONTROL DEVICES – TOP OF DEVICE	48" AFF

INSTALL ALL DEVICES AT ELEVATIONS SHOWN ABOVE UNLESS NOTES OTHERWISE IN DRAWINGS OR SPECIFICATIONS. ELEVATIONS ARE DIMENSIONED FROM AFF OR AFG TO TOP OF DEVICE. INSTALL ALL DEVICES IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS. REFER TO ARCHIECTURAL DRAWINGS FOR LOCATIONS & ELEVATIONS.

- POINT OF CONNECTION/DISCONNECTION
- # REVISION NUMBER
- – – EQUIPMENT MARK
- 1 / M1

HVAC SHEET INDEX

H0.1 – HVAC GENERAL NOTES AND ABBV.

H1.1 – HVAC BUILDING FLOOR PLAN

DX SPLIT UNIT DATA

		EVAPORATOR UNIT DATA												CONDENSER UNIT DATA											
		COOLING			HEATING			ELECTRICAL								ELECTRICAL									
MARK	AIRFLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB/WB	CAPACITY (MBH)	EAT (°F)	LAT (°F)	CAPACITY (MBH)	V	ø	HZ	MCA	MOCP	BASIS OF DESIGN	MARK	NOM. CAPACITY (MBH)	V	ø	HZ	COMP RLA	FAN FLA	MCA	MOCP	EER	HSPF	BASIS OF DESIGN	NOTES
FCU–1	335	80/67	55/54	14	70	80	18	208	1	60	1A	15A	MITSUBISHI MSZ–HM15NA	CU–1	15	208	1	60	7.4	0.5	10	15	12.0	10.0	MITSUBISHI MUZ–HM15NA	1–7

NOTE:
1. PROVIDE REFRIGERANT LINES SIZED PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE CLEARANCE AROUND UNIT PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE P–TRAPS AND ARRANGE SLOPE OF REFRIGERANT PIPING FOR OIL RETURN.
4. GRAVITY DRAIN CONDENSATE TO EXTERIOR ONTO PERVIOUS GRADE.
5. PROVIDE PROGRAMMABLE T–STAT AND SAFETY CONTROLS.
6. PROVIDE CU–1 ON CONCRETE HOUSEKEEPING PAD WITH HURRICANE RATED TIE DOWNS.
7. INDOOR UNIT IS POWERED BY OUTDOOR UNIT.

100% DESIGN PLANS

No.	REVISIONS	DATE	BY

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ERIC TSIGULOFF, P.E.
FL LICENSE NUMBER 92845
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LS 7W IMPROVEMENTS
PREPARED FOR
CITY OF WINTER SPRINGS
SEMINOLE COUNTY FL

HVAC GENERAL NOTES & SYMBOLS

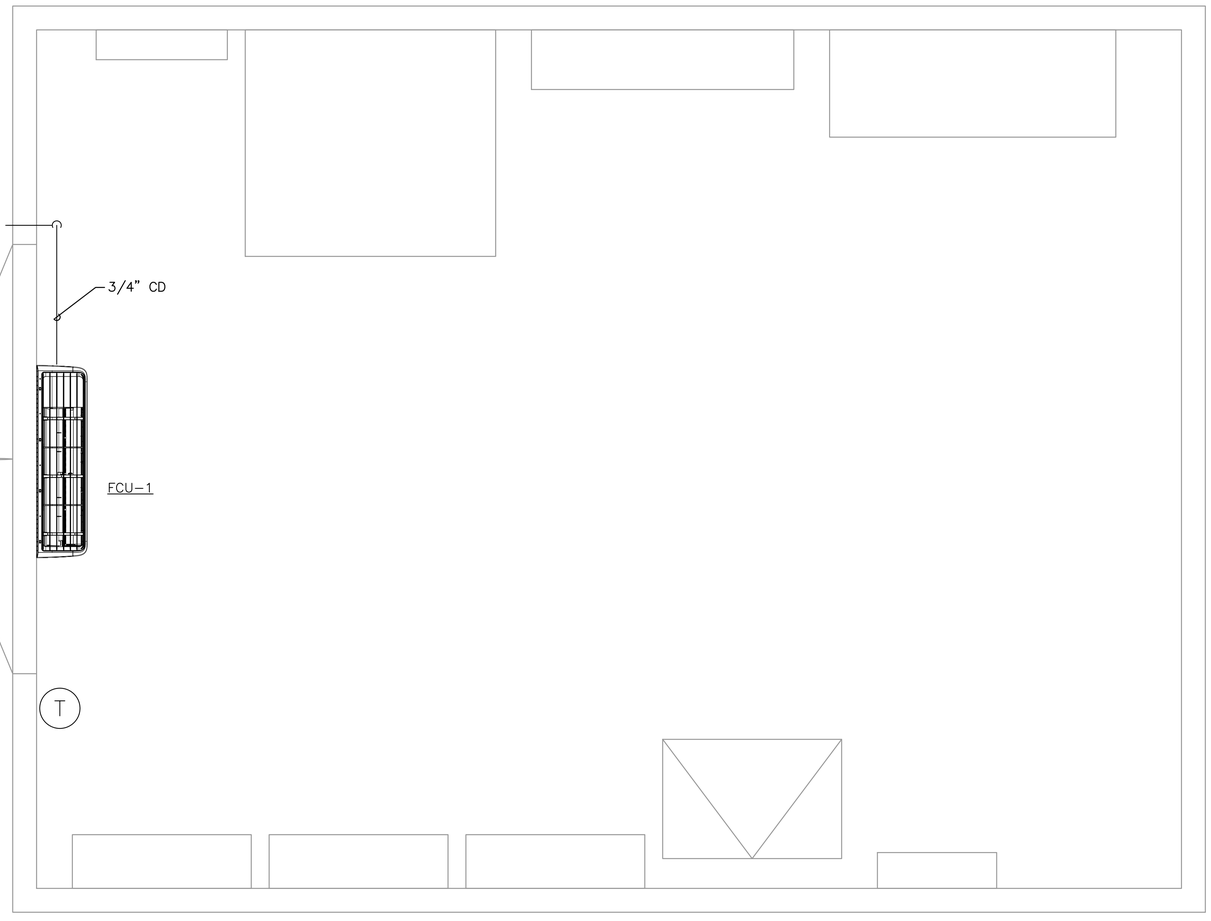
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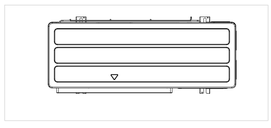
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GENERAL NOTES

1. PROVIDE CONCRETE HOUSEKEEPING PAD FOR CONDENSING UNIT PER MANUFACTURER SPECIFICATIONS. ROUTE REFRIGERANT PIPING UP THE BUILDING TO INDOOR UNIT. PROVIDE INSULATION FOR ALL REFRIGERANT AND APPLY UV RESISTANT PAINT FOR OUTDOOR REFRIGERANT PIPING INSULATION.



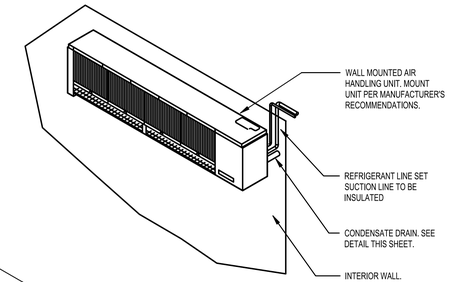


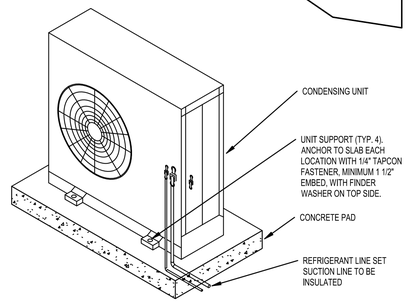
CU-1

MECHANICAL BUILDING PLAN

SCALE: 1"=1'-0"

0 1/2' 1' 2'





DUCTLESS SPLIT DETAIL

NOT TO SCALE

100% DESIGN PLANS

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LS 7W IMPROVEMENTS

PREPARED FOR CITY OF WINTER SPRINGS

SEMINOLE COUNTY

HVAC NEW BUILDING PLAN

SHEET NUMBER H02

RFP 07-24-01 BI Lift Station 7W Replacement - Proposal Evaluation Evaluator Team Results: Date: Sept. 09, 2024

Criteria	Max. Points	Mid South	San Pik	Prime Construction Group	Scoring Notes
Experience: ***The Proposer's experience in design and construction projects of this or a similar nature***					
Proposer has demonstrated significant experience and references provided attest to their skills and capabilities with designing and constructing lift stations	**25 X3**	**20**	**59**	**71**	
Proposers has significant experience in successfully completing projects very similar to this project and has the necessary capabilities and skills to undertake this project	**20 X3**	**20**	**56**	**58**	
Experience Total	**45 X 3**	**40**	**115**	**129**	
Proposers has significant experience in successfully completing projects very similar to this project and has the necessary capabilities and skills to undertake this project					
Reference 1	**15 X 3**	**16**	**36**	**34**	
Reference 2	**15 X 3**	**16**	**37**	**35**	
References Total	**30 X 3**	**32**	**73**	**69**	
Cost: *The cost of the Proposal is important to the CITY, however, based on the evaluation of the other criteria, the CITY will not necessarily select the lowest Proposer. Cost Total:*	**25 X 3**	**69**	**45**	**62**	
EXTRA BONUS POINTS: Certified Minority Business Enterprise: (3 Extra Bonus Points if Yes) *The firm is a certified minority business enterprise as defined by the Florida Small and Minority Business assistance act*	**3 X 3**	**0**	**0**	**0**	
Total Possible Points	**103 X 3**	**141**	**233**	**260**	0

Evaluators : David Kerr, Clifton Mullis, Todd Petrie

Comments from evaluators of RFP 07-24-01 BI regarding their concerns about the lowest cost bidder (Mid South Inc.) that affected their scoring of the proposal submitted for the Lift Station 7W replacement project are below.

1) “In reviewing the package received, Mid South did not provide documentation supporting the company's experience related to the type of project, history of the company, or staff details such as resumes or project assignments. In addition, the company did not provide completed projects with any details for review. Only references were provided. The vendor selection criteria assigned points to these topics. As the company did not provide any of these details for consideration, low or no points were assigned to these criteria.”

2) “While reviewing the proposal package I saw no comparable jobs submitted, the references included did not support the type of job, and overall their seemed to be some missing criteria from the contractor. The proposal was insufficient in providing firm support for the undertaking of a project this size.”

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

RFP # 07-24-01 BI

Replacement of Lift Station 7W

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: Midsouth Inc.

TAX ID# SNN or EIN: 92-0659280

PROPOSER ADDRESS: 132 Bushnell Plaza, Bushnell FL 33513

PURCHASE ORDER ADDRESS: PO Box 1330 Bushnell FL 33513

PHONE NUMBER: 352-446-7272

COMPANY WEBSITE: www.midsouthfl.com

COMPANY CONTACT (REP): Scott Smith, President

CONTACT EMAIL ADDRESS: scott@midsouth.info

SIGNATURE: 

THE UNDERSIGNED:

A. Acknowledges receipt of:

1. RFP # 07-24-01 BI Pertaining To: Replacement of Lift Station 7W
2. Addenda: 1 July 16, 2024
   Number: 2, Dated August 2, 2024
   Number: 3, Dated August 2, 2024
   4 August 26, 2024

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:

1. To hold this Proposal open for 90 calendar days after the bid opening date.
2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
3. To accept the provisions of the Instructions to PROPOSERS.
4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
5. To accomplish the work in accordance with the contract documents.

D. Certifies:

1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

2024 FLORIDA PROFIT CORPORATION AMENDED ANNUAL REPORT

FILED
Aug 21, 2024
Secretary of State
5164537936CC

DOCUMENT# P22000077864

Entity Name: MIDSOUTH, INC.

Current Principal Place of Business:

132 BUSHNELL PLAZA
BUSHNELL, FL 33513

Current Mailing Address:

P.O. BOX 1330
BUSHNELL, FL 33513 US

FEI Number: 92-0659280

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

DURHAM, MARGARET H
132 BUSHNELL PLAZA
BUSHNELL, FL 33513 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE: MARGARET DURHAM 08/21/2024
Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	P, D, S
Name	SMITH, WILLIAM SCOTT
Address	P.O. BOX 1330
City-State-Zip:	BUSHNELL FL 33513

Title	CONTROLLER, ASST. SECRETARY
Name	DURHAM, MARGARET
Address	P.O. BOX 1330
City-State-Zip:	BUSHNELL FL 33513

Title	VP
Name	CROFT, III, CHARLES C
Address	P.O. BOX 1330
City-State-Zip:	BUSHNELL FL 33513

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: WILLIAM SCOTT SMITH PRESIDENT 08/21/2024
Electronic Signature of Signing Officer/Director Detail — Date

REFERENCE INFORMATION FORM

RFP # 07-24-01 BI

Replacement of Lift Station 7W

Organization: Hernando Co Utilities

Contact Person: Alan Turner, Senior Project Manager

Address: 15470 Flight Path Drive

City: Brooksville State: FL Zip: 34604

Phone Number: (352) 540-6219 cturner@hernandocounty.us

Project Cost: $2.2 Million Elgin Blvd Fore Main Date Performed: Completion 10/2024

Organization: Citrus County BOCC

Contact Person: Len Brown, Project Manager

Address: 3600 Sovereign Path

City: Lecanto State: FL Zip: 34461

Phone Number: (352) 586-2780 leonard.brown@citrusbocc.com

Project Cost: $1.8 Million Brentwood Meadowcrest WWTF Date Performed: Final 5/2024

work was subbed to Pospiech Contractin

Organization: City of Inverness

Contact Person: Alan Garri, EOR Kimley Horn Engineering, alan.garri@kinley-horn.com

Address: City of Inverness, 212 W. Main St

City: Inverness State: FL Zip: 34450

Phone Number: (352) 726-2611 x1504 City of Inverness Asst PW Director (Robert Pell)

Project Cost: $5 Million HWY 44 W Sewer Extension Date Performed: Final 7/2024

PROPOSER Representative Typed Name/Title: William Scott Smith, PRESIDENT

PROPOSER Representative Signature:

PROPOSER: Midsouth Inc.

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
	Commercial General Liability	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability.
✔	(Occurrence Form) patterned after the current ISO form	This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

PROPOSER shall ensure that all subcontractors comply with the same insurance requirements that it is required to meet. The same PROPOSER shall provide the CITY with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.

Thirty (30) days cancellation notice required.

The undersigned PROPOSER agrees to obtain, prior to award, if selected, insurance as stated above.

Midsouth Inc.

PROPOSER



Authorized Signature

William Scott Smith, President

Officer Title

August 26, 2024

Date

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/14/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER M.E. Wilson Company LLC Waldorff Insurance & Bonding 45 Eglin Parkway NE Ste 202 Fort Walton Beach FL 32548	**CONTACT NAME:** **PHONE (A/C, No, Ext):** 850-581-4925 **FAX (A/C, No):** 850-581-4930 **E-MAIL ADDRESS:** receptionist@waldorffinsurance.com
INSURED POSPCON-01 Pospiech Contracting, Inc. Midsouth, Inc. 201 S. Apopka Ave Inverness FL 34452	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** Westfield Insurance Company — 24112 **INSURER B :** Illinois Union Insurance Co. — 27960 **INSURER C :** Zurich American Ins Co — 16535 **INSURER D :** Navigators Specialty Insurance Company — 36056 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 50089842 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			CMM8659781	12/15/2023	12/15/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 500,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			CMM8659781	12/15/2023	12/15/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) PIP	$ 1,000,000 $ $ $ $ $10,000
D	X **UMBRELLA LIAB** X OCCUR X **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 0			GA23EXCZ06ZN3IC	12/15/2023	12/15/2024	EACH OCCURRENCE AGGREGATE $	$ 4,000,000 $ 4,000,000 $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N/A					PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $
C B	Lsd/Rntd Eqpt. Pollution Liability			CPP 8025006-04 CPYG7113393A004	12/15/2023 12/15/2023	12/15/2024 12/15/2024	Limit Limit Per Occurrence	500,000 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

FOR BIDDING PURPOSES

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/31/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Comp360, LLC 170 Fitzgerald Rd Ste 2 Lakeland FL 33813	CONTACT NAME: PHONE (A/C, No, Ext): 863-646-3332 FAX (A/C, No): 863-646-3031 E-MAIL ADDRESS: info@comp360.com
INSURED POSPCON-01 Pospiech Contracting, Inc. 201 S Apopka Ave Inverness FL 34452	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Third Coast Insurance Company — 10713 INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 1227271486 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	☐ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$
	☐ OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A	Y	3C WCP 100048887 02	9/1/2023	9/1/2024	X PER STATUTE ☐ OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

For Bidding Purposes Only

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF FLORIDA

COUNTY OF SUMTER

The foregoing instrument was acknowledged before me by means of (XX) physical presence ~~or (_____) online~~ notarization,

this 26th day of August, 2024 by William Scott Smith the President of

Midsouth Inc., a FL S Corporation (XX) who is personally known to me ~~or (_____) who~~

~~produced----------as identification~~.

Notary Public: _____

DARLA CROFT
~~Notary Public - State of Florida~~
Commission # HH 190984
My Comm. Expires Oct 25, 2025
Bonded through National Notary Assn.

Print Name: Darla Croft

My Commission Expires: 10/25/25

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF FLORIDA

COUNTY OF CITRUS

William Scott Smith, being duly sworn, deposes and says that:

(1) He/~~she~~ is President (Title) of Midsouth Inc. (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed) William Scott Smith — President (Title)

STATE OF Florida

COUNTY OF Citrus

The foregoing instrument was acknowledged before me this August 26, 2024 by William Scott Smith,

who is (XX) personally known to me ~~or (----) who has produced ---------- as identification~~ and

who (~~did~~ / did not) take an oath.

(Signature of Notary Public)

DARLA CROFT
Notary Public - State of Florida
Commission # HH 190984
My Comm. Expires Oct 25, 2025
Bonded through National Notary Assn.

Darla Croft (Name of Notary Typed, Printed or Stamped) Notary Public

HH190984 (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

Midsouth Inc. does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) August 26, 2024 (Date)

William Scott Smith, President
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BI Replacement of Lift Station 7W.

2. This sworn statement is submitted by (PROPOSER) Midsouth Inc. whose business address is 132 Bushnell Pza, Bushnell FL 33513 and (if applicable) Federal Employer Identification Number (FEIN) is 92-0659280 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is William Scott Smith and my relationship to the PROPOSER named above is President.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:

- A predecessor or successor of a person convicted of a public entity crime; or
- An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

XX Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

PUBLIC ENTITY CRIMES STATEMENT cont.

Signature William Scott Smith, Pres — Date: August 26, 2024

STATE OF FLORIDA

COUNTY OF CITRUS

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/~~her~~ signature at the space provided above on this 26th day of August, 2024, and is personally known to me, or ~~has provided----------as identification~~.

Darla Croft

My Commission expires: 10/25/25

DARLA CROFT
Notary Public - State of Florica
Commission # HH 190984
My Comm. Expires Oct 25, 2025
Bonded through National Notary Assn.

DEBARMENT, SUSPENSION and OTHER RESPONSIBILITY MATTERS

Certification A - Primary Covered Transactions

The prospective primary participant certifies to the best of its knowledge and belief that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal debarment or agency;

b. Have not within a three-year period preceding this proposal, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation of this proposal.

Instructions for Certification (A)

By signing and submitting this Bid, the prospective primary participant is providing the certification set out below;

a. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or any explanation shall disqualify such person from participation in this transaction.

b. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

c. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

d. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules

implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

e. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

f. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines this eligibility of its principals. Each participant may, but is not required to, check the Non- procurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph (6) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

Certification B - Lower Tier Covered Transactions

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (B)

By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

a. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

b. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

c. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of these regulations.

d. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

e. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause title "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitation for lower tier covered transactions.

f. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principles. Each participant may but is not required to, check the Non- procurement List.

g. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

h. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a lower covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies including suspension and/or debarment.

Bidder: Midsouth Inc.	Date: 8/26/2024
Signature of Authorized Certifying Official: 	Title: President

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BI

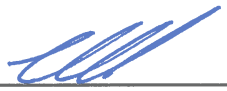
Project Description: Replacement of Lift Station 7W

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: Midsouth Inc.

Authorized Signature: 

Title: President

Date: August 26, 2024

E-Verify

E-VERIFY IS A SERVICE OF DHS AND SSA

Company ID Number: 2034498

Approved by:

Employer Midsouth Inc	
Name (Please Type or Print) Margaret Durham	**Title**
Signature Electronically Signed	**Date** 12/05/2022
Department of Homeland Security – Verification Division	
Name (Please Type or Print) USCIS Verification Division	**Title**
Signature Electronically Signed	**Date** 12/05/2022

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BI Replacement of Lift Station 7W***

This sworn statement is submitted by (PROPOSER) Midsouth Inc. whose business address is

132 Bushnell Plaza, Bushnell FL 33513 and (if applicable) Federal Employer Identification Number (FEIN) is

92-0659280 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social

Security Number: _____.)

My name is William Scott Smith and my relationship to the PROPOSER named above is President.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____ 8/26/2024

Signature William Scott Smith, President Date:

STATE OF FLORIDA

COUNTY OF SUMTER

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/~~her~~ signature at the space provided above on this 26th day of August, 2024 and is personally known to me, or ~~has provided _____ as identification~~.

_____ My Commission expires: 10/25/25

Notary Signature

DARLA CROFT
Notary Public - State of Florida
Commission # HH 190984
My Comm. Expires Oct 25, 2025
Bonded through National Notary Assn.

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

PROPOSER Company Name: Midsouth Inc.

Project Name : ***Replacement of Lift Station 7W***

RFP Number : ***RFP # 07-24-01 BI***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.
- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.
- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.
- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.
- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. §1352 (as amended)

Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352 (as amended). Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. See below – Certification Regarding Lobbying.

Byrd Anti-Lobbying Certification

Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Byrd Anti-Lobbying Amendment, 31 U.S.C. §1352 (as amended)

The PROPOSER, Midsouth Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of PROPOSER's Authorized Official

William Scott Smith, President

Name and Title of PROPOSER's Authorized Official

August 26, 2024

Date

Appendix A
COST PROPOSAL WORKSHEET

Part 1 :

The total cost of the construction of the Replacement Lift Station 7W is:

Three Million, Five Hundred Thirty Nine Thousand, Forty Six Dollars and 00/100 ($ 3,539,046.00)

The estimated time to substantial completion of the project is 45 weeks from Notice To Proceed

Part 2 :

The individual cost elements are as follows:

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	Mobilization/Demobilization	LS	1	$ 125,910.00	$ 125,910.00
2	Insurance, Performance and Payment Bond	LS	1	$ 37,450.00	$ 37,450.00
3	Preconstruction Video	LS	1	$ 1,790.00	$ 1,790.00
4	Construction Testing (Pressure, Density Testing, etc.)	LS	1	$ 32,030.00	$ 32,030.00
5	Survey Layout & Record Drawings	LS	1	$ 19,540.00	$ 19,540.00
				SUBTOTAL	**$ 216,720.00**
SITE/CIVIL					
6	Demolition	LS	1	$ 57,080.00	$ 57,080.00
7	General Restoration - (site cleanup, debris removal)	LS	1	$ 33,330.00	$ 33,330.00
8	Clearing and grubbing, grading, general erosion control	LS	1	$ 37,970.00	$ 37,970.00
9	Asphalt Pavement Removal & Restoration	SY	55	$ 450.00	$ 24,750.00
10	Silt Fence (TYP.)	LF	1,865	$ 2.60	$ 4,849.00
11	Lift Station Abandonment	CY	221	$ 512.50	$ 113,262.50
12	Abandonment of existing 18-in PVC Sanitary Sewer	LF	315	$ 120.00	$ 37,800.00
13	Removal of existing 6-in VCP Sanitary Sewer	LF	41	$ 250.00	$ 10,250.00
14	Abandonment of existing 12-in VCP Sanitary Sewer	LF	188	$ 80.00	$ 15,040.00
15	Abandonment of existing 24-in RCP Sanitary Sewer	LF	52	$ 320.00	$ 16,640.00
16	Abandonment of existing 10-in By-pass force main	LF	188	$ 90.00	$ 16,920.00
17	10-inch Line-Stop	EA	1	$ 38,320.00	$ 38,320.00
18	Existing Manhole Modification	EA	2	$ 19,360.00	$ 38,720.00
19	Manhole Installation	EA	3	$ 45,740.00	$ 137,220.00
20	Fence Removal	LF	214	$ 40.00	$ 8,560.00
21	Fencing	LF	335	$ 40.00	$ 13,400.00
22	Bypass Operations	LS	1	$ 256,580.00	$ 256,580.00
				SUBTOTAL	**$ 860,691.50**
CONCRETE					
23	Concrete (Driveway, Concrete Pads, New sidewalk)	CY	410	$ 480.00	$ 196,800.00
				SUBTOTAL	**$ 196,800.00**

UTILITIES					
24	12-in DIP/HDPE Disharge Piping (Piping, Fittings, Valves, etc.)	LS	1	$ 54,620.00	$ 54,620.00
25	Potable and Reclaimed water service Connections	EA	2	$ 4,460.00	$ 8,920.00
26	20" Plug Valve (if existing is not operational)	EA	1	$ 49,750.00	$ 49,750.00
27	16-in PVC Force Main	LF	35	$ 380.90	$ 13,331.50
28	20-in PVC Force Main	LF	20	$ 494.50	$ 9,890.00
29	20-in Existing Force Main Connection	EA	1	$ 42,150.00	$ 42,150.00
30	1-in PVC Potable Water Service	LF	140	$ 90.00	$ 12,600.00
31	1-in PVC Reclaimed Water Service	LF	15	$ 640.00	$ 9,600.00
32	6-in PVC Sanitary Sewer	LF	20	$ 390.00	$ 7,800.00
33	8-in PVC Sanitary Sewer	LF	41	$ 330.00	$ 13,530.00
34	12-in PVC Sanitary Sewer	LF	199	$ 600.00	$ 119,400.00
35	21-in PVC Sanitary Sewer	LF	372	$ 500.00	$ 186,000.00
36	24-in PVC Sanitary Sewer	LF	12	$ 1,380.00	$ 16,560.00
37	16-in Magnetic Flow Meter	EA	1	$ 76,740.00	$ 76,740.00
				SUBTOTAL	**$ 620,891.50**
ELECTRICAL					
38	Electrical I&C	LS	1	$ 374,423.00	$ 374,423.00
39	Prefabricated Concrete Electrical Building	LS	1	$ 179,590.00	$ 179,590.00
40	Generator Installation	EA	1	$ 105,120.00	$ 105,120.00
				SUBTOTAL	**$ 659,133.00**
MECHANICAL					
41	Wet Well Installation	LS	1	$ 897,490.00	$ 897,490.00
42	Submersible Pumps Installation	LS	1	$ 87,320.00	$ 87,320.00
				SUBTOTAL	**$ 984,810.00**

Appendix B - BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

MidSouth, Inc. as Principal, and Liberty Mutual Insurance Company as Surety, are hereby and firmly bound unto the CITY OF WINTER SPRINGS as OWNER, in the penal sum of FIVE percent of amount bid Dollars ($ 5%) for the payments of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the CITY OF WINTER SPRINGS a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Work described as: Replacement of Lift Station 7W

NOW, THEREFORE, if the Principal shall not withdraw said Bid within 90 days after the opening of the same, or in the alternate, if said Bid shall be accepted and the Principal shall execute and deliver required certificates of insurance and a contract that, at minimum, includes the terms of the Form of Agreement attached hereto (properly completed in accordance with said Bid), and shall give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then this obligation shall be void; otherwise the same shall remain in force and effect and the sum herein stated shall be due and payable to the CITY OF WINTER SPRINGS and the Surety herein agrees to pay said sum immediately, upon demand of the CITY OF WINTER SPRINGS, in good and lawful money of the United States of America, as liquidated damages for failure of the Principal; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such Bid; and said Surety does hereby give waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this 16 day of August, 2024, the name and corporate seal of each corporate body being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Witness)

MidSouth, Inc.
(Principal) (Seal)

SCOTT SMITH, (Title) ~~VICE~~ PRESIDENT

PO BOX 1330
BUSHNELL, FL 33513
(Address)

Liberty Mutual Insurance Company
(Surety) (Seal)

Trava Ridlon (Title) Attorney-in-Fact & FL Resident Agent

175 Berkeley St., Boston, MA 02116
(Address)

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8211150-964021

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Benjamin H. French; Ronald J. Hays; Paul A. Locascio; Joshua T. Morgan; Trava Ridlon; Rebekah F. Sharp; L. Dale Waldorff; K. Wayne Walker

all of the city of Gainesville state of FL each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of January, 2024.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 8th day of January, 2024 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 16 day of August, 2024.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

ORIGINAL

Section A

Proposer Info & Acknowledgement Form

PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

RFP # 07-24-01 BI

Replacement of Lift Station 7W

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: Prime Construction Group, Inc.

TAX ID# SNN or EIN: 59-3210337

PROPOSER ADDRESS: 1000 Jetstream Drive, Orlando, FL, 32824

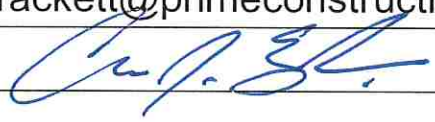
PURCHASE ORDER ADDRESS: 1000 Jetstream Drive, Orlando, FL, 32824

PHONE NUMBER: 407-856-8180

COMPANY WEBSITE: www.primeconstructiongroup.com

COMPANY CONTACT (REP): Charles J. Brackett III, President/CEO

CONTACT EMAIL ADDRESS: cbrackett@primeconstructiongroup.com

SIGNATURE: 

THE UNDERSIGNED:

A. Acknowledges receipt of:

1. RFP # 07-24-01 BI Pertaining To: Replacement of Lift Station 7W
2. Addenda:
   Number: 1, Dated 7/16/2024. Number 3, Dated 8/2/2024
   Number: 2, Dated 8/2/2024.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:

1. To hold this Proposal open for 90 calendar days after the bid opening date.
2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
3. To accept the provisions of the Instructions to PROPOSERS.
4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
5. To accomplish the work in accordance with the contract documents.

D. Certifies:

1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

Section B

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Section C

Introduction Letter

PRIME
CONSTRUCTION GROUP, INC.

City of Winter Springs

1126 East SR 434, Winter Springs, FL, 32708

Dear Members of the City of Winter Springs Procurement Department,

Subject: Proposal Submission for RFP #07-24-01 BI - Replacement of Lift Station 7W

I am pleased to introduce Prime Construction Group, Inc. as a highly qualified general contractor submitting our proposal for the Replacement of Lift Station 7W (RFP #07-24-01 BI). We have thoroughly reviewed the project scope and are confident in our ability to execute the work efficiently and to the highest standard.

The project scope as we understand it involves comprehensive site preparation, including grading and fencing, as well as the installation and modification of sanitary sewer systems and manholes. We are prepared to handle the abandonment and removal of existing infrastructure, construct a new lift station, install necessary piping and force mains, and complete associated electrical and structural work, including the setup of a new concrete electrical building and generator system. Additionally, we will conduct a radio study for the telemetry tower, ensuring all aspects of the project are addressed.

Prime Construction Group, Inc. has extensive experience in the new construction of lift stations, as detailed in Section D of our proposal. Our team is also highly experienced in pipeline installation, making us exceptionally well-suited to delivering the high-quality results required for this project. We are committed to working closely with the City of Winter Springs to ensure the successful completion of this critical infrastructure project.

We appreciate the opportunity to submit our proposal and are confident that our qualifications will meet and exceed your expectations. Please feel free to contact us if you require any additional information or clarification. We look forward to the possibility of collaborating with Seminole County on this important project.

Thank you for your consideration.

Sincerely,

Charles J. Brackett III, President/CEO

Prime Construction Group, Inc.

Section D

Qualifications

PRIME CONSTRUCTION GROUP, INC.

General Information

Established on April 1,1991, Prime Construction Group, Inc., is a Florida Licensed General Contractor & Underground Utility Contractor with operations headquartered in Orlando, Florida. Throughout over 32+ years in municipal construction, we have been fortunate enough to build over 800 projects in the Central Florida Area including constructing and upgrading water production and water treatment facilities, potable water pipelines (4"-36"), forcemains (4"-48"), gravity sewer repairs and replacements, sanitary sewer lift stations (new and rehab), booster pump stations (new and rehab), other underground utilities, stormwater utilities and pump stations, roadways and other heavy civil improvements. Our team of construction professionals consist of over 90 full time employees, and we own and operate a full-service equipment department. At Prime Construction Group, Inc., we work diligently together with municipal owners and engineers to deliver timely and value-creating solutions on a regular basis.

Our team of construction professionals reside throughout central Florida including Seminole, Osceola, Orange and Polk Counties. With our in-house equipment department and our resources positioned throughout central Florida, we are well positioned to be able to complete the full scope of this project. Our offices are located approximately 12 miles from the project site.

"Our People Make the Difference with Pride, Integrity and Quality"

Office Location: 1000 Jetstream Drive, Orlando, FL 32824

Date of Incorporation: April 1, 1991

State of Incorporation: Florida

General Contractor License: CGC1526668
Underground Utility & Excavation License: CUC1225568
Fire License: FPC19-000066

Federal Identification Number: 59-3210337

President/CEO: Charles J. Brackett III

Vice-President/COO Wyatt H. Hazy

PRIME CONSTRUCTION GROUP, INC.

Experience

Attached herein you will find a list of proposed projects performed by Prime Construction Group, Inc. that showcase the capability of performing this project. Our experience with Design and Construction is extensive in the placement of all projects that Prime performs. Every project has opportunities for value engineering and optimization of proposed systems that allow us to design and build for the most efficient systems for critical infrastructure. You will find that with our attached project list that shows all aspects of this project performed by Prime in the past.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
18014	Y18-791 Pump Station Package 19	$2,045,000	$2,074,395
% Complete		NTP	Final Completion
		3/25/2019	10/18/2020

Owner:

Orange County Utilities
9150 Curry Ford Rd.
Orange County, FL
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

Neel-Schaffer, Inc.
2301 Lucien Way, Suite 300
Maitland, FL, 32751
Contact: Steven Cockerham
Telephone: (321) 558-6420
E-Mail: steven.cockerham@neel-schaffe

Scope of Work

5 Rehab stations.

Pump Station 3308-Ethanwood
Pump Station 3347-Inside Loop
Pump Station 3371-Bloomfield
Pump Station 3410-Creekbottom
Pump Station 3468-Deerfield

Remove and replace pumps (5 HP up to 14 HP with VFDs), new wet well FRP liners (17' to 22' deep). New valve vault coatings, new misc. site improvements to include fences, gates, stone coverings, new driveways, misc. sidewalks, curbing and electrical and instrumentations (SCADA) systems. Several new water systems were installed.

Some stations required new forcemain connections, emergency pump outs as well as sewer manhole coatings and gravity (4" to 12") upgrades, new manholes

All Rehabs were completed under by pass

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
18012	Y18-792 Pump Station Package 20	$2,199,303	$2,252,641
% Complete		**NTP**	**Final Completion**
100		3/25/2019	5/3/2020

Owner:

Orange County Utilities
9150 Curry Ford Rd.
Orlando, FL 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

CPH Engineers
1117 E. Robinson St.
Orlando, FL 32801
Contact: Scott Breitenstein
Telephone: (407) 425-0452
E-Mail: sBreitenstein@cphcorp.com

Scope of Work

Project Consisted of 5 Orange County standard lift stations. 4 Rehab stations and one new. The rehab consisted of various site improments to include concrete work, stone coverings, fencing and piping. In addition the wet wells were lined with FRP liners and re-plumbed per the county standards. Plumbing included new base plates, stainless steel risers and pumps from 5 to 12 HP, operated on new electrical systems utilizing VFDs and tied into the county wide SCADA system.

The new station was 6' in diameter and approximately 20' deep.

By passing of the stations were required.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
19015	Eatonville Park Master Lift Station Replacement	$748,000	$748,000
% Complete		**NTP**	**Final Completion**
100		1/1/2020	9/25/2020

Owner:

Town of Eatonville
307 E. Kennedy Blvd
Eatonville, FL 32751
Contact: Katrina Gibson
Telephone: (407) 623-8905
E-Mail: kgibson@townofeatonville.org

Engineer:

CPH Inc.
1117 E. Robinson St.
Orlando, FL 32801
Contact: Scott Breitenstein
Telephone: (407) 425-0452
E-Mail: sBreitenstein@cphcorp.com

Scope of Work

Installation of new master lift station for the town of Eatonville. Station was 10' diameter, 20' deep with duplex 25HP submersible pumps, 10" SS discharge, flowmeter and 125kw emergency generator with fuel tank. 150 lf of new 8" gravity sewer was installed to redirect sewer to new lift station site. Other site improvements included new chain link fencing, double swing gates, concrete drive way, stone ground cover, area lighting and restoration of approx. 800 sy of roadway and the surrounding neighborhood park. Existing lift station was demolished upon completion of new lift station.

All work completed without shutdown

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
600	Iron Bridge RWRF Master Pump Station Rehab - Design Build	$2,675,602	$2,564,719
% Complete		**NTP**	**Final Completion**
100		1/12/2010	12/19/2010

Owner:

City of Orlando
400 South Orange Avenue
Orlando, FL 32801
Contact: Ron Proulx
Telephone: (407) 246-2573
E-Mail: robert.rutter@cityoforlando.net

Engineer:

CPH Engineers
1117 E. Robinson Street
Orlando, FL
Contact: Mr. David Mahler
Telephone: (407) 425-0452
E-Mail:

Scope of Work

Rehabilitation/replacement of 31 ft. deep MPS influent gravity sewer junction box, box culvert and plant diversion channels via large diameter fiberglass reinforced mortar pipe and new motor actuated knife gate valves. Work included concrete demolition, sheet pile shored excavation, temporary dewatering wells, temporary odor control system, structural concrete repairs, and plant electrical upgrades.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
20766	Y20-721 Pump Stations Package 11	$1,542,000	
% Complete		NTP	Final Completion
		5/6/2020	5/31/2021

Owner:

Orange County Utilities
9150 Curry Ford Rd.
Orlando, FL, 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

BFA Environmental, Inc.

Contact: Najee Hunter
Telephone: (321) 332-1114
E-Mail: nhunter@bfaenvironmental.com

Scope of Work

SCOPE OF WORK: Construction of a new duplex pump station with a new wet well to replace an existing pump station that will be removed. Improvements to one duplex pump station including installation of liners in the wet well, replacement of pumps, riser, and discharge piping, valves, and electrical systems, and improve site access and security.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
17723	Y17-757 Pump Stations Package 13	$1,616,776	$1,673,941
% Complete		**NTP**	**Final Completion**
100		2/12/2018	3/9/2019

Owner:

Orange County Utilities
9150 Curry Ford Rd
Orlando, FL 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montavlo@ocfl.net

Engineer:

BFA Environmental
1230 Hillcrest St, Suite 100
Orlando, FL 32803
Contact: Ryan Tordella
Telephone: (407) 896-8608
E-Mail:

Scope of Work

PS 3372: Rehab of pump station, work included rehab of (1) sanitary manhole via, coatings, temporary line stop, installation of new FRP Liner within wet well, lowering of wet well by 0.5 feet, regrade pump station site, installation of (2) new submersible pumps (15HP @ 500GPM), new wet well top slab, new valve vault. Remove & replace electrical system, and relocation of existing SCADA panel. Installation of 16' wide vinyl coating chain link double swing gate, and installation of 14' wide concrete driveway and apron.
PS 3409: Rehab of pump station, work included De-scaling and CIPP lining (2) segments of existing D.I gravity sewer, rehab of (2) existing manholes via coatings, installation of tapping sleeve and valve and plug valve to connect to 24" FM, installation of new FRP Liner within wet well, lower wet well by 1.03 feet, regrade site, installation of (2) new submersible pumps (20HP @ 600GPM), new wet well top slab, and new valve vault. Remove & replace electrical system, relocation of existing SCADA panel and 50' concrete SCADA pole. Installation of 6' high chain link fence, and 14' wide concrete driveway and apron.
PS 3565: Rehab of pump station, work included rehab of (1) sanitary manhole, lined with FRP liner, de-scaling and CIPP lining (1) segment of D.I gravity sewer, install temporary line stop, installation of new FRP liner within wet well, raised wet well by 1.55 feet, regraded site, installation of (2) submersible pumps (34HP @ 750GPM) new wet well top slab, & above grade support slab. Remove & replace electrical system, and installation of new 50' SCADA pole. Installation of 6' high chain link fence, and 14' wide concrete driveway and apron.

PS F3072: Rehab of pump station, work included rehab of (1) sanitary manhole lined with FRP liner, installation of temporary line stop, (2) new submersible pumps (20HP @ 580GPM), new wet well top slab, and new valve vault. Remove and replace electrical system, and installation of 50' SCADA pole. Installation of 14' wide concrete driveway and apron, and installation of chain link fence and concrete fence.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
18002	Y18-736 Pump Station Package 5	$1,749,479	$1,825,218
% Complete		**NTP**	**Final Completion**
100		7/19/2018	8/12/2019

Owner:

Orange County Utilities
9150 Curry Ford Rd
Orlando, FL 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

CPH, Inc.
1117 E. Robinson St.
Orlando, FL 32801
Contact: Scott Breitenstein
Telephone: (407) 425-0452
E-Mail: sbreitenstein@cphcorp.com

Scope of Work

Project includes Construction of a new duplex pump station with a new wet well to replace an existing pump station that will be demolished. Improvements will be made to the station including installation of liners in wet wells, replacement of pumps (greater than 5 HP), riser and discharge, electrical systems, and improve site access and security. Emergency generator install, 40 KW.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
18005	Pump Station Package 18	$1,994,240	$2,068,896
% Complete		**NTP**	**Final Completion**
100		10/4/2018	10/28/2019

Owner:

Orange County Utilities
9150 Curry Ford Rd.
Orlando, FL 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

CPH
1117 E. Robinson St.
Orlando, FL 32801
Contact: Scott Breitenstein
Telephone: (407) 425-0452
E-Mail: SBreitenstein@cphcorp.com

Scope of Work

Project Consisted of 5 Orange County standard lift stations all were Rehab stations. The rehabs consisted of various site improments to include concrete work, stone coverings, fencing and piping. In addition the wet wells were lined with FRP liners and re-plumbed per the county standards. Plumbing included new base plates, stainless steel risers and pumps from 5 to 12 HP, operated on new electrical systems utilizing VFDs and tied into the county wide SCADA system.

By passing of the stations were required.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
674	CC-0194-15 Soldier Creek Reg. Nutrient Rmv. Stormwater Treatment Facility	$6,696,716	$6,693,165
% Complete		**NTP**	**Final Completion**
100		12/25/2015	3/23/2017

Owner:

Seminole County
520 W. Lake Mary Boulevard
Sanford, FL 32771
Contact: Stephen L. Miller
Telephone: (407) 665-5654
E-Mail: smiller02@seminolecountyfl.go

Engineer:

England-Thims & Miller, Inc.
15265 E. Colonial Drive
Orlando, FL 32826
Contact: Robert Weinbender
Telephone: (407) 415-2274
E-Mail:

Scope of Work

Site work included, clearing and grubbing for new (larger) storm water retention pond access roads and misc site improvements. Seminole County building permit were required and obtained for a new treatment structure. Retrofit the existing retention pond at CR427 and Country Club Road using an Aluminum Sulfate Injection system. Redirecting Soldiers Creek via a diversion weir and intake structure to the facility through a box culvert. Installation of 300 LF of 48" RCP with MES, storm manholes and control structures. Additional RCP pipe was installed from 18" to 60" with connecting structures and MES at outfall into pond. Concrete walks, driveways and truck loading area were also installed. 720 SY of ACB mat was constructed (open/closed cell) while riprap, headwalls and 3,200 SY of stabilized access road were installed.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
711	Y17-722 SWRF Sodium Hypochlorite Storage & Feed System	$2,764,940	$2,775,868
% Complete		**NTP**	**Final Completion**
100		7/10/2017	12/31/2018

Owner:

Orange County Utilities
9150 Curry Ford Road
Orlando,FL 32825
Contact: Terra Reffitt
Telephone: (407) 947-9802
E-Mail: terra.reffitt@ocfl.net

Engineer:

Reiss Engineering, Inc.
1016 Spring Vallas Pt.
Winter Springs, FL 32708
Contact: Melanie Peckham, P.E.
Telephone: (407) 679-5358
E-Mail: mdpeckham@reisseng.com

Scope of Work

Orange County building permit was required and obtained for the construction of Sodium Hypochlorite Storage & Feed S ystems: North System - Installation of three (3) new 15,600 gal. single-wall, vertical fiberglass reinforced plastic storage tanks under new metal roofed structure, three (3) simplex metering pump skids and one (1) triplex meting pump skid. South System - Installation of two (2) 9,900 gal. single-wall vertical fiberglass reinforced plastic storge tank under new metal roofed structure with concrete containment system, two (2) duplex metering pump skinds. Both systems include dosing points to the chlorine contact chamber and ROF controllers.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
684	Water Conserv II WRF-Bioset System	$1,218,940	$1,258,388
% Complete		**NTP**	**Final Completion**
100		2/29/2016	11/14/2016

Owner:

City of Orlando
400 South Orange Avenue
Orlando, FL 32801
Contact: Kristi Fries
Telephone: (407) 246-3353
E-Mail: kristina.fries@cityoforlando.net

Engineer:

Black & Veatch
201 S. Orange Ave., Ste. 500
Orlando, FL 32801
Contact: Bryan M. Martin, P.E.
Telephone: (813) 892-3348
E-Mail: MartinB@bv.com

Scope of Work

Installation of owner provided Bioset Alkaline Stabilization System. The system includes reactor, piston pumps, lime silos, acid feeder, ammonia scrubber and all associated equipment and accessories. The project also included modifications to the existing Dewatering Building and Truck Loading Facility to accommodate the new equipment.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
21788	Clarcona Ocoee Force Main Replacement	$1,000,000	$1,000,000
% Complete		**NTP**	**Final Completion**
		4/6/2021	7/6/2021

Owner:

Orange County
9150 Curry Ford Rd.
Orlando, FL 32839
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

Orange County Utilities
9150 Curry Ford Rd.

Contact: James Montalvo
Telephone: (407) 254-9850
E-Mail: james.montalvo@ocfl.net

Scope of Work

Emergency response repair project for Orange County Utilities (OCU) to replace 500 LF of damaged 24" PCCP force main with new 24" PVC C900 DR18 force main. Installed one 24" PCCP line stop with 1500 LF of aboveground bypass pipe to the OCU triplex pump station (60 hp pumps, 1000 gpm) using 24" HDPE. Modifications and repairs included removal of 500 LF of 24" PCCP force main and installation of new 24" PVC force main. Installed two PCCP-PVC adapters and two 24" MJ sleeves for material type transitions. Installed one 4" air release valve using 24x4 tapping sleeve and 4" flanged stainless steel pipes and fittings. Cut in a new 16" flanged plug valve at the pump station which can be used by OCU for future bypass as well. Removal and replacement of 948 LF chain link fence, Pressure testing, sidewalk and sod restoration, and turnkey delivery.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
19013	Y19-767 Forcemain Area Package 2	$1,156,190	$1,190,103
% Complete		**NTP**	**Final Completion**
		3/31/2020	4/30/2022

Owner:

Orange County Utilities
9150 Curry Ford Rd.
Orlando, FL, 32825
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

Neel-Schaffer
2301 Lucien Way #300
Maitland, FL, 32751
Contact: Steve Cockerham
Telephone: (407) 647-6623
E-Mail: steven.cockerham@neel-schaffe

Scope of Work

Various forcemain improvements to include 1100 LF of 24" PVC and 500 LF of 30" PVC installation (ie open cut). Project included 24" and 30" line stops, taping valves and plug valves.

Various other site improvements were required.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
19007	OC ERR Destination Parkway Force Main Repair	$1,500,000	$1,146,827
% Complete		**NTP**	**Final Completion**
100		4/22/2019	12/31/2019

Owner:

Orange County Utilities
8100 President Dr, Ste A
Orlando, FL 32801
Contact: James Montalvo
Telephone: (407) 506-2120
E-Mail: james.montalvo@ocfl.net

Engineer:

Woolpert
11486 Corporate Blvd, Suite 150
Orlando, FL 32817
Contact: Bill Whidden
Telephone: (407) 591-5116
E-Mail:

Scope of Work

Emergency response repair project with Orange County Utilities to replace 1,200 LF of 36" PCCP force main with 36" PVC DR 21/25 force main. Installed 2 ea. – 36" PCCP Line Stops with 1,200 LF of above ground by pass pipe using 24" HDPE. Modifications and repairs included removal of 1,200 LF of 36" PCCP FM and installation of new 36" PVC pipe, installation of two 36" plug valves using cut in PCCP x DIP adapters, 36" DR21 PVC Pipe and 36" MJ Sleeves. Installation included 36" DR 21/25 PVC Pipe, 36" MJ Fittings, 36" Plug Valve, 36" Gate Valves. Tie in of existing 20" force main including new buried 20" plug valves with transition to the newly installed 36" PVC force main. Pressure testing, restorations and turn key delivery.

Modification of discharge header to master pump station by installing a flanged 20" plug valve for future upgrade considerations.

Specific Project Requirements:

2a) F&I FM 36" PVC LF 1200 Installed

Project Personnel:

PM - Wyatt Hazy
Super - Marice Brown

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
20776	Longdale Septic Abatement Project	$3,489,000	$3,638,110
% Complete		**NTP**	**Final Completion**
		12/7/2020	5/6/2022

Owner:

City of Longwood
907 E. SR. 434
Longwood, FL 32750
Contact: Andrew Marsian
Telephone: (407) 263-2378
E-Mail: amarsian@longwoodfl.org

Engineer:

BFA Environmental Consults
1230 Hillcrest Street, Suite 100
Orlando, FL 32803
Contact: Najee Hunter
Telephone: (321) 332-1114
E-Mail: nhunter@bfaenvironmental.com

Scope of Work

This contract comprises the construction of the wastewater collection and transmission system.

1. Installation of approximately 8,900 feet of 8-inch PVC gravity sanitary sewer, 38 sanitary sewer manholes and all necessary fittings and incidentals to complete the wastewater system via open cut construction method. The installed gravity sewer system, consisted of 4600 LF at 0' - 8' deep, 2400 LF at 8' - 12' deep and 1900 LF 12 - 16'. 38 manholes installed throughout the various depths. MOT was setup to ensure safety and to reduce the impact the residents as much as possible. Residential driveways and walks were reconstructed as required.

Disruption of the roadway was kept to a minimum via mixing and creating stabilized subgrade and base, in place and onsite. Approximately 12,000 SY of asphalt was milled paved as part of the roadway restoration.

2. Installation of approximately 220 sanitary sewer lateral services (a mix of doubles and singles) to existing residential buildings on private property including all necessary piping, valves, fittings and incidentals to connect all homes as shown on the Drawings. After installation, restoration was completed to original or better conditions.

3. Abandonment and demolition of approximately 225 existing septic tanks on private property. Each homeowner agreement was made and each permit completed - work was completed by state licensed plumber.

4. Installation of one 6' duplex pump station (24' deep) and all necessary structures (valve vault), equipment, accessories, utility service connections, site work, electrical and instrumentation, start up and testing as shown on the Drawings. Pumps were 7.5 HP (VFD). Site improvements included, fencing, gates, bollard, stone coverings, misc. concrete pads, new water service and an antenna with a new RTU panel.

5. Installation of 1,650 feet of 6-inch PVC wastewater force main and all necessary fittings, valves, connecting to existing piping and incidentals as required.

Project Superintendent: Keyon Brown

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
21791	TOHO LS 57 SW Quadrant Gravity Sewer Rehabilitation	$4,412,740	$5,405,776
% Complete		**NTP**	**Final Completion**
		5/12/2021	4/4/2023

Owner:

Tohopekaliga Water Authority
951 Martin Luther King Blvd.
Kissimmee, FL 34741
Contact: George Eversole
Telephone: (407) 944-5025
E-Mail: geversole@tohowater.com

Engineer:

TetraTech INC.
201 East Pine Street, Suite 1000
Orlando, FL 32801
Contact: Janine Alexander
Telephone: (407) 839-3955
E-Mail: No longer with TetraTech

Scope of Work

Several Gravity Sewer repairs were complete. More that 2000 LF of gravity Lines were cleaned, CCTV'd and Lined. Several Manholes (60 VF) were cleaned and structurally repaired. 2500 new 8" gravity sewer was installed (open cut). 6 new gravity sewer manholes were installed. Several walk ways and driveways were removed and replaced. More than 15,000 SY of roadway was milled and resurfaced.

Specific Project Requirements:

2d.) Remove & Replace 8" SDR 35 PVC Gravity Sewer - 1984 + 277 LF Installed
2d.) Remove & Replace 12" SDR 35 PVC Gravity Sewer - 611 LF
2e.) Installed 4' Diameter Manholes 6 EA

4) Work was preformed in and around residential neighborhoods, extensive MOT was maintained, residents were informed via door hangers, and a PIO was provided.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
19008	San Remo Gravity Sewer Rehab	$4,695,876	$5,428,620
% Complete		**NTP**	**Final Completion**
		7/23/2019	11/8/2021

Owner:

Tohopekaliga Water Authority
951 Martin Luther King Blvd.
Kissimmee, FL 34741
Contact: George Eversole
Telephone: (407) 944-5025
E-Mail: geversole@tohowater.com

Engineer:

Tetratech
201 E. Pine St. Ste 1000
Orlando, FL 32801
Contact: Janine Alexander
Telephone: (321) 388-5178
E-Mail: janine.alexander@tetratech.com

Scope of Work

The project was to upgrade / repair residential sewer systems and water systems. The project consisted of CIPP lining of 8" (7793 LF) 10" (1685 LF) and 12" (800 LF) sewer lines, gravity point repairs of approximately 500 LF of 8" 10" and 12" pipe, the installation of approximately 1200 LF of new 8" gravity sewer and the repair of 11 manholes from 10' to 20' deep (as well as 350 VF of linings / coatings). Project required other utilities to be relocated road restorations, milling and paving operations.

Project was in a residential neighbor, local MOT required.

Specific Project Requirements:

2d.) Installation of 8" SDR 35 PVC Gravity Sewer - 1200 LF Installed
2e.) Installed 4' Diameter Manholes 11 EA (Various depths)

4) Work was preformed in and around residential neighborhoods, MOT was maintained, residents were informed via door hangers, and a PIO was provided.

Similar Projects:

Job #	Project Name	Project Amt	Final Contract
691	Downtown CRA Area A SW Treat Imps	$5,328,306	$7,241,245
% Complete		**NTP**	**Final Completion**
100		7/13/2016	4/30/2019

Owner:

City of Tavares
201 East Main Street
Tavares, FL
Contact: Phil Clark
Telephone: (352) 742-6485
E-Mail: pclark@tavares.org

Engineer:

ARCADIS
14025 Riveredge Drive, Ste. 600
Tampa, FL 33637
Contact: Sean Chaparro
Telephone: (813) 353-5808
E-Mail: sean.chaparro@arcadis.com

Scope of Work

The project consisted of nearly 4,000 LF of storm collection pipe including of 1,250 LF of 24" RCP,1,057 LF of 30" RCP, 346 LF of 36" RCP, 239 LF of 15" RCP & 44 LF of 18" RCP, 710 LF of various sized ERCP (12"x18" to 29" x 45"), 170 LF of 24" (42" casing) & 117 LF of 30" (48" casing) jack and bores,4,536 SY of brick roadway and new concrete curb & gutter the length of the project. Installation of 600 LF of gravity system (8" to 15") and redirecting the force main from the lift station (900) LF of 8" PVC) with an excavation depth of 15'. Storm pipe out falls to the lake on one end of the downtown area and into a storm water treatment pond on the other. Several storm outfalls into lakes, included MES, and Cast in Place Headwalls

MOT and Utility coordination through out the downtown area.

An 8 acre area was cleared and grubbed the storm water treatment pond was constructed of a series of cells that were specifically designed to treat the water prior to the out fall into the lake. Specific water plants were installed, along with a series of Bee Mats, a fountain, pedestrian bridge on piles, area lighting and security cameras, multiple landscape areas, park equipment and benches. Installed 4,606 LF of concrete curb (type F, D and Misc.), 31 SY of 6" concrete sidewalks and 1,016 SY of 4" concrete sidewalks.

Additional 2500 SY of removal of roadway and brick replacement was requested by owner throughout the duration of the project.

PRIME CONSTRUCTION GROUP, INC.

Charles J. Brackett III, President/CEO



1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
cbrackett@primeconstructiongroup.com

Profile

Chase is an Orlando native who is a proud husband, father of four and leader in our community. Upon graduation from Edgewater High School, Chase attended University of Florida where he earned his Bachelor of Science in Building Construction from the M.E. Rinker Sr. School of Construction as well as his Minor in Business Administration while at UF. Upon graduation he returned to Orlando where he has been building within our community for over 25 years. He holds a State of Florida Certified General Contractors license.

Education

University of Florida, Gainesville, FL

Bachelor of Science with Highest Honors in Construction Management

Work History

Prime Construction Group, Inc. **2014—Present**

Vice President Estimating & Business Development, Sr. Project Manager, President/CEO

Darden Restaurants **2010-2014**

Facilities & Purchasing Manager

Trammell Crow Company **2006-2010**

Development Manager

Duke Realty **2004-2006**

Development Manager

Relevant Project Experience

- *Orange County Y20-753 Southwest Service Area Potable Water Storage and Repump Facility and Avalon Road Master Pump Station*
- *Orange County Y19-709 Western Regional Water Supply Improvements, Phase 3B*
- *City of Casselberry Howell Park Water Treatment Plant Rehabilitation*
- *City of Orlando Water Conserv II Master Pump Station & Flow Equalization*
- *Orange County Y10-704 NWWRF Reclaimed Water Storage & Repump Facility*

PRIME CONSTRUCTION GROUP, INC.

Wyatt H. Hazy, Vice President/COO



Profile

Wyatt grew up in eastern North Carolina and received a Bachelor of Science in Civil Engineering & Construction from North Carolina State University. Wyatt has over 25 years of experience in heavy civil construction throughout the mid-Atlantic and Florida. He is a dedicated husband, father and leader here at Prime as he oversees our Operations Team and Heavy Equipment Department. Wyatt has a Certified Underground Utility & Excavation contractor's license.

Education

North Carolina State University

Bachelor's of Science—Civil Engineering, Construction Option

Work History

Prime Construction Group, Inc. **2014—Present**

Project Manager, Chief Operations Officer

American Infrastructure, Inc. **1997-2014**

Project Engineer, Project Manager

Development Manager

Relevant Project Experience

- *TOHO LS 57 SW Quadrant Gravity Sewer Rehab*
- *OC Y21-738 Wekiwa Springs Septic Tank Retrofit Project Phase 1*
- *TOHO FM Rehab from LS 57 to S. Bermuda*
- *Casselberry Howell Park WTP Rehab*
- *TOHO San Remo Gravity Sewer Rehab*
- *OC ERR Destination Parkway FM Repair*
- *OC Gravity System Improvement Package #10*

1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
whazy@primeconstructiongroup.com

PRIME
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Tim Francis, Project Manager



1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
tfrancis@primeconstructiongroup.com

Profile

Tim's responsibilities include direction and control of projects from contract award through contract close-out. Supporting field supervision by performing plan take-offs, acquiring subcontractors, vendors and materials, and providing administrative functions required on contract-related issues. Create and update projects schedules in collaboration with Superintendents and disseminates schedules information to project owners and company personnel. Budgets projects and forecast costs to predict overall financial outcome. Tim's entire career has been spent in heavy civil construction management. His experience and knowledge creates an ability to build the highest quality projects in a safe and cost effective manner.

Education

Work History

Prime Construction Group, Inc. **2023—Present**

Project Manager

Relevant Project Experience

- *Orange County Y24-781 Emergency Pond 6114 Virginia Drainage Improvements Phase 1*
- *Orange County Y23-7001-RC Wekiwa Springs Septic Tank Retrofit Project Phase 3*
- *Manatee County Elwood Booster Pump Station Project*

PRIME CONSTRUCTION GROUP, INC.

Yanelis Valentin, PMA



1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
yvalentin@primeconstructiongroup.com

Profile

Yanelis's responsibilities include provide support to the Project Manager, Subcontractors and Suppliers and field from contract award through contract closeout. Setup jobsite office, call in locates, attend project meetings, route submittals, pay applications, subcontracts electronically and paper. Prepare owner contracts, bonds and insurance for execution. Manage any and all correspondence relating to the project. Assist Project Manager in the materials and subcontract buyout process. Generate Operation and Maintenance Manuals at contract closeout. Produces Construction Schedules for on-going projects.

Education

Work History

Prime Construction Group, Inc. **2024—Present**

Project Management Assistant

Relevant Project Experience

- *Orange County Y23-781 Emergency Virginia Pond 6114 Drainage Improvements Phase 1*
- *Orange County Y23-7001-RC Wekiwa Springs Septic Tank Retrofit Project Phase 3*
- *Manatee County Elwood Booster Pump Station Upgrades*

PRIME CONSTRUCTION GROUP, INC.

Mark Allen, Director of Preconstruction



1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
whazy@primeconstructiongroup.com

Profile

Mark is the Director of Preconstruction and the Information Technology Manager. His responsibilities as Director of Preconstruction include to pursue new contract opportunities through hard bid, cost plus, design-build or other negotiated contract methods. Mark manages the estimating department staff working with team of estimators and assistants to maintain a high degree of subcontractor / vendor engagement, including MWBE, DBE, LDB/VBE business partners, to ensure best in class pricing and a high level of accuracy for all bid packages. Mark also works closely with project managers and clients to provide creative solutions and detailed pricing of alternate construction methods. Upon award of new contracts, he works closely to seamlessly transfer preconstruction information to operations team assigned to building each project. His role as IT Manager encompasses the following responsibilities: Analyze, plan, coordinate, and direct the information and computer-related activities of the Company from an operational and strategic perspective. His responsibilities include, evaluate and recommend hardware and software enhancements based on the needs of the business, negotiate the best pricing and service agreements, administer their installation and properly train company personnel on their full use and ensure the availability, stability, integrity and security of data and information technology services at all times.

Education

Millersville University, Bachelor's of Science, Physics

Air Force Officers Orientation Course

Work History

Prime Construction Group, Inc. **2000—Present**

Project Manager, Information Technology Manager, Director of Preconstruction

Remediation Inc./Johnston Construction Company **1987-2000**

Project Manager, Network Administrator

PRIME
CONSTRUCTION GROUP, INC.

Zachary Fields, Estimating Assistant



Profile

Zack's responsibilities as Estimating Assistant include managing and developing request for quotation lists for upcoming projects to bid, organize and maintain active licensing for Prime Construction Group including insurance, business tax receipts, general contracting license, municipality licensing, prepare responsive bid packages by compiling required information requested by bid owners, coordinate with estimators for needs on getting quotes for full scope for each bid, maintain and organize the contact database for Prime Construction, assist ongoing projects by providing contacts and being knowledgeable for the ongoing operations of all contacts in Prime Construction's database. Find and present new and upcoming bids by browsing all formats of bid acquisition daily and present the estimating department with new bids to pursue.

Education

University of Central Florida, Bachelor's of Science—Finance

Minor: Banking

Work History

Prime Construction Group, Inc. **2019—Present**

Estimating Assistant

Project Management Assistant

1000 Jetstream Drive, Orlando, FL, 32824

Phone: 407--856-8180

Fax: 407-856-8182

E-mail:
zfields@primeconstructiongroup.com

REFERENCE INFORMATION FORM

RFP # 07-24-01 BI

Replacement of Lift Station 7W

Organization: Orange County Utilities

Contact Person: James Montalvo

Address: 9150 Curry Ford Rd

City: Orlando State: FL Zip: 32824

Phone Number: (407) 506-2120 james.montalvo@ocfl.net

Project Cost: $20,000,000+ Date Performed: 15+ years

Organization: City of Orlando

Contact Person: Kristi Fries

Address: 400 S Orange Ave, Orlando, FL, 32801

City: Orlando State: FL Zip: 32824

Phone Number: (407) 246-2291 kristina.fries@cityoforlando.net

Project Cost: $25,000,000+ Date Performed: 20+ years

Organization: CPH Corp.

Contact Person: Scott Breitenstein

Address: 1117 E. Robinson St.

City: Orlando State: FL Zip: 32801

Phone Number: (407) 425-0452 sbreintenstein@cphcorp.com

Project Cost: $15,000,000.00+ Date Performed: 10+ years

PROPOSER Representative Typed Name/Title: Charles J. Brackett III, President/CEO

PROPOSER Representative Signature:

PROPOSER: Prime Construction Group, Inc.

PRIME
CONSTRUCTION GROUP, INC.

Conclusion

Prime Construction Group, Inc. is uniquely positioned to undertake the Replacement of Lift Station 7W project due to our extensive experience and proven track record in managing complex construction projects. Our deep expertise in these projects ensures that we can deliver innovative solutions tailored to the specific needs of the City of Winter Springs, optimizing both design and execution processes for superior results.

Our commitment to value engineering allows us to identify and implement cost-effective solutions without compromising on quality or performance. This approach not only ensures that we meet project budgets but also maximizes the overall value delivered to our clients. Furthermore, our proficiency in optimizing critical infrastructure means that we bring a strategic focus to enhancing operational efficiency and longevity in every project we undertake.

With a robust history of successful project completions, including significant work in lift station construction and pipeline installations, Prime Construction Group, Inc. is well-equipped to handle the complexities of this project. Our team's dedication to excellence, combined with our innovative approach and cost-effective strategies, makes us an ideal partner for the City of Winter Springs Lift Station 7W Replacement project.

We are enthusiastic about the opportunity to bring our expertise to this project and are confident that our qualifications and commitment to quality will exceed your expectations. Thank you for considering Prime Construction Group, Inc. for this important project.

Sincerely,

Charles J. Brackett III, President/CEO
Prime Construction Group, Inc.

Section E

Other Information

Section F

Cost & Time

Appendix A
COST PROPOSAL WORKSHEET

Part 1:

The total cost of the construction of the Replacement Lift Station 7W is: Three million seven hundred seventy seven thousand dollars ($3,777,000.00)

The estimated time to substantial completion of the project is 45 weeks from Notice To Proceed

Part 2:

The individual cost elements are as follows:

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	Mobilization/Demobilization	LS	1	$ 300,000.00	$ 300,000.00
2	Insurance, Performance and Payment Bond	LS	1	$ 48,000.00	$ 48,000.00
3	Preconstruction Video	LS	1	$ 2,500.00	$ 2,500.00
4	Construction Testing (Pressure, Density Testing, etc.)	LS	1	$ 22,000.00	$ 22,000.00
5	Survey Layout & Record Drawings	LS	1	$ 36,000.00	$ 36,000.00
				SUBTOTAL	$ 408,500.00
SITE/CIVIL					
6	Demolition	LS	1	$ 25,000.00	$ 25,000.00
7	General Restoration - (site cleanup, debris removal)	LS	1	$ 24,000.00	$ 24,000.00
8	Clearing and grubbing, grading, general erosion control	LS	1	$ 20,000.00	$ 20,000.00
9	Asphalt Pavement Removal & Restoration	SY	55	$ 250.00	$ 13,750.00
10	Silt Fence (TYP.)	LF	1,865	$ 7.00	$ 13,055.00
11	Lift Station Abandonment	CY	221	$ 160.00	$ 35,360.00
12	Abandonment of existing 18-in PVC Sanitary Sewer	LF	315	$ 40.00	$ 12,600.00
13	Removal of existing 6-in VCP Sanitary Sewer	LF	41	$ 100.00	$ 4,100.00
14	Abandonment of existing 12-in VCP Sanitary Sewer	LF	188	$ 40.00	$ 7,520.00
15	Abandonment of existing 24-in RCP Sanitary Sewer	LF	52	$ 40.00	$ 2,080.00
16	Abandonment of existing 10-in By-pass force main	LF	188	$ 40.00	$ 7,520.00
17	10-inch Line-Stop	EA	1	$ 35,000.00	$ 35,000.00
18	Existing Manhole Modification	EA	2	$ 8,800.00	$ 17,600.00
19	Manhole Installation	EA	3	$ 55,000.00	$ 165,000.00
20	Fence Removal	LF	214	$ 13.00	$ 2,782.00
21	Fencing	LF	335	$ 64.00	$ 21,440.00
22	Bypass Operations	LS	1	$ 176,300.00	$ 176,300.00
				SUBTOTAL	$ 583,107.00
CONCRETE					
23	Concrete (Driveway, Concrete Pads, New sidewalk)	CY	410	$ 160.00	$ 65,600.00
				SUBTOTAL	$ 65,600.00

UTILITIES					
24	12-in DIP/HDPE Disharge Piping (Piping, Fittings, Valves, etc.)	LS	1	$ 175,000.00	$ $ 175,000.00
25	Potable and Reclaimed water service Connections	EA	2	$ 2,500.00	$ $ 5,000.00
26	20" Plug Valve (If existing is not operational)	EA	1	$ 15,000.00	$ $ 15,000.00
27	16-in PVC Force Main	LF	35	$ 250.00	$ $ 8,750.00
28	20-in PVC Force Main	LF	20	$ 260.00	$ $ 5,200.00
29	20-in Existing Force Main Connection	EA	1	$ 22,500.00	$ $ 22,500.00
30	1-in PVC Potable Water Service	LF	140	$ 65.00	$ $ 9,100.00
31	1-in PVC Reclaimed Water Service	LF	15	$ 100.00	$ $ 1,500.00
32	6-in PVC Sanitary Sewer	LF	20	$ 700.00	$ $ 14,000.00
33	8-in PVC Sanitary Sewer	LF	41	$ 700.00	$ $ 28,700.00
34	12-in PVC Sanitary Sewer	LF	199	$ 700.00	$ $ 139,300.00
35	21-in PVC Sanitary Sewer	LF	372	$ 700.00	$ $ 260,400.00
36	24-in PVC Sanitary Sewer	LF	12	$ 700.00	$ $ 8,400.00
37	16-in Magnetic Flow Meter	EA	1	$ 89,143.00	$ $ 89,143.00
				SUBTOTAL	$ 781,993.00
ELECTRICAL					
38	Electrical I&C	LS	1	$ 767,400.00	$ $ 767,400.00
39	Prefabricated Concrete Electrical Building	LS	1	$ 342,200.00	$ $ 342,200.00
40	Generator Installation	EA	1	$ 17,500.00	$ $ 17,500.00
				SUBTOTAL	$ 1,127,100.00
MECHANICAL					
41	Wet Well Installation	LS	1	$ 791,200.00	$ $ 791,200.00
42	Submersible Pumps Installation	LS	1	$ 19,500.00	$ $ 19,500.00
				SUBTOTAL	$ 810,700.00

Section G

Mandatory Proposal Forms

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
	Commercial General Liability	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability.
✔	(Occurrence Form) patterned after the current ISO form	This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

PROPOSER shall ensure that all subcontractors comply with the same insurance requirements that it is required to meet. The same PROPOSER shall provide the CITY with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.

Thirty (30) days cancellation notice required.

The undersigned PROPOSER agrees to obtain, prior to award, if selected, insurance as stated above.

Prime Construction Group, Inc.

PROPOSER



Authorized Signature

Charles J. Brackett III, President/CEO

Officer Title

8/16/2024

Date

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 02/14/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-813-229-8021 M. E. Wilson Company, LLC 300 W. Platt St. Ste 200 Tampa, FL 33606	CONTACT NAME: Cierra Lewis PHONE (A/C, No, Ext): 813-349-2240 FAX (A/C, No): 813-354-4807 E-MAIL ADDRESS: clewis@mewilson.com
INSURED Prime Construction Group, Inc. 1000 Jetstream Dr. Orlando, FL 32824	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: ZURICH AMER INS CO — 16535 INSURER B: GREAT AMER INS CO — 16691 INSURER C: XL SPECIALTY INS CO — 37885 INSURER D: HOMELAND INS CO OF NY — 34452 INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** 70565401 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			GLO353849901	03/01/24	03/01/25	EACH OCCURRENCE	$ 1000000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300000
	GEN'L AGGREGATE LIMIT APPLIES PER:						MED EXP (Any one person)	$ 5000
	POLICY [X] PRO-JECT [ ] LOC						PERSONAL & ADV INJURY	$ 1000000
	OTHER:						GENERAL AGGREGATE	$ 2000000
							PRODUCTS - COMP/OP AGG	$ 2000000
								$
A	AUTOMOBILE LIABILITY			BAP353850001	03/01/24	03/01/25	COMBINED SINGLE LIMIT (Ea accident)	$ 1000000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
							PIP	$ 10,000
B	X UMBRELLA LIAB [ ] OCCUR			TUU422914402	01/01/24	03/01/25	EACH OCCURRENCE	$ 10000000
	X EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 10000000
	DED [X] RETENTION $ 10000							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [Y] N/A If yes, describe under DESCRIPTION OF OPERATIONS below			WC353849801	03/01/24	03/01/25	X PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 1000000
							E.L. DISEASE - EA EMPLOYEE	$ 1000000
							E.L. DISEASE - POLICY LIMIT	$ 1000000
C	Builders Risk			UM00101185MA24A	01/01/24	01/01/25	Aggregate	10000000
D	Pollution Liability			7930106530003	01/01/24	01/01/25	Per Each Condition	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Bid Purposes
Prime Construction Group

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF Florida

COUNTY OF Orange

The foregoing instrument was acknowledged before me by means of (x) physical presence or (_____) online notarization,

this 16th day of August, 2024 by Charles J. Brackett III the President/CEO of Prime Construction Group, Inc., a Corporation (x) who is personally known to me or (_____) who produced _____ as identification.

Notary Public: _____

Print Name: Zachary Fields, Notary Public

My Commission Expires: 5/16/2025

ZACHARY DAVID FIELDS
Notary Public - State of Florida
Commission # HH 130374
My Comm. Expires May 16, 2025
Bonded through National Notary Assn.

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF Florida

COUNTY OF Orange

Charles J. Brackett III, being duly sworn, deposes and says that:

(1) He/she is President/CEO (Title) of Prime Construction Group, Inc. (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed)

Charles J. Brackett III, President/CEO
(Title)

STATE OF Florida

COUNTY OF Orange

The foregoing instrument was acknowledged before me this 16th of August by Charles J. Brackett III,

who is (x) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

ZACHARY DAVID FIELDS
Notary Public - State of Florida
Commission # HH 130374
My Comm. Expires May 16, 2025
Bonded through National Notary Assn.

(Signature of Notary Public)

Zachary Fields, Notary Public (Name of Notary Typed, Printed or Stamped) Notary Public

HH 130374 (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

Prime Construction Group, Inc. does:
(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.



(Authorized Signature) 8/16/2024 (Date)

Charles J. Brackett III, President/CEO
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BI Replacement of Lift Station 7W.

2. This sworn statement is submitted by (PROPOSER) Prime Construction Group, Inc. whose business address is 1000 Jetstream Drive, Orlando, FL, 32824 and (if applicable) Federal Employer Identification Number (FEIN) is 59-3210337 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is Charles J. Brackett III and my relationship to the PROPOSER named above is President/CEO.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
   - A predecessor or successor of a person convicted of a public entity crime; or
   - An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

____The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

PUBLIC ENTITY CRIMES STATEMENT cont.

Charles J. Brackett III, President/CEO

Signature

8/16/2024

Date:

STATE OF Florida

COUNTY OF Orange

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 16th day of August, 2024, and is personally known to me, or has provided _____ as identification.

Zachary Fields, Notary Public

My Commission expires: 5/16/2025

ZACHARY DAVID FIELDS
Notary Public - State of Florida
Commission # HH 130374
My Comm. Expires May 16, 2025
Bonded through National Notary Assn.

DEBARMENT, SUSPENSION and OTHER RESPONSIBILITY MATTERS

Certification A - Primary Covered Transactions

The prospective primary participant certifies to the best of its knowledge and belief that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal debarment or agency;

b. Have not within a three-year period preceding this proposal, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation of this proposal.

Instructions for Certification (A)

By signing and submitting this Bid, the prospective primary participant is providing the certification set out below;

a. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or any explanation shall disqualify such person from participation in this transaction.

b. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

c. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

d. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules

implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

e. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

f. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines this eligibility of its principals. Each participant may, but is not required to, check the Non- procurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph (6) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

Certification B - Lower Tier Covered Transactions

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (B)

By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

a. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

b. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

c. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of these regulations.

d. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

e. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause title "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitation for lower tier covered transactions.

f. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principles. Each participant may but is not required to, check the Non- procurement List.

g. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

h. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a lower covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies including suspension and/or debarment.

Bidder: Prime Construction Group, Inc.	Date: 8/16/2024
Signature of Authorized Certifying Official: 	Title: Charles J. Brackett III, President/CEO

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BI

Project Description: Replacement of Lift Station 7W

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: Prime Construction Group, Inc.

Authorized Signature: 

Title: Charles J. Brackett III, President/CEO

Date: 8/16/2024

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BI Replacement of Lift Station 7W***

This sworn statement is submitted by (PROPOSER) Prime Construction Group, Inc. whose business address is 1000 Jetstream Drive, Orlando, FL, 32824 and (if applicable) Federal Employer Identification Number (FEIN) is 59-3210337 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.)

My name is Charles J. Brackett III and my relationship to the PROPOSER named above is President/CEO .

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____

Signature Charles J. Brackett III, President/CEO Date: 8/16/2024

STATE OF Florida

COUNTY OF Orange

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 16th day of August, 2024 and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 5/16/2025

Notary Signature Zachary Fields, Notary Public

ZACHARY DAVID FIELDS
Notary Public - State of Florida
Commission # HH 130374
My Comm. Expires May 16, 2025
Bonded through National Notary Assn.

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

PROPOSER Company Name: Prime Construction Group, Inc.

Project Name : ***Replacement of Lift Station 7W***

RFP Number : ***RFP # 07-24-01 BI***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.

- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.

- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.

- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.

- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

Prime Construction Group

Plan to Utilize Small and Minority Business Enterprises (SMWBE) and Labor Surplus Area Firms

1. Identifying and Placing Qualified SMWBE Firms on Solicitation Lists

- **Objective**: Ensure that qualified small and minority business enterprises (SMWBE), including women's business enterprises and veteran-owned businesses, are identified and included in all solicitation lists for potential procurement opportunities.
- **Action Steps**:
    - Develop a database of certified SMWBE firms, focusing on those with a proven track record in relevant industries such as construction, engineering, and procurement.
    - Regularly update this database to include new SMWBE firms and remove inactive or unqualified firms.
    - Collaborate with local chambers of commerce, minority business councils, and relevant state and federal agencies to identify additional qualified SMWBE firms.
    - Ensure that the SMWBE database is integrated into the company's procurement software, allowing automatic inclusion of these firms in all solicitation efforts.

2. Active Solicitation of SMWBE Firms

- **Objective:** Guarantee that SMWBE firms are solicited for all procurement opportunities where they are potential sources.
- **Action Steps**:
    - For every procurement opportunity, cross-check the SMWBE database to identify potential SMWBE firms that can provide the required goods or services.
    - Send targeted solicitations to identified SMWBE firms, ensuring they have all the necessary information to submit competitive bids.
    - Follow up with these firms to address any questions or concerns and encourage their participation in the bidding process.
    - Track and report the number of solicitations sent to SMWBE firms and the response rate to continuously improve the outreach process.

3. Dividing Total Requirements to Maximize SMWBE Participation

- **Objective:** Increase SMWBE participation by breaking down large procurement requirements into smaller tasks or quantities.
- **Action Steps**:
    - Assess the scope of work for each project and identify opportunities to divide the work into smaller, more manageable tasks that can be performed by SMWBE firms.

- Ensure that divided tasks are economically feasible and do not compromise the overall efficiency or cost-effectiveness of the project.
- Clearly define the scope and requirements of each smaller task to make it easier for SMWBE firms to submit competitive bids.
- Monitor the effectiveness of this strategy by tracking the number of SMWBE firms that participate and succeed in winning contracts for smaller tasks.

4. Establishing Flexible Delivery Schedules

- **Objective:** Encourage greater participation by SMWBE firms by establishing delivery schedules that accommodate their operational capacities.
- **Action Steps:**
  - Evaluate the overall project timeline and identify areas where delivery schedules can be made more flexible without impacting project deadlines.
  - Communicate with SMWBE firms to understand their specific needs and constraints regarding delivery schedules.
  - Adjust delivery schedules where feasible to allow SMWBE firms to participate, particularly for firms that may have limited resources or capacity.
  - Document and analyze the impact of flexible delivery schedules on SMWBE participation and project outcomes to refine this approach for future projects.

5. Leveraging Support Services and Resources

- **Objective:** Utilize external support services to enhance the effectiveness of SMWBE utilization efforts.
- **Action Steps:**
  - Partner with the Small Business Administration (SBA) and the Florida Office of Supplier Diversity to access resources, training, and assistance in identifying and engaging SMWBE firms.
  - Participate in workshops, seminars, and networking events organized by these agencies to build relationships with SMWBE firms and stay informed about best practices in procurement.
  - Utilize the SBA's online tools and resources to ensure that solicitation practices and contract requirements are aligned with federal guidelines for SMWBE participation.
  - Encourage SMWBE firms to take advantage of these resources to enhance their competitiveness and ability to meet project requirements.

6. Monitoring and Reporting

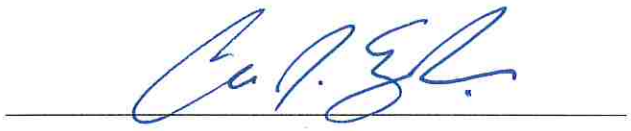
- **Objective:** Ensure transparency and accountability in the utilization of SMWBE firms.

- **Action Steps**:
    - Implement a system for tracking the participation of SMWBE firms in all procurement activities, including the number of firms solicited, the number of bids received, and the number of contracts awarded.
    - Regularly review and analyze data to identify trends, successes, and areas for improvement in SMWBE utilization.
    - Report on SMWBE participation in all relevant project documentation and presentations to stakeholders.
    - Continuously refine strategies and action steps based on feedback and performance data to maximize the effectiveness of SMWBE utilization efforts.

7. Continuous Improvement and Feedback

- **Objective**: Enhance the SMWBE utilization plan over time through continuous improvement.
- **Action Steps**:
    - Solicit feedback from SMWBE firms, project managers, and other stakeholders to identify barriers to participation and areas for improvement.
    - Adjust the plan based on feedback and lessons learned from previous projects.
    - Stay updated on new regulations, guidelines, and best practices related to SMWBE utilization and integrate them into the plan as needed.
    - Foster a culture of inclusivity and diversity within the company by providing ongoing training and awareness programs focused on the importance of SMWBE participation in procurement activities.

Thank you,



Charles J. Brackett III, President/CEO

Prime Construction Group, Inc.

BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. §1352 (as amended)

Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352 (as amended). Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. See below – Certification Regarding Lobbying.

Byrd Anti-Lobbying Certification

Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Byrd Anti-Lobbying Amendment, 31 U.S.C. §1352 (as amended)

The PROPOSER, Prime Construction Group, Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of PROPOSER's Authorized Official

Charles J. Brackett III, President/CEO

Name and Title of PROPOSER's Authorized Official

8/16/2024

Date

Appendix B - BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

Prime Construction Group, Inc. as Principal, and Travelers Casualty and Surety Company of America as Surety, are hereby and firmly bound unto the CITY OF WINTER SPRINGS as OWNER, in the penal sum of TEN percent of amount bid Dollars ($ 10%) for the payments of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the CITY OF WINTER SPRINGS a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Work described as: Replacement of Lift Station 7W

NOW, THEREFORE, if the Principal shall not withdraw said Bid within 90 days after the opening of the same, or in the alternate, if said Bid shall be accepted and the Principal shall execute and deliver required certificates of insurance and a contract that, at minimum, includes the terms of the Form of Agreement attached hereto (properly completed in accordance with said Bid), and shall give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then this obligation shall be void; otherwise the same shall remain in force and effect and the sum herein stated shall be due and payable to the CITY OF WINTER SPRINGS and the Surety herein agrees to pay said sum immediately, upon demand of the CITY OF WINTER SPRINGS, in good and lawful money of the United States of America, as liquidated damages for failure of the Principal; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such Bid; and said Surety does hereby give waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this 16th day of August, 2024, the name and corporate seal of each corporate body being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Witness)
Wyatt H. Hazy, Vice President/COO

Prime Construction Group, Inc.
(Principal) (Seal)

Charles J. Brackett III, President/CEO
(Title)

1000 Jetstream Drive, Orlando, FL, 32824
(Address)

Travelers Casualty and Surety Company of America
(Surety) (Seal)

Paul A. Locascio (Title) Attorney-in-Fact & FL Resident Agent

One Tower Square, Hartford, CT 06183
(Address)

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **BENJAMIN H FRENCH, Pamela L Jarman, PAUL A LOCASCIO, TRAVA RIDLON, REBEKAH F SHARP, L Dale Waldorff, and K Wayne Walker of Fort Walton Beach, Florida,** their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, **2021.**

HARTFORD, CONN. — TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
HARTFORD, CONN. — TRAVELERS CASUALTY AND SURETY COMPANY
CORPORATE SEAL — ST. PAUL FIRE AND MARINE INSURANCE COMPANY

State of Connecticut

By: _____
Robert L. Raney, Senior Vice President

City of Hartford ss.

On this the **21st** day of **April**, **2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2026**

ANNA P NOWIK NOTARY PUBLIC CONNECTICUT

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 16 day of August , 2024 .

HARTFORD, CONN. — TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
HARTFORD, CONN. — TRAVELERS CASUALTY AND SURETY COMPANY
CORPORATE SEAL — ST. PAUL FIRE AND MARINE INSURANCE COMPANY

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

Section H

Corporate Filing

2024 FLORIDA PROFIT CORPORATION ANNUAL REPORT

DOCUMENT# P93000078767

Entity Name: PRIME CONSTRUCTION GROUP, INC.

Current Principal Place of Business:

1000 JETSTREAM DRIVE
ORLANDO, FL 32824

Current Mailing Address:

1000 JETSTREAM DRIVE
ORLANDO, FL 32824 US

FEI Number: 59-3210337

FILED
Feb 05, 2024
Secretary of State
8879608385CC

Certificate of Status Desired: Yes

Name and Address of Current Registered Agent:

BRACKETT, CHARLES J III
1000 JETSTREAM DRIVE
ORLANDO, FL 32824 US

The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.

SIGNATURE: CHARLES J BRACKETT III 02/05/2024

Electronic Signature of Registered Agent — Date

Officer/Director Detail :

Title	VICE PRESIDENT AND SECRETARY	Title	PRESIDENT AND TREASURER
Name	HAZY, WYATT H	Name	BRACKETT, CHARLES J III
Address	8335 UPPER PERSE CIRCLE	Address	1201 WATERWITCH COVE CR
City-State-Zip:	ORLANDO FL 32827	City-State-Zip:	ORLANDO FL 32806

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: CHARLES J BRACKETT III PRESIDENT 02/05/2024

Electronic Signature of Signing Officer/Director Detail — Date

Section A- PROPOSER Information and Acknowledgement Form



PROPOSER INFORMATION AND ACKNOWLEDGEMENT FORM

For

RFP # 07-24-01 BI

Replacement of Lift Station 7W

The undersigned PROPOSER does hereby agree to furnish the City of Winter Springs, Florida, the items listed in accordance with the minimum requirements/evaluation criteria shown by the Request for Proposal to be delivered to the specified site for the price indicated.

IT IS THE PROPOSER'S RESPONSIBILITY TO CHECK www.demandstar.com FOR FINAL DOCUMENTS AND ADDENDA BEFORE SUBMITTAL

THIS PROPOSAL MUST BE SIGNED BY THE PRINCIPAL OR DIRECTOR AS INDICATED BY THE FLORIDA DEPARTMENT OF STATE, DIVISION OF CORPORATIONS (www.sunbiz.org). Proof of corporate signer must be submitted with Proposal. If not submitted, PROPOSER will be considered non-responsive. Use Sunbiz website screen shot or copy of Corporate Resolution or Power of Attorney.

PROPOSER NAME: SanPik Inc

TAX ID# SNN or EIN: 47-1475163

PROPOSER ADDRESS: 4300 W Lake Mary Blvd Suite 1010, Lake Mary, FL 32746

PURCHASE ORDER ADDRESS: 4300 W Lake Mary Blvd Suite 1010, Lake Mary, FL 32746

PHONE NUMBER: 407-98-1033

COMPANY WEBSITE: https://sanpikinc.com/

COMPANY CONTACT (REP): Matthew Sands

CONTACT EMAIL ADDRESS: m.sands@sanpikinc.com

SIGNATURE:

THE UNDERSIGNED:

A. Acknowledges receipt of:

1. RFP # 07-24-01 BI Pertaining To: Replacement of Lift Station 7W
2. Addenda:

Number: 1, Dated 7/16/24. 4 - 8/16/24

Number: 2, Dated 8/2/24

3 8/2/24.

B. Has examined the site and all RFP Documents and understands that in submitting its Proposal, they waive all right to plead any misunderstanding regarding the same.

C. Agrees:

1. To hold this Proposal open for 90 calendar days after the bid opening date.
2. To furnish the services specified in this RFP at the prices quoted in Proposal and in compliance with the RFP Documents.
3. To accept the provisions of the Instructions to PROPOSERS.
4. To negotiate a contract with the CITY incorporating the Proposal prices, if selected on the basis of this Proposal.
5. To accomplish the work in accordance with the contract documents.

D. Certifies:

1. That all information contained in this Proposal is truthful to the best of my knowledge and belief.
2. That I am duly authorized to submit this Proposal on behalf of the PROPOSER and that the PROPOSER is ready, willing, and able to perform if awarded the Proposal.

Stipulated Amount

A. Submit on Cost Proposal Worksheet, Appendix A.

Section B- Table of Contents

Section A- Proposer Information and Acknowledgement Form	Pages 1-2
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Section E- Other Information	Pages 17-34
Section F- Cost and Time	Pages 35-37
Section G- Mandatory Forms	Pages 38-54
Section H- Florida State Corporate Filing	Pages 55-57

Section C- Introduction Letter

SanPik is pleased to present this bid package for your consideration. We would be honored to have the opportunity to work with the City of Winter Springs to successfully complete all aspects of the scope of work outlined in the bid documents.

Our company is highly familiar with every scope of work detailed in the bid documents. We bring a wealth of experience and expertise to this project, having completed numerous similar jobs with excellence. Our extensive portfolio includes successful projects with:

- Grading
- Fence Removal and Replacement
- Manhole Replacement with various depths
- Manhole Modification of various depths
- Grouting/ Pipe Abandonment within various diameters
- PVC Sewer Pipe Installation in ranging depths
- Triplex lift station installation
- Force main installation ranging in sizes and depths
- Water pipe installation and taps
- Wet Well abandonment
- Concrete driveway, pad and sidewalk installation
- Electrical building installation
- Electrical upgrades provided by Electrical Subcontractor

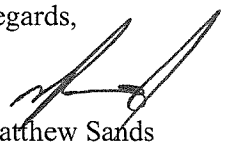
SanPik understands the complexity of this job and the importance of completing the entirety of the job within the specified timeline.

Our bid package includes the outline of general information about SanPik. This includes the size, structure and location of our Office. Next, the proposal includes the experience on behalf of SanPik. The SanPik has over 40 years of combined experience working in the Caribbean and the US. We have worked for numerous municipalities around all Central Florida.

Next, in our proposal we outline our teams experience as well as Resumes for each of the personnel that will be working on this Winter Springs job if we are selected. In this section we also outline jobs we completed with similar scope as called out within the drawings of this solicitation. Following that section, we listed the references for jobs that we have completed in the past. Lastly, we simply stated why we believe SanPik would be the most appropriate contractor to complete this project. Each of these items in this section were a part of the Qualifications for SanPik.

Moving on, we included our business license, COI, W9 and Resumes in the other information tab. Section F included our Cost proposal. Section G included all of the Mandatory forms, and the last Section H was inclusive of our corporate resolution for SanPik.

Regards,



Matthew Sands

President

Section D- Qualifications

1. General

SanPik Company Overview

Company Name: SanPik
Location: Lake Mary, Florida
Industry: General Contracting
Specialization: Underground Utilities
Size: 25 Employees

About SanPik:

SanPik is a dedicated and skilled general contracting firm specializing in underground utilities. Based in Lake Mary, Florida, SanPik has earned a reputation for delivering high-quality services in the underground utilities sector. As a relatively small company with 25 employees, SanPik places a strong emphasis on expertise, safety, and client satisfaction.

Our Services:

SanPik offers a wide array of services that cater to the specific needs of our clients. Each project is handled with precision and care, ensuring that every detail meets the highest standards.

- **Water, Sewer, and Force main Installation:** SanPik is highly experienced in the installation of water, sewer, and force main systems. Our team is equipped to handle projects of varying complexity, ensuring that all installations are compliant with industry regulations.
- **Manhole Installation:** We specialize in the installation of manholes up to 30 feet deep. Our team uses the latest techniques and equipment to ensure that these installations are both safe and durable.
- **Lift Station Systems:** SanPik has the expertise to install lift station systems of any size. Our work ensures the efficient and reliable operation of these crucial components in utility systems.

Project Management:

Every project undertaken by SanPik is assigned a dedicated team consisting of a project manager, a project engineer, and a superintendent. This team approach ensures that each job is managed efficiently, from planning and execution to completion, with a focus on delivering results on time and within budget.

What SanPik has to offer:

- **Experienced Team:** Our team of professionals brings years of industry experience to each project, ensuring that even the most complex jobs are handled with expertise.
- **Quality Assurance:** At SanPik, quality is at the forefront of everything we do. From materials to workmanship, we guarantee that our services meet the highest standards.
- **Safety Commitment:** SanPik is committed to maintaining strict safety protocols on all project sites, safeguarding both our workers and the surrounding community.

- **Customer-Centric Approach:** We prioritize our clients' needs, working closely with them to understand their objectives and deliver tailored solutions that exceed expectations

Section D- Qualifications

2. Proposer Experience

SanPik: A Decade of Excellence in Underground Utilities

For the past 10 years, SanPik has been a trusted name in the underground utility industry in Central Florida and the Cayman Islands. With a proven track record of delivering high-quality services, SanPik has established itself as a leader in the installation of lift station systems and water utilities throughout Central Florida.

Extensive Experience in Lift Station Installations

SanPik has successfully installed numerous lift stations at sites across Central Florida, handling projects of varying sizes and complexities. Our expertise in this area ensures that each installation is completed with precision, meeting all industry standards and client expectations.

Trusted by Leading Municipalities

SanPik's commitment to excellence has earned the trust of several key municipalities and water authorities in the region. Our projects include the installation of lift stations and utilities for:

- **City of Sanford**
- **City of Orlando**
- **City of Mount Dora**
- **City of Leesburg**
- **Town of Ponce Inlet**
- **City of Maitland**
- **City of Ocoee**
- **Orange County**
- **Seminole County**
- **City of Daytona Beach Utilities**
- **City of Port Orange**
- **TOHO Water Authority**

These partnerships reflect our ability to deliver reliable and efficient utility solutions that meet the diverse needs of our clients. SanPik's decade-long experience, combined with our commitment to quality and safety, makes us the ideal partner for underground utility projects. Whether it's a complex lift station installation or a comprehensive utility project, SanPik delivers results that stand the test of time.

Design Services

Sanpik, Inc along with its Cayman Islands sister company (Sanpik Contracting Cayman) was recently awarded a Design-Build of a Seawater Intake Line and 20 MGD Master Pump Station for the Turtle Centre in Grand Cayman.

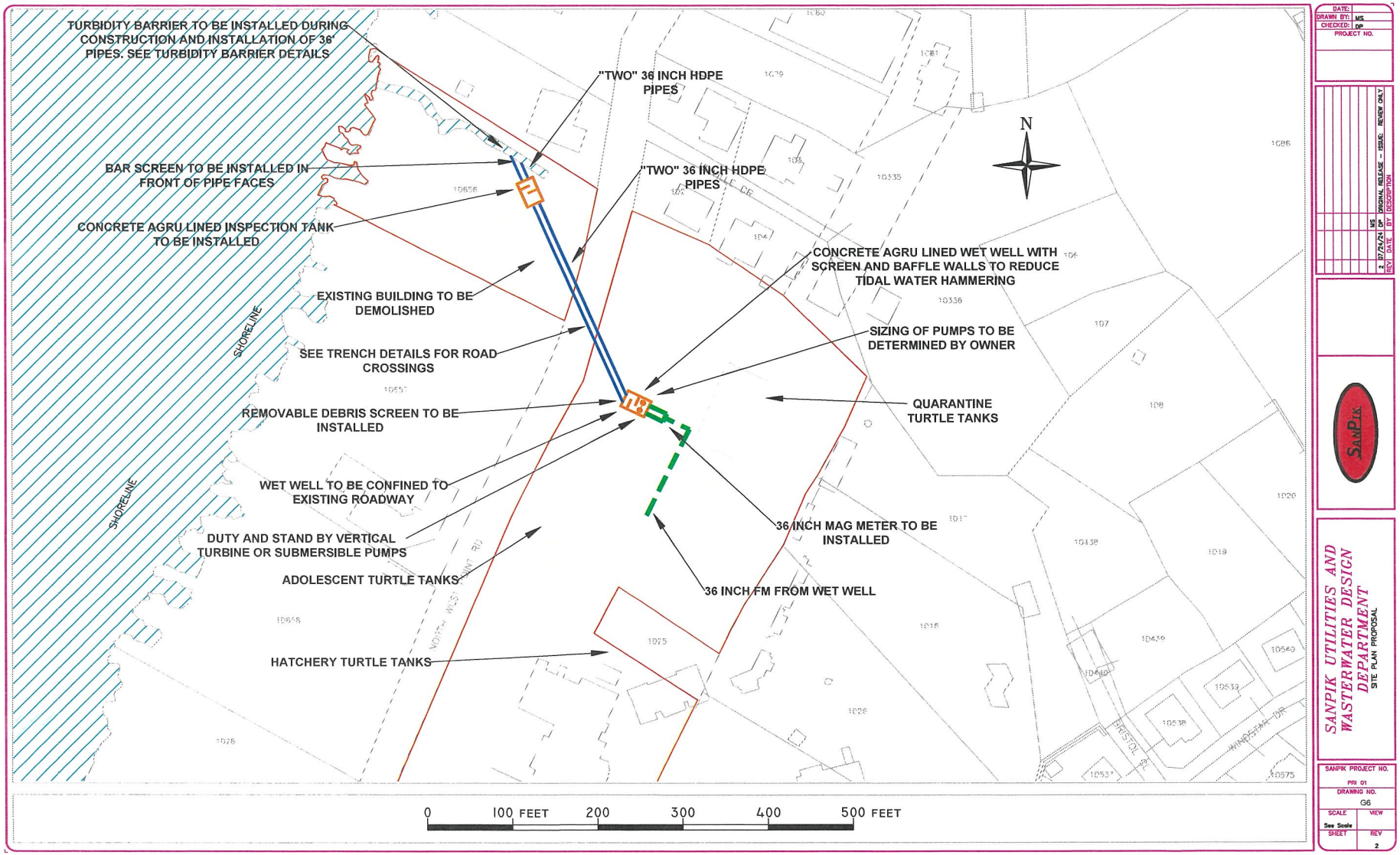
The scope includes:

- Designing and constructing a 20 MGD seawater intake line and pump station system.
- Approximately 26ft deep Wet Well
- 36" HDPE Seawater Intake Line via open cut excavation
- Provided estimated cost of design and construction phases.
- Demolishing the existing Blue building and ensuring site cleanup.
- Temporary construction fencing as required for site access.
- All cast-in-place concrete structures will be Agru Lined.
- Pipe penetrations will require specialty welding and waterstops to ensure no leakage can occur.
- Existing seawater pumping system remains in service until time to switch over.
- Ensuring all connections to park system process piping are secure and functional.
- Conducting thorough site surveys and assessments to inform the design process.
- Procuring and installing high-quality materials and equipment, including Flygt pumps.
- Adhering to industry standards and regulatory requirements throughout the project.
- Testing, commissioning, and providing comprehensive documentation.
- New pumps are recommended to be Flight/Xylem, these are the same ones Water Authority Cayman uses for reference.
- In addition, new pump control panel should have backup circuit boards, VFD's etc., ordered for inventory as part of this contract.
- As an option, a training program and service period can also be included.

In addition to the above large Design-Build project, Sanpik has also performed a Design-Build for a subdivision in Grand Cayman called "Bayview".

The scope included:

- Design-Build of all infrastructure, inclusive of one Pump Station, 3,130 feet of 8" gravity sewer, 2,900 feet of 3" HDPE force main, 3,600 feet of 4" HDPE water main, 3,830 feet of 4" telecom duct bank, 3,600 feet of 2" telecom duct bank, and water/sewer services.


TURBIDITY BARRIER TO BE INSTALLED DURING CONSTRUCTION AND INSTALLATION OF 36" PIPES. SEE TURBIDITY BARRIER DETAILS
"TWO" 36 INCH HDPE PIPES
"TWO" 36 INCH HDPE PIPES
BAR SCREEN TO BE INSTALLED IN FRONT OF PIPE FACES
CONCRETE AGRU LINED INSPECTION TANK TO BE INSTALLED
CONCRETE AGRU LINED WET WELL WITH SCREEN AND BAFFLE WALLS TO REDUCE TIDAL WATER HAMMERING
EXISTING BUILDING TO BE DEMOLISHED
SIZING OF PUMPS TO BE DETERMINED BY OWNER
SEE TRENCH DETAILS FOR ROAD CROSSINGS
QUARANTINE TURTLE TANKS
REMOVABLE DEBRIS SCREEN TO BE INSTALLED
WET WELL TO BE CONFINED TO EXISTING ROADWAY
36 INCH MAG METER TO BE INSTALLED
DUTY AND STAND BY VERTICAL TURBINE OR SUBMERSIBLE PUMPS
ADOLESCENT TURTLE TANKS
36 INCH FM FROM WET WELL
HATCHERY TURTLE TANKS
SHORELINE
SHORELINE
N
0
100 FEET
200
300
400
500 FEET
DATE:
DRAWN BY: MS
CHECKED: DP
PROJECT NO.
REV DATE BY DESCRIPTION
2 07/24/24 DP ORIGINAL RELEASE - ISSUED: REVIEW ONLY
SANPIK UTILITIES AND WASTERWATER DESIGN DEPARTMENT
SITE PLAN PROPOSAL
SANPIK PROJECT NO.
PRI 01
DRAWING NO.
G6
SCALE
See Scale
VIEW
SHEET
REV
2

Previous Jobs Completed with Similar Scope of Work

City of Mount Dora: Lift Station 53 at Round Lake Road

Project Value: $2,231,021.00

Project Dates: January 2021-January 2022

Scope of Work: SanPik was contracted to build a new wastewater lift station for Mt Dora. The scope included, new wet well 30ft deep with new pumps, complete electrical and generator set up with the associated force main and gravity sewer piping.





City of Maitland: Lift Station #1 Relocation

Project Value: $6,000,000.00

Project Dates: September 2021- February 2023

Scope of Work: This project consisted of the installation of 6,000LF of PVC Sewer Pipe ranging in sizes from 8" to 24". There was also 3,320LF of HDPE Force main installed. Also, demolition of existing lift station and the installation of a new submersible triplex lift station. A new wet well was installed at about 25FT deep. During the entire time of construction, a bypass setup had to be in place to keep the live sewer flowing through. There was also a complete road, sidewalk and landscape restoration associated with this project.





TOHO Water Authority: Lift Station 61 Manhole Replacement

Project Value: $600,000.00

Project Dates: September 2023- October 2023

Scope of Work: SanPik Inc was contracted by TOHO Water Authority to replace a manhole in Osceola County ROW right outside of their Lift Station 61 service area. The manhole was 28FT deep and required an extensive trench to be dug in the middle of the road on Poinciana Blvd in Kissimmee. There was a complete bypass set up to keep the live sewer on during this entire manhole replacement.





Section D- Qualifications

3. Team Experience

SanPik: Structured and Efficient Project Management

At SanPik, every project is approached with a clear, structured process that ensures efficiency, quality, and safety from start to finish. Our project management hierarchy is designed to provide strong leadership and expert oversight at every stage of the project, ensuring that every detail is meticulously handled.

1. **Project Manager: William Picek/ Matthew Sands**
   Every project begins with the project manager, who oversees the entire operation. The project manager is responsible for planning, budgeting, and coordinating all aspects of the project. They ensure that the project aligns with client expectations and is completed on time and within budget.

2. **Superintendent: John-Paul Thatcher**
   Working closely with the project manager, the superintendent is on-site to oversee the daily operations. They manage the overall construction activities, ensuring that the work progresses according to the schedule and that safety protocols are strictly followed.

3. **Project Engineer: Tyler Eldon**
   The project engineer is responsible for the technical aspects of the project. They provide the necessary engineering expertise, solve on-site challenges, and ensure that all work meets the required specifications and standards.

4. **Foreman and Skilled Labor Crew: Loren Pagel (Todd)**
   Finally, the foreman and his crew of skilled laborers carry out the hands-on work. The foreman leads the crew, ensuring that the work is performed according to the project plans and specifications. The skilled laborers bring their expertise to the field, executing the tasks with precision and care.

This well-organized approach ensures that each project is handled by experienced professionals at every level, from planning and design to execution and completion. At SanPik, we believe that this structured process is key to delivering high-quality results that meet and exceed our clients' expectations.

See attached Resumes in Section E for the personnel listed below that would be a part of this job with the City of Winter Springs:

- Project Manager: William Picek or Matthew Sands
- Superintendent: John-Paul Thatcher
- Project Engineer: Tyler Eldon
- Foreman: Loren Pagel

Section D- Qualifications

4. References: See "References Information form" on the following page.

REFERENCE INFORMATION FORM

RFP # 07-24-01 BI

Replacement of Lift Station 7W

Organization: City of Maitland

Contact Person: Karen McCullen

Address: 1827 Fennell St

City: Maitland State: Florida Zip: 32751

Phone Number: (407)-312-0296

Project Cost: 6 Million Date Performed: September 2021- February 2023

Organization: City of Mount Dora

Contact Person: George Marek

Address: 900 N Donnelly St

City: Mount Dora State: Florida Zip: 32757

Phone Number: (352)-455-5547

Project Cost: $2.3 Million Date Performed: January 2021- January 2022

Organization: TOHO Water Authority

Contact Person: Lauren Shields

Address: 951 Martin Luther King Blvd

City: Kissimmee State: Florida Zip: 34741

Phone Number: (407)-269-7750

Project Cost: 9.1 Million Date Performed: September 2022-July 2024

PROPOSER Representative Typed Name/Title: Matthew Sans/ President

PROPOSER Representative Signature:

PROPOSER: SanPik Inc

Section D- Qualifications

5. Conclusion

SanPik firmly believes it should be the selected contractor for a multitude of compelling reasons. First and foremost, being a local company, SanPik has a deep understanding of the Central Florida area and its unique challenges. Our crews are not only readily available to undertake this scope of work but also bring years of specialized experience to the table. With a decade of consistent performance across Central Florida, SanPik has developed strong relationships with municipalities, engineers, and project managers, which underscores our reliability and commitment to the community.

Our reputation as a trustworthy and dedicated company is well-established, built on a foundation of successful projects and satisfied clients. Our project managers, who together boast over 40 years of experience in the Caribbean and Florida, bring invaluable expertise and insight to each project. This extensive experience ensures that SanPik can handle even the most complex projects with confidence and efficiency.

What truly sets SanPik apart is our close-knit, collaborative approach to project execution. We work hand-in-hand with engineers, project managers, and owners, fostering a team environment that feels like a family. This level of cooperation and communication ensures that every detail is attended to and that the project's vision is realized to the fullest extent.

SanPik Inc. is known for its expertise in tackling deep, complex gravity sewer jobs, establishing a strong reputation in the industry. The company takes pride in its ability to handle these challenging projects, which require precision and skill, often involving intricate underground conditions. SanPik's crews undergo extensive training to specialize in this type of work, enabling them to successfully complete jobs that many other contractors might avoid. This dedication to complex projects has allowed SanPik to carve out a niche in the industry, becoming a go-to contractor for difficult underground utility installations.

Our reputation is of utmost importance to us, and we go to great lengths to maintain it. Every project we undertake is executed with a commitment to excellence, ensuring that it meets or exceeds the standards set by the owners. We pride ourselves on our work ethic, performance, and the lasting relationships we build with our clients.

At SanPik, we believe that our dedication to quality, combined with our local expertise and collaborative spirit, makes us the ideal choice for this project.

Section E- Other Information

This section includes information such as: SanPik's Underground Utility License, Sample Certificate of Insurance, a copy of our W-9 and Resumes for our key personnel.

Ron DeSantis, Governor

Melanie S. Griffin, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

PICEK, WILLIAM J II

SANPIK, INC.
3599 W LAKE MARY BLVD SUITE B
LAKE MARY FL 32746

LICENSE NUMBER: CUC1225224

EXPIRATION DATE: AUGUST 31, 2026

Always verify licenses online at MyFloridaLicense.com

ISSUED: 08/22/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

1305

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/28/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	**CONTACT NAME:** Mary Greenfelder
Cypress Risk Partners, LLC	**PHONE (A/C, No, Ext):** (407) 949-5810 **FAX (A/C, No):** (407) 794-6386
1201 S Orlando Ave Suite 390	**E-MAIL ADDRESS:** mgreenfelder@cypressrp.com
Winter Park FL 32789	**INSURER(S) AFFORDING COVERAGE** / **NAIC #**
INSURED	**INSURER A :** ARCH INSURANCE CO 11150
SanPik, Inc	**INSURER B :** TRAVELERS PROPERTY CASUALTY INS CO 36161
4300 W Lake Mary Blvd, Ste 1010	**INSURER C :** Berkley Assur Co 39462
Lake Mary FL 32746	**INSURER D :** / **INSURER E :** / **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR X Contractual Liability GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☐ LOC ☐ OTHER:			ZAGLB9259302	06/01/2024	06/01/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 2,000,000 $ 300,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS X HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY			ZACAT9296302	06/01/2024	06/01/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Personal Injury Protect	$ 1,000,000 $ $ $ $ 10,000
B	X UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED X RETENTION $ 10,000			CUP-3T105467-24-NF	06/01/2024	06/01/2025	EACH OCCURRENCE AGGREGATE 	$ 7,000,000 $ 7,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		ZAWCI9752702	06/01/2024	06/01/2025	X PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C	Professional Liability & Pollution Liability			PCAB-5024576-0624	06/01/2024	06/01/2025	Each Claim Aggregate	$1,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

FOR INFORMATIONAL PURPOSES ONLY

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give Form to the requester. Do not send to the IRS.

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

SANPIK INCORPORATED

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☑ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

4300 W. LAKE MARY BLVD, STE 1010

Requester's name and address (optional)

6 City, state, and ZIP code

LAKE MARY, FLORIDA 32746

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

4	7	–	1	4	7	5	1	6	3

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | **Signature of U.S. person ▶** [signature] **Date ▶** 6/20/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*



MATTHEW SANDS

176 Citation Ct, Lake Mary, FL 32746 | 407. 650. 6969 | m.sands@sanpikinc.com

EDUCATION

University of Georgia Southern
BS in Civil Engineering Technology **Fall 2010**

University of Miami Online High School
High School Diploma **Summer 2005**

EMPLOYMENT HISTORY

SanPik, Inc. (4300 W. Lake Mary Blvd, Ste 1010, Lake Mary, FL, USA 32746)
President/Owner/Project Manager **07/2015 – Present**

- $62K - Skylark Subdivision Water Main Improvements, Longwood, FL, USA -2015
- $215K - Skylark Subdivision Drainage Improvements, Longwood, FL, USA -2015
- $357K - Lee Vista Promenade Sanitary Sewer Improvements, Orlando, FL, USA -2015
- $33K - St. Cloud/ TWA Reclaimed Water Main Interconnect NW-Phase 2, St. Cloud, FL, USA -2015
- $297K - Consumer Ct. Liftstation No. 62 Ocoee, FL, USA -2015
- $205K – South Water Treatment Plant Raw Water Re-pipe Project, Ocoee, FL, USA -2015
- $644K – West Bay Beach Sewerage System Force Main Installation, George Town, Cayman Islands -2016
- $318K – Maitland Towncenter Drainage & Utility Upgrades, Maitland, FL, USA -2016
- $369K – TOHO Water Authority Harmony Wastewater Treatment Plant Expansion Phase 1, Kissimmee, FL -2016
- $1.35M – SR46 Utility Relocations, Sanford, FL, USA -2016
- $550K – Hoffner Ave (SR15) Water Main Installation, Deland, FL -2016
- $180K – Amanda St Sewer & 436 Extensions, Altamonte Springs, FL -2016
- $686K – Easterly Tibbets Hwy Force Main, George Town, Cayman Islands -2016
- $2.2M – Osceola Pkwy "Early Works" – Utilities, Lake Buena Vista, FL, USA -2016
- $842K – Midway Utility Replacements Ph ll, Sanford, FL, USA -2017
- $435K – TWA Cypress West WRF TOHO, Kissimmee, FL, USA -2017
- $249K – Reclaim Water Main Conversion – Polynesian Resort, Lake Buena Vista, FL, USA -2017
- $343K – Flewelling Ave Drainage, Ocoee, FL, USA -2018

- $84K – Alaqua Phase ll, Longwood, FL, USA -2018
- $774K – Sole Mia Crystal Lagoon – Miami, FL, USA – 2018
- $3.25M – Lake Davis to Lake Greenwood Drainage Improvements – Orlando, FL, USA 2018
- $289K - CBR Portable Water Relocations – Lake Buena Vista, FL, USA – 2018
- $70K – South Bermuda WRF Sewer Plant 2 & 3 Improvements – Kissimmee, FL, USA 2018
- $4.4M – Lake Marion WRF – Lake Buena Vista, FL, USA – 2018
- $2.9M – Gravity Wastewater System Improvements – Orlando, FL, USA – 2019
- $445K – 1st Street Lift Station – Sanford, FL, USA – 2019
- $488K - Well LM-3R Equip & Connect – Lake Mary, FL, USA 2019
- $230K - Sunrise Subdivision Water Distribution System Rehabilitation and Replacement – Sanford, FL, USA - 2019
- $28K – 115 Wildwood Dr. Drainage Improvements – Sanford, FL, USA - 2019
- $371K - SR100 Reclaimed Water Main Extension – Bunnell, FL, USA - 2019
- $2.6M - MLK Roadway & Pedestrian Improvements – Daytona, FL, USA – 2019
- $3.1M – Aloma Ave & Dean Rd Gravity Main Reconnection – Oviedo, FL, USA -2020
- $678K – Lake Richmond Sewer Replacement – Orlando, FL, USA – 2020
- $3.3M – Virginia Monroe Stormwater System – Port Orange, FL, USA – 2020
- $95K – Devon Drive Watermain Replacement – Villages, FL, USA – 2020
- $193K – Sweetwater Hills Drainage Improvements – Port Orange, FL, USA - 2020
- $297K – Forest City Drainage – Orlando, FL, USA - 2020
- $34K – Manhole Replacement – Sanford, FL, USA - 2020
- $105K – Sanford Sewer Repairs – Sanford, FL, USA - 2020
- $11K - Sewer Repair, 199 Standish Dr. – Ormond Beach, FL, USA – 2020
- $15K – Airport Blvd & Bungalow Tie-In – Sanford, FL, USA – 2020
- $1.4M- DB Lee WRF Gravity Interceptor- Melbourne, FL USA- 2021
- $700K- Lift Station Rehabilitation- Leesburg, FL USA 2021
- $2.2M- Master Lift Station #53 at Round Lake Rd- Mount Dora, FL USA 2021
- $6M- Lift Station #1 Relocation- Maitland, FL USA 2021
- $4M- Lift Station 1B Hermosillo Gravity Sewer Rehabilitation- Kissimmee, FL 2021
- $800K- Sandhill Rd Water Reclamation Upgrade and Expansion- Kissimmee, FL 2022
- $9M- Lift Station 18 Scott Blvd Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- $6M- Lift Station 35 Phase 2 Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- $1M- Lift Station 33 Osceola Park Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $1M- Lift Station 19 Pickering Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $4M- Lift Station 35 Phase 3 Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $3M- Orange County Pump Station Pkg 36- Orlando, FL 2024

Island Site Development **01/01/2011 – 01/30/2015** Chief Investments Manager

Manage ISD investment companies (BCRS, TESS, Pirates Paving & J.S Steel & Supply)

Project Administrator & Project Management from January 2011 to December 2012

RELATED EXPERIENCE

Investment Manager for the following companies:

- Bahamas Contractor Rental and Supplies
- Truck Equipment Sales and Services
- Pirates Paving Ltd
- J.S Steel & Supply

Duties included but not limited to the following:

- Reviewed P&L reports on a monthly basis
- Liaised with the CEO of ISD Corporate on major decisions for the above companies
- Solved problems that the General Managers of the above companies encounter
- Reviewed cash flows for the ISD Group of companies on a weekly basis with CEO and CFO
- Reviewed payables on a weekly basis for above referenced companies
- Reviewed receivables on a weekly basis to assure clients were paying on time and addressing any problems
- Supported the ISD Group of Companies equipment manager on making decisions on substantial problems
- Liaised with U.S equipment supplier to bring in new and used equipment and trucks to support the ISD Group of Companies
- Analyzed equipment in order to make calculated decisions on major repairs, rentals and sales
- Ensured ISD Group of Companies policies are followed
- Ordered material for Pirates Paving

Project Administrator on the following projects

Duties included but not limited to tracking project cost, managing payroll, accounts receivables/payables and logistics.

- $58M – Baha Mar West Bay Street Realignment Project – February 2011 through November 2011
- $24M – Sports Centre Redevelopment Project – October 2011 through March 2013
- $2M – NAD Phase II Underground Utility Project - 2012
- $2.7M– Bakers Bay Underground Utility Project – March 2012 through June 2012
- $8M – Arawak Cay Port Development – Underground Utility Project - 2012
- $2.5M – Schooner Bay HDPE Waterline Installation Project – June 2012 through October 2012
- $2.3M – APD 5 Million Gallon Water Tank Installation – June 2011 through December 2012

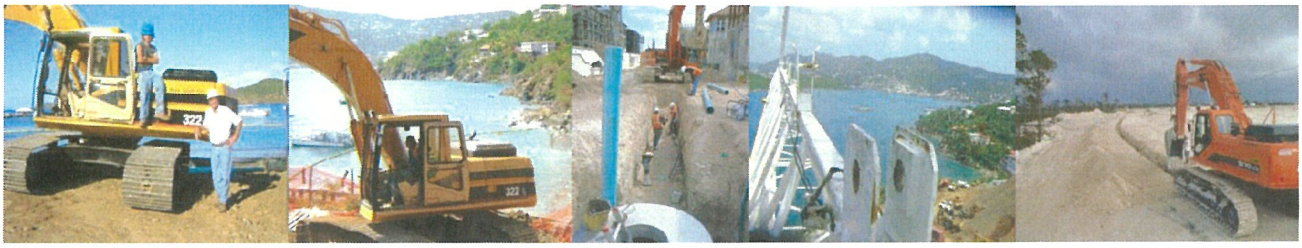
Site Foreman experience in the Sports Centre Redevelopment Project. I supervised a crew of three men during the installation of the street light bases and the street lighting electrical conduit. I also managed the construction of the BEC Substation on this project.

Project Management experience on the following projects:

- ***Arawak Cay BEC Substation building***

Duties included managing all aspects of the project from the ground up. Located existing utilities before construction began and then oversaw the building subcontractor on the construction of the substation. Handled all logistics for the project to make sure the project ran smoothly.

- ***ISD office building construction***
  Duties included managing all aspects of the project from the ground up. Retrieved quotes from local building contractors, completed the job budget and tracked all cost on the project. Two story building was complete in less than three months.
- ***Miya RRI Garden Hills Water Services project***
  Managed two crews during the installation of new water services for residents in Nassau, Bahamas. Handled all logistics, liaised with the client and tracked all project cost.



William John Picek II

24936 Derby Dr. Sorrento, FL 32776 (407) – 625 - 6300 b.picek@sanpikinc.com

Construction Skills

- Mainline C-900
- Mainline HDPE
- Demolition
- Gravity Sanitary Sewer
- Gravity Storm Sewer
- Reinforced Concrete Storm Sewer
- Fine Grading and Road Base
- Operation of Excavation Equipment
- Hydrostatic testing
- Repairing of Existing Systems

Experience

SanPik, Inc – 4300 W. Lake Mary Blvd Ste 1010, Lake Mary, FL 32746

Owner/Vice President, 1/15 to Present

- $62K - Skylark Subdivision Water Main Improvements, Longwood, FL, USA (2015)
- $215K - Skylark Subdivision Drainage Improvements, Longwood, FL, USA (2015)
- $357K - Lee Vista Promenade Sanitary Sewer Improvements, Orlando, FL, USA (2015)
- $33K - St. Cloud/ TWA Reclaimed Water Main Interconnect NW-Phase 2, St. Cloud, FL, USA (2015)
- $297K - Consumer Ct. Liftstation No. 62 Ocoee, FL, USA (2015)
- $205K – South Water Treatment Plant Raw Water Re-pipe Project, Ocoee, FL, USA (2015)
- $644K – West Bay Beach Sewerage System Force Main Installation, George Town, Cayman Islands (2016)
- $318K – Maitland Towncenter Drainage & Utility Upgrades, Maitland, FL, USA (2016)
- $369K – TOHO Water Authority Harmony Wastewater Treatment Plant Expansion Phase 1, Kissimmee, FL (2016)
- $1.35M – SR46 Utility Relocations, Sanford, FL, USA (2016)
- $550K – Hoffner Ave (SR15) Water Main Installation, Deland, FL (2016)
- $180K – Amanda St Sewer & 436 Extensions, Altamonte Springs, FL (2016)
- $686K – Easterly Tibbets Hwy Force Main, George Town, Cayman Islands (2016)
- $2.2M – Osceola Pkwy "Early Works" – Utilities, Lake Buena Vista, FL, USA (2016)
- $842K – Midway Utility Replacements Ph ll, Sanford, FL, USA (2017)
- $435K – TWA Cypress West WRF TOHO, Kissimmee, FL, USA (2017)
- $249K – Reclaim Water Main Conversion – Polynesian Resort, Lake Buena Vista, FL, USA (2017)
- $343K – Flewelling Ave Drainage, Ocoee, FL, USA (2018)
- $84K – Alaqua Phase ll, Longwood, FL, USA (2018)
- $774K – Sole Mia Crystal Lagoon – Miami, FL, USA – (2018)

- $3.25M – Lake Davis to Lake Greenwood Drainage Improvements – Orlando, FL, USA (2018)
- $289K - CBR Portable Water Relocations – Lake Buena Vista, FL, USA – (2018)
- $70K – South Bermuda WRF Sewer Plant 2 & 3 Improvements – Kissimmee, FL, USA (2018)
- $4.4M – Lake Marion WRF – Lake Buena Vista, FL, USA – (2018)
- $2.9M – Gravity Wastewater System Improvements – Orlando, FL, USA – (2019)
- $445K – 1st Street Lift Station – Sanford, FL, USA – (2019)
- $3.1M – Aloma Ave & Dean Rd Gravity Main Reconnection – Oviedo, FL, USA -2020
- $678K – Lake Richmond Sewer Replacement – Orlando, FL, USA – 2020
- $3.3M – Virginia Monroe Stormwater System – Port Orange, FL, USA – 2020
- $95K – Devon Drive Watermain Replacement – Villages, FL, USA – 2020
- $193K – Sweetwater Hills Drainage Improvements – Port Orange, FL, USA - 2020
- $297K – Forest City Drainage – Orlando, FL, USA - 2020
- $34K – Manhole Replacement – Sanford, FL, USA - 2020
- $105K – Sanford Sewer Repairs – Sanford, FL, USA - 2020
- $11K - Sewer Repair, 199 Standish Dr. – Ormond Beach, FL, USA – 2020
- $15K – Airport Blvd & Bungalow Tie-In – Sanford, FL, USA – 2020
- $1.4M- DB Lee WRF Gravity Interceptor- Melbourne, FL USA- 2021
- $700K- Lift Station Rehabilitation- Leesburg, FL USA 2021
- $2.2M- Master Lift Station #53 at Round Lake Rd- Mount Dora, FL USA 2021
- $6M- Lift Station #1 Relocation- Maitland, FL USA 2021
- $4M- Lift Station 1B Hermosillo Gravity Sewer Rehabilitation- Kissimmee, FL 2021
- $800K- Sandhill Rd Water Reclamation Upgrade and Expansion- Kissimmee, FL 2022
- $9M- Lift Station 18 Scott Blvd Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- $6M- Lift Station 35 Phase 2 Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- $1M- Lift Station 33 Osceola Park Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $1M- Lift Station 19 Pickering Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $4M- Lift Station 35 Phase 3 Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- $3M- Orange County Pump Station Pkg 36- Orlando, FL 2024

Island Site Development – Nassau, Bahamas

Project Manager, 1/11 to 12/14

Day to day operations and quality control. I oversaw all of installation of the underground services (water, sewer, electric, telecommunications and irrigation) on numerous multi-million-dollar projects. I oversaw 5 crews during the West Bay Street Road Project that included over 7 miles of pipe for the Baha Mar Casino and Resort.

Selected Achievements:

- Taking off, ordering, and tracking all materials through shipping until landed on site.
- Maintaining a good working relationship with owner to help get the job done.
- Have the ability to help and teach the local workforce the proper way to install underground services.
- Excellent problem-solving skills when faced with a new challenge.
- Scheduled work on a day to day basis.

Bahamas Marine Underground Services – Nassau, Bahamas

Project Engineer, Underground Utilities Division, 5/09 to 1/11

Day to day operations and quality control. I oversee all installation of the underground services (water, sewer, electric, telecommunications and irrigation) on the Albany project. I was brought in prior to the contract and

Loren Pagel

3100 Stratford Lane, Mt. Dora, FL 32757 t.pagel@sanpikinc.com
218-393-6356

Professional Summary

Construction manager with over 22+ years of experience in successfully overseeing all phases of construction, both underground and infrastructure, projects for a variety of clients, including private and government. Experience includes managing crews in pipe laying, installation of lift stations, water treatment plants, marina dredging, and a variety of other construction projects. Backed by strong credentials and a proven history of on-time, on-budget, and high-quality project completions.

Skills

- Training and Development
- Workplace Safety
- Operations Supervision
- Schedule Development
- OSHA Compliance
- Site Inspection

Experience

Supervisor — *Jan 2015 - Current*
SanPik, Inc. — *Lake Mary, FL*

- Maintained safe, underground pipe installation by leading and managing pipe crew's daily activities and production.
- Coordinated equipment placement near specified sites based on plans and specifications and code requirements.
- Participated in various tasks, including demolition, site maintenance, clean-up, material transport and material loading and unloading.
- Maintained clean environment and prepared worksites by removing debris, setting up equipment and clearing debris after job completion.
- Evaluated work locations to properly locate, measure and mark the exact spot for each aspect of the project.
- Set schedules and delegated work to team members based on available skill sets, materials and time.
- Supervised operations and implemented quality assurance systems.
- Observed and inspected construction progress to comply with specifications and contract documents.
- Coordinated construction activities by communicating daily production issues with upper management.
  Supervised team crew members to maintain compliance with client specifications, OSHA mandates and regulatory standards.

Certifications

OSHA10

Mainline HDPE
Confined Space Trench
Shoring Fusion
Certified

SanPik Project History

- Skylark Subdivision Water Main Improvements, Longwood, FL, USA (2015)
- Lee Vista Promenade Sanitary Sewer Improvements, Orlando, FL, USA (2015)
- Consumer Ct. Liftstation No. 62 Ocoee, FL, USA (2015)
- Maitland Towncenter Drainage & Utility Upgrades, Maitland, FL, USA (2016)
- SR46 Utility Relocations, Sanford, FL, USA (2016)
- Hoffner Ave (SR15) Water Main Installation, Deland, FL (2016)
- Midway Utility Replacements Ph ll, Sanford, FL, USA (2017)
- TWA Cypress West WRF TOHO, Kissimmee, FL, USA (2017)
- Reclaim Water Main Conversion – Polynesian Resort, Lake Buena Vista, FL, USA (2017)
- Flewelling Ave Drainage, Ocoee, FL, USA (2018)
- Alaqua Phase ll, Longwood, FL, USA (2018)
- Sole Mia Crystal Lagoon — Miami, FL, USA — (2018)
- Lake Davis to Lake Greenwood Drainage Improvements – Orlando, FL, USA (2018)
- Lake Marion WRF — Lake Buena Vista, FL, USA — (2018)
- Gravity Wastewater System Improvements – Orlando, FL, USA – (2019)
- 1st Street Lift Station – Sanford, FL, USA – (2019)
- Well LM-3R Equip & Connect – Lake Mary, FL, USA (2019)
- SR100 Reclaimed Water Main Extension – Bunnell, FL, USA – (2019)
- MLK Roadway & Pedestrian Improvements – Daytona, FL, USA – (2019)
- Aloma Ave & Dean Rd Gravity Main Reconnection — Oviedo, FL, USA
- DB Lee WRF Gravity Interceptor- Melbourne, FL USA- 2021
- Lift Station Rehabilitation- Leesburg, FL USA 2021
- Master Lift Station #53 at Round Lake Rd- Mount Dora, FL USA 2021
- Lift Station #1 Relocation- Maitland, FL USA 2021
- Lift Station 1B Hermosillo Gravity Sewer Rehabilitation- Kissimmee, FL 2021
- Sandhill Rd Water Reclamation Upgrade and Expansion- Kissimmee, FL 2022
- Lift Station 18 Scott Blvd Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- Lift Station 35 Phase 2 Gravity Sewer Rehabilitation- Kissimmee, FL 2022
- Lift Station 33 Osceola Park Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- Lift Station 19 Pickering Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- Lift Station 35 Phase 3 Gravity Sewer Rehabilitation- Kissimmee, FL 2023
- Orange County Pump Station Pkg 36- Orlando, FL 2024

ISD Project History

- Bahamar Resort and Casino. Nassau, Bahamas
- Schooner Bay by Lindroth Development Co. Abaco, Bahamas
- Non-Revenue Water Project by MIYA and WSC. Nassau,

Bahamas • Albany Development by Tavistock Group. Nassau,
Bahamas

- Frenchman's Cove. St. Thomas, Virgin Islands
- Kerzner International Phase II Development. Paradise Island,

Bahamas • Housing Development. Exuma, Bahamas

Various USA History

- Guam US Navy Base Design-Build. Guam, South Pacific
- Georgia 400 Water Transmission Design-Build. Forsyth County, GA, USA
- Iron River Water System. Iron River, WI, USA
- Moose Lake Housing Development. Moose Lake, MN, USA
- Utility Systems of America. Hibbing, MN, USA
- Gravity Sewer Main. Hermantown, MN, USA
- Sewer System Installation. Eveleth, MN, USA
- Ascension Island US Navy Project. Ascension Island, South Atlantic
- Force Main and Water Main. Sanford, FL, USA
- Sewer Replacement. Lake Mary, FL, USA
- Water and Sewer Housing Development, Kissimmee, FL, USA
- Water Treatment Plant. Winter Haven, FL

TE

TYLERELDON

813-924-8023
Tylereldon96@gmail.com
1400 Encore Place, Apt 132,
Lake Mary, FL 32746

PROFESSIONAL SUMMARY

Strategic Project Engineer versed in evaluating project needs and coordinating resources to foster efficient and cost-effective project completion. Decisive problem- solver with four years of project leadership and cross-functional team collaboration. Skillfully adjusts project plans and implements continuous improvement initiatives to mitigate time-loss and prohibit cost overages.

SKILLS

- Verbal and Written Communication
- Technical Knowledge
- Project Management
- Strategic planning
- Networking and collaboration
- Cross-functional team management

ACCOMPLISHMENTS

- Port-Orange Virginia Monroe Stormwater $3.4M
- Melbourne-DB Lee Forcemain Connection $1.8M
- Mt. Dora Lift Station #53 $2.5M
- Ponce Inlet Septic to Sewer Project $1M
- TOHO LS1B Hermosillo Gravity Sewer Rehab $3.5M
- TOHO LS18 Scott Blvd Gravity Sewer Rehab $9M
- Maitland LS1 Relocation $6M
- TOHO LS33 Osceola Parkway Gravity Sewer Rehab $1.3M
- TOHO LS19 Pickering Gravity Sewer Rehab $1.1M
- TOHO LS35 PH2 Gravity Sewer Rehab $5M
- TOHO LS35 PH3 Gravity Sewer Rehab $6M

EXPERIENCE

Project Engineer, **SanPik, Inc.** , Jan 2020 - Current, Lake Mary, FL

- Evaluated project needs and exploited opportunities to improve operational processes while using pragmatic approaches to resolve and prevent project delays.
- Led cross-functional teams in strategic planning and project delivery activities.
- Managed budget development and regulated project expenses, negotiating favorable prices with vendors and contractors.
- Developed project plans to utilize resources and allocated to support milestone achievements.
- Utilized skills and knowledge to evaluate project demands and processes and provide actionable solutions for resource optimization.

- Reviewed proposed designs for technical feasibility, safety, and compliance with applicable standards. Complete all the preconstruction task for all projects. Keep up with all Submittals, RFI's and project documentation as the project progresses.
- Handled project budgets, proposals and technical documentation with detail- oriented and methodical approach. Compute all project schedules using Primavera P6.

Preconstruction Manager, **SanPik, Inc**, May 2019 - Dec 2019, Lake Mary, FL

- Assisted in bid process and award phase of contracts by reviewing contract documents and RFQs and putting together bid packages
- Obtained quotes from suppliers for equipment and materials
- Completed project cost estimations within anticipated timeframes.
- Prepared subcontractor agreements and task orders to accomplish goals of projects.
- Completed daily opening, closing and administrative tasks for smooth business operations.
- Used historical data used to help develop relevant cost estimates.
- Reviewed bid proposals to determine if bids fit within project cost parameters.

EDUCATION

Bachelor of Science, Business Management
University of Tampa - Tampa, FL Dec 2019

JOHN-PAUL THATCHER

14136 Balm Boyette Rd, Riverview, FL 33579
j.thatcher@sanpikinc.com
813-750-5104

PROFESSIONAL SUMMARY

Dependable and hard-working superintendent with experience in supervision and execution of underground utility work. Possesses a profound knowledge of materials, methods, and tools that are involved in the proper execution of underground utility work. A resourceful team player with strong field troubleshooting and skills to progress milestones, ensuring on-time project completion.

SKILLS

- Time Management
- Multi-Project Coordination
- Schedule Determination
- Assignment Delegation
- Work Monitoring
- Safe Operating Procedures
- Problem-Solving
- Risk Management

EXPERIENCE

Superintendent, Dec 2018 - Current
SanPik, Inc., Lake Mary, FL

- Work closely with Project Managers and Supervisors in reviewing plans and specs and following instructions to complete projects within scheduled time.
- Carefully evaluate team members for compliance with safety procedures and the correct use of protective equipment.
- Work for extended hours to complete projects within deadline and kept other workers motivated to comply with quality standards.
- Plan and manage various schedules, keeping capacity, labor and material resources in line with productivity goals.
- Contribute to safe workplace environment by identifying and reporting potential safety hazards, possible accidents and incidents.
- Ensure site health and safety compliance is in accordance with applicable city and OSHA regulations
- Peform daily inspections of work performed and quality control
- Assist with diagnosing and repairing any issues or defects that may arise
- Prepare timely field reports which include daily and safety reports
- Manage all subcontractor activity and quality control on site

EDUCATION

Associate of Science: Construction Management
Sante Fe College, Gainsville, FL

CERTIFICATIONS

- Advance Maintenance of Traffic
- SWPP Management Inspection
- Fusion Certified

- OSHA 30
- CPR/First Aid
- Stormwater Management Inspector
- Erosion Control

EXPERIENCE IN PROJECTS SIMILAR IN NATURE

LS 1B Hermosillio Sewer Rehabilitation
Owner: TOHO Water Authority

- Gravity Sewer
- Precast Manhole Installations
- Erosion Control
- Road & Concrete Restoration

Virginia Monroe Stormwater System
Owner: City of Port Orange

- Storm Drainage (RCP)
- Storm Structure
- Force Main via Directional Drilling
- Water Main
- Erosion Control

South Orange Avenue Water Main Improvement Project
Owner: Orange County Government

- Deep Gravity Sewer
- Precast Manhole
- Sewer Service
- Erosion Control
- Road & Concrete Restoration

Section F- Cost and Time

In this section you will find Appendix A: Cost Proposal Worksheet filled out for SanPik Inc.

Appendix A
COST PROPOSAL WORKSHEET

Part 1:

The total cost of the construction of the Replacement Lift Station 7W is: FOUR MILLION EIGHTY ONE THOUSAND

AND FIFTY SEVEN DOLLARS ($ 4,081,057.00)

The estimated time to substantial completion of the project is 48 weeks from Notice To Proceed

Part 2:

The individual cost elements are as follows:

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	Mobilization/Demobilization	LS	1	$498,210.00	$ 498,210.00 -
2	Insurance, Performance and Payment Bond	LS	1	$73,250.00	$ 73,250.00 -
3	Preconstruction Video	LS	1	$1,300.00	$ 1,300.00 -
4	Construction Testing (Pressure, Density Testing, etc.)	LS	1	$26,600.00	$ 26,600.00 -
5	Survey Layout & Record Drawings	LS	1	$30,000.00	$ 30,000.00 -
				SUBTOTAL	$ 629,360.00 -
SITE/CIVIL					
6	Demolition	LS	1	$31,500.00	$ 31,500.00 -
7	General Restoration - (site cleanup, debris removal)	LS	1	$64,750.00	$ 64,750.00 -
8	Clearing and grubbing, grading, general erosion control	LS	1	$31,500.00	$ 31,500.00 -
9	Asphalt Pavement Removal & Restoration	SY	55	$600.00	$ 33,000.00 -
10	Silt Fence (TYP.)	LF	1,865	$3.00	$ 5,595.00 -
11	Lift Station Abandonment	CY	221	$397.00	$ 87,737.00 -
12	Abandonment of existing 18-in PVC Sanitary Sewer	LF	315	$32.00	$ 10,080.00 -
13	Removal of existing 6-in VCP Sanitary Sewer	LF	41	$227.00	$ 9,307.00 -
14	Abandonment of existing 12-in VCP Sanitary Sewer	LF	188	$20.00	$ 3,760.00 -
15	Abandonment of existing 24-in RCP Sanitary Sewer	LF	52	$55.00	$ 2,860.00 -
16	Abandonment of existing 10-in By-pass force main	LF	188	$30.00	$ $5,640.00 -
17	10-inch Line-Stop	EA	1	$34,500.00	$ 34,500.00 -
18	Existing Manhole Modification	EA	2	$16,600.00	$ 33,200.00 -
19	Manhole Installation	EA	3	$38,500.00	$ 115,500.00 -
20	Fence Removal	LF	214	$10.00	$ 2,140.00 -
21	Fencing	LF	335	$65.00	$ 21,775.00 -
22	Bypass Operations	LS	1	$129,500.00	$ 129,500.00 -
				SUBTOTAL	$ 622,344.00 -
CONCRETE					
23	Concrete (Driveway, Concrete Pads, New sidewalk)	CY	410	$115.00	$ 47,150.00 -
				SUBTOTAL	$ 47,150.00 -

UTILITIES					
24	12-in DIP/HDPE Disharge Piping (Piping, Fittings, Valves, etc.)	LS	1	$328,500.00	$ 328,500.00 -
25	Potable and Reclaimed water service Connections	EA	2	$3,885.00	$ 7,770.00 -
26	20" Plug Valve (if existing is not operational)	EA	1	$44,850.00	$ 44,850.00 -
27	16-in PVC Force Main	LF	35	$1,050.00	$ 36,750.00 -
28	20-in PVC Force Main	LF	20	$756.00	$ 15,120.00 -
29	20-in Existing Force Main Connection	EA	1	$12,500.00	$ 12,500.00 -
30	1-in PVC Potable Water Service	LF	140	$56.00	$ 7,840.00 -
31	1-in PVC Reclaimed Water Service	LF	15	$536.00	$ 8,040.00 -
32	6-in PVC Sanitary Sewer	LF	20	$675.00	$ 13,500.00 -
33	8-in PVC Sanitary Sewer	LF	41	$677.00	$ $27,757.00 -
34	12-in PVC Sanitary Sewer	LF	199	$685.00	$ 136,315.00 -
35	21-in PVC Sanitary Sewer	LF	372	$730.00	$ 271,560.00 -
36	24-in PVC Sanitary Sewer	LF	12	$1,400.00	$ 16,800.00 -
37	16-in Magnetic Flow Meter	EA	1	$73,000.00	$73,000.00 -
				SUBTOTAL	$1,000,302.00 -
ELECTRICAL					
38	Electrical I&C	LS	1	$1,010,181.00	$ 1,010,181.00 -
39	Prefabricated Concrete Electrical Building	LS	1	$317,870.00	$ 317,870.00 -
40	Generator Installation	EA	1	$5,000.00	$ 5,000.00 -
				SUBTOTAL	$ 1,333,051.00 -
MECHANICAL					
41	Wet Well Installation	LS	1	$410,000.00	$ 410,000.00 -
42	Submersible Pumps Installation	LS	1	$38,850.00	$ 38,850.00 -
				SUBTOTAL	$ 448,850.00 -

Section G- Mandatory Proposal Forms

This section includes the Mandatory forms included in the bid package filled out and signed by SanPik.

INSURANCE REQUIREMENTS FORM

	Insurance Type	Required Limits
✔	Worker's Compensation	Statutory Limits of Florida Statutes, Chapter 440 and all Federal Government Statutory Limits
✔	Employer's Liability	$1,000,000 each accident, single limit per occurrence
	Commercial General Liability	$1,000,000 single limit per occurrence $3,000,000 aggregate for Bodily Injury Liability & Property Damage Liability.
✔	(Occurrence Form) patterned after the current ISO form	This shall include Premises and Operations; Independent Contractors; Products & Completed Operations & Contractual Liability.
✔	Indemnification	To the maximum extent permitted by Florida law, the Contractor/Vendor/Consultant shall indemnify and hold harmless City of Winter Springs, its officers and employees from any and all liabilities, damages, losses and costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Contractor/Vendor/Consultant or anyone employed or utilized by the Contractor/Vendor/Consultant in the performance of the Agreement. This indemnification obligation shall not be construed to negate, abridge or reduce any other rights or remedies which otherwise may be available to an indemnified party or person described in this paragraph. This section does not pertain to any incident arising from the sole negligence of the City of Winter Springs.
✔	Automobile Liability	$1,000,000 each person; Bodily Injury & Property Damage, Owned/Non-owned/Hired; Automobile Included.
☐	Other	

PROPOSER shall ensure that all subcontractors comply with the same insurance requirements that it is required to meet. The same PROPOSER shall provide the CITY with certificates of insurance meeting the required insurance provisions.

The City of Winter Springs must be named as "Additional Insured" on the Insurance Certificate for Commercial General Liability where required.

The Certificate Holder shall be named as City of Winter Springs.

Thirty (30) days cancellation notice required.

The undersigned PROPOSER agrees to obtain, prior to award, if selected, insurance as stated above.

SanPik Inc

PROPOSER

Authorized Signature

President

Officer Title

8/16/24

Date

SCRUTINIZED COMPANY CERTIFICATION

Florida Statutes, Sections 287.135 and 215.473

Pursuant to Section 287.135, Florida Statutes (2017), a company is ineligible to, and may not, bid on, submit a Proposal for, or enter into or renew a contract with the CITY for goods or services of:

a. Any amount if, at the time of submitting a Proposal for, or entering into or renewing such contract, the PROPOSER is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or
b. One million dollars or more if, at the time of bidding on, submitting a Proposal for, or entering into or renewing such contract, the PROPOSER:
   Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or
   Is engaged in business operations in Cuba or Syria.

Subject to limited exceptions provided in state law, the CITY will not contract for the provision of goods or services with any scrutinized company referred to above. The PROPOSER must submit this required certification form attesting that it is not a scrutinized company and is not engaging in prohibited business operations.

The following shall be grounds for termination of the contract at the option of the awarding body:

a. The PROPOSER is found to have submitted a false certification; been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;
b. Been placed on the Scrutinized Companies that Boycott Israel List or
c. Is engaged in a boycott of Israel; or
d. Been engaged in business operations in Cuba or Syria.

The CITY shall provide notice, in writing, to the PROPOSER of any determination concerning a false certification.

a. The PROPOSER shall have five (5) days from receipt of notice to refute the false certification allegation.
b. If such false certification is discovered during the active contract term, the PROPOSER shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error.
c. If the PROPOSER does not demonstrate that the CITY's determination of false certification was made in error then the CITY shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes.

THIS CERTIFICATION FORM MUST BE COMPLETED AND INCLUDED IN YOUR BID RESPONSE. FAILURE TO SUBMIT THIS FORM AS INSTRUCTED SHALL RENDER YOUR BID SUBMITTAL NON-RESPONSIVE.

a. The Vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes; and
b. The Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel; and
c. For contracts of one million dollars or more, the Vendor, owners, or principals are eligible to participate in this solicitation and not listed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and, further, are not engaged in business operations in Cuba or Syria; and
d. If awarded the Contract, the Vendor, owners, or principals will immediately notify the CITY in writing if any of its company, owners, or principals: are placed on the Scrutinized Companies that Boycott Israel List, the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; engage in a boycott of Israel; or engage in business operations in Cuba or Syria.

STATE OF Florida

COUNTY OF Seminole

The foregoing instrument was acknowledged before me by means of (✓) physical presence or (_____) online notarization,

this 16th day of August, 2024 by Matthew Sands the President of SanPik Inc, a S-Corp (✓) who is personally known to me or (_____) who produced _____ as identification.

Notary Public: Tyler Eldon

Notary Public State of Florida
Tyler Gregory Nelson Eldon
My Commission HH 481616
Expires 2/9/2028

Print Name: Tyler Eldon

My Commission Expires: 2/9/2028

NON-COLLUSION AFFIDAVIT of PRIME PROPOSER

STATE OF Florida

COUNTY OF Seminole

Matthew Sands, being duly sworn, deposes and says that:

(1) He/she is President (Title) of SanPik Inc (PROPOSER)

The PROPOSER that has submitted the attached response.

(2) He/she is fully informed respecting the preparation and contents of the attached Proposal and of all pertinent circumstances respecting such solicitation.

(3) Such Proposal is genuine and is not a collusive or sham solicitation.

(4) Neither the PROPOSER nor any of its officers, partners, owners, agent representatives, employees or parties in interest including this affiant, has in any way, colluded, conspired, or agreed, directly or indirectly, with any other PROPOSER, firm or person, to submit a collusive or sham response in connection with the RFP for which the attached Proposal has been submitted or to refrain from proposing in connection with such RFP, or has in any manner, directly or indirectly, sought by Agreement or collusion or communication or conference with any other PROPOSER, firm or person to fix the price or prices in the attached Proposal or of any other PROPOSER, or to fix any overhead, profit or cost element of the proposed price or the proposed price of any other PROPOSER, or to secure through any collusion, conspiracy, connivance or unlawful Agreement any advantage against the City of Winter Springs, Florida, or any person interested in the proposed Agreement.

(5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, or unlawful Agreement on the part of the PROPOSER or any of its agents, representatives, owners, employees, or parties of interest, including affiant.

(Signed) President (Title)

STATE OF Florida

COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 8/16/24 by Matthew Sands,

who is (✓) personally known to me or (___) who has produced _____ as identification and

who (did / did not) take an oath.

(Signature of Notary Public)

Notary Public State of Florida
Tyler Gregory Nelson Eldon
My Commission HH 481616
Expires 2/9/2028

Tyler Eldon (Name of Notary Typed, Printed or Stamped) Notary Public

481616 (Commission Number)

DRUG FREE WORKPLACE FORM

The undersigned PROPOSER, in accordance with Florida Statute 287.087 hereby certifies that

SanPik Inc does:

(Name of PROPOSER)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under contract a copy of the Drug-Free statement.

4. Notify the employees that as a condition of working on the commodities or contractual services that are under contract, employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

7. As the person authorized to sign the statement, I certify that this business complies fully with the above requirements.

(Authorized Signature) 8/16/24 (Date)

Matthew Sands
(Print/Type Name as Signed Above

PUBLIC ENTITY CRIMES STATEMENT

SWORN STATEMENT UNDER F.S. SECTION 287.133(3) (A), ON PUBLIC ENTITY CRIMES
THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Proposal for RFP # 07-24-01 BI Replacement of Lift Station 7W.

2. This sworn statement is submitted by (PROPOSER) SanPik Inc whose business address is 3599 West Lake Mary Blvd, Suite 4B, Lake Mary, FL 32746 and (if applicable) Federal Employer Identification Number (FEIN) is 47-1475163 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.

3. My name is Matthew Sands and my relationship to the PROPOSER named above is President.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(a) (g). Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or any agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in paragraph 287.133(a) (b), Florida Statutes, means finding of guilt or a conviction of a public entity crime with or without an adjudication of guilt, in any federal or state trial court of records relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:

- A predecessor or successor of a person convicted of a public entity crime; or
- An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The City of Fernandina Beach, Florida ownership by one of shares constituting a controlling income among persons when not for fair interest in another person, or a pooling of equipment or income among persons when not for fair market value under a length agreement, shall be a prima facie case that one person controls another person. A person who was knowingly convicted of a public entity crime, in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of the state or of the United States with the legal power to enter into a binding contract for provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)

✓ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. (Please attach a copy of the final order.)

____ The person or affiliate was placed on the convicted FIRM list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in public interest to remove the person or affiliate from the convicted FIRM list. (Please attach a copy of the final order.)

✓ The person or affiliate has not been placed on the convicted FIRM list. (Please describe any action taken by, or pending with, the Department of General Services.)

PUBLIC ENTITY CRIMES STATEMENT cont.

Signature _____ Date: 8/16/24

STATE OF Florida

COUNTY OF Seminole

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 16th day of August, 2024, and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 2/9/2028

Notary Public State of Florida
Tyler Gregory Nelson Eldon
My Commission HH 481616
Expires 2/9/2028

DEBARMENT, SUSPENSION and OTHER RESPONSIBILITY MATTERS

Certification A - Primary Covered Transactions

The prospective primary participant certifies to the best of its knowledge and belief that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal debarment or agency;

b. Have not within a three-year period preceding this proposal, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation of this proposal.

Instructions for Certification (A)

By signing and submitting this Bid, the prospective primary participant is providing the certification set out below;

a. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or any explanation shall disqualify such person from participation in this transaction.

b. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

c. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

d. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules

implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of these regulations.

e. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

f. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines this eligibility of its principals. Each participant may, but is not required to, check the Non- procurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph (6) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

Certification B - Lower Tier Covered Transactions

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Certification (B)

By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

a. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

b. The prospective lower tier participant shall provide immediate written notice to the person to whom this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

c. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of these regulations.

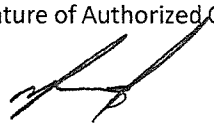
d. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

e. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause title "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitation for lower tier covered transactions.

f. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principles. Each participant may but is not required to, check the Non- procurement List.

g. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

h. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a lower covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies including suspension and/or debarment.

Bidder: SanPik Inc		Date: 8/16/24
Signature of Authorized Certifying Official: 	Title: President	

E-VERIFY STATEMENT

Proposal Number: RFP # 07-24-01 BI

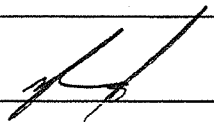
Project Description: Replacement of Lift Station 7W

PROPOSER acknowledges and agrees to the following:
PROPOSER shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of:

1. All persons employed by the PROPOSER during the term of the Contract to perform employment duties within Florida; and

2. All persons assigned by the PROPOSER to perform work pursuant to the contract with the CITY.

PROPOSER: SanPik Inc

Authorized Signature: 

Title: President

Date: 8/16/24

CONFLICT OF INTEREST STATEMENT

This sworn statement is submitted with Proposal for ***RFP # 07-24-01 BI Replacement of Lift Station 7W***

This sworn statement is submitted by (PROPOSER) SanPik Inc whose business address is

3599 West Lake Mary Blvd, Suite 4B, Lake Mary, FL 32746 and (if applicable) Federal Employer Identification Number (FEIN) is

47-1475163 (If a Sole Proprietor and you have no FEIN, include the last four (4) digits of your Social Security Number: _____.)

My name is Matthew Sands and my relationship to the PROPOSER named above is President.

1. The above-named PROPOSER is submitting a Proposal for the City of Winter Springs.
2. The Affiant has made diligent inquiry and provides the information contained in the Affidavit based upon his/her own knowledge.
3. The Affiant states that only one submittal for the above Proposal is being submitted and that the above-named PROPOSER has no financial interest in other entities submitting Proposals for the same project.
4. Neither the Affiant nor the above- named PROPOSER has directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraints of free competitive pricing in connection with the PROPOSER's submittal for the above Proposal. This statement restricts the discussion of pricing data until the completion of negotiations if necessary and execution of the Contract for this project.
5. Neither the PROPOSER not its affiliates, nor anyone associated with them, is presently suspended or otherwise ineligible from participation in contract letting by any local, State, or Federal Agency.
6. Neither the PROPOSER nor its affiliates, nor anyone associated with them have any potential conflict of interest due to any other clients, contracts, or property interests for this project.
7. I certify that no member of the PROPOSER's ownership or management is presently applying for an employee position or actively seeking an elected position with the City of Winter Springs.
8. I certify that no member of the PROPOSER's ownership or management, or staff has a vested interest in any aspect of the City of Winter Springs.
9. In the event that a conflict of interest is identified in the provision of services, I, on behalf of the above-named PROPOSER, will immediately notify the City of Winter Springs.

_____ 8/16/24

Signature Date:

STATE OF Florida

COUNTY OF Seminole

PERSONALLY, APPEARED BEFORE ME, the undersigned authority, who, after first being sworn by me, affixed his/her signature at the space provided above on this 16th day of August, 2024 and is personally known to me, or has provided _____ as identification.

_____ My Commission expires: 2/9/2028

Notary Signature

Notary Public State of Florida
Tyler Gregory Nelson Eldon
My Commission HH 481616
Expires 2/9/2028

SMWBE UTILIZATION PLAN

Small, Minority, and Women's Business Enterprises (SMWBE), and Labor Surplus Area Firms Utilization

PROPOSER Company Name: SanPik Inc

Project Name : ***Replacement of Lift Station 7W***

RFP Number : ***RFP # 07-24-01 BI***

CFR §200.321 requires local governments to take all necessary affirmative steps to assure that minority business, women's business enterprises, and labor surplus area firms are used when possible. The CITY requires that PROPOSERS (Prime Contractors), if subcontracts are to be let, to take the five affirmative steps as cited below. Please describe your firm's plan for identifying and potential use of SMWBE and Labor Surplus Area Firms. Additional pages may be attached, as necessary.

- Placing qualified small and minority business and women's business enterprises on solicitation lists.
- Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.
- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business and women's business enterprises.
- Establishing delivery schedules where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises and veteran owned businesses.
- Using the services and assistance, as appropriate, of such organizations as the Small Business Administration or the Florida Office of Supplier Diversity

https://www.dms.myflorida.com/agency_administration/office_of_supplier_diversity_osd

BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. §1352 (as amended)

Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352 (as amended). Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient. See below – Certification Regarding Lobbying.
Byrd Anti-Lobbying Certification
Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Byrd Anti-Lobbying Amendment, 31 U.S.C. §1352 (as amended)

The PROPOSER, SanPik Inc, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of PROPOSER's Authorized Official

Matthew Sands/ President
Name and Title of PROPOSER's Authorized Official

8/16/24
Date

Appendix B - BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

SanPik, Inc. as Principal, and ----------
Atlantic Specialty Insurance Company as Surety, are hereby and firmly bound unto the CITY OF

WINTER SPRINGS as OWNER, in the penal sum of ----- Five Percent of Amount Bid ----- Dollars ($ ---------- 5% ----------) for the payments of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the CITY OF WINTER SPRINGS a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Work described as: Replacement of Lift Station 7W

NOW, THEREFORE, if the Principal shall not withdraw said Bid within 90 days after the opening of the same, or in the alternate, if said Bid shall be accepted and the Principal shall execute and deliver required certificates of insurance and a contract that, at minimum, includes the terms of the Form of Agreement attached hereto (properly completed in accordance with said Bid), and shall give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then this obligation shall be void; otherwise the same shall remain in force and effect and the sum herein stated shall be due and payable to the CITY OF WINTER SPRINGS and the Surety herein agrees to pay said sum immediately, upon demand of the CITY OF WINTER SPRINGS, in good and lawful money of the United States of America, as liquidated damages for failure of the Principal; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such Bid; and said Surety does hereby give waive notice of any such extension.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this 16th day of August, 2024, the name and corporate seal of each corporate body being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(Witness)

SanPik, Inc.
(Principal) (Seal)

Matthew Sands, President

4300 W Lake Mary Blvd. Ste 1010 #326
Lake Mary, Florida 32746-2449
(Address)

Atlantic Specialty Insurance Company
(Surety) (Seal)

Jessie Sloan, Attorney-In-Fact &
Florida Licensed Resident Agent

605 Highway 169 North, Suite 800 Plymouth, MN 55441
(Address) Inquiries: (321) 800-6594

intact INSURANCE

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that ATLANTIC SPECIALTY INSURANCE COMPANY, a New York corporation with its principal office in Plymouth, Minnesota, does hereby constitute and appoint: **Jorge L. Bracamonte, Jessie Sloan, Karla Tomaszewski**, each individually if there be more than one named, its true and lawful Attorney-in-Fact, to make, execute, seal and deliver, for and on its behalf as surety, any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof; provided that no bond or undertaking executed under this authority shall exceed in amount the sum of: **unlimited** and the execution of such bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof in pursuance of these presents, shall be as binding upon said Company as if they had been fully signed by an authorized officer of the Company and sealed with the Company seal. This Power of Attorney is made and executed by authority of the following resolutions adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the President, any Senior Vice President or Vice-President (each an "Authorized Officer") may execute for and in behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and affix the seal of the Company thereto; and that the Authorized Officer may appoint and authorize an Attorney-in-Fact to execute on behalf of the Company any and all such instruments and to affix the Company seal thereto; and that the Authorized Officer may at any time remove any such Attorney-in-Fact and revoke all power and authority given to any such Attorney-in-Fact.

Resolved: That the Attorney-in-Fact may be given full power and authority to execute for and in the name and on behalf of the Company any and all bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed and sealed by an Authorized Officer and, further, the Attorney-in-Fact is hereby authorized to verify any affidavit required to be attached to bonds, recognizances, contracts of indemnity, and all other writings obligatory in the nature thereof.

This power of attorney is signed and sealed by facsimile under the authority of the following Resolution adopted by the Board of Directors of ATLANTIC SPECIALTY INSURANCE COMPANY on the twenty-fifth day of September, 2012:

Resolved: That the signature of an Authorized Officer, the signature of the Secretary or the Assistant Secretary, and the Company seal may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing an Attorney-in-Fact for purposes only of executing and sealing any bond, undertaking, recognizance or other written obligation in the nature thereof, and any such signature and seal where so used, being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, ATLANTIC SPECIALTY INSURANCE COMPANY has caused these presents to be signed by an Authorized Officer and the seal of the Company to be affixed this twenty-seventh day of April, 2020.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

By _____
Paul J. Brehm, Senior Vice President

STATE OF MINNESOTA
HENNEPIN COUNTY

On this twenty-seventh day of April, 2020, before me personally came Paul J. Brehm, Senior Vice President of ATLANTIC SPECIALTY INSURANCE COMPANY, to me personally known to be the individual and officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, that he is the said officer of the Company aforesaid, and that the seal affixed to the preceding instrument is the seal of said Company and that the said seal and the signature as such officer was duly affixed and subscribed to the said instrument by the authority and at the direction of the Company.

ALISON DWAN NASH-TROUT
NOTARY PUBLIC - MINNESOTA
My Commission Expires
January 31, 2025

_____
Notary Public

I, the undersigned, Secretary of ATLANTIC SPECIALTY INSURANCE COMPANY, a New York Corporation, do hereby certify that the foregoing power of attorney is in full force and has not been revoked, and the resolutions set forth above are now in force.

Signed and sealed. Dated 16th day of August, 2024.

ATLANTIC SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1986 NEW YORK

This Power of Attorney expires
January 31, 2025

_____
Kara Barrow, Secretary

Please direct bond verifications to surety@intactinsurance.com

Section H: Florida State Corporate Filing

Below you will find a screenshot from the Sunbiz website representing proof of corporate signer.

Department of State / Division of Corporations / Search Records / Search by Entity Name /

Detail by Entity Name

Florida Profit Corporation
SANPIK, INC.

Filing Information

Document Number	P14000063673
FEI/EIN Number	47-1475163
Date Filed	07/29/2014
State	FL
Status	ACTIVE
Last Event	AMENDMENT AND NAME CHANGE
Event Date Filed	12/19/2014
Event Effective Date	NONE

Principal Address

3559 W LAKE MARY BLVD, SUITE 4B
Lake Mary, FL 32746

Changed: 12/21/2023

Mailing Address

4300 W. LAKE MARY BLVD
STE 1010 #326
Lake Mary, FL 32746

Changed: 01/03/2024

Registered Agent Name & Address

BREWER, TREVOR K
407 WEKIVA SPRINGS RD STE 241
LONGWOOD, FL 32779

Address Changed: 03/30/2021

Officer/Director Detail

Name & Address

Title P

SANDS, MATTHEW
176 Citation Ct
Lake Mary, FL 32746

Title VP

PICEK, WILLIAM
24936 Derby Dr.
Sorrento, FL 32776

Annual Reports

Report Year	Filed Date
2022	02/16/2022
2023	02/24/2023
2024	01/03/2024

Document Images

01/03/2024 -- ANNUAL REPORT	View image in PDF format
02/24/2023 -- ANNUAL REPORT	View image in PDF format
02/16/2022 -- ANNUAL REPORT	View image in PDF format
03/30/2021 -- ANNUAL REPORT	View image in PDF format
02/03/2020 -- ANNUAL REPORT	View image in PDF format
01/28/2019 -- ANNUAL REPORT	View image in PDF format
03/28/2018 -- ANNUAL REPORT	View image in PDF format
01/17/2017 -- ANNUAL REPORT	View image in PDF format
03/21/2016 -- ANNUAL REPORT	View image in PDF format
04/09/2015 -- ANNUAL REPORT	View image in PDF format
12/19/2014 -- Amendment and Name Change	View image in PDF format
07/29/2014 -- Domestic Profit	View image in PDF format

September 6, 2024
Bilal Iftikhar
Utilities Director

City of Winter Springs
400 Old Sanford Oviedo Road
Winter Springs, FL 32708

Re: Lift Station 7W – Limited Construction Phase Services

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this letter scope (the "Scope") to the City of Winter Springs, FL ("City") for providing construction services for Lift Station 7W Replacement Construction Contract. This Scope is for a work release under RFP #01-21 Civil Engineering Continuing Service Contract.

Project Understanding

The existing lift station is a triplex, buried-can style lift station that was installed in1995. There have been a few modifications since its installation which has allowed the lift station to continue to operate for 27 years. The existing on-site generator was repurposed and is capable of providing secondary power to the lift station and Water Treatment Plant #3. This generator is outdated and parts to maintain the equipment are not readily available. The design and construction scope includes abandoning the existing wet well, dry well, and generator. Constructing new gravity sanitary runs, wet well, discharge piping, electrical building and installing the new generator, variable frequency drives (VFDs) and additional electrical equipment.

In general, Kimley-Horn's services under this project involve provision of the construction services related to the improvements described herein. Specific descriptions of the various phases and tasks are presented below.

Scope of Services

Task 1 – Construction Phase Services and Certifications

A. *Administration and Project Management:* Provide up to 4 hours per week (on average) during the 24 months (104 weeks) of construction, December 2024 through December 2026 for Project Manager/Engineer coordination and project management assistance.

B. *Pre-Construction Conference*: Kimley-Horn will attend and lead a Pre-Construction Conference prior to commencement of Work at the Site. Kimley-Horn will provide the selected contractor with three complete sets of project documents along with copies of the appropriate permits, notices and documents. Kimley-Horn will prepare a Notice to Proceed for issuance by the City.

C. *Site visits, Observation of Construction, and Progress Meetings*: Kimley-Horn will provide site visits and progress meetings during construction activities twice per month of active construction. Such visits and site observations by Kimley-Horn are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation of the Work based on our exercise of professional judgment. Based on

information obtained during such visits and such observations, we will evaluate whether Contractor's work is proceeding in accordance with the Contract Documents, and provide specific notifications to the City based on progress of the Work. Additional site visits for the following critical activities have been included.

a. Attend lift station start-up, 2 days

b. Attend generator start-up, 2 days

c. Observe connection to existing 20-inch force main, 2 days

D. *Clarifications and Interpretations*: Kimley-Horn will respond to reasonable and appropriate Contractor requests for information, and issue necessary clarifications and interpretations of the Contract Documents to the City as appropriate to the orderly completion of Contractor's work. Any orders authorizing variations from the Contract Documents will be made by City.

E. *Change Orders*: Kimley-Horn will review and make recommendations related to Change Order requests submitted or proposed by the Contractor.

F. *Shop Drawings and Samples*: Kimley-Horn will review and approve, or take other appropriate action in respect to Shop Drawings, Samples, and other data which the Contractor is required to submit. Our reviews will be focused on the submittal's conformance with the information given in the Contract Documents. Such review, approvals, or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, procedures of construction, or to related safety precautions and programs.

G. *Substitutes and "or-equals"*: Kimley-Horn will evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor in accordance with the Contract Documents, but subject to the provisions of applicable standards of state or local government entities.

H. *Substantial Completion*: Kimley-Horn will, promptly after notice from Contractor that it considers the entire Work ready for its intended use, in company with City and Contractor, conduct a site visit to determine if the Work is substantially complete. Work will be considered substantially complete following satisfactory completion of all items with the exception of those identified on a final punch list developed during the substantial completion site visit and project observation.

I. *Permitting Certification Coordination:* Kimley-Horn will prepare permits and close out documents for the affected regulatory agencies, complete one inspection with each agency representative per permit certification and provide written confirmation to the City for their records. The expected permit certifications are:

a. Florida Department of Environmental Protection

b. St. Johns River Water Management District 404

c. City ROW permit and Maintenance of Traffic Plan Review

J. *Final Notice of Acceptability of the Work:* Kimley-Horn will conduct a final site visit to determine if the completed work is performed in accordance with the Contract Documents and the final punch list has been completed.

K. *Project Documentation and Record Drawings*: Kimley-Horn will prepare, track and monitor logs for shop drawings, RFIs, change order requests, project deviations, spare parts list, and project images. The logs will be updated weekly and distributed to the City and Contractor for documentation of the construction activities, approvals, and requests by the Contractor.

   Kimley-Horn will review construction records (red-lined drawings) monthly, Operations and Maintenance manuals, and "as-built" drawings provided by the Contractor at the completion of the project. Kimley-Horn will prepare final record drawings for the City's use as the pipeline is cleared for certification and transition to service. At the completion of the project, Kimley-Horn will produce a final set of signed and sealed record drawings for the City.

L. *Construction Closeout Coordination:* Kimley-Horn will assist with the construction closeout documents for contract closeout. Assistance with contract document closeout includes: final pay request, final releases of liens, certificates of insurance, specified equipment warranties and bonds, warranty bond, Contractors affidavit of payment of debts and claims, Contractor's affidavit of release of liens, consent of surety to final payment, video recordings, and as-built drawings.

M. The construction observation fee estimate for this task is based on 24 months of active construction. During construction, Kimley-Horn will provide the following levels of service.

   a. Site Visits and Observations – up to 6 hours every month

   b. Attend up to forty-eight (48) on-site, monthly project progress/coordination meetings.

   c. Review of shop drawings estimated up to twenty (20) submittals

   d. Review of clarifications and interpretations estimated up to seven (7) submissions

   e. Review of up to three (3) change orders

   f. Review of substitutes or "or equals" estimated up to five (5) submissions

N. Kimley-Horn will coordinate with the electrical engineer for the construction phase services also being provided under this contract.

O. Kimley-Horn will coordinate additional field investigation of one (1) 40-foot-deep geotechnical bore at the wet well location prior to installation.

Additional Services:

Any other services beyond those specifically stated in Task 1 above, including but not limited to the following can be included in a separate scope of services or via an amendment to this scope of services:

- Additional Resident Project Representative, site inspections, and onsite observation of the construction project
- Additional Site Visits beyond those listed in the scope above
- Geotechnical construction verification services
- Additional permit applications or certifications identified during the project construction and not listed above

- Construction survey/layout and as-builts services
- Additional pipe design and construction services outside of the boundary listed within the scope

Information Provided by City and Contractor

We shall be entitled to rely on the completeness and accuracy of all information provided by the City, the City's representatives, or the Contractor.

Fee and Expenses

Kimley-Horn will perform the services in Task 1 for the total lump sum fee below.

Total Lump Sum Fee $ 323,247.00

Lump sum fees will be invoiced monthly based upon the overall percentage of services performed. Payment will be due within 25 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.

Kimley-Horn, in an effort to expedite invoices and reduce paper waste, submits invoices via email in an Adobe PDF format. We can also provide a paper copy via regular mail if requested. We request the City to include the invoice number and Kimley-Horn project number with all payments. Please provide the following contact information for invoices:

_X_ Please email all invoices to_____

If you concur in all the foregoing and wish to direct us to proceed with the services, please have authorized persons execute a task authorization for this scope of services and transmit via email to Lance.Littrell@Kimley-Horn.com. We will commence services after we have received a fully-executed task authorization.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.



By: Lance R. Littrell, P.E.
Vice President

Julia Felter, P.E.
Project Manager

Authorization

City of Winter Springs, Florida

By:

_____
Interim City Manager

_____
(Date)

Philip Hurst
(Print or Type Name)

phurst@winterspringsfl.org
(Email Address)

Attest:

_____

_____
(Print or Type Name)

ATTACHMENT A

LABOR COSTS

LIFT STATION 7W - CONSTRUCTION PHASE SERVICES										
Tasks	Project Manager		Analyst		Senior Designer/ Technical support		Clerical/ Project Admin		Labor	
	Rate	$220.00	Rate	$140.00	Rate	$145.00	Rate	$95.00	Totals	
	Hours	Costs	Hours	Cost	Hours	Cost	Hours	Costs	Hours	Costs
Task 1 - Construction Services	529	$116,380.00	1012	$141,680.00	81	$11,745.00	216	$20,520.00	2062	$290,325.00
Administration and Project Management	208	$45,760.00	416	$58,240.00		$0.00	104	$9,880.00		
Pre Construction Conference	6	$1,320.00	6	$840.00		$0.00	2	$190.00		
Site Visits (PM - 1/month, Analyst -2/month)	144	$31,680.00	288	$40,320.00		$0.00	48	$4,560.00		
Lift station start up	12	$2,640.00	16	$2,240.00		$0.00		$0.00		
Generator Start up	12	$2,640.00	16	$2,240.00		$0.00		$0.00		
Connection to existing force main	12	$2,640.00	16	$2,240.00		$0.00		$0.00		
Clarifications and Interpretations (7 requests)	14	$3,080.00	21	$2,940.00	21	$3,045.00	7	$665.00		
Change Orders (3 requests)	15	$3,300.00	30	$4,200.00		$0.00	6	$570.00		
Shop Drawings and Samples (20 shop drawings)	20	$4,400.00	40	$5,600.00	10	$1,450.00	20	$1,900.00		
Substitutes and Or-Equals (5 requests)	10	$2,200.00	15	$2,100.00		$0.00	5	$475.00		
Substantial Completion (2 visits, 2 punch lists)	24	$5,280.00	24	$3,360.00		$0.00	4	$380.00		
Permitting Certifications		$0.00		$0.00		$0.00		$0.00		
FDEP	4	$880.00	6	$840.00		$0.00	0	$0.00		
SJRWMD	4	$880.00	6	$840.00		$0.00	0	$0.00		
City ROW and MOT Plan Review	4	$880.00	6	$840.00		$0.00	0	$0.00		
Final Inspection Site Visit	8	$1,760.00	8	$1,120.00		$0.00	0	$0.00		
Project Documentation and Record Drawings	18	$3,960.00	16	$2,240.00	40	$5,800.00	8	$760.00		
Construction Closeout	14	$3,080.00	32	$4,480.00	10	$1,450.00	12	$1,140.00		
Expenses/Mileage and Meals (108 trips)										$4,320.00
		$0.00		$0.00		$0.00		$0.00		
Electrical Engineer Construction Phase Services		$0.00	40	$5,600.00		$0.00		$0.00	$24,801.98	$24,801.98
Geotechnical Boring for Wet well		$0.00	10	$1,400.00		$0.00		$0.00	$3,800.00	$3,800.00
		$0.00		$0.00		$0.00		$0.00		
Project Totals	**529**	**$116,380.00**	**1012**	**$141,680.00**	**81**	**$11,745.00**	**216**	**$20,520.00**	**2062.00**	**$323,246.98**

Electrical Design Associates

September 3, 2024

Julia Felter, P.E.
Kimley-Horn
189 Orange Avenue, Suite 1000
Orlando, FL 32801

RE: Lift Station 7W Rehabilitation
City of Winter Springs, FL

Dear Ms. Felter:

We are pleased to submit our proposal for electrical and I&C engineering construction services for the above project. The following serves to provide an overview of the engineering services Electrical Design Associates (EDA) intends to furnish on the above referenced project to Kimley-Horn and provides the agreed upon sum. Your signature on this agreement will serve as your letter of intent and official notice to proceed with the referenced work. Services not specifically identified are not included (HVAC, Mechanical, Fuel, etc.).

Task 1 Construction Administration Services

The duration of the construction is anticipated to be 24 months. It is anticipated the City will provide construction management and construction inspection services. EDA will not provide a resident for construction services.

Conformed Documents

EDA will prepare conformed documents incorporating into the construction documents revisions and clarifications that occurred during the bidding phase. A digital copy, in AutoCAD format, will be provided to Kimley Horn.

Pre-Construction Meeting

EDA will attend the Pre-Construction Meeting with the City and Contractor. One EDA team member will attend the Meeting.

Progress Meetings

Appropriate EDA personnel will attend monthly construction progress meetings. One EDA team member will attend up to 24 Monthly Progress Meetings.

Shop Drawings and O&M Submittals

EDA shall review and approve (or take other appropriate action in respect of) Shop Drawings and samples, the results of tests and inspections and other data which each Contractor is required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents (but such review and approval or other action shall not exceed to means, methods, sequences, techniques or procedures of construction or to safety precautions and programs incident thereto); and receive and review (for general content as required by the Specifications) maintenance and operating schedules and instruction, guarantees, bonds and certificates of inspection which are to be assembled by Contractor(s) is in accordance with the Contract Documents. Up to ten (10) submittals at an average of 6 hours/submittal are budgeted for review by EDA.

Requests for Information (RFIs)/Change Orders

When requested by the City or the Contractor, EDA will issue technical interpretations or clarifications of the drawings or technical specifications. EDA may issue additional instructions, by means of drawings or technical specification updates, to clarify the intent of the design. Up to three (3) RFIs are included in the scope of this subtask at an average of 5 hours/submittal. If any change orders are required during construction, EDA will review up to three change orders to the contract documents.

Startup and Testing

Kimley Horn will provide field support services to assist during the Startup and Testing. The budget allocation includes provision for up to two EDA project team members for up to 8 hours each.

Substantial Completion Punch List

Upon substantial completion of the work, up to two EDA personnel will visit the site to develop a “punch list” of items to be completed before substantial completion can be awarded to the Contractor. The punch list will be provided to the City for inclusion into the plant-wide substantial completion punch list.

Final Completion and Clearance

Up to one EDA personnel will visit the site to perform a single final completion inspection. Kimley Horn will submit clearance documentation to the permitting authority (as required) to obtain clearance to operate the project.

Record Drawings

EDA will prepare record drawings based on the Contractor’s as-builts and red lines. EDA will submit a digital PDF of the record drawings.

Fee for Base Scope of Work

Our scope of services shall include the Electrical and Instrumentation engineering services associated with the proposed project design. All mechanical engineering, including but not limited to HVAC, Plumbing, Fuel, Process, etc., to be completed by others. Services not specifically identified are not included. The attached spreadsheet provides an estimate of our anticipated work effort. Our initial fee for this work will be lump sum, billed monthly and is based on the attached estimate hand will not be billed as a separate line item. Additional fee will be submitted for any of the task items identified herein not completed under the initial fee identified above. Work shall be based on the following:

Task 1 – Construction Administration Services	$ 24,801.98
Total:	**$ 24,801.98**

Very truly yours,



William C. Nelson, P.E.

ACCEPTED_____DATE_____

KH-24-0011G

EDA
Electrical Design Associates

Kimley-Horn
Lift Station #7W Construction Services
City of Winter Springs, FL
Estimate of Work Effort & Fee

Date: 9/3/2024

	Principal		Senior Engineer		Engineer		Field Supervisor		Cadd Technician		Clerical/Admin		Totals	
	Hourly Rate	$199.41	Hourly Rate	$179.18	Hourly Rate	$156.06	Hourly Rate	$92.48	Hourly Rate	$80.92	Hourly Rate	$63.58		
Task 1 - Consruction Services	man-hours	Total	man-hours	Total	man-hours	Total	man-hours	Total	man-hours	Total	man-hours	Total	man-hours	Total
Conformed Documents	1	$ 199.41	2	$ 358.36	2	$ 312.12	0	$ -	4	$ 323.68	1	$ 63.58	10	$ 1,257.15
Pre-Construction Meeting	1	$ 199.41	1	$ 179.18	0	$ -	0	$ -	0	$ -	0	$ -	2	$ 378.59
Progress Meetings	12	$ 2,392.92	12	$ 2,150.16	0	$ -	0	$ -	0	$ -	0	$ -	24	$ 4,543.08
Shop Drawings & O&M Submittals	16	$ 3,190.56	30	$ 5,375.40	10	$ 1,560.60	0	$ -	0	$ -	4	$ 254.32	60	$ 10,380.88
Requests for Information	8	$ 1,595.28	4	$ 716.72	0	$ -	0	$ -	0	$ -	3	$ 190.74	15	$ 2,502.74
Startup and Testing	0	$ -	8	$ 1,433.44	8	$ 1,248.48	0	$ -	0	$ -	1	$ 63.58	17	$ 2,745.50
Substation Completion	0	$ -	2	$ 358.36	0	$ -	2	$ 184.96	0	$ -	1	$ 63.58	5	$ 606.90
Final Completion and Clearance	1	$ 199.41	2	$ 358.36	0	$ -	0	$ -	0	$ -	1	$ 63.58	4	$ 621.35
Record Drawings	1	$ 199.41	2	$ 358.36	2	$ 312.12	2	$ 184.96	8	$ 647.36	1	$ 63.58	16	$ 1,765.79
Subtotal:	**40**	**$ 7,976.40**	**63**	**$ 11,288.34**	**22**	**$ 3,433.32**	**4**	**$ 369.92**	**12**	**$ 971.04**	**12**	**$ 762.96**	**153**	**$ 24,801.98**
Design Total	**40**	**$ 7,976.40**	**63**	**$ 11,288.34**	**22**	**$ 3,433.32**	**4**	**$ 369.92**	**12**	**$ 971.04**	**12**	**$ 762.96**	**153**	**$ 24,801.98**

REGULAR AGENDA ITEM 501

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Budget Amendment - Designation of Funds for Sewer Infrastructure

SUMMARY

On June 14, 2021 an informational agenda item 201 was presented to introduce the American Rescue Plan Act of 2021 (ARPA). Subsequently, Consent Agenda Item 303 was presented on September 13, 2021 to Approve Resolution 2021-24 which established the ARPA fund a special revenue fund, to formally restrict expenditures and to comply with the eligible uses identified in the American Rescue Plan Act of 2021 (ARPA) under H.R. 1319 Sec. 9901: Coronavirus State and Local Fiscal Recovery Funds.

Under the Coronavirus State and Local Fiscal Recovery Fund (SLFRF) program , funds must be used for costs incurred on or after March 3, 2021. Further, funds must be obligated by December 31, 2024 and expended by December 31, 2026. This time period, during which recipients can expend SLFRF funds, is the “period of performance”.

According to FY2022 financial statements under Note 14: Anticipated Cost of Wastewater Treatment System Replacement. In the coming fiscal years, the wastewater treatment system requires replacement, which will be a large construction cost the City is responsible for funding. As of the date the financial statements were issued, the total anticipated cost of this project is $100 million and will be funded using American Recovery Plan Act revenues and financing options available to the City in the coming fiscal years.

Regular Agenda Item 500 presented on December 11, 2023 the City entered into an agreement with Carollo Engineers, Inc for approximately $12.9 million. Due to the nature of this project, it appears only $8.5 million will be expended within the required timeline leaving approximately $10 million at risk of having to be returned. As of the date of this agenda item, this is the only contract currently obligated for the wastewater treatment system replacement.

In January of 2022, Treasury published a Final Rule offering a standard allowance for revenue loss of up to $10 million. Recipients that select the standard allowance may use that amount for government services with streamlined reporting requirements.

Using this $10 million on general government services would fulfill the deadlines of being obligated by December 31, 2024 and expended by December 31, 2026. It will also relieve the General fund of $10 million in required cash flow, thus creating a

savings. In turn, this savings will then be transferred to the (410) Water and Sewer Fund in order to finish funding the Carollo contract, potential land acquisition costs, and future CMAR costs.

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Commission approve Resolution 2024-24, a budget amendment proposed to use the Treasury Final Rule offering a standard allowance of $10 million on general government services in the general fund. Additionally, then transferring the savings from the General Fund to the (410) Water and Sewer fund, to be committed to Waste Water Infrastructure Capital Projects. Also to give the Finance Director and Interim City Manager the authority to amend the SLFRF reporting as required by Treasury.

RESOLUTION 2024-24

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS FLORIDA, AMENDING THE FISCAL YEAR 2023-2024 BUDGET; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT RESOLUTIONS, AND AN EFFECTIVE DATE.

WHEREAS, Section 7.05 of the City Charter provides that the annual City budget may be amended by Resolution duly adopted by the Commission; and

WHEREAS, the City Commission of the City of Winter Springs deems that this Resolution is in the best interests of the public health, safety, and welfare of the citizens of Winter Springs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA, AS FOLLOWS:

Section 1. **Incorporation of Recitals.** The foregoing recitals are deemed true and correct and are hereby fully incorporated by this reference.

Section 2. That the Fiscal Year 2023-2024 City Budgets are amended as provided in Attachment 1.

Section 3. **Repeal of Prior Inconsistent Resolutions.** All prior resolutions or parts of resolutions in conflict herewith are hereby repealed to the extent of the conflict.

Section 4. **Severability.** If any section, subsection, sentence, clause, phrase, word, or portion of this Resolution is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion hereto.

Section 5. **Effective Date.** This Resolution shall become effective immediately upon adoption by the City Commission of the City of Winter Springs, Florida.

RESOLVED by the City Commission of the City of Winter Springs, Florida, in a regular meeting assembled on the 23rd day of September, 2024.

ATTEST:

_____

KEVIN McCANN, Mayor

_____

CHRISTIAN GOWAN, City Clerk

Approved as to legal form and sufficiency for the City of Winter Springs only:

_____

ANTHONY A. GARGANESE, City Attorney

Attachment 1 - Budget Amendment Resolution 2024-24

Fund	GL	Db	Cr
180 - ARPA Fund			
Transfer to GF to cover general gov services	180-00-0000-591001 (Transfer to General Fund)	10,000,000	
Recognize Grant Revenue	180-00-0000-332390 Federal Grant		10,000,000
001 - General Fund			
Savings from additional cash flow	001-19-1900-591410 (To Water Sewer Utility)	10,000,000	
Revenue from ARPA to cover general gov services	001- 00-0000-381180 (From ARPA Fund)		10,000,000
410 - Water Sewer Utility			
Expenditures for Waste Water Infrastructure in FY25 and beyond	410-36-3600-599900	10,000,000	
Transfer from GF from savings	410-00-0000-381001		10,000,000
	Increase in Expenditures/Increase in Revenues	**30,000,000**	**30,000,000**

Example of Allocation of General Government Services

Sum of YTD Actuals	Column Labels						Percentage	Allocation
Row Labels	Base Wages/Salaries	FICA	Health Insurance	Overtime	Workers' Comp	Grand Total		
Division 1200 - City Manager	72,193	5,754	3,523	3,721	566	85,757	0.86%	85,574
Division 1210 - City Clerk	120,739	8,989	29,636	3,141	216	162,721	1.62%	162,373
Division 1300 - Finance - General	569,908	41,225	73,494	3,906	981	689,513	6.88%	688,039
Division 1315 - Human Resources	253,199	18,852	22,553	-	435	295,040	2.94%	294,409
Division 1500 - Comm Dev - Administration	102,293	7,759	10,473	199	176	120,900	1.21%	120,641
Division 1510 - Long-Range Planning	139,066	10,468	17,797		238	167,570	1.67%	167,212
Division 1520 - Urban Beautification	197,392	15,453	43,355	13,991	12,105	282,296	2.82%	281,693
Division 1600 - IS General	361,817	26,202	66,903	289	619	455,829	4.55%	454,855
Division 1935 - Facilities Maintenance	172,593	13,920	16,360	12,758	11,249	226,881	2.26%	226,396
Division 1940 - Fleet Maintenance	261,169	19,681	33,095	2,188	8,415	324,547	3.24%	323,853
Division 2100 - Office of the Chief	4,031,707	315,288	513,737	206,002	147,682	5,214,415	52.03%	5,203,270
Division 4100 - Public Works - Administration	112,618	8,430	23,164	824	5,175	150,211	1.50%	149,890
Division 4110 - Roads & ROW Maintenance	285,882	21,256	77,179	5,865	28,164	418,347	4.17%	417,452
Division 7200 - Parks & Rec Administration	162,985	12,255	9,290	156	3,652	188,337	1.88%	187,934
Division 7230 - Parks & Grounds	655,434	51,692	59,552	25,678	30,949	823,305	8.22%	821,545
Division 7240 - Programs	49,309	3,793		268	1,959	55,329	0.55%	55,211
Division 7250 - Seniors	160,496	12,477	9,689	3,174	5,289	191,125	1.91%	190,716
Division 7415 - Marketing & Events	129,358	8,992	30,183	539	226	169,297	1.69%	168,936
Grand Total	**7,838,157**	**602,484**	**1,039,982**	**282,700**	**258,096**	**10,021,419**	**100%**	**10,000,000**

** This is an example, final numbers will be based on final payroll numbers for fiscal year ended Sept 30th 2024.*

REGULAR AGENDA ITEM 502

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Discuss and consider approving the proposed City Manager Employment Agreement with Kevin A. Sweet

SUMMARY

At the September 9, 2024 City Commission meeting, the City Commission voted unanimously (5-0) to select Kevin Sweet as the top candidate to be the City's next City Manager subject to final approval of a written employment agreement. The City Commission expressed a desire to have a proposed agreement presented at this meeting if possible. Since that decision, Mr. Sweet traveled to the City and spent several days participating in numerous meetings with the Mayor, Commissioners, City Staff and community stakeholders. During his visit, a draft agreement was also completed on Friday afternoon. The Agreement proposes a compensation and benefits package requested by Mr. Sweet, and includes specific provisions for compensation, executive leave, health, dental, life and disability insurance, retirement contributions, and auto, technology and other business related expenses (sec. 5 through 11). One- time moving expenses are addressed in Section 14 based on Mr. Sweet and his family will need to relocate from their current home in Massachusetts.

Additionally, the Agreement is acceptable as to legal form and sufficiency.

The Agreement is presented for the City Commission's consideration and approval at the Commission's discretion.

If approved, Mr. Sweet's effective date of employment with the City will be December 16, 2024.

Mr. Sweet intends to be present telephonically to answer questions.

Timeline of City Manager Search/Selection Process

- February 27, 2023: The Commission accepted the retirement of City Manager Shawn Boyle and appointed Phil Hursh to serve as the Interim City Manager. Commission further directed Staff to bring back an item related to the procurement of a City Manager and options for a national search.
- May 22, 2023: The City Commission approved $66,000 for third party recruitment, interviews, and background checks and authorized the Interim City Manager and City Attorney to prepare and execute any contracts consistent with the agenda item.

- June 5, 2023: Letter of Engagement executed between the City of Winter Springs and Korn Ferry to conduct the search for the next City Manager. (Attached)
- August 14, 2023: Discussion on City Manager selection process, Commission agreed applications should be open until September 29, 2023.
- September 11, 2023: City Commission reviewed a draft interview matrix provided by Korn Ferry and amended the list to a final product of 19 questions.
- September 25, 2023: City Commission adopted the interview questions and further agreed that candidates would be invited to one of two scheduled Workshop meetings. Furthermore, the Commission agreed to schedule a Special Meeting for October 30, 2023 to discuss candidates and next steps.
- September 29, 2023: Application Deadline for City Manager candidates.
- October 17, 2023: City Manager Candidate Interviews held via Zoom.
- October 21, 2023: City Manager Candidate Interviews held via Zoom.
- October 30, 2023: Upon review of tallied scores, the Commission voted 4-1 to approve the top two candidates, Mr. Dale Dougherty and Mr. Christopher Miller, to be brought down for in-person interviews.
- October 31, 2023: Dale Dougherty removes his name from consideration.
- November 16, 2023: City Commission agreed to draft itinerary provided by Korn Ferry for in-person interview.
- November 20, 2023: In-person meetings with Mr. Christopher Miller.
- December 11, 2023: The Commission voted 3-2 on the motion to hire Christopher Miller as City Manager, falling short of the four (4) votes required by the City Charter.
- January 8, 2024: The Commission voted 3-2 to terminate the agreement with Korn Ferry and directed Staff to reach out to four search firms (Torch Group, Slavin Management Consultants, S Renee Narloch & Associates, and Baker Tilly US LLP) and present further information at the next scheduled Commission Meeting.
- January 22, 2024: City Commission directed Staff to prepare a Request for Proposal for Executive Search Firms
    - January 27, 2024: RFP 01-24-01 WS Executive Search Service released to the market with March 1, 2024 due date
- March 11, 2024: City Commission reviewed and scored the four (4) proposals submitted in response to RFP 01-24-01 WS Executive Search Service from ActOne, Netsynk, Inc., S. Renee Narloch & Associates, and Slavin Management Consultants. Scores were finalized and submitted to the City Clerk
- March 25, 2024: The City Commission voted 5-0 to award RFP 01-24-01 WS Executive Search Service to Slavin Management Consultants.
- April 8, 2024: Mr. Bob Slavin appeared via Zoom to answer questions and the City Commission vote 5-0 to approve the Search Services Agreement with Slavin Management Consultants.
- June 10, 2024: Mr. Slavin appeared remotely before the Commission and discussed the recruitment profile, noted a first review date of applications on July 19, 2024.
- August 26, 2024: Commission conducted three interviews with candidates David Jones, Rich Reade, and Kevin Sweet at a Workshop Meeting.

- September 9, 2024: Commission voted 5-0 to invite Mr. Kevin Sweet to visit the City, meet with Commissioners, staff, and residents, and begin contract negotiations with the City Attorney and Mayor McCann.

FUNDING SOURCE

RECOMMENDATION

CITY MANAGER EMPLOYMENT AGREEMENT

This Agreement made and entered into this 23rd day of September 2024, by and between the **City of Winter Springs,** a Florida municipal corporation, whose address is 1126 E. State Road 434, Winter Springs, Florida 32708, hereinafter referred to as "City" and **Kevin A. Sweet**, hereinafter referred to as "City Manager", both of whom understand and agree as follows:

WHEREAS, the City is a Florida municipal corporation organized under the laws of the State of Florida, and whose powers in accordance with section 4.6 of the City Charter are vested in the City Commission, except as otherwise provided by law or the City Charter, and the City Commission shall provide for the exercise thereof and for the performance of all duties and obligations imposed on the City by law; and

WHEREAS, the City Commission desires to retain the City Manager to serve in accordance with Article V, of the City's Charter for an indefinite term; and

WHEREAS, the City Manager has been appointed solely on the basis of executive and administrative qualifications and shall serve at the pleasure of the Commission; and

WHEREAS, the City Commission and the City Manager desire to establish those benefits and conditions of employment regarding the City Manager's employment.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the City Commission and the City Manager agree as follows:

SECTION 1. EMPLOYMENT AND DUTIES

The City Commission hereby appoints and agrees to hire the City Manager, with an effective start date of December 16, 2024. The City Manager shall be the Chief Administrative Officer, and shall have the power and authority to perform those duties set forth in the City Charter, and further shall perform such other duties as may be prescribed by the City Commission which are legally permissible and consistent with the provisions of the Commission-Manager form of government, as well as the City Charter, City Ordinances, Policies, and Resolutions of the City Commission.

A. Nothing in this Agreement shall prevent, limit, or otherwise interfere with the right of the City Commission to terminate the employment of the City Manager at any time, subject to the provisions of Sections 2 and 3 of this Agreement.

B. Nothing in this Agreement shall prevent, limit, or otherwise interfere with the right of the City Manager to resign at any time, subject to the provisions of Section 4 of this Agreement.

C. It is recognized that the City Manager must devote a great deal of time on business for the City that will require him to arrange to be available to perform the duties of his employment not only during regular business hours of the City, but also at such other times when circumstances warrant such as attending Commission and other board meetings, handling emergency management and response situations, and as reasonably requested by the City Commission, and to that end the City Manager will not have a set work schedule. The City Manager acknowledges that the duties and hours of the City Manager's position will be variable and will require work after the City's regular business hours, and on nights, weekends, and holidays. The City Manager hereby agrees that he

shall faithfully and fully devote, on a full-time basis, his best efforts and the time and energy necessary to fully perform the duties of the position. All such duties shall be performed within the time frames or deadlines expressly imposed by law, applicable policy, rule, or as reasonably established by the City Commission. The City Manager shall request of the City Commission from time to time such decisions or actions of the City Commission which the City Manager may determine in his professional judgment are reasonably necessary for the successful accomplishment of his duties as City Manager.

SECTION 2. TERMINATION BY THE CITY

This Agreement is for an indefinite term, but in accordance with the City Charter Section 5.02, the City Manager shall be removed from office only by a super-majority of no less than four (4) affirmative votes of the full City Commission.

A. If the City Manager's employment is terminated by the City Commission with cause, the City Commission shall not be required to pay any severance allowance to the City Manager or any other salary, compensation, or benefits after the effective date of termination. For the purposes of this paragraph, the term "with cause" shall mean: (l) conviction of or a plea of guilty or nolo contendere to a felony involving moral turpitude; (2) misfeasance, malfeasance or nonfeasance in office; (3) conviction of a violation of the Florida Ethics Laws or any illegal act involving personal gain to himself such as embezzlement, bribery and theft; (4) incapacity or habitual neglect of duties, rendering the City Manager unable to perform the essential functions of the position for an extended time; or (5) abandonment of the Office of City Manager.

B. The term of this Agreement shall remain in full force and effect and hold over until employment is terminated under the terms herein, or a new employment agreement has been negotiated and entered into between the City Commission and the City Manager.

SECTION 3. SEVERANCE PAY

In the event the City Manager is terminated without cause by super-majority vote of four (4) affirmative votes of the full City Commission, the City agrees to pay the City Manager his salary, all stated benefits in Sections 5 through 11 of this Agreement, and accrued benefits. In addition, upon termination without cause, the City agrees to pay the City Manager severance pay equivalent to twenty (20) weeks of salary, calculated from the final date of termination. This severance payment will serve as consideration for the mutual release and waiver of any claims between the City and the City Manager.

By accepting this severance, the City Manager agrees to release, discharge, and hold harmless the City, its officers, agents, attorneys, and employees from any and all claims, liabilities, or causes of action, whether known or unknown, arising from or relating to the City Manager's employment, including, but not limited to, all acts or omissions that occurred during the course of employment. This release shall survive the termination of this Agreement.

The City, in turn, agrees to release and hold the City Manager harmless from any claims or liabilities arising from the performance of his duties as City Manager, from the beginning of time until the date of termination. This release shall survive the termination of this Agreement.

The City Manager has the option to accept full payment of severance and benefits immediately upon termination, receive the benefits bi-weekly as normal, or to defer payment to a mutually agreeable

future date.

In the event the City Manager resigns following a super-majority vote of four (4) affirmative votes of the full commission, as required by the charter, suggesting to him that he resign, then the City Manager may, at his option, deliver written notice to the Mayor and City Commission within seventy-two (72) hours of such vote, declaring that he deems himself to be "terminated." Upon such declaration, the City Manager shall be entitled to receive severance pay as described above. If the City Manager does not deliver written notice within the specified time period, he waives any entitlement to declare termination and severance pay under this provision.

SECTION 4. RESIGNATION BY THE CITY MANAGER

In the event the City Manager resigns his position (unless such resignation is pursuant to the requirements specified in the last paragraph of Section 3 hereinabove) with the City, the City Commission shall have no obligation to pay a severance payment, other than his due salary and stated benefits accrued as of the date of final resignation. The City Manager shall give the City Commission at least sixty (60) days' written notice in advance, unless waived by a super-majority vote of four (4) affirmative votes of the full City Commission at its sole discretion.

SECTION 5. COMPENSATION

The initial base salary of the City Manager shall be $218,000 per annum. Effective October 1, 2025 (FY 2026), his salary shall be raised to $225,000 per annum. The salary shall be payable consistent with current city procedures.

A. Commencing on October 1, 2026, and for each fiscal year thereafter, the City Manager shall receive the standard annual cost of living allowance (COLA) as determined and granted at the discretion of the City Commission to all other senior leadership level employees of the City.

B. In addition to any annual cost of living (COLA) increases, the City Commission may by super-majority vote of the full Commission, at its discretion, increase the City Manager's salary or pay bonuses as additional compensation at any time during any year. The number and amount of such increase or bonuses, if any, shall be at the sole discretion of the City Commission and subject to Section 215.425, Florida Statutes. However, in no event shall the City Manager's salary or any agreed upon continuing annual bonus be less than his present salary or any agreed upon continuing annual bonus.

SECTION 6. HOLIDAYS AND EXECUTIVE LEAVE

The City Manager is entitled to all paid holidays observed by regular full-time City employees. In lieu of vacation, sick, personal, and administrative leave, the City Manager will receive Executive Leave (EL) days. Upon commencement of employment on the start date stated in Section 1, the City Manager shall be credited with thirty (30) paid EL days, and thereafter, forty-five (45) paid EL days annually at the start of each fiscal year commencing on October 1, 2025. A maximum of one hundred and forty (140) EL days may be carried over each year, with any remaining days to be either used or paid out. Upon termination of this Agreement, whether voluntary or involuntary, the City Manager will be entitled to a full cash payment for all accumulated, unused EL days at his last rate of pay.

SECTION 7. HEALTH, DENTAL, VISION, LIFE AND DISABILITY INSURANCE

A. Upon commencement of employment, the City Manager shall be entitled, at his option, to receive fully paid health, dental and vision insurance coverage of his choice for himself and his family (as provided under, and subject to the terms and conditions of, the City's applicable group health plan). The City Manager at the time of his official retirement from the City, shall at his option be able to continue to be covered by the City's group health, dental and vision coverage purchased at the then rate offered to employees as may be allowed by law.

B. During his employment with the City, the City agrees to pay the required premiums for a term life insurance policy for the City Manager in an amount equal to two (2) times his salary, not to exceed $500,000.

C. During his employment with the City, the City shall put in force for the City Manager, and to make the required premium payments for a short-term and long-term disability insurance policy.

D. Upon execution of this Agreement, the City Manager agrees to opt-out and waive all benefits outlined in Section 9(A) and 9(B). In exchange for opting-out of all the benefits outlined in Section 9(A) and 9(B), the City will provide an annual opt-out payment of $15,000 from the City's health insurance budget line, payable in equal installments according to current payroll procedures. If the City Manager, due to a qualifying event, chooses not to waive the benefits in Section 9(A) and 9(B) collectively, he will not be eligible for the opt-out payment and will receive all the benefits provided under those sections.

SECTION 8. RETIREMENT

The City Manager is not eligible to participate in the City's defined benefit pension plan. Therefore, he shall receive a contribution equal to fifteen (15) percent of the City Manager's annual gross salary to his established 401(a) retirement plan, plus an additional match of up to five (5) percent if the City Manager contributes. In addition, the City shall contribute the maximum allowable amount under IRS Code annually to the City Manager's established 457b deferred compensation plan. Contributions to both plans will be made in bi-weekly installments, and the City Manager will be immediately vested.

SECTION 9. AUTOMOBILE, TECHNOLOGY, AND MISC. EXPENSES

A. The City Manager's duties require that he be on duty and available 24/7. The City shall provide, maintain, repair, fuel, insure, pay SunPass tolls and properly equip a full-size automobile for the City Manager's exclusive and unrestricted use at all times during his employment with the City.

B. The City shall provide the City Manager with a $125 per month allowance toward the cost of his personal cell phone and data plan. This payment is meant to compensate for business use. The City shall not be responsible for the cost of any cell phone replacement or any other charges related to the cell phone usage.

C. Recognizing the importance of constant communication and maximum productivity, to work externally, a mobile laptop will be provided for the City Manager's exclusive official use, returnable to the City upon resignation or termination.

D. The City shall provide the City Manager with a $300 annual clothing allowance for the purchase of official City of Winter Springs monogrammed attire, foul weather gear, and high-visibility apparel to support his official capacity in representation of the City.

SECTION 10. PROFESSIONAL DEVELOPMENT AND ACTIVITES

A. The City Manager is required to maintain professional competency, and participation in educational conferences, seminars, and professional meetings is encouraged. The City Commission agrees to budget for and cover the reasonable costs of professional dues and subscriptions necessary for the City Manager's continued involvement in national, regional, state, and local associations (e.g., ICMA, FCCMA, GFOA, IAEM) that benefit both his professional development and the City's interests. The City Commission agrees to also budget for and cover all reasonable expenses related to the City Manager attending conferences, meetings, and seminars, including registration fees and travel costs (e.g., airfare, lodging, car rental). Furthermore, the City Commission recognizes the value of the City Manager's engagement with local civic organizations that benefit the City's interests and will cover reasonable membership fees or dues for such participation. Expenses that are budgeted and approved by the City Commission will be paid directly or on a reimbursement basis. The City Manager shall not be required to use Executive Leave time for professional development activities that are budgeted for and approved by the City Commission.

B. The City Manager shall receive a per diem allowance for meals and incidental expenses (M&IE) in accordance with the City's travel and per diem policy, when away on City business for a 24-hour or more period. Receipts are not required for per diem allowances and are paid after the trip is completed.

C. The City recognizes the benefit of the City Manager maintaining his national and/or Florida professional licensure(s) and/or certification(s) relevant to the position of city manager; therefore, the City Commission shall budget for and cover the reasonable costs necessary for the City Manager's maintenance and renewals of such license(s) and/or certification(s).

D. The City Manager may accept speaking, writing, lecturing, teaching, consulting or other paid engagement of a professional nature as he sees fit, provided they do not interfere with the performance and discharge of his duties and responsibilities as City Manager, and shall not be in violation of the State of Florida Conflict of Interest Law. The City Manager may also serve on local, regional, state or national boards and committees that are not politically affiliated nor deemed contrary to the City's best interests by the City Commission.

SECTION 11. OTHER BENEFITS

The City Manager shall be entitled to the highest level of insurance and/or benefits enjoyed by and/or available to department heads, and/or general employees of the City, except as otherwise expressly provided to the City Manager by the terms of this Agreement herein.

SECTION 12. PERFORMANCE EVALUATION

Annually the City Commission and the City Manager shall define the goals and objectives which they determine necessary for the proper operation of the City and the attainment of the Commission's policy objectives, and shall further establish a general priority among those various goals and objectives,

said goals and objectives to be reduced to writing. They shall generally be attainable within the time limits specified and with the annual operating and capital budgets and appropriations provided by the City and the events that have occurred during the year. The City Commission may review the performance of the City Manager within 30 days prior to his annual anniversary date for each year. The City Manager's review and evaluation shall be in accordance with specific criteria developed jointly by the City Manager and the City Commission. Said criteria may be amended by mutual agreement of the City Commission and the City Manager. Further, the Mayor may participate in the annual evaluation, and the Mayor and City Commission, through the City Clerk, shall provide the City Manager with a written summary of the evaluation results. The City Manager shall be provided with an adequate opportunity to discuss the performance evaluation and results with the Mayor and City Commissioners. Failure of the City Commission to perform the annual evaluation will not impede the City Commission from providing, at its discretion, an annual increase in accordance with Section 5(B).

SECTION 13. NO REDUCTION OF BENEFITS

The City Commission shall not, at any time during the term of this Agreement, unilaterally reduce the salary, compensation, or other financial benefits of the City Manager, unless the reduction of salary, compensation, or other financial benefit is based on a percentage reduction that is applicable to an across-the-board reduction for all other senior leadership level employees of the City.

SECTION 14. RESIDENCY

There is currently no residency requirement for the City Manager; however, the City Manager agrees to establish a primary residence within the City of Winter Springs or within 10 miles of the City boundary.

A. As a one-time expense, effective as of the date of execution of this Agreement, the City shall provide the City Manager with a relocation budget not to exceed $30,000, to be expended by August 1, 2025. This budget covers necessary and reasonable expenses related to relocating, moving and transitioning the City Manager's family and belongings. Covered expenses include temporary or permanent rental housing reimbursement for 90 days, moving services, supplies, storage, dumpsters, substantive travel and house hunting costs (e.g., round-trip airfare, lodging, vehicle rental, and meals). The City shall directly pay for contractual expenses associated with moving the City Manager's family and personal property. These expenses include packing, moving, storage, unpacking, and insurance costs. The City Manager shall provide written evidence of actual moving expenses by obtaining written quotes from three (3) companies. These quotes will be submitted to the Finance Director, whom in consultation with the City Manager will select the moving company. The City acknowledges that relocation expenses may be incurred in phases to accommodate the completion of the school year and the full relocation of dependent family members.

B. As a one-time benefit, the City Manager shall be granted five (5) days of leave, to be used by August 1, 2025, for transitioning and addressing personal matters related to relocating to the State of Florida and the City of Winter Springs. This leave is in addition to the Executive Leave provided in this Agreement.

C. If the City Manager voluntarily resigns prior to the second anniversary of his effective start date stated in Section 1, the City Manager shall reimburse the City for the total amount of any relocation expenses paid by the City. Such reimbursement shall be deducted from any contract payouts owed to the City Manager, provided the payouts are sufficient to cover the full amount. If the payouts

are insufficient, the City Manager shall be responsible for paying the remaining balance in cash to the City.

SECTION 15. INDEMNIFICATION

The City shall defend, indemnify, save, and hold harmless the City Manager against any tort, civil rights, professional liability claim or demand, or other legal action, whether groundless or otherwise, arising out of an alleged act or omission occurring within the scope and performance of the City Manager's duties, except for acts or omissions acted in bad faith, with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property. Criminal litigation shall not be included in this indemnity clause. The City Manager recognizes that the City shall have the right to compromise and settle any claim or suit and pay the amount of any settlement or judgment rendered thereon. Further, the City agrees to pay all reasonable litigation expenses of the City Manager throughout the pendency of any litigation to which the City Manager is a party, witness or advisor to the City which may arise out of the course and scope of his employment. However, if the City Manager is found to be personally liable by virtue of acting outside the scope of his employment, or was acting in bad faith, with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property, the City may recover from the City Manager any attorney's fees paid from City funds in accordance with Section 111.07, Florida Statutes. If any claim or cause of action shall arise after the City Manager has left his employment with the City, he shall be reimbursed for travel, lodging and be paid a daily per diem basis based on his salary at the time of his separation from the City. To the maximum extent permitted by law, the City and City Manager shall rely upon the doctrine of sovereign immunity and the provisions of section 768.28, Florida Statutes, and other applicable law. The City Manager's right to indemnification hereunder shall survive the termination of this Agreement.

SECTION 16. BONDING

The City shall bear the full cost of any bonds required of the City Manager.

SECTION 17. GENERAL PROVISIONS

A. This Agreement embodies the complete agreement between the parties.

B. There are no inducements, promises, terms, conditions, or obligations made or entered into by the parties other than as contained herein.

C. This Agreement shall be binding upon and inure to the benefit of the heirs at law and executors of the City Manager.

D. In the event of any conflict between the terms, conditions, and provisions of this Agreement and the provisions of the City's policies, ordinances, or rules and regulations, or any permissive state or federal law, then, unless otherwise prohibited or mandated by law, the terms of this Agreement must take precedence over contrary provisions.

E. If any provision, or any portion thereof, contained in this Agreement is held unconstitutional, invalid, or unenforceable, the remainder of this Agreement, or portion thereof, shall be deemed severable, shall not be affected, and shall remain in full force and effect.

F. This Agreement may not be modified or changed in any way whatsoever except by written

agreement of the parties.

G. This Agreement shall be interpreted and governed by the laws of Florida. Venue for any action hereunder shall be in Seminole County, Florida, or if a federal action is commenced, in the Federal Court in Orlando, Florida.

H. **WAIVER OF JURY TRIAL. THE CITY AND CITY MANAGER HEREBY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY RIGHT EITHER MAY HAVE TO A TRIAL BY JURY WITH RESPECT TO ANY LITIGATION RELATED TO OR ARISING OUT OF, UNDER OR IN CONJUNCTION WITH THIS AGREEMENT, THE CITY MANAGER'S EMPLOYMENT AND TERMINATION OF EMPLOYMENT, AND ANY AND ALL OTHER DISPUTES WHICH MAY ARISE BETWEEN THE CITY AND CITY MANAGER WHETHER BASED ON CONTRACT, COMMON LAW, LOCAL ORDINANCE, OR STATE OR FEDERAL LAW.**

I. The City Commission and City Manager hereby represent to the other that they have each undertaken all necessary actions to execute this Agreement, and they each have the legal authority to enter into this Agreement and to undertake all obligations imposed on it.

J. The language of the City Charter relating to the position and function of the City Manager of the City of Winter Springs, as may be amended from time to time, is incorporated herein by reference into this Agreement as though it were set forth in the text of this Agreement verbatim.

K. The effective date of this Agreement shall be the date first written above. The effective date of employment shall be the date written in Section 1.

L. The "whereas" recitals stated above are hereby incorporated herein by this reference.

IN WITNESS WHEREOF, the City Commission has caused this Agreement to be signed and executed on its behalf by its Mayor and duly attested by its City Clerk, and the City Manager has signed and executed the same, on the day and year first written above.

CITY OF WINTER SPRINGS, FLORIDA **CITY MANAGER**

_____ _____

Kevin McCann, Mayor Kevin A. Sweet

Approved by the City Commission on: _____

ATTEST:

_____

Christian Gowan, City Clerk

Approved as to legal form and sufficiency
for the City of Winter Springs only:

Anthony A. Garganese, City Attorney

REGULAR AGENDA ITEM 503

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

Matters Related to City Board and Committees

SUMMARY

The City Clerk Department wishes to inform the City Commission of the following vacancies:

Per Section 2-41(e) of the City Code*, *"If any commissioner fails to appoint a member within thirty (30) days after a vacancy occurs or a term expires, that seat shall be filled by a majority vote of the commission."

CURRENT VACANCIES:

- **Veteran and Veteran Families Advisory Committee**
  - Seat Four Appointment
  - At-Large Appointment

FUNDING SOURCE

N/A

RECOMMENDATION

N/A

REGULAR AGENDA ITEM 504

CITY COMMISSION AGENDA | SEPTEMBER 23, 2024 REGULAR MEETING

TITLE

New Business

SUMMARY

Pursuant to Sec 2-27 (c)(2) of the City Code, "Unless otherwise determined by the city commission, each regular agenda shall have a new business section, in the order on the agenda approved by the city commission, which allows the mayor, any city commissioner, city manager or city attorney an opportunity to raise, if necessary, new issues not on the agenda that require discussion and potential future direction by the city commission. The new business section shall not be used to present items requiring prior public notice or hearing, for reports allowed under subsection (m), or be used as a substitute for timely placing items on the agenda prior to the agenda packet being distributed or as an add-on item as required by subsection (b). The city commission will not take final action on any new business item that is considered a major initiative and/or initiative that would ordinarily require significant city staff research. Persons introducing new business items are encouraged to provide background information regarding the item prior to or at the meeting in the same manner as permitted for reports under subsection (m)(4)."

FUNDING SOURCE

RECOMMENDATION

Staff recommends the Mayor and Commission bring forward any new business they wish to have placed on a future agenda.