PLANNING & ZONING REGULAR MEETING
THURSDAY, NOVEMBER 21, 2024 – 2:00 PM
10451 GULF BOULEVARD TREASURE ISLAND, FL 33706

MEETING NOTICE AND AGENDA

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1. **MEETING CALLED TO ORDER BY PRESIDING OFFICER**

2. **CELL PHONE ANNOUNCEMENT**

3. **PLEDGE ALLEGIANCE**

4. **ROLL CALL**
   Richard Harris- Chair
   Michael Hurtubise- Board Member
   Marvin Shavlan- Board Member
   Diana Crabill- Board Member
   Ross Sanchez- Vice-Chair
   *Chris Downing- Alternate Board Member**
   *Gary Potenziano- Alternate Board Member**

   **Per Sec. 70-3, alternate members shall only vote on any matter when a board member is unavailable.*

5. **APPROVAL OF MINUTES**

6. **STATUS UPDATE ON PRIOR PLANNING AND ZONING CASES**
   Staff will address questions, comments, and/or concerns from the Board pertaining to prior cases.

7. **ADMINISTRATION OF OATH**

8. **EX-PARTE COMMUNICATION DISCLOSURE**

9. **HEARING PROCEDURES**
   City Attorney explains hearing procedures.

10. **PRESENTATION OF ITEMS**

    10.ASMOD-000469-2024- 10126 Gulf Blvd- Site plan modification approval request to increase the proposed building height at grade from 55'-8" to 57'.

1. Staff Report.docx
2. Application.pdf
3. Affidavit to Authorize Agent.pdf
4. Warranty Deed.pdf
5. SunBiz- The Treasure Island Pearl LLC.pdf
6. Architectural Plans.pdf
7. Civil Plans.pdf
8. Stormwater Management Report.pdf
9. Survey.PDF

11. PUBLIC COMMENTS ON NON-AGENDA ITEMS

12. REPORTS AND COMMENTS OF CITY ATTORNEY, STAFF AND BOARD MEMBERS

13. PLANNING & ZONING BOARD / LOCAL PLANNING AGENCY MEETINGS
NEXT LPA MEETING: TBD
NEXT P&Z MEETING: TBD

14. ADJOURNMENT

AGENDA ITEM NO. 10.A

Item Cover Page

PLANNING & ZONING BOARD AGENDA ITEM REPORT

DATE:	November 21, 2024
SUBMITTED BY:	Jesse Miller, Community Development
ITEM TYPE:	Public Hearings
AGENDA SECTION:	PRESENTATION OF ITEMS
SUBJECT:	SMOD-000469-2024- 10126 Gulf Blvd- Site plan modification approval request to increase the proposed building height at grade from 55'-8" to 57'.
BACKGROUND:	See attached Staff Report.
POLICY/PURPOSE:	N/A
STRATEGIC PLAN RELEVANCE:	N/A
ANALYSIS/DISCUSSION:	See attached Staff Report.
FUNDING:	N/A
MOTION:	See attached Staff Report.

ATTACHMENTS:

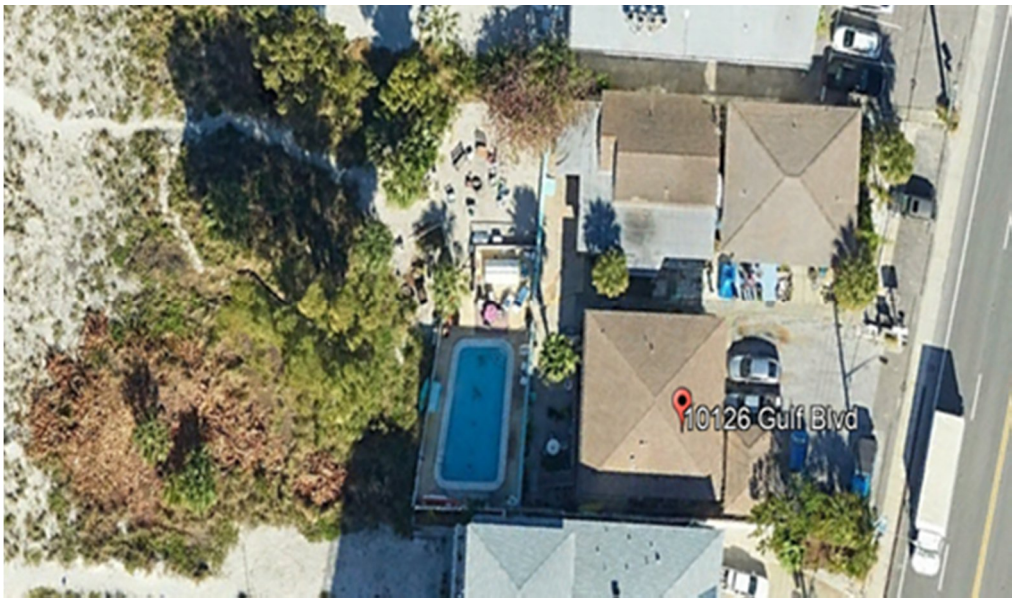
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CITY OF TREASURE ISLAND
PLANNING AND ZONING BOARD
10451 Gulf Blvd, Treasure Island, Florida 33706
Telephone (727) 547-4575; Fax (727) 547-4584

CASE NO. SMOD-000469-2024
STAFF REPORT
THURSDAY, NOVEMBER 21, 2024, AT 2:00 P.M.

DESCRIPTION: Site plan modification approval request to increase the proposed building height at grade from 55'-8" to 57'

SITE LOCATION: 10126 Gulf Blvd
Treasure Island, FL 33706



PARCEL ID #: 26-31-15-78786-003-0070

LEGAL DESCRIPTION: SAWYER & HARRELL'S ADD BLK 3, LOTS 7 & 8 LESS RD R/W ON E PER DEED BK 462/305 TOGETHER WITH VAC 30FT RD R/W ADJ ON W PER DEED BK 665/375 & TOGETHER WITH LANDS LYING W'LY OF SD LOT 7 EXT TO CITY OF TREASURE ISLAND MHWL AS DESC IN BULKHEAD LINE PLAT BK 2/24

PROPERTY OWNER: Treasure Island Pearl LLC
4655 Bayshore Blvd. NE
St. Petersburg, FL 33703

GENERAL INFORMATION:

Land Use: RFH (Resort Facilities High)
P (Preservation)

Zoning: RFH-50 (Resort Facilities High)
P (Preservation)

Adjacent Property (Use):

North: 10164 Gulf Blvd – Hotel/Motel

West: Gulf of Mexico- Public Beach

South: 10124 Gulf Blvd– Single-Family Dwelling

East: 10133 Gulf Blvd – Condominiums

Site Area: RFH- Approximately 0.294 acres | 12,813 sf
P- Approximately 0.015 acres | 660 sf

Flood Zone: AE- 10 (Coastal A Zone) Flood Insurance Rate Map Community Panel No. 12103C0194H eff. August 24, 2021.



PROPERTY SUMMARY:

The subject property has 3 existing structures constructed in 1958 and 1959, comprised of 6 dwelling units.

On November 22, 1977, Coastal Construction Setback Variance No. 77-2-V-176 was approved for the construction of a pool within the area 50 feet landward of the range line.

On December 13, 1977, Res. No. 77-30 approved site plan #034 for a commercial pool.

On June 6, 2024, the Planning & Zoning Board approved a site plan approval request for a proposed 4 story over parking multi-family dwelling structure comprised of 4 dwelling units (SITE-000442-2024).

This is a site plan modification to a site plan previously approved by the Planning and Zoning Board. There are no substantial changes except for those pertaining to the building height. The proposed site plan still remains in compliance with the RFH-50 zoning district standards.

TREASURE ISLAND CODE OF ORDINANCES:

CHAPTER 68- ZONING REGULATIONS
ARTICLE I.- IN GENERAL
Sec. 68-2- Definitions

Dwelling, multiple-family means a building designed for and/or containing three or more dwelling units.

Building height means the vertical distance from the average finished grade of all exterior corners to the highest point of the building, not including those structures specifically permitted to extend beyond the height of the building. On any site where construction is required to adhere to the flood elevation, as established for the National Flood Insurance Act of 1968, the building height is the vertical distance from the first living level or the tidal floodplain, whichever is lower, to the highest point of the building not including those structures specifically permitted to extend beyond the height of the building.

CHAPTER 68- ZONING REGULATIONS
ARTICLE VI. – ZONING DISTRICT REGULATIONS
DIVISION 5. – RFH-50 (RESORT HIGH) ZONING DISTRICT.
Sec. 68-302. – Uses Permitted.

The following uses shall be allowed within an RFH-50 zoning district as permitted, special exception or accessory uses as set forth herein:

1) *Permitted uses*. The following permitted uses shall be allowed within an RFH-50 zoning district:
   c) Dwelling, residential

Sec. 68-431. - Schedule of lot and bulk regulations.
The restrictions and controls intended to regulate the property development characteristics of each zoning district are set forth in the following schedule of lot and bulk regulations supplemented by other sections of this chapter:

Zoning District/Land Use	Minimum Lot Width (Feet)	Minimum Lot Depth (Feet)	Minimum Lot Area (Square Feet)	Maximum Density Dwelling Units	Maximum Building Height (Above	Floor Area Ratio (%)

				(Per Acre)	BFE +2 feet of freeboard)	
RFM-50/Resort Facilities High						
Multiple-family	70	90	9,000	15 (5 living levels max.)	60	—
Maximum lot coverage: 50%						
Impervious surface ratio—RFM-50:		Multifamily residential: 70% Nonresidential uses: 95%				

Sec. 68-454. – Intersection/driveway visibility. At all street intersections and at the intersection of any street, driveway, or alley, no obstruction to vision (other than existing buildings posts or tree trunks with a maximum diameter of 12 inches, or existing buildings) between 30 inches and seven feet in height above the established grade of the street at the property line shall be erected or maintained on any lot within the triangle formed by the street, driveway, or alley frontage of such lot and a line drawn between the points along such street, driveway, or alley frontage 50 feet distant from their point of street intersection or ten feet distant from their point of intersection with driveways and alleys. Existing trees must be cleared between 30 inches and seven feet.

Sec. 68-458. – Garden walls, fences and hedges.

a) *Generally.* All garden walls and fences shall be located completely within the limits of the property lines and shall have equal architectural treatment on both sides; i.e. the side facing abutting properties, streets, etc., shall be finished. See also section 68-462, Screening regulations. All fees pursuant to this section, shall be set by the city commission in appendix A.
b) *Front yard.* Decorative walls, fences and hedges within the required front yard shall not exceed 36 inches above finished grade. Chain link type fences are specifically prohibited in front yards.
c) *Side and nonwaterfront rear yards.* All garden walls, fences or hedges located within the required side or nonwaterfront rear yard shall not exceed seven feet in height above finished grade.
d) *Waterfront yards.* All garden walls, fences or hedges within a waterfront yard shall not exceed 30 inches in height above the finished grade level; provided, however, that a chain link or an open fence with openings not less than 3⅝ inches between intermediate uprights which are not greater than 1½-inch cross sections may extend up to four feet in height. Decorative post caps may be installed on structural posts of the fence, but shall not extend more than ten inches above the top rail.

Sec. 68-461. - Height regulations.

(a) General application. No building or structure shall have an aggregate height of a greater number of feet than is permitted in the zoning district in which such building or structure is located, except as noted in subsection (b). Height shall be defined as in section 68-2, Building height.

(b) Permitted exceptions. No exceptions to height regulations shall be permitted except enclosed stairways and elevator machinery or shafts not including an elevator exit which shall not exceed a height of seven feet above the roof of the structure and one community television antenna per principal structure shall be allowed but in no instance shall such antenna extend more than 13 feet above the roof of the structure.

Sec. 68-486. – Off-street parking.

a) *Number and description of parking spaces required*

	Use	Minimum Spaces Required
(1)	Single-family, two-family, multifamily, and townhouse dwellings and group homes	2 spaces per unit

g) *Utilization of yards.*

(2) In all zoning districts, for all other permitted uses, approved permitted uses with site plan review or approved special exception uses, required front, side or rear yards may be used for off-street parking except as limited herein. A maximum of 80 percent of a required front yard may be used for off-street parking. All parking areas shall have each parking space and aisle marked and shall be landscaped in conformance with the paved area landscape requirements in chapter 72, article II.

(3) In all zoning districts, parking area surfaces shall not extend closer than three feet from any abutting property line.

Sec. 68-541. - Setback classifications.

Street: 25 feet
Side: 7.5 feet
Waterfront: 5 feet

ARTICLE IX – ALTERNATE SETBACK SYSTEM

Sec. 68-561. - Alternate setback system procedures.

(a) *Application and exceptions.*

(1) This article shall be the alternative methods of determining all building setback requirements. The section or subsection which results in the greatest amount of setback shall apply for any given property.

(2) The following categories are exempt from the application of the vertical ratio setback system set out in this article:

a. Single-family dwellings including townhouses;
b. Duplex dwellings;
c. All totally commercial buildings located in the CG zoning districts.
d. All buildings located in the PR-MU Core zoning district.
e. All buildings located in the PR-MU Gulf Blvd. zoning district.

(b) *Vertical setback ratio.* All buildings, not otherwise excepted from this article, shall be set back from all property lines 30 percent of the height of building above existing grade. Notwithstanding this provision, the minimum setback from the waterfront property line on properties bordering the Gulf of Mexico or the public beach shall be five feet.

(c) *Properties bordering on the Gulf* of *Mexico or public beach.* For properties bordering on the Gulf of Mexico or public beach, the following additional building setback and open space requirements shall be applicable:

(1) The minimum required setback shall be five feet from the waterfront property line. No construction shall be permitted seaward of the coastal construction control line except by permit from the state department of environmental protection and the city.

(2) Total open space between side lot lines shall be not less than 30 percent of the width of the lot but no less than the minimum designated in the setback chart, article VIII.

(3) Interior open space between buildings or towers shall equal a distance of 30 percent of the combined height above existing grade of the two structures or towers.

ANALYSIS OF LAND DEVELOPMENT REGULATIONS:

The criteria for reviewing a site plan for approval or denial is contained in the City of Treasure Island Land Development Regulations – Sec. 70-92.

1) In what respects the plan is or is not consistent with the Comprehensive Plan and the purpose and intent of the zoning district in which it is located.

The subject property has a future land use designation of Resort Facilities High and is located within the Resort Facilities High (RFH-50) Zoning District. The proposed site plan modification is consistent with the purpose and intent of the zoning district.

2) In what respects the plan is or is not in conformance with all the applicable regulations of the zoning district in which it is located.

The proposed site plan modification is in conformance with all applicable regulations of the RFH-50 zoning district. Please see table below.

	Land Development Regulations	**Proposed Site Plan**
Lot Width (min.)	70	100.04 ft.
Lot Depth (min.)	90	155 ft.- N Property Line 130 ft.- S Property Line
Lot Area (min.)	9,000	13,474 sq. ft.
Density	Multiple-family- 15 dwelling units per acre (5 living levels max.)	4 15 x 0.31 AC. = 4.65 units
Lot Coverage (max.)	50%	45%
ISR (max.)	RFH-50- 70%	RFH-50- 69.9%

	P- 20%	P- 0%
FAR	120	N/A
Building Height **Max. above DFE** **Height Encroachment** **From Grade**	 60’ 7’ above roof	 53’-2 3/8” from DFE N/A 57’ from grade
Height Encroachment	7’ above roof	4’ above roof
Setbacks **Front– Gulf Blvd.** **Rear** **Side** **Alternate Setbacks** **Greater of above setbacks apply.**	 25’ 5’ 7.5’ Open Space/Side: 30% of Lot Width 30% of Building Height above Grade All Sides	 25.2’ 17.3’ 17.1’ 100.04 x .30 = 30.01’ (divided among two sides) 57’ x .30 = 17.1’ All Four Sides
Design Elevation	12’ NAVD	14’ NAVD
Loading Berths	Varies	N/A
Parking Spaces **Total Spaces** **Standard** **Compact (max.)** **ADA-accessible** **Bicycle**	 8 7 0 1 0 Bike Rack (5 spaces per rack)	 17 16 0 1 2 Bike Rack (5 spaces per rack)

3) In what respects the plan is or is not in conformance with the City’s subdivision regulations and all other applicable City requirements including the design and construction of streets, utility facilities and other essential services.
N/A- The proposed site plan modification does not include the subdivision of property.

4) In what respects the plan is or is not consistent with good design standards with respect to all internal or external relationships, including but not limited to:

a. Provisions to ensure compatibility with the planned character of the zoning district where the proposed development is to be located, and with existing development surrounding the site.
The proposed site plan modification meets the purpose and intent of RFH-50 Zoning District and is compatible with the planning character of the RFH-50 zoning district and with existing development surrounding the site.

b. Internal or external circulation patterns, for vehicles, bicycles, and pedestrians; provisions for the separation of on-site pedestrian and vehicular traffic; provisions for the safe and convenient storage of bicycles, where applicable.
N/A- The proposed site plan modification has no impact on circulation patterns for vehicles, bicycles or pedestrians.

c. **Disposition of open space, effective use of screening or buffering to reduce the impacts of incompatible and/or nonconforming uses, preservation of acceptable existing trees and other natural features, and protection of existing environmentally sensitive areas and their ecological functions.**
N/A- The proposed site plan modification is only an increase in building height for a previously approved site plan.

d. **Building arrangements, both between buildings in the proposed development and in relation to those on properties adjacent to the site.**
N/A- The proposed site plan modification has no impact on building arrangements.

e. **Provisions to ensure continued public use of existing public beach or waterfront access ways, if any. Also, proposed new or enhanced public beach or waterfront access ways, if identified as a requirement during the conference(s) between the applicant and city staff (see Section 70-53).**
N/A- The proposed site plan will not impact the use of the existing public beach or access to the waterfront.

f. **Protection of historically/architecturally significant structures or archaeological sites, if any, on or near the proposed development site from any adverse effects of the proposed development.**
N/A – There are no known historically/architecturally significant structures or archaeological sites on the subject property.

g. **Suitability and design of proposed on-site recreation areas and improvements, or of other lands to be dedicated for public recreational purposes.**
N/A – There are no on-site recreation areas, improvements, or lands to be dedicated for public recreational purposes.

5) **In what respects the plan is or is not in conformance with city policies regarding sufficiency of ownership, guarantees for completion of all required improvements, and guarantees for continued maintenance.**
N/A- There are no newly required or upgraded public improvements associated with this development proposal.

6) **Where applicable, in what respects the plan is or is not in conformance with the regulations of the Southwest Florida Water Management District, the Tampa Bay Regional Planning Council, and state and federal agencies. The issuance of permits or letters of intent-to-approve by these agencies may be considered evidence of such conformance.**
N/A- The proposed site plan modification is only an increase in building height for a previously approved site plan.

7) **In the case of rehabilitation or redevelopment of an existing nonconforming use, per Section 68-512(3), whether the overall degree of nonconformity on the site is significantly reduced and additional adverse impacts are not created,**

and whether an exemption from variance requirements for any or all remaining nonconformities should be granted.
N/A – The subject property will be redeveloped in conformance with all applicable codes.

STAFF RECOMMENDATION:

Staff recommends the proposed site plan modification be **APPROVED WITH THE FOLLOWING CONDITIONS**:

1. All building permits and construction associated with this development proposal shall be subject to all current regulations within the Florida Building Code, Floodplain Management Regulations, Land Development Regulations, and the Florida Fire Prevention Code in effect at the time of the building permit application process.

2. All applicable state and federal permits and/or exemptions shall be submitted to the City prior to commencement of development per F.S. 166.033(6).

3. Conditions of the previously approved site plan case SITE-000442-2024 will remain in effect.

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NOVEMBER 21, 2024
PLANNING AND ZONING BOARD
DEVELOPMENT ORDER

CASE NO. SMOD-000469-2024
LOCATION: 10126 GULF BLVD TREASURE ISLAND, FL 33706

The Planning and Zoning Board has made a motion to:

[ ] APPROVE [ ] DENY
[ ] CONTINUE [ ] APPROVE WITH CONDITIONS

The site plan modification request to increase the proposed building height at grade from 55'-8" to 57'.

CONDITIONS:

1. All building permits and construction associated with this development proposal shall be subject to all current regulations within the Florida Building Code, Floodplain Management Regulations, Land Development Regulations, and the Florida Fire Prevention Code in effect at the time of the building permit application process.

2. All applicable state and federal permits and/or exemptions shall be submitted to the City prior to commencement of development per F.S. 166.033(6).

3. Conditions of the previously approved site plan case SITE-000442-2024 will remain in effect.

_____ _____
Richard Harris, Chair Date
Planning & Zoning Board

Pursuant to Section 70-92(f), if within 12 months of the date of approval of an application for site plan review, a building permit has not been applied for, the approved site plan shall expire; provided, however, that the original approving body and applicant may jointly agree to extend such period of approval.

Case Number: _____

City of Treasure Island Planning and Zoning Board or City Commission Review Application

Please use blue or black ink only. Failure to complete this form in its entirety will result in this application being returned without review. Note: A separate application is required for each request.

Property Owners: Treasure Island Pearl LLC	Agent: ARO Engineering, Daniel J. Epperly, P.E.
Address: 4655 Bayshore Blvd. NE	Address: 780 94th Ave. N. Suite 102
St. Petersburg, FL 33703	St. Petersburg, FL 33702
Phone: 617-921-2828	Phone: 727-527-5900
Fax: N/a	Fax: N/a
Email: thepearlllc@hotmail.com	Email: daniel@aroeng.com

List all Legal Owner(s) of Property: Treasure Island Pearl LLC

Complete legal description (may be placed on attached separate page): See attached.

Development Name: The Pearl

Site Location/Address: 10126 Gulf Blvd. Treasure Island, FL 33706

Area of Development (Acreage or Square Feet) 13,473.89 S.F.

Parcel Identification Number (list all): 26-31-15-78786-003-0070

Application Request: Construction of 5 story condominium building, 4 living units with ground level parking and all other associated site infrastructure.

Future Land Use Designation: RFH & P Proposed Future Land Use: RFH & P

Current Zoning: RFH-50 & P Proposed Zoning: RFH-50 & P

I certify that I have reviewed the Land Development Regulations and that my submission meets all requirements. The only exceptions are those items to which I am requesting variances to or waivers from certain sections of the code and understand that they must be listed on the plans individually and on the attached transmittal. I understand that if an item does need a variance, it will be necessary to file through the appropriate review entity.

Signature must be original (No copies, scans, faxes or e-mails)

Owner/Agent

8/23/2024
Date

AFFIDAVIT TO AUTHORIZE AGENT

STATE OF Florida
COUNTY OF Pinellas

Treasure Island Pearl LLC, Alex Millman
NAME OF OWNER(S) being duly sworn, depose(s) and say(s):

PROPERTY ADDRESS(ES): 10126 Gulf Blvd. Treasure Island, FL 33706

Parcel I.D. Number(s).: 26-31-15-78786-003-0070

1. That this property constitutes the property for which request for permits and approvals from the City of Treasure Island, as necessary, are being applied for.

2. That the undersigned (has/have) appointed ARO Engineering, Daniel J. Epperly, P.E. as (his/their) agent(s) to represent the above-described property and serve as the applicant/agent for development applications/modifications, at the Planning and Zoning Board meeting and execute any permits or other documents necessary to affect such permit(s).

3. That this affidavit has been executed to induce appropriate state agency in Florida to consider, and act on the above-described property.

4. That (I/we), the undersigned authority, hereby certify that the foregoing is true and correct.

PRINTED NAME OF PROPERTY OWNER(S): Alex Millman
SIGNATURE OF PROPERTY OWNER(S): Alex Mill
DATE: 8/23/2024

STATE OF: Florida
COUNTY OF: Pinellas
The foregoing instrument was acknowledged before me this 23rd day of August, 2024, by (company/agent) Treasure Island Pearl LLC by (persons name) Alex Millman, it's (title) Owner who is personally known to me, or who has produced _____ as identification and who _____ did X did not take an oath.

Antonio Lanzilotta
(Print, Type, or Stamp Commissioned Name of Notary Public)
Commission Number: HH338323
Commission Expires: 12/5/2026

ANTONIO LANZILOTTA
Notary Public
State of Florida
Comm# HH338323
Expires 12/5/2026

Legal Description

THAT PORTION OF LOT 8, BLOCK 3 AND THE WESTERLY 30.00 FEET OF VACATED ROAD RIGHTY-OF-WAY, ACCORDING TO INSTRUMENT NO. 452618, OF SAWYER & HARRELL'S ADD. TO BOCA CIEGA PASS SUB., ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, WHICH LIES WEST OF THE WESTERLY BOUNDARY OF STATE ROAD NO. 699 (GULF BOULEVARD) ACCORDING TO INSTRUMENT NO. 257542.
TOGETHER WITH
LOT 7, BLOCK 3, TOGETHER WITH ALL LANDS LYING BETWEEN THE NORTHERLY AND SOUTHERLY LINES OF SAID LOT AS EXTENDED TO THE MEAN HIGH WATERLINE OF THE GULF OF MEXICO, LESS ANY PORTIONS THEREOF LYING WESTERLY OF THE CITY OF TREASURE ISLAND MEAN HIGH WATERLINE, AS ESTABLISHED BY PLAT RECORDED IN BULKHEAD PLAT BOOK 2, PAGES 24 TO 28, INCLUSIVE, PINELLAS COUNTY, FLORIDA RECORDS, AND LESS THE EASTERLY PORTION OF SAID LOT FOR ROAD PURPOSES; BEING IN BLOCK 3, SAWYER AND HARRELL'S ADD. TO BOCA CIEGA PASS SUB., AS RECORDED IN PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

I#: 2023251410 BK: 22580 PG: 2321, 09/29/2023 at 01:21 PM, RECORDING 5 PAGES $44.00 D DOC STAMP COLLECTION $22050.00 KEN BURKE, CLERK OF COURT AND COMPTROLLER PINELLAS COUNTY, FL BY DEPUTY CLERK: CLKPR12

Prepared by and return to:
Frank Cruz Jr.
First Title Source LLC
1267 Court Street
Clearwater, FL 33756
(727) 399-6977
File No 1-2023-9934

Parcel Identification No 26-31-15-78786-003-0070

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WARRANTY DEED

(STATUTORY FORM – SECTION 689.02, F.S.)

This indenture made the **29th day of September, 2023** between **Marta Hreshchyshyn, Yuri B. Hreshchyshyn, Nadia R. McQuiggan, Adrian V. Hreshchyshyn and Maria Anna K. Hreshchyshyn, Trustees of LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021,** whose post office address is **121 Deer Run, Williamsville, NY 14221,** of the County of Erie, State of New York, Grantor, to **The Treasure Island Pearl, LLC, a Florida Limited Liability Company,** whose post office address is **4655 Bayshore Boulevard Northeast, St. Petersburg, FL 33703,** of the County of Pinellas, State of Florida, Grantee:

Witnesseth, that said Grantor, for and in consideration of the sum of TEN DOLLARS (U.S.$10.00) and other good and valuable considerations to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said Grantee, and Grantee's heirs and assigns forever, the following described land, situate, lying and being in Pinellas, Florida, to-wit:

That portion or Lot 8, Block 3 and the Westerly 30.00 feet of vacated Road Rightyof-way, according to Instrument No. 452618, of SAWYER & HARRELL'S ADD. TO BOCA CIEGA PASS SUB., according to the map or plat thereof as recorded in Plat Book 3, Page 41, Public Records of Pinellas County, Florida, which lies West of the Westerly boundary of State Road No. 699 (Gulf Boulevard) according to Instrument No. 257542.

TOGETHER WITH
Lot 7, Block 3, together with all lands lying between the Northerly and Southerly lines of said lot as extended to the mean high waterline of the Gulf of Mexico, LESS any portions thereof lying Westerly of the City of Treasure Island mean high waterline, as established by plat recorded in Bulkhead Plat Book 2, Pages 24 to 28, inclusive, Pinellas County, Florida Records, and LESS the Easterly portion of said lot for road purposes; being in Block 3, SAWYER AND HARRELL'S ADD. TO BOCA CIEGA PASS SUB., as recorded in Plat Book 3, Page 41, Public Records of Pinellas County, Florida.

Property is not the homestead of the Grantors and the grantors have no Individual interest in the property.

Together with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

Subject to taxes for 2023 and subsequent years, not yet due and payable; covenants, restrictions, easements, reservations and limitations of record, if any.

TO HAVE AND TO HOLD the same in fee simple forever.

And Grantor hereby covenant with the Grantee that the Grantor is lawfully seized of said land in fee simple, that Grantor have good right and lawful authority to sell and convey said land and that the Grantor hereby fully warrant the title to said land and will defend the same against the lawful claims of all persons whomsoever.

PINELLAS COUNTY FL OFF. REC. BK 22580 PG 2322

In Witness Whereof, Grantor have hereunto set Grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

WITNESS
PRINT NAME: Kelly Snekser

WITNESS
PRINT NAME: Mariah Getman

LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021

By: Nadia R. McQuiggan, Trustee
Nadia R. McQuiggan, Trustee

STATE OF New York

COUNTY OF Erie

Sworn to (or affirmed) and subscribed before me by means of (✓) physical presence or ( ) online notarization this 27 th day of September, 2023, by Nadia R. McQuiggan, Trustees of LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021.

Signature of Notary Public

Print, Type/Stamp Name of Notary Julie A Jones

JULIE A. JONES
Notary Public, State of New York
Qualified in Niagara County
Reg. No. 01JO6171026
My Commission Expires 7/23/2027

Personally Known:_____ OR Produced Identification: X

Type of Identification Produced: NY DL

PINELLAS COUNTY FL OFF. REC. BK 22580 PG 2323

In Witness Whereof, Grantor have hereunto set Grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

WITNESS
PRINT NAME: MiKeyla Davis

WITNESS
PRINT NAME: Carol D. Mahon

LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021

By: _____
Yuri B. Hreshchyshyn, Trustee

STATE OF New York
COUNTY OF Erie

The foregoing instrument was acknowledged before me by means of (✓) physical presence or ( ) online notarization this 27 th day of September, 2023, by , Yuri B. Hreshchyshyn, Trustee of LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021.

Signature of Notary Public
Print, Type/Stamp Name of Notary

CAROL D. MAHON
Notary Public, State of New York
Qualified in Erie County
Commission Expires: 08-28-2025
Reg No 01MA4955104

Personally Known: _____ OR Produced Identification: ✓
Type of Identification Produced: New York State Driver's License

PINELLAS COUNTY FL OFF. REC. BK 22580 PG 2324

In Witness Whereof, Grantor have hereunto set Grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

K. White
WITNESS
PRINT NAME: Kathleen White

WITNESS
PRINT NAME: OSCAR M. CAMPOS

LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021

By: Adrian V. Hreshchyshyn
Adrian V. Hreshchyshyn, Trustee

STATE OF Arizona

COUNTY OF Maricopa

Sworn to (or affirmed) and subscribed before me by means of (✓) physical presence or ( ) online notarization this 27 th day of September, 2023, by Adrian V Hreshchyshyn, Trustees of LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021.

K. White
Signature of Notary Public

Kathleen White
Print, Type/Stamp Name of Notary

NOTARY PUBLIC AUTHORIZED UNDER 5 U.S.C. SECTION 1044A
SEAL

Personally Known:_____ OR Produced Identification: Military I.D.
Type of Identification
Produced: Military I.D.

PINELLAS COUNTY FL OFF. REC. BK 22580 PG 2325

In Witness Whereof, Grantor have hereunto set Grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Sean Thompson 09/27/2023 03:16 PM EDT

WITNESS
PRINT NAME: Sean Thompson

Scott Robert Perreault 09/27/2023 03:18 PM EDT

WITNESS
PRINT NAME: Scott Robert Perreault

LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021

By: Marta Hreshchyshyn 09/27/2023 03:12 PM EDT
Marta Hreshchyshyn, Trustee

By: Maria Anna K. Hreshchyshyn 09/27/2023 03:14 PM EDT
Maria Anna K. Hreshchyshyn, Trustee

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was acknowledged before me by means of ( ) physical presence or (X) online notarization this 27 th day of September, 2023, by Marta Hreshchyshyn and Maria Anna K. Hreshchyshyn, Trustees of LIDIA HRESHCHYSHYN FAMILY TRUST dated May 7, 2021.

Scott Robert Perreault 09/27/2023 03:18 PM EDT

Signature of Notary Public
Print, Type/Stamp Name of Notary
Scott Robert Perreault

SCOTT ROBERT PERREAULT
Notary Public - State of Florida
Commission # HH 348690
My Comm. Expires Jun 27, 2027
Bonded through National Notary Assn.

Personally Known:_____ OR Produced Identification: X
Type of Identification Produced: Drivers License

Online Notary Public. This notarial act involved the use of online audio/video communication technology. Notarization facilitated by SIGNiX

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Detail by Entity Name

Florida Limited Liability Company
THE TREASURE ISLAND PEARL LLC

Filing Information

Document Number	L23000439024
FEI/EIN Number	93-3551169
Date Filed	09/21/2023
Effective Date	09/20/2023
State	FL
Status	ACTIVE

Principal Address

4655 BAYSHORE BLVD NE
ST PETERSBURG, FL 33703

Mailing Address

4655 BAYSHORE BLVD NE
ST PETERSBURG, FL 33703

Registered Agent Name & Address

KRUSEMARK, AMY
4655 BAYSHORE BLVD NE
ST PETERSBURG, FL 33703

Authorized Person(s) Detail

Name & Address

Title AMBR

MILLMAN, ALEX
4655 BAYSHORE BLVD NE
ST PETERSBURG, FL 33703

Annual Reports

Report Year	Filed Date
2024	01/31/2024

Document Images

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THE PEARL

(4 CONDUMINIUM UNITS)
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA
FDI# 23146.00

OWNER:
THE PEARL , LLC.
10126 GULF BLVD.
TREASURE ISLAND, FL

CONTRACTOR:
GSA CONTRACTING, INC.
845 MAIN STREET
SAFETY HARBOR, FLORIDA 34695

ARCHITECT:
FRAZE DESIGN, INC.
1750 CENTRAL AVENUE
ST. PETERSBURG, FLORIDA 33712

STRUCTURAL ENGINEER:
GEORGE F. YOUNG
299 DR. MARTIN LUTHER KING JR. N.
ST. PETERSBURG, FLORIDA 33701

MEP ENGINEER:
GRINER ENGINEERING
3125 5TH AVENUE NORTH, SUITE 300
PETERSBURG, FLORIDA 33713

CIVIL ENGINEER:
ARO ENGINEERING
780 94TH AVE, N., SUITE 102
ST. PETERSBURG, FLORIDA 33701

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FDI# 23146.00

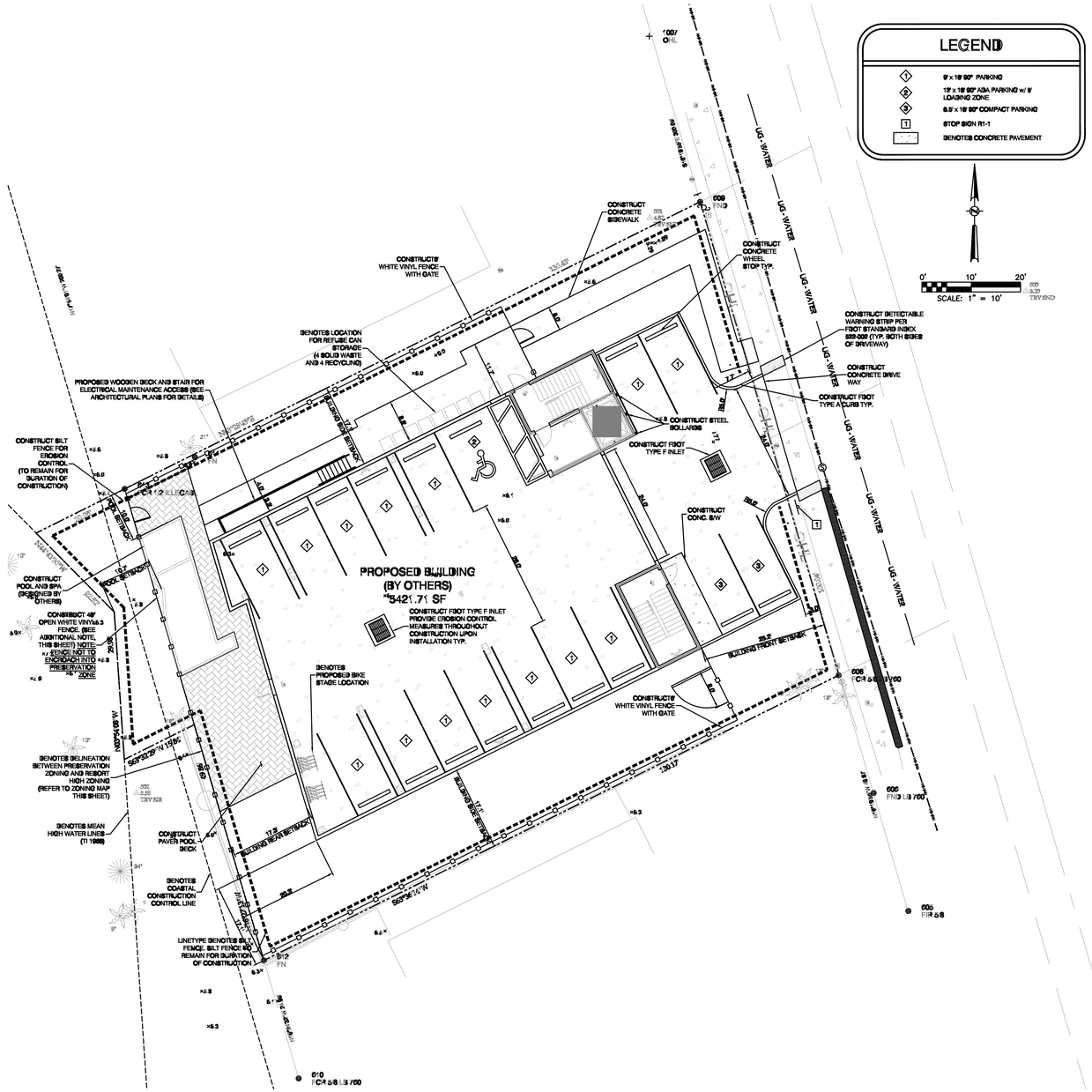
THE PEARL
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA

PROFESSIONAL SEAL
STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT
ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL LIC. NO. AA26005585
3125 5th AVENUE N. SUITE 200
ST. PETERSBURG, FLORIDA 33713
PHONE: 727/328-3609
STUDIO: 727/328-3608
FAX: 727/328-3608
E-MAIL: fd@frazedesign.com

SHEET TITLE
COVER PAGE

SHEET NUMBER
A-0



ARITECTURAL SITE PLAN
SCALE: N.T.S.

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AR0014705
REGISTERED ARCHITECT
ORA FRANKLIN FRAZE, IV

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FL. LIC. NO. AA26000851
3125 5th AVENUE N. SUITE 200 ST. PETERSBURG, FLORIDA 33713
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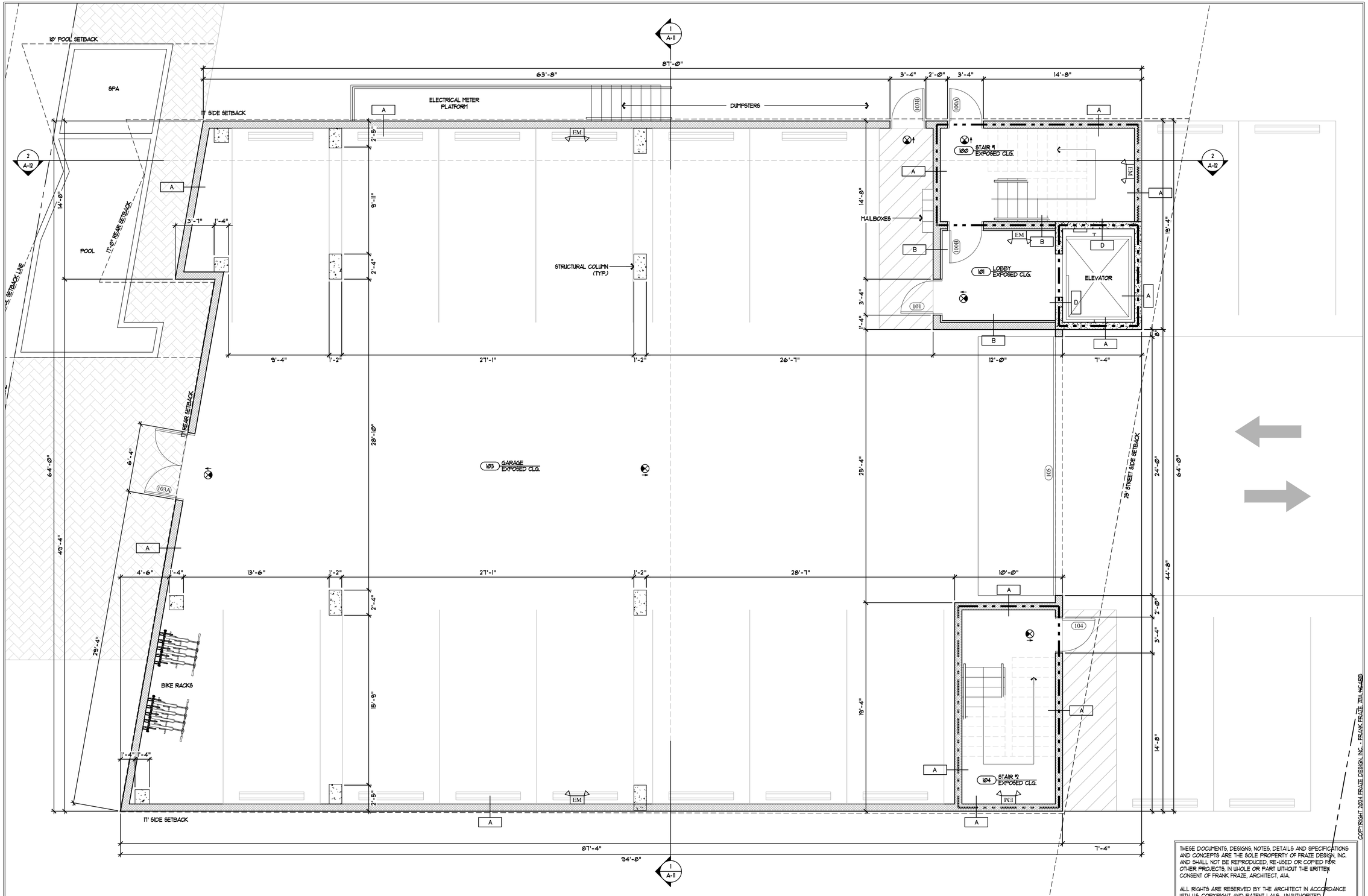
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SHEET TITLE
ARITECTURAL SITE PLAN

SHEET NUMBER
A-2



1 GROUND LEVEL FLOOR PLAN
SCALE: 1/4"=1'-Ø"

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REGISTERED ARCHITECT
ORA FRANKLIN FRAZE, IV

FRAZE design
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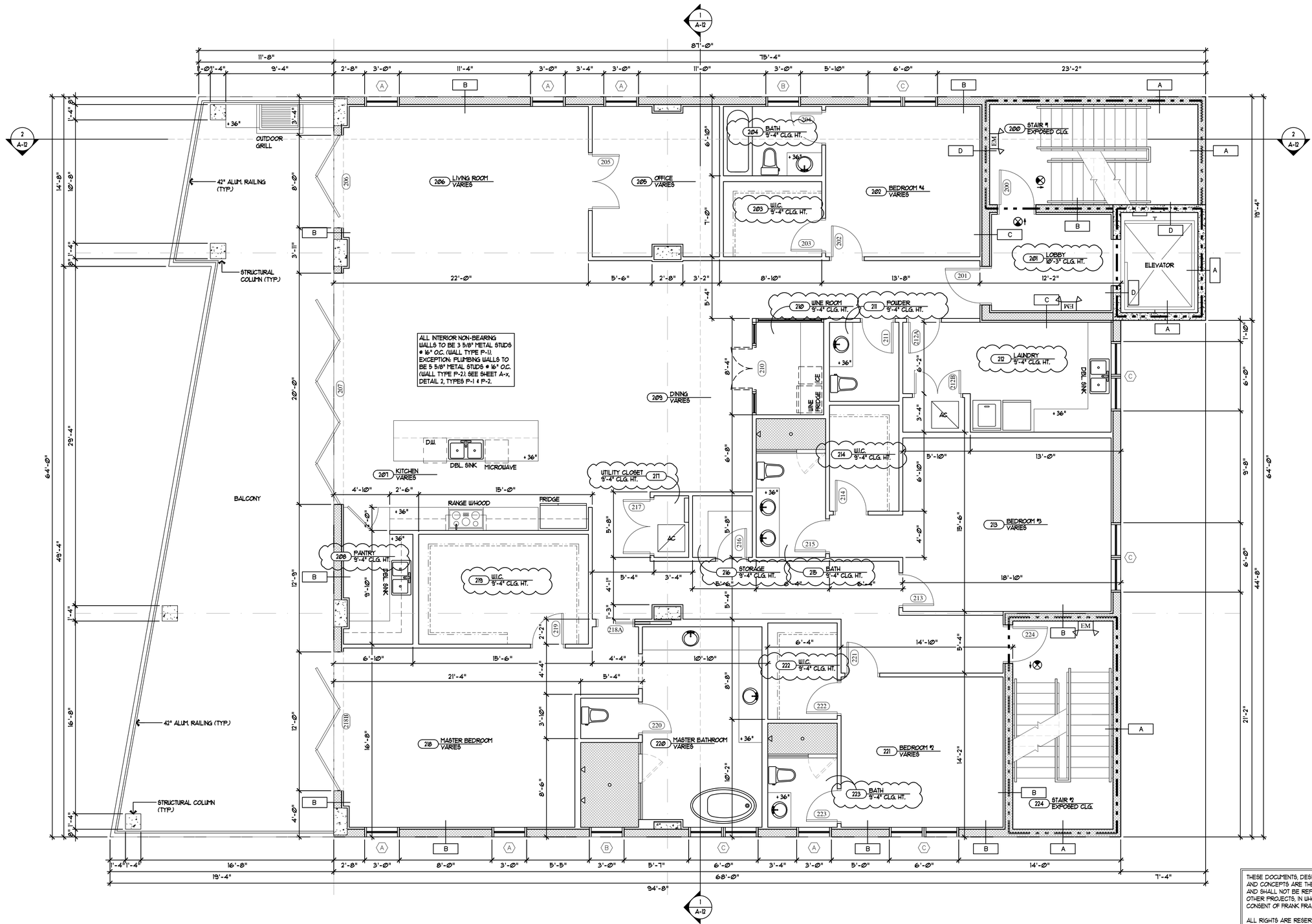
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SHEET TITLE
GROUND LEVEL FLOOR PLAN

SHEET NUMBER
A-3



1 2ND-4TH LEVEL FLOOR PLAN
SCALE: 1/4"=1'-0"

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ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

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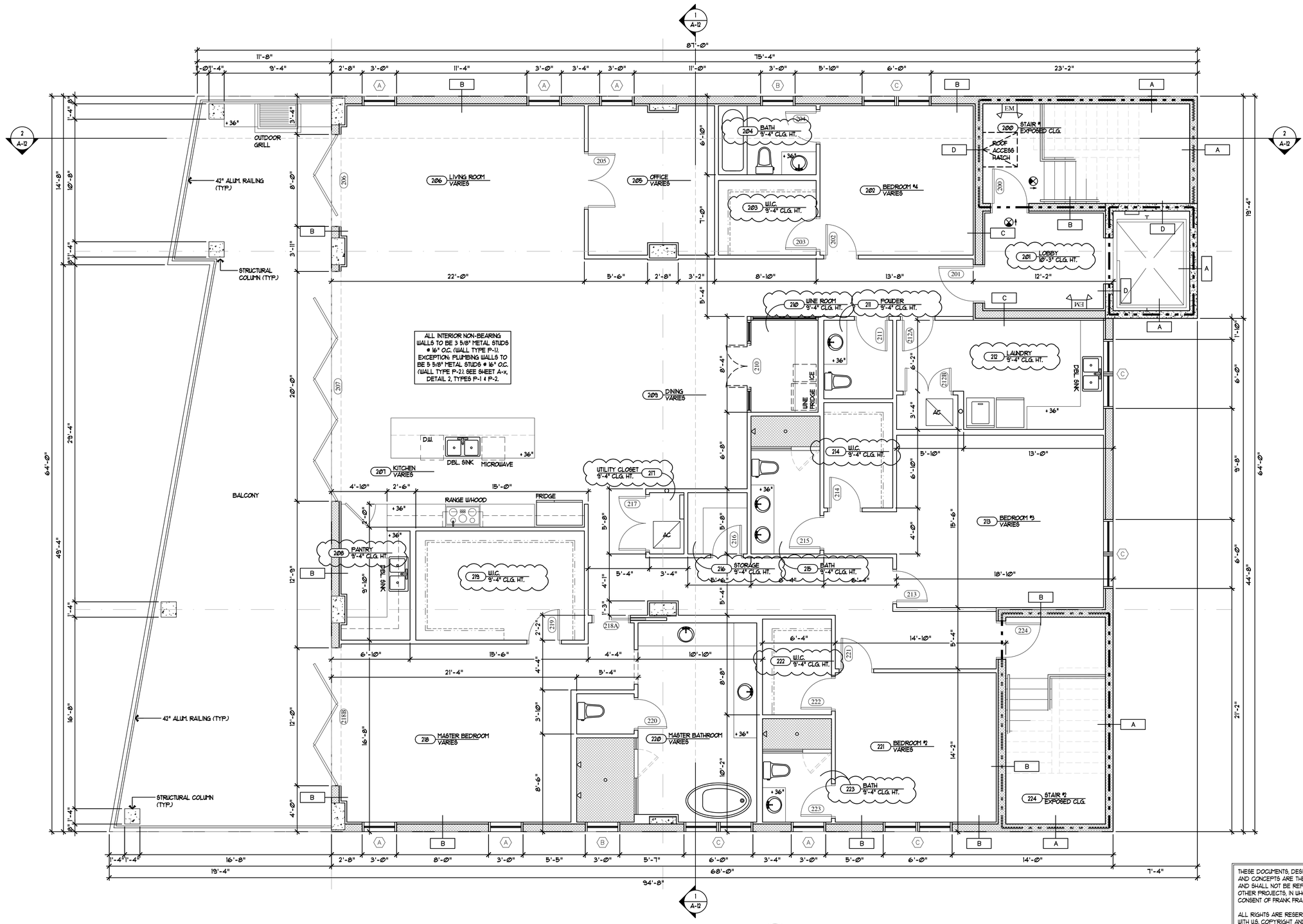
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2ND-4TH LEVEL FLOOR PLAN

SHEET NUMBER
A-4



1 5TH LEVEL FLOOR PLAN
SCALE: 1/4"=1'-0"

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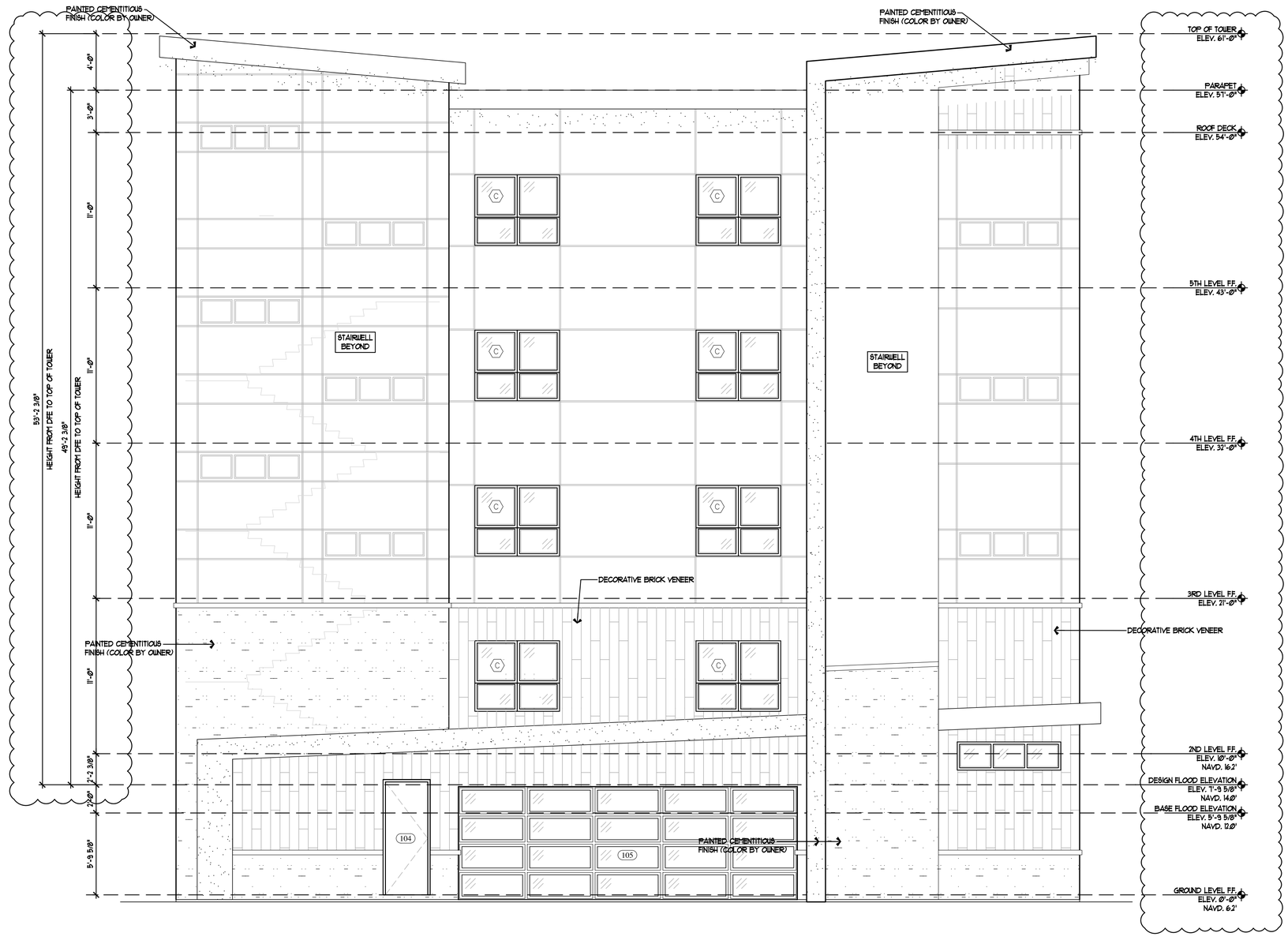
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STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT
ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL. LIC. NO. AA26005585
E-MAIL: (info@frazedesign.com
3125 5th AVENUE N. SUITE 200 ST. PETERSBURG, FLORIDA 33713
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SHEET TITLE
5TH LEVEL FLOOR PLAN

SHEET NUMBER
A-5



1 FRONT ELEVATION
SCALE: 1/4"=1'-0"

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SHEET TITLE
FRONT ELEVATION

SHEET NUMBER
A-7



1 SIDE ELEVATION
SCALE: 1/4"=1'-0"

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THE PEARL
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA

PROFESSIONAL SEAL

STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL. LIC. NO. AA26000585
3125 5th AVENUE N. SUITE 200 ST. PETERSBURG, FLORIDA 33713
PHONE: 727/328-3668 FAX: 727/328-3669 STUDIO: 727/328-3668
E-MAIL: fd@frazedesign.com

SHEET TITLE
SIDE ELEVATION

SHEET NUMBER
A-8



1 SIDE ELEVATION
SCALE: 1/4"=1'-Ø"

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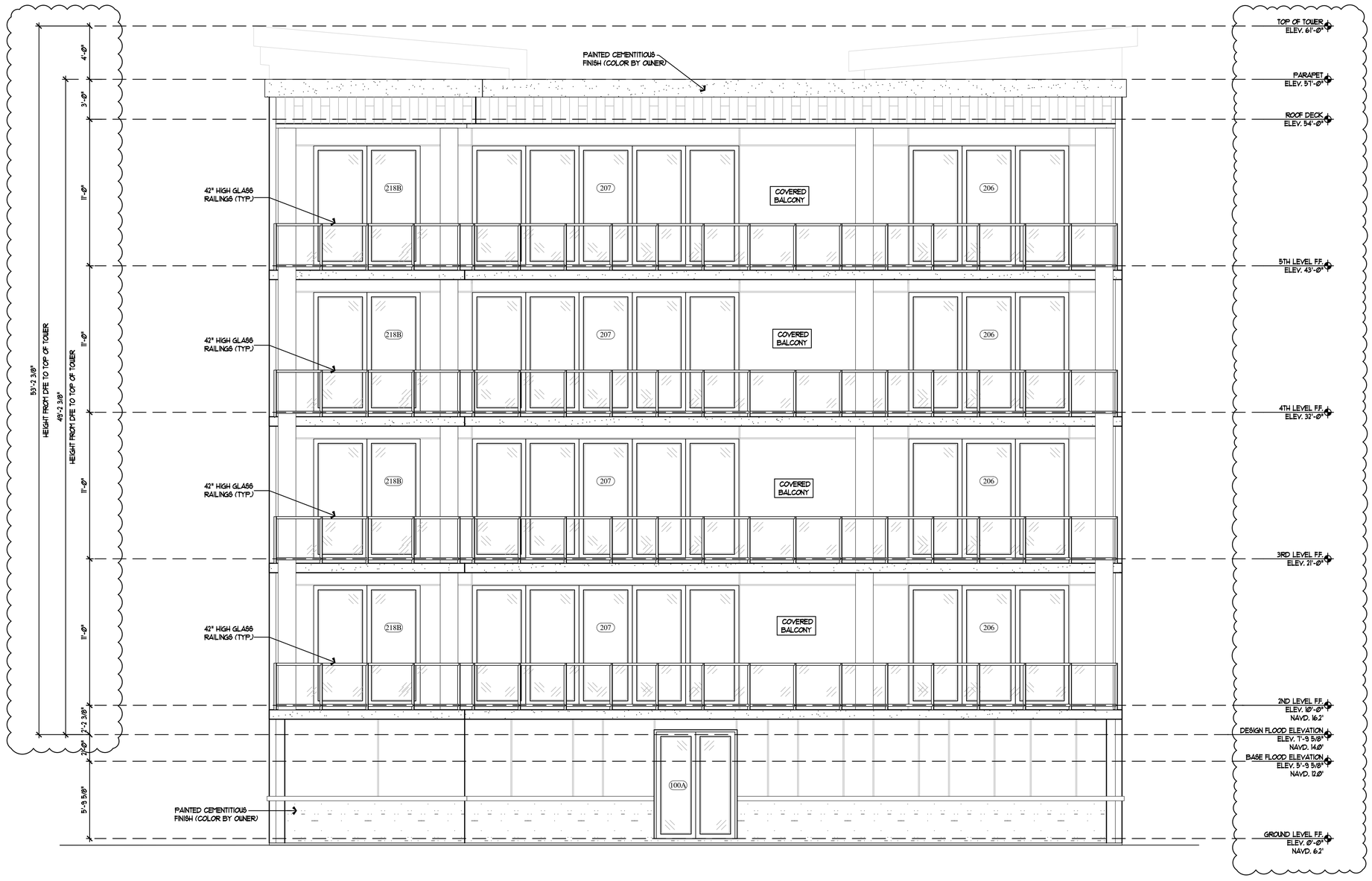
THE PEARL
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA

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STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
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ORA FRANKLIN FRAZE, IV

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E-MAIL: fd@frazedesign.com
3125 5th AVENUE N. SUITE 200
PHONE: 727/328-3608
FAX: 727/328-3609

SHEET TITLE
SIDE ELEVATION

SHEET NUMBER
A-9



1 REAR ELEVATION
SCALE: 1/4"=1'-0"

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Construction Documents for:

FDH# 23146.00

THE PEARL
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA

PROFESSIONAL SEAL



ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL. LIC NO. AA26000585
3125 5th AVENUE N. SUITE 200 ST. PETERSBURG, FLORIDA 33713
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SHEET TITLE
REAR ELEVATION

SHEET NUMBER
A-10

THE PEARL
10126 GULF BLVD.
TREASURE ISLAND, FLORIDA 33706

LOCATION MAP



CONTACT INFORMATION

OWNER:	TREASURE ISLAND PEARL, LLC	4655 BAYSHORE BLVD NE ST. PETERSBURG, FL 33703
ARCHITECT	FRAZE DESIGN	4215 CENTRAL AVENUE ST. PETERSBURG, FL 33713 727-328-3608
ENGINEER:	ARO ENGINEERING	780 94TH AVE. N., SUITE 102 ST. PETERSBURG, FL 33702 727-527-5900
SURVEYOR:	BULLSEYE SURVEYING, INC.	2198 NE COACHMAN ROAD UNIT F CLEARWATER, FL 33765 727-475-8088

UTILITY PROVIDERS

POTABLE WATER:	PINELLAS COUNTY
SANITARY SEWER:	TREASURE ISLAND
ELECTRICAL:	DUKE ENERGY
FIRE:	TREASURE ISLAND

ZONING:

ZONE - RESORT FACILITIES HIGH (RFH-50) / PRESERVATION (P)
FLOOD ZONE - AE (ELEV = 10')
MINIMUM FLOOR ELEVATION = 12'
FEMA FIRM PANEL - 12103C0194H, REVISED 8/24/21

SHEET LIST:

C-0	COVER SHEET
C-1	GENERAL NOTES
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SECTION 26, TOWNSHIP 31S, RANGE 16E

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY DANIEL J. EPPERLY, PE 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.

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.08.26 13:33:02-04'00'

08/26/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE : 08/09/2024	DRAWN BY: TL
CHECKED BY: DE	JOB NO.: B34-24-TI047C

REVISIONS:

1 08/23/2024 - P&Z RESUBMISSION PACKAGE

THE PEARL

COVER SHEET

10126 GULF BLVD.
TREASURE ISLAND,FLORIDA
33706

ARO ENGINEERING
CIVIL - STRUCTURAL - COASTAL
780 94TH AVE N. SUITE 102, ST. PETERSBURG, FL 33702
PHONE 727. 527.5900
CERTIFICATE NO. 28919

PRELIMINARY
PERMITTING
ISSUED FOR CONSTRUCTION ☒
RECORD DRAWING

C-0

GENERAL CONSTRUCTION

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE CONDITIONS AND INSPECTION REQUIREMENTS OF ALL PERMITS ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION AND SHALL SCHEDULE ALL INSPECTIONS IN ACCORDANCE WITH AGENCY REQUIREMENTS.

2. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO SHALL BE OF LATEST REVISIONS AND/OR LATEST EDITION.

3. THE CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH ALL APPLICABLE STATUTES, RULES, REGULATIONS AND PERMIT CONDITIONS.

4. AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, OWNER, AND APPROPRIATE PERMITTING AGENCIES OF THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE, AND OTHER INFORMATION AS REQUIRED.

5. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHERS. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES WITH OTHERS WHERE NECESSARY.

6. ALL DISTURBED AREAS SHALL BE SODDED IN ACCORDANCE WITH FDOT STANDARDS. THE CONTRACTOR SHALL MAINTAIN ALL GRASSED AREAS UNTIL A SATISFACTORY STAND OF GRASS, ACCEPTABLE TO THE APPLICABLE REGULATORY AGENCIES, OWNER, AND ENGINEER, HAS BEEN ACHIEVED. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF ALL REMEDIAL WORK REQUIRED UNTIL THE SYSTEM HAS BEEN ACCEPTED.

7. ALL SODDED AREAS SHALL BE WATERED AND FERTILIZED UNTIL THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER.

8. THE CONTRACTOR SHALL LOCATE AND FLAG ALL PROPERTY CORNERS PRIOR TO FINAL ENGINEERING INSPECTION AND CERTIFICATION. THE CONTRACTOR SHALL BEAR ALL COSTS INCURRED AS A CONSEQUENCE OF LOST OR DISTURBED PROPERTY CORNERS. LOST OR DISTURBED PROPERTY CORNERS SHALL BE REESTABLISHED BY A PROFESSIONAL LAND SURVEYOR.

9. THE CONTRACTOR SHALL REVIEW ALL PROJECT GEOTECHNICAL REPORTS PRIOR TO BIDDING AND THE START OF CONSTRUCTION.

10. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED CONSTRUCTION DRAWINGS AND ALL PERMITS AT THE CONSTRUCTION SITE.

11. THE CONSTRUCTION DRAWINGS DO NOT INCLUDE SPECIFICATION FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION SITE SAFETY.

SAFETY

1. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS SHALL BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.

2. 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 WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

3. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.

4. 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.

CLEARING AND EROSION CONTROL

1. CONTRACTOR SHALL PROVIDE A SILTATION CURTAIN TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW OR MULCH ON GROUND IN AREAS WHERE CONSTRUCTED RELATED TRAFFIC IS TO ENTER AND EXIT THE SITE.

2. IF, IN THE OPINION OF THE ENGINEER OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE, EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER OR AUTHORITIES.

3. THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. ALL DISTURBED OPEN AREAS SHALL BE SEEDED, MULCHED, OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL IMMEDIATELY FOLLOWING CONSTRUCTION.

4. THE TOP SOIL REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER AND SHALL BE USED FOR LANDSCAPING PURPOSES UNLESS OTHERWISE DIRECTED BY THE OWNER.

5. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

6. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR REMOVAL OF EXISTING STRUCTURES.

7. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVAL OR DEMOLITION OF EXISTING STRUCTURES.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL UNDERGROUND AND ABOVE GROUND STRUCTURES THAT WILL NOT BE INCORPORATED WITH THE NEW FACILITIES. SHOULD ANY DISCREPANCY EXIST, THE CONTRACTOR SHALL CONTACT THE OWNER FOR CLARIFICATION PRIOR TO DEMOLITION.

9. PRIOR TO THE COMPLETION OF CONSTRUCTION, THE RETENTION/DETENTION AREAS SHALL BE RESHAPED, CLEARED OF SILT, MUD AND DEBRIS, AND GRASSED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS.

MASONRY

1. MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 530 (CURRENT).

2. MORTAR FOR ALL MASONRY WALLS: ASTM C 270, TYPE M OR S (COMPRESSIVE STRENGTH = 1,900 PSI (MIN.))

3. GROUT: ASTM C 476 (FG = 3,000 PSI (MIN.) AT 28 DAYS)

4. PROVIDE LADDER TYPE #9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING @ 16" O.C. (VERT.).

5. CONVENTIONAL REINFORCING BARS, HORIZONTAL AND VERTICAL: ASTM A 615 GRADE 60, DEFORMED (MIN.)

6. PROVIDE SPECIAL PREFABRICATED UNITS AT CORNERS AND INTERSECTIONS.

7. ALL UNITS SHALL HAVE FACE SHELL MORTAR COVERAGE WEBS AND COLLAR JOINTS (U.O.N.) WITH RUNNING BOND PATTERN.

8. PROVIDE CLEANOUT OPENINGS FOR EACH GROUTED CELL.

9. ALL CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS, TYPE II, CONFORMING TO ASTM C-90, F'M = 1,800 PSI (MIN.)

PAVING, GRADING & DRAINAGE

1. SIDEWALK:
4" THICK (6" IN DRIVEWAY) 3000 psi CONCRETE, NO REINFORCEMENT.

2. ALL DELETERIOUS SUBSTANCES (I.E. MUCK, PEAT, BURIED DEBRIS) SHALL BE EXCAVATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER OR OWNER. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS SHALL BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SPECIFIED ON THE PLANS OR BY THE GEOTECHNICAL ENGINEER OR OWNER.

3. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES TO BE SAVED. THE CONTRACTOR SHALL COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY GRADE CHANGE.

4. THE CONTRACTOR SHALL PROVIDE AN EXPANSION JOINT AT ABUTMENT OF CONCRETE AND ANY STRUCTURE.

5. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS OF WAY SHALL BE MADE WITH PERMANENT THERMOPLASTIC, AND SHALL CONFORM TO FDOT STANDARD INDEX NO. 17346 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. PARKING STALL STRIPING SHALL BE 6" WIDE PAINTED WHITE STRIPES UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

6. THE CONTRACTOR SHALL INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT ELEVATION AND THE TOP OF THE PIPE EXCEEDS THE MINIMUM DIMENSIONS SHOWN IN FDOT INDEX 205.

7. STANDARD INDICES REFER TO THE LATEST EDITION OF FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".

8. ANY RELOCATION OR MODIFICATION OF PROPOSED STORM SEWER SYSTEM SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.

9. CONSTRUCTION WITHIN EXISTING RIGHTS-OF-WAY SHALL NOT BE PERFORMED PRIOR TO RECEIPT OF REQUIRED PERMITS AND AUTHORIZATIONS.

10. ALL UNPAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE SODDED UNLESS OTHERWISE SHOWN ON PLANS OR DETAILS.

11. ALL CONSTRUCTION LAYOUT AND STAKING IS TO BE PERFORMED UNDER THE DIRECTION OF A FLORIDA REGISTERED LAND SURVEYOR.

12. ALL PROPOSED UNDERGROUND DRAINAGE MUST BE IN PLACE, TESTED AND INSPECTED PRIOR TO PAVEMENT SURFACE COURSE

13. PIPE LENGTHS SHOWN ARE APPROXIMATE.

14. ALL DRAINAGE STRUCTURE FRAMES, GRATES AND COVERS WITHIN TRAFFIC AREAS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.

15. THE CONTRACTOR IS TO GRASS THE RETENTION/DETENTION POND AS INDICATED ON PLANS WITHIN ONE-WEEK FOLLOWING CONSTRUCTION OF THE POND.

16. MATERIALS AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL REGULATIONS AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO.

PAVING, GRADING & DRAINAGE TESTING & INSPECTION REQUIREMENTS

1. THE STORM DRAINAGE PIPING AND FILTRATION SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION.

2. THE CONTRACTOR SHALL MAINTAIN THE STORM DRAINAGE SYSTEMS UNTIL FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER.

SITE

1. IN AREAS WHERE FILL MATERIAL IS REQUIRED, THE EXISTING VEGETATION AND ROOTS SHALL BE REMOVED PRIOR TO PLACING ANY FILL MATERIAL. THE FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 12 INCHES AS MEASURED LOOSE, UNLESS OTHERWISE NOTED BY THE GEOTECHNICAL ENGINEER.

2. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY REGARDING ANY CONFLICTS ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSULT WITH THE ENGINEER FOR MAKING ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS. HOWEVER, THIS IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY FOR CONSTRUCTING THE PROJECT TO ACCOMPLISH THE INTENT OF THE PLANS.

3. REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE COMMENCING CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.

4. 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, BUT DO NOT REPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL SPRINKLE OR OTHERWISE APPLY WATER TO AFFECTED CONSTRUCTION AREA TO CONTROL BOTH SIGNIFICANT WIND EROSION OR FUGITIVE DUST.

6. PLACE EXPANSION JOINTS WHERE SIDEWALKS ABUT CONCRETE CURB.

7. ALL SIGNAGE AND STRIPING TO COMPLY WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)

8. PER CITY OF TREASURE ISLAND LDC SEC. 66-303.5, THE USE OF STRUCTURAL FILL IS PROHIBITED

SANITARY SEWER NOTES

1. ALL SANITARY SEWER MAINS AND LATERALS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.

2. ALL SANITARY SEWER WORK SHALL CONFORM TO LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.

3. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW WORK TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING CONNECTION POINT AND NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.

4. PVC PIPE AND FITTINGS SHALL CONFORM TO ASTM SPECIFICATION DESIGNATION D-3034, SDR 26. THE JOINTS SHALL CONFORM TO ASTM D-3212. INSTALLATION OF SDR 26 PIPE SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF ASTM SPECIFICATION SECTION D2321. ALL SANITARY SEWER PIPELINES SHALL BE SOLID GREEN IN COLOR.

5. ALL PVC FORCE MAINS SHALL BE PRESSURE CLASS 200, SDR 21, COLOR GREEN, WITH A GREEN MAGNETIC TAPE A MINIMUM OF 2" WIDE PLACED 1 FOOT BELOW THE PROPOSED GRADE. THE PRINTING ON THE MAGNETIC TAPE SHALL READ "FORCE MAIN"

6. ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.51-91 (AWWA C151) AND PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.51 (AWWA C151) AND SHALL BE CEMENT MORTAR LINED, STANDARD THICKNESS IN ACCORDANCE WITH ANSI A 21.4 (AWWA C104).

7. ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE DIP ARE TO BE POLYLINED OR EPOXY LINED.

8. ALL SANITARY SEWER RIMS AND COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.

SANITARY SEWER TESTING AND INSPECTION

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER. CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.

2. THE GRAVITY SANITARY SEWER AND ALL SERVICE LATERALS SHALL BE SUBJECT TO AN INFILTRATION/EXFILTRATION TEST IN ACCORDANCE WITH LOCAL REGULATIONS. TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SHALL BE SUBMITTED TO THE LOCAL AUTHORITIES FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

3. ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH LOCAL REGULATIONS. TESTS SHALL BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE LOCAL AUTHORITIES FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

TREE & LANDSCAPING

1. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES AND GRAND TREES DURING SITE CLEARING, AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING AND CONSTRUCTION ACTIVITIES ARE COMPLETE. BARRICADES SHALL BE ERECTED AT THE DRIPLINE UNLESS OTHERWISE NOTED.

2. REQUIRED TREE BARRICADES AND EROSION CONTROL MEASURES SHALL REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION.

3. A MINIMUM DISTANCE OF TEN FEET (10') SHALL BE MAINTAINED FROM ALL PROTECTED TREES WHEN INSTALLING UNDERGROUND UTILITIES. IF THIS RESULTS IN UNREASONABLE HARDSHIP, A SOIL AUGER SHALL BE USED TO TUNNEL UNDER THE ROOT SYSTEMS.

4. THE CONTRACTOR SHALL PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN. THE CONTRACTOR SHALL BE LIABLE FOR FINES DUE TO ALL DAMAGE OF TREES THAT ARE DESIGNATED TO BE SAVED DURING CONSTRUCTION. SPECIAL CARE IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN.

5. INSTALLATION OF ARTIFICIAL BARRIERS SUCH AS PROTECTIVE BARRICADES, FENCES, POSTS, OR WALLS SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES AND GRAND TREES. FOOTERS FOR WALLS SHALL BE AT THE POINT WHERE LARGER ROOTS ARE ENCOUNTERED, AND THE ROOTS SHALL BE BRIDGED. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES OR GRAND TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.

6. ALL ROOTS TO BE REMOVED DURING THE SITE CLEARING PHASE SHALL BE SEVERED CLEAN AT THE PERIMETER OF THE DESIGNATED PROTECTED RADIUS.

7. A TWO-INCH (2") LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES AND GRAND TREES DURING THE SITE CLEARING PHASE.

8. A LAYER OF MULCH TO A MINIMUM DEPTH OF THREE (3) INCHES SHALL BE PLACED IN PLANT BEDS AND AROUND INDIVIDUAL TREES IN TURF AREAS. THE MULCH SHOULD NOT BE PLACED DIRECTLY AGAINST THE PLANT STEM OR TREE TRUNK. MULCH SHALL NOT BE REQUIRED IN ANNUAL BEDS.

9. ALL TRIMMING OF PROTECTED TREES AND GRAND TREES SHALL BE DONE BY A QUALIFIED, LICENSED TREE SERVICE DURING DEVELOPMENT. AND SHALL BE PRUNED IN ACCORDANCE WITH THE NATIONAL ARBORIST ASSOCIATION (NAA) PRUNING STANDARDS.

10. ALL REMAINING GREENSPACE, INCLUDING RETENTION AREA SHALL BE TURF OR GRASS USING SOD WHICH IS CLEAN, FREE OF WEEDS, PESTS AND DISEASE.

11. NO TREE ROOT SEVERANCE SHALL OCCUR WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES TO REMAIN. NO IRRIGATION IS REQUIRED WITHIN THE CRITICAL ROOT ZONE OF TREES TO REMAIN.

12. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

WATER SYSTEM NOTES

1. ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.

2. ALL WATER SYSTEM WORK SHALL CONFORM TO LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.

3. CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER SHALL BE RESOLVED BY ADJUSTING THE WATER LINES AS REQUIRED.

4. ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.51 (AWWA C151) AND PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.51 (AWWA C151) AND SHALL BE CEMENT MORTAR LINED, STANDARD THICKNESS IN ACCORDANCE WITH ANSI A 21.4 (AWWA C104).

5. ALL FITTINGS 3" OR LARGER SHALL BE MECHANICAL JOINT, DUCTILE IRON PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.10 AND A 21.11 (AWWA C110 AND AWWA C111 RESPECTIVELY). FITTINGS SHALL BE CEMENT MORTAR LINED AND BITUMINOUS COATED IN ACCORDANCE WITH AWWA C104 AND AWWA C151 RESPECTIVELY.

6. THE CONTRACTOR SHALL INSTALL TEMPORARY BLOW-OFFS AT THE END OF WATER SERVICE LATERALS TO ASSURE ADEQUATE FLUSHING AND DISINFECT ION.

7. ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C900. PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF SDR 18 IN ACCORDANCE WITH ASTM D-2241.

8. WATER MAIN PIPING LARGER THAN 2" AND SMALLER THAN 4" SHALL BE PRESSURE CLASS 200 AND MEET THE REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D2241 UNLESS SPECIFIED OTHERWISE.

9. ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELDED SLEEVE TYPE JOINTS.

10. ALL GATE VALVES 2" OR LARGER SHALL BE RESILIENT SEAT OR RESILIENT WEDGE MEETING THE REQUIREMENTS OF AWWA C509

11. MATERIALS AND CONSTRUCTION METHODS FOR WATER DISTRIBUTION SYSTEMS SHALL BE IN ACCORDANCE WITH ALL LOCAL REGULATIONS, PLANS, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF, AND SUPPLEMENTAL SPECIFICATIONS THERETO. APPROVAL AND CONSTRUCTION OF ALL POTABLE WATER SERVICE MAIN EXTENSIONS AND CONNECTIONS MUST BE COORDINATED THROUGH THE LOCAL REGULATORY AGENCY.

FDEP NOTES

B. ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT WILL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.

C. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61.

D. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT WILL CONTAIN NO MORE THAN 0.2% LEAD.

E. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)

O. THE OPEN END OF THE AIR RELIEF PIPE FROM ALL AUTOMATIC AIR RELIEF VALVES INSTALLED UNDER THIS PROJECT WILL BE EXTENDED TO AT LEAST ONE FOOT ABOVE GRADE AND WILL BE PROVIDED WITH A SCREENED, DOWNWARD-FACING ELBOW.

Q. NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.

R. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.

S. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT WILL BE PROVIDED WITH THRUST BLOCKS OR RESTRAINED JOINTS TO PREVENT MOVEMENT.

T. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605, RESPECTIVELY, AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.

U. NEW OR ALTERED WATER MAINS, INCLUDING FIRE HYDRANT LEADS AND INCLUDING SERVICE LINES THAT WILL BE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER, WILL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.

AA.NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS UNDER SURFACE WATER WILL HAVE A MINIMUM COVER OF TWO FEET.

WATER SYSTEM TESTING AND INSPECTION

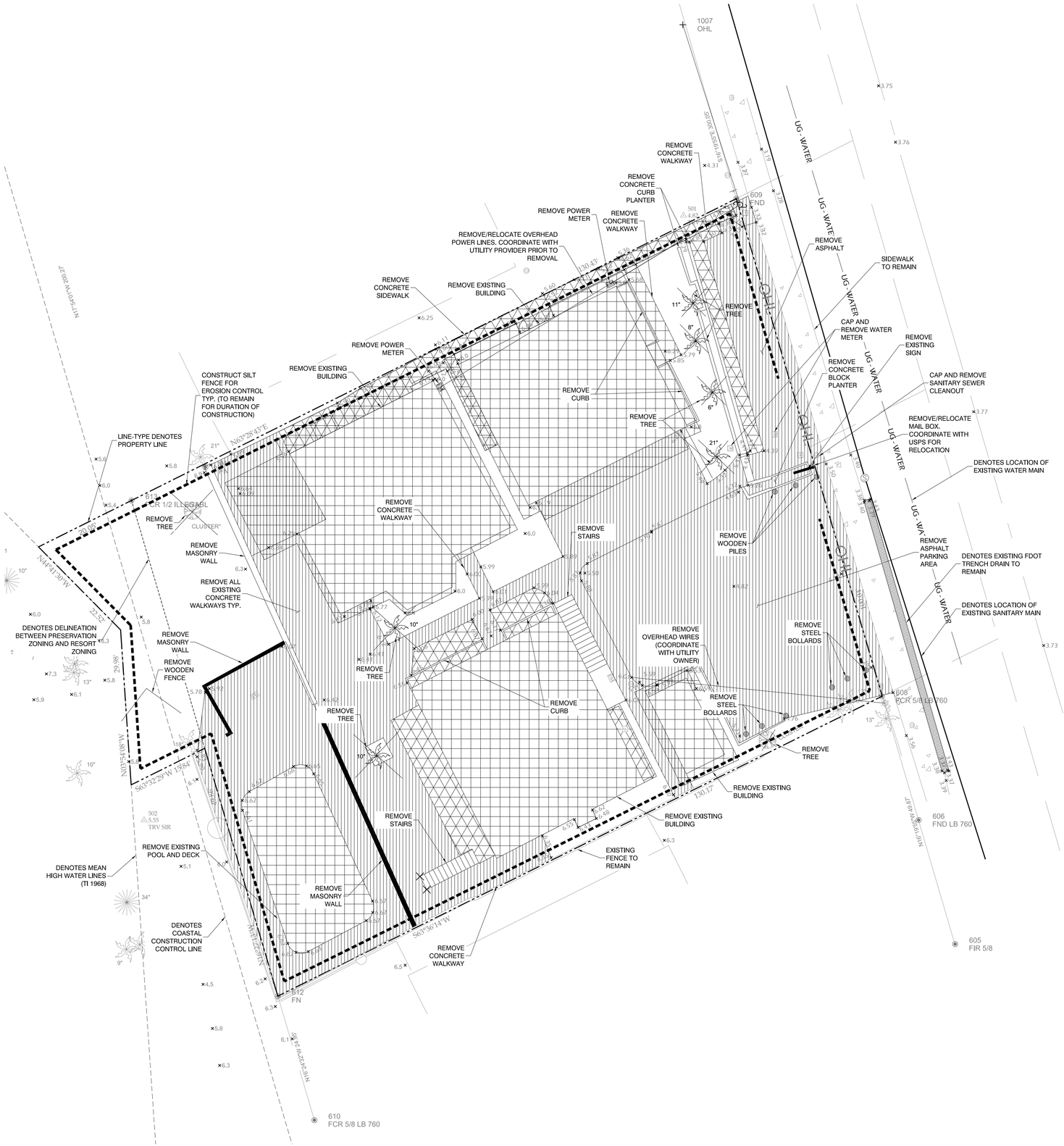
1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE ENGINEER AND LOCAL AUTHORITIES. PRESSURE TESTS SHALL BE IN ACCORDANCE WITH LOCAL WATER DEPARTMENT & FDEP SPECIFICATIONS. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER AND WATER DEPARTMENT INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS. SEE ITEM "T" ABOVE.

2. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED CHLORINATION/DISINFECTION AND BACTERIOLOGICAL SAMPLING IN ACCORDANCE TO ITEM "U" ABOVE. CONTRACTOR SHALL OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM. COPIES OF ALL BACTERIOLOGICAL TESTS (WHICH SHALL ALSO INDICATE THE CHLORINE RESIDUAL) SHALL BE SUBMITTED TO ENGINEER.

WATER CLEARANCE REQUIREMENTS

W. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

X. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER W





48 HOURS BEFORE YOU DIG
CALL SUNSHINE
1-800-432-4770
IT'S THE LAW IN FLORIDA

FL STATUE 553.851 (1979) REQUIRES MIN. OF 2 DAYS AND MAX. OF 5 DAYS NOTICE BEFORE YOU EXCAVATE. FDOT MAINTENANCE YARD TO BE CONTACTED 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

DEMO NOTES

1. LOCATIONS, DIMENSIONS AND ELEVATIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO STANDARD UTILITY ATLAS SHEETS OR OTHER INFORMATION OBTAINED AT THE TIME OF PREPARATION OF THESE PLANS. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DIMENSIONS, AND ELEVATION OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THE WORK AND MAKE ARRANGEMENTS FOR REQUIRED RELOCATIONS WITH THE AFFECTED UTILITY. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY OWNERS DURING RELOCATION OPERATIONS.

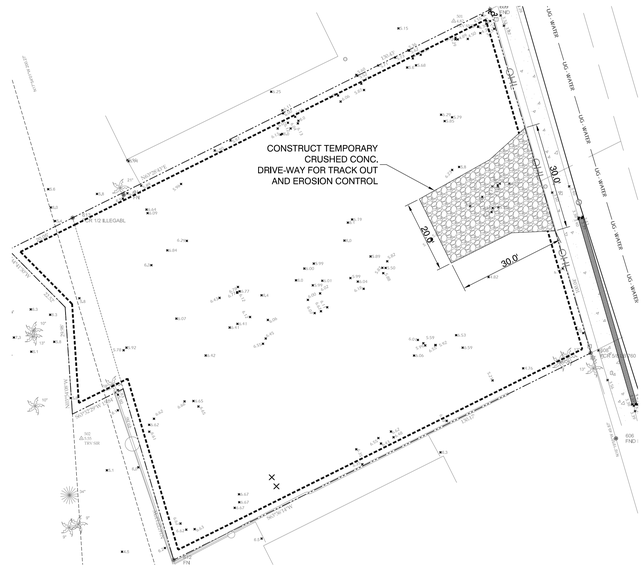
2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO ALL UTILITY COMPANIES BEFORE PERFORMING ANY EXCAVATION. THE CONTRACTOR SHALL HAVE UTILITY LOCATIONS MARKED BY CALLING "SUNSHINE" PRIOR TO THE START OF ANY EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES NOT INCLUDED IN THE "SUNSHINE" PROGRAM.

3. PRIOR TO REMOVAL OF ANY MATERIALS THE R.O.W. MUST BE SAW-CUT TO PREVENT ANY DAMAGE TO THE ROADWAY.

4. CONTRACTOR TO CAP ANY UNUSED SANITARY SEWER LATERALS AND CAP ANY UNUSED WATERLINES AND REMOVE ASSOCIATED METERS

5. ALL S/W IN R.O.W. SHALL BE REQUIRED TO MEET ADA STANDARDS. ANY SIDEWALK THAT DOES NOT MEET ADA STANDARDS SHALL BE REMOVED AND REPLACED.

CONSTRUCTION ENTRANCE DETAIL



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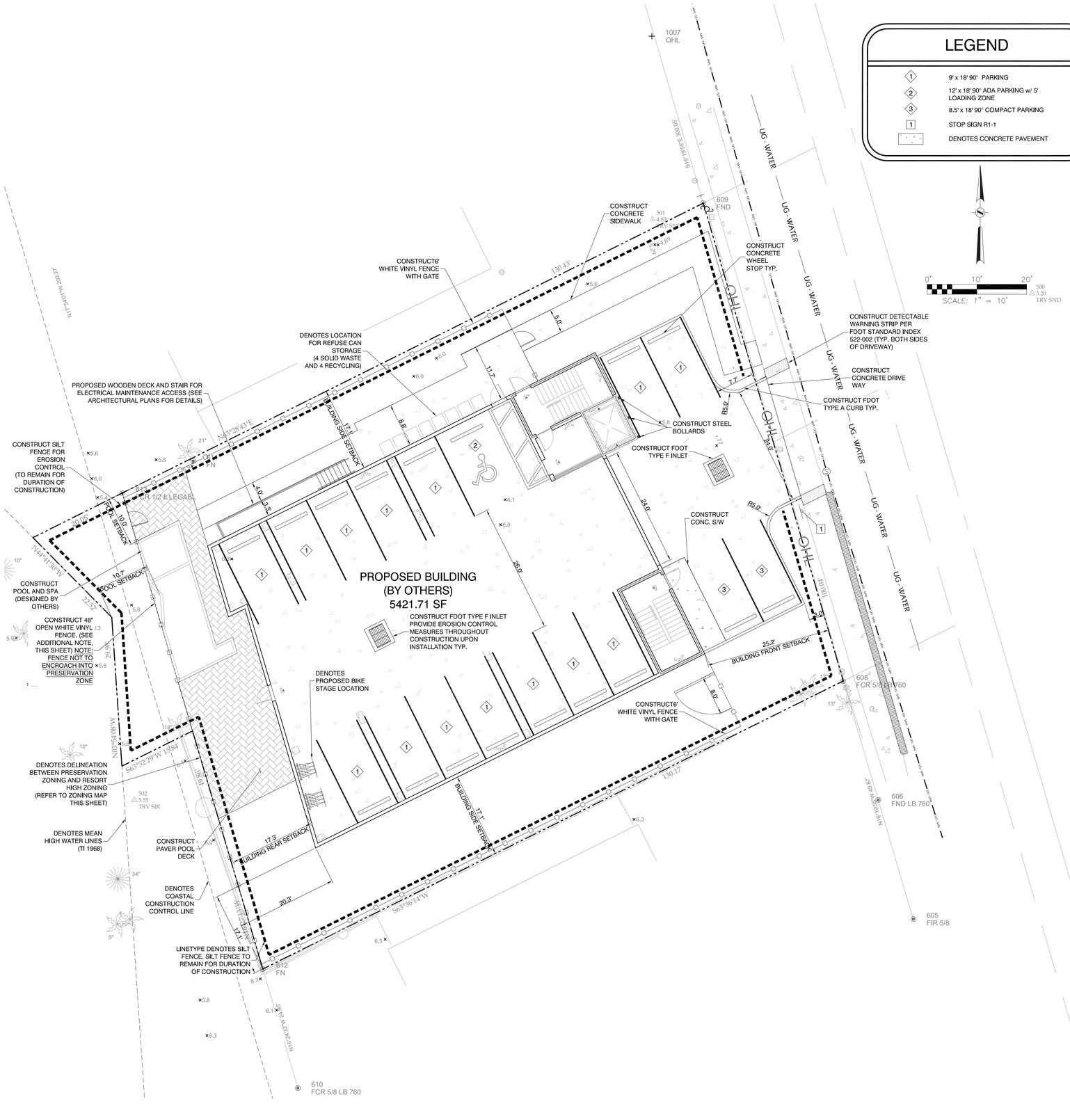
EXISTING & DEMOLITION PLAN

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LEGEND

1	9' x 18' 90° PARKING
2	12' x 18' 90° ADA PARKING w/ 5' LOADING ZONE
3	8.5' x 18' 90° COMPACT PARKING
1	STOP SIGN R1-1
	DENOTES CONCRETE PAVEMENT

NOTES

1. THE CONTRACTOR MUST PULL SEPARATE ENGINEERING ROW PERMITS FOR ANY PROPOSED SANITARY SEWER OR STORM SEWER CONNECTIONS TO PUBLIC MAINS; AS WELL AS FOR DRIVEWAY, CURB, AND SIDEWALK WORK WITHIN THE CITY PUBLIC RIGHT OF WAY. THE CONTRACTOR WILL ALSO BE REQUIRED TO PROVIDE A CERTIFICATE OF INSURANCE IN THE AMOUNT OF WORK OR $15,000, WHICHEVER IS GREATER.

2. ALL UTILITY CONNECTIONS SHALL BE HANDLED UNDER A SEPARATE UTILITY PERMIT OR GENERAL USE PERMIT.

3. SOD ALL DISTURBED AREAS OF CONSTRUCTION. USE BAHIA SOD TYP.

4. CONTRACTOR SHALL NOT OPERATE OR PRESSURE TEST AGAINST ANY CITY INSTALLED VALVES OR FITTINGS.

5. LIGHTING TO BE ATTACHED TO REAR OF BUILDING DESIGNED BY OTHERS.

6. ALL PROPOSED CONCRETE SLABS WILL ADHERE TO SEC. 66-307.2.; IN COASTAL HIGH HAZARD AREAS (ZONE V) AND COASTAL A ZONES, CONCRETE SLABS USED AS PARKING PADS, ENCLOSURE FLOORS, LANDINGS, DECKS, WALKWAYS, PATIOS, AND SIMILAR NONSTRUCTURAL USES ARE PERMITTED BENEATH OR ADJACENT TO BUILDINGS AND STRUCTURES PROVIDED THE CONCRETE SLABS ARE DESIGNED AND CONSTRUCTED TO BE: STRUCTURALLY INDEPENDENT OF THE FOUNDATION SYSTEM OF THE BUILDING OR STRUCTURE; FRANGIBLE AND NOT REINFORCED, SO AS TO MINIMIZE DEBRIS DURING FLOODING THAT IS CAPABLE OF CAUSING SIGNIFICANT DAMAGE TO ANY STRUCTURE; AND HAVE A MAXIMUM SLAB THICKNESS OF NOT MORE THAN FOUR INCHES.

7. FENCES ADJACENT TO THE POOL AREA WILL BE REQUIRED TO BE OPEN FENCE WITH OPENINGS NOT LESS THAN 3½ INCHES BETWEEN INTERMEDIATE UPRIGHTS WHICH ARE NOT GREATER THAN 1½-INCH CROSS SECTIONS AND MAY EXTEND UP TO FOUR FEET IN HEIGHT.

SITE DATA

PARCEL ID:
26-31-15-78786-003-0070

LOCATION:
SECTION 26, TOWNSHIP 31S, RANGE 15E

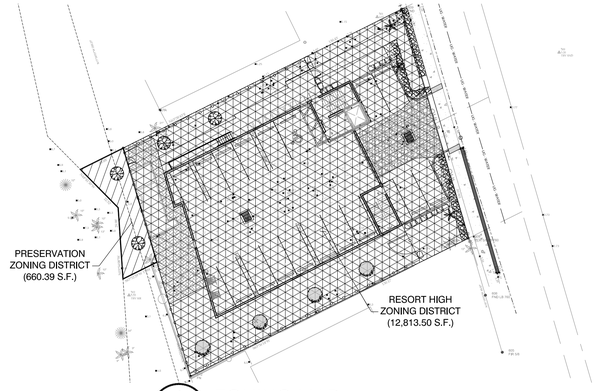
	EXISTING	PROPOSED
LAND USE:	RESIDENTIAL TOWN HOMES	RESIDENTIAL TOWN HOMES
TOTAL PROJECT AREA:	13473.89 S.F. 0.31 AC.	13473.89 S.F. 0.31 AC.
PAVING/VUA IMPERVIOUS:	2447.65 S.F. 0.06 AC.	0 S.F. 0.00 AC.
BUILDING/CONC. IMPERVIOUS:	9094.81 S.F. 0.21 AC.	8958.16 S.F. 0.21 AC.
TOTAL IMPERVIOUS AREA:	11542.46 S.F. 0.26 AC.	8958.16 S.F. 0.21 AC.
IMPERVIOUS SURFACE RATIO:	85.7 %	66.5 %
TOTAL CHANGE IN IMPERVIOUS:		-2,584.3 S.F. -0.05 AC.

ZONING INFORMATION

PARKING CALCULATIONS: 2 SPACES PER UNIT
REQUIRED: 8
PROPOSED: 16 + 1 ADA SPACE
FRONT YARD PARKING CALCULATION:
MAX ALLOWED: 80%
PROPOSED: 641.33 SF / 2,500 SF = 25.6%
BUILDING SETBACKS
FRONT = 25 FT REQUIRED 25FT PROPOSED
SIDES = 17 FT REQUIRED 17.1 FT PROPOSED
REAR = 17 FT REQUIRED 17.3 FT PROPOSED
RESORT HIGH DISTRICT
IMPERVIOUS SURFACE RATIO (RH DISTRICT AREA / IMPERIOUS AREA WITHIN RH DISTRICT)
0.700 MAX
0.699 PROPOSED (8,958.16 S.F. / 12,813.50 S.F.)
PRESERVATION ZONING DISTRICT
IMPERVIOUS SURFACE RATIO (P DISTRICT AREA / IMPERIOUS AREA WITHIN P DISTRICT)
0.20 MAX
0.00 PROPOSED (0.00 S.F. / 660.39 S.F.)
LEGAL DESCRIPTION:
SEE SURVEY

MAX LOT COVERAGE CALCULATION
MAX ALLOWED: 50%
PROPOSED BASE FLOOR AREA: 5,421.70 SF
ANTICIPATED ROOF OVERHANG AREA: 644.86 SF
5,421.70 + 644.86 / 13,473.89 SF = 45.0% PROPOSED

MAX DENSITY CALCULATION
15 UNITS PER ACRE MAX
MAX ALLOWED: 15 X 0.31 = 4.65
PROPOSED: 4



1 C-3 ZONING MAP
1:30

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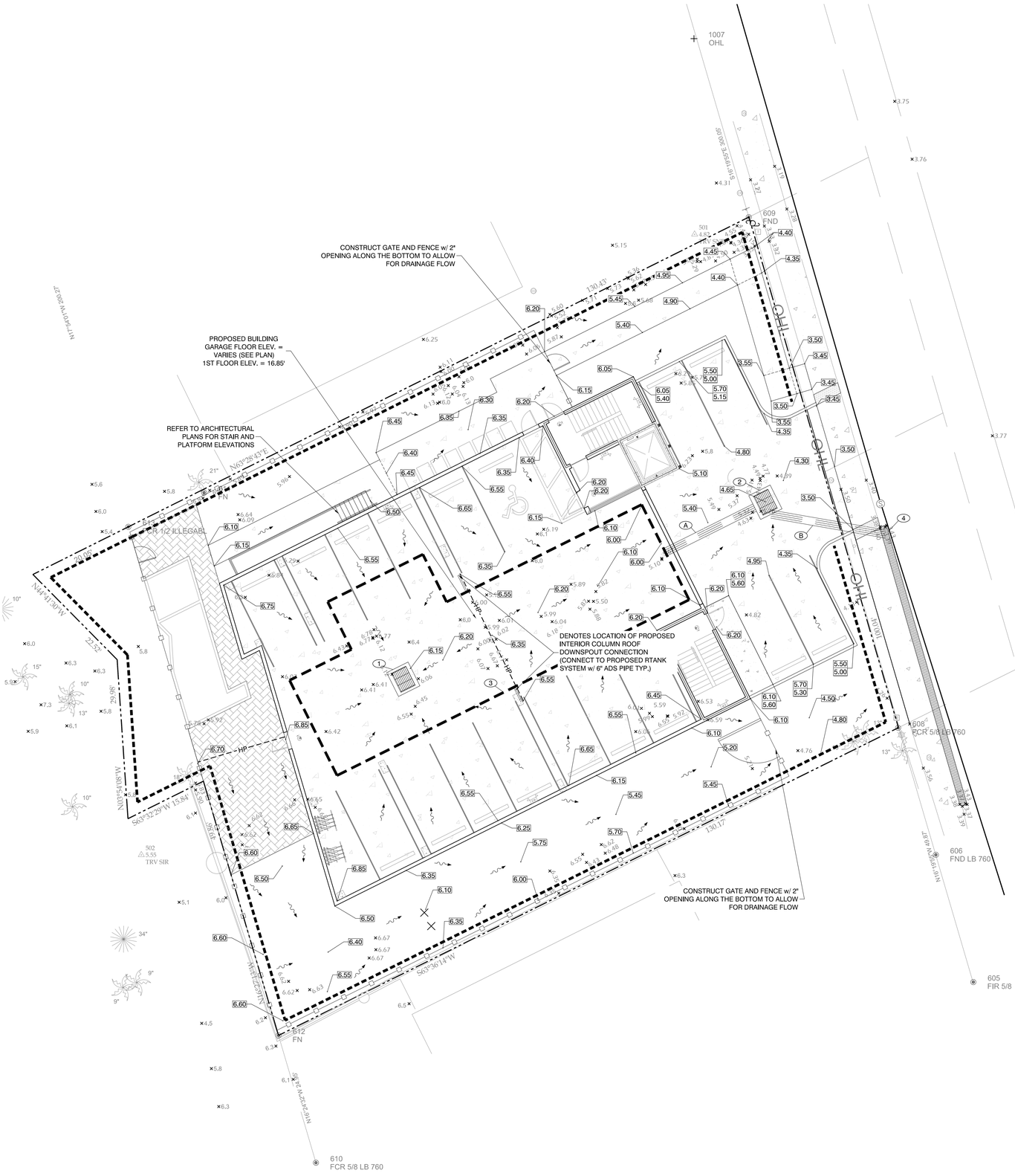
HORIZONTAL CONTROL PLAN

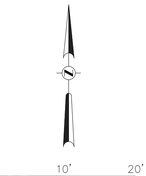
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LEGEND

LAND SURVEYOR

FOR SURVEY INFORMATION REFER TO BULLSEYE SURVEYING INV., 2198 NE COACHMAN ROAD UNIT F CLEARWATER, FLORIDA 33765 (727) 475-8088. PROJECT NO. 23-046 DATED 10/13/2023.

- (1) CONSTRUCT FDOT TYPE F DITCH BOTTOM INLET TOP OF GRATE ELEV.= 6.15
- (2) CONSTRUCT MODIFIED FDOT TYPE "F" DITCH BOTTOM OUTFALL STRUCTURE SEE DETAIL
- (3) R-TANK STORMWATER SYSTEM SEE DETAIL
- (4) POINT OF CONNECTION TO EXISTING FDOT STORMWATER TRENCH DRAIN
- (A) CONSTRUCT ±21 L.F. 12"Ø ADS N-12 PIPE
- (B) CONSTRUCT ±20 L.F. 12"Ø ADS N-12 PIPE
- HP DENOTES HIGH POINT
- 38.85 DENOTES PROPOSED ELEVATION
  - 38.85 TOP OF CURB
  - 36.45 PAVEMENT ELEV.
- ×6.58 DENOTES EXISTING ELEVATION
- 7.20 DENOTES PROPOSED CONTOUR
- DENOTES CONCENTRATED FLOW
- DENOTES DIRECTION FLOW

NOTE:
1. SOD ALL NON-PAVED AREAS OF CONSTRUCTION
2. ALL SIDEWALKS AND WALKWAYS TO HAVE A MAXIMUM SLOPE OF 5% AND 2% MAXIMUM CROSS SLOPE
3. 2% MAXIMUM SLOPE IN ANY DIRECTION ON ADA PARKING SPACES AND LOADING ISLES
4. RAILINGS ARE REQUIRED ON SIDEWALK SLOPES GREATER THAN 1:20 (5%)

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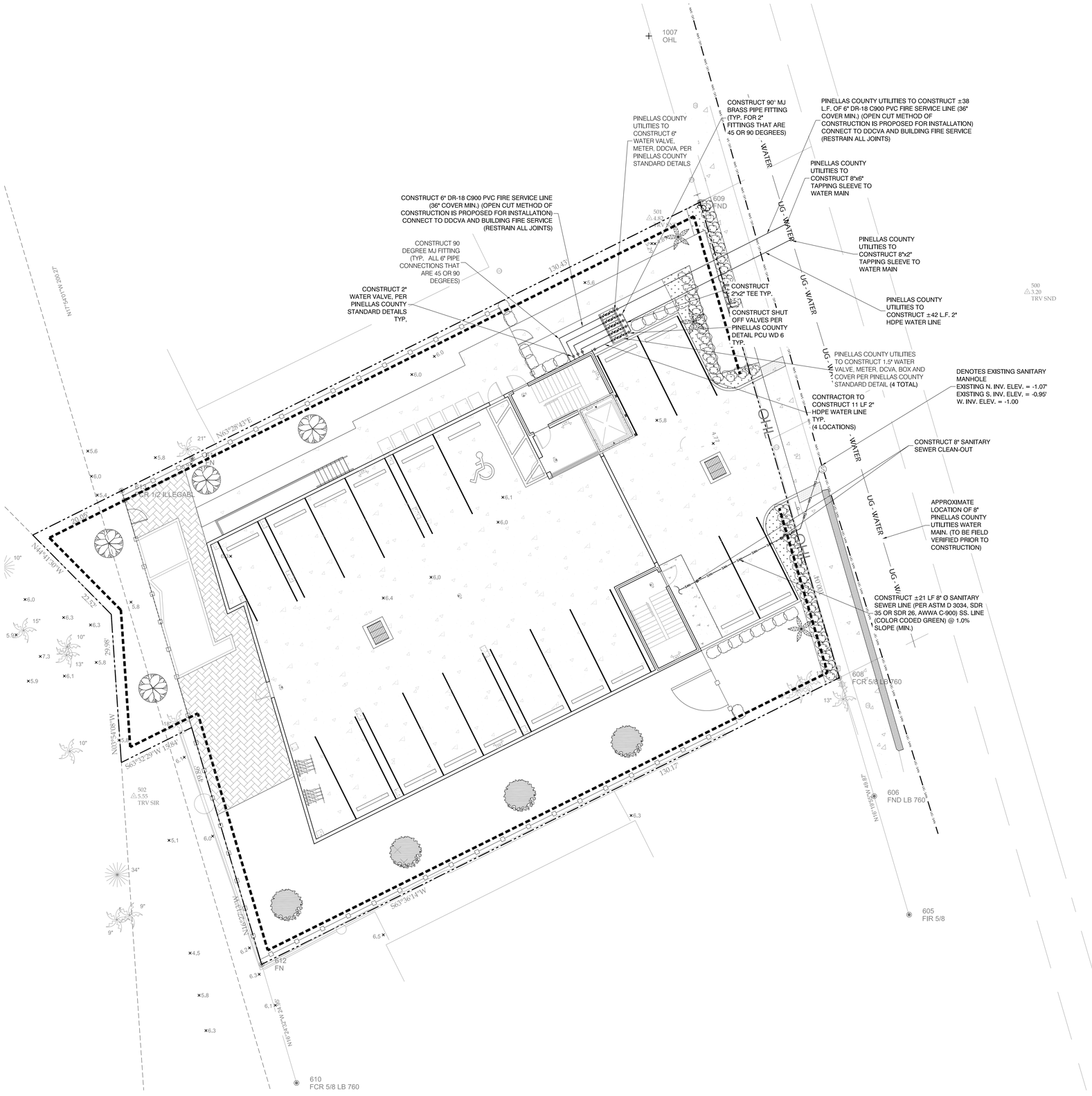
PAVING GRADING & DRAINAGE PLAN

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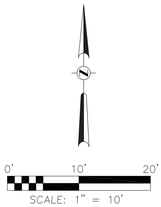
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UTILITY NOTES

1. PINELLAS COUNTY OWNED INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH:
   A) PINELLAS COUNTY STANDARD TECHNICAL SPECIFICATIONS DATED JUNE 2018
   B) PINELLAS COUNTY MATERIAL SPECIFICATION MANUAL
   C)PINELLAS COUNTY STANDARD DETAILS DATED JULY 2018
2. APPURTENANCES EQUAL TO OR LESS THAN 2" TO BE FURNISHED AND INSTALLED BY PINELLAS COUNTY UTILITIES
3. APPURTENANCES GREATER THAN 2" AND LOCATED ON PRIVATE PROPERTY REQUIRE AN EASEMENT DEDICATED TO PINELLAS COUNTY FOR OWNERSHIP AND MAINTENANCE.
4. THE PIPELINE CONTRACTOR IS REQUIRED TO PINELLAS COUNTY CONSTRUCTION MANAGEMENT, PINELLAS COUNTY PUBLIC WORKS AT (727)-464-8821 72-HOURS PRIOR TO COMMENCING UTILITY CONSTRUCTION FOR INSPECTION.
5. GIS MAPPING INFORMATION PROVIDED BY PINELLAS COUNTY UTILITIES IS NOT A REPLACEMENT FOR LOCATING BURIED UTILITIES BY CONTACTING SUNSHINE 811, PERFORMING FIELD LOCATION, AND SUBSURFACE UTILITIES ENGINEERING (SUE). ALL UTILITIES SHALL BE VERIFIED BEFORE CONSTRUCTION COMMENCE.
6. CONTRACTOR SHALL PROVIDE RSS TESTING RESULTS AND HAVE ANY ERCES EQUIPMENT INSTALLATIONS APPROVED PRIOR TO CLOSEOUT.
7. ALL 45-DEGREE AND 90-DEGREE FITTINGS WILL BE MJ CONNECTIONS ON 6" PIPING
8. ALL 90-DEGREE FITTINGS ON THE 2" DOMESTIC WATER SERVICE WILL BE BRASS FITTINGS.
9. CONTRACTOR WILL BE RESPONSIBLE FOR ALL MOT AND RESTORATION IN AREA OF THE EXCAVATION FOR THE POTABLE WATER TAPS.



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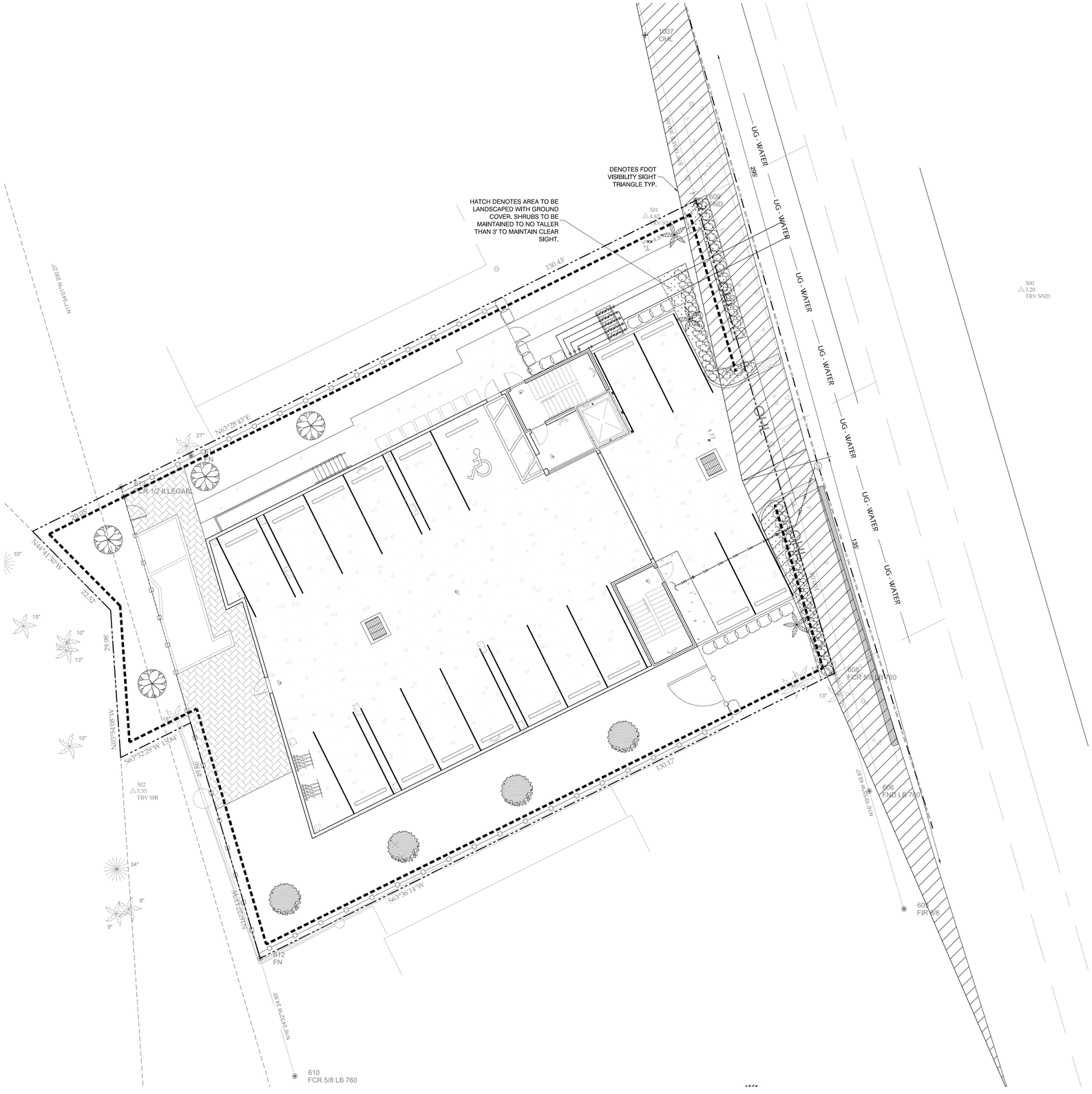
UTILITY PLAN

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PLANT TABLE

1. ALL PLANT MATERIALS USED SHALL CONFORM TO THE STANDARDS FOR FLORIDA NO. 1 OR BETTER AS GIVEN IN GRADES AND STANDARDS FOR NURSERY PLANTS, STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, TALLAHASSEE. (ORD. NO. 1714, 8-13-1987; ORD. NO. 2227, 5-26-1994) FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, 2ND EDITION, 1998.
2. ALL TREES AT THE TIME OF PLANTING SHALL HAVE A MINIMUM HEIGHT OF (6) FEET.
3. SHRUBS SHALL BE COLD TOLERANT AND NON-DECIDUOUS AND HAVE A MINIMUM HEIGHT OF 24 INCHES AT THE TIME OF PLANTING AND SHALL BE SPACED A MAXIMUM OF THREE FEET ON CENTER
4. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES.
5. STREET FRONTAGE TREES ARE TO BE PLACED A MINIMUM OF (5) FEET FROM THE BACK OF THE CURB AND A MINIMUM OF (3) FEET FROM THE INSIDE EDGE OF A PROPOSED OR ESTABLISHED SIDEWALK.

TREE/PLANTINGS CALCULATIONS

MINIMUM REQUIRED TREES/PLANTINGS	TREES REQUIRED
VUA PERIMETER LANDSCAPING CONTINUOUS HEDGE OR WALL AND 1 TREE PER 50 LF OF HEDGING MATERIAL 40 LF / 50 LF =	0.80
INTERIOR LANDSCAPING (CAN SUBSTITUTE PERIMETER IF INTERIOR IS NOT FEASIBLE) 10% OF ALL VUA AREA 5728.86 SF x 10% = 572.8 SF 1 TREE PER 18 x 5 LANDSCAPING ISLAND 572.8 SF / 90 SF =	6.35
RIGHT-OF-WAY LANDSCAPING 1 TREE PER 35 LF 100 LF / 35 LF =	3.85
TREE TYPES AND QUANTITY FOR PROPOSED PLANTING	**NUMBER PROVIDED**
SOUTHERN MAGNOLIA *(MAGNOLIA GRANDIFLORA)*	4
CABBAGE PALM *(SABAL PALMETTO)*	3
SOUTHERN WAX MYRTLE *(MYRICA CERIFERA)*	4
TEXAS SAGE *(LEUCOPHYLLUM FRUTECENS)*	43
SWEET VIBURNUM *(VIBURNUM ODORATISSIMUM)*	21

TREE REPLACEMENT CALCULATIONS	
TOTAL DBH TO BE REMOVED FOR DEVELOPMENT	60 INCHES
TOTAL DBH TO BE PLANTED FOR LANDSCAPING REQUIREMENT (ALL TREES TO BE 3" DBH AT PLANTING)	33 INCHES
TOTAL DBH TO BE PRESERVED ONSITE (TO BE COUNTED TOWARDS LANDSCAPING REQUIREMENT)	44 INCHES
TOTAL DBH TO BE PRESERVED + TOTAL DBH TO BE PLANTED	77 INCHES

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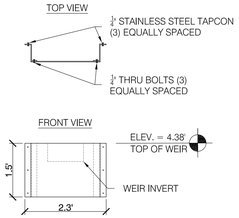
LANDSCAPING PLAN

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33706

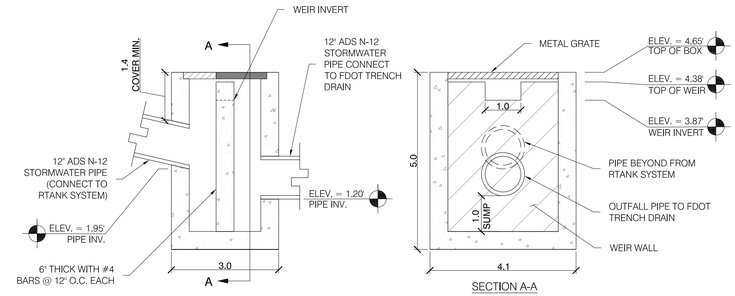
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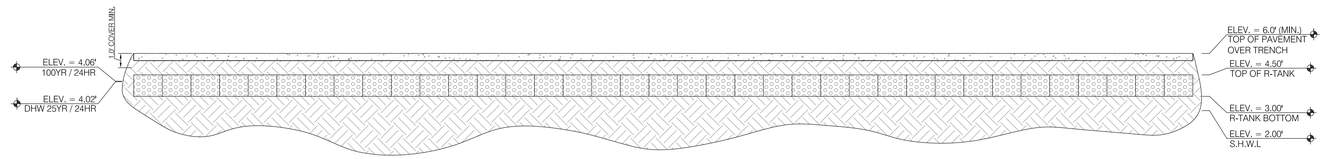
C-6



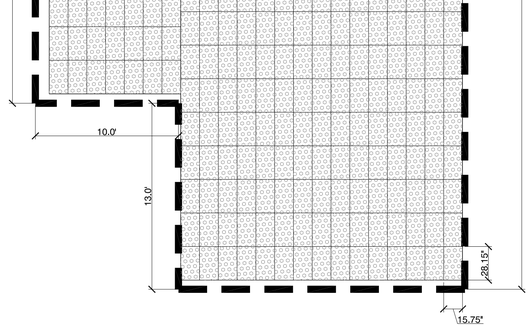
5 OUTFALL SKIMMER DETAIL
C-7 N.T.S.



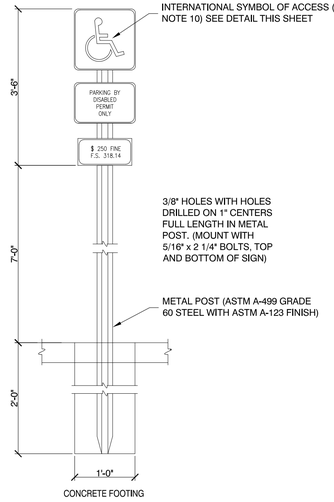
3 OUTFALL STRUCTURE 2 DETAIL
C-7 N.T.S.

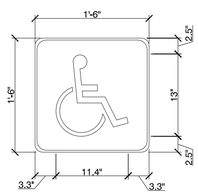


2 R-TANK SECTION
C-7 N.T.S.

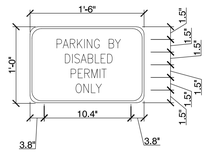


4 R-TANK PLAN VIEW DETAIL
C-7 N.T.S.





ALL LETTERS 1-1/2" SERIES C
1" SPACING BETWEEN LINES OF TEXT

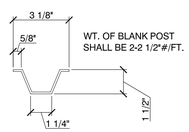


FTP-26
1'-6" x 2'-6"
1-1/2" RADII 3/4" BORDER
1-1/2" SERIES C LEGEND

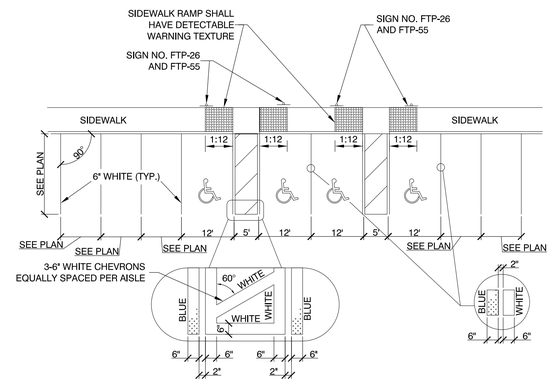
COLOR	TOP	BOTTOM
BACKGROUND	BLUE	WHITE
LEGEND AND BORDER	WHITE	BLACK

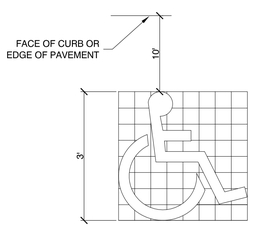
FTP-55
1'-0" x 6"
1-1/2" RADII 3/4" BORDER
1" SERIES C
WHITE BACKGROUND
BLACK LEGEND & BORDER

SUPPLEMENTAL PANEL FOR THE FTP-25 AND FTP-26 SIGNS



METAL POST





NOTES:

1. DIMENSIONS ARE TO THE CENTERLINE OF MARKINGS.

2. AN ACCESS AISLE IS REQUIRED FOR EACH ACCESSIBLE SPACE WHEN ANGLE PARKING IS USED.

3. CRITERIA FOR PAVEMENT MARKINGS ONLY, NOT PUBLIC SIDEWALK CURB RAMP LOCATIONS. FOR RAMP LOCATIONS REFER TO PLANS.

4. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARDS 595a.

5. THE FTP-55 PANEL SHALL BE MOUNTED BELOW THE FTP-26 SIGN.

6. METAL POST TO BE GALVANIZED, ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.

7. CONCRETE FOR FOOTING SHALL USE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

8. SIGNS WILL BE FABRICATED BY USING REFLECTIVE COATING IN THE SYMBOL, MESSAGE AND BORDER APPLIED TO A SHEET ALUMINUM BACKING (.080) IN THICKNESS.

9. MESSAGE LETTERING SHALL BE UPPER CASE (WHITE)(SERIES B) 2" HIGH IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

10. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEELCHAIR FIGURE (WHICH SHOULD ALWAYS FACE RIGHT) ON A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595a, COLOR #15180).

11. SIGN POST SHALL BE MIN. 2'-0" CLEAR FROM BACK OF CURB.

(SIGN FOR THE PHYSICALLY DISABLED)

1 ADA SPACING DETAILS
C-7 N.T.S.

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DANIEL J. EPPERLY No.94679 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.08.26 13:33:42-04'00'

08/26/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE :	DRAWN BY:
08/09/2024	TL
CHECKED BY:	JOB NO.:
DE	B34-24-TI047C

REVISIONS:

1 08/23/2024 - P&Z RESUBMISSION PACKAGE

THE PEARL

MISCELLANEOUS DETAILS

10126 GULF BLVD.
TREASURE ISLAND,FLORIDA
33706

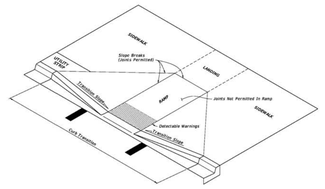
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PHONE 727. 527.5900
CERTIFICATE NO. 28919

PRELIMINARY
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RECORD DRAWING

C-7

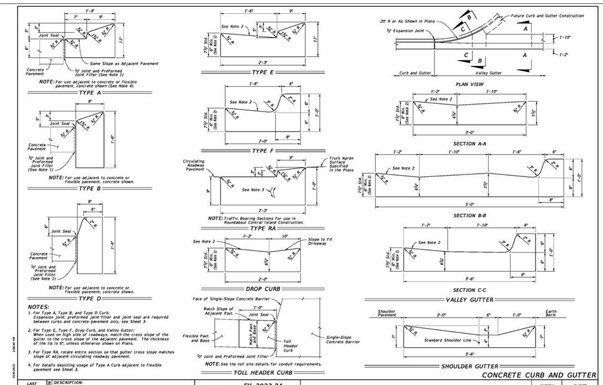
GENERAL NOTES:

1. Cross Slopes and Grades:
   - A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope as necessary to meet field conditions.
   - B. Landings must have cross-slopes less than or equal to 0.02 in any direction.
   - C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.
   - D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.
2. Curb, Curb and Gutter and/or Sidewalk:
   - A. Refer to Index 522-001 for concrete thickness and sidewalk details.
   - B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.
   - C. Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.
3. Curb Ramp Alpha-Identification:
   - A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.
   - B. Alpha-identifications CR-I and CR-J are intentionally omitted.
4. Detectable Warnings:
   - A. Install detectable warnings in accordance with Specification 527.
   - B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
   - C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the detectable warnings with the centerline of the ramp, otherwise, the truncated domes are not required to be aligned.



CURB RAMP NOMENCLATURE

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 1 of 7
11/01/21						



NOTE: For use adjacent to concrete or flexible pavement, concrete shown.

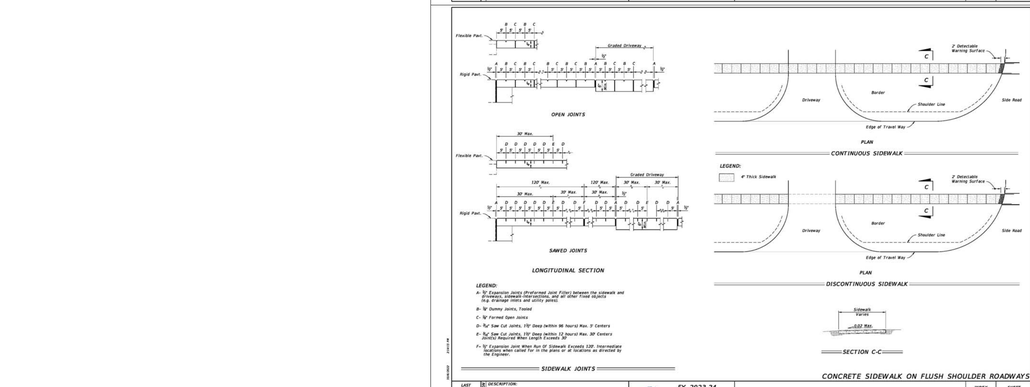
NOTE: Traffic Bearing Sections For use in Roundabout Central Island Construction.

NOTE: See the toll site details for conduit requirements.

NOTES:
1. Type A, Type B, and Type D Curb Expansion Joint, preformed Joint Filler and Joint Seal are required between curbs and concrete pavement only, See Sheet 3.
2. For Type E, Type F, Drop Curb, and Valley Gutter: When used on high side of roadway, match the cross slope of the adjacent lane. When used on low side of roadway, the thickness at the lip is 6" unless otherwise shown on Plans.
3. For Type RA, rotate skirts section so that gutter cross slope matches slope of adjacent circulating roadway pavement.
4. For details depicting usage of Type A Curb adjacent to flexible pavement see Sheet 3.

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CURB AND GUTTER	INDEX 520-001	SHEET 2 of 3
11/01/21						

CONCRETE CURB AND GUTTER



LEGEND:
- A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and driveways, sidewalks and structures, and all other fixed objects (e.g. drainage inlets and utility poles).
- B- ½" Dummy Joints, Tooled
- C- ½" Formed Open Joints
- D- ¼" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers
- E- ¼" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 10' Centers (Joints) Required When Length Exceeds 30'
- F- ½" Expansion Joint When Run 0' Sidewalk Exceeds 120. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
- G- Cold Joint With Bond Breaker, Tooled

SIDEWALK JOINTS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CONCRETE SIDEWALK	INDEX 522-001	SHEET 2 of 2
11/01/18						

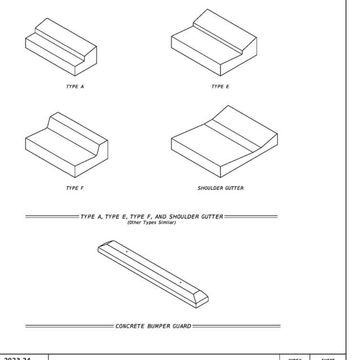
CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

GENERAL NOTES:

1. For curb, gutter and curb & gutter provide ½" - ¾" contraction joints at 10' intervals, unless otherwise shown, or match to concrete pavement or sidepaths and flat curves and to match the pavement joints, with intermediate joints not to exceed 15' centers.
2. Locate expansion joints for curb, gutter and curb & gutter in accordance with Specification 520.

TABLE OF CONTENTS:

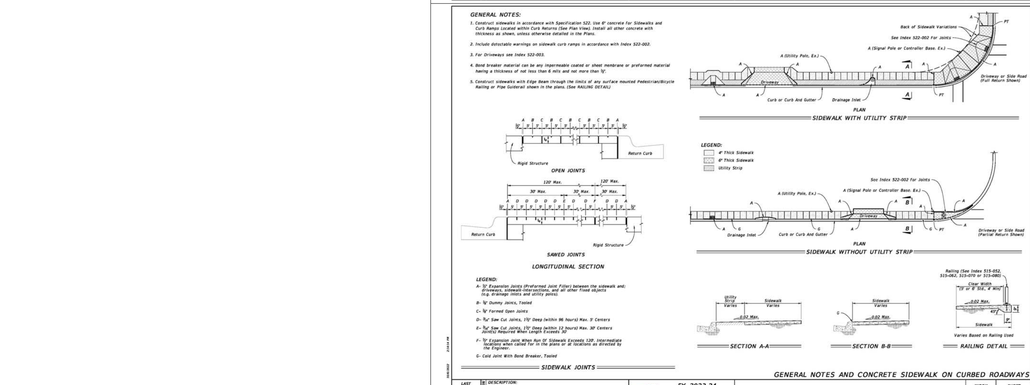
Sheet	Description
1	General Notes and Contents
2	Concrete Curb and Gutter
3	Curb and Gutter Joints and Endings, Concrete Bumper Guard, and Asphaltic Concrete Curb



LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CURB AND GUTTER	INDEX 520-001	SHEET 1 of 3
11/01/21						

GENERAL NOTES:

1. Construct sidewalks in accordance with Specification 522. Use 6" concrete for Sidewalks and Curb Ramps Located within Curb Returns (See Plan Views). Install all other concrete with thickness as shown, unless otherwise detailed in the Plans.
2. Include detectable warnings on sidewalk curb ramps in accordance with Index 522-002.
3. For Driveways see Index 522-003.
4. Bond breaker material can be any impermeable coated or sheet membrane or preformed material having a thickness of not less than 6 mils and not more than ½".
5. Construct sidewalks with Edge Beam through the limits of any surface mounted Pedestrian/Bicycle Railing or Pipe Guiderail shown in the plans. (See RAILING DETAIL)



LEGEND:
- A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and: driveways, sidewalks and structures, and all other fixed objects (e.g. drainage inlets and utility poles).
- B- ½" Dummy Joints, Tooled
- C- ½" Formed Open Joints
- D- ¼" Saw Cut Joints, 1½" Deep (within 96 Hours) Max. 5' Centers
- E- ¼" Saw Cut Joints, 1½" Deep (within 12 Hours) Max. 10' Centers
- F- ½" Expansion Joint When Run 0' Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
- G- Cold Joint With Bond Breaker, Tooled

SIDEWALK JOINTS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CONCRETE SIDEWALK	INDEX 522-001	SHEET 1 of 2
11/01/18						

GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

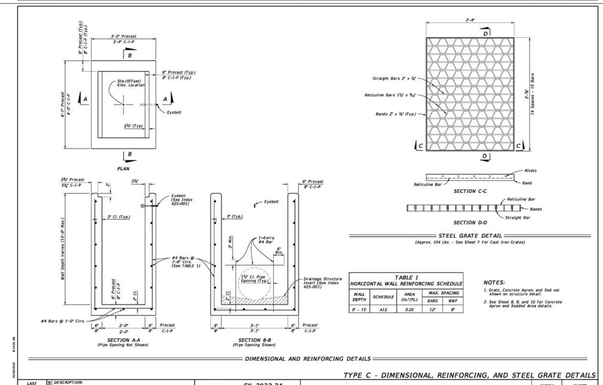


TABLE 1
HORIZONTAL WALL REINFORCING SCHEDULE

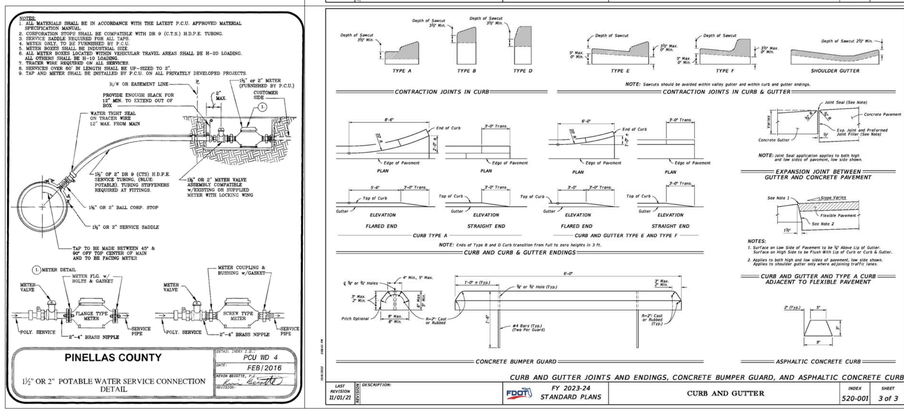
WALL DEPTH	SCHEDULE	MAX. SPACING DIA./(EL)	BARS	MAT
0' - 13'	A12	#20	12"	8"

NOTES:
1. Grate, Concrete Apron, and Sod not shown on structure detail.
2. See Sheet 6, 8, and 10 for Concrete Apron and Slotted Area details.

DIMENSIONAL AND REINFORCING DETAILS

TYPE C - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E, AND H	INDEX 425-052	SHEET 2 of 14
10/01/20						



NOTE: Joint Seal application applies to both high and low sides of pavement, low side shown.

NOTES:
1. Surface on low side of Pavement to be ¼" Above Lip of Gutter. Surface on High Side of Pavement Match the Lip of Curb & Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CURB AND GUTTER	INDEX 520-001	SHEET 3 of 3
11/01/21						

LEGEND:
- A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and: driveways, sidewalks and structures, and all other fixed objects (e.g. drainage inlets and utility poles).
- B- ½" Dummy Joints, Tooled
- C- ½" Formed Open Joints
- D- ¼" Saw Cut Joints, 1½" Deep (within 96 Hours) Max. 5' Centers
- E- ¼" Saw Cut Joints, 1½" Deep (within 12 Hours) Max. 10' Centers (Joints) Required When Length Exceeds 30'
- F- ½" Expansion Joint When Run 0' Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
- G- Cold Joint With Bond Breaker, Tooled

SIDEWALK JOINTS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CONCRETE SIDEWALK	INDEX 522-001	SHEET 1 of 2
11/01/18						

GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

TABLE 1
HORIZONTAL WALL REINFORCING SCHEDULE

WALL DEPTH	SCHEDULE	MAX. SPACING DIA./(EL)	BARS	MAT
0' - 13'	A12	#20	12"	8"

NOTES:
1. Grate, Concrete Apron, and Sod not shown on structure detail.
2. See Sheet 6, 8, and 10 for Concrete Apron and Slotted Area details.

DIMENSIONAL AND REINFORCING DETAILS

TYPE C - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E, AND H	INDEX 425-052	SHEET 2 of 14
10/01/20						

NOTE: Joint Seal application applies to both high and low sides of pavement, low side shown.

NOTES:
1. Surface on low side of Pavement to be ¼" Above Lip of Gutter. Surface on High Side of Pavement Match the Lip of Curb & Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	CURB AND GUTTER	INDEX 520-001	SHEET 3 of 3
11/01/21						

GENERAL NOTES:

1. Work this Index with Index 425-001 and Index 425-050.
2. Chamfer all exposed edges and corners ¾" chamfer or tooled to ¾" radius.
3. All reinforcing in Grade 60 bars with 2" minimum cover unless otherwise noted. Cut or bend bars for 1'0" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening.
4. Use Concrete Apron on inlets without slots and inlets with non-traversable slots only when called for in the Plans.
5. Quantities are For informational and estimating purposes only.

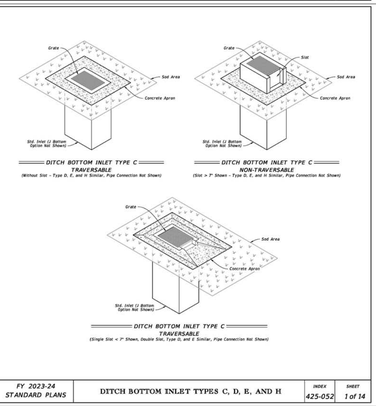


TABLE OF CONTENTS:

Sheet	Description
1	General Notes and Contents
2	Type C - Dimensional, Reinforcing, and Grate Details
3	Type D - Dimensional, Reinforcing, and Grate Details
4	Type E - Dimensional, Reinforcing, and Grate Details
5	Type H (2 & 3 Grate) - Dimensional, Reinforcing, and Steel Grate Details
6	Type H (4 Grate) - Dimensional, Reinforcing, and Steel Grate Details
7	Cast Iron Grate Details
8	Non-Traversable Inlet Details
9	Traversable Inlet Without Slot Details
10	Traversable Inlet With Slot Details
11	Case 1 - Add Traversable Slots to Existing Inlets
12	Case 2 - Add Traversable Slots (Partial) to Existing Inlets
13	Case 3 - Add Traversable Slots (Partial) to Existing Inlets and Ditch Block
14	Alternate A Structure Bottom - Toy Slab Details

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	DITCH BOTTOM INLET TYPES C, D, E, AND H	INDEX 425-052	SHEET 1 of 14
10/01/20						

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DANIEL J. EPPERLY No.94679 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.08.26 13:33:48-04'00'

08/26/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE : 08/09/2024	DRAWN BY: TL
CHECKED BY: DE	JOB NO.: B34-24-TI047C

REVISIONS:

1 08/23/2024 - P&Z RESUBMISSION PACKAGE

THE PEARL

STANDARD DETAILS

10126 GULF BLVD.
TREASURE ISLAND,FLORIDA
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CERTIFICATE NO. 28819

PRELIMINARY
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ISSUED FOR CONSTRUCTION
RECORD DRAWING

C-8

The Pearl

10126 Gulf Blvd.
Treasure Island, FL
33706

Stormwater Management Report

Prepared by:

ARO ENGINEERING
780 94th Avenue North Suite 102
St. Petersburg, Florida 33704
Tel 727.527.5900

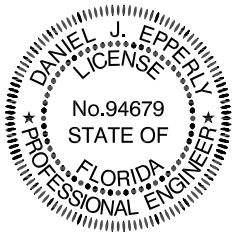
Cert. of Auth # 28919

For Submittal to:

The City of Treasure Island

August 9, 2024

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Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.08.09 20:25:48 -04'00'

Daniel J. Epperly, PE
PE No. 94679

I. Site Executive Summary

PROPOSED RE-DEVELOPMENT OVERVIEW

The project is located in Treasure Island, Florida (Section 26, Township 31S, Range 16E). The total project alteration area consists of 0.31 acres. Proposed improvements include construction of a new multi-family building, an underground stormwater R-TANK exfiltration trench, and all other associated site infrastructure. The proposed R-TANK exfiltration trench and associated stormwater infrastructure is designed to capture, and treat stormwater runoff from proposed project area.

EXISTING CONDITIONS

The existing site consists of multiple multi-family buildings with existing parking and site infrastructure. The existing development consists of 0.21 Acres of impervious area.

The site is contained within flood zone AE Elev. 10' according to FEMA's FIRM Panel 12103C0194H, Revised 8/24/2021.

PROPOSED CONDITIONS

The proposed permit consists of the construction of a new multi-family building with parking and all other related site infrastructure. An underground R-TANK exfiltration trench is proposed, and is located under the parking area of the ground floor. The R-TANK system is designed to capture both the treatment and attenuation volumes over the basin area, and discharge east to an existing Florida Department of Transportation curb inlet along Gulf Blvd. The R-TANK exfiltration trench will meet the required treatment volume and attenuation volume required from its respective project area, along with meeting Florida Department of Transportation requirements of pre-development and post development discharge. See appendix for calculations.

No wetland impacts are proposed

II. Drainage System Summary

The stormwater management system for this site falls under the jurisdiction of The City of Treasure Island, the Southwest Florida Water Management District, and the Florida Department of Transportation. The proposed treatment for the project area is provided the above-mentioned exfiltration trench. The design parameters used for the system are as follows:

POLLUTION VOLUME TREATMENT

Stormwater treatment for the proposed project area development is accomplished through an exfiltration trench. The treatment volume will account for 1" of rainfall coverage over the post-developed south parcel basin. (See Appendix for MODRET analysis and drainage calculations).

A MODRET infiltration analysis was used to verify the treatment system recovers within 36 hours.

STORMWATER ATTENUATION (SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT REQ.)

The proposed stormwater system will accommodate the post-developed 25yr/24hr storm with the pre-developed 25yr/24hr storm discharge rate. Additional supporting calculations and model data for this specific storm analysis have been provided to SWFWMD for approval.

STORMWATER ATTENUATION (FLORIDA DEPARTMENT OF TRANPORTATION)

The post-developed discharge rate of stormwater that outfalls to Gulf Blvd. right of way is limited to the pre-developed flow that historically drained to the system. The critical storm duration has been determined for the 2, 5, 10, 25, 50, 100-year storm design using ICPR software. A tailwater condition has been included. Additional supporting calculations and model data for the storm conditions mentioned above have been provided to FDOT for approval.

CONCLUSION

The stormwater management system for the proposed development will meet or exceed the minimum design standards enforced by The City of Treasure Island, the Southwest Florida Water Management District, and the Florida Department of Transportation.

Appendix

DRAINAGE CALCULATIONS FOR TREATMENT VOLUME

Drainage Calculations for The Pearl

TREASURE ISLAND

Objective:

Find the storage volume necessary to satisfy the water quality requirements

Given:

1" water quality treatment over entire site (dry retention)

25-year Pre vs Post discharge requirement for SWFWMD / FDOT

Pre-Development North Basin:

Surface	Area (ac)	x	C	=	$C_{surface}$
Impervious	0.265	x	0.95	=	0.25
Pervious	0.044	x	0.61	=	0.03
Pond	0.000	x	1.00	=	0.00
Total Project Area	0.309			Sum =	0.28

Post-Development Basin 100:

Runoff Coefficient Calculations:

Use: Buildings, Parking lots, and Ponds

Surface	Area (ac)	x	C	=	$C_{surface}$
Impervious	0.21	x	0.95	=	0.20
Pervious	0.10	x	0.61	=	0.06
Ponds	0.00	x	1.00	=	0.00
Total Area	0.309			Sum =	0.26

C=Sum of $C_{surface}$ / Total Area = 0.84 Used in Modified Rational Method Calc

Water Quality Treatment Volume:

Over Modified Project Area

Treatment Depth = 1.00 in

Drainage Area (Contributing to Pond)= 0.309 ac

Treatment Volume = 0.0258 ac-ft

Total Treatment Volume (Over Site) = 0.0258 ac-ft

Pond #1 Treatment Volume = 0.0258 ac-ft 100% of volume

Total Treatment Pond= **0.0258** ac-ft

Modified Rational Method
25-yr Post - IDF - ZONE 6

Rainfall Duration (minutes)	Rainfall Intensity (in/hr)	Rainfall Duration (hours)	Inflow (cfs)	Outflow (cfs)	Storage (ft^3)
10	8.50	0.17	2.20	2.34	0
15	7.30	0.25	1.89	2.34	0
20	6.40	0.33	1.66	2.34	0
30	5.25	0.50	1.36	2.34	0
45	4.25	0.75	1.10	2.34	0
60	3.70	1.00	0.96	2.34	0
75	3.20	1.25	0.83	2.34	0
90	2.80	1.50	0.72	2.34	0
105	2.60	1.75	0.67	2.34	0
120	2.35	2.00	0.61	2.34	0
150	2.00	2.50	0.52	2.34	0
180	1.80	3.00	0.47	2.34	0
240	1.50	4.00	0.39	2.34	0
360	1.10	6.00	0.28	2.34	0
480	0.90	8.00	0.23	2.34	0
720	0.70	12.00	0.18	2.34	0
960	0.56	16.00	0.14	2.34	0
1200	0.50	20.00	0.13	2.34	0
1440	0.44	24.00	0.11	2.34	0

Required 25 year Storage = 0 ft^3
= 0.00 ac-ft.

Attenuation Volume Breakdown
Pond #1 Volume = 0.0000 ac-ft.

Total Attenuation Volume = 0.0000 ac-ft.

Treatment and Attenuation Volume Combined
Pond #1 Volume = 0.0258 ac-ft.

Total Volume (both treatment and attenuation combined) = 0.0258 ac-ft.

Pond Stage / Storage Calculations for Dry Pond

POND #1					
SHWL approx @ 2.0 (Per Driggers Engineering Report)					
Elevation (ft)	Area (sq ft)	Area (acres)	Incremental Volume (ac-ft)	Cumulative Volume (ac-ft)	
				0.00	
3.00	1,245	0.0286	0.000	0.00	Pond Bottom
3.25	1,317	0.0302	0.00735	0.00735	
3.50	1,390	0.0319	0.00777	0.01512	
3.75	1,466	0.0337	0.00820	0.02332	
4.00	1,544	0.0354	0.00864	0.03195	
4.20	1,607	0.0369	0.00723	0.03918	
4.50	1,705	0.039	0.01140	0.05059	

Trench Area at Water Quality = 1,488.06 sq ft
Trench Water Quality Treatment Elevation = 3.82 ft

Elevation for 1" Treatment

DRAINAGE TREATMENT CALCULATIONS FOR R-TANK EXFILTRAION SYSTEM

Exfiltration Trench Volume: R-TANK

Type:

Subsurface Detention System R-Tank

Area of Pipe: Used For Equivalent Section

Length of Trench = 40 ft

NOTE: This section is used as an equivalent section for design purposes.

Area of Trench: Used in calculation of Equivalent Pond Section

Top of Trench Width = 41.7 ft
Trench Depth = 1.5
$A_{trench\ Section}$ = 62.55 ft^2
Trench Footprint (length x width)= 1,668.00 ft^2

Total Allowable Volume of System:

V_{pipe} = - ft^3 per ft
V_{trench} = 62.55 ft^3 per ft
$V_{trench} - V_{pipe}$ = 62.55 ft^3 per ft ($V_{rock} = V_{trench} - V_{pipe}$)
V_{allow} = 59.42 ft^3 per ft

($V_{allow} = (0.95 * (V_{trench} - V_{pipe}) + V_{pipe}$) (Using only 95% of tank for storage)

Total Trench Volume = **2,376.90** ft^3

Solve for Equivalent Pond Section:

Side Slope = 2 to 1
Pond Depth = 1.50

Bottom of Pond Width = 36.62

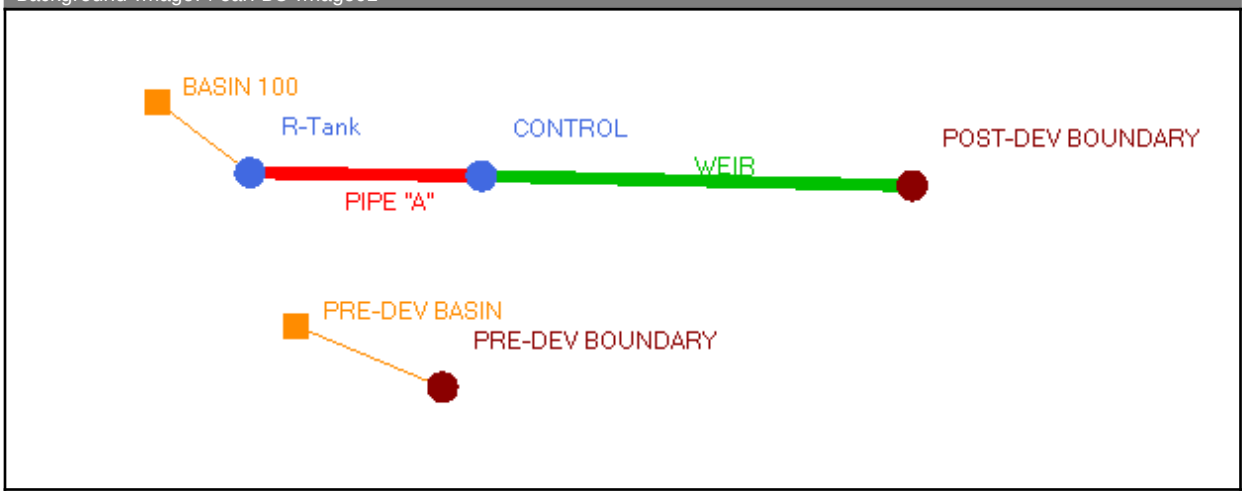
Top of Pond Width = 42.62

Pond Length = 40.00

ICPR REPORT

1" TREATMENT

Background Image: Pearl BG Image01



Simulation: 25 YR 24-HR

Scenario: Scenario1
Run Date/Time: 7/17/2024 2:34:16 PM
Program Version: ICPR4 4.04.00

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	30.0000	0.0500
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: 1

Green-Ampt Set:
Vertical Layers Set:
Impervious Set: 1

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr

Manual Basin Rain Opt: Global

Rainfall Name: ~FDOT-24
Rainfall Amount: 10.10 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Curve Number: 1 [Set]

Land Cover Zone	Soil Zone	Curve Number [dec]
IMPERVIOUS	A	98.0
PERVIOUS	A	68.0
PERVIOUS POND	A	100.0
TEST	B	10.0

Boundary Stage: POST DEV BOUNDARY

Boundary Stage Set: POST DEV

Year	Month	Day	Hour [hr]	Stage [ft]
0	0	0	0.0000	2.50

Year	Month	Day	Hour [hr]	Stage [ft]
0	0	0	5.0000	2.50
0	0	0	10.0000	2.50
0	0	0	20.0000	2.50
0	0	0	30.0000	2.50

Comment:

Manual Basin: BASIN 100

Scenario: Scenario1
Node: R-Tank
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 999.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name
0.2100	IMPERVIOUS	A	
0.1000	PERVIOUS	A	

Comment:

Manual Basin: PRE-DEV BASIN

Scenario: Scenario1
Node: PRE-DEV BOUNDARY
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 999.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name
0.2650	IMPERVIOUS	A	
0.0440	PERVIOUS	A	

Comment:

Node: CONTROL

Scenario: Scenario1

Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.79 ft
Warning Stage: 4.30 ft

Stage [ft]	Area [ac]	Area [ft2]
1.00	0.0003	13
4.30	0.0003	13

Comment:

Node: POST-DEV BOUNDARY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 4.30 ft
Boundary Stage: POST DEV BOUNDARY

Comment:

Node: PRE-DEV BOUNDARY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: R-Tank

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.43 ft
Warning Stage: 4.50 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0286	1246

Stage [ft]	Area [ac]	Area [ft2]
3.25	0.0302	1316
3.50	0.0319	1390
3.75	0.0337	1468
4.00	0.0354	1542
4.20	0.0369	1607
4.50	0.0390	1699

Comment:

Pipe Link: PIPE "A"		Upstream		Downstream	
Scenario:	Scenario1	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	R-Tank	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	CONTROL	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	21.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 ft	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Drop Structure Link: WEIR		Upstream Pipe		Downstream Pipe	
Scenario:	Scenario1	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	CONTROL	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	POST-DEV	Geometry: Circular		Geometry: Circular	
	BOUNDARY	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	10	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	168.44 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 ft				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	3.82 ft
Control Elevation:	3.82 ft
Max Depth:	0.56 ft
Max Width:	1.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Manual Basin Runoff Summary [Scenario1]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN 100	25 YR 24-HR	0.29	12.0000	10.10	8.63	0.3100	88.0	0.00	0.00
PRE-DEV BASIN	25 YR 24-HR	0.30	12.0000	10.10	9.31	0.3090	93.5	0.00	0.00

Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
CONTROL	25 YR 24-HR	4.30	4.02	0.0021	0.44	4.26	100
POST-DEV BOUNDARY	25 YR 24-HR	4.30	1.00	0.0000	0.28	0.00	0
PRE-DEV BOUNDARY	25 YR 24-HR	0.00	0.00	0.0000	0.30	0.00	0
R-Tank	25 YR 24-HR	4.50	4.02	0.0010	4.26	0.44	1549

Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow	Min Flow [cfs]	Min/Max	Max Us	Max Ds	Max Avg

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
PIPE "A"	25 YR 24-HR	0.44	-4.26	-0.33	-3.47	-3.47	-3.47
WEIR - Pipe	25 YR 24-HR	0.28	0.00	-0.01	0.00	0.00	0.00
WEIR - Weir: 1	25 YR 24-HR	0.28	0.00	0.01	1.43	1.43	1.43

MODRET RESULTS FOR R-TANK TRENCH+

MODRET 25 YR - 24 HR

SUMMARY OF UNSATURATED & SATURATED INPUT PARAMETERS

PROJECT NAME :
POLLUTION VOLUME RUNOFF DATA USED
UNSATURATED ANALYSIS EXCLUDED

Pond Bottom Area	1,310.00 ft²
Pond Volume between Bottom & DHWL	1,443.00 ft³
Pond Length to Width Ratio (L/W)	3.70
Elevation of Effective Aquifer Base	0.00 ft
Elevation of Seasonal High Groundwater Table	2.00 ft
Elevation of Starting Water Level	3.00 ft
Elevation of Pond Bottom	3.00 ft
Design High Water Level Elevation	4.02 ft
Avg. Effective Storage Coefficient of Soil for Unsaturated Analysis	0.05
Unsaturated Vertical Hydraulic Conductivity	53.00 ft/d
Factor of Safety	2.00
Saturated Horizontal Hydraulic Conductivity	79.50 ft/d
Avg. Effective Storage Coefficient of Soil for Saturated Analysis	0.08
Avg. Effective Storage Coefficient of Pond/Exfiltration Trench	1.00

Hydraulic Control Features:

	Top	Bottom	Left	Right
Groundwater Control Features - Y/N	N	N	N	N
Distance to Edge of Pond	0.00	0.00	0.00	0.00
Elevation of Water Level	0.00	0.00	0.00	0.00
Impervious Barrier - Y/N	N	N	N	N
Elevation of Barrier Bottom	0.00	0.00	0.00	0.00

MODRET

TIME - RUNOFF INPUT DATA

PROJECT NAME:

STRESS PERIOD NUMBER	INCREMENT OF TIME (hrs)	VOLUME OF RUNOFF (ft^3)
Unsat	0.00	0.00
1	1.00	1,123.00
2	4.38	0.00
3	4.38	0.00
4	4.38	0.00
5	4.38	0.00
6	4.38	0.00
7	4.38	0.00
8	4.38	0.00
9	4.38	0.00

MODRET

SUMMARY OF RESULTS

PROJECT NAME :

CUMULATIVE TIME (hrs)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)	CUMULATIVE OVERFLOW (ft^3)
00.00 - 0.00	2.000	0.000 *		
			0.00000	
0.00	2.000	0.08082		
			0.07188	
1.00	3.611	0.06294		0.00
			0.02382	
5.38	3.346	0.01910		0.00
			0.01438	
9.75	3.186	0.01241		0.00
			0.01044	
14.13	3.069	0.00933		0.00
			0.00821	
17.44	3.000	0.00748		0.00
			0.00674	
22.88	2.903	0.00622		0.00
			0.00569	
27.25	2.839	0.00530		0.00
			0.00490	
31.63	2.785	0.00459		0.00
			0.00429	
36.00	2.737			0.00

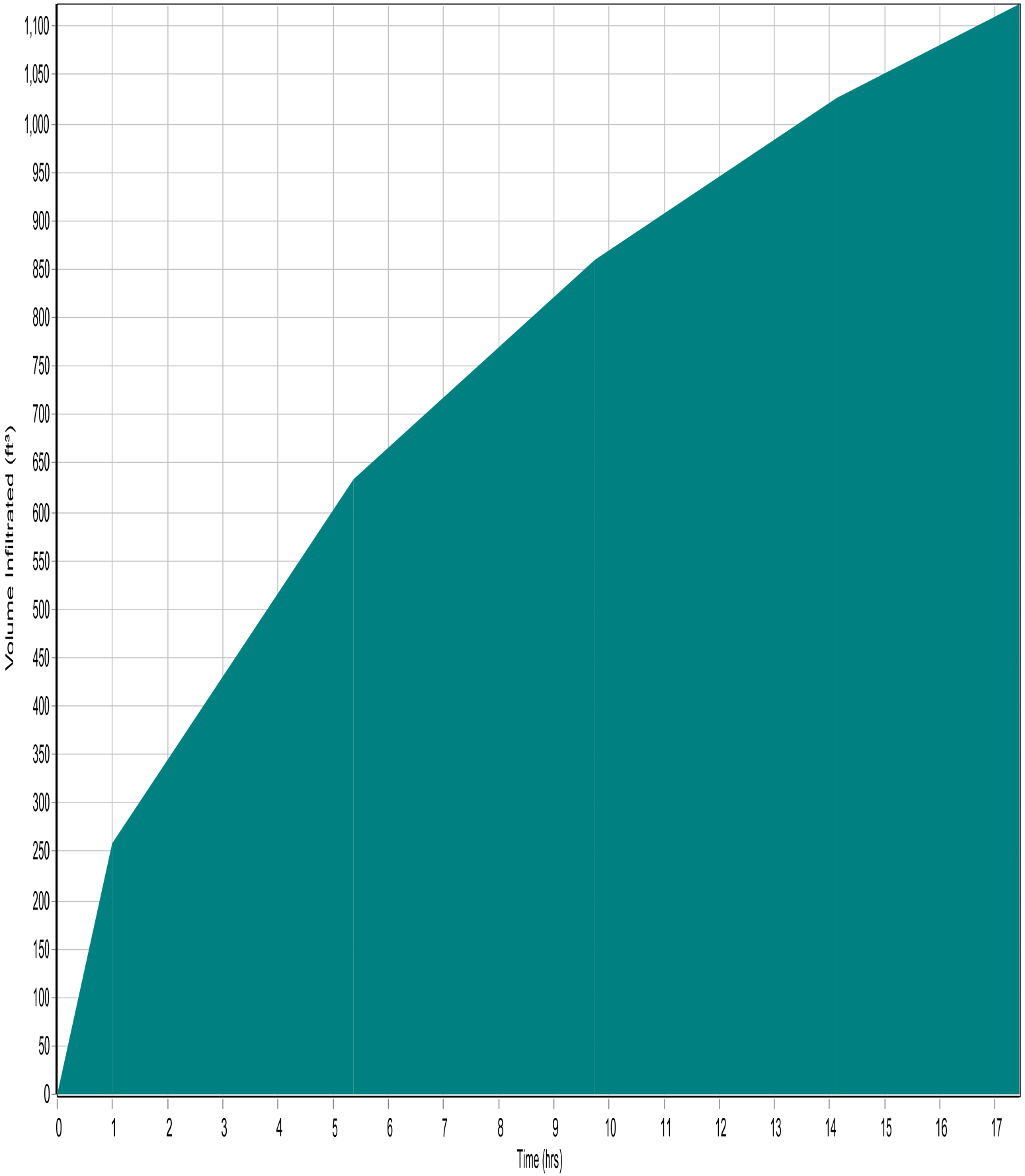
Maximum Water Elevation: 3.611 feet @ 1.00 hours Recovery @ 17.441 hours

* Time increment when there is no runoff

Maximum Infiltration Rate: 4.390 ft/day

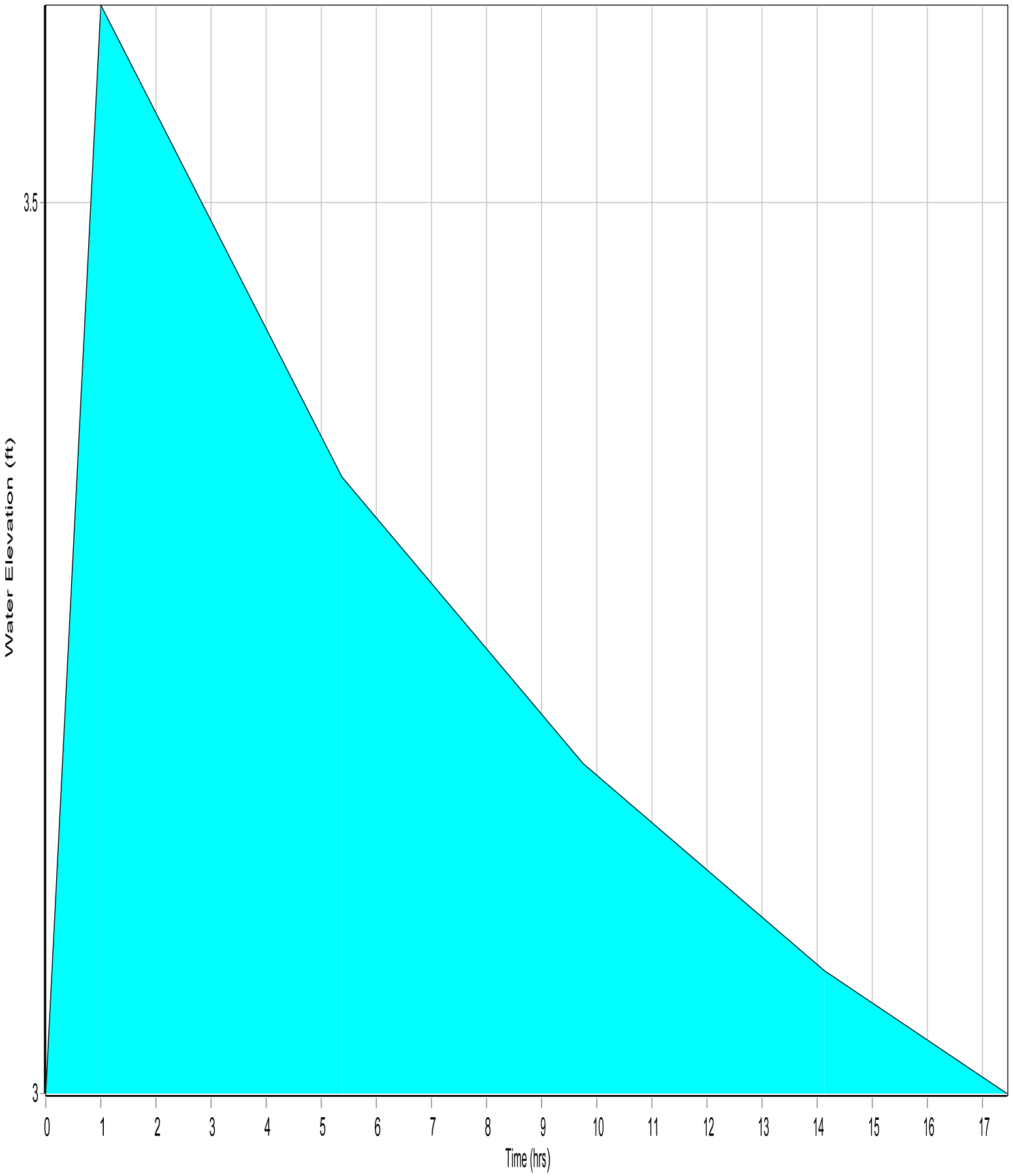
Analysis Date: 7/18/2024

INFILTRATION :



Total Volume Infiltrated = 1,123 ft³

INFILTRATION :



Max Water Elevation = 3.61 ft

BOUNDARY / TOPOGRAPHIC SURVEY

THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.

SURVEYOR'S REPORT

DESCRIPTION:

THAT PORTION OF LOT 8, BLOCK 3 AND THE WESTERLY 30.00 FEET OF VACATED ROAD RIGHTY-OF-WAY, ACCORDING TO INSTRUMENT NO. 452618, OF SAWYER & HARRELL'S ADD. TO BOCA CIEGA PASS SUB., ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, WHICH LIES WEST OF THE WESTERLY BOUNDARY OF STATE ROAD NO. 699 (GULF BOULEVARD) ACCORDING TO INSTRUMENT NO. 257542. TOGETHER WITH
LOT 7, BLOCK 3 TOGETHER WITH ALL LANDS LYING BETWEEN THE NORTHERLY AND SOUTHERLY LINES OF SAID LOT AS EXTENDED TO THE MEAN HIGH WATERLINE OF THE GULF OF MEXICO, LESS ANY PORTIONS THEREOF LYING WESTERLY OF THE CITY OF TREASURE ISLAND MEAN HIGH WATERLINE, AS ESTABLISHED BY PLAT RECORDED IN BULKHEAD PLAT BOOK 2, PAGES 24 TO 28, INCLUSIVE, PINELLAS COUNTY, FLORIDA RECORDS, AND LESS THE EASTERLY PORTION OF SAID LOT FOR ROAD PURPOSES; BEING IN BLOCK 3, SAWYER AND HARRELL'S ADD. TO BOCA CIEGA PASS SUB., AS RECORDED IN PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

ALSO DESCRIBED AS FOLLOWS:

A PORTION OF LOTS 7 AND 8, BLOCK 8, TOGETHER WITH THE VACATED RIGHT-OF-WAY ALONG THE WEST LINE OF SAID LOTS, SAWYER & HARRELLS ADDITION TO BOCA CIEGA PASS SUBDIVISION AS RECORDED IN PLAT BOOK 3, PAGE 41 OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, TOGETHER WITH LANDS LOCATED EAST OF THE MEAN HIGH WATER LINE AS DESCRIBED ON BULKHEAD PLAT BOOK 2, PAGE 24 OF THE PUBLIC RECORDS OF PINELLAS COUNTY AND WEST OF AFORESAID LOT 7 BEING DESCRIBED AS FOLLOWS:

BEGINING AT THE INTERSECTION OF THE NORTH LINE OF AFORESAID LOT 7 AND THE WEST RIGHT-OF-WAY OF GULF BOULEVARD (STATE ROAD 699) AS SHOWN ON STATE OF FLORIDA DEPARTMENT OF TRANSPORTAION RIGHT OF WAY CONTROL SURVEY, S.R. 699 FROM SOUTH OF 99TH AVENUE TO 105TH AVENUE, STATE PROJECT NO, 15100-XXXX, SEGMENT 431404 1, DATED 04/04/14; THENCE ALONG SAID WEST RIGHT-OF-WAY, S16°19'55"E, 100.04 FEET TO THE SOUTH LINE OF AFORESAID LOT 8, THENCE ALONG SAID SOUTH LINE, S63°36'14"W, 130.17 FEET TO THE WEST RIGHT-OF-WAY OF THE VACATED RIGHT-OF-WAY LOCATED EAST OF AFORESAID BLOCK 8; THENCE ALONG SAID WEST RIGH-OF-WAY N16°27'13"W, 49.86 FEET TO THE WESTERLY EXTENSION OF THE SOUTH LINE OF AFORESAID LOT 7; THENCE ALONG SAID WESTERLY EXTENSION, S63°32'29"W, 15.84 FEET TO THE INTERSECTION WITH THE AFORESAID MEAN HIGH WATER LINE; THENCE ALONG SAID MEAN HIGH WATER LINE THE FLLOWING 2 COURSES: THENCE N03°54'08"W, 29.98 FEET; THENCE N44°41'30"W, 22.52 FEET TO THE WESTERLY EXTENSION OF THE NORTH LINE OF AFORESAID LOT 7; THENCE ALONG SAID NORTH LINE AND WESTERLY EXTENSION, N63°28'43"E, 130.43 FEET TO THE POINT OF BEGINNING.

ACCURACY:

1. ALL MEASUREMENTS, DISTANCES, ELEVATIONS (IF SHOWN) AND FEATURES WERE PERFORMED IN STRICT ACCORDANCE WITH THE MINIMUM STANDARDS OF PRACTICE SET FORTH IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE (5J-17FAC).
2. METHODS FOR ALL CONTROL MEASUREMENTS WERE MADE WITH A TRANSIT AND STEEL TAPE, OR DEVICES WITH EQUIVALENT OR HIGHER DEGREES OF ACCURACY.
3. THE ACCURACY STANDARD USED FOR THIS SURVEY, AS CLASSIFIED IN THE MINIMUM STANDARDS OF PRACTICE (5J-17 FAC), IS "COMMERCIAL/HIGH RISK". THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF SURVEY IS 1 FOOT IN 10,000 FEET. THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE MET THIS REQUIREMENT.

DATA SOURCES:

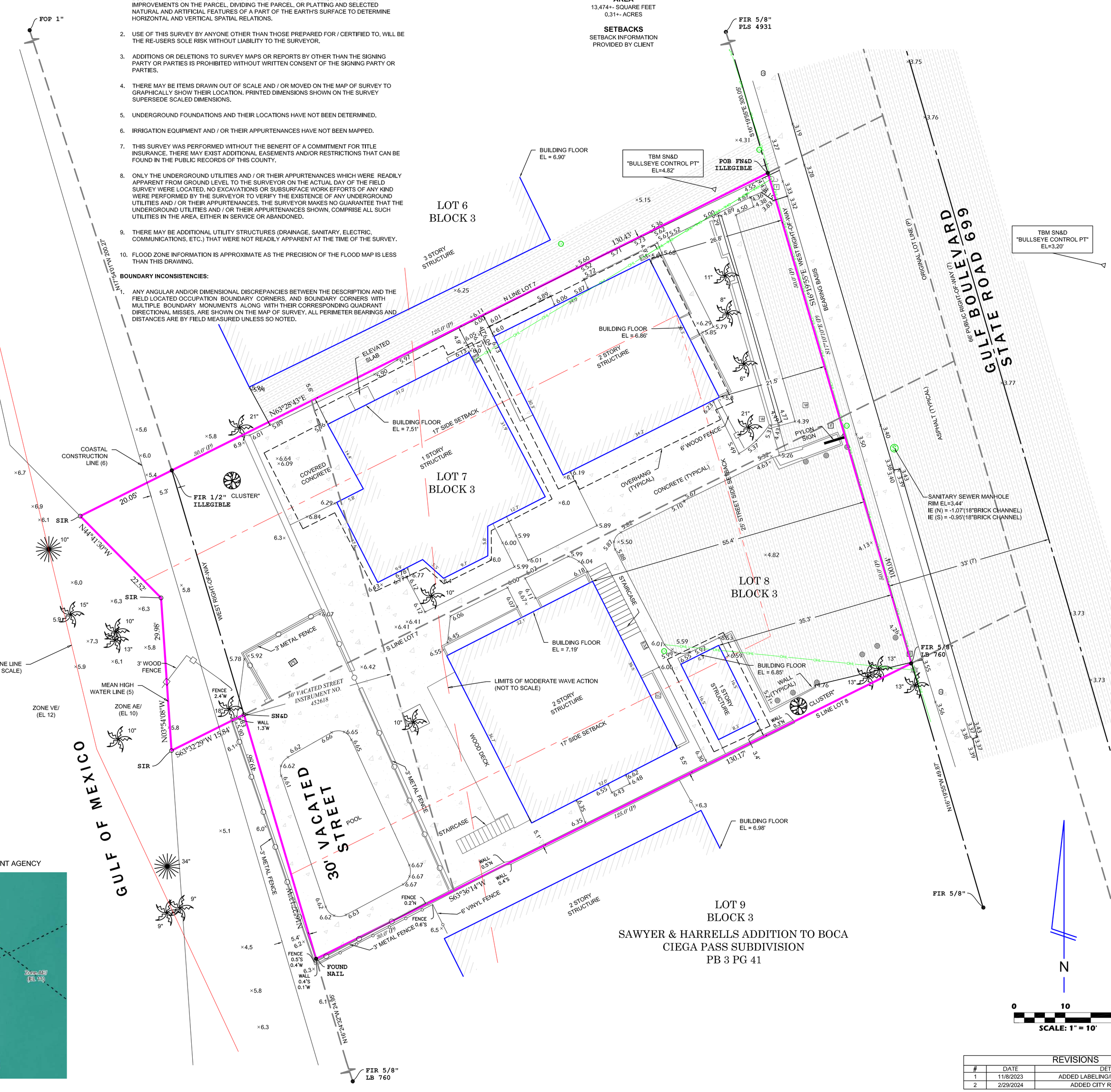
1. THE BASIS OF BEARING IS WEST RIGHT-OF-WAY LINE OF GULF BOULEVARD, BEING S17°10'10"E (2).
2. PLAT OF BOCA SAWYER & HARRELLS ADDITION TO BOCA CIEGA PASS SUBDIVISION, RECORDED PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.
3. WARRANTY DEED, RECORDED IN OFFICIAL RECORDS BOOK 21856, PG 2229, OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.
4. ELEVATIONS SHOWN HEREON BASED ON CITY OF NATIONAL GEODETIC SURVEY BENCHMARK PBE 144 1968, HAVING AN ELEVATION OF 4.353' (NORTH AMERICAN DATUM 1988).
5. CITY OF TREASURE ISLAND MEAN HIGH WATER LINE MAP, RECORDED IN BULKHEAD PLAT BOOK 2, PAGE 24-28, OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.
6. SHAPE FILE OF THE COASTAL CONSTRUCTION LINE FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
7. STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY CONTROL SURVEY, S.R. 699 FROM SOUTH OF 99TH AVE. TO 105TH AVE., STATE PROJECT NO. 15100-XXXX, SEGMENT431404 1, DATED 04/04/14.

LIMITATIONS:

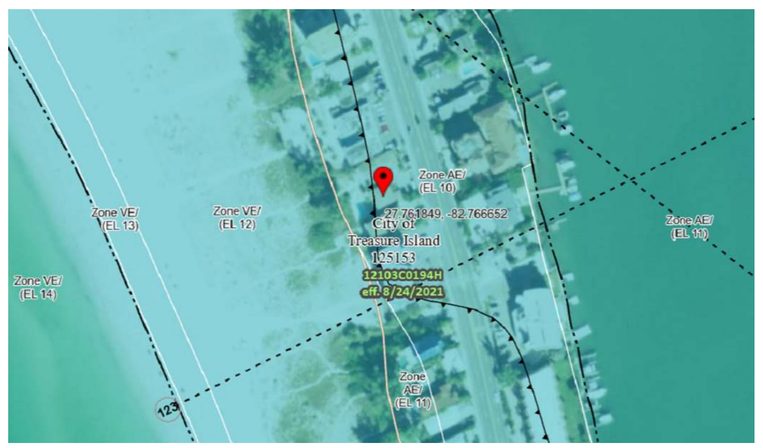
1. PURPOSE OF SURVEY: TO DOCUMENT THE PERIMETERS, OR ANY ONE OF THEM, OF A PARCEL OR TRACT OF LAND BY ESTABLISHING OR RE-ESTABLISHING CORNERS, MONUMENTS,AND BOUNDARY LINES FOR THE PURPOSES OF DESCRIBING THE PARCEL, LOCATING FIXED IMPROVEMENTS ON THE PARCEL, DIVIDING THE PARCEL, OR PLATTING AND SELECTED NATURAL AND ARTIFICIAL FEATURES OF A PART OF THE EARTH'S SURFACE TO DETERMINE HORIZONTAL AND VERTICAL SPATIAL RELATIONS.
2. USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR / CERTIFIED TO, WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.
3. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
4. THERE MAY BE ITEMS DRAWN OUT OF SCALE AND / OR MOVED ON THE MAP OF SURVEY TO GRAPHICALLY SHOW THEIR LOCATION. PRINTED DIMENSIONS SHOWN ON THE SURVEY SUPERSEDE SCALED DIMENSIONS.
5. UNDERGROUND FOUNDATIONS AND THEIR LOCATIONS HAVE NOT BEEN DETERMINED.
6. IRRIGATION EQUIPMENT AND / OR THEIR APPURTENANCES HAVE NOT BEEN MAPPED.
7. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE. THERE MAY EXIST ADDITIONAL EASEMENTS AND/OR RESTRICTIONS THAT CAN BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
8. ONLY THE UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES WHICH WERE READILY APPARENT FROM GROUND LEVEL TO THE SURVEYOR ON THE ACTUAL DAY OF THE FIELD SURVEY WERE LOCATED. NO EXCAVATIONS OR SUBSURFACE WORK EFFORTS OF ANY KIND WERE PERFORMED BY THE SURVEYOR TO VERIFY THE EXISTENCE OF ANY UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES AND / OR THEIR APPURTENANCES SHOWN, COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
9. THERE MAY BE ADDITIONAL UTILITY STRUCTURES (DRAINAGE, SANITARY, ELECTRIC, COMMUNICATIONS, ETC.) THAT WERE NOT READILY APPARENT AT THE TIME OF THE SURVEY.
10. FLOOD ZONE INFORMATION IS APPROXIMATE AS THE PRECISION OF THE FLOOD MAP IS LESS THAN THIS DRAWING.

BOUNDARY INCONSISTENCIES:

ANY ANGULAR AND/OR DIMENSIONAL DISCREPANCIES BETWEEN THE DESCRIPTION AND THE FIELD LOCATED OCCUPATION BOUNDARY CORNERS, AND BOUNDARY CORNERS WITH MULTIPLE BOUNDARY MONUMENTS ALONG WITH THEIR CORRESPONDING QUADRANT DIRECTIONAL MISSES, ARE SHOWN ON THE MAP OF SURVEY. ALL PERIMETER BEARINGS AND DISTANCES ARE BY FIELD MEASURED UNLESS SO NOTED.



FLOOD ZONE MAP (NOT TO SCALE) SOURCE: FEDERAL EMERGENCY MANAGEMENT AGENCY



REVISIONS		
#	DATE	DETAILS
1	11/8/2023	ADDED LABELING/MEAN HIGH WATER
2	2/29/2024	ADDED CITY REQUIREMENTS

BULLSEYE SURVEYING, INC.
LB 7818
2198 NE COACHMAN ROAD, UNIT F
CLEARWATER FL 33765
PHONE: 727-475-8088

SECTION 26, TOWNSHIP 31 SOUTH, RANGE 15 EAST, PINELLAS COUNTY, FLORIDA

ADDRESS:
10126 GULF BLVD, TREASURE ISLAND, FL 33706

PARCEL ID:
26-31-15-78786-003-0070

ABBREVIATIONS

DENOTES

- FIR= FOUND IRON REBAR (SIZE AS NOTED)
- FN= FOUND NAIL
- FN&D= FOUND NAIL & DISK
- FOP= FOUND OPEN PIPE
- LB= LICENSED BUSINESS
- (P)= PLAT INFORMATION
- PB= PLAT BOOK
- PG= PAGE
- PLS= PROFESSIONAL LICENSED SURVEYOR
- SIR= SET 1/2" REBAR & CAP LB 7818
- SN&D= SET NAIL & DISK LB 7818
- TBM= TEMPORARY BENCHMARK

SYMBOL LEGEND

DENOTES

- AC AIR CONDITIONING EQUIPMENT
- BOLLARD
- CO CLEANOUT
- EM ELECTRIC METER
- GAS PAINT MARKER
- LIGHT POLE(WOOD)
- MAIL BOX
- POOL EQUIPMENT
- R RECLAIMED WATER METER
- S SANITARY MANHOLE
- SIGN
- TREE(OTHER)
- TREE(PALM)
- TREE(PINE)
- T TELEPHONE EQUIPMENT
- W WATER METER
- WOOD UTILITY POLE

THIS SURVEY AND THE COPIES THEREOF, EXCEPT THOSE WITH ELECTRONIC SIGNATURE AND ELECTRONIC SEAL, THE SURVEY OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR OR MAPPER

THE SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

CERTIFIED TO:
TREASURE ISLAND PEARL LLC

George R Martin

Digitally signed by George R Martin
DN: C=US, O=Florida, dnQualifier=A01410C00000189D5125F70001AEFC9, CN=George R Martin
Reason: I am the author of this document
Location:
Date: 2024.02.29 08:45:48-05'00'
Foxit PDF Reader Version: 2023.3.0

GEORGE R. MARTIN
PROFESSIONAL SURVEYOR AND MAPPER
LICENSE NUMBER LS 6019
STATE OF FLORIDA
gmartin@bullseyesurveying.com

FIELD BOOK / PAGE	SCALE	SHEET NUMBER
033/04-06	1" = 10'	1 of 1
DRAFTED BY	SURVEY FIELD DATE	
VPL	10/13/2023	
PROJECT NUMBER	FILE NAME	
23-046	23-046.dwg	

The Pearl

10126 Gulf Blvd.
Treasure Island, FL
33706

Stormwater Management Report

Prepared by:

ARO ENGINEERING
780 94th Avenue North Suite 102
St. Petersburg, Florida 33704
Tel 727.527.5900

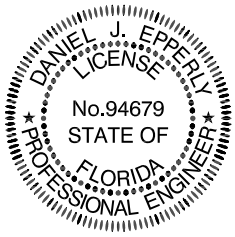
Cert. of Auth # 28919

For Submittal to:

The City of Treasure Island

August 9, 2024

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY DANIEL J. EPPERLY., 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.



Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.08.09 20:25:48 -04'00'

Daniel J. Epperly, PE
PE No. 94679

I. Site Executive Summary

PROPOSED RE-DEVELOPMENT OVERVIEW

The project is located in Treasure Island, Florida (Section 26, Township 31S, Range 16E). The total project alteration area consists of 0.31 acres. Proposed improvements include construction of a new multi-family building, an underground stormwater R-TANK exfiltration trench, and all other associated site infrastructure. The proposed R-TANK exfiltration trench and associated stormwater infrastructure is designed to capture, and treat stormwater runoff from proposed project area.

EXISTING CONDITIONS

The existing site consists of multiple multi-family buildings with existing parking and site infrastructure. The existing development consists of 0.21 Acres of impervious area.

The site is contained within flood zone AE Elev. 10' according to FEMA's FIRM Panel 12103C0194H, Revised 8/24/2021.

PROPOSED CONDITIONS

The proposed permit consists of the construction of a new multi-family building with parking and all other related site infrastructure. An underground R-TANK exfiltration trench is proposed, and is located under the parking area of the ground floor. The R-TANK system is designed to capture both the treatment and attenuation volumes over the basin area, and discharge east to an existing Florida Department of Transportation curb inlet along Gulf Blvd. The R-TANK exfiltration trench will meet the required treatment volume and attenuation volume required from its respective project area, along with meeting Florida Department of Transportation requirements of pre-development and post development discharge. See appendix for calculations.

No wetland impacts are proposed

II. Drainage System Summary

The stormwater management system for this site falls under the jurisdiction of The City of Treasure Island, the Southwest Florida Water Management District, and the Florida Department of Transportation. The proposed treatment for the project area is provided the above-mentioned exfiltration trench. The design parameters used for the system are as follows:

POLLUTION VOLUME TREATMENT

Stormwater treatment for the proposed project area development is accomplished through an exfiltration trench. The treatment volume will account for 1" of rainfall coverage over the post-developed south parcel basin. (See Appendix for MODRET analysis and drainage calculations).

A MODRET infiltration analysis was used to verify the treatment system recovers within 36 hours.

STORMWATER ATTENUATION (SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT REQ.)

The proposed stormwater system will accommodate the post-developed 25yr/24hr storm with the pre-developed 25yr/24hr storm discharge rate. Additional supporting calculations and model data for this specific storm analysis have been provided to SWFWMD for approval.

STORMWATER ATTENUATION (FLORIDA DEPARTMENT OF TRANPORTATION)

The post-developed discharge rate of stormwater that outfalls to Gulf Blvd. right of way is limited to the pre-developed flow that historically drained to the system. The critical storm duration has been determined for the 2, 5, 10, 25, 50, 100-year storm design using ICPR software. A tailwater condition has been included. Additional supporting calculations and model data for the storm conditions mentioned above have been provided to FDOT for approval.

CONCLUSION

The stormwater management system for the proposed development will meet or exceed the minimum design standards enforced by The City of Treasure Island, the Southwest Florida Water Management District, and the Florida Department of Transportation.

Appendix

DRAINAGE CALCULATIONS FOR TREATMENT VOLUME

Drainage Calculations for The Pearl

TREASURE ISLAND

Objective:

Find the storage volume necessary to satisfy the water quality requirements

Given:

1" water quality treatment over entire site (dry retention)

25-year Pre vs Post discharge requirement for SWFWMD / FDOT

Pre-Development North Basin:

Surface	Area (ac)	x	C	=	$C_{surface}$
Impervious	0.265	x	0.95	=	0.25
Pervious	0.044	x	0.61	=	0.03
Pond	0.000	x	1.00	=	0.00
Total Project Area	0.309			Sum =	0.28

Post-Development Basin 100:

Runoff Coefficient Calculations:

Use: Buildings, Parking lots, and Ponds

Surface	Area (ac)	x	C	=	$C_{surface}$
Impervious	0.21	x	0.95	=	0.20
Pervious	0.10	x	0.61	=	0.06
Ponds	0.00	x	1.00	=	0.00
Total Area	0.309			Sum =	0.26

C=Sum of $C_{surface}$ / Total Area = 0.84 Used in Modified Rational Method Calc

Water Quality Treatment Volume:

Over Modified Project Area

Treatment Depth = 1.00 in

Drainage Area (Contributing to Pond)= 0.309 ac

Treatment Volume = 0.0258 ac-ft

Total Treatment Volume (Over Site) = 0.0258 ac-ft

Pond #1 Treatment Volume = 0.0258 ac-ft 100% of volume

Total Treatment Pond= **0.0258** ac-ft

Modified Rational Method
25-yr Post - IDF - ZONE 6

Rainfall Duration (minutes)	Rainfall Intensity (in/hr)	Rainfall Duration (hours)	Inflow (cfs)	Outflow (cfs)	Storage (ft^3)
10	8.50	0.17	2.20	2.34	0
15	7.30	0.25	1.89	2.34	0
20	6.40	0.33	1.66	2.34	0
30	5.25	0.50	1.36	2.34	0
45	4.25	0.75	1.10	2.34	0
60	3.70	1.00	0.96	2.34	0
75	3.20	1.25	0.83	2.34	0
90	2.80	1.50	0.72	2.34	0
105	2.60	1.75	0.67	2.34	0
120	2.35	2.00	0.61	2.34	0
150	2.00	2.50	0.52	2.34	0
180	1.80	3.00	0.47	2.34	0
240	1.50	4.00	0.39	2.34	0
360	1.10	6.00	0.28	2.34	0
480	0.90	8.00	0.23	2.34	0
720	0.70	12.00	0.18	2.34	0
960	0.56	16.00	0.14	2.34	0
1200	0.50	20.00	0.13	2.34	0
1440	0.44	24.00	0.11	2.34	0

Required 25 year Storage = 0 ft^3
= 0.00 ac-ft.

Attenuation Volume Breakdown
Pond #1 Volume = 0.0000 ac-ft.

Total Attenuation Volume = 0.0000 ac-ft.

Treatment and Attenuation Volume Combined
Pond #1 Volume = 0.0258 ac-ft.

Total Volume (both treatment and attenuation combined) = 0.0258 ac-ft.

Pond Stage / Storage Calculations for Dry Pond

POND #1					
SHWL approx @ 2.0 (Per Driggers Engineering Report)					
Elevation (ft)	Area (sq ft)	Area (acres)	Incremental Volume (ac-ft)	Cumulative Volume (ac-ft)	
				0.00	
3.00	1,245	0.0286	0.000	0.00	Pond Bottom
3.25	1,317	0.0302	0.00735	0.00735	
3.50	1,390	0.0319	0.00777	0.01512	
3.75	1,466	0.0337	0.00820	0.02332	
4.00	1,544	0.0354	0.00864	0.03195	
4.20	1,607	0.0369	0.00723	0.03918	
4.50	1,705	0.039	0.01140	0.05059	

Trench Area at Water Quality = 1,488.06 sq ft
Trench Water Quality Treatment Elevation = 3.82 ft

Elevation for 1" Treatment

DRAINAGE TREATMENT CALCULATIONS FOR R-TANK EXFILTRAION SYSTEM

Exfiltration Trench Volume: R-TANK

Type:

Subsurface Detention System R-Tank

Area of Pipe: Used For Equivalent Section

Length of Trench = 40 ft

NOTE: This section is used as an equivalent section for design purposes.

Area of Trench: Used in calculation of Equivalent Pond Section

Top of Trench Width = 41.7 ft
Trench Depth = 1.5
$A_{trench\ Section}$ = 62.55 ft^2
Trench Footprint (length x width)= 1,668.00 ft^2

Total Allowable Volume of System:

V_{pipe} = - ft^3 per ft
V_{trench} = 62.55 ft^3 per ft
$V_{trench} - V_{pipe}$ = 62.55 ft^3 per ft ($V_{rock} = V_{trench} - V_{pipe}$)
V_{allow} = 59.42 ft^3 per ft

($V_{allow} = (0.95 * (V_{trench} - V_{pipe}) + V_{pipe}$) (Using only 95% of tank for storage)

Total Trench Volume = **2,376.90** ft^3

Solve for Equivalent Pond Section:

Side Slope = 2 to 1
Pond Depth = 1.50

Bottom of Pond Width = 36.62

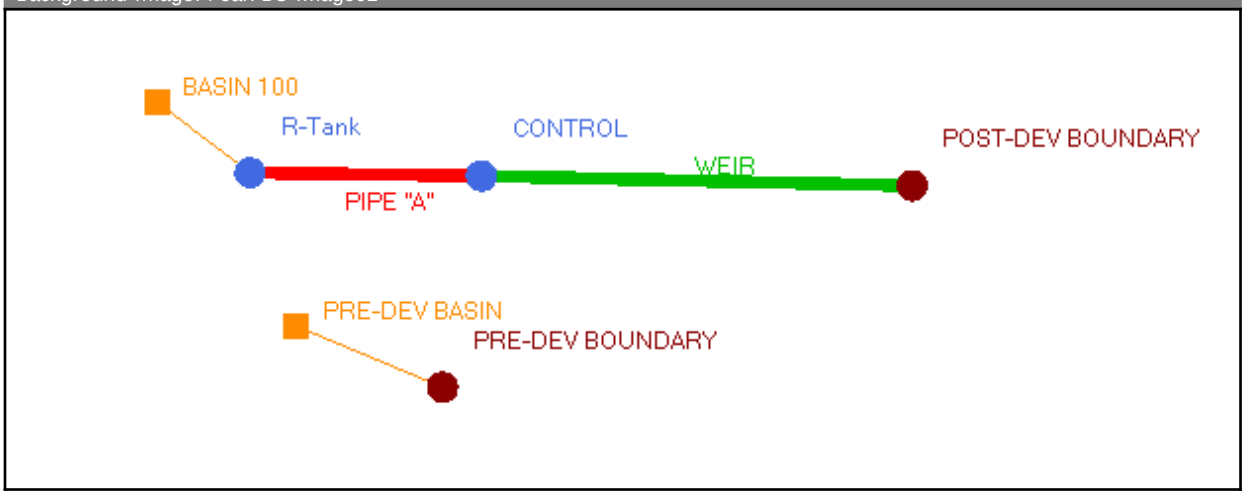
Top of Pond Width = 42.62

Pond Length = 40.00

ICPR REPORT

1" TREATMENT

Background Image: Pearl BG Image01



Simulation: 25 YR 24-HR

Scenario: Scenario1
Run Date/Time: 7/17/2024 2:34:16 PM
Program Version: ICPR4 4.04.00

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	30.0000	0.0500
Max Calculation Time:		30.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: 1

Green-Ampt Set:
Vertical Layers Set:
Impervious Set: 1

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft

Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr

Manual Basin Rain Opt: Global

Rainfall Name: ~FDOT-24
Rainfall Amount: 10.10 in
Storm Duration: 24.0000 hr

Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Curve Number: 1 [Set]

Land Cover Zone	Soil Zone	Curve Number [dec]
IMPERVIOUS	A	98.0
PERVIOUS	A	68.0
PERVIOUS POND	A	100.0
TEST	B	10.0

Boundary Stage: POST DEV BOUNDARY

Boundary Stage Set: POST DEV

Year	Month	Day	Hour [hr]	Stage [ft]
0	0	0	0.0000	2.50

Year	Month	Day	Hour [hr]	Stage [ft]
0	0	0	5.0000	2.50
0	0	0	10.0000	2.50
0	0	0	20.0000	2.50
0	0	0	30.0000	2.50

Comment:

Manual Basin: BASIN 100

Scenario: Scenario1
Node: R-Tank
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 999.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name
0.2100	IMPERVIOUS	A	
0.1000	PERVIOUS	A	

Comment:

Manual Basin: PRE-DEV BASIN

Scenario: Scenario1
Node: PRE-DEV BOUNDARY
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 999.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name
0.2650	IMPERVIOUS	A	
0.0440	PERVIOUS	A	

Comment:

Node: CONTROL

Scenario: Scenario1

Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.79 ft
Warning Stage: 4.30 ft

Stage [ft]	Area [ac]	Area [ft2]
1.00	0.0003	13
4.30	0.0003	13

Comment:

Node: POST-DEV BOUNDARY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 4.30 ft
Boundary Stage: POST DEV BOUNDARY

Comment:

Node: PRE-DEV BOUNDARY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: R-Tank

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.43 ft
Warning Stage: 4.50 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0286	1246

Stage [ft]	Area [ac]	Area [ft2]
3.25	0.0302	1316
3.50	0.0319	1390
3.75	0.0337	1468
4.00	0.0354	1542
4.20	0.0369	1607
4.50	0.0390	1699

Comment:

Pipe Link: PIPE "A"		Upstream		Downstream	
Scenario:	Scenario1	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	R-Tank	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	CONTROL	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	21.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 ft	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Drop Structure Link: WEIR		Upstream Pipe		Downstream Pipe	
Scenario:	Scenario1	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	CONTROL	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	POST-DEV	Geometry: Circular		Geometry: Circular	
	BOUNDARY	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	10	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	168.44 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 ft				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	3.82 ft
Control Elevation:	3.82 ft
Max Depth:	0.56 ft
Max Width:	1.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Manual Basin Runoff Summary [Scenario1]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN 100	25 YR 24-HR	0.29	12.0000	10.10	8.63	0.3100	88.0	0.00	0.00
PRE-DEV BASIN	25 YR 24-HR	0.30	12.0000	10.10	9.31	0.3090	93.5	0.00	0.00

Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
CONTROL	25 YR 24-HR	4.30	4.02	0.0021	0.44	4.26	100
POST-DEV BOUNDARY	25 YR 24-HR	4.30	1.00	0.0000	0.28	0.00	0
PRE-DEV BOUNDARY	25 YR 24-HR	0.00	0.00	0.0000	0.30	0.00	0
R-Tank	25 YR 24-HR	4.50	4.02	0.0010	4.26	0.44	1549

Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow	Min Flow [cfs]	Min/Max	Max Us	Max Ds	Max Avg

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
PIPE "A"	25 YR 24-HR	0.44	-4.26	-0.33	-3.47	-3.47	-3.47
WEIR - Pipe	25 YR 24-HR	0.28	0.00	-0.01	0.00	0.00	0.00
WEIR - Weir: 1	25 YR 24-HR	0.28	0.00	0.01	1.43	1.43	1.43

MODRET RESULTS FOR R-TANK TRENCH+

MODRET 25 YR - 24 HR

SUMMARY OF UNSATURATED & SATURATED INPUT PARAMETERS

PROJECT NAME :
POLLUTION VOLUME RUNOFF DATA USED
UNSATURATED ANALYSIS EXCLUDED

Pond Bottom Area	1,310.00 ft²
Pond Volume between Bottom & DHWL	1,443.00 ft³
Pond Length to Width Ratio (L/W)	3.70
Elevation of Effective Aquifer Base	0.00 ft
Elevation of Seasonal High Groundwater Table	2.00 ft
Elevation of Starting Water Level	3.00 ft
Elevation of Pond Bottom	3.00 ft
Design High Water Level Elevation	4.02 ft
Avg. Effective Storage Coefficient of Soil for Unsaturated Analysis	0.05
Unsaturated Vertical Hydraulic Conductivity	53.00 ft/d
Factor of Safety	2.00
Saturated Horizontal Hydraulic Conductivity	79.50 ft/d
Avg. Effective Storage Coefficient of Soil for Saturated Analysis	0.08
Avg. Effective Storage Coefficient of Pond/Exfiltration Trench	1.00

Hydraulic Control Features:

	Top	Bottom	Left	Right
Groundwater Control Features - Y/N	N	N	N	N
Distance to Edge of Pond	0.00	0.00	0.00	0.00
Elevation of Water Level	0.00	0.00	0.00	0.00
Impervious Barrier - Y/N	N	N	N	N
Elevation of Barrier Bottom	0.00	0.00	0.00	0.00

MODRET

TIME - RUNOFF INPUT DATA

PROJECT NAME:

STRESS PERIOD NUMBER	INCREMENT OF TIME (hrs)	VOLUME OF RUNOFF (ft^3)
Unsat	0.00	0.00
1	1.00	1,123.00
2	4.38	0.00
3	4.38	0.00
4	4.38	0.00
5	4.38	0.00
6	4.38	0.00
7	4.38	0.00
8	4.38	0.00
9	4.38	0.00

MODRET

SUMMARY OF RESULTS

PROJECT NAME :

CUMULATIVE TIME (hrs)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)	CUMULATIVE OVERFLOW (ft^3)
00.00 - 0.00	2.000	0.000 *		
			0.00000	
0.00	2.000	0.08082		
			0.07188	
1.00	3.611	0.06294		0.00
			0.02382	
5.38	3.346	0.01910		0.00
			0.01438	
9.75	3.186	0.01241		0.00
			0.01044	
14.13	3.069	0.00933		0.00
			0.00821	
17.44	3.000	0.00748		0.00
			0.00674	
22.88	2.903	0.00622		0.00
			0.00569	
27.25	2.839	0.00530		0.00
			0.00490	
31.63	2.785	0.00459		0.00
			0.00429	
36.00	2.737			0.00

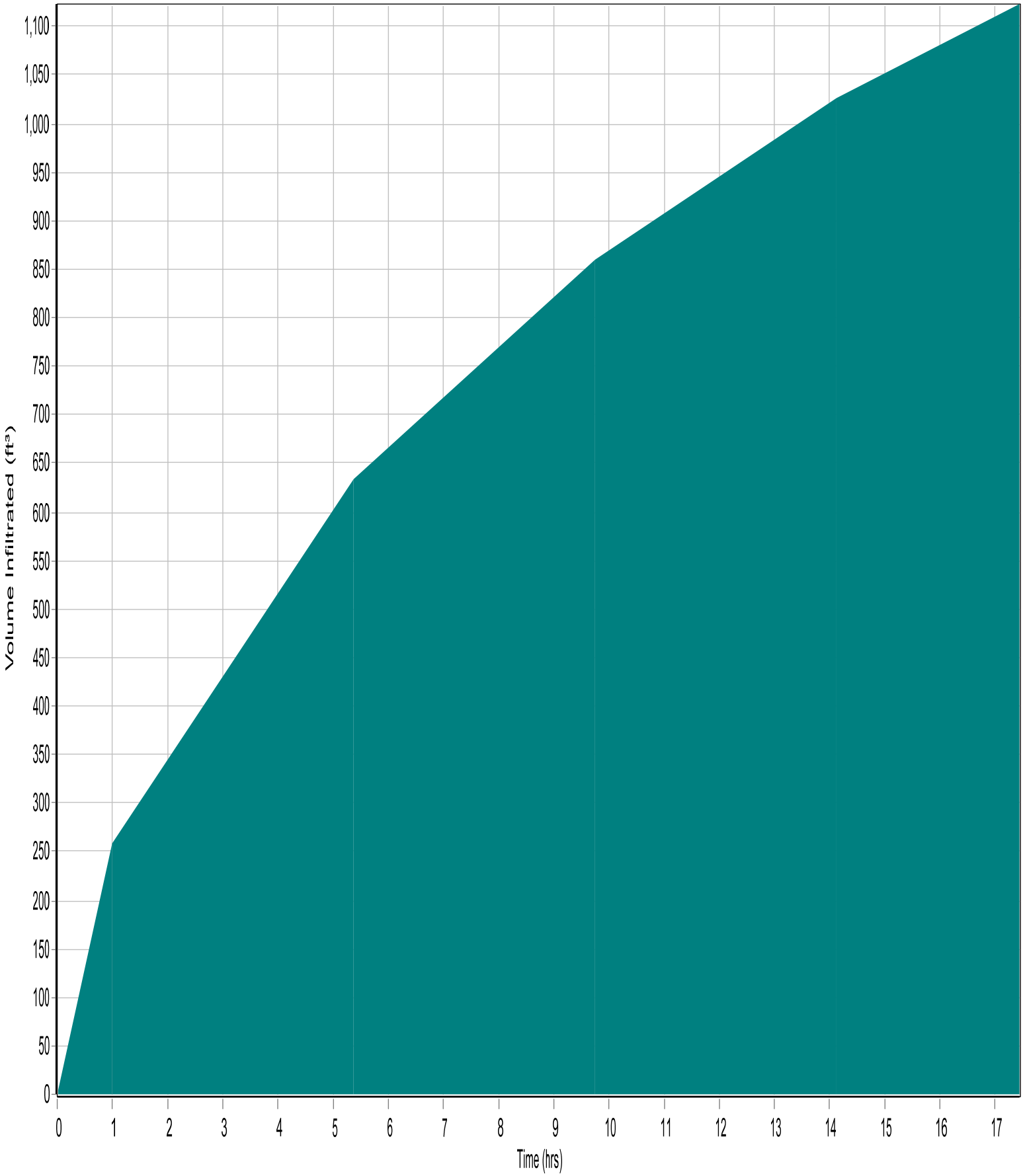
Maximum Water Elevation: 3.611 feet @ 1.00 hours Recovery @ 17.441 hours

* Time increment when there is no runoff

Maximum Infiltration Rate: 4.390 ft/day

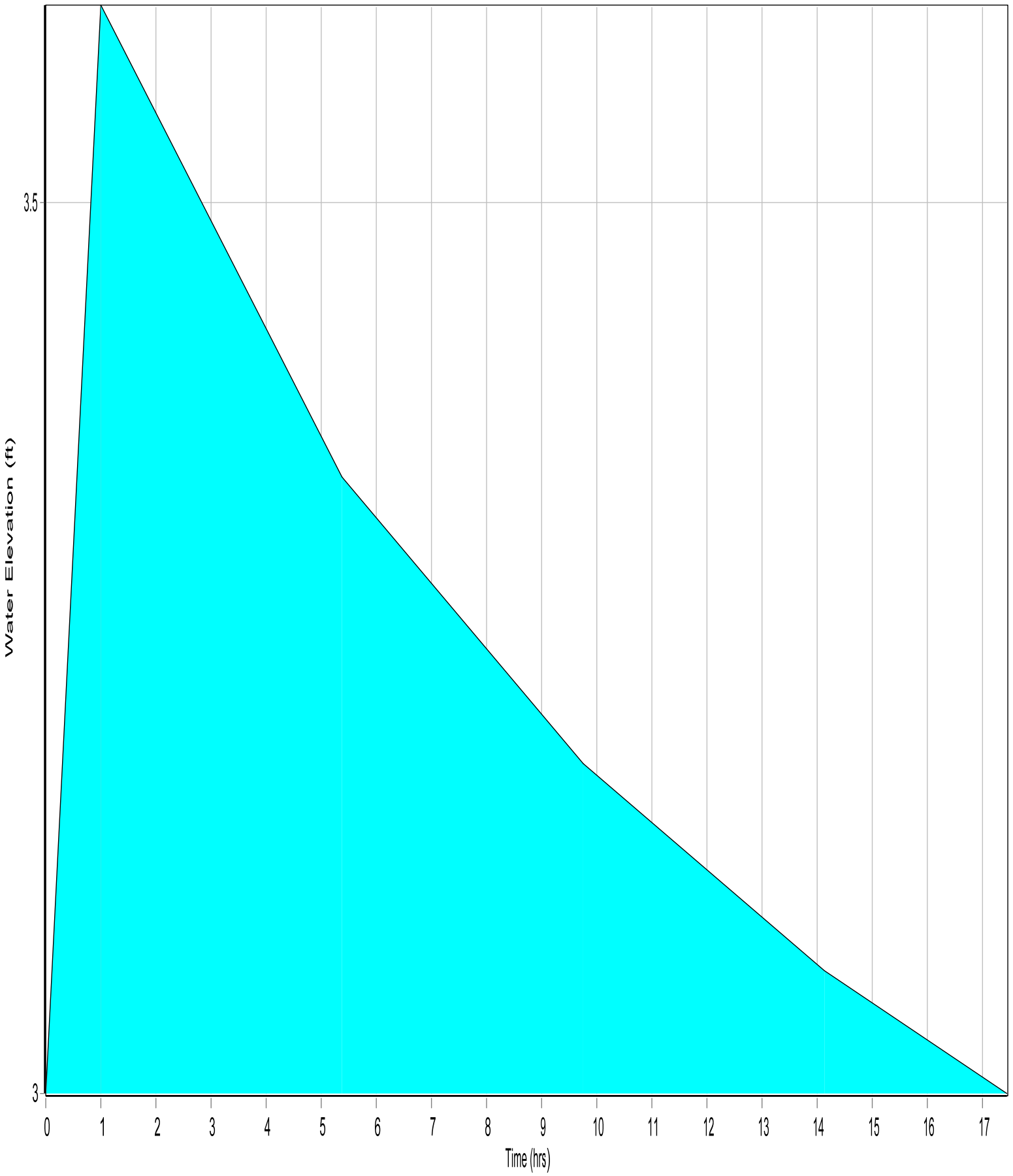
Analysis Date: 7/18/2024

INFILTRATION :



Total Volume Infiltrated = 1,123 ft³

INFILTRATION :



Max Water Elevation = 3.61 ft