PLANNING & ZONING REGULAR MEETING
THURSDAY, MAY 30, 2024 – 10:00 AM
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
   Linda Driscoll- Board Member
   Michael Hurtubise- Board Member
   Lynn Fisher- Board Member
   Diana Crabill- Board Member
   Marvin Shavlan- 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**

    SITE-000298-2022- 12765 Sunshine Ln- Site plan approval request for a proposed

commercial off-street parking lot.
1. Staff Report.docx
2. Application and Project Narrative.pdf
3. Warranty Deed.pdf
4. JP Beach Holdings - Sunbiz Filing.pdf
5. Affidavit to Authorize Agent.pdf
6. Topographic Survey.pdf
7. Civil Plans.pdf
8. Photometric Plan- Duke Energy.pdf
9. Landscape Plan.pdf
10. Geotechnical Report.pdf
11. Stormwater Report.pdf
12. Impervious Surface Ratio Worksheet.pdf

SITE-000428-2023- 11580 Gulf Blvd- Site plan approval request for a proposed 5 story over parking condo-hotel structure comprised of 17 hotel/motel units.
1. Staff Report.docx
2. Application.pdf
3. Affidavit to Authorize Agent.pdf
4. Warranty Deed.pdf
5. Sunbiz-ATM ARVILLA LLC.pdf
6. Renderings- Front, Side, and Rear.pdf
7. Architectural Plans.pdf
8. Civil Plans.pdf
9. ISR Worksheet.pdf
10. Drainage Narrative.pdf
11. Geotechnical Report.pdf
12. Survey.pdf

SITE-000442-2024- 10126 Gulf Blvd- Site Plan approval request for a proposed 4 story over parking multi-family dwelling structure comprised of 4 dwelling units.
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. Drainage Narrative.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 P&Z MEETING: June 27, 2024 at 2:00 p.m.
NEXT LPA MEETING: June 27, 2024 at 3:00 p.m.

14. ADJOURNMENT

Item Cover Page

PLANNING & ZONING BOARD AGENDA ITEM REPORT

DATE:	May 30, 2024
SUBMITTED BY:	Jesse Miller, Community Development
ITEM TYPE:	Public Hearings
AGENDA SECTION:	PRESENTATION OF ITEMS
SUBJECT:	SITE-000298-2022- 12765 Sunshine Ln- Site plan approval request for a proposed commercial off-street parking lot.
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:

1. Staff Report.docx
2. Application and Project Narrative.pdf
3. Warranty Deed.pdf
4. JP Beach Holdings - Sunbiz Filing.pdf
5. Affidavit to Authorize Agent.pdf
6. Topographic Survey.pdf
7. Civil Plans.pdf
8. Photometric Plan- Duke Energy.pdf
9. Landscape Plan.pdf
10. Geotechnical Report.pdf
11. Stormwater Report.pdf
12. Impervious Surface Ratio Worksheet.pdf

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. SITE-000298-2022
STAFF REPORT
THURSDAY, MAY 30, 2024, AT 10:00 A.M.

DESCRIPTION: Site plan approval request for a proposed parking lot, commercial.

SITE LOCATION: 12765 Sunshine Ln
Treasure Island, FL 33706

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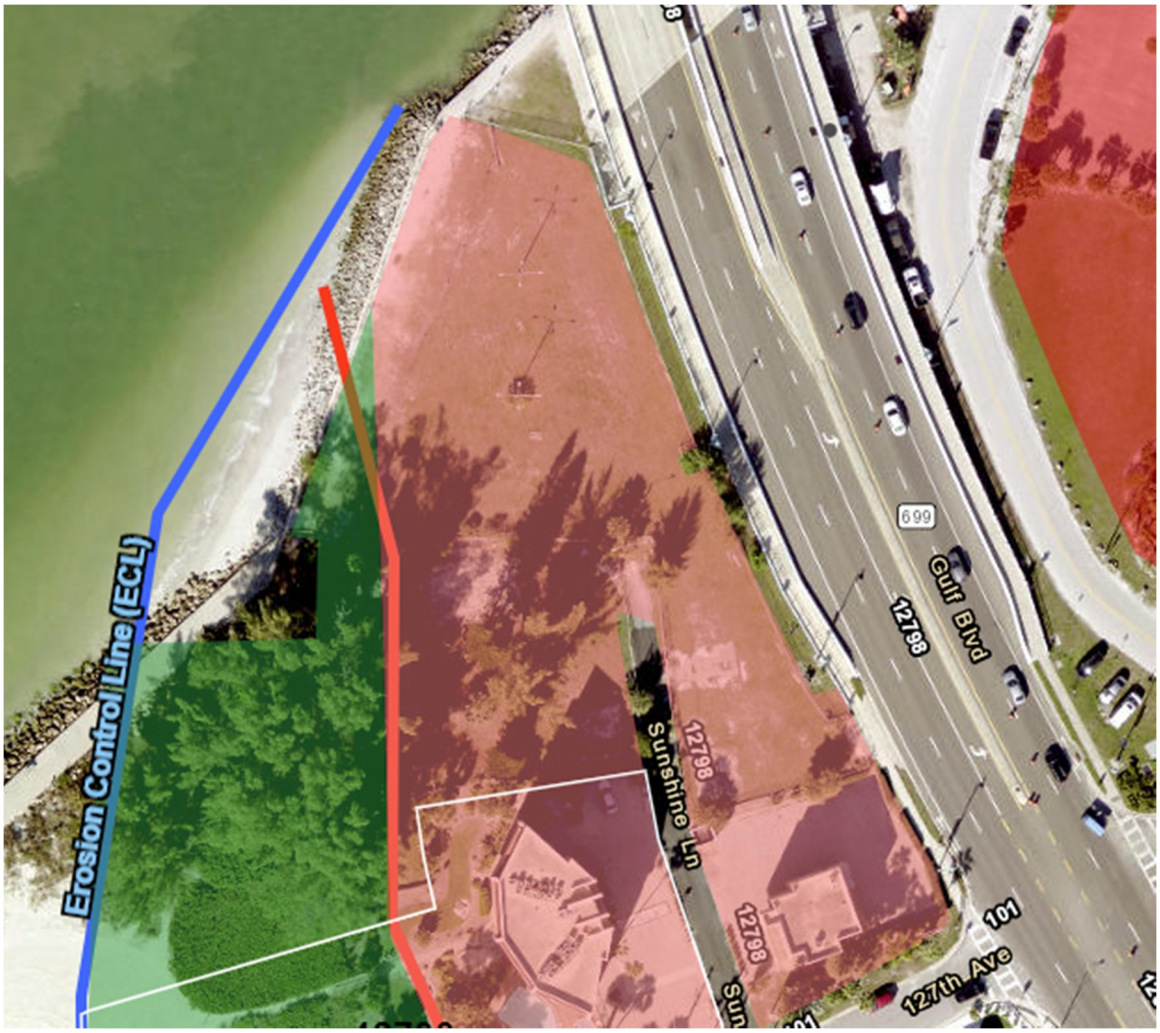


PARCEL ID #: 15-31-15-76240-000-0000

LEGAL DESCRIPTION:

SURVEY PARCEL 0: (ALSO KNOWN AS A PORTION OF THE “PALMER PARCEL”) LOT 5, BLOCK 2, AND THAT PART OF LOT 30, BLOCK 2, CONEY ISLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLOR1DA, DESCRIBED AS FOLLOWS: FROM THE SOUTHEAST CORNER OF SAID LOT 30, RUN THENCE S. 72°Q50' W., 73.19 FEET ALONG THE SOUTHERLY BOUNDARY THEREOF FOR A POINT OF BEGINNING; RUN THENCE N. 09°44'36" W., 28.84 FEET; THENCE S. 80°07'05" W., 30.56 FEET TO THE WESTERLY BOUNDARY OF SAID LOT 30; THENCE SOUTHERLY ALONG SAID WESTERLY BOUNDARY TO THE SOUTHWEST CORNER OF SAID LOT 30; THENCE EASTERLY ALONG SAID LOT'S SOUTHERLY BOUNDARY TO THE POINT OF

BEGINNING. SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")
LOT 6, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, LESS THE FOLLOWING PORTION: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 6 RUN NORTH 88°47'02" EAST, 62.51 FEET ALONG THE NORTHERLY LINE OF SAID LOT 6; THENCE SOUTH 01°13'40" WEST., 7.51 FEET; THENCE RUN NORTH 88°07'20" WEST, 61.87 FEET TO AN INTERSECTION WITH THE WESTERLY BOUNDARY LINE OF SAID LOT 6; THENCE RUN NORTHERLY ALONG SAID WESTERLY BOUNDARY OF SAID LOT 6, 4.17 FEET TO THE POINT OF BEGINNING.
ALSO, THE FOLLOWING PORTION OF SAID LOT 7, BLOCK 2, OF SAID CONEY ISLAND SUBDIVISION: FROM A POINT OF BEGINNING AT THE SOUTHEAST CORNER OF LOT 7, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, RUN NORTH 00°07'50" WEST, 6.6 FEET ALONG THE EAST BOUNDARY OF SAID LOT 7; THENCE RUN SOUTH 85°16'40" WEST, 39.5 FEET; THENCE SOUTH 01°13'40" WEST, 4.19 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 7; THENCE NORTH 88°47'02" EAST, ALONG SAID SOUTHERLY BOUNDARY OF SAID LOT 7, 39.49 FEET TO THE POINT OF BEGINNING.
TOGETHER WITH THAT PORTION OF VACATED SUNSHINE LANE ADJOINING SAID PORTION OF LOT 7 THAT ATTACHES BY OPERATION OF LAW PURSUANT TO RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

ALSO TOGETHER WITH THAT TRACT OF LAND LYING WESTERLY OF LOTS 4 AND 5, BLOCK 2, OF AFORESAID CONEY ISLAND SUBDIVISION, TO THE WATERS OF THE GULF OF MEXICO, BETWEEN, THE NORTHWESTERLY LINE OF SAID LOT 5 AND THE SOUTHEASTERLY LINE OF SAID LOT 4, EXTENDED WESTERLY TO THE SAID WATERS OF THE GULF OF MEXICO.
COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")
ALL OF ROCK HOUSE REPLAT, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN PLAT BOOK 98, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.
TOGETHER WITH THAT PORTION OF THE EAST 1/2 OF SUNSHINE LANE WHICH WAS VACATED BY THE RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, AND WHICH ABUTS SAID PLAT OF ROCK HOUSE REPLAT.

PROPERTY OWNER: JP Beach Holdings LLC
3802 Coconut Palm Dr.
Tampa, FL 33619

GENERAL INFORMATION:

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

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

Adjacent Property (Use):

North: Johns Pass

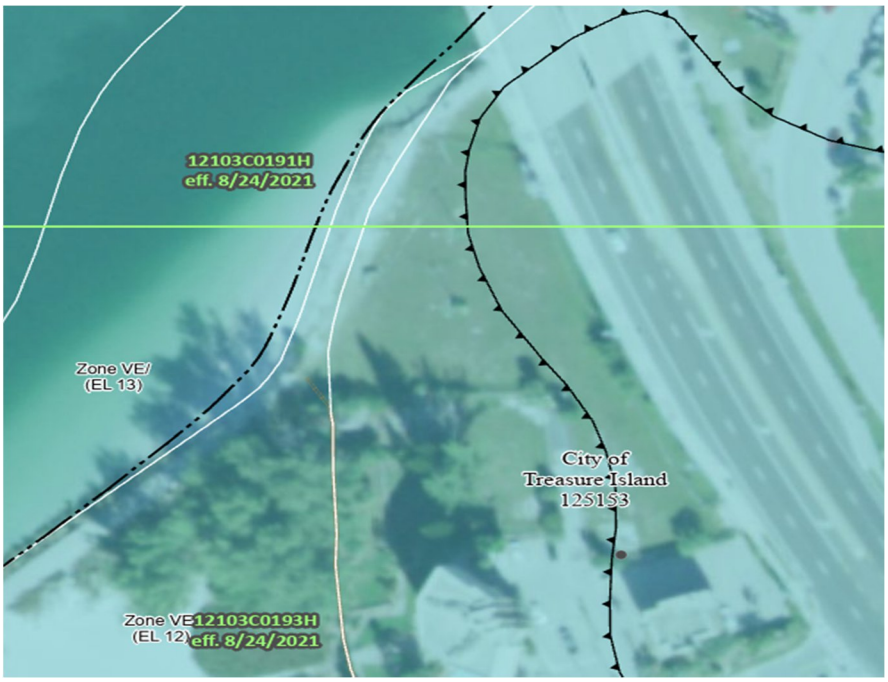
West: Gulf of Mexico – Public Beach

South: 12700 Gulf Blvd – Condo-Hotel

East: 12725 Gulf Blvd – Vacant Land

Site Area: RFH- Approximately 0.915 acres | 39,861 sf
P- Approximately 0.502 acres | 21,875 sf

Flood Zone: AE- 10, AE-11 (Coastal A Zone), VE-12, VE-13, Flood Insurance Rate Map Community Panel No. 12103C0191H, 12103C0193H eff. August 24, 2021.



PROPERTY SUMMARY:

The subject property is vacant land.

On August 11, 2011, the Planning and Zoning Board approved a Special Exception request to allow a beach restaurant/grill/bar with 17 cabanas, wading pool, water fountain feature, outdoor seating and shell parking (PZ-2011-02-SE).

On August 14, 2019, a proposed Special Exception request and Site Plan approval request for a proposed Parking Lot, Off-site, Remote was withdrawn (PZ 2019-14, PZ 2019-15).

On January 16, 2020, the Planning and Zoning Board approved a Special Exception request and Site Plan approval request for a proposed Private Parking Lot, Off-site, Remote (PZ 2019-25, PZ 2019-26)

On October 23, 2023, a Special Exception request for a proposed Private Parking Lot, Off-site, Remote was withdrawn (SPEC-000297-2022).

TREASURE ISLAND CODE OF ORDINANCES:

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

Parking area means any public or private land area designated and used for parking motor vehicles including parking lots, garages, private driveways, and legally designated areas of public streets.

Parking lot means an off-street, ground level area improved for the temporary storage of licensed operable motor vehicles. Does not include an area used exclusively for the display of motor vehicles for sale as part of an automobile dealership (all references to parking lot may be commercial, private, valet, and/or public in nature unless otherwise specified).

Parking lot or structure, commercial means a lot or parcel of land or portion thereof, which is not accessory to any other use of the same or any other lot or parcel, and contains parking space rented to the general public for a fee.

Parking, off-street means a parking area improved for licensed motor vehicles, temporarily stored in connection with a use requiring same. It includes parking spaces, aisles, access drives, landscaped areas, and vehicular access to a public street.

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:
   l) Parking lot, off-street and shared (per section 68-486)

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. 68-486. – Off-street parking.

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.

r) *Illustrative parking use table (for illustrative purposes only).*

ILLUSTRATIVE PARKING USE TABLE

Parking lot	District	RU-75	RM-15	RFM-30	RFH-50	CG	RO/S and I	P	T/U
Off-Street (Stand Alone)		NO	NO	SE	P	P	P	NO	P

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 use is not in conflict with the goals, objectives and policies of the Comprehensive Plan.

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 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	Approx. 380 ft
Lot Depth (min.)	90	Approx. 380 ft.
Lot Area (min.)	9,000	39,861 sq. ft.
Density	N/A	N/A
Lot Coverage (max.)	N/A	N/A
ISR (max.)	95%	52%
FAR	N/A	N/A
Building Height **Max. above DFE** **Height Encroachment From Grade**	N/A	N/A
Height Encroachment	N/A	N/A
Setbacks **Sunshine Lane:** **Street: 10 feet** **Side: 5 feet** **Waterfront: 25 feet** **Gulf Boulevard from 127th Avenue to John's Pass:** **West side:** **Street: 25 feet** **Side: 5 feet** **Waterfront:25 feet** **In all zoning districts, parking area surfaces shall not extend closer than three feet from any abutting property line.**	N/A N/A 3’	N/A N/A 5.3’
Design Elevation	N/A	N/A
Loading Berths	N/A	N/A
Parking Spaces **Total Spaces** **Standard** **Compact (max.)** **ADA-accessible** **Bicycle**	0 0 0 0 0 Bike Rack (5 spaces per rack)	46 44 0 2 0 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 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 is compatible with the planned character of the RFH-50 zoning district.

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.
The proposed site plan meets drive aisle widths, parking space width and length. Driveway and sidewalk connections within the right-of-way appear to adhere to all applicable FDOT standards. Additionally, ingress and egress for the City of Treasure Island Fire Department is available. Refer to Sheet C-4.4 of Civil Plans.

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.
Proposed site plan is in conformance with landscaping requirements set forth in Chapter 72- Resources; Vegetation and Environmentally Sensitive Lands. Additionally, no development is proposed within the preservation area of the subject property or seaward of the CCCL.

d. Building arrangements, both between buildings in the proposed development and in relation to those on properties adjacent to the site.
N/A There are no proposed buildings on site.

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).
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 historically/architecturally significant structures on the site.

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.**
Any proposed work in the Right-of-Way will require approval by the City of Treasure Island Public Works Dept. prior to the commencement of work on City property. Refer to civil plans sheet C-3.0, C-4.1, and C-5-1 for proposed demo and replacement of asphalt in Right-of-Way.

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.**
The proposed site plan will require a permit or exemption from the Southwest Florida Water Management District and the Florida Department of Transportation.

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 is currently a vacant lot.

STAFF RECOMMENDATION:

Staff recommends the proposed site plan 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. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

4. Any proposed work in the Right-of-Way will require approval by the City of Treasure Island Public Works Dept. prior to the commencement of work.

5. Provide a Unity of Title.

6. The construction in the proposed vacated right-of-way is only included in this site plan approval if the City Commission approves to vacate the section of right-of-way as identified in Case Number VAC-000449-2024.

7. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

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MAY 30, 2024
PLANNING AND ZONING BOARD
DEVELOPMENT ORDER

CASE NO. SITE-000298-2022
LOCATION: 12765 SUNSHINE LN, TREASURE ISLAND, FL 33706

The Planning and Zoning Board has made a motion to:

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

A site plan approval request for a proposed parking lot, commercial.

CONDITIONS:

1. Building permits and construction associated with this development order shall be subject to all Code in effect at the time of the building permit application process.

2. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

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7. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

_____ _____
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: SITE-000298-2022

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: Anthony Saravanos / JP Beach Holdings, LLC	Agent: Braulio Grajales / High Point Engineering, Inc
Address: 3802 Coconut Palm Drive	Address: 5005 W Laurel Street, Suite 201
Tampa, Florida 33619	Tampa, Florida 33607
Phone: 813-405-3660	Phone: 813-644-8333
Fax:	Fax:
Email: asaravanos@gleafcapital.com	Email: bgrajales@hpe-fl.com

List all Legal Owner(s) of Property: JP Beach Holdings, LLC

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

Development Name: Parking Lot at John's Pass

Site Location/Address: 12765 Sunshine Lane, Treasure Island, Florida

Area of Development (Acreage or Square Feet) 61,736 sf

Parcel Identification Number (list all): 15-31-15-76240-000-0000

Application Request: Parking Lot, Commercial

Future Land Use Designation: Resort Facilities High & Preservation (P) Proposed Future Land Use: Resort Facilities High & Preservation (P)

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

5-1-24

Date

LEGAL DESCRIPTION

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 5, BLOCK 2, AND THAT PART OF LOT 30, BLOCK 2, CONEY ISLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: FROM THE SOUTHEAST CORNER OF SAID LOT 30, RUN THENCE S. 72°Q50' W., 73.19 FEET ALONG THE SOUTHERLY BOUNDARY THEREOF FOR A POINT OF BEGINNING; RUN THENCE N. 09°44'36" W., 28.84 FEET; THENCE S. 80°07'05" W., 30.56 FEET TO THE WESTERLY BOUNDARY OF SAID LOT 30; THENCE SOUTHERLY ALONG SAID WESTERLY BOUNDARY TO THE SOUTHWEST CORNER OF SAID LOT 30; THENCE EASTERLY ALONG SAID LOT'S SOUTHERLY BOUNDARY TO THE POINT OF BEGINNING.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 6, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, LESS THE FOLLOWING PORTION: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 6 RUN NORTH 88°47'02" EAST, 62.51 FEET ALONG THE NORTHERLY LINE OF SAID LOT 6; THENCE SOUTH 01°13'40" WEST., 7.51 FEET; THENCE RUN NORTH 88°07'20" WEST, 61.87 FEET TO AN INTERSECTION WITH THE WESTERLY BOUNDARY LINE OF SAID LOT 6; THENCE RUN NORTHERLY ALONG SAID WESTERLY BOUNDARY OF SAID LOT 6, 4.17 FEET TO THE POINT OF BEGINNING.

ALSO, THE FOLLOWING PORTION OF SAID LOT 7, BLOCK 2, OF SAID CONEY ISLAND SUBDIVISION: FROM A POINT OF BEGINNING AT THE SOUTHEAST CORNER OF LOT 7, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, RUN NORTH 00°07'50" WEST, 6.6 FEET ALONG THE EAST BOUNDARY OF SAID LOT 7; THENCE RUN SOUTH 85°16'40" WEST, 39.5 FEET; THENCE SOUTH 01°13'40" WEST, 4.19 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 7; THENCE NORTH 88°47'02" EAST, ALONG SAID SOUTHERLY BOUNDARY OF SAID LOT 7, 39.49 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH THAT PORTION OF VACATED SUNSHINE LANE ADJOINING SAID PORTION OF LOT 7 THAT ATTACHES BY OPERATION OF LAW PURSUANT TO RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

ALSO TOGETHER WITH THAT TRACT OF LAND LYING WESTERLY OF LOTS 4 AND 5, BLOCK 2, OF AFORESAID CONEY ISLAND SUBDIVISION, TO THE WATERS OF THE GULF OF MEXICO, BETWEEN, THE NORTHWESTERLY LINE OF SAID LOT 5 AND THE SOUTHEASTERLY LINE OF SAID LOT 4, EXTENDED WESTERLY TO THE SAID WATERS OF THE GULF OF MEXICO.

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

ALL OF ROCK HOUSE REPLAT, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN PLAT BOOK 98, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

TOGETHER WITH THAT PORTION OF THE EAST 1/2 OF SUNSHINE LANE WHICH WAS VACATED BY THE RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, AND WHICH ABUTS SAID PLAT OF ROCK HOUSE REPLAT.

HIGH POINT | ENGINEERING

May 1, 2024

Mr. Jesse Miller, CFM
Principal Planner
City of Treasure Island
Community Development Department
10451 Gulf Blvd
Treasure Island, Florida 33706

RE: SITE PLAN APPLICATION
PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706
APPLICATION NUMBER: SITE-000298-2022

Dear Mr. Miller,

On behalf of JP Beach Holdings, LLP, High Point Engineering, Inc. is submitting the proposed Parking Lot at John's Pass project, which encompasses 46 surface parking spaces including two handicap parking spaces to be rented to the general public for a fee. The project site is situated on the western side of Gulf Boulevard, immediately following the descending segment of the southbound lanes of the John's Pass Bridge.

The purpose of this site plan application is to request approval for a proposed Parking Lot, Commercial use permitted in the Resort Facilities High - 50 zoning district. The proposed use is not in conflict with the Residential Facilities High land use category. The property area to be developed is 0.69 acres. In total, the property encompasses 1.42 acres of land including the portion of the site designated Preservation. The site design provides compliance with the Land Development Code including stormwater, landscape and lightning preserving the harmony with the surrounding development. There are no planned improvements in the area designated Preservation and the proposed improvements will not encroach into the areas of the property designated Preservation. The proposed light pole configuration illuminating the parking lot will be arranged as to direct and / or shield light away from adjoining beach, buildings, and rights-of-way.

The site plans have been designed to ensure sufficient safety and protection for pedestrians and bicycles crossing in front of the right-in/right-out driveway connection to Gulf Boulevard. There is no requirement for fire hydrants as per the Treasure Island Fire Department. "No Parking - Fire Lane" signs will be installed as requested by the Treasure Island Fire Department to prevent the obstruction of fire department access roads. All fire department access roads will have an unobstructed width of at least 20 feet. A vehicular routing simulation plan for the access and circulation of public emergency vehicles to the site is provided in the attached site construction plans. The parking lot is proposing connectivity to the public right-of-way with the extension of concrete sidewalks into the proposed development. The proposed parking lot will be utilized for renting out spaces to the general public for a fee. Potable water, sanitary sewer,

or solid waste will not be demanded or generated because buildings are not proposed. Reclaimed water will be used for irrigation purposes.

The proposed parking lot will not create conflicts with the existing development in adjacent properties. It will not alter the neighborhood's character due to being a surface parking lot. The neighboring Nordvind development to the south utilizes a turfstone paver parking lot for their owners and guests under a podium building. Vehicle access to the parking lot will be facilitated through the existing curb cut on Gulf Boulevard, situated immediately after the downward portion of the southbound lanes of the John's Pass Bridge. Given the narrow width of Sunshine Lane, it will be restricted to one-way traffic only, limited to inbound traffic, to avoid congestion. There will be no vehicle egress onto Sunshine Lane to ensure that Nordvind owners and guests are not inconvenienced.

Access to the parking lot will be regulated and limited through the use of smart security gates, which will be controlled by digital keypads. The designated hours of operation are from 6:00 am to 11:00 pm, and overnight parking will not be permitted. Additionally, oversized vehicles such as recreational vehicles, campers, or boat trailers will be prohibited from parking in the lot. Moreover, to ensure clarity and adherence to the parking rules, signs outlining the parking lot regulations will be prominently installed on the concrete island where the smart boom gates are placed.

Should you have any questions or concerns regarding this project, please do not hesitate to contact us at (813) 644-8333 ext. 333 or by email at bgrajales@hpe-fl.com.

Sincerely,
HIGH POINT ENGINEERING, INC.

Braulio Grajales, P.E.
Principal

I#: 2012094844 BK: 17537 PG: 1905, 04/03/2012 at 05:07 PM, RECORDING 2 PAGES $18.50 D DOC STAMP COLLECTION $7000.00 KEN BURKE, CLERK OF COURT PINELLAS COUNTY, FL BY DEPUTY CLERK: CLKDM08

6 of 8
18.50
7000.00

This Instrument Prepared by and Return to:
SEMINOLE TITLE COMPANY
8640 SEMINOLE BLVD.
SEMINOLE, FL 33772
File No. 12-185A

WARRANTY DEED

THIS WARRANTY DEED, made the 2nd day of April, 2012 by Rice Family Holdings, LLLP, a Florida limited liability limited partnership, hereinafter referred to as "Grantor", to JP Beach Holdings LLC, a Florida limited liability company, whose post office address is: 5300 West Cypress St., Suite 100, Tampa, FL 33607, hereinafter referred to as "Grantee":

(Wherever used herein the terms Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns *of* individuals, and the successors and assigns *of* corporations)

W I T N E S S E T H: That the Grantor, for and in consideration of the sum of Ten and 00/100 ($10.00) Dollars and other valuable considerations, receipt whereof is hereby acknowledged, does hereby grant, bargain, sell, alien remise, release, convey and confirm unto the Grantee all that certain land situate in Pinellas County, State of Florida

To-wit:

See Exhibit "A" attached hereto and incorporated by reference herein.

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

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

AND, the Grantor hereby covenants with the Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land, that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except: taxes accruing subsequent to December 31, 2012; and easements and restrictions of record.

IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

Witness #1 Signature

Jane L. Early
Witness #1 Printed Name

Witness #2 Signature

Jill A. Iacobelli
Witness #2 Printed Name

Rice Family Holdings, LLLP, a Florida limited liability limited partnership

By: Rice Property Management, LLC, a Florida limited liability company, its General Partner

By: _____
Sidney A. Rice, Manager

By: _____
Peter Wells, Manager

STATE OF FLORIDA
COUNTY OF PINELLAS

The foregoing instrument was acknowledged before me this 2nd day of April, 2012 by Sidney A. Rice and Peter Wells, as Managers of Rice Property Management, LLC, a Florida limited liability company, as General Partner of Rice Family Holdings, LLLP, a Florida limited liability partnership, on behalf of the company. They are personally known to me or have produced _____ Drivers lic as identification.

Jane L. Early
Notary Signature

Printed Notary Signature

JANE L. EARLY
Commission # DD 929732
Expires October 23, 2013
Bonded Thru Trey Fain Insurance 800-385-7019

EXHIBIT "A" 12-185A

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

All of ROCK HOUSE REPLAT, according to the map or plat thereof recorded in Plat Book 98, Page 41, Public Records of Pinellas County, Florida.

TOGETHER WITH that portion of the East 1/2 of Sunshine Lane which was vacated by the Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida, and which abuts said plat of ROCK HOUSE REPLAT.

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 5, Block 2, and that part of Lot 30, Block 2, CONEY ISLAND, according to the plat thereof recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, described as follows: From the Southeast corner of said Lot 30, run thence S. 72°50' W., 73.19 feet along the Southerly boundary thereof for a POINT OF BEGINNING; run thence N. 09°44'36" W., 28.84 feet; thence S. 80°07'05" W., 30.56 feet to the Westerly boundary of said Lot 30; thence Southerly along said Westerly boundary to the Southwest corner of said Lot 30; thence Easterly along said lot's Southerly boundary to the Point of Beginning.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 6, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, less the following portion: Beginning at the Northwest corner of said Lot 6 run North 88°47'02" East, 62.51 feet along the Northerly line of said Lot 6; thence South 01°13'40" West., 7.51 feet; thence run North 88°07'20" West, 61.87 feet to an intersection with the Westerly boundary line of said Lot 6; thence run Northerly along said Westerly boundary of said Lot 6, 4.17 feet to the Point of Beginning.
Also the following portion of said Lot 7, Block 2, of said CONEY ISLAND SUBDIVISION: From a Point of Beginning at the Southeast corner of Lot 7, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, run North 00°07'50" West, 6.6 feet along the East boundary of said Lot 7; thence run South 85°16'40" West, 39.5 feet; thence South 01°13'40" West, 4.19 feet to an intersection with the Southerly line of said Lot 7; thence North 88°47'02" East, along said Southerly boundary of said Lot 7, 39.49 feet to the Point of Beginning.

TOGETHER WITH that portion of vacated Sunshine Lane adjoining said portion of Lot 7 that attaches by operation of law pursuant to Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida.

ALSO TOGETHER with that tract of land lying Westerly of Lots 4 and 5, Block 2, of aforesaid CONEY ISLAND SUBDIVISION, to the waters of the Gulf of Mexico, between, the Northwesterly line of said Lot 5 and the Southeasterly line of said Lot 4, extended Westerly to the said waters of the Gulf of Mexico.



Detail by Entity Name

Florida Limited Liability Company
JP BEACH HOLDINGS LLC

Filing Information

Document Number	L12000037362
FEI/EIN Number	45-4804435
Date Filed	03/16/2012
State	FL
Status	ACTIVE

Principal Address

3802 Coconut Palm Dr.
Tampa, FL 33619

Changed: 03/16/2022

Mailing Address

3802 Coconut Palm Dr.
Tampa, FL 33619

Changed: 03/16/2022

Registered Agent Name & Address

F&L CORP.
ONE INDEPENDENT DRIVE
SUITE 1300
JACKSONVILLE, FL 32202

Authorized Person(s) Detail

Name & Address

Title CFO

Harmsworth, James M
3802 Coconut Palm Dr.
Tampa, FL 33619

Title Secretary, GC

Graham, Andrew L
3802 Coconut Palm Dr.
Tampa, FL 33619

Title VP

Patel, Paresh
3802 Coconut Palm Dr.
Tampa, FL 33619

Title President, CEO, Manager

SARAVANOS, ANTHONY
3802 Coconut Palm Dr.
Tampa, FL 33619

Title Authorized Member

Greenleaf Capital LLC
3802 Coconut Palm Dr.
Tampa, FL 33619

Annual Reports

Report Year	Filed Date
2021	04/14/2021
2022	03/16/2022
2023	02/27/2023

Document Images

02/27/2023 -- ANNUAL REPORT	View image in PDF format
03/16/2022 -- ANNUAL REPORT	View image in PDF format
04/14/2021 -- ANNUAL REPORT	View image in PDF format
01/30/2020 -- ANNUAL REPORT	View image in PDF format
04/05/2019 -- ANNUAL REPORT	View image in PDF format
04/11/2018 -- ANNUAL REPORT	View image in PDF format
04/24/2017 -- ANNUAL REPORT	View image in PDF format
03/10/2016 -- ANNUAL REPORT	View image in PDF format
03/12/2015 -- ANNUAL REPORT	View image in PDF format
04/18/2014 -- ANNUAL REPORT	View image in PDF format
04/18/2013 -- ANNUAL REPORT	View image in PDF format
03/16/2012 -- Florida Limited Liability	View image in PDF format

2022 FLORIDA LIMITED LIABILITY COMPANY ANNUAL REPORT

FILED
Mar 16, 2022
Secretary of State
9132224975CC

DOCUMENT# L12000037362

Entity Name: JP BEACH HOLDINGS LLC

Current Principal Place of Business:

3802 COCONUT PALM DR.
TAMPA, FL 33619

Current Mailing Address:

3802 COCONUT PALM DR.
TAMPA, FL 33619 US

FEI Number: 45-4804435

Certificate of Status Desired: No

Name and Address of Current Registered Agent:

F&L CORP.
ONE INDEPENDENT DRIVE
SUITE 1300
JACKSONVILLE, FL 32202 US

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

SIGNATURE:

Electronic Signature of Registered Agent — Date

Authorized Person(s) Detail :

Title	CFO
Name	HARMSWORTH, JAMES M
Address	3802 COCONUT PALM DR.
City-State-Zip:	TAMPA FL 33619

Title	SECRETARY, GC
Name	GRAHAM, ANDREW L
Address	3802 COCONUT PALM DR.
City-State-Zip:	TAMPA FL 33619

Title	VP
Name	PATEL, PARESH
Address	3802 COCONUT PALM DR.
City-State-Zip:	TAMPA FL 33619

Title	PRESIDENT, CEO, MANAGER
Name	SARAVANOS, ANTHONY
Address	3802 COCONUT PALM DR.
City-State-Zip:	TAMPA FL 33619

Title	AUTHORIZED MEMBER
Name	GREENLEAF CAPITAL LLC
Address	3802 COCONUT PALM DR.
City-State-Zip:	TAMPA FL 33619

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am a managing member or manager of the limited liability company or the receiver or trustee empowered to execute this report as required by Chapter 605, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: JAMES MARK HARMSWORTH C.F.O. 03/16/2022

Electronic Signature of Signing Authorized Person(s) Detail — Date

AFFIDAVIT TO AUTHORIZE AGENT

STATE OF FLORIDA
COUNTY OF PINELLAS

ANTHONY SARAVANOS / J P BEACH HOLDINGS, LLC
NAME OF OWNER(S) being duly sworn, depose(s) and say(s):

PROPERTY ADDRESS(ES): 12765 SUNSHINE LANE, TREASURE ISLAND

Parcel I.D. Number(s).: 15-31-15-76240-000-0000

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 BRAULIO GRAJALES / HIGH POINT ENGINEERING 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): ANTHONY SARAVANOS
SIGNATURE OF PROPERTY OWNER(S): [signature]
DATE: 9-9-2022

STATE OF: FLORIDA
COUNTY OF: PINELLAS
The foregoing instrument was acknowledged before me this 9 day of SEPTEMBER, 2022, by (company/agent) J P BEACH HOLDINGS, LLC by (persons name) ANTHONY SARAVANOS, it's (title) PRESIDENT who is personally known to me, or who has produced _____ as identification and who ✓ did ____ did not take an oath.

ORINTA DELAIN
[signature]
(Print, Type, or Stamp Commissioned Name of Notary Public)
Commission Number: HH 072558
Commission Expires: 12-15-2024

ORINTA M. DELAIN
MY COMMISSION # HH 072558
EXPIRES: December 15, 2024
Bonded Thru Notary Public Underwriters

NOTE THAT THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION

W.O. 5770

TOPOGRAPHIC SURVEY

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

LEGAL DESCRIPTION:

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

All of ROCK HOUSE REPLAT, according to the map or plat thereof recorded in Plat Book 98, Page 41, Public Records of Pinellas County, Florida.

TOGETHER WITH that portion of the East 1/2 of Sunshine Lane which was vacated by the Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida, and which abuts said plat of ROCK HOUSE REPLAT.

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Lot 6, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, less the following portion: Beginning at the Northwest corner of said Lot 6 run North 88°47'02" East, 62.51 feet along the Northerly line of said Lot 6; thence South 01°13'40" West., 7.51 feet; thence run North 88°07'20" West, 61.87 feet to an intersection with the Westerly boundary line of said Lot 6; thence run Northerly along said Westerly boundary of said Lot 6, 4.17 feet to the Point of Beginning.
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TOGETHER WITH that portion of vacated Sunshine Lane adjoining said portion of Lot 7 that attaches by operation of law pursuant to Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida.

ALSO TOGETHER with that tract of land lying Westerly of Lots 4 and 5, Block 2, of aforesaid CONEY ISLAND SUBDIVISION, to the waters of the Gulf of Mexico, between, the Northwesterly line of said Lot 5 and the Southeasterly line of said Lot 4, extended Westerly to the said waters of the Gulf of Mexico.

SCALE: 1" = 20'

CURVE TABLE (D&M)					
CURVE	LENGTH	RADIUS	DELTA	CH DIRECTION	CH LENGTH
C1	141.73	1971.86	4°07'06"	S20°22'45"E	141.70
C2	10.38	1981.86	0°18'00"	S22°35'18"E	10.38
C3	113.87	1971.86	3°18'32"	S24°23'34"E	113.86
C4	42.36	1959.86	1°14'18"	S26°45'03"E	42.35
C5	39.98	611.35	3°44'50"	S10°35'59"E	39.98
C6	35.87	611.35	3°21'41"	S03°17'49"E	35.86

LINE TABLE (D&M)		
LINE	LENGTH	BEARING
L1	10.00	S67°33'42"W
L2	10.00	N67°15'42"E
L3	12.35	N77°30'00"E
L4	90.76	S72°50'00"W
L5	96.91	S10°16'00"E
L6	7.50	S89°52'00"W
L7	0.66	S00°08'00"E
L8	7.53	S84°48'00"W
L9	66.42	S10°16'00"E
L10	108.17	S81°15'00"W
L11	165.31	S77°33'00"W
L12	104.30	N08°56'23"E
L13	133.60	N85°01'00"E
L14	41.58	N88°07'22"W
L15	45.94	N02°10'12"E
L16	13.22	N81°03'16"W
L17	195.00	N20°02'00"E
L18	14.60	N36°37'36"E
L19	19.48	S74°25'39"E
L20	51.55	S68°44'00"E

SURVEY NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, AND IS SUBJECT TO EASEMENTS, RIGHT-OF-WAY, AND OTHER MATTERS OF RECORD THAT A TITLE SEARCH MIGHT DISCLOSE.

2. PLANIMETRIC FEATURES SHOWN HEREON WERE DETERMINED BY STANDARD FIELD SURVEYING METHODS.

3. BEARING BASIS IS THE SOUTH BOUNDARY LINE OF PARCEL M BEING S72°50'00"W, ASSUMED.

4. ALL INSTRUMENTS SHOWN HEREON ARE OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, UNLESS OTHERWISE SPECIFIED.

5. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SURFACE MARKINGS AND OR STRUCTURES. NO EXCAVATION WAS PERFORMED FOR THE LOCATION OF SUCH UTILITIES.

6. ADDITIONS OR DELETIONS TO THIS SURVEY MAP AND/OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

7. THIS PARCEL APPEARS TO BE IN FLOOD ZONE "VE (EL 12 FEET)", "AE (EL 11 FEET)" AND "AE (EL 10 FEET)" ACCORDING TO THE FLOOD INSURANCE RATE MAP, MAP NUMBER: 12103C0193H, MAP EFFECTIVE DATE: 08/24/2021. AS PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THIS PARCEL, OR A PORTION THEREOF, APPEARS TO BE IN A COASTAL "A" ZONE.
THIS MAP'S NOTES STATE THAT THE BASE FLOOD ELEVATIONS SHOWN REPRESENT ROUNDED WHOLE-FOOT ELEVATIONS AND THEREFORE MAY NOT EXACTLY REFLECT THE FLOOD ELEVATION DATA PRESENTED IN THE FLOOD INSURANCE STUDY (FIS) REPORT. THE FIS REPORT WAS NOT CONSULTED FOR THIS SURVEY.
FLOOD ZONE LINES AND/OR LMWA LINE SHOWN HEREON WERE TRANSFERRED BY GRAPHIC METHODS FROM THE FLOOD ZONE MAP, AND ARE SUBJECT TO THE INHERENT INACCURACIES OF SUCH TRANSFERS. THIS FLOOD ZONE NOTE IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, AND ANY PROPOSED FINISHED FLOOR ELEVATIONS ARE TO BE DETERMINED BY THE PERMITTING AGENCY HAVING JURISDICTION.

8. LOCATIONS OF TREES SHOWN HEREON WERE LIMITED TO TREES 4" DIAMETER AT BREAST HEIGHT (DBH) OR LARGER.
GEODATA SERVICES INC. CAN ACCEPT NO RESPONSIBILITY FOR THE IDENTIFICATION OF THE TREE SPECIES SHOWN HEREON. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PROPERLY IDENTIFY THE TREES SHOWN HEREON, TREE IDENTIFICATION IS OUTSIDE THE EXPERTISE OF A PROFESSIONAL LAND SURVEYOR. THE TREE TYPES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE USED AFTER CONFIRMATION BY A CERTIFIED ARBORIST OR OTHER SUCH PROFESSIONAL.

9. VERTICAL DATA SHOWN HEREON ARE IN NAVD 88 DATUM, HOLDING FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK BM 15-12-E03 AND A PUBLISHED ELEVATION OF 5.28 FEET UTILIZED TO SET A SITE TBM, BENCHMARK DESIGNATIONS AND INFORMATION SHOWN HERE ARE FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK SHEETS.

10. STATE PLANE COORDINATES SHOWN HEREON ARE THE RESULT OF A CONTROL SURVEY PERFORMED BY GLOBAL POSITIONING SYSTEM (GPS) METHODS. THIS GPS SURVEY WAS PERFORMED BY A CREW FROM GEODATA SERVICES, INC., CLEARWATER, FLORIDA AND WAS ESTABLISHED BY GPS OBSERVATION AND USING A SPECTUM PRECISION EPOCH 50 RTK RECEIVER WITH CORRECTIONS PROVIDED BY TRIMBLE POSITIONING SERVICES VIA INTERNET MODEM.
BASIS: FLORIDA WEST ZONE, NORTH AMERICAN DATUM (NAD) 83 (2009 ADJUSTMENT)

SYMBOL LEGEND

- BFP = Backflow Preventor
- CB = Cable Box
- CL = Centerline
- CO = Cleanout
- DL = Decorative Light
- DMH = Drainage Manhole
- FH = Fire Hydrant
- GT = Grease Trap
- HA = Handicap Anchor
- HH = Handhole
- LP = Lightpole
- MB = Mailbox
- PB = Power Box
- SMH = Sanitary Manhole
- SN = Sign
- SE = Spot Elevation
- TB = Telephone Box
- UP = Utility Pole
- WM = Water Meter
- WV = Water Valve
- WL = Wall

TREE LEGEND

- PALM

ABBREVIATION LEGEND

- (C) = Calculated Data
- (D) = Data per Description
- (F) = Field Determined
- (M) = Measured Data
- (P) = Data per Plat
- (R) = Data per Record
- A/C = Air Conditioner
- BW/F = Barbwire Fence
- BFE = Base Flood Elevation
- BFP = Backflow Preventor
- CB = Chord Bearing
- CH = Chord
- C.A.B. = Condominium Plat Book
- C/C = Covered Concrete
- C/S = Concrete Slab
- C/SW = Concrete Sidewalk
- CCCL = Coastal Construction Control Line
- C/L = Centerline
- CLF = Chainlink Fence
- COV. = Covered
- CLP = Concrete Light Pole
- CMP = Corrugated Metal Pipe
- CONC. = Concrete
- Δ = Delta Angle
- D.B. = Deed Book
- DH = Drillhole
- DMH = Drainage Manhole
- E/P = Edge of Pavement
- ECL = Erosion Control Line
- EL = Elevation
- EOW = Edge of Water
- FCIR = Found Iron Rod & Cap
- FCM = Found Concrete Monument
- FDOT = Florida Department of Transportation
- FFE = Finished Floor Elevation
- FIP = Found Iron Pipe
- FIR = Found Iron Rod No Cap
- FND = Found Nail & Disk
- FPP = Found Pinched Pipe
- FW = Fence Wall
- GV = Gate Valve
- HYD = Fire Hydrant
- I.E. = Invert Elevation
- LB = Corporate Certificate Number
- LP = Light Pole
- LFE = Lowest Floor Elevation
- LMWA = Limit of Moderate Wave Action Line
- M.O.L. = More or Less
- MES = Mitered End Section
- N&D = Nail & Disk
- NFNS = Not Found and Not Set
- N.I. = Not Included
- OCS = Outfall Control Structure
- OHW = Overhead Wire
- O.R. = Official Records Book
- P.B. = Plat Book
- PCP = Permanent Control Point
- PG(S) = Page(s)
- PLS = Professional Land Surveyor
- POB = Point of Beginning
- POC = Point of Commencement
- PRC = Point of Reverse Curvature
- PRM = Permanent Reference Monument
- R = Radius
- RGE = Range
- R/W = Right-of-way
- SCM = Set Concrete Monument
- SCM = Set Concrete Monument PLS #2865
- SCIR = Set Iron Rod & Cap 5/8" PLS #2865
- SN&D = Set Nail & Disc PLS #2865
- SMH = Sanitary Manhole
- TBM = Temporary Benchmark
- TOB = Top of Bank
- TOS = Toe of Slope
- TWP = Township
- UB = Utility Box
- UP = Utility Pole
- V/F = Vinyl Fence
- W/F = Wood Fence
- WM = Water Meter
- W.O. = Work Order
- WV = Water Valve

SURVEYOR'S CERTIFICATION:

I, DENNIS J. EYRE, THE SURVEYOR IN RESPONSIBLE CHARGE, HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON AND THAT SAID ABOVE GROUND SURVEY AND SKETCH ARE ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. SURVEY NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, OR ELECTRONIC DIGITAL SIGNATURE IN ACCORDANCE WITH STATE OF FLORIDA ADMINISTRATIVE CODE RULE 5J-17.062.

Dennis J Eyre PLS 2865
Digitally signed by Dennis J Eyre PLS 2865
Date: 2022.09.16 12:16:48 -04'00'

DENNIS J. EYRE, P.L.S. FLA. REG. No. 2865
DATE: SEPTEMBER 16, 2022

AN UNSIGNED SURVEY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY

W.O. # 5770	FIELD DATE: MARCH 19, 2019
DRAWN BY: EJ/HW	FIELD DATE: APRIL 9, 2019 - ADDED ADDITIONAL TOPO
CHECKED BY: DJE	FIELD DATE: MAY 16, 2019 - ADDED ADDITIONAL TOPO
SCALE: 1" = 20'	UDATED FLOOD ZONE DATE: SEPTEMBER 15, 2022
FIELD BOOK / PAGE(S): 1-19/22, 1-19/29	
SHEET 1 OF 1	

GEODATA SERVICES INC.
1166 KAPP DRIVE
CLEARWATER, FL 33765
PHONE: (727) 447-1763
LB 7466

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NOTE THAT THIS DRAWING MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION

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PARKING LOT AT JOHN'S PASS

12765 SUNSHINE LANE
TREASURE ISLAND, PINELLAS COUNTY, FLORIDA 33706

FLOOD ZONE INFORMATION
PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), THE SITE IS LOCATED WITHIN ZONE "AE" (BFE 10' & 11') AND "VE" (BFE 12'), FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER: 12101C0193H (REVISED 8/24/2021)

BOUNDARY AND TOPOGRAPHIC SURVEY
SURVEY INFORMATION PROVIDED BY: GEODATA SERVICES, INC. L.B. # 7466
SIGNED AND SEALED BY: DENNIS J. EYRE, P.S.M # 2865
DATED: 06/03/2019

GEOTECHNICAL INVESTIGATION
GEOTECHNICAL INFORMATION PROVIDED BY: AREHNA ENGINEERING, INC.
SIGNED AND SEALED BY: KRISTINA LACAVA, P.E. # 77594
DATED: 05/09/2019

UTILITIES PROVIDERS

ELECTRICITY
DUKE ENERGY FLORIDA
100 CENTRAL AVENUE
ST, PETERSBURG, FLORIDA 33701
TEL: (877) 372-8477

WATER AND SEWER
PINELLAS COUNTY UTILITIES
14 S. FORT HARRISON AVENUE
CLEARWATER, FLORIDA 33756
TEL: (813) 235-6189

CABLE
SPECTRUM
700 CARILLON PARKWAY, SUITE 6
ST. PETERSBURG, FLORIDA 33716
TEL: (877) 897-7333

TELEPHONE
FRONTIER
1280 EAST CLEVELAND STREET
CLEARWATER, FLORIDA 33755
TEL: (800) 483-4000

GAS
TECO PEOPLES GAS
1920 9TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33713
TEL: (727) 826-3333

FIRE
TREASURE ISLAND FIRE DEPARTMENT
180 108TH AVENUE
TREASURE ISLAND, FLORIDA 33706
TEL: (727)-547-4590

CONTRACTOR SHALL CALL
"SUNSHINE STATE ONE CALL" OF FLORIDA AT 1-800-432-4770
A MINIMUM OF 2 AND A MAXIMUM OF 5 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION.

OWNER:
JP BEACH HOLDINGS, LLC
5300 W. CYPRESS, SUITE 100
TAMPA, FL 33607
TEL: (888) 515-1564
EMAIL: ASARAVANOS@GREENLEAFCAPITAL.COM

DEVELOPER:
GREENLEAF CAPITAL, LLC
5300 W. CYPRESS STREET, SUITE 165
TAMPA, FLORIDA 33607
TEL: (888) 515-1564
EMAIL: ASARAVANOS@GREENLEAFCAPITAL.COM

ENGINEER:
HIGH POINT ENGINEERING, INC.
5300 W. CYPRESS STREET, SUITE 282
TAMPA, FLORIDA 33607
TEL: (813) 644-8333
FAX: (813) 644-7000
EMAIL: BGRAJALES@HPE-FL.COM

ARCHITECT:
N/A

SURVEYOR:
GEODATA SERVICES, INC
1166 KAPP DRIVE
CLEARWATER, FLORIDA 33765
TEL: (727) 447-1763

CONTRACTOR:
T.B.D.

LANDSCAPE:
CJM DESIGNS, LLC
3333 SAN PEDRO STREET
CLEARWATER, FLORIDA 33759
TEL: (727) 430-5038
EMAIL: CMORAHAN@VERIZON.NET



SITE AERIAL PHOTOGRAPH
N.T.S.



SITE LOCATION MAP
N.T.S.

SITE DATA TABLE

SECTION 15, TOWNSHIP 31 S, RANGE 15 E
TREASURE ISLAND, PINELLAS COUNTY, FLORIDA
PARCEL ID # 15-31-15-76240-000-0000

DESCRIPTION		EXISTING	PROPOSED	CODE REQUIREMENTS
ZONING:		RFH - 50 - RESORT FACILITIES HIGH P - PRESERVATION	RFH - 50 - RESORT FACILITIES HIGH P - PRESERVATION	-----
FUTURE LAND USE:		RFH - RESORT FACILITIES HIGH P - PRESERVATION	RFH - RESORT FACILITIES HIGH P - PRESERVATION	-----
USAGE:		VACANT	PARKING LOT, OFF-STREET	-----
SITE AREA:		RFH - 50 : 39,861 SF (0.915 AC) P : 21,875 SF (0.502 AC)	RFH - 50 : 39,861 SF (0.915 AC) P : 21,875 SF (0.502 AC)	15,000 S.F. (MIN)
BUILDING FOOTPRINT AREA: PERCENTAGE OF SITE AREA:		3,221 S.F. 8.1%	0 S.F. 0.0%	50.0% (MAX)
GROSS FLOOR AREA (G.F.A.): FLOOR AREA RATIO (F.A.R.):		5,090 S.F. 0.127	0 S.F. 0.000	0.6 (MAX)
BUILDING SETBACKS	GULF BOULEVARD (EAST):	75.7 LF	----	25.0 FT. (MIN)
	SIDE (NORTH):	194.5 LF	----	0 FT. (MIN)
	SIDE (SOUTH):	12.4 LF	----	0 FT. (MIN)
	REAR (WEST):	26.3 LF	----	25.0 FT. (MIN)
BUILDING HEIGHT:		25.0 F.T	----	-----
VEHICULAR USE AREA (V.U.A.): PERCENTAGE OF SITE AREA:		4,281 S.F. 10.7%	20,173 S.F. 50.6%	-----
SIDEWALK, CURB & DUMPSTER AREA: PERCENTAGE OF SITE AREA:		2,115 S.F. 5.3%	619 S.F. 1.6%	-----
TOTAL IMPERVIOUS AREA: IMPERVIOUS SURFACE RATIO (I.S.R.):		9,617 S.F. 0.241	20,792 S.F. 0.522	-----
TOTAL PERVIOUS AREA: PERCENTAGE OF SITE AREA:		30,244 S.F. 75.9%	19,069 S.F. 47.8%	-----
TOTAL POND AREA: PERCENTAGE OF SITE AREA:		0 S.F. 0%	3,089 S.F. 7.7%	-----
TOTAL WETLAND AREA: PERCENTAGE OF SITE AREA:		0 S.F. 0.0%	0 S.F. 0.0%	-----
INTERIOR LANDSCAPE AREA FOR V.U.A.: PERCENTAGE OF V.U.A.:		450 S.F. 10.5%	2,656 S.F. 13.2%	10.0% (MIN)
OFF-STREET PARKING:		0 SPACES	46 SPACES	-----
MINIMUM OFF-STREET PARKING CALCULATION:				

INDEX OF DRAWINGS

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C-2.1	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
C-2.2	SITE CONSTRUCTION NOTES & SPECIFICATIONS
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C-3.1	ROW DEMOLITION & TREE PROTECTION PLAN
C-4.0	SITE LAYOUT & PARKING PLAN AERIAL
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C-7.3	SITE CONSTRUCTION DETAILS
C-7.4	MAINTENANCE OF TRAFFIC DETALS

SUMMARY OF PARKING SUPPLY:
REGULAR PARKING = 44 SPACES
COMPACT PARKING = 0 SPACES
HANDICAP PARKING = 2 SPACE
TOTAL PARKING = 46 SPACES

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

Digitally signed by Braulio Grajales
DN: c=US, o=HIGH POINT ENGINEERING INC, dnQualifier=A01410C00000179A4A75F5A0000CD60, cn=Braulio Grajales
Date: 2024.05.10 14:44:14 -04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	1-11-24	PER FDOT
4	ED	10-20-23	PER FDOT
3	ED	2-6-23	PER FDOT
2	ED	2-6-23	PER CITY OF TREASURE ISLAND
1	ED	9-23-22	PER FDOT

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE DEVELOPMENT DATA

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-1

GENERAL CONSTRUCTION NOTES

1. THESE DRAWINGS SHALL NOT BE UTILIZED FOR CONSTRUCTION PRIOR TO OBTAIN THE PERMITS FROM THE CITY/COUNTY AND OTHER GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. THE CONTRACTOR SHALL ASSURE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED DRAWINGS.

2. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AND REGULATORY AGENCIES, THE ENGINEER, AND THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.

3. UNLESS OTHERWISE SPECIFIED, ALL WORK PERFORMED SHALL COMPLY WITH THE ORDINANCES AND REGULATIONS OF THE GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. ALL CONSTRUCTION MATERIALS, MEANS, METHODS, PROCEDURES AND TECHNIQUES SHALL CONFORM TO CITY/COUNTY CONSTRUCTION STANDARDS, FDOT "STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" AND FDOT "SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

4. THE INFORMATION PROVIDED IN THESE CONSTRUCTION DOCUMENTS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING AND EVALUATING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY OR ALL INVESTIGATIONS AS DEEMED NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM A SITE RECONNAISSANCE PRIOR TO BIDDING THE WORK AND CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN ON THE CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

6. IMMEDIATELY UPON MOBILIZING TO THE SITE, THE CONTRACTOR (ACCOMPANIED BY THE OWNER AND ARCHITECT) SHALL PERFORM A SURVEY OF THE ENTIRE PROJECT AREA. THE CONTRACTOR SHALL SURVEY IN DETAIL USING WRITTEN AND PHOTOGRAPHIC MEANS, BUILDING(S) AND SITE AREAS THAT ARE NOT IN A FIRST CLASS CONDITION (SURFACES THAT ARE UNBROKEN, NON-CRACKED, NON-RUSTING, WITHOUT CHIPS, WITHOUT SPLINTERS, OF TEXTURE MATCHING ITS SURROUNDING, WITH NEW APPEARING FINISHES, AND OPERATING AS ORIGINALLY DESIGNED OR INTENDED TO OPERATE) SPECIALLY THOSE THAT WILL REMAIN IN THEIR EXISITNG CONDITION AT THE END OF PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TO THE OWNER A COMPLETE PROJECT IN FIRST CLASS CONDITION, MEETING INDUSTRY WIDE STANDARDS IN QUALITY AND PERFORMANCE (REGARDLESS OF WHETHER AN AREA IS SPECIFICALLY IDENTIFIED WITHIN THE DRAWINGS AND SPECIFICATIONS OR NOT) UNLESS A PARTICULAR AREA HAS BEEN DESCRIBED IN THE WRITTEN AND PHOTOGRAPHIC DETAILS. SHOULD DURING THE COURSE OF THE WORK, ANY AREA OF THE BUILDING(S) AND/OR UTILITIES AND/OR THE SITE BECOME DAMAGED AND THAT AREA WAS NOT SPECIFICALLY CALLED OUT TO BE A PART OF THE CONSTRUCTION, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE DAMAGED AREA TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO ADDITIONAL COST.

7. WHEN NECESSARY, THE CONTRACTOR SHALL COORDINATE AND SCHEDULE CONSTRUCTION ACTIVITIES WITH OTHER CONTRACTORS AND UTILITY COMPANIES (E.G., POWER, TELEPHONE, CABLE, GAS, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE REQUIRED PERMITS TO PERFORM WORK WITHIN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ENSURE THAT ALL PERMITS ARE APPROVED PRIOR TO CONSTRUCTION.

8. THE CONTRACTOR SHALL USE THE BENCHMARK ELEVATION NOTED IN THE BOUNDARY AND TOPOGRAPHIC SURVEY TO REFERENCE ALL TEMPORARY BENCHMARKS, BASE LINES, GRADE POINTS AND PROPERTY MONUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REESTABLISH, IN THEIR ORIGINAL STATE, THE PROPERTY MONUMENTS DISTURBED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE TO VERIFY AND CORRELATE IN THE FIELD ALL BASE LINES, ELEVATIONS, AND DIMENSIONS SHOWN IN THESE PLANS, AND REPORT TO THE ENGINEER IN WRITING ANY ERROR, OMISSION, OR DISCREPANCY BEFORE PERFORMING ANY WORK.

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAKE ADJUSTMENTS OF ANY CONFLICT SHOWN OR NOT SHOWN IN THESE PLANS WITH OTHER EXISTING SITE IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT SUCH AS BASE LINES, GRADES, SLOPES, UTILITY RELOCATIONS, OR ANY OTHER STAKE-OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN IN THESE PLANS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

11. TOPOGRAPHIC SURVEY AND LEGAL DESCRIPTIONS WERE PREPARED BY OTHERS AND ARE SHOWN HEREIN FOR INFORMATION PURPOSES ONLY. THE ENGINEER ASSUME NO RESPONSIBILITY FOR THEIR PREPARATION, COMPLETENESS NOR ACCURACY AND THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING SAID INFORMATION. PROPOSED LOCATIONS, ELEVATIONS, AND DIMENSIONS OF STRUCTURES AND OTHER SITE FEATURES ARE SHOWN IN ACCORDANCE TO THE SURVEY INFORMATION PROVIDED TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

12. GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS WERE PREPARED BY OTHERS AND ARE USED SOLELY TO ASSIST CONTRACTORS IN ASSESSING THE NATURE AND EXTENT OF TESTING AND STUDIES REQUIRED TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. NO REPRESENTATION IS MADE OR GIVEN CONCERNING THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK AND CONTRACTORS ARE FULLY RESPONSIBLE WHEN USING SAID INFORMATION. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY OR ALL INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

13. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND NOT FIELD VERIFIED. THE CONTRACTOR MUST USE SAID INFORMATION ONLY AS A GUIDE TO THE SUGGESTED LOCATION OF UNDERGROUND UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO: POTABLE WATER LINES, SANITARY SEWER, STORM SEWER, GAS LINES, ELECTRICAL POWER, RECLAIMED WATER LINES, IRRIGATION LINES, TELEVISION CABLES, FIBER OPTIC CABLES, TELEPHONE CABLES, ALARM SYSTEM CABLES, SECURITY WIRING, SITE UNDERGROUND MECHANICAL, CONTROL SYSTEMS WIRING, SYSTEMS INCLUDING INSULATION, ETC. THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF THE EXISTING UNDERGROUND UTILITY LINES NOR THAT ALL ARE SHOWN HEREON. THE CONTRACTOR SHALL DETERMINE THE SPECIFIC LOCATION AND CAREFULLY EXPOSE ALL UNDERGROUND UTILITY LINES IN COORDINATION WITH OWNER(S) TO THEIR SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR, PER SPECIFICATIONS, ANY AND ALL DAMAGED UNDERGROUND UTILITY SERVICES AS LISTED ABOVE AT NO ADDITIONAL COST.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, REPAIRING AND/OR REINSTALLING DAMAGED OR DISTURBED EXISTING IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, SIDEWALKS, DUMPSTER PADS, FENCES, HAND RAILS, GATE VALVES, CLEANOUTS, FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS, ELECTRICAL, CABLE AND TELEPHONE BOXES, ELEVATED POWER AND TELEPHONE LINES, WATER, SANITARY, GAS AND STORMWATER PIPELINES, UNDERGROUND POWER, TELEPHONE AND CABLE LINES, IRRIGATION SYSTEMS AND CONTROLS, ETC.

15. THE CONTRACTOR SHALL LOCATE PROPERTY LINES AS REQUIRED TO AVOID ENCROACHMENT INTO ADJACENT PROPERTY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, PHASES, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.

16. THE CONTRACTOR SHALL RESTORE TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS, ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THE WORK. ADDITIONAL COSTS ARE INCIDENTAL AND NO EXTRA COMPENSATION IS TO BE ALLOWED.

17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER FOR APPROVAL ON ALL PRECAST AND MANUFACTURED ITEMS FOR THIS PROJECT. FAILURE TO OBTAIN APPROVAL BEFORE MANUFACTURE AND INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

18. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A FLORIDA REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER TO PERFORM ALL SITE CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL TESTING, AND THIS COST SHALL BE INCLUDED AS PART OF THE CONTRACT PRICE. IN LOCATIONS WHERE THE CONSTRUCTION TAKES PLACE WITHIN PUBLIC RIGHT-OF-WAY, ALL SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH FDOT AND LOCAL AGENCY REQUIREMENTS.

19. THE CONTRACTOR SHALL FORWARD TO THE OWNER A COPY OF ALL COMPACTION AND ASPHALT MIX TEST RESULTS. THE TEST RESULTS SHALL BE CERTIFIED BY A MATERIAL/GEOTECHNICAL ENGINEER, IN WRITING, THAT ALL TESTING REQUIREMENTS, REQUIRED BY CITY/COUNTY AND/OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AS WELL AS BY THE APPROVED CONSTRUCTION PLANS, ARE SATISFIED.

20. DEVIATIONS TO THESE PLANS AND SPECIFICATIONS WITHOUT CONSENT OF THE ENGINEER OR THE OWNER MAY BE A CAUSE FOR THE WORK TO BE UNACCEPTABLE. VALUE ENGINEERING SHALL RECEIVE WRITTEN APPROVAL FROM THE ENGINEER AND THE OWNER.

21. THE CONTRACTOR SHALL PROVIDE CERTIFIED AS-BUILT DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE AS-BUILT DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, ACCURATE HORIZONTAL AND VERTICAL LOCATION OF DETENTION / RETENTION BASIN(S) INCLUDING TOP OF BANK, TOE OF SLOPE, BOTTOM OF POND AND SIDE SLOPES, CONTROL STRUCTURE(S), DIMENSION AND INVERT ELEVATION OF WEIR, ORIFICE AND SKIMMER, INLET AND MANHOLE SIZES AND STORM PIPE INVERT ELEVATIONS, SIZE AND LOCATIONS OF ALL UTILITIES INCLUDING SANITARY SEWER AND WATER PIPES AND FITTINGS, STORM AND SANITARY SEWER SLOPES, CONCRETE PADS, SIDEWALKS, FINISHED FLOOR ELEVATION(S), GRADE BREAKS, ETC. THE CONTRACTOR SHALL PROVIDE FIVE COPIES OF THE CERTIFIED AS-BUILT DRAWINGS TO THE ENGINEER. THE AS-BUILT DRAWING SHALL BE SUFFICIENT IN DETAIL TO BE ACCEPTABLE BY GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION ON THE PROJECT.

22. SIGN MONUMENTS, WALLS AND FENCES REQUIRE SEPARATE PERMIT APPLICATION(S). ANY DEVIATIONS SHALL RECEIVE WRITTEN APPROVAL FROM THE OWNER.

23. WHEN NECESSARY, CONTRACTOR SHALL BE RESPONSIBLE FOR AN EASEMENT INSPECTION BY CITY/COUNTY ENGINEERING DEPARTMENT PRIOR TO CONCRETE POUR OF FOOTER/SLAB. CONTRACTOR SHALL STAKE ALL PROPERTY CORNERS AND EASEMENT LINES PRIOR TO EASEMENT INSPECTION.

24. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLANS AND PERMITS AT THE CONSTRUCTION SITE AT ALL TIMES.

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) NOTES

1. TO MINIMIZE CARBON FOOTPRINT, THE OWNER AND CONTRACTOR SHALL SELECT LOCAL MATERIALS FROM SUPPLIERS AND MANUFACTURES WITHIN 500 MILES OF THE PROJECT SITE.

2. TO REDUCE ENVIRONMENTAL IMPACT, THE OWNER AND CONTRACTOR SHALL USE SUSTAINABLE OR RECYCLED MATERIALS SUCH AS CRUSHED CONCRETE, RECYCLED AGGREGATE, RECLAIMED WOOD, ETC.

3. TO MITIGATE ENVIRONMENTAL IMPACT, THE OWNER AND CONTRACTOR SHALL SEND ANY CONSTRUCTION DEBRIS PRODUCED DURING DEMOLITION ACTIVITIES TO RECYCLING FACILITIES RATHER THAN LANDFILLS.

4. TO MINIMIZE POTABLE WATER USAGE AND CONSERVE GROUNDWATER, THE OWNER AND CONTRACTOR SHOULD INSTALL WHEN POSSIBLE, UNDERGROUND CISTERNS TO HARVEST RAINWATER TO BE USED AS SUPPLEMENTAL WATER FOR NEEDS OTHER THAN HUMAN CONSUMPTION.

5. TO REDUCE POLLUTED STORMWATER LEAVING THE SITE AND TO MAXIMIZE ON-SITE STORMWATER RETENTION, THE OWNER AND CONTRACTOR SHOULD USE WHEN POSSIBLE, PERMEABLE OR PERVIOUS PAVEMENT DESIGNED USING THE MIX-PROCESS METHOD DEVELOPED IN FLORIDA.

GENERAL SAFETY NOTES

1. THESE CONSTRUCTION PLANS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY IN ACCORDANCE WITH U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR MEANS, METHODS, PROCEDURES AND TECHNIQUES OF CONSTRUCTION SAFETY.

2. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET BY THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

3. DURING CONSTRUCTION, ALL SAFETY CONTROLS AND REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PEDESTRIANS AND WORKERS.

4. THE MINIMUM STANDARDS IN "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PEDESTRIANS AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED AND APPROVED BY APPLICABLE AGENCIES PRIOR TO START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT THEY COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS.

7. THE CONTRACTOR PERFORMING TRENCH EXCAVATION, IN EXCESS OF 5' FEET IN DEPTH, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR EXCAVATIONS SAFETY STANDARDS, 29 C.F.R., S.1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

8. TO COMPLY WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES, AFFILIATED OR NOT AFFILIATED TO THE "SUNSHINE STATE ONE CALL" OF FLORIDA CORPORATION, PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS AND/OR CLEARANCE OF EXISTING UNDERGROUND UTILITIES.

⚠3 WORK IN FDOT RIGHT-OF-WAY NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A RIGHT-OF-WAY USE PERMIT FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OFFICE FOR ANY WORK WITHIN THE RIGHT-OF-WAY. THE CONTRACTOR SHALL INCLUDE IN THE PERMIT APPLICATION A MAINTENANCE OF TRAFFIC PLAN AND PROOF OF LIABILITY INSURANCE.
THE CONTRACTOR SHALL NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OFFICE (48) HOURS PRIOR TO START OF CONSTRUCTION.
ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL CONFORM TO:

(1) FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

(2) FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR ROADWAY AND BRIDGE CONSTRUCTION", LATEST EDITION.

(3) FLORIDA DEPARTMENT OF TRANSPORTATION "FDOT DESIGN MANUAL", LATEST EDITION.

1. PERMANENT EROSION CONTROL AND SHOULDER SODDING AND TURF ON EXISTING FACILITIES SHALL CONFORM TO FDOT STANDARD PLANS INDEX 570-001 AND 570-010.
2. CURBS, CURB AND GUTTERS AND SIDEWALKS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 520-001, 522-001 AND 522-002.
3. INLETS, MANHOLES AND JUNCTION BOXES SHALL CONFORM TO FDOT STANDARD PLANS INDEXES 425-001 TO 425-090.
4. TRAFFIC CONTROL THROUGH WORK ZONES SHALL CONFORM TO FDOT STANDARD PLANS INDEX 102-600.
5. SINGLE COLUMN GROUND SIGNS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 700-010 AND SHALL BE PLACED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 700-101.
6. STRIPING SHALL CONFORM TO FDOT STANDARD PLANS INDEX 711-001.
7. REFLECTIVE PAVEMENT MARKERS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 706-001.
8. SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
9. ALL DISTURBED AREAS IN FDOT RIGHT-OF-WAY SHALL BE SODDED.

⚠3 FDOT CONSTRUCTION NOTES FOR ACCESS

1. ANY NEW PROPOSED PLAN SHALL INCLUDE CROSS SECTIONS OF THE STATE ROAD ADEQUATELY REFLECTING ALL RIGHT OF WAY FEATURES INCLUDING EXISTING UTILITIES, STORM DRAIN STRUCTURES AND ANY ABOVE OR BELOW GROUND APPURTENANCES WHERE APPLICABLE.
2. NO PEDESTRIAN PATHWAY IS TO BE REMOVED, BLOCKED, OR DISTURBED WITHOUT HAVING A SUFFICIENT DESIGNATED TEMPORARY PEDESTRIAN PATHWAY WITH ALL APPROPRIATE PEDESTRIAN MAINTENANCE OF TRAFFIC SIGNS (STANDARD PLAN 102-660) IN PLACE PRIOR TO PATHWAY BEING AFFECTED.
3. ALL TEMPORARY PEDESTRIAN PATHWAYS MUST BE FIRM AND UNYIELDING.
4. ANY SIDEWALK FRONTING THE PROPERTY THAT IS CRACKED, DAMAGED OR UNSTABLE AND IS CREATING AN ADA TRIP HAZARD MUST BE REPLACED BY SECTION, USING STANDARD #520-001, #522-002, AND #522-001 FOR THE CONSTRUCTION OF SIDEWALK AND MEET CURRENT ADA STANDARDS. ALL CONCRETE PLACED IN THE RIGHT OF WAY SHALL BE A MINIMUM OF 6" THICK, FDOT CERTIFIED CLASS 1 NON-STRUCTURAL, 3,000 PSI CONCRETE WITH FIBER MESH MATERIAL FROM A FDOT APPROVED PLANT.
5. VERIFY AND ENSURE THAT THE EXISTING SIDEWALK IN THE ROW BEING RETAINED MEETS ADA REQUIREMENTS. ANY SIDEWALK FOUND DURING SUBSEQUENT SITE INSPECTIONS NOT MEETING CURRENT ADA AND FDOT DESIGN STANDARDS WILL BE REQUIRED TO BE REMOVED AND REPLACED.
6. THE DETECTIBLE WARNING SURFACE MATERIALS MUST BE ON THE STATE'S APPROVED PRODUCTS LIST. (NON-PROPRIETARY).
7. ANY SIDEWALK DAMAGED AS A RESULT OF WORK BEING PERFORMED IN ASSOCIATION WITH THE PERMITTEE AND CONTRACTOR SHALL BE REMOVED AND REPLACED PER FDOT SPECIFICATIONS.
8. ANY SIDEWALK DISTURBED WILL BE REPLACED BY SECTION WITHIN 72 HOURS, TO FDOT SPECIFICATIONS.
9. PIPE CULVERTS SHOWN ON THE PERMIT MUST MEET FDOT SPECIFICATIONS, TYPE, SIZE, AND LENGTH AS DESCRIBED ON THE PERMIT. EACH JOINT OR LENGTH OF PIPE SHALL HAVE FDOT STAMPS AFFIXED VERIFYING THIS APPROVAL. ALL CONCRETE PIPE JOINTS OTHER THAN 1" RING JOINTS MUST BE DIAPHERED. ALL CULVERTS TO BE INSPECTED BY FDOT PRIOR TO PLACEMENT OF FILL.
10. THE FDOT RETAINS THE RIGHT TO MAKE ALTERATIONS TO THE PERMIT, ATTACHED SKETCH OR CHARACTER OF WORK AS MAY BE CONSIDERED NECESSARY OR DESIRABLE DURING THE PROGRESS OF THE WORK FOR SATISFACTORY COMPLETION OF THE PROPOSED CONSTRUCTION.
11. THE PERMITTEE SHALL NOTIFY THE FDOT OF DATE OF COMPLETION, REQUEST A FINAL INSPECTION AND A NOTICE OF FINAL ACCEPTANCE.
12. ALL CONSTRUCTION AND/OR MAINTENANCE ON THE FDOT RIGHT OF WAY SHALL CONFORM TO THE FEDERAL MANUAL ON UNIFORM TRAFFIC DEVICES (MUTCD). THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, PLANS PREPARATION MANUAL AND DRAINAGE MANUAL.
13. NO LANE CLOSURES OF ANY STATE ROADWAY ARE ALLOWED WITHOUT 48-HOUR ADVANCE NOTICE AND APPROVAL FROM FDOT.
14. LANE CLOSURES MUST BE LIMITED TO SUNDAY THROUGH THURSDAY 8:00 PM TO 5:30 AM UNLESS OTHERWISE APPROVED BY THE FDOT.
15. LANE CLOSURE NEEDS TO ACCOMMODATE FOR A BIKE LANE IF THE ROADWAY CONSISTS OF ONE.
16. NO WORK SHALL BE PERFORMED DURING THE WEEKS OF ANY STATE OR FEDERAL HOLIDAYS UNLESS OTHERWISE APPROVED IN WRITING BY THE FDOT.
17. NO WORK REQUIRING LANE OR SIDEWALK CLOSURE SHALL BE PERFORMED DURING SPRING BREAK ON SR 699 (GULF BOULEVARD). SPRING BREAK IS IDENTIFIED AS MARCH 1 THRU THE FIRST MONDAY FOLLOWING EASTER. DURING THIS TIME, LANE AND SIDEWALK CLOSURES ON ALL STATE ROADWAYS THAT LEAD TO SR 699 (GULF BOULEVARD) WILL BE RESTRICTED TO NIGHT WORK, SUNDAY THRU THURSDAY, 8:30 PM TO 5:30 AM.
18. OPEN CUTTING OF ANY ROADWAY, DRIVEWAY, OR SIDEWALK OUTSIDE THOSE LIMITS IDENTIFIED WITHIN THE PERMIT ARE NOT ALLOWED WITHOUT PRIOR APPROVAL BY THE FDOT.
19. PRIOR TO THE REMOVAL OF ANY MATERIALS THE AREA MUST BE SAW-CUT TO PREVENT ANY DAMAGE TO THE ROADWAY.
20. THE CONTRACTOR SHALL HAVE AN AUTHORIZED PERSON AVAILABLE AT/OR NEAR THE WORK SITE ON A 24-HOUR BASIS, 7 DAYS A WEEK IN ORDER TO ADDRESS EMERGENCY ISSUES ASSOCIATED WITH THE PROJECT.
21. NO STOCK PILING, STORING, OR SEMI-PERMANENT USE OF THE RIGHT OF WAY IS AUTHORIZED UNLESS SPECIFICALLY IDENTIFIED WITHIN THE PERMIT.
22. THE PERMITTED WORK SCHEDULE IS DEFINED AS MONDAY THROUGH FRIDAY 7:00 AM TO 5:30 PM UNLESS OTHERWISE NOTED WITHIN THE PERMIT. ANY WORK DESIRED OUTSIDE OF THIS PERIOD MUST BE REQUESTED IN ADVANCE AND APPROVED BEFORE WORKING THE ALTERNATE SCHEDULE.
23. THE DEPARTMENT OF TRANSPORTATION RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO ANY PERMITTED METHOD OF INSTALLATION, SCOPE, RESTORATION THAT MAY BE REQUIRED TO POSITIVELY SUPPORT LIFE, SAFETY AND ENVIRONMENTAL WELL-BEING OF ALL USERS OF THE TRANSPORTATION SYSTEM.
24. ROADWAY RESTORATION SHALL UTILIZE 100 PSI EXCAVATABLE FLOWABLE FILL MATERIAL AND ASPHALT PLACED WITHIN THE STATE RIGHT-OF-WAY SHALL BE PLACED FULL-DEPTH, TWO 2.5-INCH LIFTS OF SP 12.5, TWO 1.5-INCH LIFTS OF SP 9.5. TYPICAL SECTIONS WILL NEED TO BE PROVIDED WITHIN THE PLANS FOR THE PAVEMENT PLACEMENT. A STAIR STEP METHOD SHOULD BE INCORPORATED, PRIOR TO PLACING ASPHALT, TO AVOID VERTICAL JOINTS. MILLING OF THE PATCH MAY BE REQUIRED BASED ON THE PATCHED SURFACE PERFORMANCE. THE MILLING SHALL BE UTILIZED FOR SURFACE LEVELING TO A THICKNESS EQUAL TO OR GREATER THAN THE EXISTING FRICTION COARSE MATERIAL. THE MILLING LIMITS ARE 50-FOOT OF THE PATCH ALONG THE LONGITUDINAL PATH OF THE LANE, FULL LANE WIDTH AND TO INCLUDE ANY ADJACENT BIKE LANES, SHARED PATH OR URBAN SHOULDER SECTIONS.
25. ANY DISRUPTIONS TO ANY PERMEABLE PEDESTRIAN WAY AND BIKE LANE ARE TO BE RESTORED AS WORK CONTINUES. ALL PATCHES SHALL BE FULL WIDTH FROM OUTSIDE EDGE OF PEDESTRIAN PATH TO WHITE LINE EDGE OF TRAVEL LANE WITH STAIR STEP (STAGGERED) JOINTS. RESTORATION TO INCLUDE BACKFILL WITH EXISTING SUB-GRADE MATERIAL AND #57 STONE AS BASE MATERIAL (COMPACT IN 6-INCH LIFTS) TO BOTTOM OF EXISTING PERVIOUS ASPHALT BASE, FOLLOWED BY PERMEABLE DESIGN MIX (IF AVAILABLE) OR FC-5 (FRICTION COURSE) MIX WITH A MINIMUM OF TWO 2-INCH AND A MAXIMUM OF TWO 3-INCH LIFTS. MAINTAIN INGRESS/EGRESS ON ALL DRIVES AND SIDE STREETS DURING CONSTRUCTION.
26. THE DEPARTMENT WILL REVIEW THE REVISIONS TO THE PLANS AND IF NEEDED CHANGES ARE NECESSARY THE DEPARTMENT WILL ADDRESS IT AT THAT TIME.
27. ANY LOCAL GOVERNMENT DETAILS NEED TO BE REMOVED FROM THE STATE PERMIT PLANS OR A NOTE NEEDS TO BE ADDED THAT THE LOCAL GOVERNMENT DETAILS ARE TO BE UTILIZED ONLY WITHIN THE PROPERTY.

STANDARD SYMBOLS

EXISTING	DESCRIPTION	PROPOSED
EX. WM	WATER METER	WM
EX. RM	RECLAIMED METER	RM
EX. WM & BFP	METER AND BACK FLOW PREVENTOR	WM & BFP
EX. DDCVA	DOUBLE DETECTOR CHECK VALVE ASSEMBLY	DDCVA
EX.FHA	FIRE HYDRANT ASSEMBLY	FHA
EX. FDC	FIRE DEPARTMENT CONNECTION	FDC
EX. G.V.	GATE VALVE	G.V.
	BLOW-OFF VALVE	
S	SANITARY SEWER MANHOLE	
EX. C.O.	CLEANOUT	C.O.
	GREASE TRAP / OIL SEPARATOR	
	SURFACE FLOW ARROW	
	GRATE INLET	
	CURB INLET	
D	STORM SEWER MANHOLE	
	MITERED END SECTION	
	FLARED END SECTION	
EX. LP	LIGHT POLE	LP
	CONCRETE UTILITY POLE	
	WOOD UTILITY POLE	
	GUIDE WIRE	
	BOLLARD	
	SIGNAGE	
	WHEEL STOP	
	HANDICAP SPACE	
	TRAFFIC MARKINGS	

LINETYPES

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	CENTER LINE	
	EDGE OF PAVEMENT	
	WALL	
	WOOD FENCE	
	CHAIN LINK FENCE	
N/A	BARB WIRE FENCE	
	SILT FENCE	
	LOT LINE	
XX.XX'	POND TOP OF BANK	XX.XX'
	RIGHT OF WAY LINE	
	SECTION LINE	
EX. ST	STORM SEWER LINE	ST
EX. CATV	CABLE TV LINE	CATV
EX. F

TESTING SCHEDULE

ITEM	TEST	TEST FREQUENCY
BUILDING PAD	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	ONE PER 2,500 SF HORIZONTALLY IN 12 INCH LIFTS
	GRADATION AS DETERMINED BY AASHTO T27-06 (ASTM D136-06)	EACH LIFT (SEE NOTE 3)
EMBANKMENT	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	ONE PER 5,000 SF HORIZONTALLY IN 12 INCH LIFTS
	GRADATION AS DETERMINED BY AASHTO T27-06 (ASTM D136-06)	EACH LIFT (SEE NOTE 3)
UTILITY TRENCH BACKFILL OVER PIPELINES AND AROUND STRUCTURES FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE AND IN STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTES 1 AND 2)
UTILITY TRENCH BACKFILL OVER PIPELINES OUTSIDE THE RIGHT-OF-WAY AND IN NON-STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTES 1 AND 2)
STABILIZED SUB GRADE	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER MATERIAL TYPE
	MINIMUM LBR 40	PER MATERIAL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70), NO TOLERANCE	(SEE NOTE 3)
BASE (OTHER THAN SOIL CEMENT OR CRUSHED CONCRETE)	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOURCE
	MINIMUM LBR 100	PER SOURCE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) - NO TOLERANCE	EACH LIFT (SEE NOTE 3)
	GRADATION, ATTERBERG LIMITS	PER SOURCE
CRUSHED CONCRETE BASE	MINIMUM LBR 150	PER MATERIAL TYPE
	ABRASION TEST BY USING LOS ANGELES MACHINE AS DETERMINED BY FM-1T096	PER MATERIAL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTE 3)
SOIL CEMENT BASE (NO IN PLACE MIXING ALLOWED)	DESIGN MIX AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS	ONE PER MATERIAL TYPE
	OPTIMUM MOISTURE / MAXIMUM DENSITY	ONE PER MATERIAL TYPE DAILY
	PROCTOR AS DETERMINED BY AASHTO T180	ONE PER MATERIAL TYPE
	COMPRESSIVE STRENGTH SPECIMENS AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS (300 PSI AT 7 DAYS), (SEE NOTE 4)	ONE SET OF 3 SAMPLES PER MATERIAL TYPE PER ONE-HALF DAY
	TEST CORES AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS (300 PSI AT 21 DAYS), (SEE NOTE 4)	(SEE NOTE 3)
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T134 - NO TOLERANCE	(SEE NOTE 3)
CONCRETE (SEE NOTE 5)	SLUMP TEST	ONE PER SET OF CYLINDERS
	COMPRESSIVE STRENGTH CYLINDERS (MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 3,000 PSI), NO TOLERANCE	ONE SET OF THREE (3) CYLINDERS FOR 100 CY OR FRACTION THEREOF
	AIR CONTENT	ONE PER SET OF CYLINDERS
ASPHALTIC CONCRETE	AGGREGATE ANALYSIS	ONE PER DESIGN
	DESIGN MIX	ONE PER F.D.O.T. APPROVED TYPE
	BITUMEN CONTENT	ONE PER DAY UNLESS TONNAGE > 1,000 TON
	GRADATION STABILITY FLOW	ONE PER DAY
	PROPERTIES OF IN-PLACE MATERIALS (MARSHALL TEST)	ONE PER DAY
	THICKNESS	(SEE NOTE 3)
	MAXIMUM SPECIFIC GRAVITY	ONE PER DAY
	95% OF LAB DENSITY	(SEE NOTE 3)

NOTES:

1. TESTS SHALL BE LOCATED NO MORE THAN 200 FEET APART. TESTS SHALL BE PERFORMED ON EACH LIFT. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SERVICE LATERALS. THERE SHALL BE A MINIMUM OF ONE (1) TEST SERIES FOR EACH 6 INCHES OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALED IN 6 INCH LIFTS. TESTS AROUND BOX CULVERTS SHALL DONE ON BOTH SIDES EVERY LIFT.

2. FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER F.D.O.T. SUPPLEMENTAL SPECIFICATIONS SUB ARTICLE 125-8.3.2 AS MODIFIED.

3. TESTS SHALL BE LOCATED NO MORE THAN 500 FEET APART. THERE SHALL BE NO LESS THAN ONE (1) TEST PER 5,000 SF.

4. MAXIMUM STRENGTH LIMITS, AS ESTABLISHED BY SOILS TESTING COMPANY, SHALL NOT BE EXCEEDED.

5. APPLIES TO SITE CONCRETE SUCH AS CURBS, DRIVEWAYS, PADS AND SIDEWALKS.

CLEARING AND GRUBBING NOTES

1. PRIOR TO SITE CLEARING AND GRUBBING, ALL TREES SHOWN TO REMAIN ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE CITY / COUNTY TREE ORDINANCE AND DETAILS CONTAINED IN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THESE TREES IN GOOD CONDITION. NO TREES SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER.

2. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE PRIOR TO CONSTRUCTION IN ACCORDANCE, WITH THE GEOTECHNICAL INVESTIGATION REPORT. COPIES OF THE GEOTECHNICAL INVESTIGATION REPORT ARE AVAILABLE THROUGH THE OWNER. ANY QUESTION REGARDING SITE PREPARATION REQUIREMENTS DESCRIBED IN THE GEOTECHNICAL INVESTIGATION REPORT ARE TO BE DIRECTED TO THE GEOTECHNICAL ENGINEERING COMPANY THAT PREPARE THE REPORT.

3. THE CONTRACTOR SHALL CLEAR AND GRUB, ONLY THOSE AREAS OF THE SITE NEEDED FOR CONSTRUCTION. DISTURBED AREAS SHALL BE SEEDED, MULCHED, OR PLANTED WITH APPROVED LANDSCAPE MATERIAL IMMEDIATELY AFTER CONSTRUCTION.

4. UNLESS OTHERWISE DIRECTED, THE TOP 4" TO 6" OF SOIL REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER TO BE USED FOR LANDSCAPING PURPOSED.

5. ONLY GRADING BY HAND IS PERMITTED WITHIN THE CANOPY / DRIP LINE OF TREES TO REMAIN.

PAVING AND GRADING NOTES

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) SHALL BE EXCAVATED IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS OR AS DIRECTED BY THE OWNER, OR THE GEOTECHNICAL ENGINEER. DELETERIOUS MATERIAL SHALL BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS SHALL BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

3. ALL NECESSARY FILL AND EMBANKMENT MATERIAL THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE CONSTRUCTION DOCUMENTS OR THE REFERENCED GEOTECHNICAL INVESTIGATION REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES, WHICH INCLUDE BUT ARE NOT LIMITED TO EARTHWORK ACTIVITIES, SUB GRADE PREPARATION, ETC. CONFORM WITH THE GEOTECHNICAL INVESTIGATION REPORT.

4. PROPOSED PAD GRADES SHOWN ARE MINIMUM GRADES. ELEVATIONS OF ADJOINING LOTS, EXISTING TREES, AND OTHER FIELD CONDITIONS MAY WARRANT LEAVING LOTS WHICH ARE HIGHER IN THEIR NATURAL STATE. THE CONTRACTOR SHALL CONSULT WITH THE OWNER AND THE ENGINEER IN WRITING PRIOR TO GRADING ACTIVITIES WHEN THESE CONDITIONS EXIST.

5. PROPOSED ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON THESE CONSTRUCTION DOCUMENTS.

6. ALL SLOPES STEEPER THAN 5:1 SHALL BE SODDED; ALL SLOPES STEEPER THAN 4:1 SHALL BE REINFORCED WITH STAKED SOD.

7. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

8. CURBING SHALL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THESE CONSTRUCTION DOCUMENTS.

9. REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC STANDARD PLANS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE CONSTRUCTION DOCUMENTS.

10. CONTRACTOR SHALL PROVIDE A 1/2" BITUMINOUS EXPANSION JOINT WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE. EXPANSION JOINT FILLER SHALL CONFORM TO THE SPECIFICATIONS OF ASTM D1751.

11. CONTRACTOR SHALL PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR SHALL REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES.

12. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

13. THE CONTRACTOR SHALL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS AS REQUIRED ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND MATERIAL TESTING AND SUBMITTING TEST RESULTS TO OWNER'S ENGINEER ON A WEEKLY BASIS. SOIL TESTS ARE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS SITE. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATIONS SIGNED BY THE MATERIAL / GEOTECHNICAL ENGINEER STATING THAT ALL SOIL AND MATERIAL REQUIREMENTS HAVE BEEN MET.

15. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE CONSTRUCTION DOCUMENTS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THIS SITE. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF SAID RETESTING.

16. MIXING IN PLACE OF SOIL CEMENT SHALL NOT BE ALLOWED.

17. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER F.D.O.T. INDEX NO. 522-002. THE CONTRACTOR SHALL FINISH ALL EXPOSED BACK OF CURB.

18. PRIOR TO CONSTRUCTION OF CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE ENGINEER FOR APPROVAL.

19. ALL PAVEMENT MARKINGS IN THE RIGHT-OF-WAY SHALL BE MADE WITH PERMANENT THERMOPLASTIC AND SHALL CONFORM TO F.D.O.T STANDARD INDEX NO. 711-001, SHEETS 1-7. PARKING STALL STRIPING SHALL BE 4" WIDE STRIPES PAINTED IN WHITE COLOR. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

20. THE CONTRACTOR SHALL INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT SURFACE AND THE TOP OF THE PIPE OR BELL IS LESS THAN TWELVE (12) INCHES.

21. ON-SITE PAVEMENT SHALL CONSIST OF 2" ASPHALT (TYPE SP-9.5) ON 6" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

22. CITY / COUNTY RIGHT-OF-WAY PAVEMENT SHALL CONSIST OF 3" ASPHALT (TYPE SP-12.5) ON 11" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 100% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180, UNLESS OTHERWISE SPECIFIED.

DRAINAGE NOTES

1. STANDARD INDEXES REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC STANDARD PLANS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE INLETS AND OTHER DRAINAGE STRUCTURES CALLED FOR IN THESE CONSTRUCTION DOCUMENTS.

2. ALL STORM SEWER PIPES SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76, ASTM C-507) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC STANDARD PLANS UNLESS OTHERWISE NOTED ON PLANS. SUBSTITUTION OF RCP WITH OTHER MATERIAL (PVC, HDPE, ADS, ETC.) SHALL NOT BE PERMITTED.

3. PVC STORM PIPE, 12" AND SMALLER SHALL CONFORM TO AWWA C-900, CLASS 150 STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

4. REINFORCED CONCRETE STORM SEWER PIPE JOINTS SHALL BE ROUND RUBBER GASKET (ASTM C-361) UNLESS OTHERWISE NOTED ON PLANS. ELLIPTICAL REINFORCED PIPE SHALL BE COLD ADHESIVE PERFORMED PLASTIC GASKET IN ACCORDANCE WITH F.D.O.T. STANDARD 942-2. ALL STORMWATER PIPE JOINTS WILL BE WRAPPED PER F.D.O.T. INDEX NO. 430-001.

5. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED END SECTIONS (MES) AND FLARED END SECTIONS (FES) WHICH ARE NOT INCLUDED IN LENGTHS. CONTRACTOR SHALL VERIFY ALL QUANTITIES IN SUBMITTAL OF BID, AND INFORM THE ENGINEER OF ANY DISCREPANCIES.

6. ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER PRIOR TO THE PLACEMENT OF BACK FILL. CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPLICABLE AGENCIES 72 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.

7. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.

8. ALL INLETS WITHIN PAVEMENT AREAS ARE TO BE MODIFIED FOR TRAFFIC BEARING WITH HOT DIPPED GALVANIZED STEEL GRATES AND FRAMES IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS. ALL DRAINAGE STRUCTURE GRATES AND COVERS TO BE TRAFFIC RATED FOR HS-20 AASHTO TRUCK LOADINGS.

9. ALL MITERED END SECTIONS ON SIDE DRAIN PIPES AT DRIVEWAY ENTRANCES TO CITY/COUNTY/F.D.O.T. ROADWAYS MUST BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 430-022.

10. FOR INLETS NOT IMMEDIATELY ADJACENT TO LOW POINT (C/L) OF ROADWAY CONTRACTOR TO ADJUST CROSS SLOPE IN THESE AREAS IN ACCORDANCE WITH ENGINEER'S DIRECTION.

11. STORMWATER RUNOFF FROM THE ROOF(S) SHALL BE ROUTED THROUGH THE PROPOSED STORMWATER SYSTEM AND DIRECTED TOWARD DETENTION POND.

EARTHWORK NOTES

1. IF EVIDENCE OF THE EXISTENCE OF HISTORIC RESOURCES IS DISCOVERED OR OBSERVED AT THE SITE OR DURING DEVELOPMENT ACTIVITIES AFTER FINAL APPROVAL, ALL WORK SHALL CEASE. THE DEVELOPER, OWNER, OR AGENT THEREOF SHALL NOTIFY THE DEPARTMENT OF HISTORICAL RESOURCES WITHIN 24 HOURS. EXAMPLES OF EVIDENCE OF HISTORIC RESOURCES INCLUDE WHOLE OR FRAGMENTARY STONE TOOLS, SHELL TOOLS, ABORIGINAL OR HISTORIC POTTERY, HISTORIC GLASS, HISTORIC BOTTLES, BONE TOOLS, HISTORIC BUILDING FOUNDATIONS, SHELL MOUNDS, SHELL MIDDENS, OR SAND MOUNDS. THE DIRECTOR OF HISTORIC RESOURCES SHALL ASSESS THE SIGNIFICANCE OF THE FINDS AND MITIGATE ANY ADVERSE EFFECTS AS SOON AS POSSIBLE, BUT NO LATER THAN THREE (3) WORKING DAYS OF NOTIFICATION. WORK ACTIVITIES CAN BE NORMALLY RESUMED EXCEPT IN THE AREA OF EFFECT AS DETERMINED BY THE DIRECTOR OF HISTORIC RESOURCES.

2. TOP SOIL, ORGANIC SILTY SOILS WITH ROOTS AND ORGANIC MUCK MATERIALS SHALL BE REMOVED WHEN ENCOUNTERED AT THE GROUND SURFACE AND IF NOT REMOVED DURING NORMAL CLEARING AND GRUBBING OPERATIONS. OTHER ISOLATED AREAS OF ORGANIC MATERIAL OR DELETERIOUS MATERIAL MAY EXIST WITHIN THE PROJECT SITE. IF ADDITIONAL UNSUITABLE MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE REMOVED AND REPLACED WITH CLEAN, SLIGHTLY SILTY OR SILTY FINE SAND (A-3, A-2-4).

3. EMBANKMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE F.D.O.T. STANDARD SPECIFICATIONS. SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE F.D.O.T. STANDARD INDEXES NO. 120-001 AND 120-002. EMBANKMENT FILL, WHERE REQUIRED, SHALL CONTAIN NO MUCK, STUMPS, ROOTS, OR OTHER DELETERIOUS MATERIAL AND SHALL BE PLACED IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX 120-001. THE BACKFILL SHALL BE SHAPED AND ADDRESSED TO CONFORM TO THE CROSS SECTIONS AND GRADES INDICATED ON THESE CONSTRUCTION DOCUMENTS WITHIN THE TOLERANCES STATED IN THE F.D.O.T. STANDARD SPECIFICATIONS.

4. PIPE BEDDING MATERIAL IN TRENCHES SHALL CONSIST OF CLEAN OR SLIGHTLY SILTY FINE SAND (A-3) WITH LESS THAN 10 PERCENT PASSING THE US STANDARD NO 200 SIEVE. THE MATERIAL SHALL BE FREE OF STONES, GRAVEL, ORGANICS, VEGETATION AND OTHER DELETERIOUS MATERIAL, PLACED IN UNIFORM LIFTS NOT EXCEEDING SIX (6) INCHES THICK AND COMPACTED TO AT LEAST 95 PERCENT OF ITS MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180 (MODIFIED PROCTOR TEST). TRENCH BACK FILL MATERIAL SHALL CONSIST OF CLEAN, SLIGHTLY SILTY OR SILTY FINE SAND (A-3, A-2-4) WITH LESS THAN 35 PERCENT PASSING THE U.S. STANDARD NO. 200 SIEVE. ALL BACKFILL SHALL CONTAIN NO MORE THAN FIVE PERCENT ORGANICS AS DETERMINED BY ASTMD-2974.

5. PIPE BEDDING MATERIAL SHALL BE SOLIDLY TAMPED AROUND PIPES IN SIX (6) INCH ES THICK LAYERS UP TO A LEVEL OF AT LEAST ONE (1) FOOT ABOVE THE TOP OF THE PIPE. IN AREAS TO BE PAVED, PIPE BEDDING MATERIAL SHALL BE COMPACTED TO 98% MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180 (MODIFIED PROCTOR TEST).

6. BACKFILL MATERIAL OVER ANY PIPE (STORM SEWER, SANITARY SEWER, OR WATER MAINS) INSTALLED UNDER ROADWAYS OR WITHIN THE EMBANKMENT OF THE ROADWAY SHALL BE COMPACTED IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, SECTION 125-8, LATEST EDITION.

7. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE OR FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, CITY / COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE. ALL WORK IN THE AFFECTED AREA SHALL COME TO AN IMMEDIATE STOP UNTIL ALL PERTINENT PERMITS HAVE BEEN OBTAINED, AGENCY WRITTEN AUTHORIZATION TO COMMENCE ACTIVITIES HAS BEEN GIVEN, OR UNLESS COMPLIANCE WITH STATE AND FEDERAL GUIDELINES CAN BE DEMONSTRATED.

8. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF HISTORIC RESOURCES, INCLUDING BUT NOT LIMITED TO ABORIGINAL OR HISTORIC POTTERY, PREHISTORIC STONE TOOLS, BONE OR SHELL TOOLS, HISTORIC TRASH PITS, OR HISTORIC BUILDING FOUNDATION, ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE FLORIDA DEPARTMENT OF HISTORIC RESOURCES (STATE HISTORIC PRESERVATION OFFICER) AND CITY / COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE RESOURCES FOUND ON THE SITE.

OPERATION AND MAINTENANCE OF STORMWATER SYSTEM

AFTER COMPLETION OF THE PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER FACILITIES. OPERATION AND MAINTENANCE OF THE STORMWATER SYTEM INCLUDES:

1. THE DETENTION AREA, UNDER NO CIRCUMSTANCES, SHALL BE FILLED WITH ANY OTHER SUBSTANCE THAN STORMWATER. THE OWNER OR AGENT SHALL MAKE SURE, TO THE BEST OF HIS ABILITY, THAT NOTHING ENTERS THE SYSTEM AND COULD DETERIORATE THE FUNCTIONING CAPABILITIES OF THE DETENTION AREA, (I.E. GASOLINE, OIL, GREASE, CHEMICALS, ETC.).

2. ALL SODDED AREAS SHALL BE MOWED AND MAINTAINED PROPERLY.

3. SWALES SHALL BE KEPT CLEAN AND FREE OF ANY OBSTRUCTIONS.

4. CONTROL STRUCTURE(S) SHALL BE CHECKED MONTHLY FOR DAMAGE OR BLOCKAGE. ANYDAMAGED SKIMER(S) SHALL BE REPLACED OR REPAIRED. ANY DEBRIS BLOCKING FULL FLOW THROUGH THE WEIR(S) AND/OR ORIFFICE(S) SHALL BE REMOVED.

5. INLET GRATE(S) SHALL BE CHECKED MONTHLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED GRATE(S) SHALL BE REPLACED OR REPAIRED. ANY DEBRIS BLOCKING FULL FLOW THROUGH THE GRATE(S) SHALL BE REMOVED.

6. PIPE(S) AND INLET(S) SHALL BE INSPECTED TWICE A YEARLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED PIPE(S) OR INLET(S) SHALL BE REPAIRED OR REPLACED. ANY TRASH, DEBRIS OR SAND DEPOSITS SHALL BE REMOVED. THE PIPE CONVEYANCE SYSTEM SHALL BE FLUSHED, AS DEEMED NECESSARY NO LESS THAN TWICE A YEAR. ALL MATERIAL SHALL BE COLLECTED DOWNSTREAM AND REMOVED.

7. ALL POND SIDE SLOPES AND MAINTENANCE BERMS WILL BE PERIODICALLY MOWED AND CLEANED. DURING THE MOWING OPERATION THE PONDS SHALL BE INSPECTED FOR BARE SPOTS AND EROSION DAMAGE. ANY BARE SPOTS GREATER THAN ONE SQUARE FOOT IN AREA WILL BE SEEDED OR SODDED TO REPLACE THE GRASS COVER. IN CASE OF EROSION OR DAMAGE WHERE UNDERLYING SOIL IS MISSING, THE MISSING SOIL WILL BE REPLACED AND THE AREA BROUGHT BACK TO GRADE WITH SEEDING OR SODDING AS REQUIRED. THE BOTTOM AND SIDE SLOPES OF THE POND SHALL BE INSPECTED REGULARLY TO ASSURE THAT EXCESS SILTATION OR EROSION HAS NOT OCCURRED. SILTATION AND EROSION IN THE POND SHALL BE CONTROLLED TO ASSURE THAT THE STORAGE VOLUME IS NOT AFFECTED.

8. IN THE EVENT THAT STORMWATER STAND IN THE POND MORE THAN 48 HOURS, RAKING AND/OR SCARIFICATION OF THE POND BOTTOM / SIDE SLOPES SHALL BE REQUIRED AS DEEMED NECESSARY TO RESTORE THE PERCOLATION CHARACTERISTICS OF THE POND.

9. CATTAILS, BULRUSHES, AND OTHER NUISANCE VEGETATION WILL BE CUT BACK FROM INLET OR OUTFALL STRUCTURES, TO THE EXTENT NEEDED TO MAINTAIN DESIGN DISCHARGES. IN ADDITION, THE AREA IMMEDIATELY IN FRONT OF THE CONTROL STRUCTURE SHOULD BE CLEARED OF AQUATIC GROWTH AND DEBRIS.

10. GRASS CLIPPING AND OTHER VEGETATIVE DEBRIS SHALL BE REMOVED FROM THE AREA SURROUNDING THE POND AND LIMIT FERTILIZER USE AROUND THE POND AREA TO PREVENT NUTRIENT LOADING OF THE FACILITY.

SITE PREPARATION AND GRADING BY AREHNA ENGINEERING, INC

GENERAL

THE INITIAL STEP IN SITE PREPARATION SHOULD BE THE COMPLETE REMOVAL OF ALL TOPSOIL, ROOTS, AND OTHER DELETERIOUS MATERIALS FROM BENEATH AND TO A MINIMUM OF FIVE FEET BEYOND THE DEVELOPMENT PERIMETER. THE DEPTH TO WHICH STRIPPING WILL BE REQUIRED WILL VARY TO SOME DEGREE BUT SHOULD BE LESS THAN 6 INCHES. ALSO, PRIOR TO CONSTRUCTION, THE LOCATION OF ANY EXISTING UNDERGROUND IRRIGATION, SEPTIC TANKS, DRAINAGE, OR OTHER UTILITY LINES WITHIN THE CONSTRUCTION AREA SHOULD BE ESTABLISHED. IN THIS REGARD IT SHOULD BE NOTED THAT UNDERGROUND PIPES, IF NOT PROPERLY REMOVED OR PLUGGED, MAY SERVE AS CONDUITS FOR SUBSURFACE EROSION WHICH SUBSEQUENTLY MAY RESULT IN EXCESSIVE SETTLEMENTS. THE PAVEMENT AREA SHOULD THEN BE INSPECTED AND THOROUGHLY PROOFROLLED AS DIRECTED BY A GEOTECHNICAL ENGINEER. OUR RECOMMENDATIONS LISTED IN THIS SECTION SHOULD BE USED AS A GUIDELINE FOR THE PROJECT GENERAL SPECIFICATIONS PREPARED BY THE DESIGN ENGINEER:

A. THE EXPOSED SUBGRADE WITHIN THE PROPOSED CONSTRUCTION AREA SHOULD BE PROOFROLLED USING A VIBRATORY ROLLER WITH A STATIC WEIGHT OF AT LEAST 8 TONS AND A DRUM DIAMETER OF AT LEAST 4 FEET, REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF 10 COMPLETE COVERAGES (5 IN EACH PERPENDICULAR DIRECTION) SHOULD BE PERFORMED.

B. CAREFUL OBSERVATIONS SHOULD BE MADE DURING PROOFROLLING TO HELP IDENTIFY ANY AREAS OF SOFT-YIELDING SOILS THAT MAY REQUIRE OVER EXCAVATION AND REPLACEMENT.

C. ANY PLANNED FILL CAN BE PLACED FOLLOWING SATISFACTORY COMPLETION OF PROOFROLLING. FILL SHOULD GENERALLY CONSIST OF FINE SAND WITH LESS THAN 12 PERCENT PASSING THE NO. 200 SIEVE AND BE FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS AND OTHER UNSUITABLE MATERIAL. FILL SHOULD BE TESTED AND APPROVED PRIOR TO ACQUISITION. APPROVED SAND FILL SHOULD BE PLACED IN LOOSE LIFTS NOT EXCEEDING 12 INCHES IN THICKNESS AND SHOULD BE COMPACTED TO A MINIMUM OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. DENSITY TESTS TO CONFIRM COMPACTION SHOULD BE PERFORMED IN EACH FILL LIFT BEFORE THE NEXT LIFT IS PLACED.

D. PRIOR TO BEGINNING COMPACTION, SOIL MOISTURE CONTENTS MAY NEED TO BE CONTROLLED IN ORDER TO FACILITATE EFFICIENT COMPACTION. A MOISTURE CONTENT WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM INDICATED BY THE MODIFIED PROCTOR TEST (ASTM D-1557) IS RECOMMENDED PRIOR TO COMPACTION OF THE NATURAL GROUND AND FILL.

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION NOTES & SPECIFICATIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HPE HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Su

"BE IT KNOWN" THAT THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION

W.O. 5770

TOPOGRAPHIC SURVEY

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

LEGAL DESCRIPTION:

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

All of ROCK HOUSE REPLAT, according to the map or plat thereof recorded in Plat Book 98, Page 41, Public Records of Pinellas County, Florida.

TOGETHER WITH that portion of the East 1/2 of Sunshine Lane which was vacated by the Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida, and which abuts said plat of ROCK HOUSE REPLAT.

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 5, Block 2, and that part of Lot 30, Block 2, CONEY ISLAND, according to the plat thereof recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, described as follows: From the Southeast corner of said Lot 30, run thence S. 72°50' W., 73.19 feet along the Southerly boundary thereof for a POINT OF BEGINNING; run thence N. 09°44'36" W., 28.84 feet; thence S. 80°07'05" W., 30.56 feet to the Westerly boundary of said Lot 30; thence Southerly along said Westerly boundary to the Southwest corner of said Lot 30; thence Easterly along said lot's Southerly boundary to the Point of Beginning.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 6, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, less the following portion: Beginning at the Northwest corner of said Lot 6 run North 88°47'02" East, 62.51 feet along the Northerly line of said Lot 6; thence South 01°13'40" West., 7.51 feet; thence run North 88°07'20" West, 61.87 feet to an intersection with the Westerly boundary line of said Lot 6; thence run Northerly along said Westerly boundary of said Lot 6, 4.17 feet to the Point of Beginning.
Also the following portion of said Lot 7, Block 2, of said CONEY ISLAND SUBDIVISION: From a Point of Beginning at the Southeast corner of Lot 7, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, run North 00°07'50" West, 6.6 feet along the East boundary of said Lot 7; thence run South 85°16'40" West, 39.5 feet; thence South 01°13'40" West, 4.19 feet to an intersection with the Southerly line of said Lot 7; thence North 88°47'02" East, along said Southerly boundary of said Lot 7, 39.49 feet to the Point of Beginning.

TOGETHER WITH that portion of vacated Sunshine Lane adjoining said portion of Lot 7 that attaches by operation of law pursuant to Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida.

ALSO TOGETHER with that tract of land lying Westerly of Lots 4 and 5, Block 2, of aforesaid CONEY ISLAND SUBDIVISION, to the waters of the Gulf of Mexico, between, the Northwesterly line of said Lot 5 and the Southeasterly line of said Lot 4, extended Westerly to the said waters of the Gulf of Mexico.

SCALE: 1" = 20'

CURVE TABLE (D&M)					
CURVE	LENGTH	RADIUS	DELTA	CH DIRECTION	CH LENGTH
C1	141.73	1971.86	4°07'06"	S20°22'45"E	141.70
C2	10.38	1981.86	0°18'00"	S22°35'18"E	10.38
C3	113.87	1971.86	3°18'32"	S24°31'34"E	113.86
C4	42.36	1959.86	1°14'18"	S26°45'03"E	42.35
C5	39.98	611.35	3°44'50"	S10°35'59"E	39.98
C6	35.87	611.35	3°21'41"	S03°31'49"E	35.86

LINE TABLE (D&M)		
LINE	LENGTH	BEARING
L1	10.00	S87°33'42"W
L2	10.00	N67°15'43"E
L3	12.35	N77°30'00"E
L4	90.76	S72°50'00"W
L5	96.91	S10°16'00"E
L6	7.50	S89°52'00"W
L7	0.66	S00°08'00"E
L8	7.53	S84°48'00"W
L9	66.42	S10°16'00"E
L10	108.17	S81°15'00"W
L11	165.31	S77°33'00"W
L12	104.30	N08°56'23"E
L13	133.60	N85°01'00"E
L14	41.58	N88°07'22"W
L15	45.94	N02°10'12"E
L16	13.22	N81°33'16"W
L17	195.00	N20°02'00"E
L18	14.60	N36°37'36"E
L19	19.48	S74°25'39"E
L20	51.55	S68°44'00"E

SYMBOL LEGEND

- BFP = Backflow Preventor
- C = Cable Box
- ℄ = Centerline
- ⊙ = Cleanout
- ☼ = Decorative Light
- DMH = Drainage Manhole
- ⊡ = Grease Trap
- ⊡ = Grease Trap
- ⚓ = Guy Anchor
- ♿ = Handicap
- ☼ = Lightpole
- M = Meter
- P = Power Box
- ⊙ = Sanitary Manhole
- ⊙ = Sign
- ⊕ = Spot Elevation
- T = Telephone Box
- ✱ = Utility Pole
- ⊙ = Water Meter
- ⊙ = Water Valve
- ⊙ = Well

TREE LEGEND

- PALM

ABBREVIATION LEGEND

(C)	= Calculated Data	FFE	= Finished Floor Elevation	PRC	= Point of Reverse Curvature
(D)	= Data per Description	FIP	= Found Iron Pipe	PRM	= Permanent Reference Monument
(F)	= Field Measured	FIR	= Found Iron Rod No Cap	PT	= Point
(M)	= Measured Data	FND	= Found Nail & Disk	RGE	= Range
(P)	= Data per Plat	FPP	= Found Pinched Pipe	R/W	= Right-of-way
(R)	= Radial Bearing	GV	= Gas Valve	SCM	= Set Concrete Monument
A/C	= Air Conditioner	GV	= Gate Valve	SCM	= Set Concrete Monument PLS #2865
BWF	= Barbwire Fence	HYD	= Fire Hydrant	SCIR	= Set Iron Rod & Cap 5/8" PLS #2865
BFE	= Base Flood Elevation	I.E.	= Invert Elevation	SNAD	= Set Nail & Disc PLS #2865
BFP	= Backflow Preventor	LB	= Corporate Certificate Number	SMH	= Sanitary Manhole
BRG	= Bearing Basis	LP	= Light Pole	TBM	= Temporary Benchmark
CH	= Chord	LVE	= Lowest Floor Elevation	TOB	= Top of Bank
C.A.B.	= Condominium Plat Book	LMWA	= Limit of Moderate Wave Action Line	TOS	= Top of Slope
C/L	= Centerline of Road	M.E.	= Match Existing	TOW	= Top of Wall
C/S	= Concrete Slab	MES	= Mitered End Section	UB	= Utility Box
CSW	= Concrete Sidewalk	N&D	= Nail & Disk	UP	= Utility Pole
CCCL	= Coastal Construction Control Line	NFND	= Not Found and Not Set	VIF	= Vinyl Fence
CL	= Centerline	NS	= Not Included in Survey	WM	= Water Meter
CLF	= Chain Link Fence	OCS	= Overhead Control Structure	WM	= Wood Fence
COV	= Covered	OHW	= Overhead Wire	W.O.	= Work Order
CLP	= Concrete Light Pole	O.R.	= Official Records Book	WV	= Water Valve
CMP	= Corrugated Metal Pipe	PB	= Plat Book		
CONC	= Concrete	PCP	= Permanent Control Point		
Δ	= Delta Angle	PG(S)	= Page(s)		
D.B.	= Deed Book	PLS	= Professional Land Surveyor		
DW	= Driveway	POB	= Point of Beginning		
DMH	= Drainage Manhole	POC	= Point of Commencement		
EIP	= Edge of Pavement				
ECL	= Erosion Control Line				
EL	= Elevation				
EOW	= Edge of Water				
FCIR	= Found Iron Rod & Cap				
FCM	= Found Concrete Monument				
FDOT	= Florida Department of Transportation				

SURVEY NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, AND IS SUBJECT TO EASEMENTS, RIGHT-OF-WAY, AND OTHER MATTERS OF RECORD THAT A TITLE SEARCH MIGHT DISCLOSE.

2. PLANIMETRIC FEATURES SHOWN HEREON WERE DETERMINED BY STANDARD FIELD SURVEYING METHODS.

3. BEARING BASIS IS THE SOUTH BOUNDARY LINE OF PARCEL M BEING S72°50'00"W, ASSUMED.

4. ALL INSTRUMENTS SHOWN HEREON ARE OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, UNLESS OTHERWISE SPECIFIED.

5. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SURFACE MARKINGS AND OR STRUCTURES. NO EXCAVATION WAS PERFORMED FOR THE LOCATION OF SUCH UTILITIES.

6. ADDITIONS OR DELETIONS TO THIS SURVEY MAP AND/OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

7. THIS PARCEL APPEARS TO BE IN FLOOD ZONE "VE (EL 12 FEET)", "AE (EL 11 FEET)" AND "AE (EL 10 FEET)" ACCORDING TO THE FLOOD INSURANCE RATE MAP, MAP NUMBER: 12103C0193H, MAP EFFECTIVE DATE: 08/24/2021, AS PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THIS PARCEL, OR A PORTION THEREOF, APPEARS TO BE IN A COASTAL "A" ZONE.
THIS MAP'S NOTES STATE THAT THE BASE FLOOD ELEVATIONS SHOWN REPRESENT ROUNDED WHOLE-FOOT ELEVATIONS AND THEREFORE MAY NOT EXACTLY REFLECT THE FLOOD ELEVATION DATA PRESENTED IN THE FLOOD INSURANCE STUDY (FIS) REPORT. THE FIS REPORT WAS NOT CONSULTED FOR THIS SURVEY.
FLOOD ZONE LINES AND/OR LWMA LINE SHOWN HEREON WERE TRANSFERRED BY GRAPHIC METHODS FROM THE FLOOD ZONE MAP, AND ARE SUBJECT TO THE INHERENT INACCURACIES OF SUCH TRANSFERS. THIS FLOOD ZONE NOTE IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, ANY PROPOSED FINISH FLOOR ELEVATIONS ARE TO BE DETERMINED BY THE PERMITTING AGENCY HAVING JURISDICTION.

8. LOCATIONS OF TREES SHOWN HEREON WERE LIMITED TO TREES 4" DIAMETER AT BREAST HEIGHT (DBH) OR LARGER.
GEODATA SERVICES INC. CAN ACCEPT NO RESPONSIBILITY FOR THE IDENTIFICATION OF THE TREE SPECIES SHOWN HEREON. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PROPERLY IDENTIFY THE TREES SHOWN HEREON, TREE IDENTIFICATION IS OUTSIDE THE EXPERTISE OF A PROFESSIONAL LAND SURVEYOR. THE TREE TYPES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE USED AFTER CONFIRMATION BY A CERTIFIED ARBORIST OR OTHER SUCH PROFESSIONAL.

9. VERTICAL DATA SHOWN HEREON ARE IN NAVD 88 DATUM, HOLDING FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK BM 15-12-E03 AND A PUBLISHED ELEVATION OF 5.28 FEET UTILIZED TO SET A SITE TBM. BENCHMARK DESIGNATIONS AND INFORMATION SHOWN HERE ARE FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK SHEETS.

10. STATE PLANE COORDINATES SHOWN HEREON ARE THE RESULT OF A CONTROL SURVEY PERFORMED BY GLOBAL POSITIONING SYSTEM (GPS) METHODS. THIS GPS SURVEY WAS PERFORMED BY A CREW FROM GEODATA SERVICES, INC., CLEARWATER, FLORIDA AND WAS ESTABLISHED BY GPS OBSERVATION AND USING A SPECTUM PRECISION EPOCH 50 RTK RECEIVER WITH CORRECTIONS PROVIDED BY TRIMBLE POSITIONING SERVICES VIA INTERNET MODEM.
BASIS: FLORIDA WEST ZONE, NORTH AMERICAN DATUM (NAD) 83 (2009 ADJUSTMENT)

SURVEYOR'S CERTIFICATION:

I, DENNIS J. EYRE, THE SURVEYOR IN RESPONSIBLE CHARGE, HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON AND THAT SAID ABOVE GROUND SURVEY AND SKETCH ARE ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF; SURVEY NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, OR ELECTRONIC DIGITAL SIGNATURE IN ACCORDANCE WITH STATE OF FLORIDA ADMINISTRATIVE CODE RULE 5J-17.062.

Dennis J Eyre PLS 2865
Digitally signed by Dennis J Eyre PLS 2865
Date: 2022.09.16 12:16:48 -04'00'

DENNIS J. EYRE, P.L.S. FLA. REG. No. 2865
DATE: SEPTEMBER 16, 2022

AN UNSIGNED SURVEY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY

W.O. # 5770	FIELD DATE: MARCH 16, 2016
DRAWN BY: EJ./HW	FIELD DATE: APRIL 9, 2019 - ADDED ADDITIONAL TOPO
CHECKED BY: DJE.	FIELD DATE: MAY 16, 2019 - ADDED ADDITIONAL TOPO
SCALE: 1"= 20'	UDATED FLOOD ZONE DATE: SEPTEMBER 15, 2022
FIELD BOOK / PAGE(S): 1-16/22, 1-18/29	
SHEET 1 OF 1	

GEODATA SERVICES INC.
1166 KAPP DRIVE
CLEARWATER, FL 33765
PHONE: (727) 447-1763
LB 7466

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FOR INFORMATION PURPOSE ONLY
N.T.S.

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-30-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: BOUNDARY & TOPOGRAPHIC SURVEY

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-2.3

NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PREPARED. THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

DEMOLITION NOTES TO CONTRACTOR

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AS REQUIRED BY CITY / COUNTY, STATE AND FEDERAL LAW PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

2. THE CONTRACTOR SHALL MEET ALL SAFETY REGULATIONS REQUIRED BY FEDERAL, STATE AND LOCAL GOVERNMENT.

3. THE CONTRACTOR SHALL COMPLY WITH DEMOLITION REQUIRMENTS ESTABLISHED IN THE FLORIDA BUILDING CODE SECTION 3303.

4. THE CONTRACTOR SHALL INSPECT BUILDINGS FOR ASBESTOS AND SITE FOR HAZARDOUS WASTE PRIOR TO DEMOLITION WORK.

5. THE CONTRACTOR PERFORMING DEMOLITION, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR DEMOLITION SAFETY STANDARDS, 29 C.F.R., S.1926., SUBPART T, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT WILL NOT BE INCORPORATED WITH THE NEW IMPROVEMENTS.

7. THE CONTRACTOR SHALL DEMOLISH AND REMOVE IMPROVEMENTS WITHIN LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

8. THE CONTRACTOR SHALL ESTABLISH AND PROPERLY FLAG PROPERTY CORNERS AND PROPERTY LINES PRIOR TO DEMOLITION WORK.

9. THE CONTRACTOR SHALL DISPOSE ALL DEMOLITION MATERIALS AND DEBRIS IN ACCORDANCE WITH THE CITY / COUNTY REQUIREMENTS IN A SOLID WASTE DISPOSAL FACILITY APPROVED BY F.D.E.P. AND THE CITY / COUNTY.

10. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH NEIGHBORS THAT ARE AFECTED BY THE DEMOLITION WORK.

11. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AND TREE BARRICADES PRIOR TO DEMOLITION AND MAINTAIN DURING DEMOLITION. THE CONTRACTOR SHALL ERECT SILT FENCE AS SHOWN IN SITE CONSTRUCTION DETAILS SHEET. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE EROSION CONTROL MEASURES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-4 AND 40D-40 F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED $10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.

12. THE CONTRACTOR SHALL FENCE OR BARRICADE THE SITE, INSTALL GATES FOR TRUCK ROUTING AND CONTROL TRAFFIC PER FDOT TRAFFIC CONTROL STANDARDS.

13. THE CONTRACTOR SHALL SAW-CUT EXISTING PAVEMENT WHERE NEW PAVEMENT IS TO BE ADDED OR EXISTING PAVEMENT TO BE ELIMINATED.

14. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND IS RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.

15. EXISTING IMPROVEMENTS ABOVE GROUND (E.G., PAVEMENT, CURBING, BUILDINGS, CONCRETE PADS, RETAINING WALLS, SIDEWALKS, POLES, SIGNAGE, ETC.) AND BELOW GROUND (E.G., SANITARY, STORM, WATER, GAS, CABLE, ELECTRIC, PHONE, ETC.) SHALL REMAIN UNLESS OTHERWISE NOTED.

16. ALL CAVITIES RESULTING FROM REMOVAL OF BUILDING FOUNDATIONS, TREES, UTILITIES, SIGNS, ETC. SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO 95% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

17. THE CONTRACTOR SHALL DISPOSE ALL LOOSE DEBRIS AND GARBAGE WITHIN THE PROJECT BOUNDARIES. ADJACENT PROPERTIES SHALL NOT BE ADVERSELY AFFECTED (E.G., SOIL EROSION, UTILITIES DISCONNECTION, TRAFFIC FLOW IMPEDANCE, NOISE, DUST, GARBAGE, ETC.) AND RIGHT-OF-WAY SHALL BE RESTORED WITH NEW SIDEWALK AND SOD AS REQUIRED.

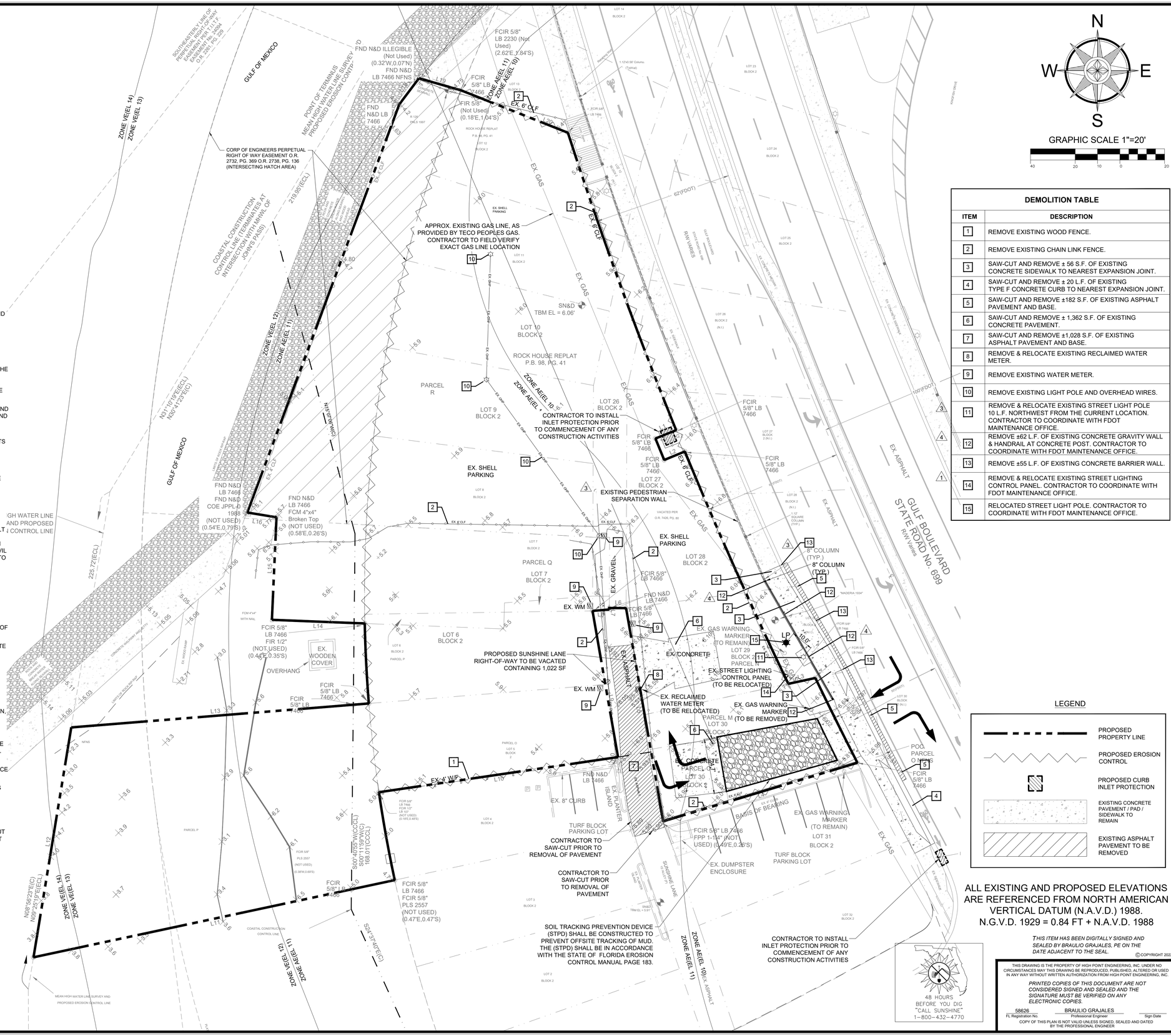
18. NO CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO CLEARING, GRUBBING, FILLING, GRADING, DIGGING, DITCHING, TRENCHING AND EXCAVATION, SHALL OCCUR WITHIN THE WETLAND UPLAND BUFFER DEPICTED ON THE APPROVED PROJECT CONSTRUCTION PLANS. ALL CONSTRUCTION ACTIVITIES MUST OCCUR UPSLOPE OF THE UPLAND BUFFER.

19. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY USE PERMIT AND PREPARE A MAINTENANCE OF TRAFFIC PLAN FOR ANY WORK IN THE RIGHT-OF-WAY.

20. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO DISCONNECT THEIR FACILITIES PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

21. THE CONTRACTOR SHALL COORDINATE THE REMOVAL / RELOCATION OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. UTILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.

22. UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE NON-SHRINK GROUT MIX OR AS OTHERWISE APPROVED BY ENGINEER. PRESSURE MAINS SHOULD BE PROPERLY CUT AND CAPPED AT TERMINATION POINTS AND RESTRAINED WITH A REVERSE DEADMAN OR RESTRAINERS OR AS OTHERWISE APPROVED BY ENGINEER.



N

W E

S

GRAPHIC SCALE 1"=20'

40 20 10 0 20

DEMOLITION TABLE

ITEM	DESCRIPTION
1	REMOVE EXISTING WOOD FENCE.
2	REMOVE EXISTING CHAIN LINK FENCE.
3	SAW-CUT AND REMOVE ± 56 S.F. OF EXISTING CONCRETE SIDEWALK TO NEAREST EXPANSION JOINT.
4	SAW-CUT AND REMOVE ± 20 L.F. OF EXISTING TYPE F CONCRETE CURB TO NEAREST EXPANSION JOINT.
5	SAW-CUT AND REMOVE ±182 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
6	SAW-CUT AND REMOVE ± 1,362 S.F. OF EXISTING CONCRETE PAVEMENT.
7	SAW-CUT AND REMOVE ±1,028 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
8	REMOVE & RELOCATE EXISTING RECLAIMED WATER METER.
9	REMOVE EXISTING WATER METER.
10	REMOVE EXISTING LIGHT POLE AND OVERHEAD WIRES.
11	REMOVE & RELOCATE EXISTING STREET LIGHT POLE 10 L.F. NORTHWEST FROM THE CURRENT LOCATION. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
12	REMOVE ±62 L.F. OF EXISTING CONCRETE GRAVITY WALL & HANDRAIL AT CONCRETE POST. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
13	REMOVE ±55 L.F. OF EXISTING CONCRETE BARRIER WALL.
14	REMOVE & RELOCATE EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
15	RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.

LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED EROSION CONTROL
- PROPOSED CURB INLET PROTECTION
- EXISTING CONCRETE PAVEMENT / PAD / SIDEWALK TO REMAIN
- EXISTING ASPHALT PAVEMENT TO BE REMOVED

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.84 FT + N.A.V.D. 1988

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	DATE	DESCRIPTION
6	ED	PER CITY OF TREASURE ISLAND
5	5-1-24	ED
4	10-20-23	PER FDOT ED
3	2-6-23	PER FDOT ED
2	9-23-22	PER FDOT ED
1	8/1/22	BG

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: DEMOLITION & TREE PROTECTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5001 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
Tel. (813) 644-7000
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-3.0

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

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17. THE CONTRACTOR SHALL DISPOSE ALL LOOSE DEBRIS AND GARBAGE WITHIN THE PROJECT BOUNDARIES. ADJACENT PROPERTIES SHALL NOT BE ADVERSELY AFFECTED (E.G., SOIL EROSION, UTILITIES DISCONNECTION, TRAFFIC FLOW IMPEDANCE, NOISE, DUST, GARBAGE, ETC.) AND RIGHT-OF-WAY SHALL BE RESTORED WITH NEW SIDEWALK AND SOD AS REQUIRED.

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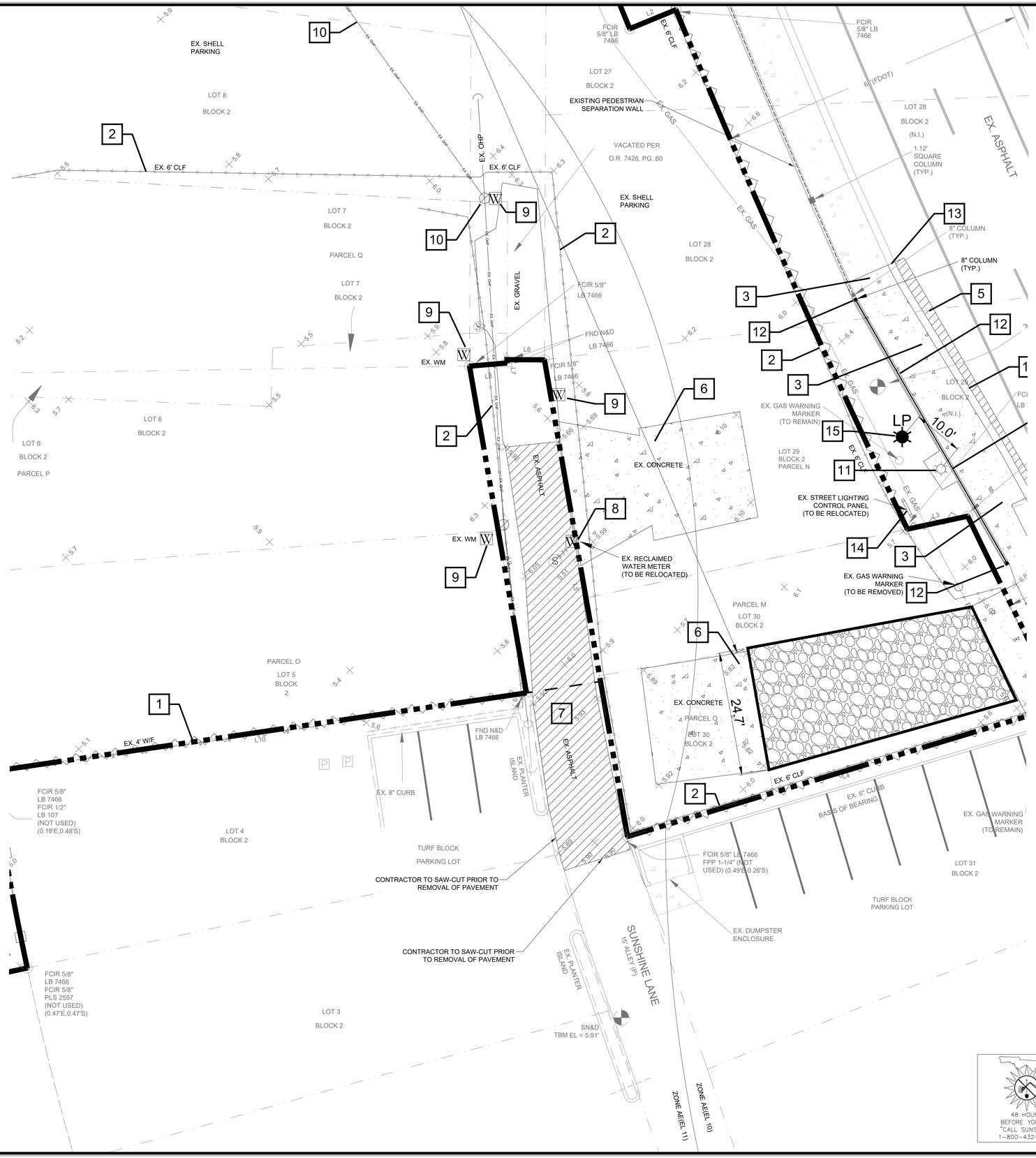
22. UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE NON-SHRINK GROUT MIX OR AS OTHERWISE APPROVED BY ENGINEER. PRESSURE MAINS SHOULD BE PROPERLY CUT AND CAPPED AT TERMINATION POINTS AND RESTRAINED WITH A REVERSE DEADMAN OR RESTRAINERS OR AS OTHERWISE APPROVED BY ENGINEER.



N

W E

S

GRAPHIC SCALE 1"=10'

20 10 5 0 10

DEMOLITION TABLE

ITEM	DESCRIPTION
1	REMOVE EXISTING WOOD FENCE.
2	REMOVE EXISTING CHAIN LINK FENCE.
3	SAW-CUT AND REMOVE ± 56 S.F. OF EXISTING CONCRETE SIDEWALK TO NEAREST EXPANSION JOINT.
4	SAW-CUT AND REMOVE ± 20 L.F. OF EXISTING TYPE F CONCRETE CURB TO NEAREST EXPANSION JOINT.
5	SAW-CUT AND REMOVE ±182 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
6	SAW-CUT AND REMOVE ± 1,362 S.F. OF EXISTING CONCRETE PAVEMENT.
7	SAW-CUT AND REMOVE ±1,028 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
8	REMOVE & RELOCATE EXISTING RECLAIMED WATER METER.
9	REMOVE EXISTING WATER METER.
10	REMOVE EXISTING LIGHT POLE AND OVERHEAD WIRES.
11	REMOVE & RELOCATE EXISTING STREET LIGHT POLE 10 L.F. NORTHWEST FROM THE CURRENT LOCATION. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
12	REMOVE ±62 L.F. OF EXISTING CONCRETE GRAVITY WALL & HANDRAIL AT CONCRETE POST. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
13	REMOVE ±55 L.F. OF EXISTING CONCRETE BARRIER WALL.
14	REMOVE & RELOCATE EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
15	RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.

LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED EROSION CONTROL
- PROPOSED CURB INLET PROTECTION
- EXISTING CONCRETE PAVEMENT / PAD / SIDEWALK TO REMAIN
- EXISTING ASPHALT PAVEMENT TO BE REMOVED

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.84 FT + N.A.V.D. 1988

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 FL Registration No. | BRAULIO GRAJALES Professional Engineer | Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 2240BHCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW DEMOLITION & TREE PROTECTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5001 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-3.1



SHEET: C-4.0

HPE HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
Tel. (813) 644-7000
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

CONTENT:
SITE LAYOUT & PARKING PLAN AERIAL

PROJECT:
PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

PROJECT No:	22-009-HCI
ISSUE DATE:	8/10/2022
DESIGNED BY:	ED
DRAWN BY:	ED
CHECKED BY:	BG
APPROVED BY:	BG

No.	BY	DATE	DESCRIPTION

REVISIONS

LEGAL DESCRIPTION

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 5, BLOCK 2, AND THAT PART OF LOT 30, BLOCK 2, CONEY ISLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: FROM THE SOUTHEAST CORNER OF SAID LOT 30, RUN THENCE S. 72°Q50' W., 73.19 FEET ALONG THE SOUTHERLY BOUNDARY THEREOF FOR A POINT OF BEGINNING; RUN THENCE N. 09°44'36" W., 28.84 FEET; THENCE S. 80°07'05" W., 30.56 FEET TO THE WESTERLY BOUNDARY OF SAID LOT 30; THENCE SOUTHERLY ALONG SAID WESTERLY BOUNDARY TO THE SOUTHWEST CORNER OF SAID LOT 30; THENCE EASTERLY ALONG SAID LOT'S SOUTHERLY BOUNDARY TO THE POINT OF BEGINNING.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 6, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, LESS THE FOLLOWING PORTION: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 6 RUN NORTH 88°47'02" EAST, 62.51 FEET ALONG THE NORTHERLY LINE OF SAID LOT 6; THENCE SOUTH 01°13'40" WEST., 7.51 FEET; THENCE RUN NORTH 88°07'20" WEST, 61.87 FEET TO AN INTERSECTION WITH THE WESTERLY BOUNDARY LINE OF SAID LOT 6; THENCE RUN NORTHERLY ALONG SAID WESTERLY BOUNDARY OF SAID LOT 6, 4.17 FEET TO THE POINT OF BEGINNING.

ALSO, THE FOLLOWING PORTION OF SAID LOT 7, BLOCK 2, OF SAID CONEY ISLAND SUBDIVISION: FROM A POINT OF BEGINNING AT THE SOUTHEAST CORNER OF LOT 7, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, RUN NORTH 00°07'50" WEST, 6.6 FEET ALONG THE EAST BOUNDARY OF SAID LOT 7; THENCE RUN SOUTH 85°16'40" WEST, 39.5 FEET; THENCE SOUTH 01°13'40" WEST, 4.19 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 7; THENCE NORTH 88°47'02" EAST, ALONG SAID SOUTHERLY BOUNDARY OF SAID LOT 7, 39.49 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH THAT PORTION OF VACATED SUNSHINE LANE ADJOINING SAID PORTION OF LOT 7 THAT ATTACHES BY OPERATION OF LAW PURSUANT TO RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

ALSO TOGETHER WITH THAT TRACT OF LAND LYING WESTERLY OF LOTS 4 AND 5, BLOCK 2, OF AFORESAID CONEY ISLAND SUBDIVISION, TO THE WATERS OF THE GULF OF MEXICO, BETWEEN, THE NORTHWESTERLY LINE OF SAID LOT 5 AND THE SOUTHEASTERLY LINE OF SAID LOT 4, EXTENDED WESTERLY TO THE SAID WATERS OF THE GULF OF MEXICO.

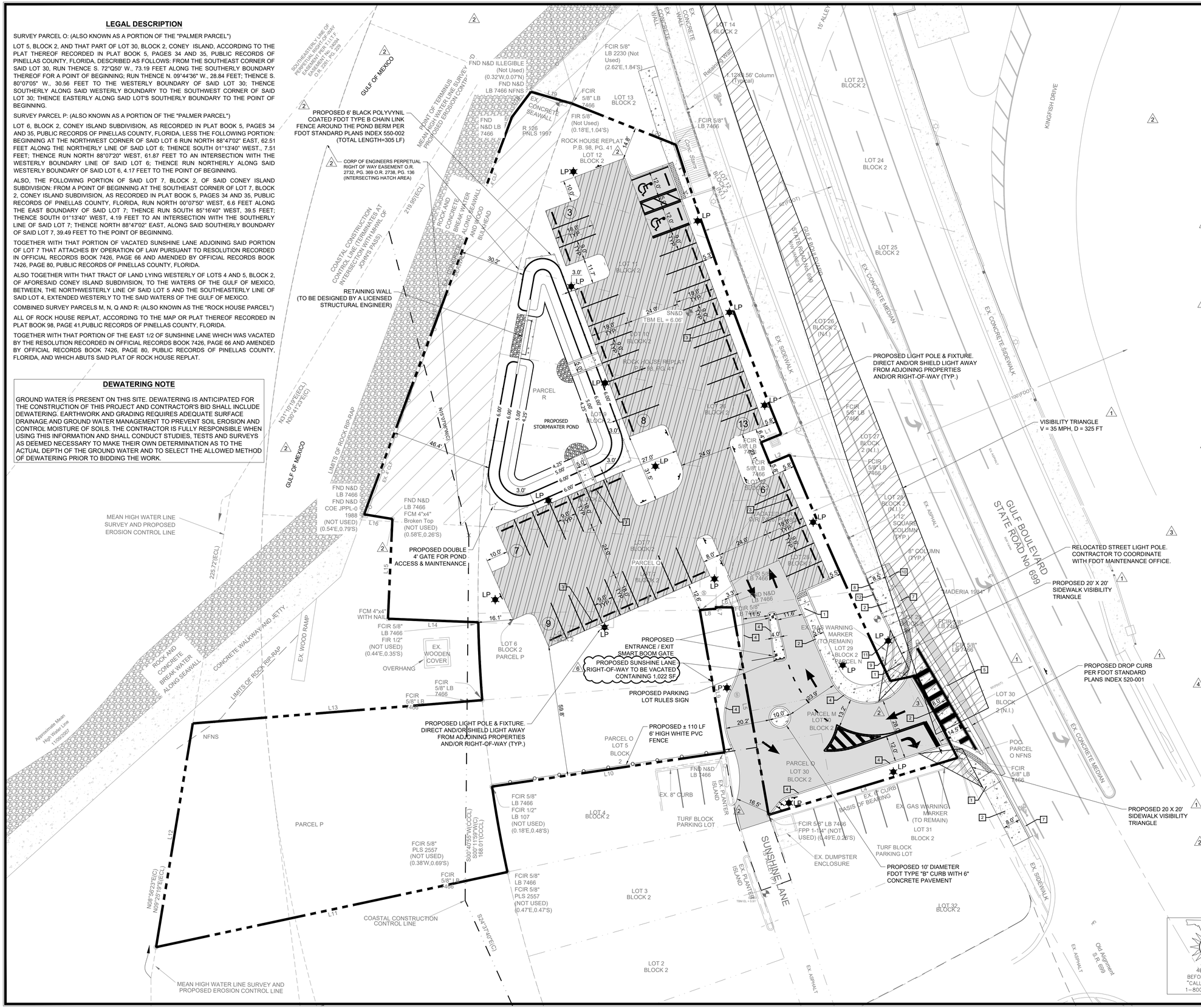
COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

ALL OF ROCK HOUSE REPLAT, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN PLAT BOOK 98, PAGE 41,PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

TOGETHER WITH THAT PORTION OF THE EAST 1/2 OF SUNSHINE LANE WHICH WAS VACATED BY THE RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, AND WHICH ABUTS SAID PLAT OF ROCK HOUSE REPLAT.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.


GULF OF MEXICO
PROPOSED 6' BLACK POLYVYNIL COATED FDOT TYPE B CHAIN LINK FENCE AROUND THE POND BERM PER FDOT STANDARD PLANS INDEX 550-002 (TOTAL LENGTH=305 LF)
CORP OF ENGINEERS PERPETUAL RIGHT OF WAY EASEMENT O.R. 2732, PG. 369 O.R. 2738, PG. 136 (INTERSECTING HATCH AREA)
RETAINING WALL (TO BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER)
PROPOSED DOUBLE 4' GATE FOR POND ACCESS & MAINTENANCE
PROPOSED ENTRANCE / EXIT SMART BOOM GATE
PROPOSED SUNSHINE LANE RIGHT-OF-WAY TO BE VACATED CONTAINING 1,022 SF
PROPOSED PARKING LOT RULES SIGN
PROPOSED LIGHT POLE & FIXTURE. DIRECT AND/OR SHIELD LIGHT AWAY FROM ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY (TYP.)
PROPOSED ± 110 LF 6' HIGH WHITE PVC FENCE
PROPOSED STORMWATER POND
PROPOSED LIGHT POLE & FIXTURE. DIRECT AND/OR SHIELD LIGHT AWAY FROM ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY (TYP.)
VISIBILITY TRIANGLE V = 35 MPH, D = 325 FT
RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED 20' X 20' SIDEWALK VISIBILITY TRIANGLE
PROPOSED DROP CURB PER FDOT STANDARD PLANS INDEX 520-001
PROPOSED 20 X 20' SIDEWALK VISIBILITY TRIANGLE
PROPOSED 10' DIAMETER FDOT TYPE "B" CURB WITH 6" CONCRETE PAVEMENT
PROPOSED CURB RAMP PER FDOT INDEX 522-002. RUNNING SLOPE 1:12 (MAX). CROSS SLOPE 1:50 (MAX).
SIDEWALK & CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX). CROSS SLOPE 1:50 (MAX).
WHEEL STOP (TYPICAL)
PROPOSED TYPE "D" CURB PER FDOT INDEX 520-001
PROPOSED DROP CURB PER FDOT INDEX 520-001
PROPOSED TYPE "B" CURB PER FDOT INDEX 520-001
PROPOSED ±16.0 FT TYPE "F" CURB PER FDOT INDEX 520-001
PROPOSED ±16.0 FT CONCRETE GRAVITY WALL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
RELOCATED EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT DESIGN STANDARD INDEX 410 FY 2012 / 2013.
RELOCATED EXISTING STREET LIGHTING POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED ±16.0 FT HANDRAIL TO MATCH EXISTING HANDRAIL. STEEL COATING TO MATCH EXISTING. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE AS WELL AS PREPARE AND SUBMIT SIGNED AND SEALED HANDRAIL PLANS / SHOP DRAWINGS TO FDOT FOR APPROVAL.
GULF BOULEVARD STATE ROAD No. 699
KINGFISH DRIVE
15' ALLEY
EX. CONCRETE MEDIAN
EX. SIDEWALK
SUNSHINE LANE
MEAN HIGH WATER LINE SURVEY AND PROPOSED EROSION CONTROL LINE
COASTAL CONSTRUCTION CONTROL LINE
LIMITS OF ROCK RIP-RAP
CONCRETE WALKWAY AND JETTY
EX. WOOD RAMP
EX. WOODEN COVER
OVERHANG
EX. 8" CURB
EX. PLANTER ISLAND
TURF BLOCK PARKING LOT
EX. DUMPSTER ENCLOSURE
EX. GAS WARNING MARKER (TO REMAIN)
EX. CONCRETE SEAWALL
EX. CONCRETE WALL
EX. ROCK AND CONCRETE BREAK WATER ALONG SEAWALL AND WOOD BULKHEAD
ROCK HOUSE REPLAT P.B. 98, PG. 41
PARCEL R
PARCEL O
PARCEL P
PARCEL M
PARCEL N
LOT 1 BLOCK 2
LOT 2 BLOCK 2
LOT 3 BLOCK 2
LOT 4 BLOCK 2
LOT 5 BLOCK 2
LOT 6 BLOCK 2
LOT 7 BLOCK 2
LOT 8 BLOCK 2
LOT 9 BLOCK 2
LOT 10 BLOCK 2
LOT 11 BLOCK 2
LOT 12 BLOCK 2
LOT 13 BLOCK 2
LOT 14 BLOCK 2
LOT 23 BLOCK 2
LOT 24 BLOCK 2
LOT 25 BLOCK 2
LOT 26 BLOCK 2 (N.I.)
LOT 27 BLOCK 2 (N.I.)
LOT 28 BLOCK 2 (N.I.)
LOT 29 BLOCK 2 (N.I.)
LOT 30 BLOCK 2 (N.I.)
LOT 31 BLOCK 2
LOT 32 BLOCK 2
MADERIA 1924
SNAD TBM EL = 6.06'
TBM EL = 5.91'
FND N&D ILLEGIBLE (Not Used) (0.32'W,0.07'N)
FND N&D LB 7466 NFNS
FCIR 5/8" LB 2230 (Not Used) (2.62'E,1.84'S)
FIR 5/8" (Not Used) (0.18'E,1.04'S)
FCIR 5/8" LB 7466
FND N&D LB 7466
FCM 4"x4" WITH NAIL
FCIR 5/8" LB 7466 FIR 1/2" (NOT USED) (0.44'E,0.35'S)
FCIR 5/8" LB 7466 FCM 4"x4" Broken Top (NOT USED) (0.58'E,0.26'S)
FCIR 5/8" LB 7466 FCIR 5/8" PLS 2557 (NOT USED) (0.38'W,0.69'S)
FCIR 5/8" LB 7466 FCIR 1/2" LB 107 (NOT USED) (0.18'E,0.48'S)
FCIR 5/8" LB 7466 FCIR 5/8" PLS 2557 (NOT USED) (0.47'E,0.47'S)
FCIR 5/8" LB 7466 FPP 1-1/4" (NOT USED) (0.49'E,0.26'S)
FND N&D LB 7466 FCIR 5/8" LB 7466
FCIR 5/8"

SITE PLAN NOTES

1. ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS IN THE CITY OF TREASURE ISLAND LAND DEVELOPMENT, ZONING AND/OR RELATED ORDINANCES.

2. ALL PEDESTRIAN ROUTES, SIDEWALKS AND ACCESSIBILITY RAMPS, HANDICAPPED PARKING SPACES, ACCESSIBILITY SIGNS AND SYMBOLS SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) AND THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION (FACBC), LATEST EDITIONS.

3. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

4. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

5. ALL PROPOSED PAVED PARKING/DRIVE AREAS TO BE CURBED WITH FDOT TYPE 'D' CURB, UNLESS SPECIFIED OTHERWISE. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER FDOT INDEX NO. 522-002.

6. MINIMUM CURB RADII IS THREE (3) FEET, UNLESS OTHERWISE NOTED. EXACT RADII DIMENSIONS ARE SPECIFIED IN PLAN SHEET C-4.3.

7. ALL DIMENSIONS SHOWN ON PLAN ARE TO EDGE OF PAVEMENT, FACE OF CURB OR CENTERLINE OF STRUCTURE, UNLESS OTHERWISE NOTED.

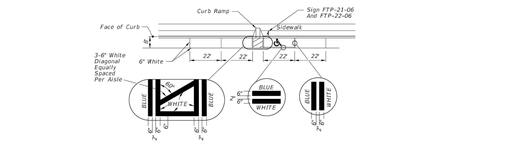
8. PROPOSED SITE LIGHTING SHALL BE AUTOMATICALLY CONTROLLED TO TURN-OFF WHEN PARKING LOT IS CLOSED.

9. REFER TO SHEET C-5.5 FOR CROSS SECTIONS.

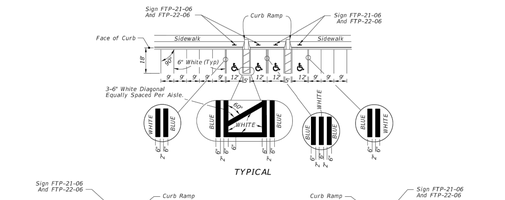
10. ALL DISTURBED AREAS ARE TO RECEIVE FOUR (4) INCHES OF TOP SOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.

11. ALL BOUNDARY AND TOPOGRAPHICAL INFORMATION SHOWN WAS TAKEN FROM TOPOGRAPHIC SURVEY BY GEODATA SERVICES, INC DATED 06/03/2019.

12. ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM OF 1988.



TYPICAL



FORWARD-IN PARKING

REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
∠ θ	"A"	"B"	"C"	"D"	"E"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING





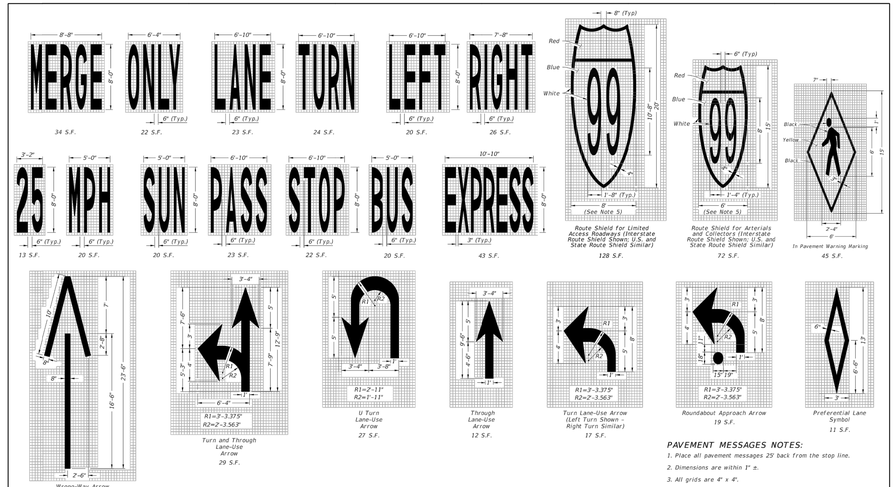
(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

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. Mount FTP-22-06 sign below the FTP-21-06 sign.
5. Use of the pavement symbol in accessible parking spaces is optional. When pavement symbol is used, the symbol is either 3'-0" or 5'-0" high and white in color.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	11 of 13



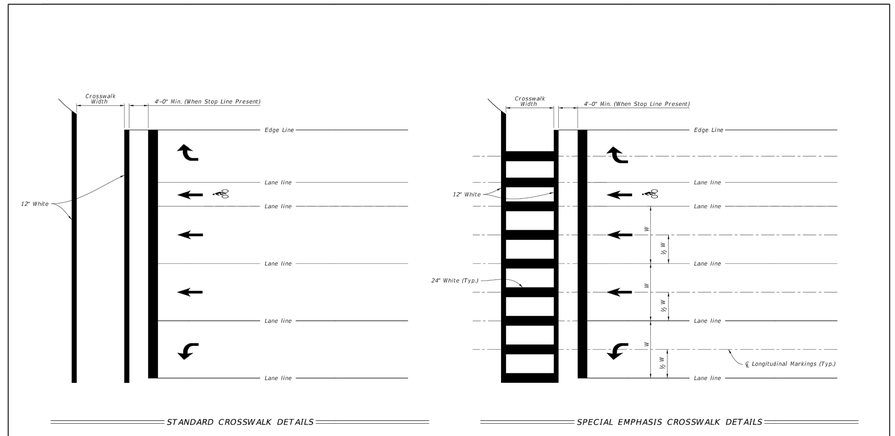
34 S.F. 22 S.F. 23 S.F. 24 S.F. 20 S.F. 26 S.F. 128 S.F. 72 S.F. 45 S.F. 13 S.F. 20 S.F. 20 S.F. 23 S.F. 22 S.F. 20 S.F. 43 S.F. 24 S.F. 29 S.F. 27 S.F. 12 S.F. 17 S.F. 19 S.F. 11 S.F.

PAVEMENT MESSAGE AND ARROW DETAILS

PAVEMENT MESSAGES NOTES:

1. Place all pavement messages 25' back from the stop line.
2. Dimensions are within 1" ±.
3. All grids are 4" x 4".
4. All pavement messages must be white except Route Shields and In Pavement Warning Markings.
5. Increase width of route shield for routes with three digits.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	1 of 13



STANDARD CROSSWALK DETAILS

SPECIAL EMPHASIS CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.
2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.
3. Refer to Index 522-002 when Curb Ramps are present.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	9 of 13

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE LAYOUT PARKING NOTES

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
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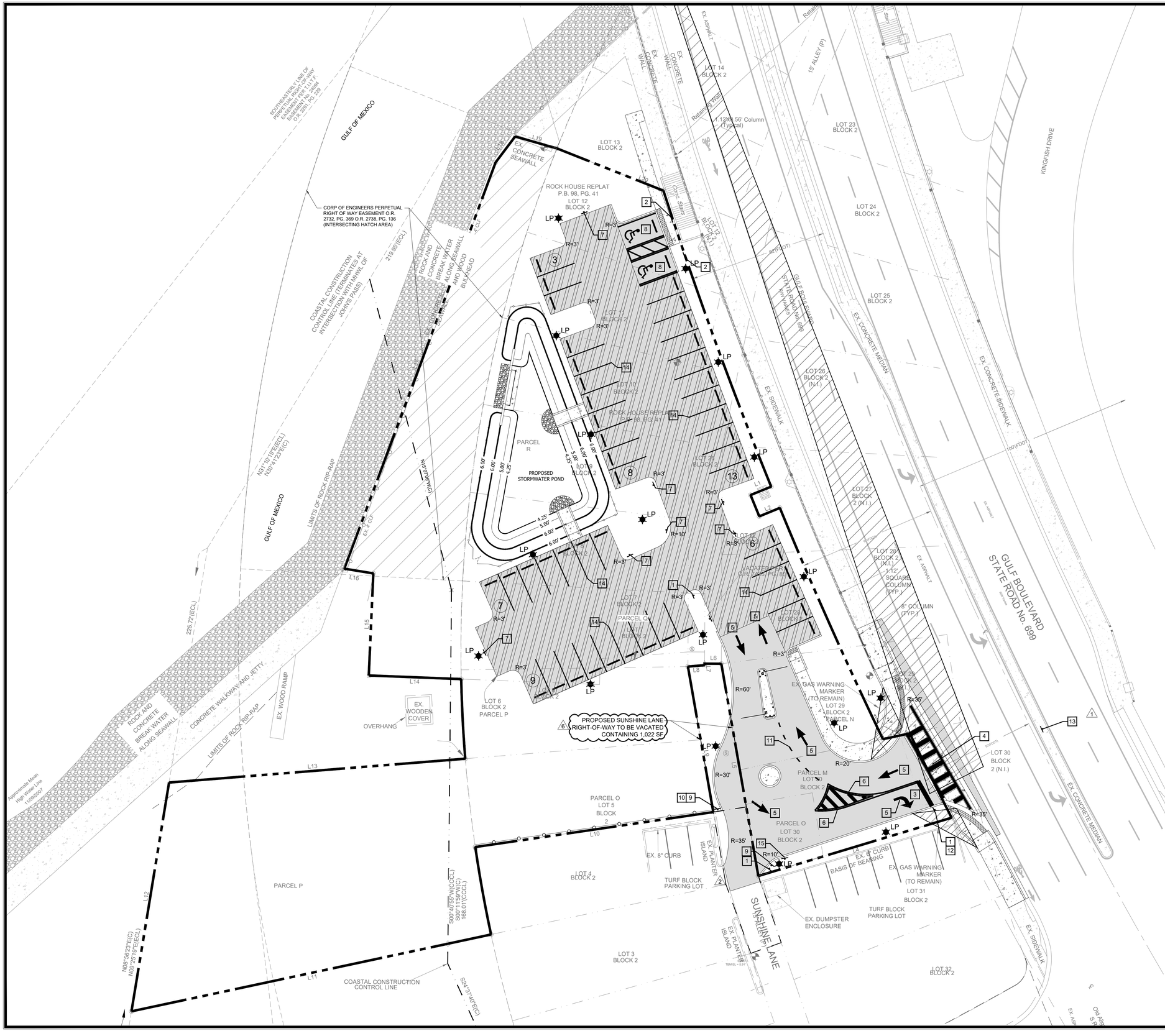
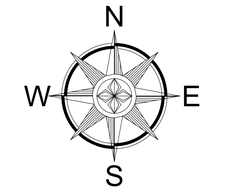
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.2

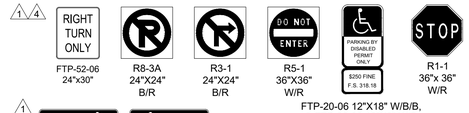




GRAPHIC SCALE 1"=20'

40 20 10 0 20

POST SIGNS



FTP-52-06 24"x30" | R8-3A 24"X24" B/R | R3-1 24"X24" B/R | R5-1 36"X36" W/R | FTP-20-06 12"X18" W/B/B, & FTP-22-06 12"X6" W/B | R1-1 36"x 36" W/R

R6-1R 36"X12" | R6-1L 36"X12"

PROPOSED SIGN QUANTITIES /6

QUANITY	NAME
3	STOP (R1-1), 36"x36"
2	PARKING BY DISABLED PERMIT (FTP-20-06 & FTP-22-06)
2	DO NO ENTER (R5-1)
1	NO RIGHT TURN (R3-1), 24" X 24"
7	NO PARKING (R8-3A), 24" X 24"
1	RIGHT TURN ONLY (FTP-52-06)
1	ONE WAY RIGHT ARROW (R6-1R)
1	ONE WAY LEFT ARROW (R6-1L)

TAG LEGEND

ITEM	DESCRIPTION
1	STOP SIGN, R1-1, 36"X36".
2	PARKING BY DISABLED PERMIT ONLY & $250 FINE F.S. 318.18 SIGNS.
3	24" WHITE STOP BAR PER FDOT STANDARD PLANS INDEX 711-001.
4	24" WHITE SPECIAL EMPHASIS CROSSWALK MARKING AND 12" LONGITUDINAL STRIPING WITH BLACK BORDER CONTRAST PER FDOT INDEX 711-001 (THERMOPLASTIC)
5	WHITE THROUGH & RIGHT TURN ARROW PER FDOT STANDARD PLANS INDEX 711-001.
6	MEDIAN GORE OUTER STRIPING TO BE 6" DOUBLE YELLOW AND INNER GORE STRIPING TO BE 18" YELLOW.
7	NO PARKING SIGN, R8-3A, 24"X24".
8	STRIPING FOR ACCESSIBLE PARKING SPACE(S) INCLUDING 6" WHITE & BLUE LINES ON EACH SIDE, ACCESS AISLE STRIPED 6" WHITE DIAGONALLY AT 45°, EQUALLY SPACED AND WHITE UNIVERSAL SYMBOL OF ACCESSIBILITY. (REFER TO FDOT STANDARD PLANS INDEX NO. 711-001).
9	DO NOT ENTER SIGN, R5-1, 36"X36".
10	NO RIGHT TURN SIGN, R3-1, 24"X24".
11	6" 2'-4' YELLOW DOTTED GUIDE LINE, PER FDOT STANDARD PLANS INDEX 711-001.
12	RIGHT TURN ONLY SIGN, FTP-52-06, 24"X30".
13	ONE WAY RIGHT ARROW SIGN, R6-1R, 36"X12".
14	4" SOLID WHITE LINE STRIPING FOR REGULAR PARKING.
15	ONE WAY LEFT ARROW SIGN, R6-1L, 36"X12".

MARKING NOTES

1. 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 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR DESIGN, CONSTRUCTION MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM".

2. PARKING STALL STRIPING TO BE 6" WIDE PAINTED STRIPES. THE STRIPING FOR ALL REGULAR PARKING SPACES SHALL BE MADE IN WHITE COLOR UNLESS INDICTAED OTHERWISE. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 FL Registration No. | BRAULIO GRAJALES Professional Engineer | Sign Date

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No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	10-20-23	PER FDOT
4	ED	2-6-23	PER FDOT
3	ED	2-6-23	PER CITY OF TREASURE ISLAND
2	ED	9-23-22	PER FDOT
1	ED	DATE	DESCRIPTION

PROJECT No: 22-008-HDI
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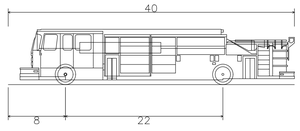
SHEET: C-4.3



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

N

W E

S

GRAPHIC SCALE 1"=20'

40 20 10 0 20

GULF OF MEXICO

SOUTHEASTERLY LINE OF PERPETUAL RIGHT OF WAY EASEMENT PER I.T.F. O.R. 4001, PG. 2494

CORP OF ENGINEERS PERPETUAL RIGHT OF WAY EASEMENT O.R. 2732, PG. 369 O.R. 2738, PG. 136 (INTERSECTING HATCH AREA)

COASTAL CONSTRUCTION CONTROL LINE (TERMINATES AT INTERSECTION WITH MHWL OF JOHN'S PASS)

LIMITS OF ROCK RIP-RAP

EX. CONCRETE SEAWALL

EX. ROCK AND CONCRETE BREAK WATER ALONG SEAWALL AND WOOD BULKHEAD

CONCRETE WALKWAY AND JETTY

EX. WOOD RAMP

EX. WOODEN COVER

OVERHANG

Approximate Mean High Water Line 11/09/2021

ROCK HOUSE REPLAT P.B. 98, PG. 41

LOT 12 BLOCK 2

LOT 13 BLOCK 2

LOT 14 BLOCK 2

LOT 11 BLOCK 2

LOT 10 BLOCK 2

LOT 9 BLOCK 2

LOT 8 BLOCK 2

LOT 7 BLOCK 2

LOT 6 BLOCK 2 PARCEL P

LOT 4 BLOCK 2

LOT 3 BLOCK 2

LOT 23 BLOCK 2

LOT 24 BLOCK 2

LOT 25 BLOCK 2

LOT 26 BLOCK 2 (N.I.)

LOT 27 BLOCK 2 (N.I.)

LOT 28 BLOCK 2 (N.I.)

LOT 29 BLOCK 2

LOT 30 BLOCK 2 (N.I.)

LOT 31 BLOCK 2

LOT 32 BLOCK 2

PARCEL R

PARCEL Q

PARCEL M LOT 30 BLOCK 2

PARCEL N LOT 29 BLOCK 2

PARCEL O LOT 5 BLOCK 2

PARCEL O LOT 30 BLOCK 2

PARCEL P

PROPOSED STORMWATER POND

PROPOSED SUNSHINE LANE RIGHT-OF-WAY TO BE VACATED CONTAINING 1,022 SF

SUNSHINE LANE (PUBLIC RIGHT-OF-WAY)

FIRE TRUCK VEHICLE PATH

EX. ASPHALT

EX. CONCRETE WALL

Retaining Wall

1.12'x0.56' Column (Typical)

15' ALLEY (P)

KINGFISH DRIVE

EX. CONCRETE SIDEWALK

EX. CONCRETE MEDIAN

GULF BOULEVARD STATE ROAD No. 699 R/W VARIES

62'(FDOT)

160'(FDOT)

Conc. Stairs

EX. SIDEWALK

EX. GAS WARNING MARKER (TO REMAIN)

1.12' SQUARE COLUMN (TYP.)

.8" COLUMN (TYP.)

EX. 8" CURB

EX. 4" CURB

EX. PLANTER ISLAND

TURF BLOCK PARKING LOT

EX. DUMPSTER ENCLOSURE

BASIS OF BEARING

TBM EL = 6.91'

L1 L2 L3 L4 L5 L6 L10 L11 L12 L13 L14 L16 L19

219.35'(ECL)

N31°10'19"E(ECL) N30°41'23"E(C)

N08°56'23"E(C) N09°25'19"E(ECL)

S00°40'55"W(CCCL) S00°01'15"W(C) 168.01'(CCCL)

225.72'(ECL)

S24°37'40"E(C)

6.00' 5.00' 4.25'

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48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

No.	BY	DATE	DESCRIPTION
6	ED	5-1-24	PER CITY OF TREASURE ISLAND

REVISIONS

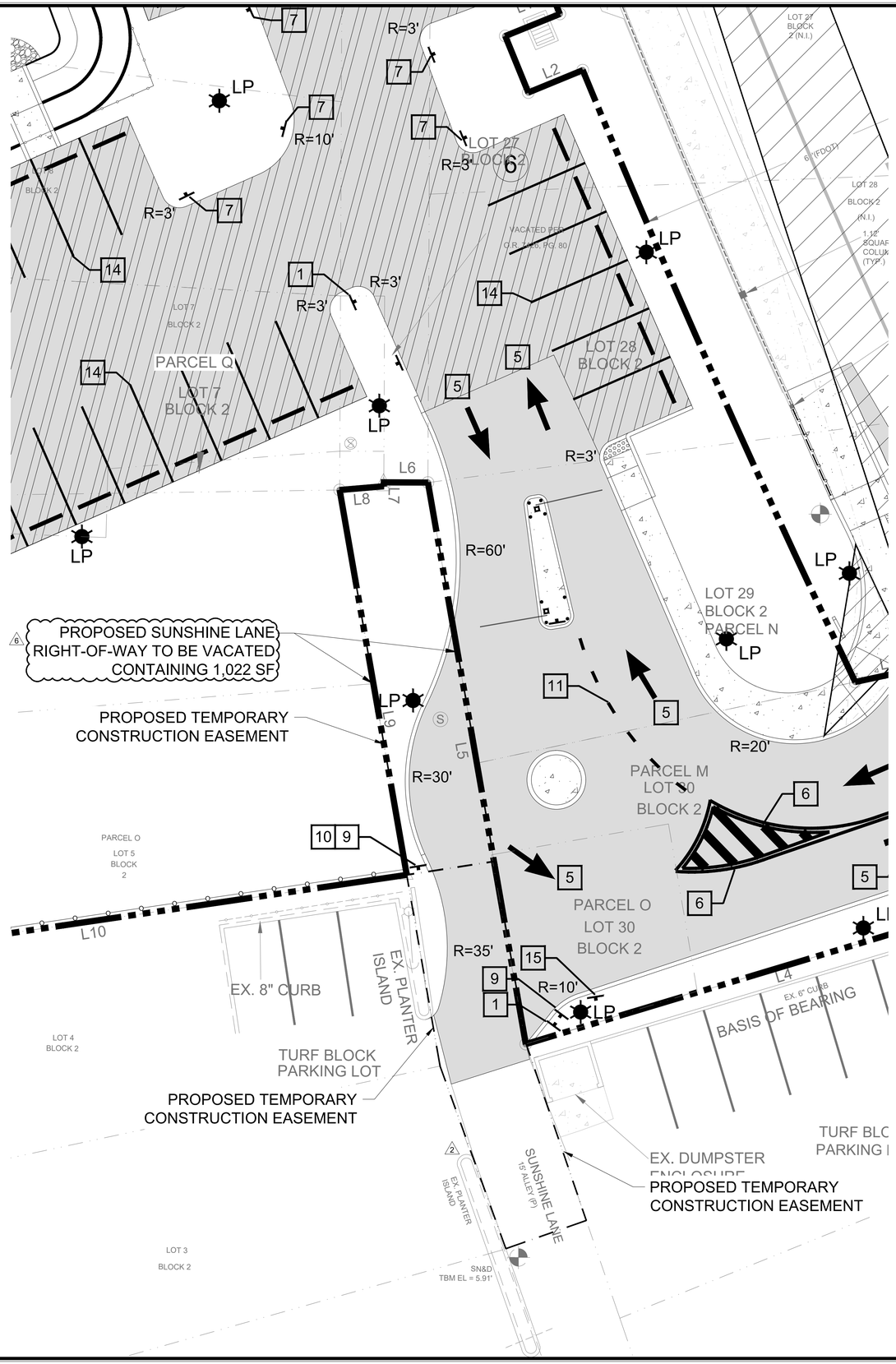
PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

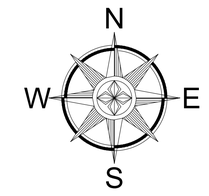
CONTENT: FIRE TRUCK TRACKING PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.4

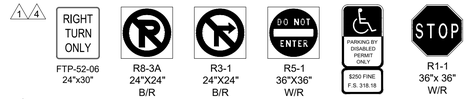




GRAPHIC SCALE 1"=10'

20 10 5 0 10

POST SIGNS



FTP-52-06 24"x30" | R8-3A 24"X24" B/R | R3-1 24"X24" B/R | R5-1 36"X36" W/R | FTP-20-06 12"X18" W/B/B, & FTP-22-06 12"X6" W/B | R1-1 36"x 36" W/R

R6-1R 36"X12" | R6-1L 36"X12"

PROPOSED SIGN QUANTITIES 6	
QUANITY	NAME
3	STOP (R1-1), 36"x36"
2	PARKING BY DISABLED PERMIT (FTP-20-06 & FTP-22-06)
2	DO NO ENTER (R5-1)
1	NO RIGHT TURN (R3-1), 24" X 24"
7	NO PARKING (R8-3A), 24" X 24"
1	RIGHT TURN ONLY (FTP-52-06)
1	ONE WAY RIGHT ARROW (R6-1R)
1	ONE WAY LEFT ARROW (R6-1L)

TAG LEGEND	
ITEM	DESCRIPTION
1	STOP SIGN, R1-1, 36"X36".
2	PARKING BY DISABLED PERMIT ONLY & $250 FINE F.S. 318.18 SIGNS.
3	24" WHITE STOP BAR PER FDOT STANDARD PLANS INDEX 711-001.
4	24" WHITE SPECIAL EMPHASIS CROSSWALK MARKING AND 12" LONGITUDINAL STRIPING WITH BLACK BORDER CONTRAST PER FDOT INDEX 711-001 (THERMOPLASTIC)
5	WHITE THROUGH & RIGHT TURN ARROW PER FDOT STANDARD PLANS INDEX 711-001.
6	MEDIAN GORE OUTER STRIPING TO BE 6" DOUBLE YELLOW AND INNER GORE STRIPING TO BE 18" YELLOW.
7	NO PARKING SIGN, R8-3A, 24"X24".
8	STRIPING FOR ACCESSIBLE PARKING SPACE(S) INCLUDING 6" WHITE & BLUE LINES ON EACH SIDE, ACCESS AISLE STRIPED 6" WHITE DIAGONALLY AT 45°, EQUALLY SPACED AND WHITE UNIVERSAL SYMBOL OF ACCESSIBILITY. (REFER TO FDOT STANDARD PLANS INDEX NO. 711-001).
9	DO NOT ENTER SIGN, R5-1, 36"X36".
10	NO RIGHT TURN SIGN, R3-1, 24"X24".
11	6" 2'-4' YELLOW DOTTED GUIDE LINE, PER FDOT STANDARD PLANS INDEX 711-001.
12	RIGHT TURN ONLY SIGN, FTP-52-06, 24"X30".
13	ONE WAY RIGHT ARROW SIGN, R6-1R, 36"X12".
14	4" SOLID WHITE LINE STRIPING FOR REGULAR PARKING.
15	ONE WAY LEFT ARROW SIGN, R6-1L, 36"X12".

MARKING NOTES

1. 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 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR DESIGN, CONSTRUCTION MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM".

2. PARKING STALL STRIPING TO BE 6" WIDE PAINTED STRIPES. THE STRIPING FOR ALL REGULAR PARKING SPACES SHALL BE MADE IN WHITE COLOR UNLESS INDICTAED OTHERWISE. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

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No.	DATE	REVISIONS
6	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	DESCRIPTION
4	BT	

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW SIGNING & MARKING PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.5

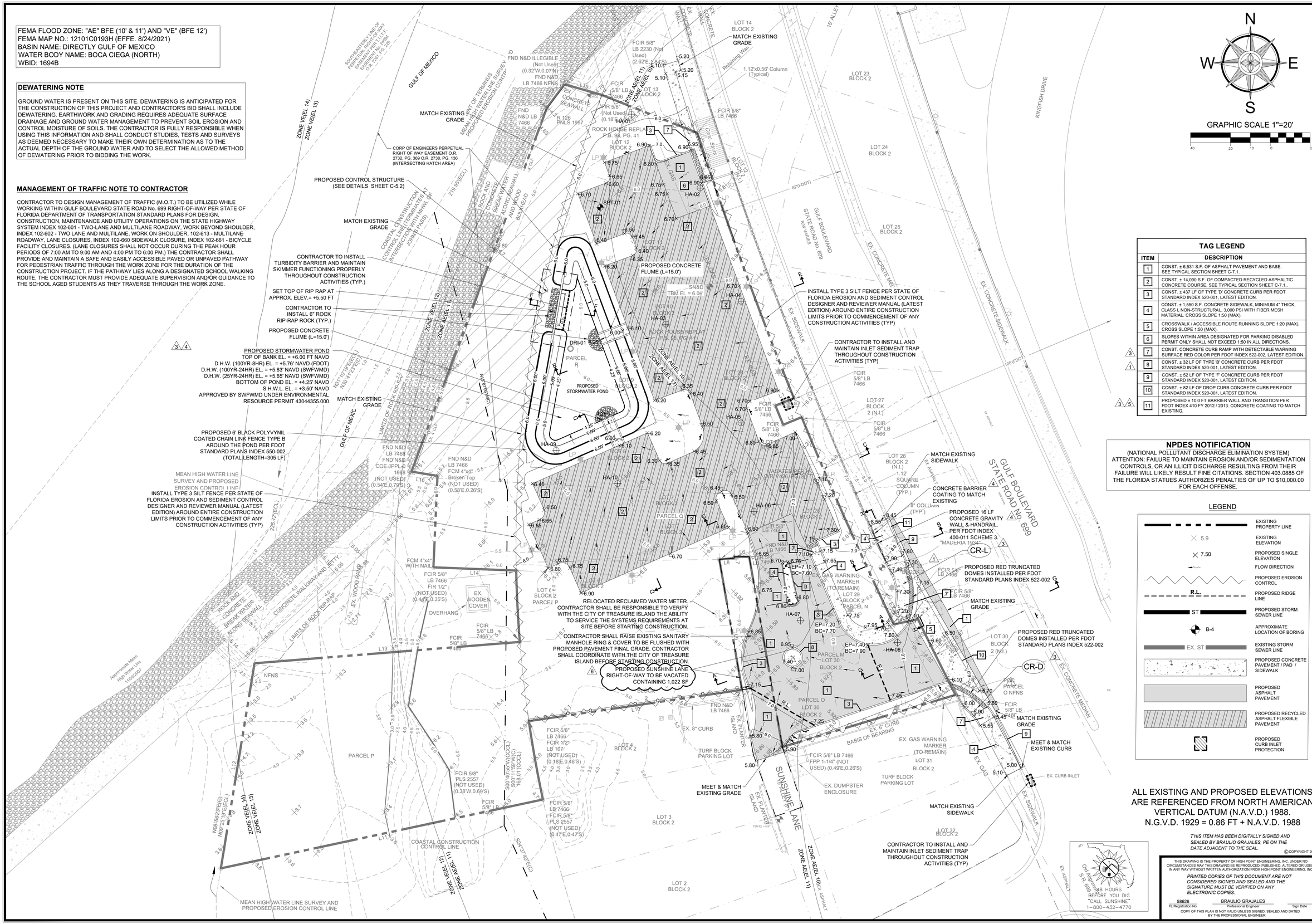
FEMA FLOOD ZONE: "AE" BFE (10' & 11') AND "VE" (BFE 12')
FEMA MAP NO.: 12101C0193H (EFFE. 8/24/2021)
BASIN NAME: DIRECTLY GULF OF MEXICO
WATER BODY NAME: BOCA CIEGA (NORTH)
WBID: 1694B

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.



TAG LEGEND

ITEM	DESCRIPTION
1	CONST. ± 6,531 S.F. OF ASPHALT PAVEMENT AND BASE. SEE TYPICAL SECTION SHEET C-7.1.
2	CONST. ± 14,090 S.F. OF COMPACTED RECYCLED ASPHALTIC CONCRETE COURSE. SEE TYPICAL SECTION SHEET C-7.1..
3	CONST. ± 437 LF OF TYPE 'D' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
4	CONST. ± 1,550 S.F. CONCRETE SIDEWALK, MINIMUM 4" THICK, CLASS I, NON-STRUCTURAL, 3,000 PSI WITH FIBER MESH MATERIAL. CROSS SLOPE 1:50 (MAX).
5	CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX), CROSS SLOPE 1:50 (MAX).
6	SLOPES WITHIN AREA DESIGNATED FOR PARKING DISABLED PERMIT ONLY SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS.
7	CONST. CONCRETE CURB RAMP WITH DETECTABLE WARNING SURFACE RED COLOR PER FDOT INDEX 522-002, LATEST EDITION.
8	CONST. ± 32 LF OF TYPE 'B' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
9	CONST. ± 52 LF OF TYPE 'F' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
10	CONST. ± 82 LF OF DROP CURB CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
11	PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT INDEX 410 FY 2012 / 2013. CONCRETE COATING TO MATCH EXISTING.

NPDES NOTIFICATION

(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)
ATTENTION: FAILURE TO MAINTAIN EROSION AND/OR SEDIMENTATION CONTROLS, OR AN ILLICIT DISCHARGE RESULTING FROM THEIR FAILURE WILL LIKELY RESULT FINE CITATIONS. SECTION 403.0885 OF THE FLORIDA STATUES AUTHORIZES PENALTIES OF UP TO $10,000.00 FOR EACH OFFENSE.

LEGEND

EXISTING PROPERTY LINE
5.9 EXISTING ELEVATION
7.50 PROPOSED SINGLE ELEVATION
FLOW DIRECTION
PROPOSED EROSION CONTROL
R.L. PROPOSED RIDGE LINE
ST PROPOSED STORM SEWER LINE
B-4 APPROXIMATE LOCATION OF BORING
EX. ST EXISTING STORM SEWER LINE
PROPOSED CONCRETE PAVEMENT / PAD / SIDEWALK
PROPOSED ASPHALT PAVEMENT
PROPOSED RECYCLED ASPHALT FLEXIBLE PAVEMENT
PROPOSED CURB INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

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No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	1-11-24	PER FDOT
4	ED	10-20-23	PER FDOT
3	ED	2-6-23	PER FDOT
2	ED	9-23-22	PER FDOT
1	BG	8/1/2022	

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: PAVING, GRADING & DRAINAGE PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
Tel. (813) 644-7000
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.1

FOUNDATION AND SOILS NOTES

1. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1806, THE MAXIMUM ALLOWABLE FOUNDATION PRESSURE, LATERAL PRESSURE OR LATERAL SLIDING-RESISTANCE VALUES FOR SUPPORTING SOILS NEAR THE SURFACE SHALL NOT EXCEED THE VALUES SPECIFIED IN THE FLORIDA BUILDING CODE TABLE 1806.2 UNLESS DATA TO SUBSTANTIATE THE USE OF A HIGHER VALUE ARE SUBMITTED AND APPROVED. PRESUMPTIVE LOAD-BEARING VALUES SHALL APPLY TO MATERIALS WITH SIMILAR PHYSICAL CHARACTERISTICS AND DISPOSITIONS. MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT OR UNPREPARED FILL SHALL NOT BE ASSUMED TO HAVE A PRESUMPTIVE LOAD-BEARING CAPACITY UNLESS DATA TO SUBSTANTIATE THE USE OF SUCH A VALUE ARE SUBMITTED. A PRESUMPTIVE LOAD-BEARING CAPACITY IS PERMITTED TO BE USED WHERE THE BUILDING OFFICIAL DEEMS THE LOAD-BEARING CAPACITY OF MUD, ORGANIC SILT OR UNPREPARED FILL IS ADEQUATE FOR THE SUPPORT OF LIGHTWEIGHT AND TEMPORARY STRUCTURES.

2. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1808 AND 1809, FOOTINGS AND SHALLOW FOUNDATIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTIONS 1808.2 THROUGH 1808.9 AND 1809.2 THROUGH 1809.13. FOOTINGS AND SHALLOW FOUNDATIONS SHALL BE BUILT ON UNDISTURBED SOIL, COMPACTED FILL MATERIAL OR CONTROLLED LOW-STRENGTH MATERIAL (CLSM). COMPACTED FILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTION 1804.6. CLSM SHALL BE PLACED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTION 1804.7. THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. THE BOTTOM SURFACE OF FOOTINGS IS PERMITTED TO HAVE A SLOPE NOT EXCEEDING ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). FOOTINGS SHALL BE STEPPED WHERE IT IS NECESSARY TO CHANGE THE ELEVATION OF THE TOP SURFACE OF THE FOOTING OR WHERE THE SURFACE OF THE GROUND SLOPES MORE THAN ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). THE MINIMUM DEPTH OF FOOTINGS BELOW THE UNDISTURBED GROUND SURFACE SHALL BE 12 INCHES. WHERE APPLICABLE, THE DEPTH OF FOOTINGS SHALL ALSO CONFORM TO THE FLORIDA BUILDING CODE SECTIONS 1809.5.

EXCAVATION, GRADING AND FILL NOTES

1. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, EXCAVATION AND FILL FOR BUILDINGS AND STRUCTURES SHALL BE CONSTRUCTED OR PROTECTED SO AS NOT TO ENDANGER LIFE OR PROPERTY. STUMPS AND ROOTS SHALL BE REMOVED FROM THE SOIL TO A DEPTH OF AT LEAST 12 INCHES BELOW THE SURFACE OF THE GROUND IN THE AREA TO BE OCCUPIED BY THE BUILDING. WOOD FORMS WHICH HAVE BEEN USED IN PLACING CONCRETE, IF WITHIN THE GROUND OR BETWEEN FOUNDATION SILLS AND THE GROUND, SHALL BE REMOVED BEFORE A BUILDING IS OCCUPIED OR USED FOR ANY PURPOSE. BEFORE COMPLETION, LOOSE OR CASUAL WOOD SHALL BE REMOVED FROM DIRECT CONTACT WITH THE GROUND UNDER THE BUILDING.

2. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, SLOPES FOR PERMANENT FILL SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT SLOPE). CUT SLOPES FOR PERMANENT EXCAVATIONS SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT SLOPE). DEVIATION FROM THE FOREGOING LIMITATIONS FOR CUT SLOPES SHALL BE PERMITTED ONLY UPON THE PRESENTATION OF A SOIL INVESTIGATION REPORT ACCEPTABLE TO THE BUILDING OFFICIAL.

3. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, NO FILL OR OTHER SURCHARGE LOADS SHALL BE PLACED ADJACENT TO ANY BUILDING OR STRUCTURE UNLESS SUCH BUILDING OR STRUCTURE IS CAPABLE OF WITHSTANDING THE ADDITIONAL LOADS CAUSED BY THE FILL OR SURCHARGE. EXISTING FOOTINGS OR FOUNDATIONS WHICH CAN BE AFFECTED BY ANY EXCAVATION SHALL BE UNDERPINNED ADEQUATELY OR OTHERWISE PROTECTED AGAINST SETTLEMENT AND SHALL BE PROTECTED AGAINST LATER MOVEMENT.

4. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.1, EXCAVATIONS FOR ANY PURPOSE SHALL NOT REMOVE LATERAL SUPPORT FROM ANY FOOTING OR FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOOTING OR FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION.

5. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.3, THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS OR A CONTROLLED LOW-STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED, IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL.

6. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.4, THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2 PERCENT WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING. WHERE CLIMATIC OR SOIL CONDITIONS WARRANT, THE SLOPE OF THE GROUND AWAY FROM THE BUILDING FOUNDATION IS PERMITTED TO BE REDUCED TO NOT LESS THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE).

7. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1803.5.8, WHERE FOOTINGS WILL BEAR ON COMPACTED FILL MATERIAL MORE THAN 12 INCHES IN DEPTH, THE COMPACTED FILL SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL INVESTIGATION REPORT, WHICH SHALL CONTAIN THE FOLLOWING: (1) SPECIFICATIONS FOR THE PREPARATION OF THE SITE PRIOR TO PLACEMENT OF COMPACTED FILL MATERIAL, (2) SPECIFICATIONS FOR MATERIAL TO BE USED AS COMPACTED FILL, (3) TEST METHOD TO BE USED TO DETERMINE THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT OF THE MATERIAL TO BE USED AS COMPACTED FILL, (4) MAXIMUM ALLOWABLE THICKNESS OF EACH LIFT OF COMPACTED FILL MATERIAL, (5) FIELD TEST METHOD FOR DETERMINING THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL, (6) MINIMUM ACCEPTABLE IN-PLACE DRY DENSITY EXPRESSED AS A PERCENTAGE OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ITEM 3, (7) NUMBER AND FREQUENCY OF FIELD TESTS REQUIRED TO DETERMINE COMPLIANCE WITH ITEM 6. COMPACTED FILL MATERIAL LESS THAN 12 INCHES IN DEPTH NEED NOT COMPLY WITH AN APPROVED REPORT, PROVIDED IT HAS BEEN COMPACTED TO A MINIMUM OF 90 PERCENT MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557.

IMPORTANT NOTES TO CONTRACTOR

1. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

2. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

3. ON-SITE FILL IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL PERFORM THEIR OWN CALCULATION OF FILL MATERIAL NEEDED AND CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL VOLUME OF FILL MATERIAL NEEDED PRIOR TO BIDDING THE WORK.

4. DEWATERING IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER PRIOR TO BIDDING THE WORK.

5. ON-SITE BURNING IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT.

6. THE SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL THE SITE IS PERMANENTLY STABILIZED.

7. ALL SODDED SLOPES OVER 4 TO 1, SHALL BE INSTALLED WITH SOD PEGS.

8. THE SITE IS IN EVACUATION ZONE "NONE".

9. ANY OFF SITE DISTURBANCE SHALL BE RESTORED TO THE PRE OR BETTER CONDITION.

10. THE OWNER/DEVELOPER WILL PROVIDE COPIES OF THE REQUIRED PERMITS FROM THE RESPECTIVE GOVERNING AGENCIES, PRIOR TO ISSUANCE OF THE SITE DEVELOPMENT PERMIT.

11. ALL WORK WITHIN THE RIGHT-OF-WAY WILL REQUIRE A RIGHT-OF-WAY USE PERMIT.

PAVING AND GRADING NOTES

1. PROPOSED ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON THESE CONSTRUCTION DOCUMENTS.

2. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

3. CURBING SHALL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THESE CONSTRUCTION DOCUMENTS.

4. CONTRACTOR SHALL PROVIDE A 1/2" BITUMINOUS EXPANSION JOINT WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE. EXPANSION JOINT FILLER SHALL CONFORM TO THE SPECIFICATIONS OF ASTM D1751.

5. CONTRACTOR SHALL PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR SHALL REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND MATERIAL TESTING AND SUBMITTING TEST RESULTS TO OWNER'S ENGINEER ON A WEEKLY BASIS. SOIL TESTS ARE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS SITE. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATIONS SIGNED BY THE MATERIAL / GEOTECHNICAL ENGINEER STATING THAT ALL SOIL AND MATERIAL REQUIREMENTS HAVE BEEN MET.

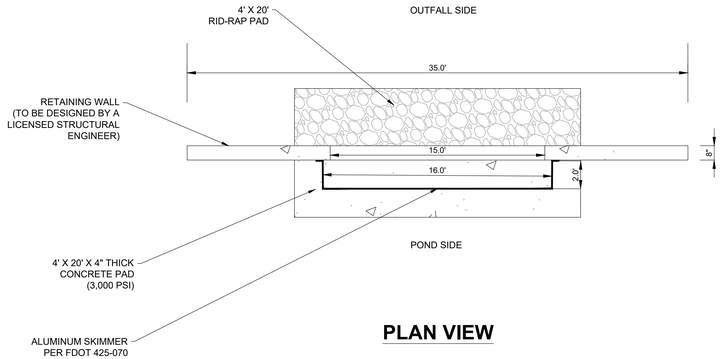
7. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE CONSTRUCTION DOCUMENTS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THIS SITE. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF SAID RETESTING.

8. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER FDOT INDEX NO. 522-002. THE CONTRACTOR SHALL FINISH ALL EXPOSED BACK OF CURB.

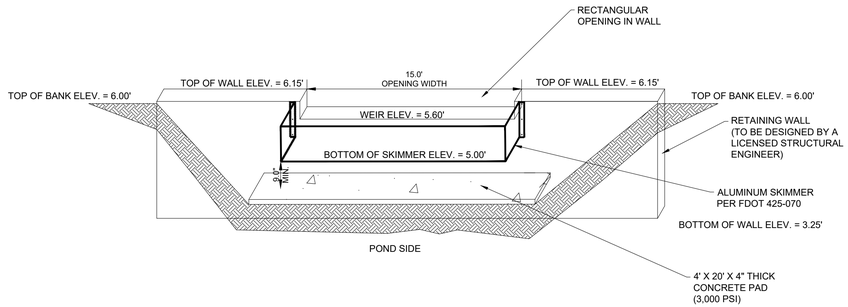
9. PRIOR TO CONSTRUCTION OF CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE ENGINEER FOR APPROVAL.

10. ON-SITE PAVEMENT SHALL CONSIST OF 2" ASPHALT (TYPE SP-9.5) ON 6" LIMEROCK BASE OR CRUSHED PORTLAND CEMENT CONCRETE COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

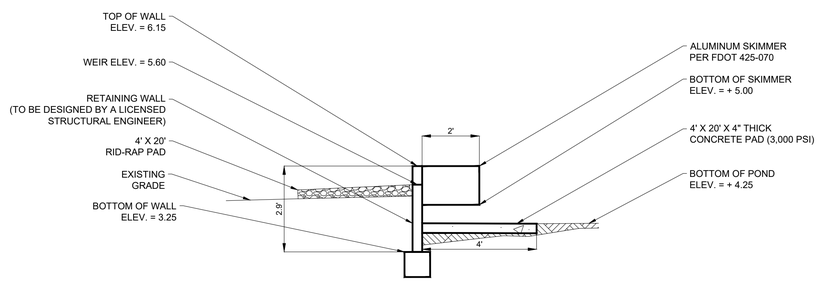
CONTROL STRUCTURE DETAILS



PLAN VIEW



OUTFALL WEIR DETAIL



PROFILE VIEW "F"

48 HOURS
BEFORE YOU DIG
"CALL SUNSHINE"
1-800-432-4770

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-08-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: PAVING, GRADING & DRAINAGE NOTES & SCHEDULES

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel (813) 644-8333
Tel (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.2

NOTES TO CONTRACTOR

1. ASSURE COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DURING CONSTRUCTION.

2. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE EROSION CONTROL MEASURES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-4 AND 40D-40 F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED $10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.

3. NOTIFY THE OWNER IN WRITING IF OTHER SOURCES OF POLLUTION ARE BEING STORED, OR OTHERWISE USED DURING CONSTRUCTION OF THE PROJECT (E.G; OILS, FUELS, FERTILIZERS, PESTICIDES, OTHER CHEMICALS, ETC). THIS NOTIFICATION SHALL BE ACCOMPANIED WITH THE CONTRACTOR'S DESIGN INCLUDING MEANS AND METHODS TO BE USED TO PREVENT POLLUTION FROM THESE SOURCES.

4. IF RELEASES OF REPORTABLE QUANTITIES OF OIL, COMBUSTIBLES OR HAZARDOUS MATERIAL OCCUR NOTIFY NATIONAL RESPONSE CENTER (800) 424-8802 IMMEDIATELY, NOTIFY PERMITTING AUTHORITY IN WRITING WITHIN 14 DAYS AND MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE DATE OF RELEASE, CIRCUNSTANCES LEADING TO THE RELEASE AND STEPS TAKEN TO PREVENT REOCCURRENCE OF THE RELEASE.

5. INSPECT ALL EROSION CONTROL MEASURES REGULARLY DURING CONSTRUCTION (WEEKLY) AND AFTER EACH RAINFALL AND REPAIR AND/OR REPLACE AS NECESSARY TO MAINTAIN ADEQUATE CONTROL OF EROSION AND SEDIMENTATION FOR THE DURATION OF THE PROJECT.

6. TAKE ALL REASONABLE MEASURES TO ASSURE THAT SEDIMENTED AND/OR POLLUTED STORMWATER IS NOT DISCHARGED FROM THE SITE.

7. USE DETENTION PONDS AS SEDIMENTATION BASINS OR CREATE SEDIMENTATION BASINS AS NEEDED.

8. PREPARE INSPECTION REPORTS SUMMARIZING NAME OF INSPECTOR(S), QUALIFICATIONS OF INSPECTOR(S), MEASURES/AREAS INSPECTED, OBSERVED CONDITIONS AND CHANGES NECESSARY TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

9. NOTIFY THE ENGINEER IN WRITING IF STORMWATER POLLUTION PREVENTION MEASURES ARE INEFFECTIVE AND IF REVISION TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ARE NEEDED.

10.MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY CEASE ON A PORTION OF THE SITE, DATES WHEN CONSTRUCTION ACTIVITIES PERMANENTLY CEASE ON A PORTION OF THE SITE AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ON THE SITE.

11. INITIATE SITE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.

12. MAINTAIN A COPY OF THE CONSTRUCTION PLANS WHICH INCLUDE THE CONSTRUCTION SURFACE WATER MANAGEMENT PLAN (CSWMP) ON SITE.

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP) IN ADDITION TO THOSE PRESENTED ON THESE CONSTRUCTION DOCUMENTS SHALL BE IMPLEMENTED PRIOR TO START OF CONSTRUCTION AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETE TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTY, ROADWAYS AND STREETS, AND SILTATION OF STORM SEWERS, WATERWAYS AND WETLANDS.

2. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.

3. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORM WATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.

4. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SCHEDULED AND PERFORMED SO THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.

5. PERMANENT DETENTION AREA(S) AND/OR TEMPORARY SEDIMENTATION BASIN(S) SHALL BE CONSTRUCTED AS A FIRST STEP IN THE LAND ALTERATION ACTIVITIES AS PART OF THE CONSTRUCTION SURFACE WATER MANAGEMENT PLAN. THE CONTRACTOR SHALL CREATE POSITIVE DRAINAGE FOR DIRECTING ANTICIPATED RUNOFF TO THE SEDIMENTATION BASIN AREA(S). WHEN REQUIRED, DEWATERING SHALL INCLUDE PROVISIONS TO RETAIN AS MUCH WATER ON-SITE AS POSSIBLE.

6. SEDIMENT BASINS, PERIMETER SWALES, SILT FENCES, BERMS, SEDIMENT TRAPS, VEGETATIVE BUFFERS AND OTHER MEASURES INTENDED TO DETAIN SEDIMENT AND/OR PREVENT THE MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING WATER BODIES, SHALL BE INSTALLED, CONSTRUCTED OR, IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION ACTIVITIES. SILTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED AS REQUIRED BY THE ENGINEER TO ENSURE SURFACE WATER QUALITY CONDITIONS ARE IN COMPLIANCE WITH STATE WATER QUALITY STANDARDS.

7. ALL STORMWATER INLETS, ON-SITE AND ADJACENT TO THE PROJECT, SHALL BE PROTECTED USING SEDIMENT TRAPS (I.E. STAKED HAY BALES) AND FILTER FABRIC SHALL BE PLACED BENEATH GRATES WHICH SHALL BE MAINTAINED AND REPLACED DURUNG CONSTRUCTION AS REQUIRED.

8. ALL EXTERIOR SWALES, DITCHES AND CHANNELS SHALL BE SODDED WITHIN (3) DAYS OF EXCAVATION. ALL OTHER INTERIOR SWALES, DITCHES AND CHANNELS INCLUDING DETENTION PONDS WILL BE SODDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

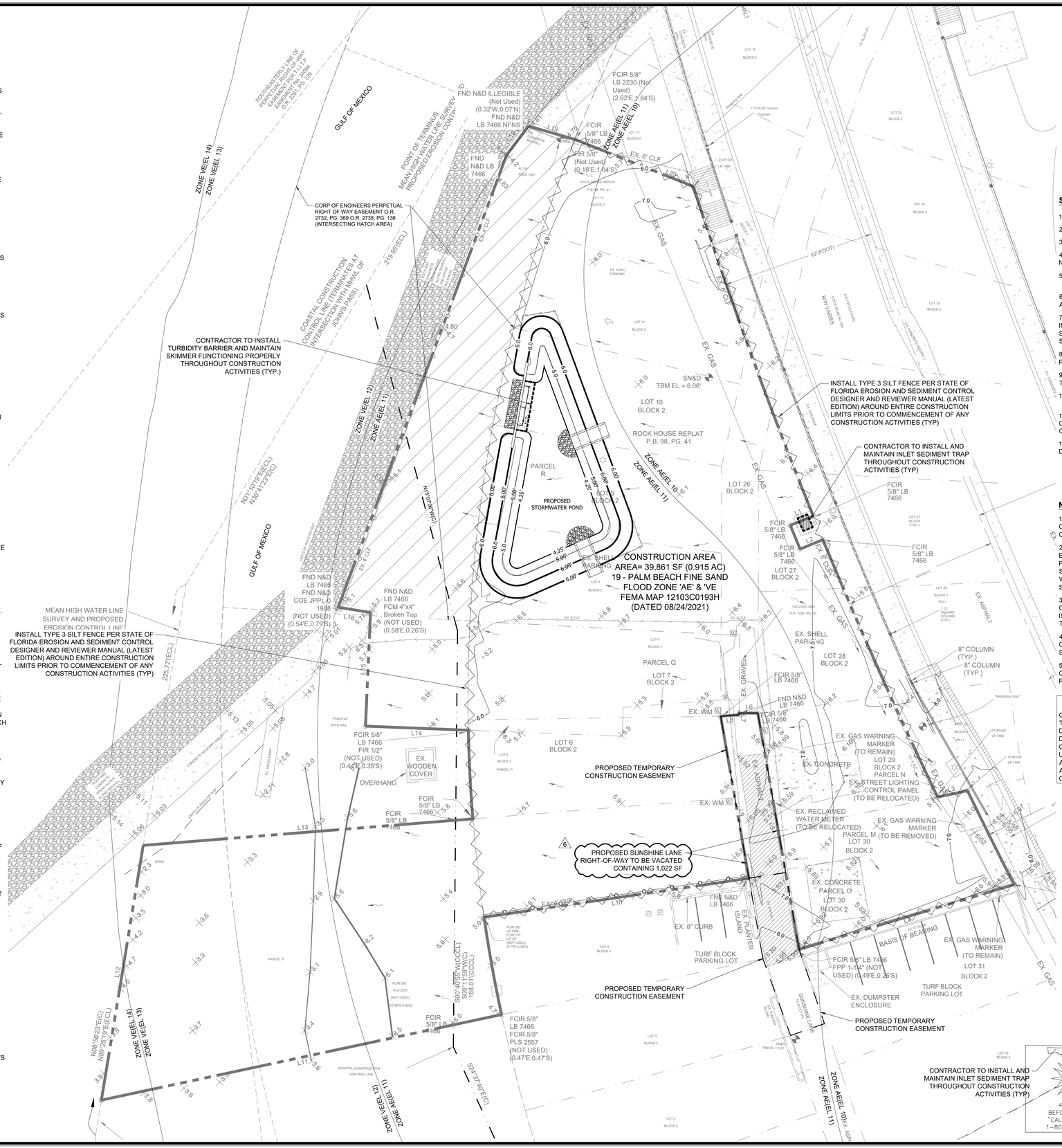
9. FILL MATERIAL STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILED MATERIAL, MAY BE REQUIRED, DEPENDING UPON THEIR LOCATION AND THE LENGTH OF TIME THE STOCKPILES WILL BE KEPT. IN NO CASE SHALL UNSTABILIZED STOCKPILE REMAIN MORE THAN THIRTY (30) DAYS.

10. ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED WEEKLY, ESPECIALLY AFTER EACH RAINFALL AND WILL BE REPAIRED AND/OR REPLACED AS REQUIRED.

11. TEMPORARY SEEDING AND MULCHING MAY BE APPLIED TO COVER BARE SOIL AND TO PREVENT WIND EROSION. SOLID BOARD FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND BLOWN DUST. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING WIND CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION. IRRIGATION WITH WATER UNTIL THE SURFACE IS WET AND REPEATED AS NECESSARY CAN BE USED TO PREVENT WIND EROSION AND CONTROL BLOWN DUST. IF THIS METHOD IS TO BE EMPLOYED, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY GRAVEL ROCK ENTRANCE OR A SOIL TRACKING PREVENTION DEVICE (STPD) TO PREVENT OFFSITE TRACKING OF MUD ONTO LOCAL STREETS.

12. THE CONTRACTOR SHALL REPORT ALL OFF-SITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTUS ABOVE BACKGROUND LEVEL TO AIR AND WATER QUALITY PROTECTION WITHIN 24 HOURS AFTER OCCURRENCE AS PER THE REQUIREMENTS OF THE NPDES PERMIT. NOTIFICATION SHALL INCLUDE CAUSE OF THE PROBLEM, CORRECTIVE ACTIONS TAKEN, AND INSTALLATION OF ADDITIONAL EROSION/SEDIMENT CONTROLS NOT SHOWN ON THE APPROVED CONSTRUCTION PLAN DRAWINGS.

13. WHEN CONSTRUCTION IS COMPLETE, THE PERMANENT DETENTION BASIN SHALL BE REGRADED AND RE-SODDED IN ACCORDANCE TO THE CONSTRUCTION PLANS. ANY SOD PLACED ON SLOPES EXCEEDING 3:1 TO BE ANCHORED BY STAKES, AND/OR ENGINEER'S APPROVED METHOD. PERMANENT DETENTION AREAS SHALL BE TOTALLY CLEANED OUT AND OPERATE PROPERLY AT FINAL INSPECTION AND AT THE END OF THE WARRANTY PERIOD.



GRAPHIC SCALE 1"=20'

40 20 10 0 20

SITE SPECIFIC NOTES

1. EXISTING SOILS: PALM BEACH FINE SAND.

2. ESTIMATED SEASONAL HIGH WATER ELEVATION = 2.5 FT NAVD.

3. STORMWATER BASIN: GULF OF MEXICO.

4. RECEIVING WATER BODY OR STORMWATER COLLECTION SYSTEM: BOCA CIEGA BAY NORTH, WBID: 1694B

5. FLOOD ZONE INFORMATION: ZONE "AE" & "VE". (FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER: 12101C0193H (EFFE. 8/24/2021)

6. APPROXIMATE CONSTRUCTION START DATE: 2/2024.
APPROXIMATE CONSTRUCTION COMPLETION DATE: 5/2024.

7. CONSTRUCTION SEQUENCE IS AS FOLLOWS: COMPLETE EROSION CONTROL INSTALLATION, CLEARING AND GRUBBING, EARTHWORK ACTIVITIES, STORMWATER SYSTEM CONSTRUCTION, BASE AND PAVEMENT CONSTRUCTION, FINAL STABILIZATION.

8. PERMANENT DRAINAGE FOR THE SITE IS PROVIDED IN THE DRY DETENTION POND.

9. CONSTRUCTION AREA: 30,060 SF (0.69 AC)
TOTAL SITE AREA: 61,736 SF (1.417 AC)

10. RUN-OFF CURVE NUMBERS ('CN' AVERAGE):
POST-DEVELOPMENT CONDITION: CN = 85.3

10. THE STORMWATER MANAGEMENT SYSTEM, FOLLOWING COMPLETION OF CONSTRUCTION AND APPROPRIATE AS-BUILT SUBMITTALS AND ENGINEERING CERTIFICATIONS, WILL BE OPERATED AND MAINTAINED BY GREENLEAF CAPITAL, LLC.

11. THE POTENTIAL SOURCE OF POLLUTION FROM THIS PROJECT IS SOIL EROSION DURING CONSTRUCTION ACTIVITIES.

NOTES TO OWNER

1. ASSURE THAT ALL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND BE MAINTAINED THROUGH CONSTRUCTION.

2. PRIOR TO CONSTRUCTION SIGN AND SUBMIT A NOTICE OF INTENT FORM TO THE ENVIRONMENTAL PROTECTION AGENCY AS PERMITTEE AND OPERATOR OF THIS FACILITY, ALONG WITH A NARRATIVE STATEMENT CERTIFYING THAT THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PROVIDES COMPLIANCE WITH APPROVED STATE OF FLORIDA ISSUED PERMITS, EROSION AND SEDIMENTATION CONTROL PLANS AND STORMWATER MANAGEMENT PLANS.

3. SUBMIT TO THE ENVIRONMENTAL PROTECTION AGENCY, ALONG WITH THE ABOVE CERTIFICATION, A COPY OF THE COVER PAGE OF THE STATE OF FLORIDA PERMIT ISSUED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION AND/OR THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD).

4. SUBMIT TO THE ENVIRONMENTAL PROTECTION AGENCY A COPY OF THE NOTICE OF INTENT TO THE APPLICABLE OPERATOR OF THE MUNICIPAL SEPARATE STORMWATER SYSTEM.

5. SIGN AND SUBMIT A NOTICE OF TERMINATION FORM UPON COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION OF THE SITE TO THE ENVIRONMENTAL PROTECTION AGENCY AND ALL APPLICABLE GOVERNMENTAL ENTITIES.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED EROSION CONTROL
- ST — PROPOSED STORM SEWER LINE
- EX. ST — EXISTING STORM SEWER LINE
- PROPOSED GRATE INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.
N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND

PROJECT No: 22-008-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: STORMWATER POLLUTION PREVENTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.3

NOTES TO CONTRACTOR

1. FEDERAL LAW PROHIBITS THE POINT SOURCE DISCHARGE OF POLLUTANTS, INCLUDING THE DISCHARGE OF STORMWATER ASSOCIATED WITH LARGE OR SMALL CONSTRUCTION ACTIVITIES TO WATER OF THE UNITED STATES WITHOUT A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. UNDER THE STATE OF FLORIDA'S AUTHORITY TO ADMINISTER THE NPDS STORMWATER PROGRAM, OPERATORS THAT HAVE STORMWATER DISCHARGE ASSOCIATED WITH LARGE OR SMALL CONSTRUCTION ACTIVITIES TO SURFACE WATERS OF THE STATE, INCLUDING THROUGH A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4), MUST OBTAIN COVERAGE EITHER UNDER THE GENERIC PERMIT OR AN INDIVIDUAL PERMIT.
2. THERE A SPECIFIC ELIGIBILITY CRITERIA AND LIMITATIONS ON COVERAGE THAT CAN BE REVIEWED IN THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES DATED MAY 2003 (HENCEFORTH REFERRED TO AS "THE GENERIC PERMIT"). ACTIVITIES SPECIFICALLY DESCRIBED IN THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ARE COVERED. ANY ACTIVITY NOT SPECIFICALLY DISCUSSED IN THIS SWPPP MAY NOT BE COVERED AND SHOULD IMMEDIATELY BE INDENTIFY TO THE TO THE SIGNATURE AUTHORITY (OWNER AND GENERAL CONTRACTOR) ON THE POSTED NOTICE OF INTENT (NOI).
3. OPERATOR SEEKING COVERAGE UNDER THIS GENERIC PERMIT TO AUTHORIZE STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR NEW LARGE OR SMALL CONSTRUCTION ACTIVITIES SHALL FILE AN NOI FOR COVERAGE UNDER THIS PERMIT AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION. SHOULD THE OPERATOR CHANGE DURING CONSTRUCTION, THE NEW OPERATOR SHALL FILE AN NOI FOR COVERAGE UNDER THIS PERMIT AT LEAST TWO (2) DAYS BEFORE ASSUMING CONTROL OF THE PROJECT AND THE PREVIOUS OPERATOR SHALL FILE A NOTICE OF TERMINATION (NOT) TO TERMINATE PERMIT COVERAGE.
4. A COPY OF THE NOI CONFIRMING COVERAGE UNDER THIS GENERIC PERMIT SHALL BE POSTED AT THE CONSTRUCTION SITE IN A PROMINENT PLACE FOR PUBLIC VIEWING.
5. THE PERIOD OF COVERAGE UNDER THIS GENERIC PERMIT IS EFFECTIVE TWO (2) DAYS AFTER THE DATE OF SUBMITTAL OF THE COMPLETE NOI TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). COVERAGE UNDER THIS GENERIC PERMIT IS LIMITED TO A TERM NOT TO EXCEED FIVE (5) YEARS FROM THE EFFECTIVE DATE OF COVERAGE.
6. EXCEPT AS NOTED IN THE GENERIC PERMIT, ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY AND DISCHARGES OF MATERIAL OTHER THAN STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IN COMPLIANCE WITH AN FDEP PERMIT (OTHER THAN THIS PERMIT) ISSUED FOR THE DISCHARGE OR BE EXEMPT FROM PERMITTING.
7. THE FOLLOWING NON-STORMWATER DISCHARGES MAY BE AUTHORIZED BY THIS PERMIT PROVIDED THE NON-STORMWATER COMPONENT OF THE DISCHARGE IS IN COMPLIANCE WITH THE GENERIC PERMIT AND THE DISCHARGE ACTIVITIES ARE LISTED AND DESCRIBED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PROVIDED BELOW: DISCHARGES FORM FIRE FIGHTING ACTIVITIES, FIRE HYDRANT FLUSHING, WATERS USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES (WASHWATERS FORM A MORE THOROUGH CLEANING, INCLUDING THE USE OF DETERGENTS OR OTHER CLEANERS, IS NOT AUTHORIZED BY THIS PERMIT) OR CONTROL DUST, POTABLE WATER SORCES INCLUDING WATERLINE FLUSHING, IRRIGATION DRAINAGE. ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT US DETERGENTS, PAVEMENT WASTEWATER WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED, AIR CONDITIONING CONDENSATE, SPRINGS, AND FOUNDATIONS OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
8. DISCHARGES RESULTING FROM GROUND WATER DEWATERING ACTIVITIES AT CONSTRUCTION SITES ARE NOT COVERED BY THIS PERMIT. APPLICANTS FOR THESE DISCHARGES MUST OBTAIN COVERAGE UNDER FDPE'S GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY.
9. THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL IN THE STORMWATER DISCHARGE(S) FROM A FACILITY OR ACTIVITY SHALL BE PREVENTED OR MINIMIZED IN ACCORDANCE WITH THE APLICABLE STORMWATER POLLUTION PREVENTION PLAN FOR THE FACILITY OR ACTIVITY. THIS PERMIT DOES NOT RELIEVE THE OPERATOR OF THE REPORTING REQUIREMENTS OF 40 CFR PART 117 AND 40 CFR PART 302. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302, OCCURS DURING A 24 HOUR PERIOD:
   A. THE OPERATOR IS REQUIRED TO NOTIFY THE STATE WARNING POINT AT (800) 320-0519 OR (850) 413-9911 AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE;
   B. THE OPERATOR SHALL SUBMIT WITHIN 14 CALENDAR DAYS OF KNOWLEDGE OF THE RELEASE A WRITTEN DESCRIPTION OF: THE RELEASE INCLUDING THE TYPE AND ESTIMATE OF THE AMOUNT OF MATERIAL RELEASED), THE DATE THAT SUCH RELEASE OCURRED, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND REMEDIAL STEPS TO BE TAKEN, TO FDEP, NPDES STORMWATER SECTION, MAIL STATION 2500, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400.
   C. THE SWPPP BELOW MUST BE MODIFIED WITHIN 14 CALENDAR DAYS OF THE KNOWLEDGE OF THE RELEASE TO: PROVIDE A DESCRIPTION OF THE RELEASE, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF THE RELEASE. IN ADDITION, THE PLAN MUST BE REVIEWED TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES, AND THE PLAN MUST BE MODIFIED WHERE APPROPRIATE.
9. THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ON-SITE SPILL.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

1. A STORMWATER POLLUTION PREVENTION PLAN SHALL BE DEVELOPED AND IMPLEMENTED FOR EACH CONSTRUCTION SITE COVERED BY THIS PERMIT. THE PLAN SHALL IDENTIFY POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY. IN ADDITION, THE PLAN SHALL DESCRIBE AND ENSURE THE IMPLEMENTATION OF BEST MANAGEMENT PRACTICES WHICH WILL BE USED TO REDUCE THE POLLUTANTS IN STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY AND TO ASSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. FACILITIES MUST IMPLEMENT THE PROVISIONS OF THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED UNDER THIS PART AS A CONDITION OF THIS PERMIT. FAILURE TO DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THIS PART SHALL BE DEEMED A VIOLATION OF THIS PERMIT AND MAY RESULT IN ENFORCEMENT ACTION.
2. THE PERMITTEE SHALL AMEND THE PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OF THE STATE OR AN MS4, INCLUDING THE ADDITION OF OR CHANGE IN LOCATION OF STORMWATER DISCHARGE POINTS, AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN. THE PERMITTEE ALSO SHALL AMEND THE PLAN IF IT PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM SOURCES IDENTIFIED IN THE GENERIC PERMIT OR IN OTHERWISE ACHIEVING THE GENERAL OBJETIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY. IN ADDITION, THE PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW CONTRACTOR AND/OR SUBCONTRACTOR THAT WILL IMPLEMENT A MEASURE OF THIS SWPPP.AMENDMENTS TO THE PLAN SHALL BE PREPARED, SIGNED, DATED, AND KEPT AS ATTACHMENTS TO THE ORIGINAL PLAN. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN WILL ENSURE COMPLIANCE WITH ALL PROCEDURES OUTLINED IN THIS PLAN.

STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM

INSPECTION MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVEN THAT IS 0.50 INCHES OR GREATER

PROJECT NAME _____ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: _____

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:
G = GOOD
C = NEEDS TO BE CLEANED
M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON
O = OTHER
P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT

LOCATION			
1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVERSION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
7. SUBSURFACE DRAIN	16. CURB AND GUTTER	25. HAY BALES	34. OTHER
8. PIPE SLOPE DRAIN	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OULET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME _____ QUALIFICATION _____ DATE _____

THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED UPON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING.

_____ _____
NAME (RESPONSIBLE AUTHORITY) DATE

SEQUENCE OF MAJOR ACTIVITY	RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR	START DATE
A. INSTALL TEMPORALY PERIMETER EROSION AND SEDIMENT CONTROL - SILT FENCE		
B. INSTALL STABILIZED CONSTRUCTION ENTRANCE		
C. SELECTIVELY CLEAR & GRUB SITE WITHIN SILT FENCE		
D. PILE AND REMOVE EXCESS TOP SOIL		
E. EXCAVATE STORMWATER MANAGEMENT POND		
F. STABILIZE DENUDED AREAS AND STOCKPILES WITH 14 CALENDAR DAYS OF LAST CONSTRUCTION ACTIVITY IN A SPECIFIC AREA		
G. INSTALL STORMWATER MANAGEMENT SYSTEM ALONG WITH TEMPORARY DRAIN SEDIMENT CONTROL		
H. ADD FILL, GRADE AND STABILIZE AREA UNDER BUILDING FOOTPRINTS AND PAVEMENT.		
I. CONSTRUCT BUILDINGS		
J. INSTALL UTILITIES		
K. INSTALL CURBING AND GUTTERS		
L. INSTALL IRRIGATION SYSTEM		
M. COMPLETE FINAL GRADING AND INSTALL LAST OF SOD AND PLANTINGS		
N. COMPLETE PAVING (IF APPLICABLE)		
O. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL, RE-GRADE AND RE-SOD ANY AREAS DISTURBED BY REMOVAL ACTIVITIES		

CONTROLS

EROSION AND SEDIMENT CONTROLS - STABILIZATION

1. TEMPORARY STABILIZATION - SOIL AND BASE MATERIALS STAGED, STOCKPILED, OR STORED ON-SITE ALONG WITH ANY DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH TEMPORARY SEED AND STRAW MULCH NOT LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED SHALL BE APPLIED AT A RATE TO ENSURE APPROPRIATE COVERAGE TO PREVENT EROSION. FERTILIZATION WILL BE PROVIDED PRIOR TO SEEDING. AFTER SEEDING, STRAW MULCH OR MATTING MATERIAL WILL BE APPLIED IN ORDER TO PREVENT EROSION AND HOLD THE SEED UNTIL IT GERMINATES AND IS ESTABLISHED. APPLICATION RATES AND THE CHOICES OF STRAW OR MATTING IS SLOPE DEPENDENT, SUB-BASE AND BASE MATERIALS WILL BE APPLIED TO PAVED AREAS AND COMPACTED TO TEMPORARILY STABILIZE THEM UNTIL PAVEMENT IS APPLIED. TEMPORARY STABILIZATION STRUCTURES AND MATERIALS WILL BE MAINTAINED UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE.
2. PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH SOD OR OTHER GROUND COVER AS DESCRIBED IN THE LANDSCAPE PLANS NOT LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY THE SOD AND OTHER PLANTINGS SHALL BE MAINTAINED IN A MANNER TO PRESERVE AND MAINTAIN HEALTHY GROWTH.

STRUCTURAL PRACTICES

1. THE SILT FENCE SURROUNDING THE CONSTRUCTION SITE WILL BE THE PRIMARY METHOD TO CONTROL THE QUALITY OF RUNOFF UNTIL THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS INSTALLED AND OPERATIONAL. TEMPORARY SILT BARRIERS USING EITHER HAY BALES OR SUPPLIER SPECIFIC ATTACHMENTS MAY BE INSTALLED TO PROTECT THE NEWLY INSTALLED STORMWATER MANAGEMENT SYSTEM UNTIL THE DRAINAGE AREAS ARE STABILIZED. THE CONTRACTOR WILL PROTECT ALL STORMWATER INLETS WITHIN AFFECTED AREAS TO PREVENT SILT OR SEDIMENT FROM ENTERING THE PUBLIC STORWATER MANAGEMENT SYSTEM. THIS CAN BE ACCOMPLISHED THROUGH SEVERAL COMMONLY ACCEPTED PRACTICES SUCH AS SAND BAGS, INFILTRATION PIPE WRAPPED IN GEOTEXTILE, ETC.

2. SEDIMENT BASINS ARE NOT REQUIRED FOR SITES UNDER 10 ACRES BUT ARE RECOMMENDED DEPENDING UPON THE EXPECTED PRECIPITATION DURING THE CONSTRUCTION PERIOD. SEDIMENT BASINS OR TRAPS SHOULD NOT BE CONSTRUCTED IN THE STORMWATER MANAGEMENT POND AREAS UNLESS ACCUMULATED SEDIMENT AND SILT ARE REMOVED FROM THE SITE ONCE CONSTRUCTION IS COMPLETE AND AS LONG AS THE CONSTRUCTION EQUIPMENT REMOVING THE ACCUMULATED SEDIMENT AND SILT WILL NOT EXCESSIVELY COMPACT THE AREA WITHIN THE POND HINDERING INFILTRATION OF THE SOILS.

CONTROLS FOR OTHER POTENTIAL POLLUTANTS

1. WASTE MATERIALS - ALL WASTE MATERIALS WILL BE COLLECTED AND STORED SECURELY IN DUMPSTERS. SEPARATE DUMPSTERS WILL BE MAINTAINED FOR COMMON TRASH AND CONSTRUCTION DEBRIS IN THAT THESE ARE DISPOSED OF AT DIFFERENT LOCATIONS. COMMON TRASH WILL BE CONNECTED AND STORED IN A LIDDED DUMPSTER TO PREVENT WIND BLOWN DISTRIBUTION AND ACCESS BY VECTORS OR ANIMALS. THE DUMPSTERS WILL MEET LOCAL GOVERNING AGENCY'S SOLID WASTE REGULATIONS AND WILL BE DUMPED A MINIMUN OF ONCE A WEEK OR MORE OFTEN AS REQUIRED. NO WASTE MATERIALS WILL BE BURIED ON- SITE. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER WASTE HANDLING AND DISPOSAL PROCEDURES.
2. HAZARDOUS WASTE - ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY THE LOCAL GOVERNING AGENCY, THE STATE OF FLORIDA, FEDERAL GOVERMENT, OR BY THE MANUFACTURER, SITE PERSONNEL WILL BE INSTRUCTED IN THE PRACTICES.
3. SANITARY WASTE - ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS A MINIMUN OF THREE TIMES PER WEEK BY _____COMPANY, LICENSED IN GOVERNING JURISDICTION AS A SANITARY WASTE MANAGEMENT CONTRACTOR.

OFF-SITE VEHICLE TRACKING AND DUST CONTROL

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED AND MAINTAINED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ALL STREETS WITH CONSTRUCTION ENTRANCES WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN. BASED UPON SITE CONDITIONS, WATER WILL BE SPRAYED BY MECHANICAL MEANS TO CONTROL FUGITIVE DUST EMISSIONS PREVENTING THEM FROM LEAVING THE CONSTRUCTION SITE.

MAINTENANCE / INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES.
THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS OF THE END OF ANY STORM EVENT OF 0.5 INCHES OR GREATER AS FOLLOWS: DISTURBED AREA AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE STORMWATER SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS OR POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT MEASURES ARE EFFECTIVE IN PREVENTING OR MINIMIZING THE DISCHARGE OF POLLUTANTS INCLUDING RETAINING SEDIMENT ON-SITE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF THE REPORT AND SHALL BE COMPLETE WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
4. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
5. THE SEDIMENT BASIN WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
6. ANY DIVERSION DIKE WILL BE INSPECTED AND BREACHES PROMPTLY REPAIRED.
7. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
8. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTION IS SHOWN ON THIS SHEET.
9. THE GENERAL CONTRACTOR'S ON-SITE FOREMAN WILL SELECT THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
10. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING THROUGH THE GENERAL CONTRACTOR. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON-SITE IN GOOD WORKING ORDER.
11. A QUALIFIED INSPECTOR IS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS A PERSON THAS HAS SUCCESSFULLY COMPLETED AND MET ALL REQUIREMENTS NECESSARY TO BE FULLY CERTIFIED THROUGH THE FDEP STORMWATER, EROSION, AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM; HAS SUCCESFULLY COMPLETED AN EQUIVALENT FORMAL TRAINING OR PRACTICAL EXPERIENCE IN THE FILED OF STORMWATER POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL.

RETENTION OF RECORDS

1. THE PERMITTEE OWNER SHALLL RETAIN COPIES OF THE STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.
2. THE PERMITTEE GENERAL CONTRACTOR SHALL RETAIN A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN AND ALL REPORTS, RECORDS AND DOCUMENTS REQUIRED BY THIS PERMIT AT THE CONSTRUCTION SITE, OR AN APPROPRIATE ALTERNATIVE LOCATION AS SPECIFIED IN THE NOI, FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION. ALL OF THESE RECORDS, DOCUMENTS, ETC. WILL BE PRESENTED TO THE OWNER TO BE RETAINED FOR THE PERIOD SPECIFIED ABOVE.

NON-STORMWATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD. AL NON-STORMWATER DISCHARGES WILL BE DIRECTED INTO A SEDIMENT BASIN PRIOR TO DISCHARGE IF THE DISCHARGE IS NOT CAPTURED BY THE SILT FENCE PRIOR TO CONSTRUCTION OF THE ON-SITE STORMWATER MANAGEMENT SYSTEM OR ENTERS THE ON-SITE STORMWATER MANAGEMENT SYSTEM.

1. WATER FORM WATER LINE FLUSHING.
2. PAVEMENT WASH WATERS WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCURRED.
3. UNCONTAMINATED GROUNDWATER FROM DE-WATERING EXCAVATION.
4. WATER FROM HIRE FIGHTING ACTIVITIES.

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

HOUSEKEEPING PRACTICES

THE FOLLOWING HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON-SITE DURING THE CONSTRUCTION PROJECT:

1. AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
2. ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND , IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
4. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
5. WHENEVER POSSIBLE, ALL OF PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER.
6. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
7. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

HAZARDOUS PRODUCTS

THESE SERVICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY CANNOT BE RESEALED.
2. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
3. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL/STATE/FEDERAL RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

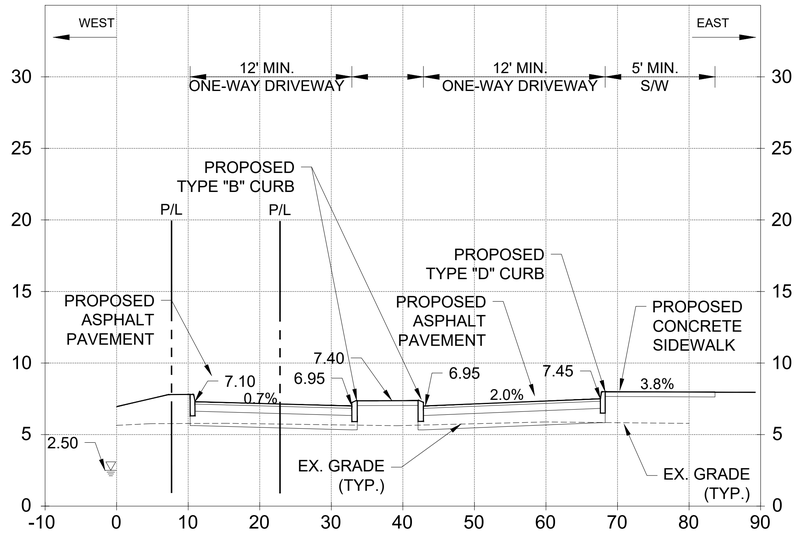
PETROLEUM PRODUCTS - ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE WILL BE APPLIED TO THE MANUFACTURER'S RECOMMENDATIONS.
FERTILIZE - FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
PAINTS - ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORE WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO ON-SITE OR COUNTY STORMWATER MANAGEMENT SYTEMS, BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR LOCAL, STATE, FEDERAL REGULATIONS.
CONCRETE TRUCKS - CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISPOSE OF SURPLUS CONCRETE OR DRUM WASH WATER ON THIS SITE.

SPILL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION CLEANUP:

1. MANUFACTURE'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, SHOVELS, RAGS, GLOVES, KITTY LITTER,SAND,SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
3. ALL SPILLS WILL BE CLEANED UP AFTER DISCOVERY.
4. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
5. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE STATE WARNING POINT AS EARLIER DESCRIBED REGARDLESS OF SIZE.
6. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
7. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE PROJECT FOREMAN WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF THE RESPONSIBLE SPIL

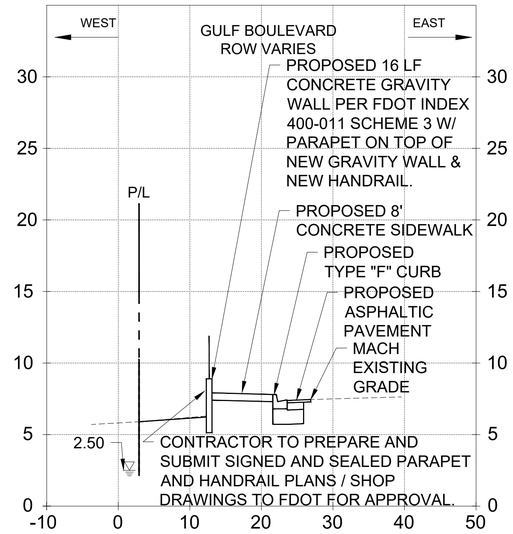
SECTION A-A



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

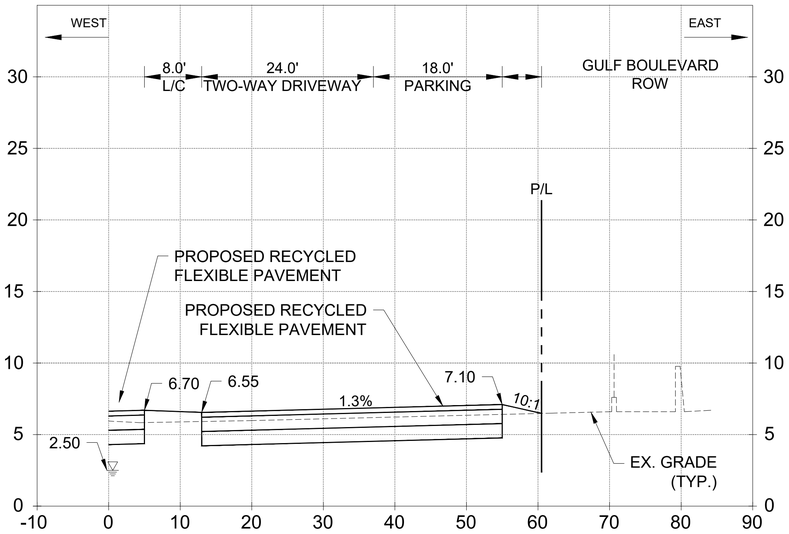
3 4 5

SECTION B-B



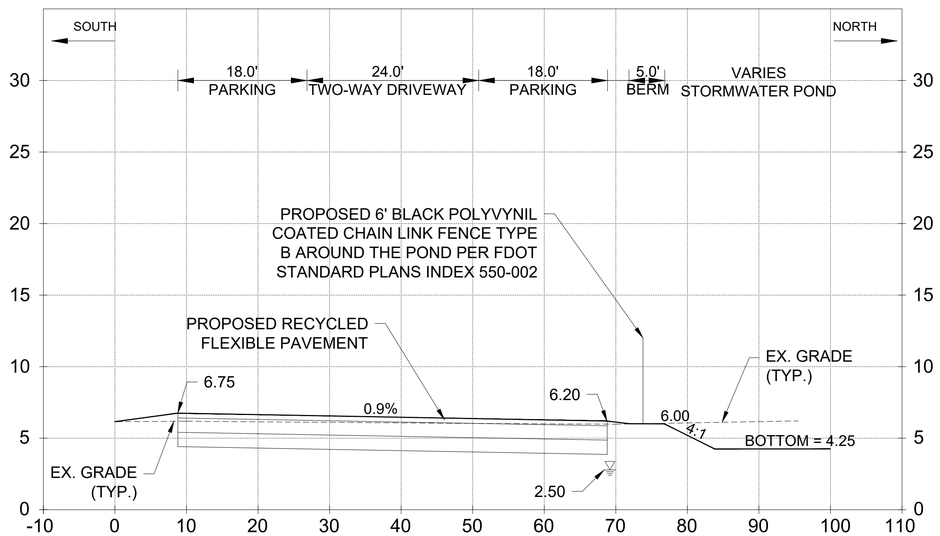
HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION C-C



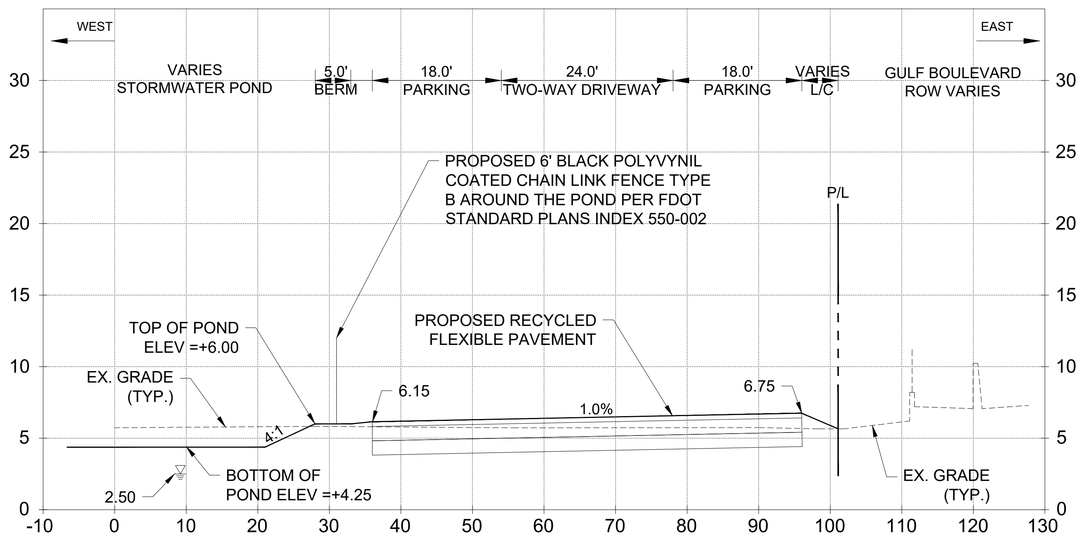
HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION D-D



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION E-E



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

No.	DESCRIPTION	DATE	BY
5	PER FDOT	1-11-24	ED
4	PER FDOT	10-20-23	ED
3	PER FDOT	2-6-23	ED

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: CROSS SECTIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.5

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date
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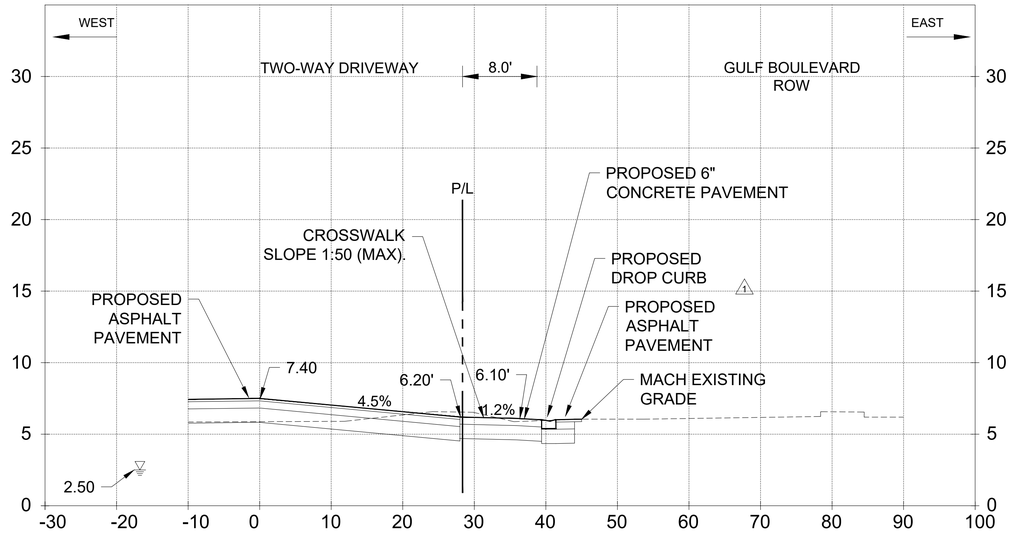
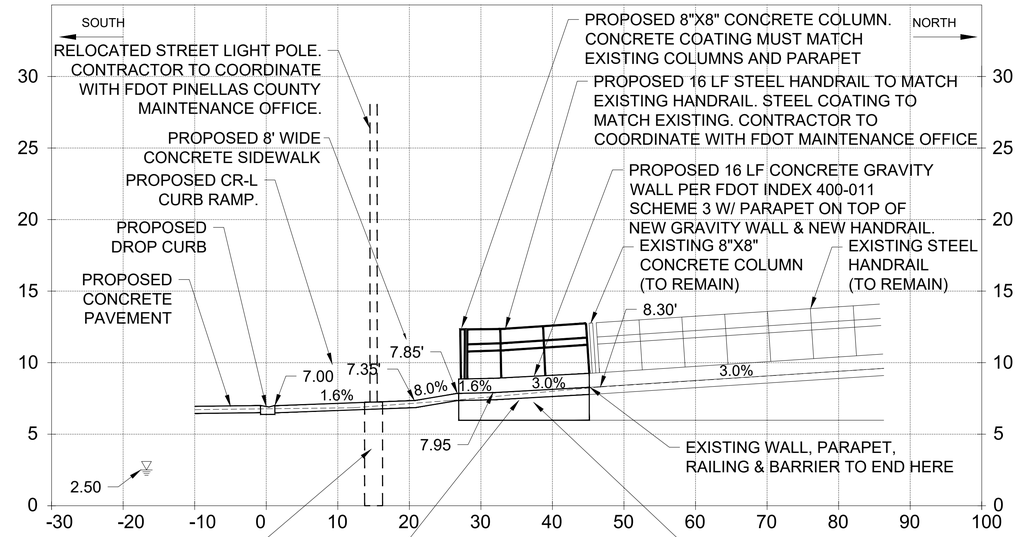
SECTION G-G



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING
& DRAINAGE PLAN SHEET C-5.1)

SECTION H-H



PROPOSED 2'-6" Ø CONCRETE
FOUNDATION & POLE BASE.
REFER TO FDOT STANDARD
PLANS INDEX 715-002 (4).

CONTRACTOR TO PREPARE AND
SUBMIT SIGNED AND SEALED PARAPET
AND HANDRAIL PLANS / SHOP
DRAWINGS TO FDOT FOR APPROVAL.

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING
& DRAINAGE PLAN SHEET C-5.1)

CONCRETE COATING MUST MATCH
EXISTING BARRIER. CONTRACTOR TO
COORDINATE WITH FDOT PINELLAS
COUNTY MAINTENANCE OFFICE

No.	DATE	DESCRIPTION
6	ED	1-11-24	PER FDOT
5	ED	10-20-23	PER FDOT
4	ED	2-6-23	PER FDOT
3	ED	9-23-22	PER FDOT
2	ED	8/1/2022	REVISIONS

PROJECT No: 22-008-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: CROSS SECTIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.6

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1-800-432-4770

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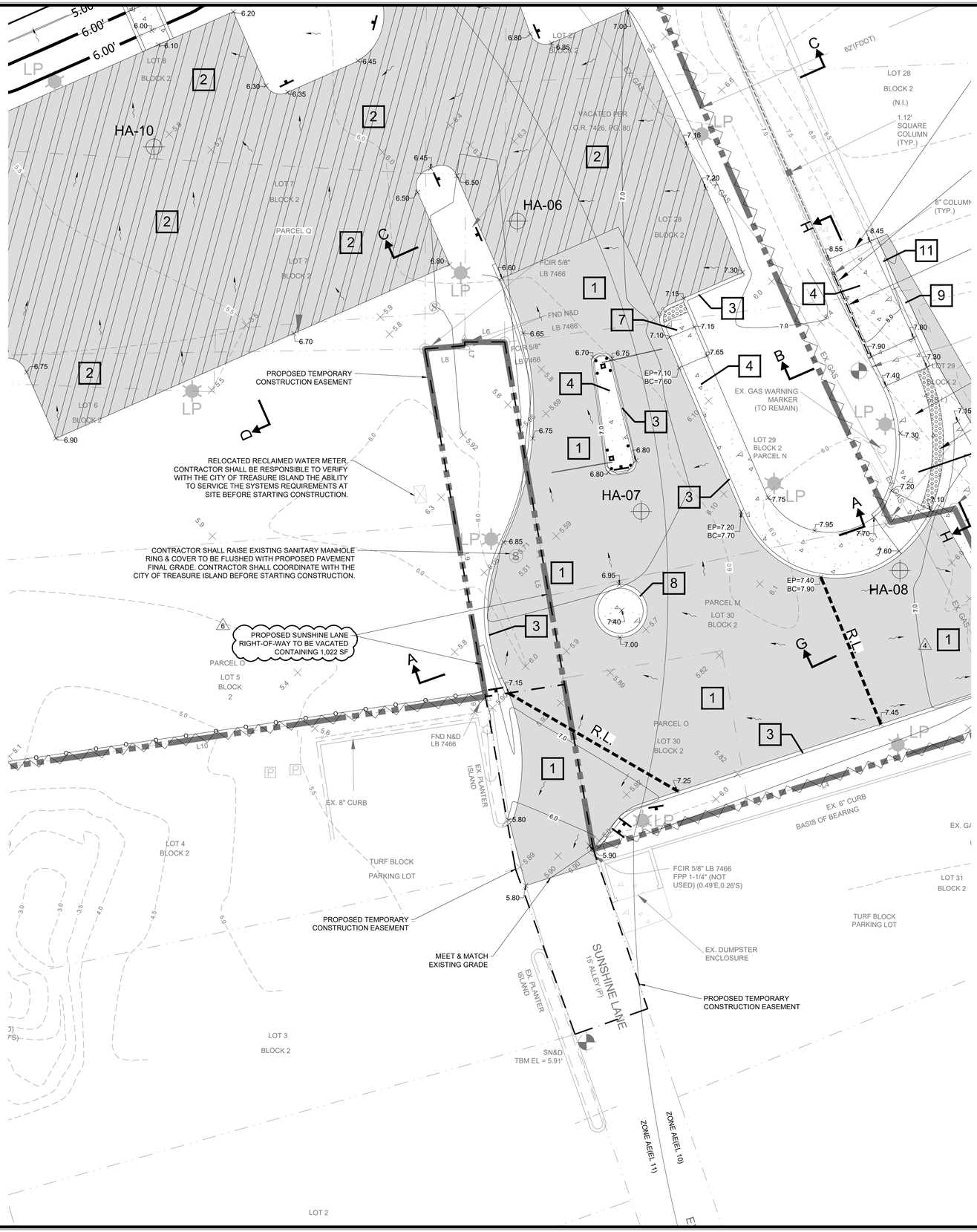
FEMA FLOOD ZONE: "AE" BFE (10' & 11') AND "VE" (BFE 12')
FEMA MAP NO.: 12101C0193H (EFFE. 8/24/2021)
BASIN NAME: DIRECTLY GULF OF MEXICO
WATER BODY NAME: BOCA CIEGA (NORTH)
WBID: 1694B

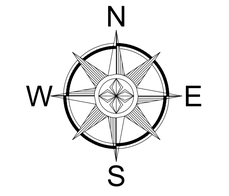
DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.





TAG LEGEND	
ITEM	DESCRIPTION
1	CONST. ± 6,531 S.F. OF ASPHALT PAVEMENT AND BASE. SEE TYPICAL SECTION SHEET C-7.1.
2	CONST. ± 14,090 S.F. OF COMPACTED RECYCLED ASPHALTIC CONCRETE COURSE. SEE TYPICAL SECTION SHEET C-7.1..
3	CONST. ± 437 LF OF TYPE 'D' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
4	CONST. ± 1,550 S.F. CONCRETE SIDEWALK, MINIMUM 4" THICK, CLASS I, NON-STRUCTURAL, 3,000 PSI WITH FIBER MESH MATERIAL. CROSS SLOPE 1:50 (MAX).
5	CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX), CROSS SLOPE 1:50 (MAX).
6	SLOPES WITHIN AREA DESIGNATED FOR PARKING DISABLED PERMIT ONLY SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS.
7	CONST. CONCRETE CURB RAMP WITH DETECTABLE WARNING SURFACE RED COLOR PER FDOT INDEX 522-002, LATEST EDITION.
8	CONST. ± 32 LF OF TYPE 'B' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
9	CONST. ± 52 LF OF TYPE 'F' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
10	CONST. ± 82 LF OF DROP CURB CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
11	PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT INDEX 521-001. CONCRETE COATING TO MATCH EXISTING.

NPDES NOTIFICATION

(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)
ATTENTION: FAILURE TO MAINTAIN EROSION AND/OR SEDIMENTATION CONTROLS, OR AN ILLICIT DISCHARGE RESULTING FROM THEIR FAILURE WILL LIKELY RESULT FINE CITATIONS. SECTION 403.0885 OF THE FLORIDA STATUES AUTHORIZES PENALTIES OF UP TO $10,000.00 FOR EACH OFFENSE.

LEGEND

- EXISTING PROPERTY LINE
- 5.9 EXISTING ELEVATION
- 7.50 PROPOSED SINGLE ELEVATION
- FLOW DIRECTION
- PROPOSED EROSION CONTROL
- R.L. PROPOSED RIDGE LINE
- ST PROPOSED STORM SEWER LINE
- B-4 APPROXIMATE LOCATION OF BORING
- EX. ST EXISTING STORM SEWER LINE
- PROPOSED CONCRETE PAVEMENT / PAD / SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED RECYCLED ASPHALT FLEXIBLE PAVEMENT
- PROPOSED CURB INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.
N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

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58626 FL Registration No. | BRAULIO GRAJALES Professional Engineer | Sign Date

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No.	BY	DATE	DESCRIPTION
6	ED	5-1-24	PER CITY OF TRASURE ISLAND

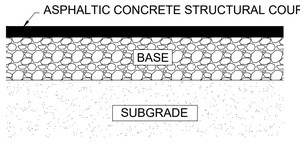
PROJECT No: 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW PAVING, GRADING & DRAINAGE PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.7

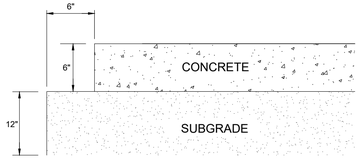


NOTES:

ASPHALT	2" TYPE SP-9.5 ASPHALTIC CONCRETE STRUCTURAL COURSE FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD
BASE	6" LIMEROCK (LBR 100) OR CRUSHED PORTLAND CEMENT CONCRETE (LBR 150) BASE FROM FDOT APPROVED SOURCES AND MEETING ALL THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS SECTION 204 COMPACTED TO 100% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

ON-SITE FLEXIBLE PAVEMENT SECTION

N.T.S.



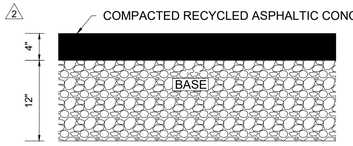
NOTES:

CONCRETE	6" THICK PORTLAND CEMENT CONCRETE SURFACE COURSE (F'c=4,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS) W 6X6/10X10 WELDED WIRE MESH REINFORCEMENT
	MAXIMUM SPACING BETWEEN JOINTS SHALL BE 12 FEET
	MINIMUM CONTRACTION JOINT DEPTH SHALL BE ONE-FORTH (1/4) OF THE PAVEMENT THICKNESS
	CONCRETE SHALL BE PLACED BY AN ACI CERTIFIED CONTRACTOR
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

RIGID PAVEMENT SECTION

N.T.S.

2



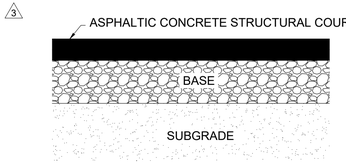
NOTES:

ASPHALT	4" RECYCLED CRUSHED ASPHALT MILLINGS FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC (gmm) METHOD
BASE	12" RECYCLED CRUSHED CONCRETE AGGREGATE BASE (LBR 150) FROM FDOT APPROVED SOURCES AND MEETING ALL THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS SECTION 204 COMPACTED TO 100% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180
SUBGRADE	SUBGRADE (LBR 20) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

ON-SITE RECYCLED ASPHALT FLEXIBLE PAVEMENT SECTION

N.T.S.

3

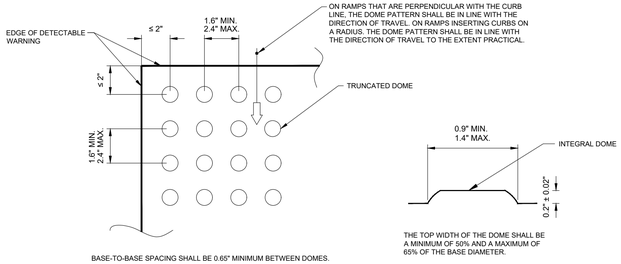


NOTES:

ASPHALT	1-1/2" TYPE FC-12.5 (TRAFFIC C) ASPHALTIC FRICTION COURSE (160 LBS/SY) (PG 76-2) FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD 1-1/2" TYPE SP-12.5 FINE MIX ASPHALTIC CONCRETE STRUCTURAL COURSE (160 LBS/SY) FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD
BASE	15" TYPE B-12.5 COARSE MIX ASPHALTIC CONCRETE BASE FROM FDOT APPROVED SOURCES FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (GMM) METHOD
SUBGRADE	FLOWABLE FILL OVER SUBGRADE COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

FDOT FLEXIBLE PAVEMENT SECTION

N.T.S.

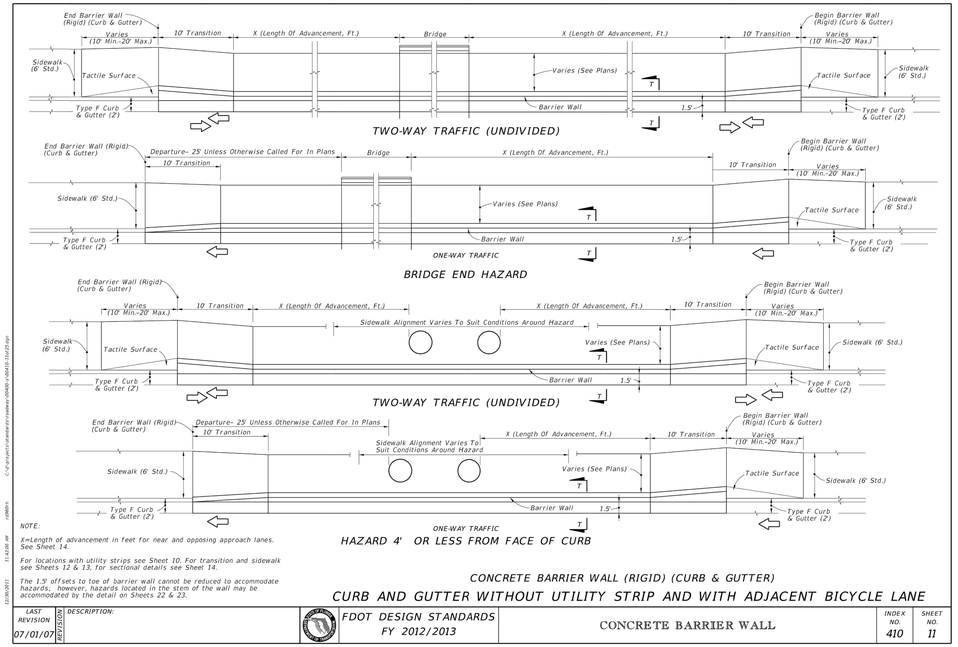


ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES (610 MM) FROM THE BACK OF CURB.

CURB RAMP DETECTABLE WARNING DETAIL

N.T.S.

5

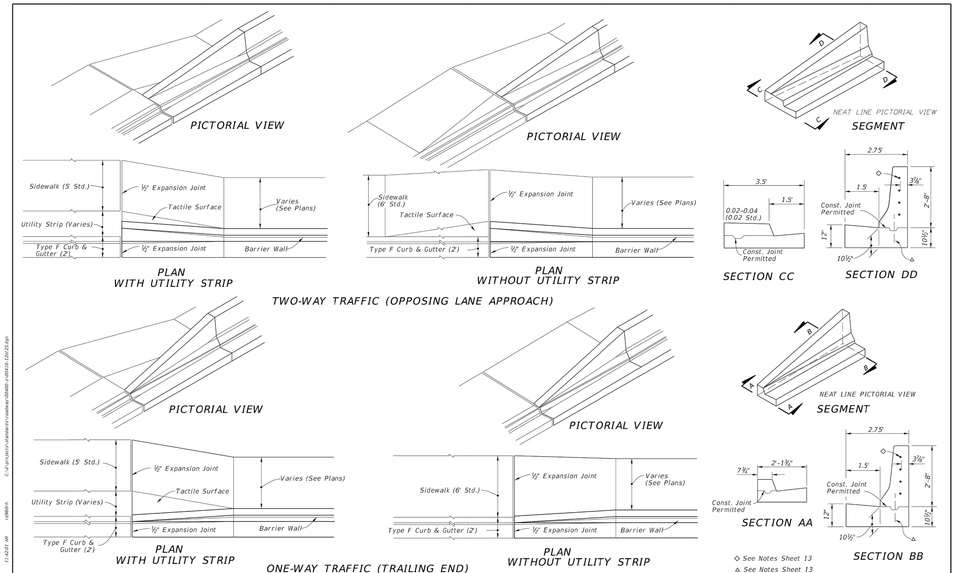


CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER)

CURB AND GUTTER WITHOUT UTILITY STRIP AND WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/07		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	11

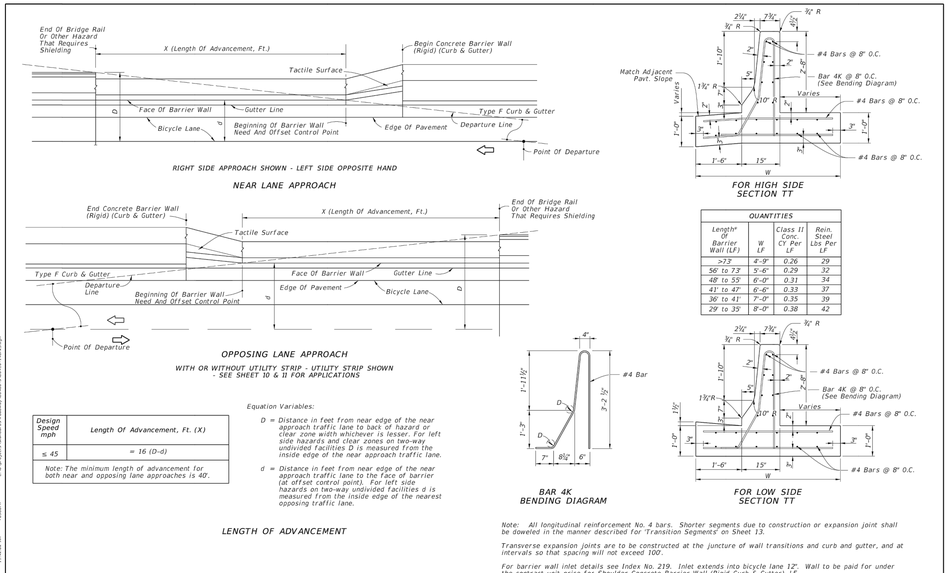
3



CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER) • TRANSITION SEGMENTS • WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/07		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	12

5



CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER) WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/09		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	14

REVISIONS	DESCRIPTION	DATE	BY
5	PER FDOT	1-11-24	ED
4	PER FDOT	10-20-23	ED
3	PER FDOT	2-6-23	ED
2	PER CITY OF TREASURE ISLAND	2-6-23	ED
1			
No.			BY

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
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BRAULIO GRAJALES
Professional Engineer
Sign Date
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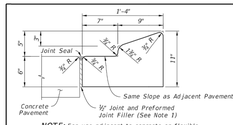
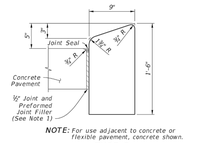
SHEET: C-7.1



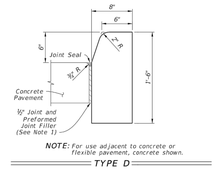
NOTE: For use adjacent to concrete or flexible pavement, concrete shown (See Note 4).

TYPE A



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

TYPE B

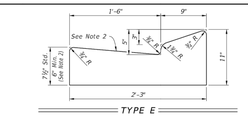


NOTE: For use adjacent to concrete or flexible pavement, concrete shown.

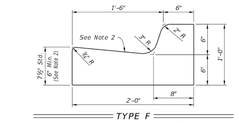
TYPE D

NOTES:

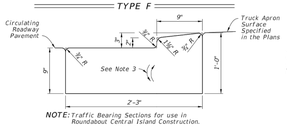
1. For Type A, Type B, and Type D Curb: Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 3.
2. For Type E, Type F, Drop Curb, and Valley Gutter: When used on high side of roadways, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 6", unless otherwise shown on Plans.
3. For Type RA, rotate entire 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.



TYPE E

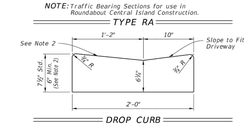


TYPE F

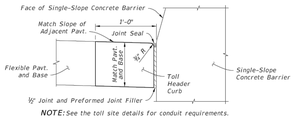


NOTE: Traffic Bearing Sections for use in Roundabout Central Island Construction.

TYPE RA

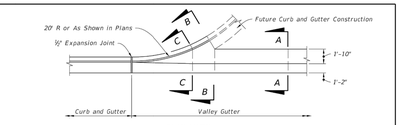


DROP CURB

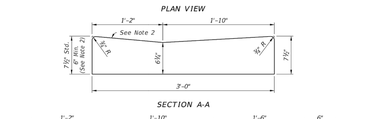


NOTE: See the toll site details for conduit requirements.

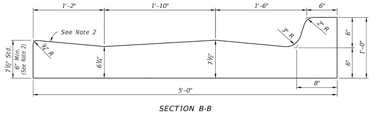
TOLL HEADER CURB



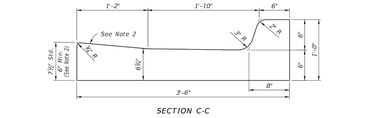
PLAN VIEW



SECTION A-A

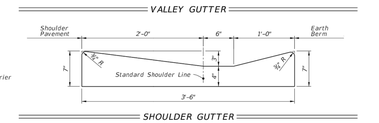


SECTION B-B



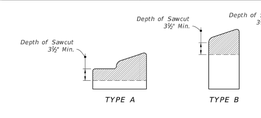
SECTION C-C

VALLEY GUTTER

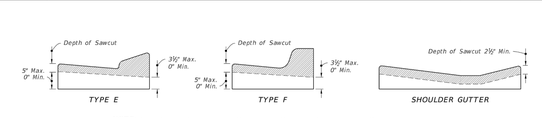


SHOULDER GUTTER

CONCRETE CURB AND GUTTER

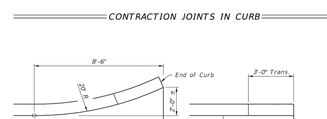


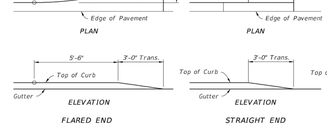
CONTRACTION JOINTS IN CURB



NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINTS IN CURB & GUTTER



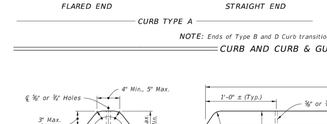


CURB TYPE A

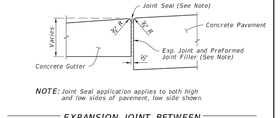
CURB AND GUTTER TYPE E AND TYPE F

NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS

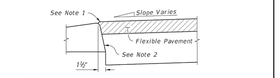


CONCRETE BUMPER GUARD



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

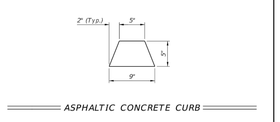
EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT



NOTES:

1. Surface on Low Side of Pavement to be ½" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

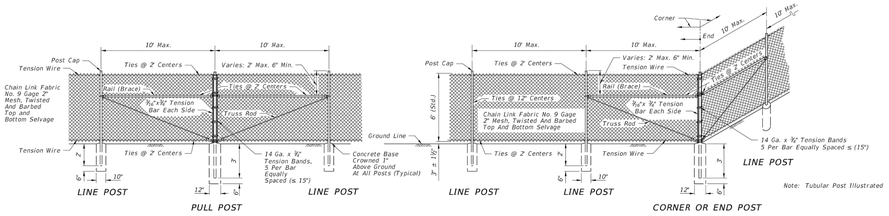
CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT



ASPHALTIC CONCRETE CURB

CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

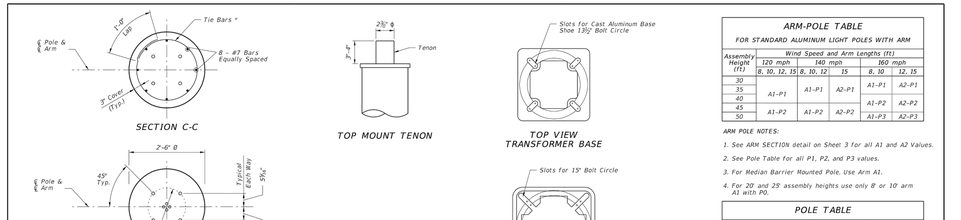
2



GENERAL NOTES

1. This fence to be used generally in urban areas.
2. For supplemental information refer to Specification 550.
3. Chain link fabric, post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous fittings and hardware shall meet the requirements of AASHTO and ASTM signify current reference.
4. Fence Component Options:
   A. Line post options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B); Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Steel H-Beam- 1¾"x 1¾": Zinc Galv. 1.8 oz./ft².; AASHTO M111 and Detail.
      (5) Aluminum alloy H-Beam- 1¾"x 1¾" Detail.
      (6) Steel C- 1¾"x 1¾"; Galv.- 1.8 oz/ft. zinc: AASHTO M111; OR -, 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.
      (7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or unpripited stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   B. Corner, end, and pull post options:
      (1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063.T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or unpripited stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   C. Rail options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables Schedule 40; 1½" nominal dia., 1.660" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 1½" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 1⅝" OD, 1½" NPS, 1.660" dec. equiv., 0.111" min. wall thick. and min. wt. 1.836 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   D. Chain link fabric options (2" mesh with twisted and barbed selvage top and bottom for all options except as described in Note 10):
      (1) AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft², modified to 1.8 oz./ft².).
      (2) AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².
      (3) AASHTO M181 Type III –Polyvinyl Chloride (PVC) Coated Steel, No. 9 gage (coated core wire diameter), core wire-zinc coated steel. PVC coating: M181 Class A (either extruded or extruded and bonded) or Class B (bonded). See table right, *unless the plans call for M181 standard color, medium green, dark green or black the coating color shall be soft gray matching that of No. 36622 of Federal Standard 595a.*
   E. Tension wire options:
      (1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².; AASHTO M181.
      (2) Aluminum alloy wire with a diameter of 0.187"S or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No7 gage coated at the rate of 0.040 oz./ft².; AASHTO M181.
   F. Tie wire and hog ring options:
      (1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².
      (2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

2



ARM-POLE TABLE

FOR STANDARD ALUMINUM LIGHT POLES WITH ARM

Assembly Height (ft)	Wind Speed and Arm Lengths (ft)					
	120 mph		140 mph		160 mph	
	8, 10, 12, 15	8, 10, 12	15	8, 10	12, 15	
30	A1-P1	A1-P1	A2-P1	A1-P1	A2-P1	
35						
40				A1-P2	A2-P2	
45	A1-P2	A1-P2	A2-P2			
50				A1-P3	A2-P3	

ARM POLE NOTES:

1. See ARM SECTION detail on Sheet 3 for all A1 and A2 Values.
2. See Pole Table for all P1, P2, and P3 values.
3. For Median Barrier Mounted Pole, Use Arm A1.
4. For 20' and 25' assembly heights use only 8' or 10' arm A1 with P0.

POLE TABLE

Pole	Pole Wall Thickness	Top of Base Shoe Weld	Inside of Base Shoe Weld
P0	0.156	5/16"	5/16"
P1	0.156	5/16"	5/16"
P2	0.250	1/2"	1/2"
P3	0.313	5/16"	5/16"

POLE NOTES:

1. Pole wall thicknesses shown are nominal and must be within the Aluminum Association tolerances.
2. Thicker walls are permitted and tapered walls may be used in accordance with the minimum Aluminum Association thicknesses.

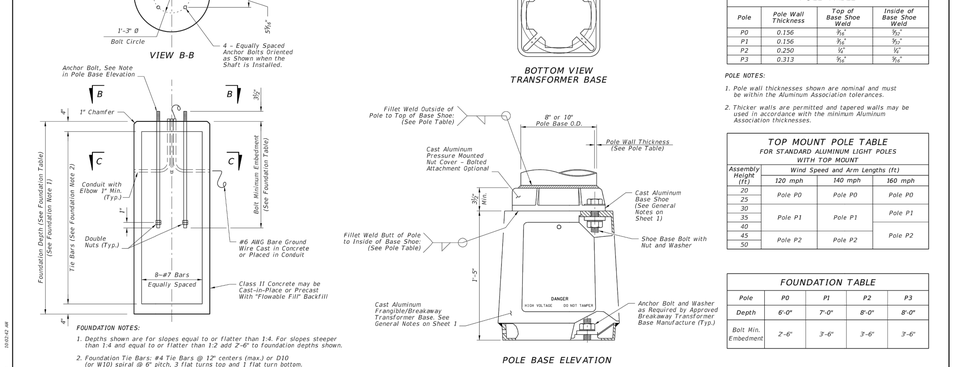
TOP MOUNT POLE TABLE

FOR STANDARD ALUMINUM LIGHT POLES WITH TOP MOUNT

Assembly Height (ft)	Wind Speed and Arm Lengths (ft)		
	120 mph	140 mph	160 mph
20	Pole P0	Pole P0	Pole P0
25			
30	Pole P1	Pole P1	Pole P1
35			
40	Pole P2	Pole P2	Pole P2
45			
50			

FOUNDATION TABLE

Pole	P0	P1	P2	P3
Depth	6'-0"	7'-0"	8'-0"	8'-0"
Bolt Min. Embedment	2'-6"	3'-6"	3'-6"	3'-6"



POLE AND BASE DETAILS FOR ROADWAY ALUMINUM LIGHT POLE

				2	ED 2-6-23 PER CITY OF TREASURE ISLAND
				No.	BY DATE DESCRIPTION
				REVISIONS	

PROJECT No. 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
Tel. (813) 644-7000
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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SHEET: C-7.2

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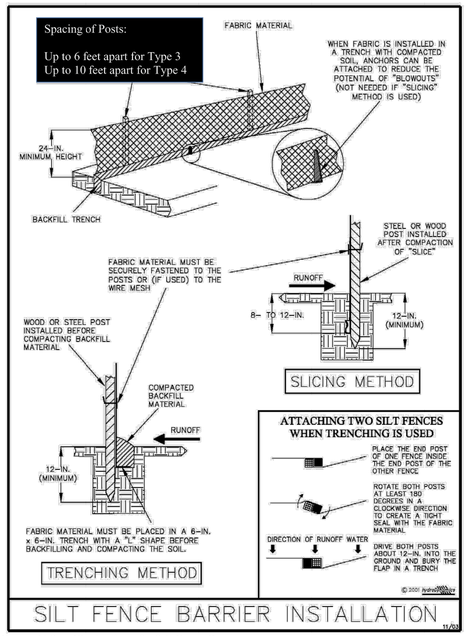

Figure V-2: Illustration of a Silt Fence Barrier

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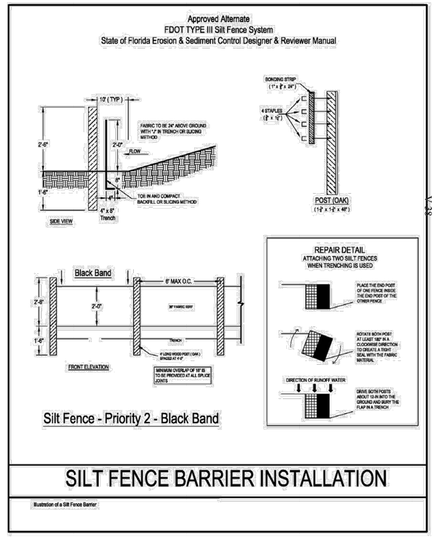

Figure V-3: Illustration of Silt Fence Priority 2 – Black Band

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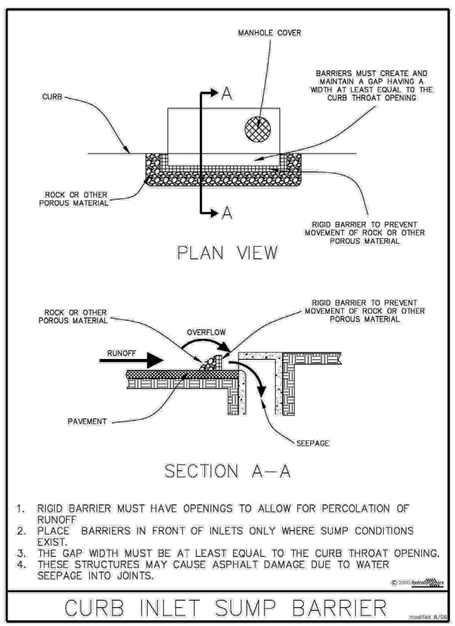

Figure V-15: Illustration of a Curb Inlet "Sump" Barrier

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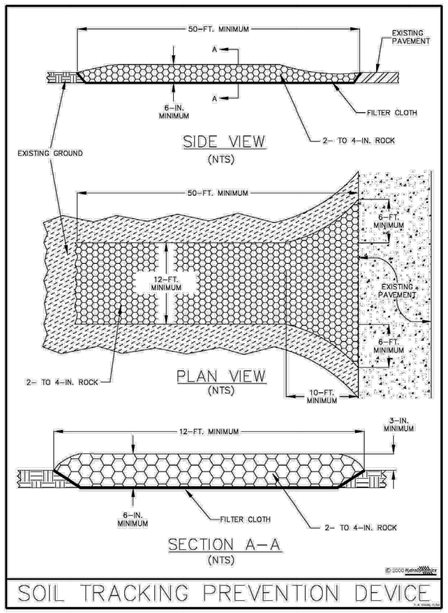

Figure V-19: Illustration of a Soil Tracking Prevention Device

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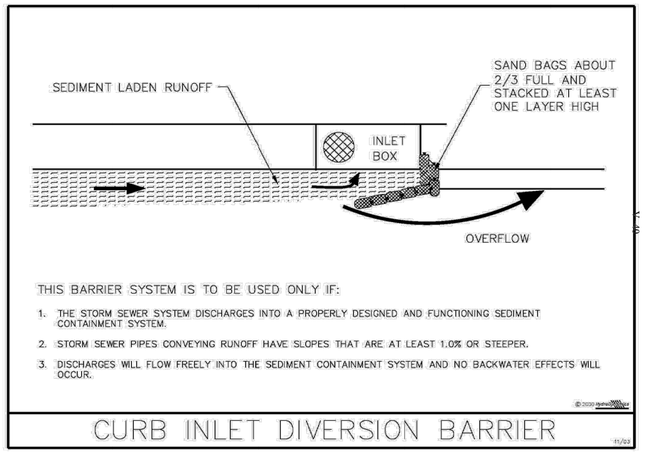

Figure V-16: Illustration of a Curb Inlet Diversion Berm

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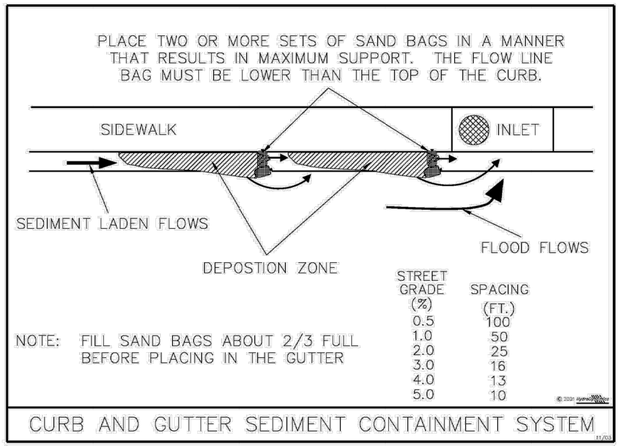

Figure V-19: Illustration of a Curb and Gutter Sediment Containment System

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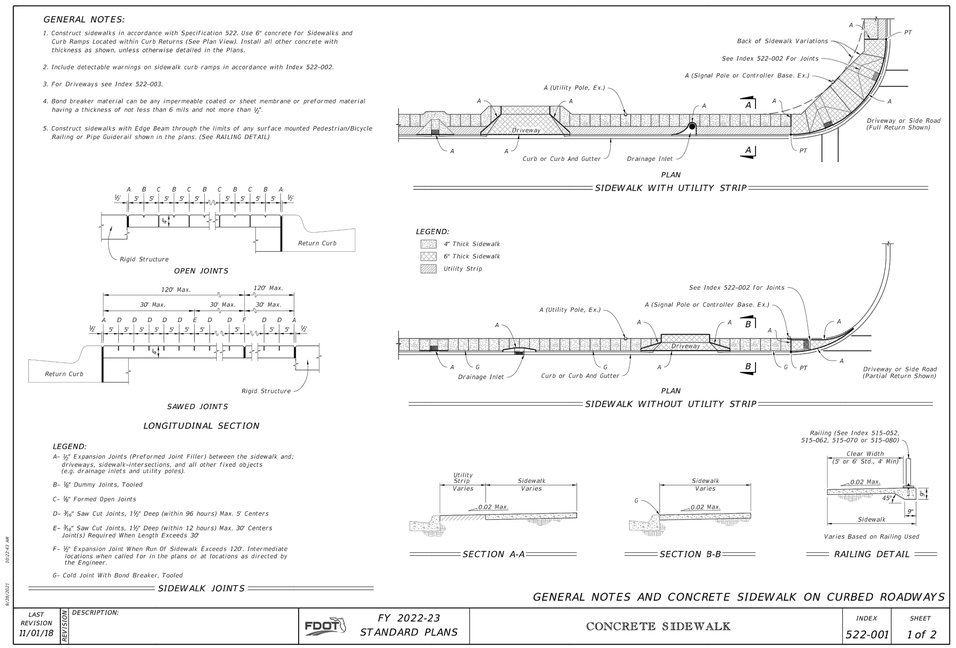

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58626 FL Registration No.
BRAULIO GRAJALES Professional Engineer
Sign Date
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CONTENT: SITE CONSTRUCTION DETAILS

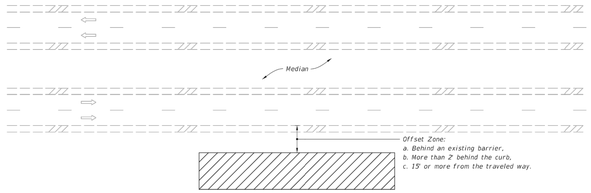
PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

No.	BY	DATE	DESCRIPTION
			REVISIONS

PROJECT No: 22-009-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-7.3



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

NOTES:

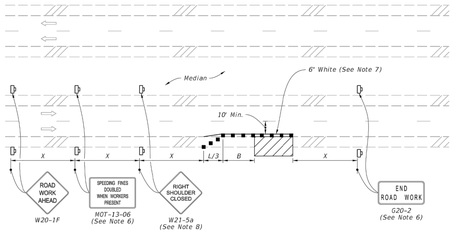
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:

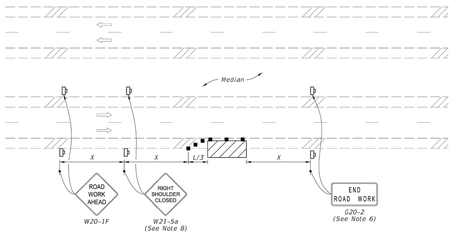
- Work Area
- Lane Identification and Direction of Traffic

8/26/2021 10:15:09 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX	SHEET
11/01/20	REVISION				102-601	1 of 1



MULTILANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



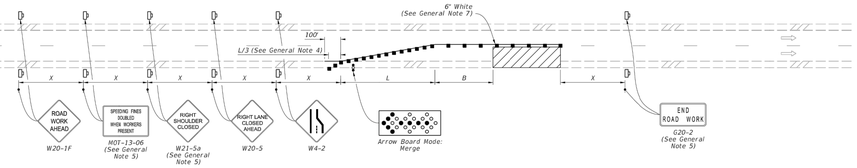
MULTILANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

8/26/2021 10:15:57 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX	SHEET
11/01/20	REVISION				102-602	2 of 2



SINGLE LANE CLOSURE

SYMBOLS:

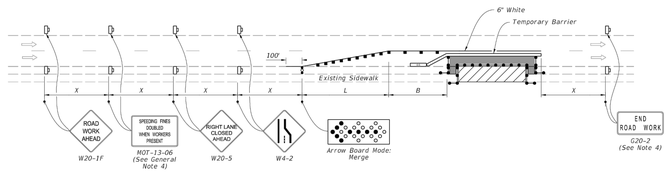
- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic

GENERAL NOTE:

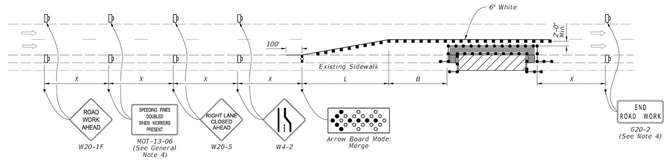
1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.
2. On undivided highways the median signs as shown are to be omitted.
3. On limited access facilities, omit "Right Shoulder Closed" signs (W21-5a) and associated work zone sign spacing distances.
4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.
5. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2) and "Right Shoulder Closed" (W21-5a), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

12/16/2021 3:13:18 AM

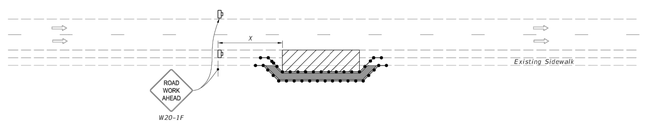
LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX	SHEET
11/01/21	REVISION				102-613	1 of 5



PEDESTRIAN DIVERSION - OPTION 1
(Temporary Barrier Shown, Low Profile Barrier Similar)



PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)



PEDESTRIAN SPECIAL DETOUR

SYMBOLS:

- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic

8/26/2021 10:17:44 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	SIDEWALK CLOSURE	INDEX	SHEET
11/01/21	REVISION				102-660	2 of 2

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-008-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: MAINTENANCE OF TRAFFIC DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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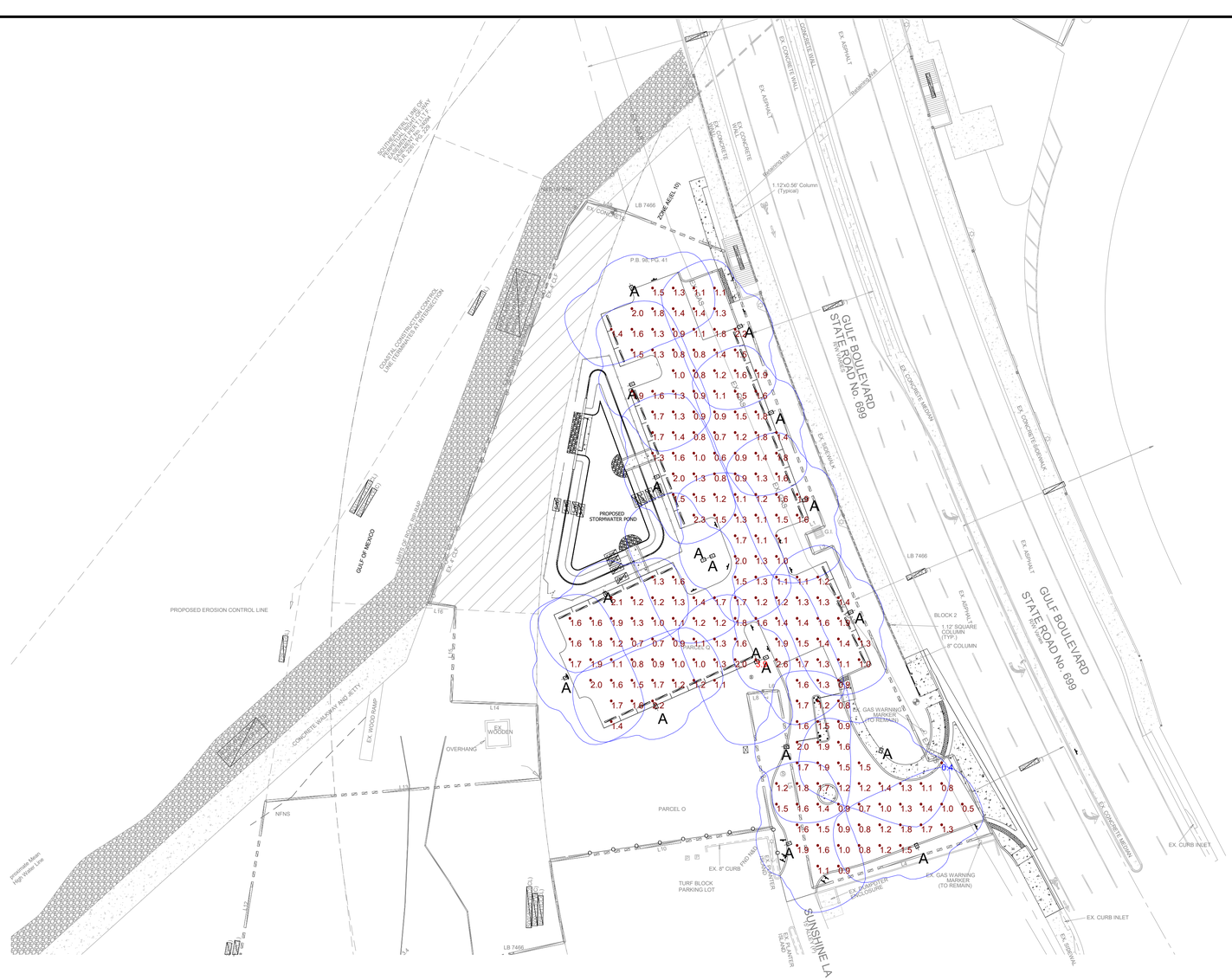
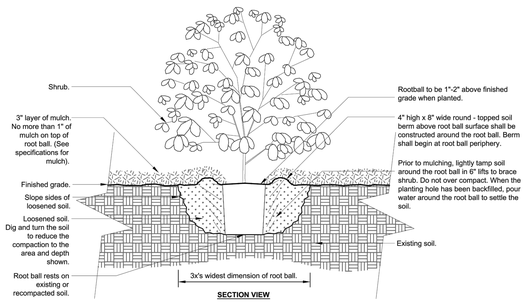
SHEET: C-7.4


GULF BOULEVARD
STATE ROAD No. 699
EX. ASPHALT
EX. CONCRETE MEDIAN
EX. CONCRETE WALL
EX. CONCRETE/ASPHALT
EX. SIDEWALK
1.12"x0.56" Column (Typical)
PROPOSED STORMWATER POND
PROPOSED EROSION CONTROL LINE
GULF OF MEXICO
CONCRETE WALKWAY AND JETTY
EX. WOOD RAMP
OVERHANG
EX. WOODEN
NFNS
PARCEL O
TURF BLOCK PARKING LOT
EX. 8" CURB
EX. HANDICAP
EX. PLANTER ISLAND
SUNSHINE LA
EX. MONITOR WELL CLOSURE
EX. GAS WARNING MARKER (TO REMAIN)
EX. CURB INLET
BLOCK 2
1.12" SQUARE COLUMN (TYP.)
8" COLUMN
LB 7466
P.B. 98, PG. 41
ZONE AE(EL 9)
COASTAL CONSTRUCTION CONTROL LINE (BEARINGS & ANTI-DIRECTION)
Property Mean High Water Line
SOUTHEASTERLY LINE OF PARCEL 100 AS DESCRIBED IN OR BOOK 7, PG. 329
EX. 4" C.M.P.
EX. CURB
EX. GRADE
EX. SWALE
EX. GRADE
EX. CURB
EX. GRADE
EX. GRADE
EX. GRADE


GULF BOULEVARD
STATE ROAD No. 699
KINGFISH DRIVE
EX. GAS
GULF OF MEXICO
CORP OF ENGINEERS PERPETUAL RIGHT OF WAY EASEMENT O.R. 2732, PG. 369 O.R. 2738, PG. 136 (INTERSECTING HATCH AREA)
PROPOSED STORMWATER POND
PROPOSED SUNSHINE LANE RIGHT-OF-WAY TO BE VACATED CONTAINING 1,022 SF
SUNSHINE LANE
TURF BLOCK PARKING LOT
EX. 8" CURB
EX. CURB INLET
EX. DUMPSTER ENCLOSURE
EX. WOOD RAMP
CONCRETE RAILWAY AND JETTY
OVERHANG
EX. WOODEN DOCK
COASTAL CONSTRUCTION CONTROL LINE
EX. CONCRETE SEAWALL
EX. ASPHALT
EX. CONCRETE WALL
EX. BRICK PAVERS
EX. CONCRETE SIDEWALK
1.12' SQUARE COLUMN (TYP.)
8" COLUMN (TYP.)
1.12'x0.58' Column (Typical)
EX. CURB
EX. CURB INLET
EX. GAS
EX. WATER
EX. STORM
EX. OH ELEC
EX. UG ELEC
EX. UG TEL
EX. UG GAS
EX. SIGN
EX. LIGHT POLE
EX. TRAFFIC SIGNAL
EX. CONCRETE
EX. ASPHALT
EX. BRICK PAVERS
EX. CONCRETE SIDEWALK
EX. CURB INLET
EX. ASPHALT
EX. CONCRETE SIDEWALK
EX. ASPHALT



Notes:
1- Shrubs shall be of quality prescribed in the root observations detail and specifications.

2- See specifications for further requirements related to this detail.

L-1 SHRUB - UNMODIFIED SOIL

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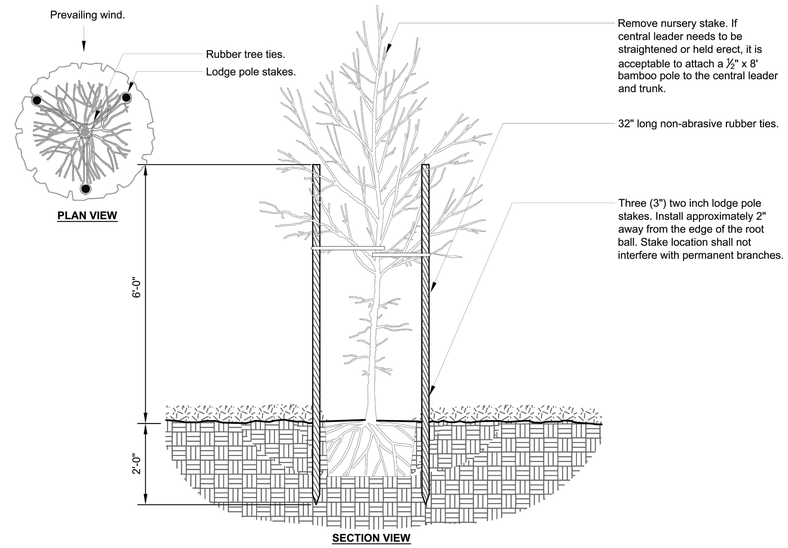

L-3 TREE STAKING - LODGE POLES (3)

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Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.

L-2 TREE w/ BERM (EXISTING SOIL NOT MODIFIED)

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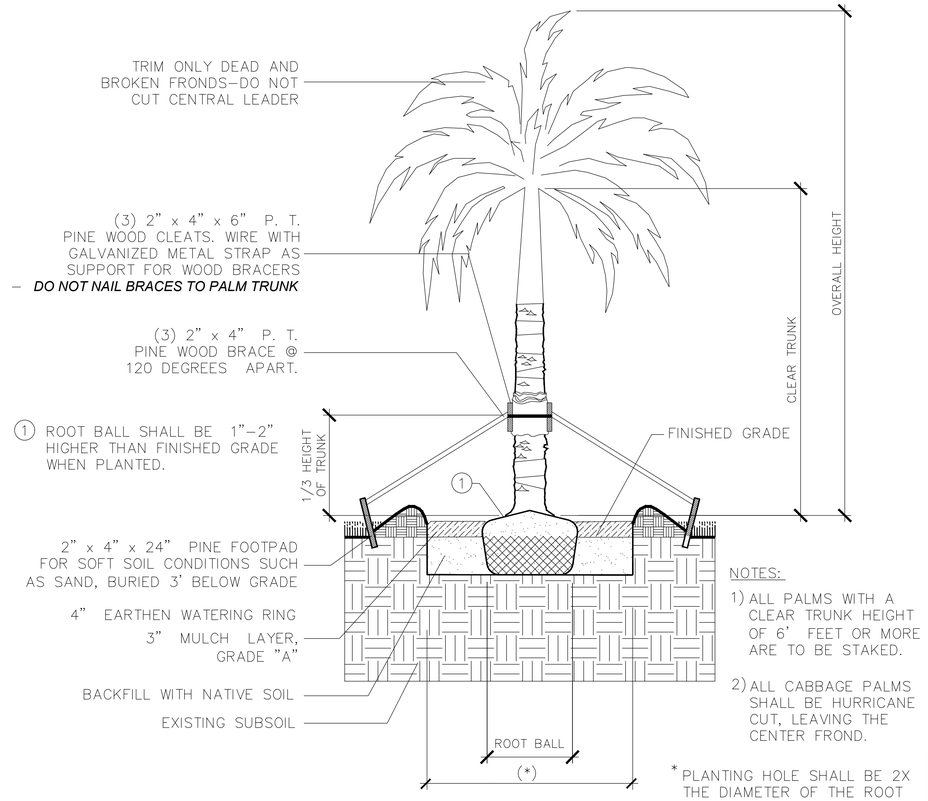

NOTES:

1) ALL PALMS WITH A CLEAR TRUNK HEIGHT OF 6' FEET OR MORE ARE TO BE STAKED.

2) ALL CABBAGE PALMS SHALL BE HURRICANE CUT, LEAVING THE CENTER FROND.

* PLANTING HOLE SHALL BE 2X THE DIAMETER OF THE ROOT BALL.

L-4 PALM TREE - PLANTING AND BRACING

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1–800–432–4770

REGISTERED LANDSCAPE ARCHITECT
CATHERINE J. MORAHAN
LA0001559
02/23/2023
STATE OF FLORIDA

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY CATHERINE J. MORAHAN ON THE DATE ADJACENT TO THE SEAL.

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LA0001559 — FL Registration No.
CATHERINE J. MORAHAN — Registered Landscape Architect
Sign Date

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No.	BY	DATE	REVISIONS / DESCRIPTION

PROJECT No: 22-009
ISSUE DATE:
DESIGNED BY: CM
DRAWN BY: CM
CHECKED BY: BG
APPROVED BY: BG

CONTENT: LANDSCAPE DETAILS

PROJECT: PRIVATE PARKING LOT

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Fax (813) 644-7000
5300 W. Cypress Street, Suite 282
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - GEOTECHNICAL ENGINEERING

SHEET: L2

PART 1.0 GENERAL

1.1 DESCRIPTION OF WORK

AWARDED BIDDER SHALL PROVIDE AND INSTALL TREES, SHRUBS AND SOD IN ACCORDANCE WITH THE LANDSCAPE PLAN AND SPECIFICATIONS.

1.2 DEFINITIONS

A. "FINAL ACCEPTANCE" SHALL MEAN THAT POINT IN TIME WHEN ALL REQUIREMENTS OF PROJECT DRAWINGS ARE COMPLETED, INCLUDING ANY PUNCH-LIST ITEMS, TO THE SATISFACTION OF THE CUSTOMER. THE AWARDED BIDDER SHALL BE NOTIFIED OF FINAL ACCEPTANCE BY THE CUSTOMER OR THEIR REPRESENTATIVE.

B. "MAINTENANCE PERIOD" OR "WARRANTY PERIOD" SHALL BEGIN WHEN PLANT MATERIAL IS INSTALLED AND CONTINUE FOR A TWELVE (12) MONTH PERIOD AFTER NOTIFICATION OF FINAL ACCEPTANCE.

C. "FINAL MAINTENANCE INSPECTION" SHALL OCCUR AT THE END OF THE TWELVE (12) MONTH MAINTENANCE PERIOD.

D. "NURSERY-GROWN" SHALL MEAN GROWN IN THE NURSERY FROM LINERS OR COLLECTED AND THEN GROWN IN A NURSERY NOT LESS THAN 2 YEARS.

E. "HEALTHY, VIGOROUS CONDITION" SHALL MEAN LIVE FOLIAGE OUT TO THE TIPS OF ALL BRANCHES AND STEMS, AND A TRUNK CALIPER THAT IS BIGGER, 12 MONTHS AFTER PLANTING, THAN AT PLANTING. HEALTHY, VIGOROUS PALMS HAVE NEW FRONDS DEVELOPING WITH NO NECROSIS OR CHLOROSIS AND ARE GREEN IN COLOR. SHRUBS SHALL HAVE LIVE FOLIAGE OUT TO THE TIPS OF ALL BRANCHES.

1.3 QUALITY ASSURANCE

A. THE INSTALLATION SHALL BE BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE HORTICULTURE. ALL LANDSCAPE MATERIAL SHALL BE PROVIDED BY THE AWARDED BIDDER, AS SPECIFIED ON THE PLANS.

B. PLANT NAMES INDICATED SHALL COMPLY WITH "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE LATEST EDITION OF THE AMERICAN JOINT COMMITTEE OF HORTICULTURAL NOMENCLATURE. NAMES OF VARIETIES NOT LISTED THERE SHALL CONFORM GENERALLY WITH NAME ACCEPTED BY THE NURSERY TRADE. STOCK PROVIDED SHALL BE TRUE TO ITS BOTANICAL NAME AND LEGIBLY TAGGED.

C. AWARDED BIDDER SHALL PROVIDE PHOTOGRAPHS OF PLANT MATERIAL PRIOR TO INSTALLATION.

D. PLANT SELECTION SHALL COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS. ALL PLANT MATERIAL SHALL BE "FLORIDA FANCY" OR "FLORIDA #1".

E. SUBSTITUTIONS SHALL NOT BE ACCEPTED AND WILL CONSTITUTE AN UNRESPONSIVE BID.

F. TREES, SHRUBS AND GROUNDCOVERS: PROVIDE TREES, SHRUBS AND GROUNDCOVERS OF QUANTITY, SIZE, GENUS, SPECIES AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF THE LOCAL GOVERNMENT. PROVIDE HEALTHY, VIGOROUS STOCK, GROWN IN A RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT.

G. THE CUSTOMER OR THEIR REPRESENTATIVE SHALL INSPECT FOR QUALITY ASSURANCE AND APPROVE PLANT MATERIAL AT EITHER THE NURSERY OR PROJECT LOCATION, PRIOR TO INSTALLATION.

H. LOCAL GOVERNMENT RESERVES THE RIGHT TO REJECT ANY AND ALL PLANT MATERIAL.

1.4 SUBMITTALS

A. AWARDED BIDDER MUST SUBMIT CERTIFICATES OF INSPECTION, ANALYSES FOR SOIL AMENDMENTS, AND LABELS FOR HERBICIDES, INSECTICIDES AND FERTILIZER MATERIALS.

B. AWARDED BIDDER MUST SUBMIT THE FOLLOWING MATERIAL SAMPLES:

1. MULCH
2. TOPSOIL
3. PRE-EMERGENT HERBICIDE
4. FERTILIZER
5. PHOTOGRAPHS OF TYPICAL PLANT MATERIAL

1.5 JOB CONDITIONS

A. THE CUSTOMER OR THEIR REPRESENTATIVE WILL PROVIDE "NOTICE TO PROCEED" TO THE AWARDED BIDDER.

B. AWARDED BIDDER IS RESPONSIBLE FOR PROTECTING UTILITIES, PAVING, AND OTHER FACILITIES FROM DAMAGE DURING LANDSCAPE INSTALLATION. AWARDED BIDDER MUST NOTIFY "CALL SUNSHINE" (800-638-4097) 48 HOURS PRIOR TO BEGINNING WORK.

C. AWARDED BIDDER MUST PROTECT PLANT MATERIAL FROM DESICCATION DURING TRANSPORT AND INSTALLATION PERIOD. IN MOST INSTANCES, THIS MEANS DAILY IRRIGATION.

D. AWARDED BIDDER MUST FAMILIARIZE THEMSELVES WITH EXISTING PROJECT CONDITIONS, E.G., UTILITIES, SOIL STRATA, DRAINAGE, AND SIGHTLINES, PRIOR TO INSTALLATION. CONFLICTS SHOULD BE ADDRESSED WITH THE CUSTOMER OR THEIR REPRESENTATIVE.

E. WORK ALONG CITY, COUNTY, OR STATE RIGHT-OF-WAY MUST COMPLY WITH THE APPROPRIATE REGULATING AUTHORITY'S GUIDELINES FOR "TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS". AWARDED BIDDER SHALL BE RESPONSIBLE TO FILE AND OBTAIN ANY AND ALL REQUIRED AGENCY PERMITS.

F. AWARDED BIDDER MUST PROVIDE TREE PROTECTION WITHIN THE SCOPE OF WORK. REFER TO LOCAL GOVERNMENT TREE ORDINANCE FOR SPECIFIC REQUIREMENTS.

PART 2.0 SHIPPING & HANDLING

2.1 TRANSPORTATION

A. TREE ROOT BALLS SHALL BE IRRIGATED JUST PRIOR TO SHIPPING. TREES SHALL BE SECURED IN THE TRUCK SO AS NOT TO ROLL. DO NOT ALLOW CLOSED TRUCKS TO REMAIN STANDING IN THE SUN IN HOT WEATHER UNLESS THEY ARE AIR-CONDITIONED. B&B TREES SHALL HAVE THEIR ROOT BALLS SHRINK-WRAPPED PRIOR TO TRANSPORTING THEM FROM THE NURSERY. TREES AND SHRUBS SHALL BE SHIPPED TO THE SITE IN ENCLOSED VANS OR COVERED WITH WOVEN SHADE TARP.

B. DELIVER SOD WITHIN 24 HOURS OF BEING HARVESTED. DO NOT DELIVER MORE SOD THAN CAN BE LAID WITHIN A 24 HOUR PERIOD.

2.2 UNLOADING AND HANDLING

TREES WILL BE REJECTED IF THEY ARE DROPPED TO THE GROUND SUDDENLY. CONTAINER GROWN AND BOXED TREES SHALL BE LIFTED WITH A FORKLIFT UNDER THE CONTAINER OR CARRIED BY HAND BY THE LIP OF THE CONTAINER. TREES MAY BE LIFTED BY WIRE LOOPS INSIDE THE CONTAINER. TREES MAY NOT BE LIFTED BY THE TRUNK. BALLED AND BURLAPPED TREES SHALL BE HANDLED BY THE ROOT BALL IN A MANNER THAT DOES NOT DEFORM THE SHAPE OF THE ROOT BALL. TREES SHALL NOT BE HANDLED BY THE TRUNK.

2.3 HOLDING TREES AND SHRUBS AT THE PLANTING SITE

IRRIGATE TREES AND SHRUBS AS SOON AS THEY ARRIVE AT THE PLANTING SITE. AFTER PLANT MATERIAL IS UNLOADED FROM THE TRUCK, IT SHALL BE STOOD AND STORED IN THE ERECT POSITION AND IRRIGATED TWICE DAILY WITH 5 GALLONS PER INCH TRUNK DIAMETER OR 1 GALLON FOR EVERY 3 GALLONS OF CONTAINER UNTIL PLANTED. SHRINK WRAPPED B&B TREES AND PLANTS IN PLASTIC CONTAINERS SHALL BE STORED IN THE SHADE.

PART 3.0 MATERIALS

3.1 PLANT MATERIALS

TREES

A. NURSERY STOCK SHALL MEET THE MINIMUM DIMENSIONS FOR HEIGHT, SPREAD, CALIPER AND ROOT BALL AS DESCRIBED ON THE LANDSCAPE PLAN. ON LARGE MATURING AND MEDIUM MATURING SHADE TREES, THE TIP OF THE DOMINANT LEADER SHALL BE THE TALLEST PART OF THE TREE. TREES WITH LEADERS TOPPED OR HEADED WITHIN THE LAST YEAR SHALL BE REJECTED.

B. CALIPER MEASUREMENT SHALL BE TAKEN SIX (6) INCHES ABOVE GRADE IF FOUR (4) INCHES OR LESS. TREES GREATER THAN FOUR (4) INCHES IN CALIPER SHALL BE MEASURED AT TWELVE (12) INCHES ABOVE GRADE.

C. FIELD-GROWN TREES AND PALMS SHALL BE NURSERY-GROWN AND HARDENED OFF (PRE-DUG) FOR A MINIMUM OF SIX (6) WEEKS PRIOR TO DELIVERY TO JOB SITE. CONTAINER GROWN TREES SHALL BE NURSERY-GROWN.

D. TREES MUST BE HEALTHY, VIGOROUS AND FULL WITH GOOD BRANCH DISTRIBUTION. TREES WITH BARK INCLUDED WITHIN MAJOR BRANCH UNIONS WILL NOT BE ACCEPTED.

E. ROOT BALLS OF FIELD-GROWN TREES MUST BE INTACT AND PROTECTED FROM DESICCATION WITH BLACK PLASTIC WRAP. CONTAINER TREES MUST HAVE THE CONTAINER ON THE ROOT BALL OR THE ROOT BALL MUST BE APPROPRIATELY PROTECTED FROM DESICCATION. TREES WITH ROOT BALLS THAT HAVE BOUND OR GIRDLED ROOTS SHALL BE REJECTED. THREES WITH SYNTHETIC BURLAP WILL NOT BE ACCEPTED.

F. THE TIP OF THE FIRST MAJOR ROOT ORIGINATING FROM THE TRUNK MUST BE WITHIN ONE INCH OF THE TIP OF THE ROOT BALL. IF THE FIRST ROOT IS DEEPER THAN THIS, THE TREE WILL BE REJECTED.

G. CONTAINER TREES SHOULD HAVE FEW, IF ANY, ROOTS ON THE OUTSIDE SURFACE OF THE MEDIA.

H. TREES MUST HAVE GREEN, LIVE FOLIAGE. SHOCKED PLANTS (I.E. THOSE WITH DEAD OR DYING LEAVES) WILL BE REJECTED.

SHRUBS

A. PROVIDE SHRUBS AT THE MINIMUM HEIGHT AND SPREAD LISTED ON THE LANDSCAPE PLAN. ALL SHRUBS MUST BE HEALTHY AND VIGOROUS WITH GOOD BRANCH DISTRIBUTION.

B. CONTAINER GROWN SHRUBS SHALL HAVE NO CIRCLING ROOTS AND FEW, IF ANY ROOTS ON THE OUTSIDE SURFACE OF THE MEDIA.

C. SHRUBS MUST HAVE GREEN, LIVE FOLIAGE. SHOCKED PLANTS (I.E. THOSE WITH DEAD OR DYING LEAVES) WILL BE REJECTED.

GROUND COVER

A. PROVIDE PLANTS ESTABLISHED AND WELL ROOTED IN CONTAINERS TO THE MINIMUM HEIGHT AND SPREAD LISTED ON THE LANDSCAPE PLAN.

SOD

A. PROVIDED STRONGLY ROOTED SOD, NOT LESS THAN 2 YEARS OLD, FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES HAVING BEEN CUT TO A MOWING HEIGHT OF ONE (1) INCH OR LESS PRIOR TO LIFTING FROM THE FIELD, AND MACHINE CUT TO PAD THICKNESS OF 3/4 INCH, EXCLUDING TOP GROWTH AND THATCH. PROVIDE SOD ONLY CAPABLE OF VIGOROUS GROWTH AND DEVELOPMENT WHEN PLANTED (VIABLE, NOT DORMANT). IT SHALL BE NURSERY GROWN AND PLANTED IN LOCATIONS AS DELINEATED ON THE LANDSCAPE PLANS.

B. PROVIDE SOD OF UNIFORM PAD SIZES WITH MAXIMUM 5% DEVIATION IN EITHER LENGTH OR WIDTH. BROKEN PADS OR PADS WITH UNEVEN ENDS WILL NOT BE ACCEPTED. SOD PADS INCAPABLE OF SUPPORTING THEIR OWN WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON UPPER 10% OF PAD WILL BE REJECTED.

3.2 ACCESSORY MATERIALS

A. REFER TO THE DRAWINGS AND OTHER PARTS OF SPECIFICATIONS FOR ACCESSORIES SPECIFICALLY USED ON THIS PROJECT.

B. BACKFILL SOIL SHALL MATCH TEXTURAL CONDITION OF EXISTING SOIL. NO SOIL AMENDMENTS ARE NECESSARY. SOIL IN SIDEWALK CUT OUTS, PARKING LOT ISLANDS, AND OTHER SMALL SPACES TO BE REPLACED WITH NATIVE TOPSOIL TO IMPROVE CONDITIONS. ALL CONSTRUCTION DEBRIS, ROCKS, STICKS, LIMEROCK, SHELL, ECT. ARE TO BE REMOVED FROM THE ENTIRE PLANTING AREA.

C. FERTILIZER SHALL BE COMPLETE WITH APPROXIMATELY THE FOLLOWING RATIO: 3N-1P-3K (+MG FOR PALMS ONLY)

D. MULCH SHALL BE DERIVED FROM AN EXOTIC INVADER TREE SPECIES, E.G. MELALEUCA, AND SHALL BE CLEAN AND FREE FROM WEEDS AND OTHER DEBRIS. ALTERNATIVE PRODUCTS, E.G., EUCALYPTUS OR PINE BARK OR STRAW MAY BE CONSIDERED. BALD CYPRESS MULCH WILL NOT BE ACCEPTED.

E. PRE-EMERGENT HERBICIDE: APPLY GRANULAR CHIPCO "RONSTAR" OR APPROVED EQUAL AT LABEL RATE.

F. TREES SHALL BE SECURED USING THREE-QUARTER (3/4) INCH ELASTIC GUYS (3).

G. PALMS SHALL BE BRACED AS SHOWN. NO NAILS, SCREWS OR OTHER SECURING DEVICES MAY BE DRIVEN INTO THE TRUNK.

PART 4.0 EXECUTION

4.1 GENERAL

A. AWARDED BIDDER SHALL PROVIDE AND INSTALL ALL TREES, PALMS, SHRUBS AND GROUNDCOVERS IN THE QUANTITIES AND DIMENSIONS INDICATED ON THE LANDSCAPE PLAN.

B. COMMENCEMENT OF WORK: WORK UNDER THIS AWARDED BID SHALL BE COMPLETED IN AN ORDERLY, BUSINESS-LIKE FASHION. ONCE WORK HAS BEGUN, IT SHALL CONTINUE ON CONSECUTIVE WORKING DAYS UNTIL IT HAS BEEN COMPLETED. SUNDAYS, SATURDAYS, HOLIDAYS AND STOPPAGES DUE TO INCLEMENT WEATHER DELAYS OR CAUSED BY THE CUSTOMER SHALL BE EXCLUDED.

4.2 INSTALLATION

TREES, PALMS AND SHRUBS

A. ALL LANDSCAPE MATERIAL IS TO BE PLANTED IN ACCORDANCE TO THE LANDSCAPE PLAN AND ATTENDANT EXHIBITS. GOOD HORTICULTURAL PRACTICES MUST BE OBSERVED.

B. TREES AND PALMS ARE TO BE PLANTED OUT OF THE RIGHT-OF-WAY (ROW) AT A MINIMUM OF FOUR (4) FEET FROM BACK OF CURB AT LOCATIONS IDENTIFIED ON THE LANDSCAPE PLAN. ALL SHRUBS ARE TO BE A MINIMUM OF TWO AND ONE HALF (2.5) FEET FROM BACK OF CURB AS SHOWN ON LANDSCAPE PLAN. AWARDED BIDDER SHALL STAKE AND/OR PAINT PLANTING LOCATIONS IN THE FIELD. UPON APPROVAL BY THE CUSTOMER, THESE AREAS SHALL BE SPRAYED WITH AN APPROVED HERBICIDE AND MAINTAINED WEED-FREE FOR THE DURATION OF THE PROJECT.

C. EXCAVATE PLANTING HOLES WITH VERTICAL SIDES. DO NOT DISTURB SOIL AT BOTTOM OF PLANTING HOLES. MAKE EXCAVATIONS TWICE AS WIDE AS THE ROOT BALL DIAMETER AND SLIGHTLY LESS (TWO INCHES) THAN THE DISTANCE BETWEEN THE TOP-MOST ROOT IN THE ROOT BALL AND THE BOTTOM OF THE ROOT BALL. ALTERNATIVELY, EXCAVATE THE HOLE SLIGHTLY WIDER THAN THE ROOT BALL AND PLACE THE ROOT BALL IN THE HOLE SO THE TOP-MOST ROOT IS EVEN WITH OR SLIGHTLY (TWO INCHES) HIGHER THAN THE SURROUNDING LANDSCAPE GRADE. THEN, LOOSEN THE SURROUNDING SOIL OUT TO A DIAMETER EQUAL TO TWICE THE DIAMETER OF THE ROOT BALL. FINALLY, PUSH THE LOOSENED SOIL TOWARD THE ROOT BALL TO FILL THE HOLE.

IF WATER FILLS THE BOTTOM OF THE PLANTING HOLE, ADD SOIL TO THE BOTTOM OF THE HOLE UNTIL THE WATER IS COVERED. PACK THE ADDED SOIL FIRMLY. PLACE THE ROOT BALL ON THIS PACKED, SOLID SOIL, NOT IN WATER. NO PART OF THE ROOT BALL SHALL BE PLACED IN WATER. IF NECESSARY, BRING IN SOIL SIMILAR TO SITE SOIL TO COVER THE SIDES OF THE ROOT BALL, CREATING A RAISED MOUND. THE BASE OF THE MOUND (I.E. THE OUTER DIAMETER CREATED) SHALL BE AT LEAST SIX TIMES THE DIAMETER OF THE ROOT BALL.

WHEN PLANTING ON A SLOPE, THE TOP-MOST MAIN ROOT IN THE ROOT BALL SHALL BE EVEN WITH THE GRADE ON THE UPHILL SIDE OF THE TREE. SITE SOIL WILL NEED TO BE ADDED ON THE DOWNHILL SIDE TO COVER THE SIDES OF THE ROOT BALL AND TO CONSTRUCT THE SOIL BERM TO HOLD WATER. THE AMOUNT OF SOIL ADDED ON THE DOWNHILL SIDE WILL DEPEND ON THE SLOPE AND SIZE OF THE ROOT BALL.

D. REMOVE ALL WOOD, PLASTIC, OR GRO-BAGS FROM THE ROOT BALL. SET PLANTS IN CENTER OF HOLES WITH THE TOP-MOST ROOT IN THE ROOT BALL AT THE SAME HEIGHT OR SLIGHTLY HIGHER (2 INCHES) THAN FINISHED LANDSCAPE GRADES AND PLUMB TREES SO THE TRUNK IS VERTICAL. BACKFILL FIELD SOIL AROUND SIDES OF ROOT MASS AND WORK EACH LAYER TO SETTLE AND ELIMINATE VOIDS AND AIR POCKETS. MATERIAL MUST BE WATERED IN AS PLANTED. PROVIDE APPROXIMATELY 5 GALLONS OF WATER PER INCH OF TRUNK CALIPER OR 1 GALLON PER 3 GALLONS OF CONTAINER TO THE ROOT BALL ONCE ALL BACKFILL IS FILLED IN AROUND THE ROOT BALL.

E. PROVIDE A 2-3" HIGH SOIL BERM AROUND THE EDGE OF TREE ROOT BALLS TO FROM A SHALLOW SAUCER TO COLLECT WATER. THE WATERING SAUCER, REGARDLESS OF HOLE SIZE, IS TO BE AT EDGE OF ROOT BALL. ALTERNATIVELY, COBRA EDGING IS TO BE INSTALLED AT THE EDGE OF THE ROOT BALL.

F. BROADCAST OVER THE ROOT BALL AND BACK FILL SOIL, AT THE RECOMMENDED RATE, A BROAD-SPECTRUM PRE-EMERGENT HERBICIDE PRIOR TO MULCHING.

G. APPLY A CONTROLLED-RELEASE FERTILIZER TO THE SOIL SURFACE UNDER THE MULCH AT 1 LB. NITROGEN PER 1000 FT2, PRIOR TO MULCHING. NO OTHER AMENDMENTS ARE NECESSARY.

H. ON TREES UP TO 4" CALIPER, APPLY A THREE (3) INCH LAYER OF MULCH TO AN EIGHT (8) FOOT DIAMETER CIRCULAR AREA AROUND THE TRUNK. ON LARGER CALIPER TREES, APPLY A TWO (2) FOOT DIAMETER MULCH AREA FOR EACH INCH OF TRUNK CALIPER. NO MULCH SHALL BE APPLIED TO THE INNER HALF OF THE ROOT BALL SURFACE. ALL OTHER PLANTING BEDS ARE TO HAVE A MINIMUM OF 3" OF MULCH.

I. TREES AND PALMS ARE TO BE SECURED BY AWARDED BIDDER.

GROUNDCOVER

A. SPACE GROUND COVER PLANTS AS INDICATED ON THE LANDSCAPE PLAN.

B. DIG HOLES LARGE ENOUGH TO ALLOW FOR SPREADING ROOTS AND BACKFILL WITH PLANTING SOIL. WORK SOIL AROUND ROOTS TO ELIMINATE AIR POCKETS AND LEAVE A SLIGHT SAUCER INDENTATION AROUND PLANTS TO HOLD WATER. WATER THOROUGHLY AFTER PLANTING, TAKING CARE NOT TO COVER CROWNS WITH WET SOILS.

C. MULCH AREA BETWEEN GROUND COVER PLANTS, PLACE NO LESS THAN 3" OF MULCH.

GENERAL

A. A REPRESENTATIVE WILL INSPECT ALL LANDSCAPE MATERIAL DURING INSTALLATION. MATERIAL THAT IS IN SHOCK OR HAS BEEN DAMAGED DURING INSTALLATION SHALL BE REPLACED BY AWARDED BIDDER WITHIN FIVE (5) WORKING DAYS FROM NOTIFICATION.

B. REMOVE FROM WORK SITE ALL EXCESS MATERIALS (E.G., SOIL, DEBRIS AND EQUIPMENT) DAILY THROUGH DURATION OF PROJECT. DAMAGES RESULTING FROM INSTALLATION SHALL BE REPAIRED BY AWARDED BIDDER.

C. PRUNING: IF THERE IS A DOUBLE LEADER IN THE TOP HALF OF THE TREE, SHORTEN ONE, BY THE ABOUT ONE-HALF, BACK TO A LIVE BRANCH THAT POINTS AWAY FROM THE TREE AND IS AT LEAST ONE-THIRD THE DIAMETER OF THE CUT LEADER. REMOVE BROKEN PORTIONS OF DAMAGED BRANCHES BACK TO A LIVE LATERAL BRANCH. PRUNE SHRUBS TO RETAIN NATURAL CHARACTER.

D. REMOVE ALL STRING OR WIRE WRAPPED AROUND TREE TRUNKS. REMOVE ALL STRAPS, ROPE AND STRING USED TO LIFT THE ROOT BALL. REMOVE ALL BURLAP AND WIRE FROM THE TOP OF THE ROOT BALL.

4.3 ACCEPTANCE

A. INSPECTION TO DETERMINE ACCEPTANCE OF PLANTED AREAS WILL BE MADE BY THE CUSTOMER REPRESENTATIVE UPON AWARDED BIDDER'S REQUEST. PROVIDE NOTIFICATION A MINIMUM OF FIVE (5) WORKING DAYS BEFORE REQUESTED INSPECTION DATE.

PLANTED AREAS WILL BE ACCEPTED PROVIDED ALL REQUIREMENT, INCLUDING MAINTENANCE, HAVE BEEN SATISFIED AND PLANT MATERIALS ARE HEALTHY AND IN VIGOROUS CONDITION.

B. THE CUSTOMER OR THEIR REPRESENTATIVE WILL PREPARE A "PUNCH LIST" OF THOSE ITEMS, WHICH MUST BE CORRECTED BEFORE RE-INSPECTION FOR FINAL ACCEPTANCE. THE REPRESENTATIVE WILL DETERMINE AN APPROPRIATE TIME PERIOD FOR CORRECTIONS. AWARDED BIDDER MUST REQUEST RE-INSPECTION TWO (2) WORKING DAYS IN ADVANCE.

4.4 MAINTENANCE

A. BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING. MAINTAIN ALL PLANT MATERIAL UNTIL FINAL ACCEPTANCE AND FOR A MAINTENANCE AND WARRANTY PERIOD OF TWELVE (12) MONTHS AFTER FINAL ACCEPTANCE.

B. MAINTENANCE SHALL INCLUDE BUT IS NOT LIMITED TO PRUNING, CULTIVATION, MOWING, WEEDING, FERTILIZING, WATERING, AND APPLICATION OF APPROPRIATE PESTICIDES NECESSARY TO MAINTAIN PLANTS IN HEALTHY CONDITION.

1.) RESET SETTLED PLANTS TO PROPER GRADE AND POSITION.
2.) RESTORE SOIL BERM AND MULCH LAYER.
3.) TIGHTEN AND REPAIR ELASTIC GUYS OR OTHER SUPPORTS
4.) CORRECT DEFECTIVE WORK.
5.) REMOVE AND REPLACE REJECTED MATERIAL WITHIN ONE (1) WORKING DAY FROM NOTIFICATION.
6.) MAINTAIN MULCH SURFACE WEED-FREE.

C. ALL PALMS ARE TO BE PRUNED TO REMOVE DEAD FRONDS, AND FRONDS WITH A PETIOLE THAT DROOPS BELOW HORIZONTAL. DEAD FRONDS ARE THOSE WITH LESS THAN 50% GREEN TISSUE. ONLY THOSE FRONDS WITH PETIOLES DROOPING BELOW HORIZONTAL (9:00-3:00 O'CLOCK) SHOULD BE REMOVED. ALL SEEDPODS ARE ALSO TO BE REMOVED INCLUDING THOSE ORIGINATING AMONG REMAINING FRONDS.

D. THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR THE IRRIGATION THROUGH FINAL ACCEPTANCE AND TWELVE- (12) MONTH WARRANTY PERIOD.

E. UPON SATISFACTORY COMPLETION OF MAINTENANCE PERIOD AS DETERMINED BY FINAL MAINTENANCE INSPECTION, THE CLIENT OR AN APPOINTED LANDSCAPE MAINTENANCE COMPANY WILL ASSUME MAINTENANCE RESPONSIBILITIES.

F. ALL STAKES, SUPPORTS, AND ASSOCIATED HARDWARE SHALL BE REMOVED 12 MONTHS AFTER PLANTING.

NOTES ON IRRIGATION

1. DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER. IRRIGATION FREQUENCY CAN BE REDUCED SLIGHTLY (E.G. 2-3 TIMES EACH WEEK INSTEAD OF EVERY OTHER DAY) WHEN PLANTING HARDENED-OFF, FIELD GROWN TREES THAT WERE ROOT-PRUNED DURING PRODUCTION. ESTABLISHMENT TAKES 3 TO 4 MONTHS PER INCH TRUNK CALIPER.

2. IRRIGATION FREQUENCY CAN BE REDUCED SLIGHTLY (E.G. TO ONE OR TWICE EACH WEEK) WHEN PLANTING HARDENED-OFF, FIELD GROWN TREES THAT WERE ROOT-PRUNED DURING PRODUCTION.

3. AT EACH IRRIGATION, APPLY 2-3 GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL. APPLY IT IN A MANNER SO ALL WATER SOAKS INTO THE ROOT BALL. DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.

4. TREES TAKE MUCH LONGER TO ESTABLISH THAT 3-4 MONTHS PER INCH TRUNK CALIPER. IRRIGATE IN DROUGHT THE FOLLOWING SUMMER.

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REGISTERED LANDSCAPE ARCHITECT CATHERINE J. MORAHAN LA0001559 02/23/2023 STATE OF FLORIDA

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY CATHERINE J. MORAHAN ON THE DATE ADJACENT TO THE SEAL.

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LA0001559 — FL Registration No.
CATHERINE J. MORAHAN — Registered Landscape Architect
Sign Date
COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-009
ISSUE DATE:
DESIGNED BY: CM
DRAWN BY: CM
CHECKED BY: BG
APPROVED BY: BG

CONTENT: LANDSCAPE NOTES

PROJECT: PRIVATE PARKING LOT

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LAND PLANNING - CIVIL ENGINEERING - GEOTECHNICAL ENGINEERING

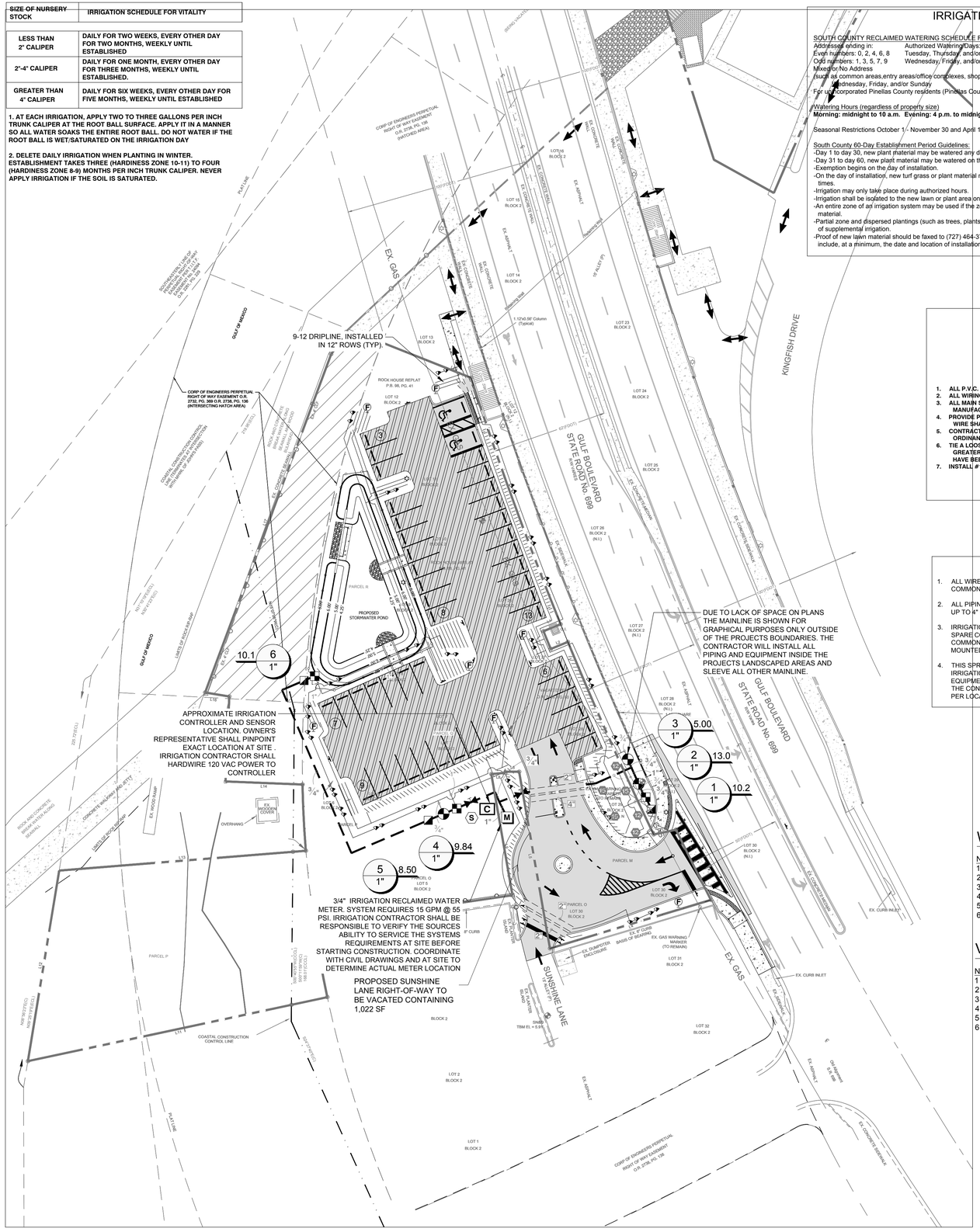
SHEET: L3

TREE IRRIGATION AFTER PLANTING DURING ESTABLISHMENT

SIZE OF NURSERY STOCK	IRRIGATION SCHEDULE FOR VITALITY
LESS THAN 2" CALIPER	DAILY FOR TWO WEEKS, EVERY OTHER DAY FOR TWO MONTHS, WEEKLY UNTIL ESTABLISHED
2"-4" CALIPER	DAILY FOR ONE MONTH, EVERY OTHER DAY FOR THREE MONTHS, WEEKLY UNTIL ESTABLISHED.
GREATER THAN 4" CALIPER	DAILY FOR SIX WEEKS, EVERY OTHER DAY FOR FIVE MONTHS, WEEKLY UNTIL ESTABLISHED

1. AT EACH IRRIGATION, APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER AT THE ROOT BALL SURFACE. APPLY IT IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL. DO NOT WATER IF THE ROOT BALL IS WET;SATURATED ON THE IRRIGATION DAY

2. DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER. ESTABLISHMENT TAKES THREE (HARDINESS ZONE 10-11) TO FOUR (HARDINESS ZONE 8-9) MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.



IRRIGATION RESTRICTIONS

SOUTH COUNTY RECLAIMED WATERING SCHEDULE FOR UNINCORPORATED PINELLAS COUNTY RESIDENTS

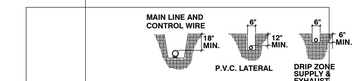
Addresses ending in:	Authorized Watering Days:
Even numbers: 0, 2, 4, 6, 8	Tuesday, Thursday, and/or Saturday
Odd numbers: 1, 3, 5, 7, 9	Wednesday, Friday, and/or Sunday
Mixed or No Address (such as common areas,entry areas/office complexes, shopping centers and other "no address" locations)	Wednesday, Friday, and/or Sunday

For UNincorporated Pinellas County residents (Pinellas County Code 82-2 external website FAC 40D-22 external website)

Watering Hours (regardless of property size)
Morning: midnight to 10 a.m. Evening: 4 p.m. to midnight - 3 Days per Week

Seasonal Restrictions October 1 - November 30 and April 1 – June 30

South County 60-Day Establishment Period Guidelines:
-Day 1 to day 30, new plant material may be watered any day of the week.
-Day 31 to day 60, new plant material may be watered on the 3 authorized days for your address.
-Exemption begins on the day of installation.
-On the day of installation, new turf grass or plant material may be irrigated once without regard to the allowable watering times.
-Irrigation may only take place during authorized hours.
-Irrigation shall be isolated to the new lawn or plant area only. New trees, shrubs and plants shall be watered by hand.
-An entire zone of an irrigation system may be used if the zone waters an area that contains at least 50% new plant material.
-Partial zone and dispersed plantings (such as trees, plants, and shrubs) shall be watered by some other targeted means of supplemental irrigation.
-Proof of new lawn material should be faxed to (727) 464-3717 prior to or immediately following installation and should include, at a minimum, the date and location of installation as well as the amount of material installed.



DETAIL NOTES:

1. ALL P.V.C. PIPING SHALL BE SNAKED IN TRENCHES.
2. ALL WIRING TO BE BUNDLED AND TAPED AT 20' INTERVALS.
3. ALL MAIN SUPPLY LINES TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
4. PROVIDE PIPE AND WIRE SLEEVES UNDER ALL PAVED SURFACES. WIRE SHALL BE WITHIN SEPARATE 2" ELECTRICAL CHASE.
5. CONTRACTOR TO COMPLY WITH ALL LOCAL CODES AND ORDINANCES IN REFERENCE TO THE INSTALLATION OF PVC PIPING
6. TIE A LOOSE 20' LOOP IN WIRING AT ALL CHANGES OF DIRECTION GREATER THAN 30° UNTIE ALL LOOPS AFTER ALL CONNECTIONS HAVE BEEN COMPLETED
7. INSTALL #14-1 TRACKING WIRE NEXT TO MAINLINE

TRENCHING DETAIL

NOTES

1. ALL WIRE WILL BE COLOR-CODED DIRECT BURIAL UL/LF WIRE: COMMON (WHITE) @12-1, CONTROL WIRE (RED) #14-1
2. ALL PIPING AND WIRING UNDER HARDTOPS WILL BE SCH 40 - UP TO 4" OR CLASS 200 - 6" AND ABOVE PVC PIPE SLEEVE
3. IRRIGATION INSTALLATION CONTRACTOR SHALL INSTALL (2) SPARE CONTROL WIRES, COLOR-CODED YELLOW AND COMMON FROM CONTROLLER TO MIDPOINT OF MAINLINE, MOUNTED IN 10" ROUND VALVE BOX.
4. THIS SPRINKLER SYSTEM USES RECLAIMED WATER, THE IRRIGATION CONTRACTOR WILL INSTALL ALL SPRINKLER EQUIPMENT WITH PURPLE CAPS, TAGS,VALVE BOX LIDS, ETC. THE CONTRACTOR WILL POST "RECLAIMED WATER" SIGNAGE PER LOCAL CODES

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
08HE-VAN 12HE-VAN 10HE-VAN 15HE-VAN	Rain Bird RD-06-P30-F-NP-U HE-VAN Series Turf Spray, 6.0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap). 1/2" NPT female threaded inlet.	6	30
25 50 10 20	Hunter AFB Adjustable Flow Bubbler, 1/2" FIPT, stainless steel screw adjustment.	54	20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-100-PRB-R Wide Flow Drip Control Kit for Commercial Applications. Purple Cap designates for Reclaimed Water, Non-Potable Use. 1" PESBR Valve and 1" Pressure Regulating 40psi Basket Filter. 0.3gpm to 20gpm.	3
F	Rain Bird MDCFPCAP Dripline Flush Valve purple cap in compression fitting coupler. For non-potable water use.	7
	Area to Receive Dripline Rain Bird XFD-09-12-NP XFD On-Surface Pressure Compensating Landscape Dripline. 0.9 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. UV Resistant. Specify XF insert fittings.	2,010 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESBR 1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, and Purple Flow Control Handle.	3
	Rain Bird 33-DNP 3/4" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Non-Potable Purple Rubber Cover, and 2-Piece Body.	3
	Matco-Norca 759 Brass Shut Off Ball Valve, 1/2" to 4". Two Piece Body, Blow-Out Proof Stem, Chrome Plated Solid Brass Ball, Threaded, with PTFE Seats. Same size as mainline pipe.	2
C	Hunter I2C-0800-PP 8 Station Outdoor Modular Controller. No Module Required. Commercial Use. Plastic Pedestal.	1
S	Hunter Solar-Sync-Sen Solar, rain freeze sensor with outdoor interface, connects to Hunter X-Core and ACC Controllers, install as noted. Includes gutter mount bracket. Wired. Module not included.	1
M	Water Meter 3/4" Reclaimed water meter requires 15 GPM @ 55 PSI.Irrigation contractor shall be responsible to verify the sources ability to service the systems requirements at site before starting construction.	1
	Irrigation Lateral Line: PVC Class 200 SDR 21-NP Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.Install 12" below final grade.	1,866 l.f.
	Irrigation Mainline: PVC Class 200 SDR 21-NP Pipe sizes 3" inch or smaller shall have bell and socket joints. Pipe sizes larger then than 3" inch shall have snap connections w/ rubber gasket joints, thrust blocked. Install 18" below grade.	318.7 l.f.
	Pipe Sleeve: PVC Class 200 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	121.5 l.f.



WATERING SCHEDULE

NUMBER	MODEL	TYPE	PRECIP	SUN	MON	TUE	WED	THU	FRI	SAT	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
1	Rain Bird XCZ-100-PRB-R	Area for Dripline	1.44 in/h	14 min			14 min		14 min		1	42	429.0	143.0
2	Rain Bird PESBR	Turf Spray	0.98 in/h	21 min			21 min		21 min		1	62	803.4	267.8
3	Rain Bird PESBR	Bubbler	0.98 in/h	21 min			21 min		21 min		1	62	310	103.3
4	Rain Bird XCZ-100-PRB-R	Area for Dripline	1.44 in/h	14 min			14 min		14 min		1	42	413.3	137.8
5	Rain Bird PESBR	Bubbler	0.96 in/h	21 min			21 min		21 min		1	63	535.5	178.5
6	Rain Bird XCZ-100-PRB-R	Area for Dripline	1.44 in/h	14 min			14 min		14 min		1	42	424.0	141.3
		TOTALS:		105			105		105			313	2,915	971.7

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 3/4"	PIPE 1"	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
1	Rain Bird XCZ-100-PRB-R	1"	Area for Dripline	10.22	680.5 l.f.	311.8		119.0	30	4.56	7.55	42.10	45.56	1.44 in/h
2	Rain Bird PESBR	1"	Turf Spray	12.96	6	71.8	8.0	110.9	30	0.29	2.81	33.10	37.92	0.98 in/h
3	Rain Bird PESBR	1"	Bubbler	5.00	20	344.0		106.0	20	0.89	2.90	23.79	24.81	0.98 in/h
4	Rain Bird XCZ-100-PRB-R	1"	Area for Dripline	9.84	656.2 l.f.	297.0	10.8	29.3	30	0.85	7.19	38.04	41.02	1.44 in/h
5	Rain Bird PESBR	1"	Bubbler	8.50	34	602.7		37.1	20	1.75	2.90	24.64	27.16	0.96 in/h
6	Rain Bird XCZ-100-PRB-R Common Wire	1"	Area for Dripline	10.10	673.1 l.f.	147.2	73.1 318.7	206.0	30	1.54	7.41	38.95	50.60	1.44 in/h

IRR. DESIGN
AN IRRIGATION DESIGN COMPANY
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THE DESIGN PROFESSIONAL DENIES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND DESIGN INTENT THEY CONVEY OR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE DESIGN PROFESSIONALS GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

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LA0001559 FL Registration No. | CATHERINE J. MORAHAN Registered Landscape Architect | Sign Date

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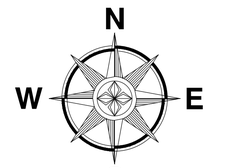

GRAPHIC SCALE 1:20

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No.	BY	DATE	REVISIONS DESCRIPTION

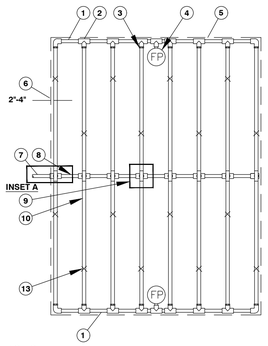
PROJECT No: 22-005
ISSUE DATE:
DESIGNED BY: JM
DRAWN BY: JM
CHECKED BY: BG
APPROVED BY: BG

CONTENT: IRRIGATION PLAN

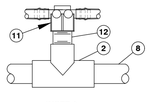
PROJECT: PRIVATE PARKING LOT

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Fax (813) 644-7000
5300 W. Cypress Street, Suite 282
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - GEOTECHNICAL ENGINEERING

SHEET: IRR-1



1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFD FLUSH POINT"
5. PERIMETER OF AREA
6. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
7. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
8. PVC SUPPLY MANIFOLD
9. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET A
10. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE(TYPICAL) POTABLE: XFD DRIPLINE NON-POTABLE: XFDP DRIPLINE
11. BARB X FEMALE FITTING: RAIN BIRD XFD-TFA-075 FITTING
12. 3/4" PVC NIPPLE, LENGTH AS NECESSARY
13. RAINBIRD TDS-050 TIE DOWN STAKE, STAGGER 3' APART ALONG DRIP LINE AND AT AND AT FITTINGS. (TYPICAL)



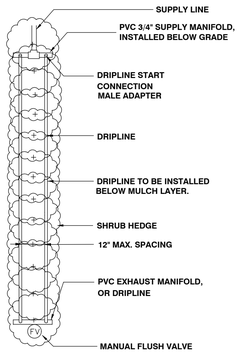
INSET A

NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFD Dripline Maximum Lateral Lengths (Feet)

	12" Spacing		18" Spacing		24" Spacing	
Inlet Pressure psi	Nominal	Flow (gph)	Nominal	Flow (gph)	Nominal	Flow (gph)
	0.6	0.9	0.6	0.9	0.6	0.9
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

XFD ON-SURFACE DRIPLINE - CENTER FEED LAYOUT



SHRUB DRIP LAYOUT

IRRIGATION SYSTEM PERFORMANCE NOTES

1. IRRIGATION SYSTEM IS DESIGNED TO OPERATE OFF A RECLAIMED WATER METER PROVIDING A MINIMUM FLOW OF 15 GPM AND A MINIMUM PRESSURE OF 55 PSI.

   CONTRACTOR MUST CONTACT THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION IF THE AVAILABLE FLOW AND PRESSURE DEVIATES MORE THEN 5% OR WILL AFFECT THE PERFORMANCE OF THE SYSTEM.

   MINIMUM PRESSURE REQUIREMENTS - 60 PSI AT THE POINT OF CONNECTION
   A. 45 PSI AT THE BASE OF THE POP-UP ROTOR/ROTATOR HEADS
   B. 30 PSI AT THE BASE OF THE POP-UP SPRAY HEADS

2. HEAD LAYOUT IS BASED ON BASE INFORMATION PROVIDED. HEADS SHALL BE ADJUSTED TO ACCOMMODATE FIELD VARIATIONS WHILE MAINTAINING 100% COVERAGE AND MINIMIZING OVER-SPRAY ONTO PAVED AREAS AND BUILDINGS.

3. ¾" PIPE SHALL NOT BE USED FOR LATERAL PIPING

DRIP TUBING NOTES

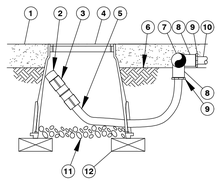
1. INSTALL DRIP TUBING AT GRADE AND COVER WITH MULCH. TYPICAL SPACING FOR DRIP TUBING IS 12" TO 18" ON CENTER. SPACING TO BE DETERMINED BY PLANT LAYOUT. REFER TO LANDSCAPE PLAN. ANCHOR TUBING EVERY 10' WITH 12" LONG PLASTIC TUBING STAKES. INSTALL FLUSH VALVE ASSEMBLIES AT ALL TUBING "DEAD ENDS". INSTALL AIR/VACUUM RELIEF VALVES AT "HIGH POINTS" OF EVERY SECTION.
2. GRID LAYOUT SHALL BE USED ON THIS PROJECT. USE CENTER GRID LAYOUT WHERE POSSIBLE.
3. WHEN SLEEVING DRIPLINE, USE BLANK DRIPLINE IN SLEEVE. SLEEVE SHALL BE 2X DRIPLINE DIAMETER. NO EMITTER DRIPLINE SHALL BE PLACED IN SLEEVE.
4. THE LENGTH OF ANY DRIPLINE LATERAL SHALL NOT BE LONGER THAN:
   12" EMITTERS @ 0.9 GPH
   a) @ 15 PSI = 65 FEET
   b) @ 25 PSI = 194 FEET
   c) @ 35 PSI = 244 FEET
   d) @ 45 PSI = 280 FEET
   LATERAL DISTANCE DOUBLED WHEN CENTER FEED LAYOUT USED (SEE CENTER FEED LAYOUT DETAIL.
5. MANUAL FLUSH VALVE SHALL BE USED & PLACED WITH A 6" X 6' SUMP. VALVES SHALL BE OPENED EVERY WATERING DAY FOR 2 WEEKS AND THEN A MINIMUM OF 2 TIMES A YEAR TO CLEAR DRIPLINE OF DEBRIS.
6. AIR/VACUUM RELIEF SHALL BE INSTALLED WHEN THE CHANGE IN SLOPE OCCURS 3% OR GREATER.
7. STAPLES SHALL BE USED AT 5' O.C. AND 2 STAPLES 'X'ED OVER EACH OTHER WITH ANY CHANGE IN DIRECTION, ELBOWS, OR CROSSES.
8. SUPPLY, EXHAUST HEADERS AND DRIPLINE SHALL BE PLACED 2"- 4" FROM PLANTS AND PAVEMENT EDGES.
9. BLANK DRIPLINE SHALL BE USED FOR ALL SUPPLY AND EXHAUST HEADERS, UNLESS OTHERWISE NOTED ON PLANS.
10. PRIOR TO COVERING DRIPLINE, DRIPLINE CIRCUIT WILL BE PRESSURIZED AND TESTED FOR PROPER OPERATION.
11. DRIP LINE LATERALS SHALL BE LAID IN THE LONGEST RUN, WHETHER IT BE THE WIDTH OR LENGTH OF THE ZONE.

RECLAIMED WATER NOTES

1. ALL PIPE SHALL BE PURPLE WATER TYPE.
2. ALL MAINLINE SHALL HAVE MAGNETIC MARKER TAPE PLACED IN THE TRENCH 6" ABOVE THE PIPE.
3. ALL SPRINKLER HEADS SHALL HAVE PURPLE RECLAIMED IDENTIFICATION.
4. ALL MANUAL AND ELECTRIC VALVES SHALL HAVE TAGS TO INDICATE RECLAIMED WATER.
5. ALL VALVE BOXES SHALL HAVE PURPLE LIDS TO INDICATE THE PRESENCE OF RE-USE WATER.
6. ALL CROSSINGS OF IRRIGATION PIPING AND POTABLE WATER LINES SHALL HAVE THE VERTICAL CLEARANCE VISUALLY VERIFIED AND THE VERIFICATION MUST BE SHOWN ON THE AS-BUILT DRAWING BY DOCUMENTING THE VERTICAL MEASUREMENTS SEPARATING THE PIPES.
7. THE VERTICAL SEPARATION BETWEEN THE POTABLE AND RECLAIMED WATER LINES SHALL BE A MINIMUM OF 18". THIS SEPARATION SHALL BE VERIFIED AND DOCUMENTED IN A SET OF AS-BUILTS DRAWINGS AS PER SPECIFICATIONS. THE HORIZONTAL SEPARATION SHALL BE 5' CENTER TO CENTER AND 3' OUTSIDE TO OUTSIDE IF VERTICAL MINIMUM OF 18" IS NOT MET. REFER TO THE SPECIFIC CODE IF THESE SEPARATIONS CANNOT BE MET.

GENERAL IRRIGATION NOTES

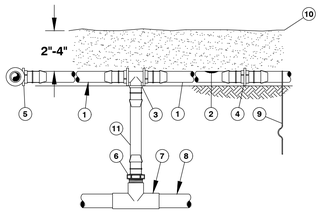
1. ALL MAINLINES TO HAVE A MINIMUM OF 18" OF COVER. (CLASS 200 PVC PIPE).
2. ALL LATERAL AND SUB-MAIN PIPE TO HAVE A MINIMUM OF 12" OF COVER (CLASS 200 PVC PIPE).
3. NO ROCKS, BOULDER, OR OTHER EXTRANEOUS MATERIALS TO BE USED IN BACKFILLING OF TRENCH.
4. ALL PIPE TO BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS.
5. ALL THREADED JOINTS TO BE COATED WITH TEFLON TAPE OR LIQUID TEFLON.
6. ALL LINES TO BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF SPRINKLER HEADS.
7. SPRINKLER AND RELATED EQUIPMENT TO BE INSTALLED AS PER DETAILS.
8. ALL ELECTRICAL JOINTS TO BE MADE USING WATERPROOF CONNECTIONS AS SHOWN ON DETAILS.
9. ALL EQUIPMENT NOT SPECIFIED IN THE LEGEND SHALL BE DETERMINED AND FURNISHED BY THE CONTRACTOR.
10. NO ELECTRICAL CONNECTIONS SHALL BE MADE IN THE FIELD EXCEPT AT A VALVE CONTROL BOX OR ANOTHER VALVE BOX SPECIFICALLY FOR CONNECTIONS.
11. ANY DISCREPANCY BETWEEN THIS SHEET AND OTHERS IN THIS SET MUST BE REFERRED TO THE IRRIGATION CONSULTANT BY THE CONTRACTOR FOR CLARIFICATION BEFORE PRECEDING WITH THE WORK.
12. ALL 24 VOLT WIRE SHALL BE #12 UF/UL FOR COMMON WIRE, AND #14 UF/UL FOR CONTROL WIRES, DIRECT BURIAL, SOLID COPPER.
13. CONTRACTOR TO BE RESPONSIBLE FOR PROPER COVERAGE OF AREAS TO BE WATERED. i.e ADJUST HEADS WITH INSUFFICIENT COVERAGE DUE TO BLOCKAGE BY EXISTING OR PROPOSED SITE FEATURES.
14. CONTRACTOR TO REFER TO LANDSCAPE PLAN TO KEEP SPRINKLER EQUIPMENT AND ACCESSORY MATERIAL FROM INTERFERING WITH PROPER PLANTING, i.e VERIFY ROOT BALL SIZE FOR PLANTING
15. CONTRACTOR SHALL PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN A VALVE BOX (WRAP AROUND 3/4" PIPE 12 TIMES.
16. SPRINKLERS IN LOW-LYING AREAS SHALL HAVE CHECK VALVES
17. ALL SPRINKLERS TO BE MOUNTED ON FLEX PIPE - REFER TO DETAILS.
18. INSTALL DRIP LINE TUBING AND NON-PRESSURE LATERAL LEAD LINE PIPING IN LANDSCAPE AREAS AND ADJACENT TO SELECTED PLANT MATERIAL AS SHOWN IN DETAILS.
19. CONTRACTOR SHALL UTILIZE VALVE I.D. TAGS ON ALL REMOTE CONTROL VALVES.
20. 24 VOLT WIRE SHALL BE COLOR CODE: COMMON-WHITE, CONTROL-RED.
21. CONTRACTOR SHALL INSTALL MANUFACTURERS' RECOMMENDED GROUNDING EQUIPMENT FOR POWER SUPPLY AND VALVE OUTPUT WITH (2) 5/8" COPPER CLAD GROUND RODS.
22. CONTRACTOR SHALL INSTALL MANUFACTURERS' RECOMMENDATION ON FAULT GROUND AND LIGHTENING PROTECTION.
23. CONTROLLER GROUNDING MUST BE PER ASIC REQUIREMENTS.
24. ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR TO OWNER:
    A. TWO WRENCHES FOR DISASSEMBLING AND ADJUSTING EACH TYPE OF SPRINKLER HEAD AND VALVE SUPPLIED.
    B. TWO KEYS FOR EACH OF THE AUTOMATIC CONTROLLERS.
    C. TWO QUICK COUPLER KEYS WITH MATCHING HOSE SWIVELS.
26. SYSTEM IS DIAGRAMMATIC TO IMPROVE CLARITY. ALL MAINLINE PIPING, ELECTRIC VALVES AND WIRING ARE TO BE INSTALLED IN LANDSCAPED AREAS AND REFERENCE THE LANDSCAPE PLAN PRIOR TO THE INSTALLATION OF PIPING TO AVOID CONTACT WITH PLANT MATERIALS EXISTING OR NEW.
27. CONTRACTOR TO ADD EXTENSION RISER TO POP-UP HEADS WHEN NEEDED TO PROVIDE PROPER COVERAGE.
28. CONTRACTOR SHALL INSTALL SPRINKLER EQUIPMENT 12" FROM FOUNDATIONS, ALSO INSTALL SPRINKLERS 4" FROM CURBS OR WALKS.
29. PRIOR TO BID IRRIGATION CONTRACTOR SHALL VERIFY RIGHT-OF-WAY AND BACKFLOW REQUIREMENTS NO LATER THAN FIVE DAYS BEFORE BID SUBMITTALS. CONTRACTOR SHALL NOTIFY CONSULTANT OF ANY CHANGES FROM PLANS OR SPECIFICATIONS.
30. IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER AND LANDSCAPE ARCHITECT WITH A REPRODUCIBLE CROSS MEASURED AS-BUILT DRAWING OF THE INSTALLED IRRIGATION SYSTEM IN AUTOCAD 2010 FORMAT BEFORE FINAL ACCEPTANCE.
31. A 1-YEAR WARRANTY PERIOD SHALL BE PROVIDED FOR SYSTEM AFTER SUBSTANTIAL COMPLETION IS ACCEPTED. START UP AND ADJUSTING OF SYSTEM IN SPRING TIME SHALL BE INCLUDED IN WARRANTY.
32. PRIOR TO BID, CONTRACTOR SHALL VERIFY THAT ALL MATERIAL, INSTALLATION PARAMETERS AND OPERATIONS CONFORM TO ALL APPLICABLE CODES AND ORDINANCES NO LATER THAN FIVE DAYS BEFORE BID SUBMITTALS. CONTRACTOR SHALL NOTIFY IRRIGATION CONSULTANT/DESIGNER OF ANY CHANGES REQUIRED DUE TO CURRENT CODE OR ORDINANCE DISCREPANCIES. IF CONTRACTOR DOES NOT COMPLY TO THIS NOTIFICATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY INSTALLATION CHANGE AND REDESIGN COSTS FOR NON-COMPLIANCE.
33. UNLESS OTHERWISE NOTED, THE CONTRACTOR MUST COMPLETE TWP PRESSURE TESTS OF THE IRRIGATION SYSTEM MAINLINE(BOTH TO SHOW NO DROP IN PRESSURE DURING DURATION OF THE TEST).
    A. 2-HOUR PRESSURE TEST AT 1.5 TIMES THE SYSTEM STATIC PRESSURE
    B. 24-HOUR PRESSURE TEST AT THE SYSTEM STATIC PRESSURE
34. IRRIGATION INSTALLATION CONTRACTOR SHALL PROVIDE THE OWNER WITH A COLOR-CODED ZONE DIAGRAM PLAN, 8-1/2"X11" LAMINATED SHEET(S) TO IDENTIFY CONTROLLER STATION TO THE CONTROL VALVE NUMBER FOR EACH CONTROLLER. CHART IS TO BE LOCATED IN AN ADHESIVE POUCH ATTACHED TO THE INSIDE OF CONTROLLER(S).
35. THE CONTROLLER(S) SHALL SCHEDULE PROGRAM "A" TO A REGULAR RUN-TIME SETTINGS FOR AFTER THE ESTABLISHMENT PERIOD OF THE PLANT MATERIAL PROGRAM "B" SHALL BE USED DURING THE ESTABLISHMENT PERIOD AND TURNED OFF AFTER THE 30-60 DAYS OF PLANT INSTALLATION.
18. THE IRRIGATION CONTRACTOR WILL READ ALL SPECIFICATIONS AND REVIEW ALL DETAILS AND EXAMINE THESE PLANS CAREFULLY PRIOR TO BIDDING THIS PROJECT. FAILURE TO READ THIS INFORMATION IS NOT AN ACCEPTABLE REASON IF THE JOB IS UNDERBID.
19. THE PLAN MAY NOT INCLUDE ALL MATERIALS. THIS DOESN'T RELIEVE THE CONTRACTOR FROM BEING RESPONSIBLE TO PROVIDE A COMPLETE SYSTEM IN PERFECT WORKING ORDER.



NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

1. TOP OF MULCH LAYER
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP NON-POTABLE: RAIN BIRD MDCFPCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. RAIN BIRD XF BLANK TUBING
6. FINISH GRADE
7. PVC EXHAUST HEADER
8. PVC SCH 40 TEE OR EL
9. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
10. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFD DRIPLINE NON-POTABLE: XFDP DRIPLINE
11. 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL
12. BRICK (1 OF 2)

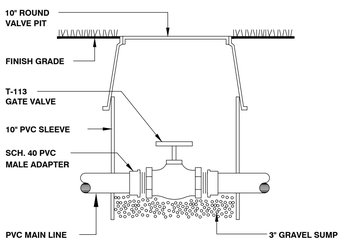
XFD ON-SURFACE DRIPLINE FLUSH POINT



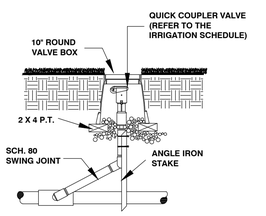
NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. SAVE YOUR HANDS. USE THE RAIN BIRD FITTINS-TOOL XF INSERTION TOOL FOR FITTING ASSEMBLY.

1. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFD DRIPLINE NON-POTABLE: XFDP DRIPLINE
2. INLINE DRIP EMITTER OUTLET, SEE PLANS FOR DRIPLINE OUTLET SPACING.
3. BARB TEE 17x17x17mm RAIN BIRD XFF-TEE
4. BARB COUPLING 17x17mm RAIN BIRD XFF-COUP
5. BARB ELBOW 17x17mm RAIN BIRD XFF-ELBOW
6. BARB MALE ADAPTER 17mm X 1/2" MPT RAIN BIRD XFF-MA-050 17mm X 3/4" MPT RAIN BIRD XFF-MA-075
7. PVC TEE SxSxT
8. PVC LATERAL SUPPLY HEADER
9. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
10. MULCH
11. FINISH GRADE
12. RAIN BIRD XF SERIES BLANK TUBING LENGTH AS REQUIRED

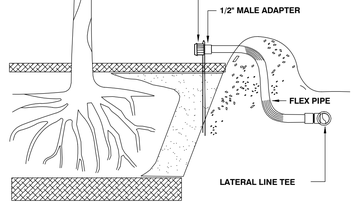
XFD ON-SURFACE DRIPLINE RISER ASSEMBLY



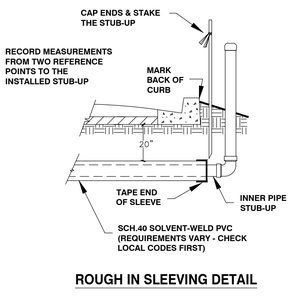
ISOLATION GATE VALVE



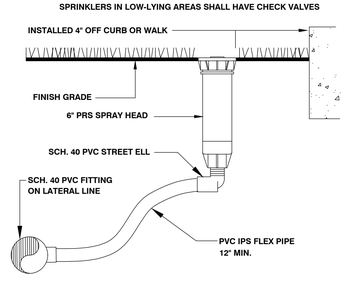
QUICK COUPLER TYPICAL DETAIL



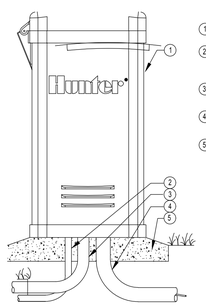
TREE BUBBLER DETAIL



ROUGH IN SLEEVING DETAIL

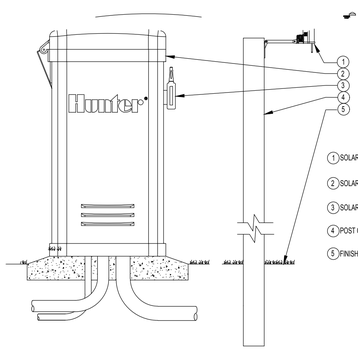


6" POP-UP SPRAY HEAD DETAIL



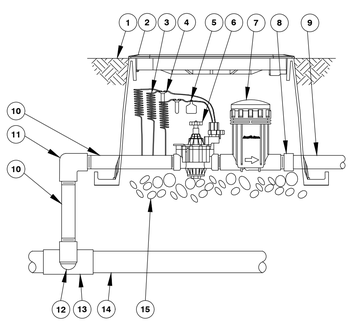
1. IRRIGATION CONTROLLER (ACC-PP) PER PLAN
2. ELECTRICAL SUPPLY CONDUIT CONNECT TO POWER SOURCE, J-BOX INSIDE CONTROLLER
3. GROUND WIRE CONDUIT GROUND PER ASIC GUIDELINES
4. IRRIGATION CONTROL WIRE IN CONDUIT SIZE AND TYPE PER LOCAL CODES
5. PEDESTAL BASE PER PLAN INSURE POSITIVE DRAINAGE AWAY FROM PEDESTAL

ACC - PLASTIC PEDESTAL



1. SOLAR SYNC WIRELESS SENSOR
2. SOLAR SYNC COMPATIBLE CONTROLLER
3. SOLAR SYNC WIRELESS RECEIVER
4. POST OR SUITABLE MOUNTING SURFACE
5. FINISHED GRADE

SOLAR SYNC WIRELESS WITH PEDESTAL CONTROLLER

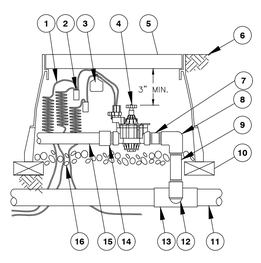


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. ID TAG
6. REMOTE CONTROL VALVE: RAIN BIRD 100-PEB (INCLUDED IN XCZ-100-PRB KIT)
7. PRESSURE REGULATING BASKET FILTER: RAIN BIRD PRB-100 (INCLUDED IN XCZ-100-PRB KIT)
8. PVC SCH 40 FEMALE ADAPTOR
9. LATERAL PIPE
10. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
11. PVC SCH 40 ELL
12. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. MAINLINE PIPE
15. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

RAIN BIRD 1" DRIP CONTROL ZONE KIT

NOTE

THIS SPRINKLER SYSTEM USES RECLAIMED WATER, THE IRRIGATION CONTRACTOR WILL INSTALL ALL SPRINKLER EQUIPMENT WITH PURPLE CAPS, TAGS,VALVE BOX LIDS, ETC. THE CONTRACTOR WILL POST "RECLAIMED WATER" SIGNAGE PER LOCAL CODES



1. 30" LINEAR LENGTH OF WIRE, COILED
2. WATERPROOF CONNECTION RAIN BIRD SPLICE-1 (1 OF 2)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PESB
5. VALVE BOX WITH COVER RAIN BIRD VB-STDP
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH 80 NIPPLE (2" LENGTH, HIDDEN) AND SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40 MALE ADAPTER
15. PVC LATERAL LINE
16. 3" MINIMUM DEPTH OF ¾" WASHED GRAVEL

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REGISTERED LANDSCAPE ARCHITECT CATHERINE J. MORAHAN LA0001559 02/23/2023 STATE OF FLORIDA

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY CATHERINE J. MORAHAN ON THE DATE ADJACENT TO THE SEAL.

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Sign Date
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No.	BY	DATE	DESCRIPTION
			REVISIONS

PROJECT No: 22-009
ISSUE DATE:
DESIGNED BY: JM
DRAWN BY: JM
CHECKED BY: BG
APPROVED BY: BG

CONTENT: IRRIGATION DETAILS

PROJECT: PRIVATE PARKING LOT

HIGH POINT ENGINEERING
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LAND PLANNING - CIVIL ENGINEERING - GEOTECHNICAL ENGINEERING

SHEET: IRR-2

AREHNA | Engineering, Inc.

5012 W. Lemon Street,
Tampa, Florida 33609
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May 9, 2019

Mr. Anthony Saravanos, CCIM, CDP
Greenleaf Capital
15300 West Cypress Street, Suite 165
Tampa, FL 33605

asaravanos@greenleafcapital.com

Subject: Report of Geotechnical Exploration
Gators Beachside Parking Lot at John's Pass
Treasure Island, Florida
AREHNA Project B-19-026

Dear Mr. Saravanos,

AREHNA Engineering, Inc. is pleased to submit this report of our geotechnical exploration for the proposed project. Services were conducted in general accordance with AREHNA Proposal B.Prop-19-040 dated March 18, 2019. The purpose of our geotechnical study was to obtain information on the general subsurface soil conditions at the site for the design of a proposed parking area, and stormwater pond.

PROJECT INFORMATION

The project site is located west of Gulf Boulevard and north of 126th Avenue in Treasure Island, Florida. Based on email communication it is our understanding that a proposed parking area and a stormwater retention pond are anticipated at the site.

SCOPE OF SERVICES

The purpose of our geotechnical exploration was to obtain information on the general subsurface soil conditions within the project area. The subsurface materials encountered were evaluated with respect to the available project characteristics. The following services were performed to achieve the above-outlined objective:

- Performed one Double Ring Infiltration (DRI) test at a depth of 2.0 feet within the proposed location of the stormwater pond.
- Performed ten hand auger borings to depths of between 1.5 and 6 feet. Soil samples were collected and groundwater levels recorded, if encountered.
- Performed one Standard Penetration Test (SPT) boring to a depth of 20 feet below the existing ground surface. Standard Penetration Test resistances were measured at approximate intervals of two feet in the top ten feet and at approximate intervals of five feet thereafter. The upper four feet were manually augered to avoid possible conflicts with existing underground utilities. The boreholes were backfilled following drilling operations.

- Visually classified and stratified the soils samples in the laboratory using the Unified Soil Classification System (USCS).
- The results of the DRI test, SPT boring, and hand auger borings are presented in this written report signed and sealed by a professional engineer specializing in geotechnical engineering.

FIELD EXPLORATION

Our scope included performing one DRI test at a depth of 2 feet, ten hand auger borings to depths between 1.5 and 6 feet, and one SPT boring to a depth of 20 feet.

The DRI test was performed by installing a 12-inch diameter steel ring and a 24-inch diameter steel ring concentrically into the ground to the desired test depth. Water was then added to a desired level in both rings and held constant. The volume of water added to the inner ring versus time was then recorded. This procedure was repeated every 15 minutes for the first hour, and every 30 minutes for ensuing hours, for a total of 4 hours or until a stabilized infiltration rate was achieved. The DRI test was performed in general accordance with ASTM D-3385, entitled "Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer."

The hand auger borings were performed by manually advancing a 3-inch diameter, 6-inch long sampler into the soil until the sampler was full. The sampler was then retrieved and the soils in the sampler were removed and visually classified. The soil sampling was performed in general accordance with ASTM Test Designation D-1452, entitled "Soil Investigation and Sampling by Auger Borings." The boreholes were backfilled after the borings were completed. Representative portions of the samples collected were sealed in glass jars, labeled, and transferred for appropriate classification.

The SPT boring was performed with the use of a Power Drill Rig using Bentonite "Mud" drilling procedures. Samples were collected and Standard Penetration Test resistances were measured at approximate intervals of two feet for the top ten feet and at approximate intervals of five feet thereafter. The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils."

The DRI test, hand auger boring, and SPT boring locations are indicated on the **Boring Location Plan, Sheet 1** in the **Appendix.** The DRI test, hand auger borings, and SPT borings were located in the field using GPS coordinates.

USGS TOPOGRAPHIC DATA

The topographic survey map published by the United States Geological Survey was reviewed for ground surface features at the proposed project location, as shown in **Sheet 2** in **Appendix**. Based on this review, natural ground surface elevations at the project site are approximately +5 feet.

USDA NATURAL RESOURCES CONSERVATION SERVICE DATA

A review of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey for Hillsborough County, as shown in **Sheet 2** in **Appendix**, indicates that the soils at the project site consist of the following soil units:

Soil Unit Number	Soil Name	Approximate Depth to Seasonal High Water Table (feet)
19	Palm Beach fine sand, 0 to 8 percent slopes	> 6.0

The soil survey also indicates that the average annual precipitation is 42 to 56 inches. The water table depths shown occur in naturally drained areas.

SUBSURFACE SOIL CONDITIONS

A pictorial representation of the subsurface conditions encountered in the borings is shown on the Soil Profiles, **Sheet 3** in the **Appendix**. The Soil Boring Records should be consulted for a detailed description of the subsurface conditions encountered at each boring location. When reviewing the boring records and the subsurface profiles, it should be understood that soil conditions may vary between, and away from, boring locations.

The SPT boring generally encountered fine sand (SP) to a depth of 13 feet underlain by silty fine sand (SM) to the termination depth of 20 feet. Standard Penetration Test Resistances (N-Values) varied between 2 and 23 blows per foot, indicating very loose to medium dense relative densities.

The hand auger borings generally encountered fine sands (SP) from the ground surface to the termination depths of 1.5 to 6 feet.

DOUBLE RING INFILTRATION (DRI) TEST RESULTS

The following table summarizes the DRI test results:

Test Location	Depth Below Ground Surface, feet	Measured Vertical Infiltration Rate, inch/hr	Estimated Horizontal Infiltration Rate, inch/hr
DRI-1	2.0	1.0	1.5

The vertical infiltration rate is the actual rate, as measured in the field. No factor of safety has been applied. The horizontal infiltration rate was then estimated based on the vertical infiltration rate and soil types encountered. A summary of the DRI test is attached in the **Appendix.**

GROUNDWATER CONDITIONS

The groundwater level was encountered at depths between 4.5 and 6 feet in the borings performed at the site. Fluctuation in groundwater levels should be expected due to seasonal climatic changes, construction activity, rainfall variations, surface water runoff, and other site-specific factors. Since groundwater level variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

Based on the soil mapping provided by the USDA Soil Survey and our experience in the area, we estimate that the seasonal high groundwater level will be encountered at a depth of approximately 3.5 to 4 feet below the existing ground surface.

GENERAL PAVEMENT RECOMMENDATIONS

The existing sandy existing soils should be acceptable for construction and support of a flexible (limerock or crushed concrete base) pavement section after proper proofrolling and subsurface preparation.

Our recommended flexible pavement sections for standard and heavy duty applications are presented in the following table:

Pavement Section	Component	Recommended Thickness (in.)
Standard Duty Flexible Pavement Section	Asphalt	1.5
	Base (LBR ≥ 100)	6.0
	Stabilized Subgrade (LBR ≥ 40)	6.0
Heavy Duty Flexible Pavement Section	Asphalt	2.0
	Base (LBR ≥ 100)	8.0
	Stabilized Subgrade (LBR ≥ 40)	12.0

Base: We recommend that either limerock or crushed concrete be used for the base. Limerock base material should meet FDOT requirements, including compaction to 98 percent of its maximum dry density, as determined by the Modified Proctor Test (ASTM D-1557), and a minimum Limerock Bearing Ratio (LBR) of 100. Crushed concrete should have an LBR value of 150 and be graded in accordance with Florida Department of Transportation (FDOT) Standard Specification Section 204.

Asphaltic Concrete: The asphaltic concrete structural course should consist of Type SP–12.5 asphaltic concrete material. The asphaltic concrete should meet standard FDOT material requirements, and placement procedures, as outlined in the 2010 Edition of the FDOT Standard Specifications for Road and Bridge Construction.

Portland Cement Concrete: If rigid pavement is used, we suggest that concrete with an unconfined compressive strength of at least 4,000 lbs/in^2 be placed over properly compacted subgrade soils. The key to a successful rigid pavement is properly spaced control joints, a good concrete mix, and proper



workmanship. Rigid pavement is recommended in the vicinity of dumpster pads and in areas with the potential for excessive water runoff.

Pavements should be sloped sufficiently to minimize ponding of surface water.

GENERAL SITE PREPARATION

The initial step in site preparation should be the complete removal of all topsoil, roots, and other deleterious materials from beneath and to a minimum of five feet beyond the development perimeter. The depth to which stripping will be required will vary to some degree but should be less than 6 inches. Also, prior to construction, the location of any existing underground irrigation, septic tanks, drainage, or other utility lines within the construction area should be established. In this regard it should be noted that underground pipes, if not properly removed or plugged, may serve as conduits for subsurface erosion which subsequently may result in excessive settlements. The pavement area should then be inspected and thoroughly proofrolled as directed by a Geotechnical Engineer. Our recommendations listed in this section should be used as a guideline for the project general specifications prepared by the Design Engineer:

- The exposed subgrade within the proposed construction area should be proofrolled using a vibratory roller with a static weight of at least 8 tons and a drum diameter of at least 4 feet. Regardless of the degree of compaction achieved, a minimum of 10 complete coverages (5 in each perpendicular direction) should be performed.

- Careful observations should be made during proofrolling to help identify any areas of soft-yielding soils that may require over excavation and replacement.

- Any planned fill can be placed following satisfactory completion of proofrolling. Fill should generally consist of fine sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum of 98 percent of the Modified Proctor maximum dry density. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

- Prior to beginning compaction, soil moisture contents may need to be controlled in order to facilitate efficient compaction. A moisture content within 3 percentage points of the optimum indicated by the modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

ON-SITE SOIL SUITABILITY

The borings indicate that the upper 6 to 13 feet of sandy soils present at the site are generally suitable for use as fill or backfill. Suitable structural fill materials should consist of fine to medium sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Any off-site materials used as fill should be approved by AREHNA prior to acquisition.

CLOSING

AREHNA appreciates the opportunity to have assisted you on this project. Should you have any questions with regards to this report, or if we can be of any further assistance, please contact this office.

Respectfully Submitted,

AREHNA ENGINEERING, INC.
FLORIDA BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION NO. 28410

This item has been digitally signed and sealed by:

Digitally signed by Kristina S LaCava
Date: 2019.05.09 14:43:42 -04'00'

KRISTINA S. LACAVA LICENSE No 77594 STATE OF FLORIDA PROFESSIONAL ENGINEER

Kristina LaCava, P.E.
Geotechnical Engineer
Florida Registration 77594
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.

Annabella De Souza Cecchettini, E.I.
Staff Geotechnical Engineer

APPENDIX

Boring Location Plan – Sheet 1
USDA & USGS Vicinity Maps – Sheet 2
Soil Profiles – Sheet 3
Double Ring Infiltration Test Result
Field Procedures

APPENDIX

Boring Location Plan – Sheet 1
USDA & USGS Vicinity Maps – Sheet 2
Soil Profiles – Sheet 3
Summary of DRI Test Result
Field Procedures



N

0 50'

APPROXIMATE PLAN SCALE

LEGEND

- APPROXIMATE LOCATION OF SPT BORING
- APPROXIMATE LOCATION OF AUGER BORING
- APPROXIMATE LOCATION OF DOUBLE RING INFILTRATION TEST

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

Boring Location Plan

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	1

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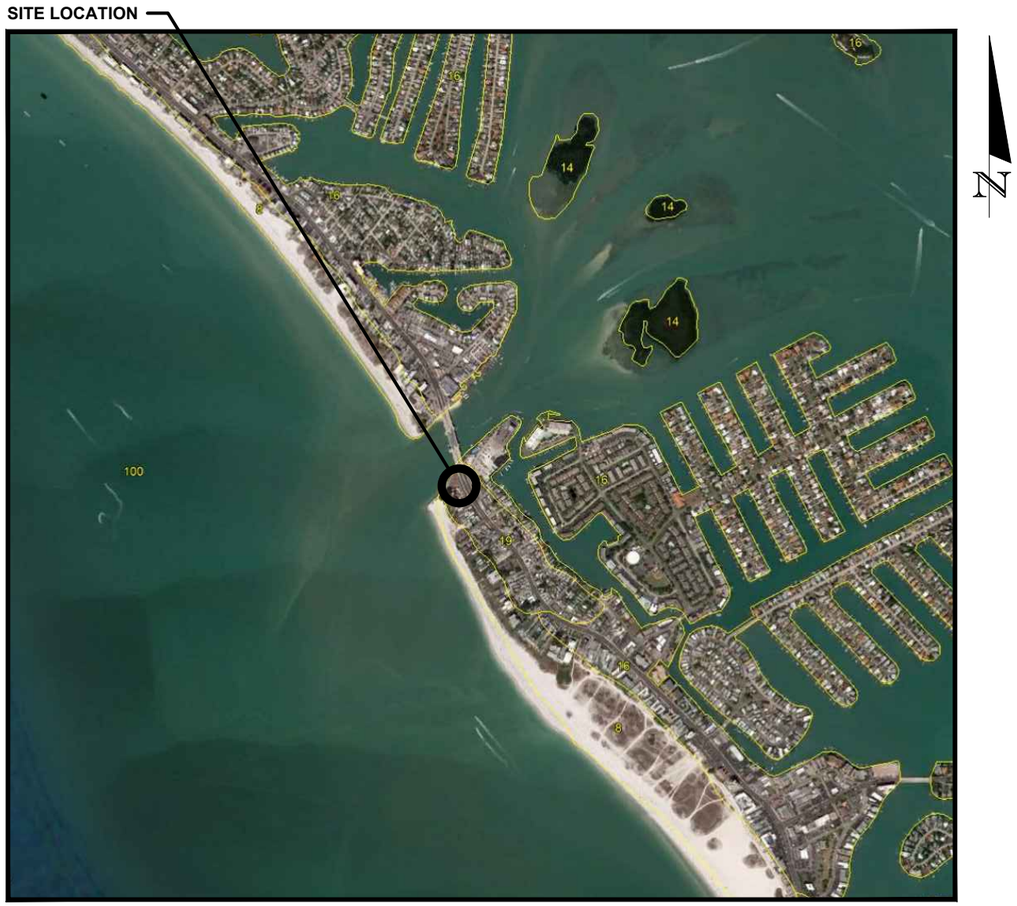
USDA SOIL SURVEY MAP

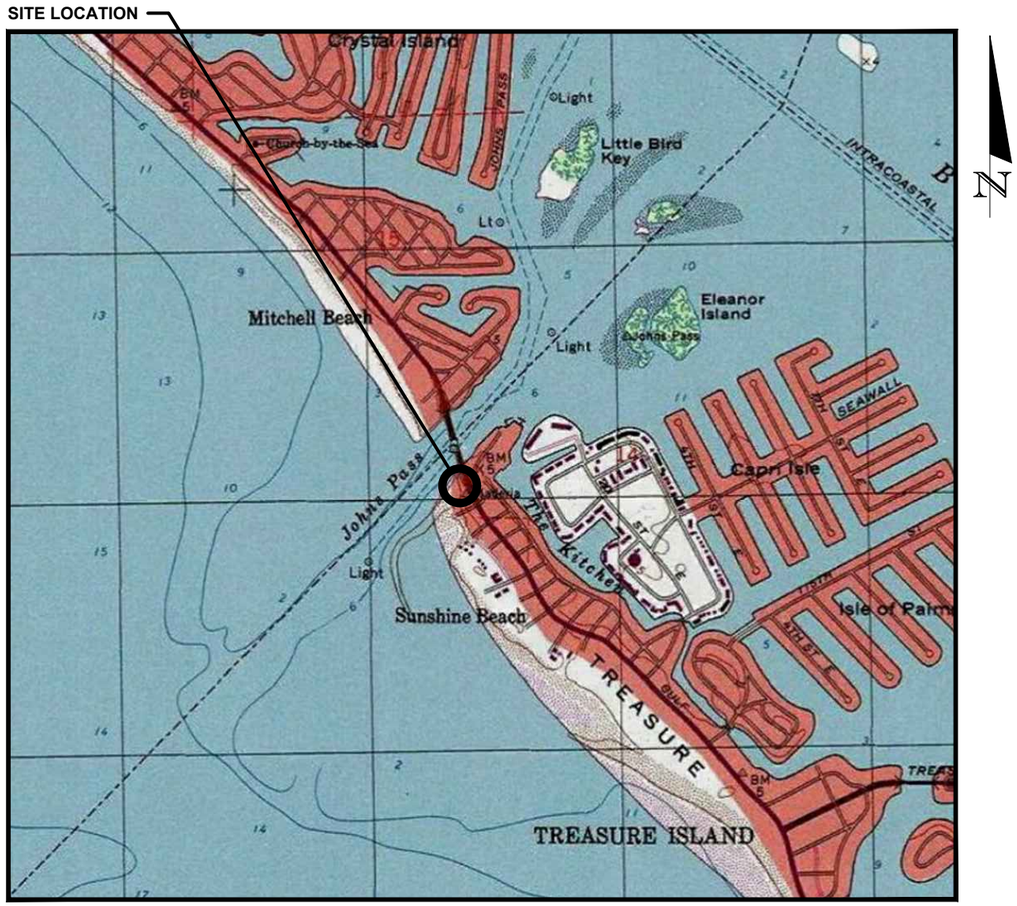


REFERENCE: USDA SOIL SURVEY OF PINELLAS COUNTY, FLORIDA

0 500 2000
Feet

TOWNSHIP: 31 S
RANGE: 15 E
SECTION: 15

USGS TOPOGRAPHIC MAP



REFERENCE: "SEMINOLE, FLORIDA" USGS QUADRANGLE MAP

0 500 2000
Feet

TOWNSHIP: 31 S
RANGE: 15 E
SECTION: 15

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

USDA & USGS Vicinity Maps

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	2

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LEGEND

SAND (SP)

SILTY SAND (SM)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING

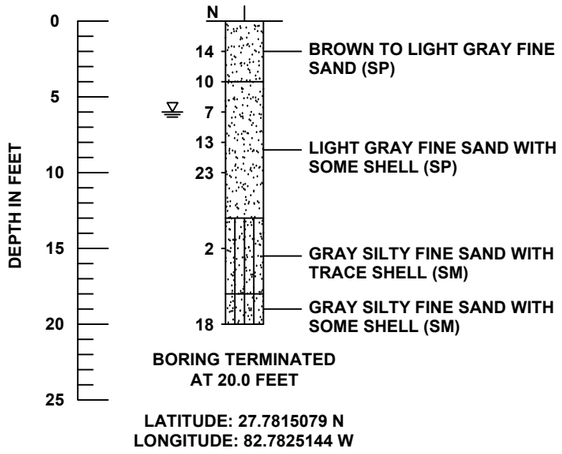
GROUNDWATER TABLE AT THE TIME OF DRILLING

GNE GROUNDWATER TABLE NOT ENCOUNTERED

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION UTILIZING SAFETY HAMMER

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

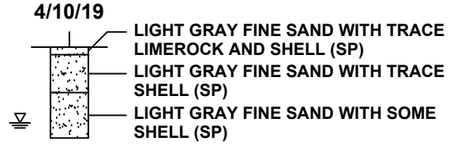
SPT-01
4/18/19



BORING TERMINATED AT 20.0 FEET

LATITUDE: 27.7815079 N
LONGITUDE: 82.7825144 W

HA-01
4/10/19



BORING TERMINATED AT 6.0 FEET

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LONGITUDE: 82.7824697 W

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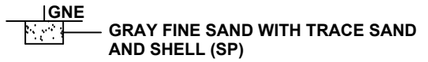
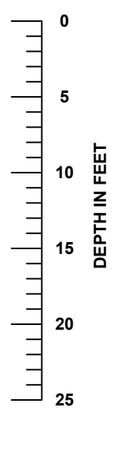
4/10/19



BORING TERMINATED AT 1.5 FEET

LATITUDE: 27.7815842 N
LONGITUDE: 82.7823383 W

REFUSAL AT 1.5' ON LARGE ROCKS



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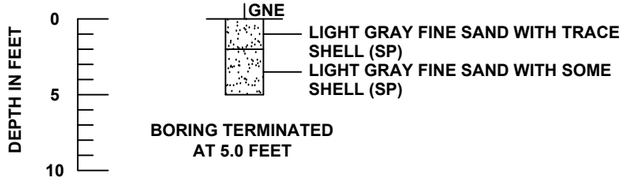

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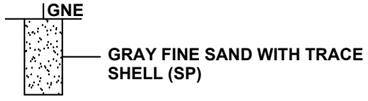
4/10/19



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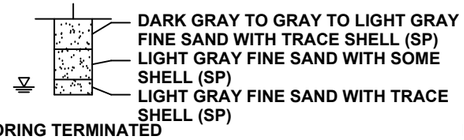
4/12/19



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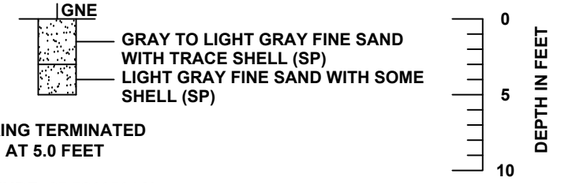
4/12/19



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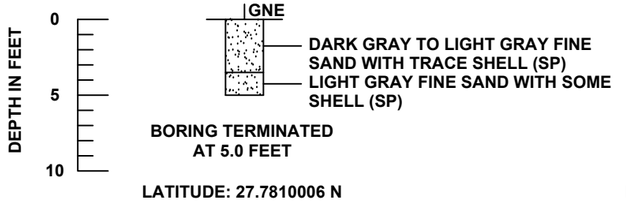
4/12/19



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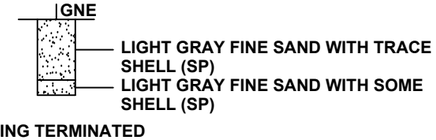
4/12/19



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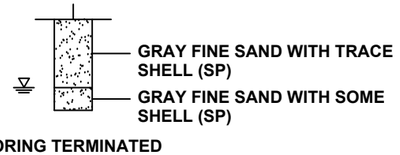
4/10/19



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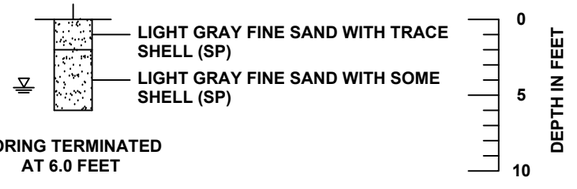
LONGITUDE: 82.7825367 W

HA-10
4/10/19



BORING TERMINATED AT 6.0 FEET

LATITUDE: 27.7812437 N
LONGITUDE: 82.7823623 W

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

Soil Profiles

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	3

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SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

GATORS BEACHSIDE PARKING LOT AT JOHN'S PASS
TREASURE ISLAND, FLORIDA

AREHNA Project No.: B-19-026

Test:	DRI - 1	Date of Test:	April 12, 2019
Test Depth:	2 feet below ground surface		
Outer Ring Diameter:	24 inches	Test Procedure:	ASTM D-3385
Inner Ring Diameter:	12 inches		
Test Duration:	4 hours		
Soil Description:	SAND		
Groundwater Level:	GNE		

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	426	26
15	426	26
15	426	26
15	426	26
30	852	52
30	852	52
30	852	52
30	852	52
30	852	52
30	852	52

Infiltration Rate: 1 in/hr

Standard Penetration Test (SPT) Borings

The SPT borings are performed in general accordance with ASTM D-1586, "Penetration Test and Split-Barrel Sampling of Soils." A rotary drilling process is used and bentonite drilling fluid is circulated in the boreholes to stabilize the sides and flush the cuttings. At regular intervals, the drilling tools are removed and soil samples are obtained with a standard 2-feet long, 2-inch diameter split-tube sampler. The sampler is first seated 6 inches and then driven an additional foot with blows of a 140-pound hammer falling under its own weight a distance of 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance." The penetration resistance, when properly interpreted, is an index to the soil strength and density.

Auger Boring

The auger borings are performed in general accordance with ASTM D-1452, “Standard Practice for Soil Investigation and Sampling by Auger Borings”. Auger borings are advanced manually using a bucket-type hand auger. The soils encountered are identified, in the field, from cuttings brought to the surface by the augering process. Representative soil samples from the auger borings are placed in glass jars and transported to our laboratory where they are examined by an engineer for classification.

Double Ring Infiltration (DRI) Testing

The DRI tests are performed in general accordance with ASTM D3385 “Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer”. The 24-inch diameter outer ring is set on the prepared and roughened surface and is driven into the soil to a depth of 6-inches. Care is taken not to disturb the soil adjacent to ring walls. The ring is then checked visually for levelness. The 12-inch diameter inner ring is then set concentrically within the outer ring and pushed and/or driven into the soil using methods described in the above paragraph to set the inner ring into the soil. The inner ring is then checked visually for level and location within the outer ring. Water is poured into both rings using a splash guard to reduce scouring of the soil surface during the testing. The inner ring and annular space is then simultaneously filled with water to a depth of 12 inches. Water is added during the testing to maintain the 12-inch depth and volume that is added during specific intervals is recorded. This water volume represents the volume infiltrated into the soils, and is converted to an infiltration velocity.

STORMWATER REPORT

FOR:

Gator's Beachside Parking Lot @ John's Pass

City of Treasure Island, Florida

Prepared for:

Greenleaf Capital
15300 West Cypress, Suite 165
Tampa, FL 33607

Prepared by:

2300 Curlew Road, Suite 201
Palm Harbor, FL 34683

Submitted To:

Southwest Florida Water Management District
City of Treasure Island

September 2019
Avid Project No. 3286-002

Gator's Beachside Parking Lot @ John's Pass
Treasure Island, Florida
Sections 15, Township 31 South, Range 15 East

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Appendix:
Datums-NOAA Tides & Currents

RONALD B. MORAHAN, JR., PE STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 48257

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY RONALD B. MORAHAN, JR., PE ON 10/03/2019 USING A SHA AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Ronald B. Morahan, Jr., P.E.
FL Reg. No. 48257

PROPOSED DEVELOPMENT OVERVIEW:

The subject property is located on the west side of Gulf Blvd and north of 127th Ave in Treasure Island, FL in Section 15, Township 31 South, Rang 15 East. The proposed development under this permit application includes demolition of the existing improvements and construction of a parking lot and the infrastructure to support it, including surface water management facilities.

A paved golf cart path is also proposed within FDOT right-of-way under the Gulf Blvd bridge and on the east side of Gulf Blvd. The path will be less than 14 feet wide, which qualifies for an exemption from SWFWMD permitting under FAC 62-330.051(10).

DESIGN CRITERIA:

Stormwater management for this site falls under the jurisdiction of SWFWMD, FDOT, and City of Treasure Island. The stormwater design criteria for the system are as follows:

- Dry retention treatment volume shall be provided for the first 0.50" of runoff across the pond's contributing area plus additional 50% of total treatment volume for direct discharge to outstanding of Florida water (SWFWMD), or 1" across the basin (City of Treasure Island), whichever is greater.
- The retention pond must fully recover the treatment volume within 72 hours via infiltration.
- Attenuation is not required for this project which has a direct outfall to a more-than-adequate receiving water, the Gulf of Mexico.
- Proposed 25yr-24hr peak stages in the pond shall not exceed the lowest proposed grate elevation or edge of pavement within the pond's contributing area per SWFWMD and City of Treasure Island LOS A criteria.
- The retention area shall be designed with side slopes no steeper than 4:1.
- Provide the minimum freeboard required by FDOT above the 100-yr Critical Duration DHW.

EXISTING SITE CONDITIONS:

Existing site conditions are reflected on the enclosed topographic survey performed by Geodata Services, Inc dated 05/16/2019. Elevations on the topographic survey are relative the North American Vertical Datum of 1988 (NAVD88). All elevations reported in this document (and the associated construction plans) refer to NAVD88. The site is mostly undeveloped except for a few buildings and concrete pads in the south part of the site.

An existing Corps of Engineers Perpetual Right of Way Easement covers the westernmost part of the site. No work is proposed in this easement.

Basins:

An Existing Condition Basin Map is not provided in this report. The entire Project Area drains directly to the Gulf of Mexico. Rate attenuation is not required due to the direct discharge to the Gulf of Mexico. There is no need to establish an existing condition rate of discharge.

On-Site Soils:

According to the Pinellas County NRCS Soil survey, the site contains Palm Beach fine sand (Soil #19). NRCS reports Soil #19 as hydrologic soil group (HSG) A. The project geotechnical engineer, AREHNA Engineering, Inc. verified the following aquifer data in the area of the proposed pond:

Depth to seasonal high groundwater = approximately 3.5 to 4 feet
Depth to confining layer = 20 feet (not encountered to bottom of boring)
Vertical Hydraulic Conductivity = 2 ft/day
Horizontal Hydraulic Conductivity = 3 ft/day (based on 1.5:1 H:V ratio)
Effective Storage Coefficient = 25%

Runoff Curve Number (CN)

The CN for the existing pervious areas is based on a land cover of "Open space" with good ground cover and HSG A. The CN for existing pervious area is 39. The CN for impervious surface is 98. The CN for open water / pond is 100.

Pre-Developed Discharge Rate:

An allowable discharge rate to the receiving water is not required. The receiving water has more-than-adequate capacity to receive an increased discharge rate from the Project Area.

Nutrient Impairment

The project lies in WBID 1694B Boca Ciega Bay North, which does not appear on FDEP's verified impaired waters list for nutrient or dissolved oxygen impairment. Net improvement of nutrient discharge is not required.

Floodplain & Wetland:

FEMA Flood Insurance Rate Map 12103C0191G shows the property lying in Flood Zone VE. Tidal surge floodplain exists on the site. Compensation for encroachment into a tidal surge floodplain is not required. Due to the highly developed condition and soil conditions on the site, it is assumed that no wetlands exist on the site.

POST-DEVELOPMENT CONDITIONS:

The property is proposed to be redeveloped as a parking lot. The proposed improvements include a normally dry onsite stormwater retention pond that can accommodate the treatment for runoff from the proposed development.

Curve Number (CN):

The proposed runoff curve number for the development was calculated as a weighted average based on the proposed land coverage of impervious, pervious and pond areas. The runoff curve numbers quoted above in the existing condition discussion were used in the proposed condition analysis. See attached calculations.

Post Developed Discharge Rate / Peak Stage:

The project basin will drain to a proposed dry retention pond, then discharge to the Gulf of Mexico. Rate attenuation is not required for this project. The 25yr-24hr peak stage that is expected to occur in the pond in the Post Developed condition is needed to establish the low edge of proposed pavement elevation.

The Project Area lies adjacent to the FDOT right-of-way, but does not drain to the FDOT drainage system. The peak stage expected to occur on-site in the FDOT Critical Duration storms will not rise into the FDOT right-of-way plus the applicable freeboard (6" for paved surface, 12" for grassed / earthen overflow).

The velocity of discharge from the weir is expected to be less than 2.0 ft/sec, therefore, pond outflow is not expected to transport sediment after it leaves the pond weir. No spreader swale should be needed.

Water Quality Treatment:

A dry retention pond will provide the required water quality treatment for the proposed project basin. Recovery of the water quality volume will occur within 72 hours via percolation. A factor of safety of 2.0 is applied to the soil permeability for the treatment recovery analysis.

Floodplain

The property lies in Flood Zone VE. Floodplain compensation is not required.

CONCLUSION:

The proposed surface water management system has been designed to meet or exceed the requirements of City of Treasure Island, FDOT, and SWFWMD.



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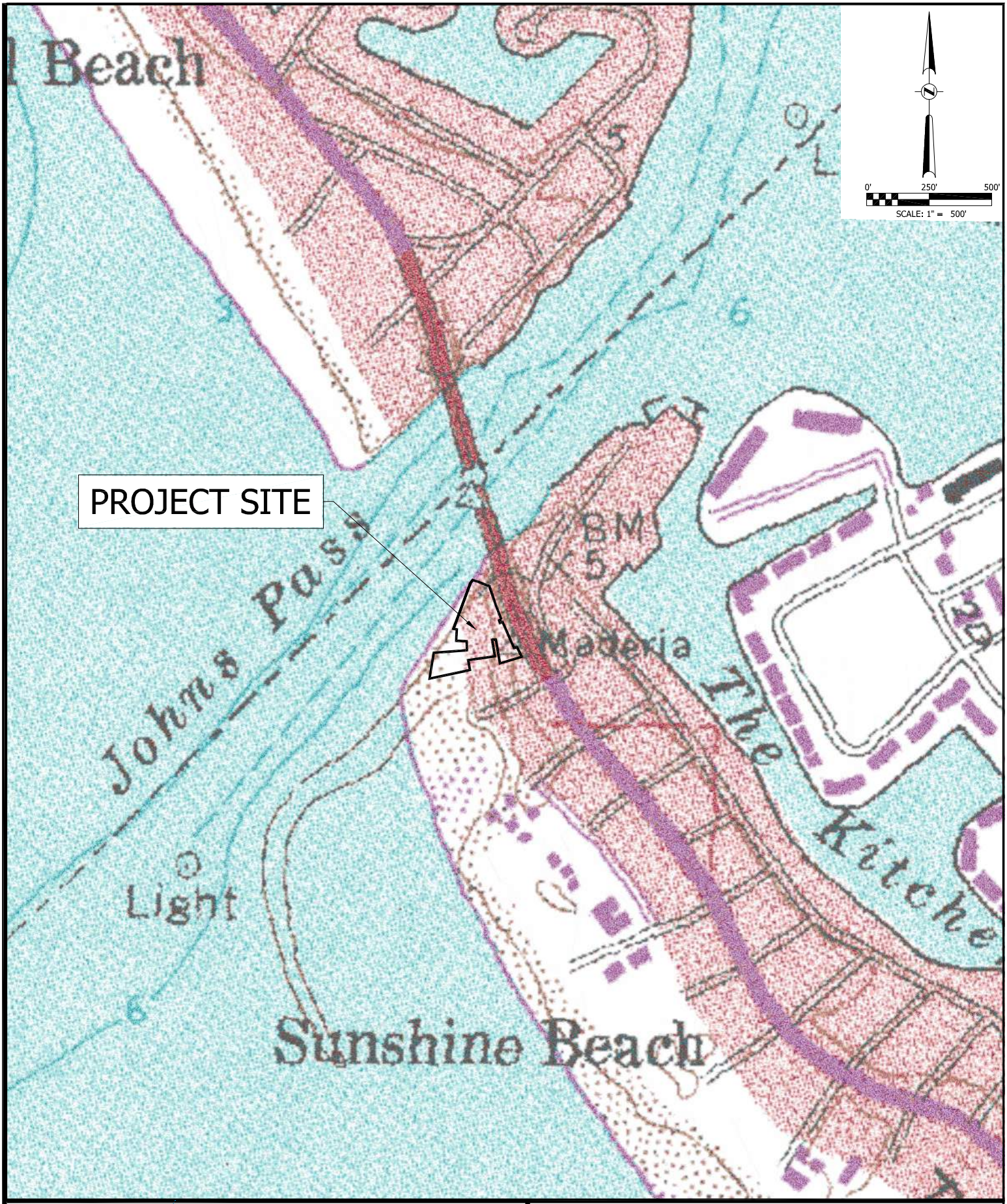
LOCATION MAP

GATOR'S BEACHSIDE
CITY OF TREASURE ISLAND, FLORIDA



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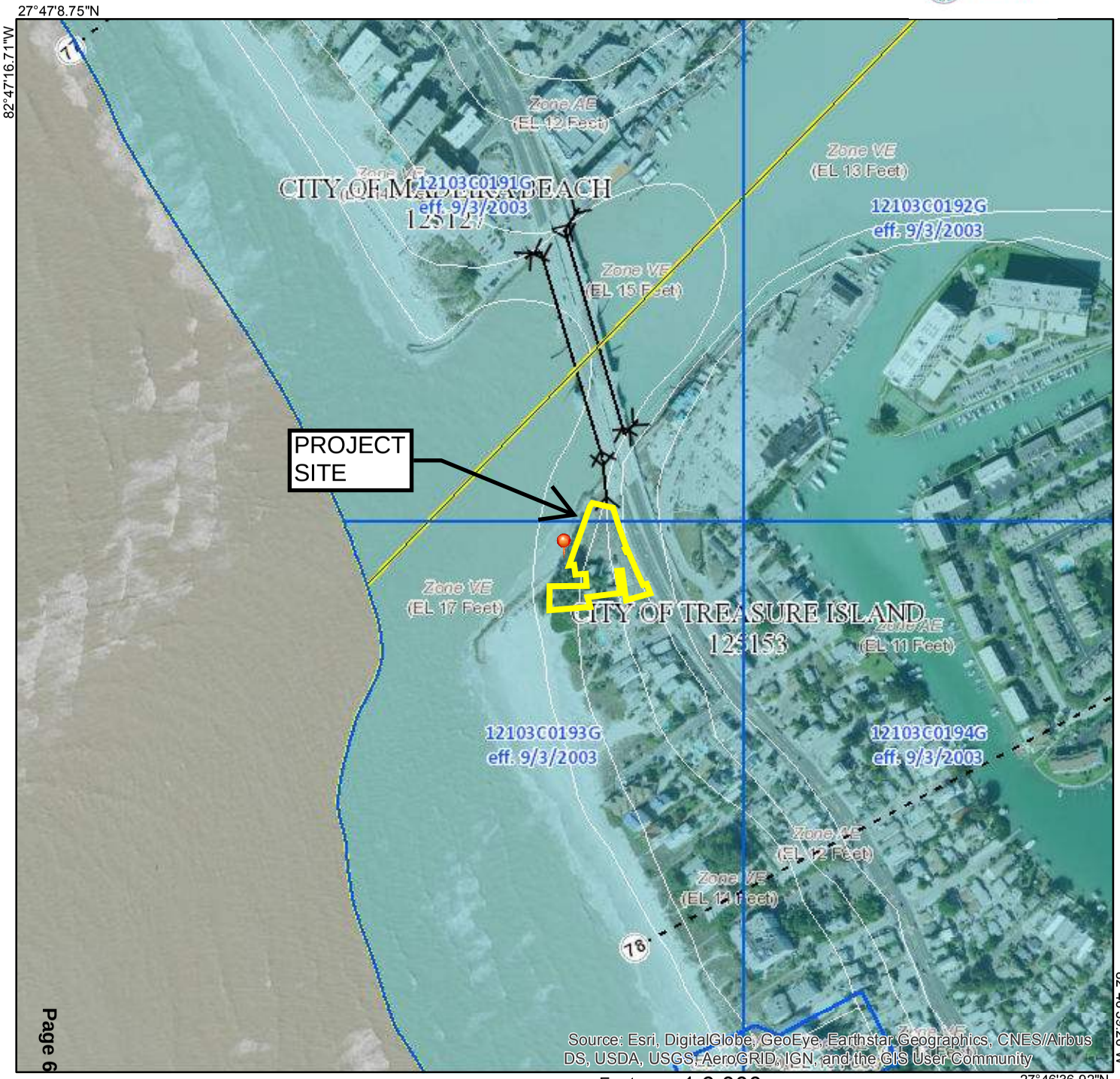
QUAD MAP

GATOR'S BEACHSIDE
CITY OF TREASURE ISLAND, FLORIDA

National Flood Hazard Layer FIRMette

FEMA



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

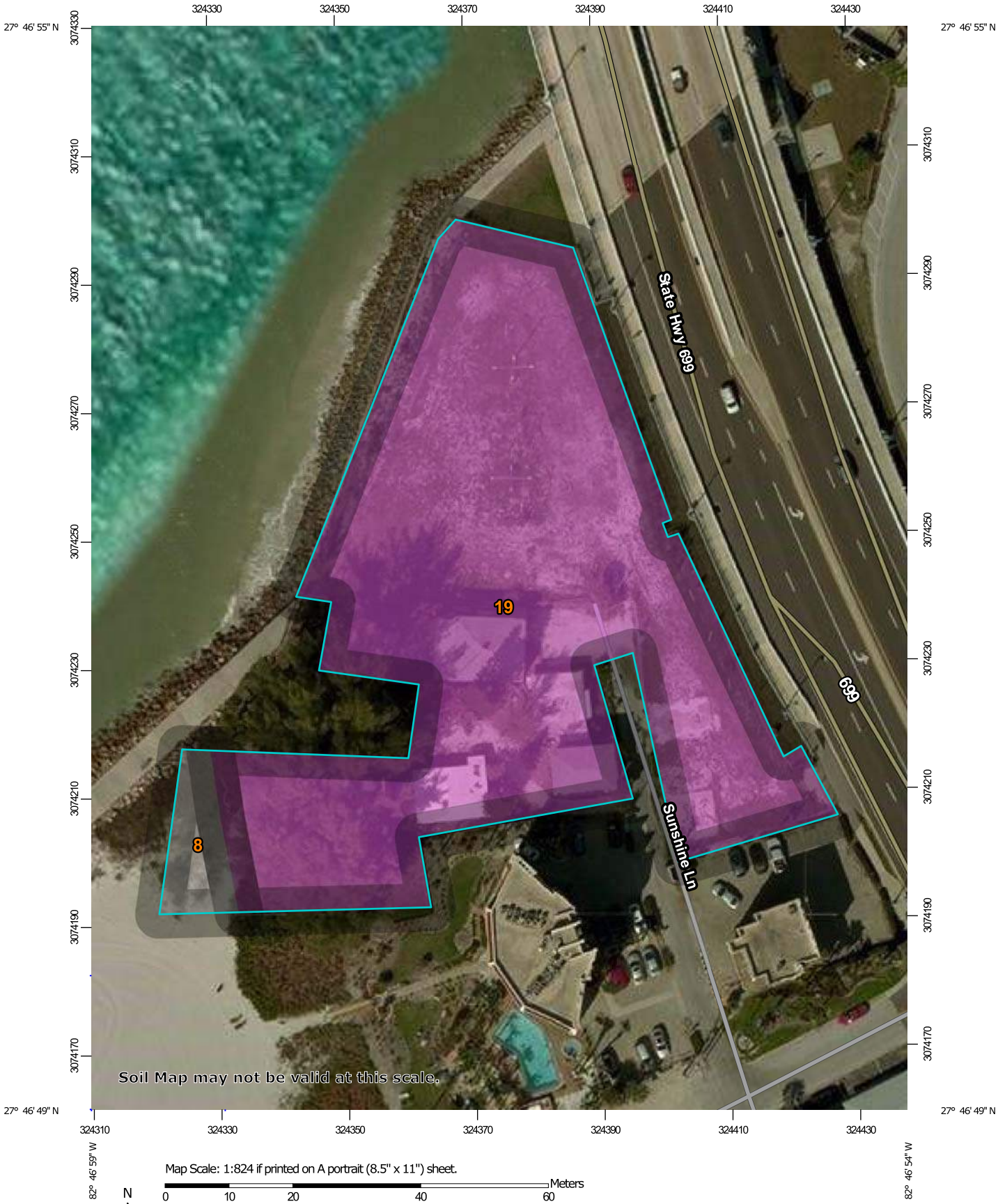
MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/1/2018 at 7:28:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Map Scale: 1:824 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Beaches		0.1	4.0%
19	Palm Beach fine sand, 0 to 8 percent slopes	A	1.3	96.0%
Totals for Area of Interest			**1.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition



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AERIAL MAP

GATOR'S BEACHSIDE
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PERCOLATION EXHIBIT

GATOR'S BEACHSIDE
CITY OF TREASURE ISLAND, FLORIDA

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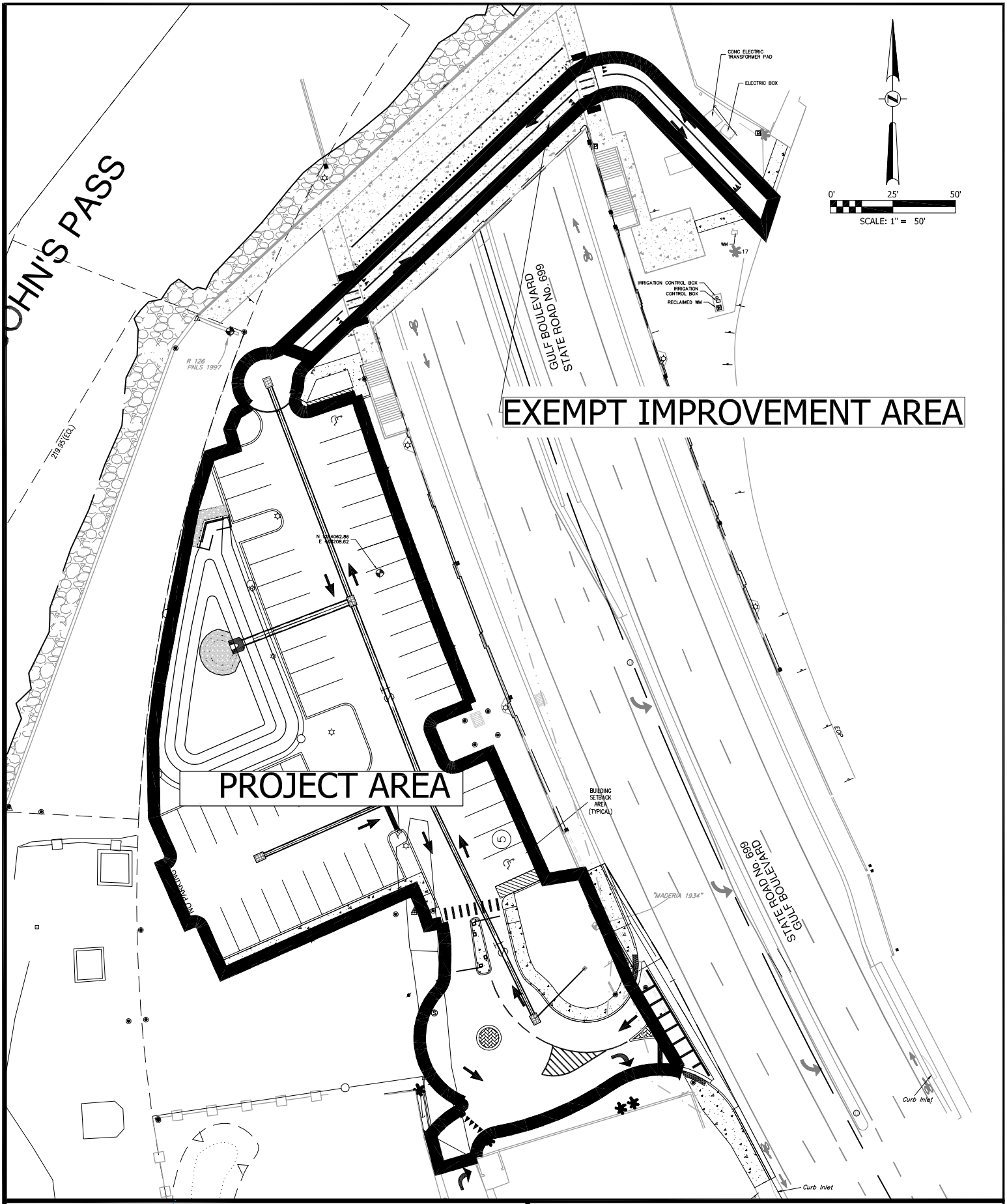

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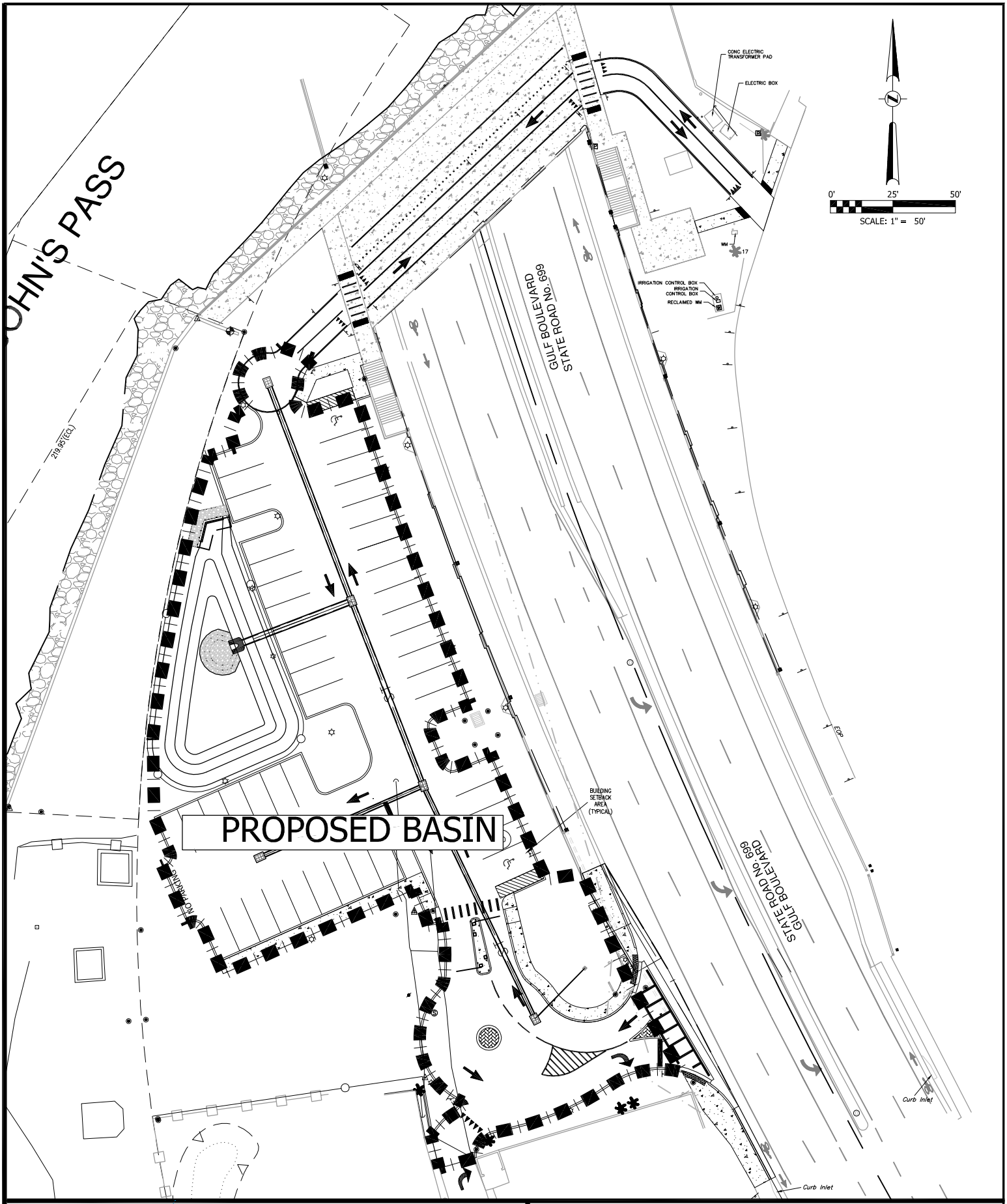
PROJECT AREA MAP

GATOR'S BEACHSIDE
CITY OF TREASURE ISLAND, FLORIDA

K:\PROJECTS\3200\3286002\DWG\CURRENT\DRAINAGE\20190529_BASIN MAP_3286002.DWG, 15/26/2019



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PROPOSED BASIN MAP

GATOR'S BEACHSIDE
CITY OF TREASURE ISLAND, FLORIDA

K:\PROJECTS\3200\3286002\DWG\CURRENT\DRAINAGE\20190529_BASIN MAP_3286002.DWG, 21/26/2019

PROJECT NAME: GATOR'S BEACHSIDE 26-Sep-19
PROJECT #: 3286002 09:53 AM
FILE NAME: K:\Projects\3200\3286002\DOC\Drainage\[20190829_SITEDATA-3286002.xls]SITEDATA

SUMMARY OF GROUND COVER DATA

CONDITION	IMPERVIOUS AREA (ac)	PERVIOUS AREA (ac)	OPEN WATER AREA (ac)	WETLAND AREA (ac)	TOTAL AREA (ac)	WEIGHTED RUNOFF COEFFICIENT	WEIGHTED CN
RUNOFF COEFFICIENT	0.95	0.2	1	0.7	---	---	---
CN	98	39	100	90	---	---	---
PROPOSED BASIN	0.53	0.11	0.06	0.00	0.69	0.84	89.2

PROJECT: **GATOR'S BEACHSIDE** **26-Sep-19**
PROJECT #: **3286002** **10:16 AM**
FILE NAME: **K:\Projects\3200\3286002\DOC\Drainage\[20190829_SITEDATA-3286002.xls]SPRE**

Stage - Storage Calculations

Elevation (ft NGVD)	Area (sq ft)	Area (acres)	Incremental Volume (ac-ft)	Cumulative Volume (ac-ft)
4.25	1127	0.026		0.000
5.00	1867	0.043	0.026	0.026
6.00	2785	0.064	0.053	0.079

		SWFWMD*	City
CONTRIBUTING AREA	**(ac)**	0.69	0.69
DEPTH OF TREATMENT	**(in)**	0.75	1.00
WATER QUALITY VOLUME	**(ac-ft)** **(cu-ft)**	0.043 1890	0.058 2520
WATER QUALITY ELEVATION	**(ft)**	5.33	5.60

* One-half inch of runoff plus additional 50% of treatment volume due to discharging to OFW.

Aquifer data per 01/29/2018 Geotechnical Analysis provided by ESC Florida, LLC:

AVG GROUND ELEV =	6.00	ft
DEPTH TO CONFINING LAYER =	20.00	ft
ELEV OF CONFINING LAYER =	-14.00	ft NAVD
DEPTH TO SHGW =	3.50	ft
ELEV OF SHGW =	2.50	ft NAVD
VERT PERMEABILITY =	2.00	ft/day
HORIZ PERMEABILITY =	3.00	ft/day
POROSITY =	25%	

PROJECT NAME: **GATOR'S BEACHSIDE** **26-Sep-19**
PROJECT #: **3286002** **10:16 AM**
FILE NAME: **K:\Projects\3200\3286002\DOC\Drainage\[20190829_SITEDATA-3286002.xls]**

"WEIR FLOW" VELOCITY CALCULATIONS

WEIR NUMBER	LENGTH (ft)	Q 25-Yr, 24-Hr (cfs)	C	H (ft)	AREA (sf)	VELOCITY (fps)
1	15	0.54	3.2	0.05	0.50	1.08

Note: "Q" is based upon the peak discharge from the 25-Year, 24-Hour storm event.
Overflow Velocity to be less than 2 ft/s

Name: POND Base Flow(cfs): 0.000 Init Stage(ft): 5.600
Group: BASE Warn Stage(ft): 0.000
Type: Stage/Area

Stage(ft)	Area(ac)
4.250	0.0260
5.000	0.0430
6.000	0.0640

Name: PERC From Node: POND Flow: Both
Group: BASE To Node: GWT Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): -14.000 Perimeter 1(ft): 220.000
Water Table Elev(ft): 2.500 Perimeter 2(ft): 382.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 638.000
Horiz Conductivity(ft/day): 1.500 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 1.000 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.250 Num Cells 1 to 2: 10
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 0.000

Name: TREAT Hydrology Sim:
Filename: K:\Projects\3200\3286002\Speciality Programs\TREAT.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 72.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	60.000

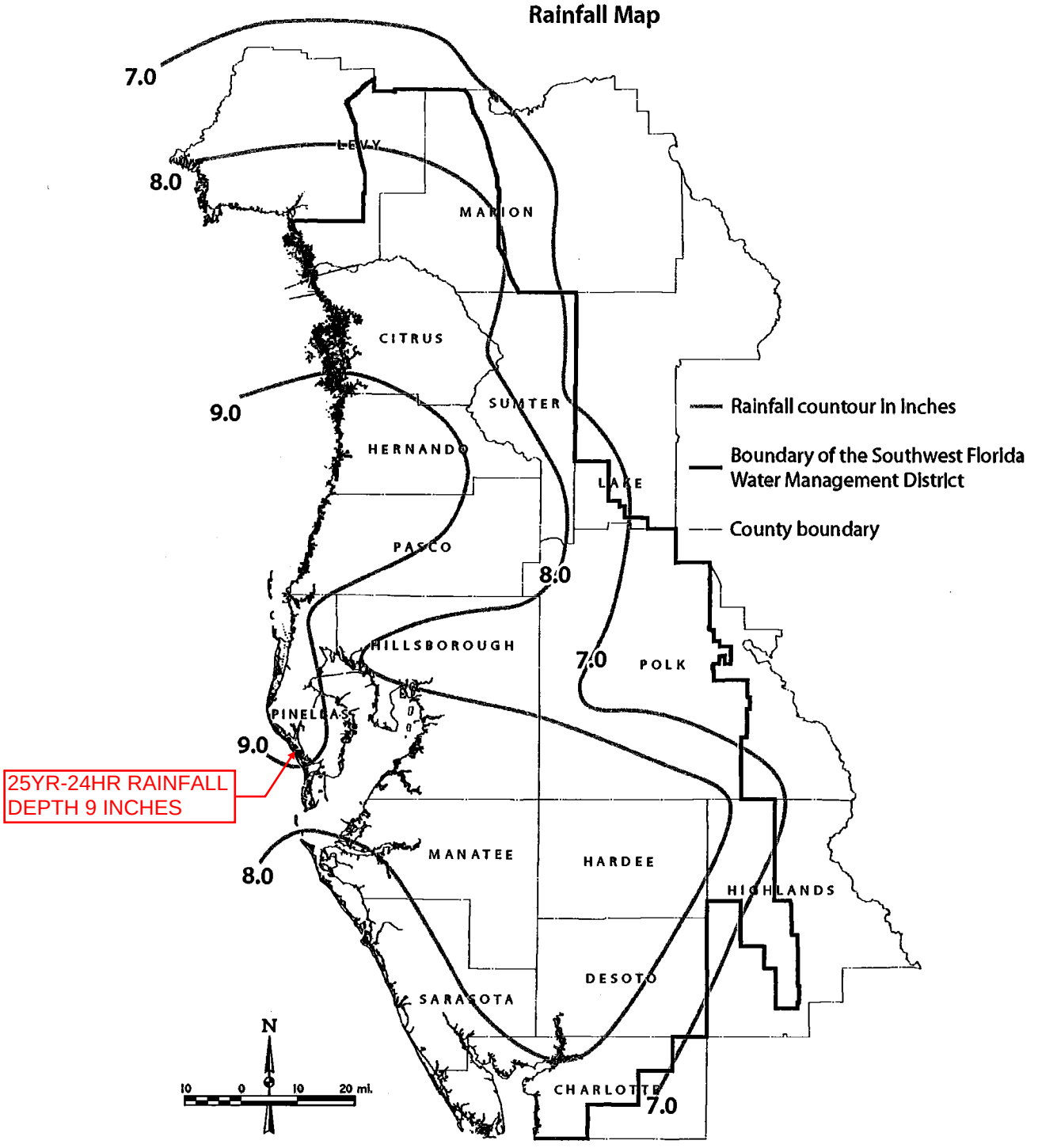
Group	Run
BASE	Yes

GATOR'S BEACHSIDE
POST MODEL
9/26/2019

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
TREAT	POND	BASE	0.00	5.60	0.00	2422	0.00	0.00	0.0	0.0
TREAT	POND	BASE	1.02	5.56	0.00	2383	0.00	0.03	0.0	0.0
TREAT	POND	BASE	2.02	5.52	0.00	2345	0.00	0.03	0.0	0.0
TREAT	POND	BASE	3.02	5.47	0.00	2307	0.00	0.03	0.0	0.0
TREAT	POND	BASE	4.02	5.43	0.00	2269	0.00	0.03	0.0	0.0
TREAT	POND	BASE	5.02	5.39	0.00	2231	0.00	0.03	0.0	0.0
TREAT	POND	BASE	6.02	5.35	0.00	2193	0.00	0.03	0.0	0.0
TREAT	POND	BASE	7.02	5.31	0.00	2155	0.00	0.02	0.0	0.0
TREAT	POND	BASE	8.02	5.27	0.00	2117	0.00	0.02	0.0	0.0
TREAT	POND	BASE	9.02	5.22	0.00	2078	0.00	0.02	0.0	0.0
TREAT	POND	BASE	10.02	5.18	0.00	2040	0.00	0.02	0.0	0.0
TREAT	POND	BASE	11.02	5.14	0.00	2005	0.00	0.02	0.0	0.0
TREAT	POND	BASE	12.02	5.11	0.00	1975	0.00	0.02	0.0	0.0
TREAT	POND	BASE	13.02	5.08	0.00	1947	0.00	0.02	0.0	0.0
TREAT	POND	BASE	14.02	5.05	0.00	1921	0.00	0.01	0.0	0.0
TREAT	POND	BASE	15.02	5.03	0.00	1896	0.00	0.01	0.0	0.0
TREAT	POND	BASE	16.02	5.00	0.00	1874	0.00	0.01	0.0	0.0
TREAT	POND	BASE	17.02	4.98	0.00	1850	0.00	0.01	0.0	0.0
TREAT	POND	BASE	18.02	4.95	0.00	1827	0.00	0.01	0.0	0.0
TREAT	POND	BASE	19.02	4.93	0.00	1806	0.00	0.01	0.0	0.0
TREAT	POND	BASE	20.02	4.91	0.00	1785	0.00	0.01	0.0	0.0
TREAT	POND	BASE	21.02	4.89	0.00	1765	0.00	0.01	0.0	0.0
TREAT	POND	BASE	22.02	4.87	0.00	1745	0.00	0.01	0.0	0.0
TREAT	POND	BASE	23.02	4.85	0.00	1726	0.00	0.01	0.0	0.0
TREAT	POND	BASE	24.02	4.83	0.00	1708	0.00	0.01	0.0	0.0
TREAT	POND	BASE	25.02	4.81	0.00	1690	0.00	0.01	0.0	0.0
TREAT	POND	BASE	26.02	4.80	0.00	1672	0.00	0.01	0.0	0.0
TREAT	POND	BASE	27.02	4.78	0.00	1655	0.00	0.01	0.0	0.0
TREAT	POND	BASE	28.02	4.76	0.00	1639	0.00	0.01	0.0	0.0
TREAT	POND	BASE	29.02	4.75	0.00	1622	0.00	0.01	0.0	0.0
TREAT	POND	BASE	30.02	4.73	0.00	1607	0.00	0.01	0.0	0.0
TREAT	POND	BASE	31.02	4.71	0.00	1591	0.00	0.01	0.0	0.0
TREAT	POND	BASE	32.02	4.70	0.00	1576	0.00	0.01	0.0	0.0
TREAT	POND	BASE	33.02	4.68	0.00	1561	0.00	0.01	0.0	0.0
TREAT	POND	BASE	34.02	4.67	0.00	1546	0.00	0.01	0.0	0.0
TREAT	POND	BASE	35.02	4.65	0.00	1531	0.00	0.01	0.0	0.0
TREAT	POND	BASE	36.02	4.64	0.00	1517	0.00	0.01	0.0	0.0
TREAT	POND	BASE	37.02	4.63	0.00	1503	0.00	0.01	0.0	0.0
TREAT	POND	BASE	38.02	4.61	0.00	1489	0.00	0.01	0.0	0.0
TREAT	POND	BASE	39.02	4.60	0.00	1476	0.00	0.01	0.0	0.0
TREAT	POND	BASE	40.02	4.58	0.00	1463	0.00	0.01	0.0	0.0
TREAT	POND	BASE	41.02	4.57	0.00	1450	0.00	0.01	0.0	0.0
TREAT	POND	BASE	42.02	4.56	0.00	1437	0.00	0.01	0.0	0.0
TREAT	POND	BASE	43.02	4.55	0.00	1424	0.00	0.01	0.0	0.0
TREAT	POND	BASE	44.02	4.53	0.00	1411	0.00	0.00	0.0	0.0
TREAT	POND	BASE	45.02	4.52	0.00	1399	0.00	0.00	0.0	0.0
TREAT	POND	BASE	46.02	4.51	0.00	1387	0.00	0.00	0.0	0.0
TREAT	POND	BASE	47.02	4.50	0.00	1375	0.00	0.00	0.0	0.0
TREAT	POND	BASE	48.02	4.48	0.00	1363	0.00	0.00	0.0	0.0
TREAT	POND	BASE	49.02	4.47	0.00	1351	0.00	0.00	0.0	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
TREAT	POND	BASE	50.02	4.46	0.00	1340	0.00	0.00	0.0	0.0
TREAT	POND	BASE	51.02	4.45	0.00	1328	0.00	0.00	0.0	0.0
TREAT	POND	BASE	52.02	4.44	0.00	1317	0.00	0.00	0.0	0.0
TREAT	POND	BASE	53.02	4.43	0.00	1306	0.00	0.00	0.0	0.0
TREAT	POND	BASE	54.02	4.41	0.00	1295	0.00	0.00	0.0	0.0
TREAT	POND	BASE	55.02	4.40	0.00	1284	0.00	0.00	0.0	0.1
TREAT	POND	BASE	56.02	4.39	0.00	1273	0.00	0.00	0.0	0.1
TREAT	POND	BASE	57.02	4.38	0.00	1262	0.00	0.00	0.0	0.1
TREAT	POND	BASE	58.02	4.37	0.00	1252	0.00	0.00	0.0	0.1
TREAT	POND	BASE	59.02	4.36	0.00	1241	0.00	0.00	0.0	0.1
TREAT	POND	BASE	60.02	4.35	0.00	1231	0.00	0.00	0.0	0.1
TREAT	POND	BASE	61.02	4.34	0.00	1221	0.00	0.00	0.0	0.1
TREAT	POND	BASE	62.02	4.33	0.00	1211	0.00	0.00	0.0	0.1
TREAT	POND	BASE	63.02	4.32	0.00	1201	0.00	0.00	0.0	0.1
TREAT	POND	BASE	64.02	4.31	0.00	1191	0.00	0.00	0.0	0.1
TREAT	POND	BASE	65.02	4.30	0.00	1181	0.00	0.00	0.0	0.1
TREAT	POND	BASE	66.02	4.29	0.00	1171	0.00	0.00	0.0	0.1
TREAT	POND	BASE	67.02	4.28	0.00	1162	0.00	0.00	0.0	0.1
TREAT	POND	BASE	68.02	4.27	0.00	1152	0.00	0.00	0.0	0.1
TREAT	POND	BASE	69.02	4.26	0.00	1143	0.00	0.00	0.0	0.1
TREAT	POND	BASE	70.02	4.25	0.00	1134	0.00	0.00	0.0	0.1
TREAT	POND	BASE	71.02	4.25	0.00	1133	0.00	0.00	0.0	0.1
TREAT	POND	BASE	72.01	4.25	0.00	1133	0.00	0.00	0.0	0.1

Figure D-5
Twenty-Four-Hour Twenty-Five-Year Return Period
Rainfall Map

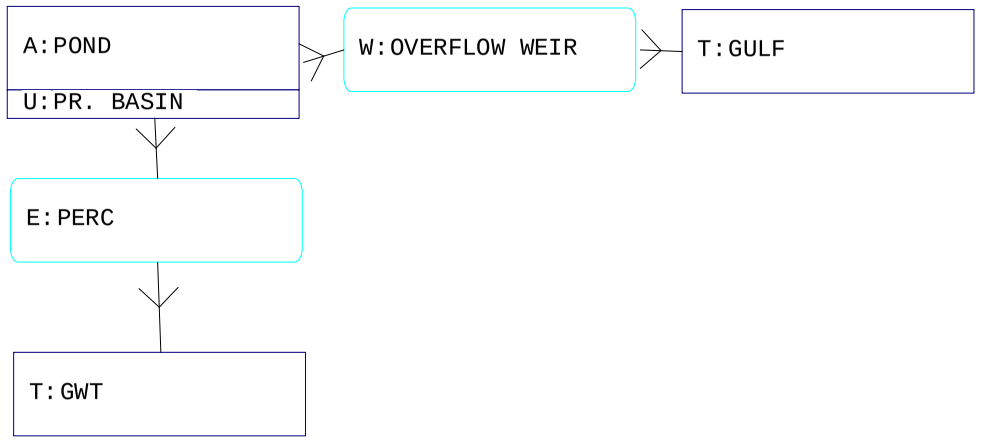


GATOR'S BEACHSIDE
POST MODEL
5/31/2019

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



==========
==== Basins ====
==========

Name: PR. BASIN Node: POND Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 0.690 Time Shift(hrs): 0.00
Curve Number: 89.20 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

==========
==== Nodes ====
==========

Name: GULF Base Flow(cfs): 0.000 Init Stage(ft): 0.460
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

MHWL @ JOHN PASS STATION 8726533.

Time(hrs)	Stage(ft)
0.00	0.460
24.00	0.460

Name: GWT Base Flow(cfs): 0.000 Init Stage(ft): 2.500
Group: BASE Warn Stage(ft): 0.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.500
72.00	2.500

Name: POND Base Flow(cfs): 0.000 Init Stage(ft): 4.250
Group: BASE Warn Stage(ft): 0.000
Type: Stage/Area

Stage(ft)	Area(ac)
4.250	0.0260
5.000	0.0430
6.000	0.0640

==========
==== Weirs ====
==========

Name: OVERFLOW WEIR From Node: POND
Group: BASE To Node: GULF
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Rectangular

Span(in): 180.00
Rise(in): 999.00
Invert(ft): 5.600
Control Elevation(ft): 5.600
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Discharge Coef: 3.200

Orifice Discharge Coef: 0.600

==========
==== Percolation Links ==========
==========

Name: PERC From Node: POND Flow: Both
Group: BASE To Node: GWT Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): -14.000 Perimeter 1(ft): 220.000
Water Table Elev(ft): 2.500 Perimeter 2(ft): 382.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 638.000
Horiz Conductivity(ft/day): 3.000 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 2.000 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.250 Num Cells 1 to 2: 10
Suction Head(in): 4.170 Num Cells 2 to 3: 45
Layer Thickness(ft): 1.750

==========
==== Hydrology Simulations ==========
==========

Name: 100yr-1hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-1hr.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: Fdot-1
Rainfall Amount(in): 4.03

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 100yr-24hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-24hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Fdot-24
Rainfall Amount(in): 13.50

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 100yr-2hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-2hr.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: Fdot-2
Rainfall Amount(in): 5.09

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 100yr-4hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-4hr.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00
Rainfall File: Fdot-4

Rainfall Amount(in): 6.56

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 100yr-72hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-72hr.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Fdot-72
Rainfall Amount(in): 17.50

Time(hrs)	Print Inc(min)
72.000	5.00

Name: 100yr-8hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-8hr.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: Fdot-8
Rainfall Amount(in): 8.72

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 25YR-24HR
Filename: K:\Projects\3200\3286002\Speciality Programs\25YR-24HR.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Fdot-24
Rainfall Amount(in): 9.00

Time(hrs)	Print Inc(min)
30.000	5.00

==========
==== Routing Simulations ==========
==========

Name: 100yr-1hr Hydrology Sim: 100yr-1hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-1hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 5.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: 100yr-24hr Hydrology Sim: 100yr-24hr

Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-24hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 24.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: 100yr-2hr Hydrology Sim: 100yr-2hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-2hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 5.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: 100yr-4hr Hydrology Sim: 100yr-4hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-4hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 5.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: 100yr-72hr Hydrology Sim: 100yr-72hr
Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-72hr.I32

```
      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 72.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes


--------------------------------------------------------------------------------------------------------
         Name: 100yr-8hr           Hydrology Sim: 100yr-8hr
     Filename: K:\Projects\3200\3286002\Speciality Programs\100yr-8hr.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 8.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes


--------------------------------------------------------------------------------------------------------
         Name: 25YR-24HR           Hydrology Sim: 25YR-24HR
     Filename: K:\Projects\3200\3286002\Speciality Programs\25YR-24HR.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 24.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000

Group           Run
--------------- -----
BASE            Yes


--------------------------------------------------------------------------------------------------------
         Name: TREAT               Hydrology Sim:
     Filename: K:\Projects\3200\3286002\Speciality Programs\TREAT.I32

      Execute: No          Restart: No            Patch: No
  Alternative: No
```

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 72.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	60.000

Group	Run
BASE	Yes

Name:	PR. BASIN
Group:	BASE
Simulation:	25YR-24HR
Node:	POND
Type:	SCS
Unit Hydrograph:	Uh256
Peaking Factor:	256.0
Spec Time Inc(min):	1.33
Comp Time Inc(min):	1.33
Rain File:	Fdot-24
Rain Amount(in):	9.000
Duration(hrs):	24.00
Status:	Onsite
TC(min):	10.00
Time Shift(hrs):	0.00
Area(ac):	0.690
Vol of Unit Hyd(in):	1.000
Curve Num:	89.200
DCIA(%):	0.000
Time Max(hrs):	12.00
Flow Max(cfs):	0.60
Runoff Volume(in):	7.692
Runoff Volume(ft3):	19265

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
GULF	BASE	25YR-24HR	0.00	0.46	0.00	0.0000	0	11.99	0.54	0.00	0.00
GWT	BASE	25YR-24HR	0.00	2.50	0.00	0.0000	0	11.99	0.06	0.00	0.00
POND	BASE	25YR-24HR	11.99	5.65	0.00	0.0050	2468	11.99	0.60	11.99	0.60

APPENDIX

8726533 JOHNS PASS, FL

Current Datum Value: 0.93

Datums for 8726533, JOHNS PASS FL

NOTICE: All data values are relative to the MLLW.

Elevations on Mean Lower Low Water

Station: 8726533, JOHNS PASS, FL
Status: Accepted (Sep 3 2003)
Units: Feet
Control Station: 8726724 Clearwater Beach, FL
T.M.: 75
Epoch: (/datum_options.html#NTDE) 1983-2001
Datum: MLLW

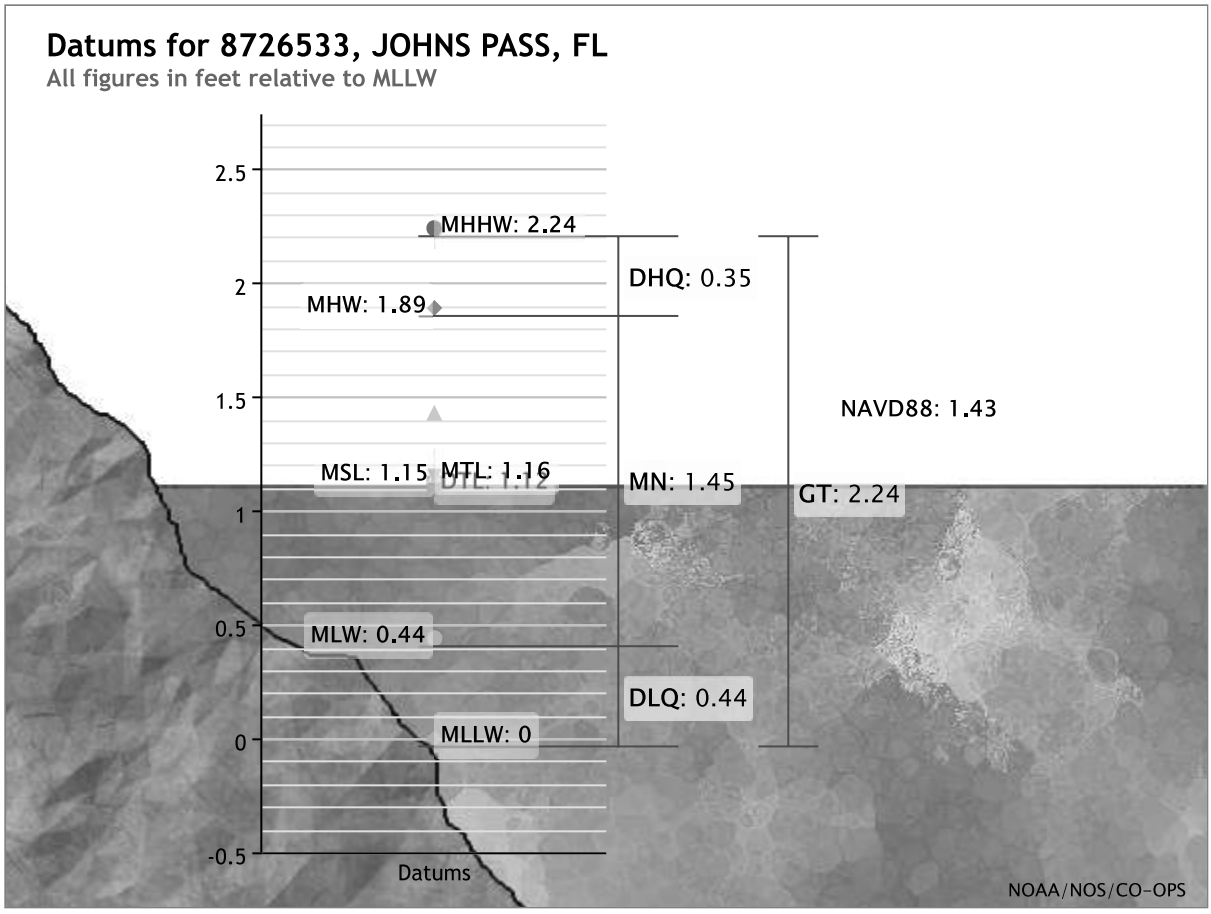
Datum	Value	Description
MHHW (/datum_options.html#MHHW)	2.24	Mean Higher-High Water
MHW (/datum_options.html#MHW)	1.89	Mean High Water
MTL (/datum_options.html#MTL)	1.16	Mean Tide Level
MSL (/datum_options.html#MSL)	1.15	Mean Sea Level
DTL (/datum_options.html#DTL)	1.12	Mean Diurnal Tide Level
MLW (/datum_options.html#MLW)	0.44	Mean Low Water
MLLW (/datum_options.html#MLLW)	0.00	Mean Lower-Low Water
NAVD88 (/datum_options.html)	1.43	North American Vertical Datum of 1988
STND (/datum_options.html#STND)	-0.93	Station Datum
GT (/datum_options.html#GT)	2.24	Great Diurnal Range
MN (/datum_options.html#MN)	1.45	Mean Range of Tide
DHQ (/datum_options.html#DHQ)	0.35	Mean Diurnal High Water Inequality

Datum	Value	Description
DLQ (/datum_options.html#DLQ)	0.44	Mean Diurnal Low Water Inequality
HWI (/datum_options.html#HWI)	4.69	Greenwich High Water Interval (in hours)
LWI (/datum_options.html#LWI)	10.53	Greenwich Low Water Interval (in hours)
Max Tide (/datum_options.html#MAXTIDE)		Highest Observed Tide
Max Tide Date & Time (/datum_options.html#MAXTIDEDT)		Highest Observed Tide Date & Time
Min Tide (/datum_options.html#MINTIDE)		Lowest Observed Tide
Min Tide Date & Time (/datum_options.html#MINTIDEDT)		Lowest Observed Tide Date & Time
HAT (/datum_options.html#HAT)		Highest Astronomical Tide
HAT Date & Time		HAT Date and Time
LAT (/datum_options.html#LAT)		Lowest Astronomical Tide
LAT Date & Time		LAT Date and Time

Tidal Datum Analysis Periods

06/01/1976 - 07/31/1976

To refer water level heights to NAVD88 (North American Vertical Datum of 1988), apply the values located at National Geodetic Survey (http://www.ngs.noaa.gov/Tidal_Elevation/diagram.xhtml?PID=AG7412&EPOCH=1983-2001).



City of Treasure Island

120 108th Avenue
Treasure Island, FL 33706-4702

Phone (727) 547-4575
Fax (727) 547-4584

IMPERVIOUS SURFACE RATIO WORKSHEET

IMPERVIOUS SURFACE means a surface that has been compacted or covered with a layer of material so that it is highly resistant to or prevents infiltration by stormwater. It includes surfaces such as compacted limerock, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots and other similar surfaces.

IMPERVIOUS SURFACE RATIO (ISR) means a measure of the intensity of hard surfaced development on a site. An impervious surface ratio is the relationship between the total impervious surface area on a site and the gross land area. The ISR is calculated by dividing the square footage of the area of all impervious surfaces on the site by the square footage of the gross land area.

LOT AREA: The area included within the lot lines of the lot. No public right-of-way shall be included in the calculation of the lot area.

CONTRACTOR NAME: ARC Development, Inc

CONTRACTOR ADDRESS: 333 N. Falkenburg Road, Suite C308, Tampa, Florida 30619

CONTRACTOR PHONE #: (813) 952-3250 CONTRACTOR EMAIL: rick@arc-fl.com

JOB SITE ADDRESS: 12765 Sunshine Lane, Treasure Island, Florida 33706

LOT AREA SQ. FT. 39,861 Sq.Ft. (0.915 Acres)

EXISTING IMPERVIOUS SURFACES:

Building footprint:	3,221	SQ. FT.
Parking & Drive areas:	4,281	SQ. FT.
Pool & Patio areas:	0	SQ. FT.
Walkways:	2,115	SQ. FT.
Other:		SQ. FT.
TOTAL EXISTING IMPERVIOUS SURFACE:	9,617	SQ. FT.

PROPOSED IMPERVIOUS SURFACES:

Building footprint:	0	SQ. FT.
Parking & Drive areas:	20,173	SQ. FT.
Pool & Patio areas:	0	SQ. FT.
Walkways:	619	SQ. FT.
Other:		SQ. FT.
TOTAL PROPOSED IMPERVIOUS SURFACE:	20,792	SQ. FT.

9,617	÷	39,861	=	24.1%
Total Existing Impervious Surface		**Lot Area**		**Existing Impervious Surface %**

20,792	÷	39,861	=	52.2%
Total Proposed Impervious Surface		**Lot Area**		**Proposed Impervious Surface %**

I, Rick Coyer, certify that the calculations submitted above for the Impervious Surface Ratio are accurate and complete.

Contractor Signature: _____ Date: 02-20-2023

Item Cover Page

PLANNING & ZONING BOARD AGENDA ITEM REPORT

DATE:	May 30, 2024
SUBMITTED BY:	Jesse Miller, Community Development
ITEM TYPE:	Public Hearings
AGENDA SECTION:	PRESENTATION OF ITEMS
SUBJECT:	SITE-000428-2023- 11580 Gulf Blvd- Site plan approval request for a proposed 5 story over parking condo-hotel structure comprised of 17 hotel/motel units.
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.

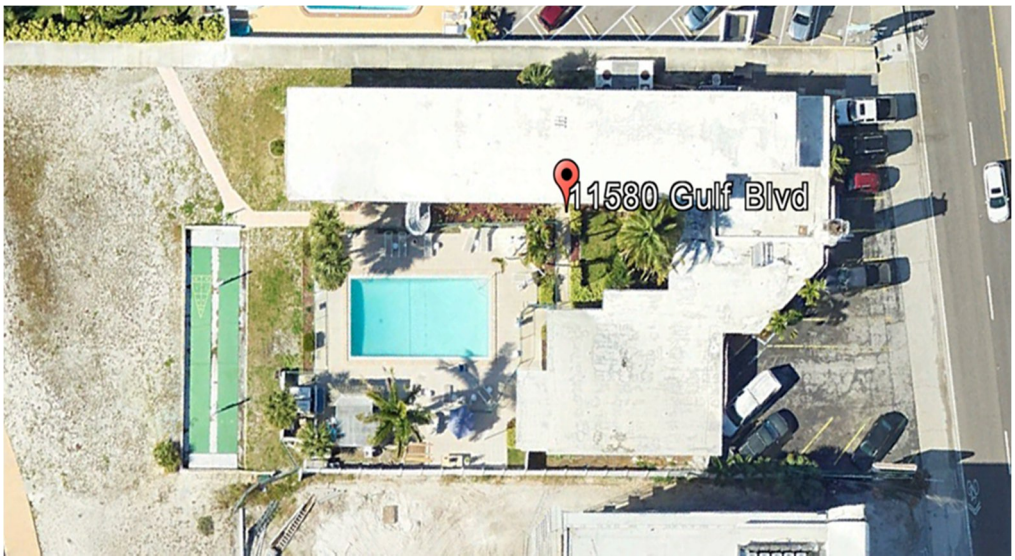
ATTACHMENTS:
1. Staff Report.docx
2. Application.pdf
3. Affidavit to Authorize Agent.pdf
4. Warranty Deed.pdf
5. Sunbiz-ATM ARVILLA LLC.pdf
6. Renderings- Front, Side, and Rear.pdf
7. Architectural Plans.pdf
8. Civil Plans.pdf
9. ISR Worksheet.pdf
10. Drainage Narrative.pdf
11. Geotechnical Report.pdf
12. Survey.pdf

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. SITE-000428-2023
STAFF REPORT
THURSDAY, MAY 30, 2024, AT 10:00 A.M.

DESCRIPTION: Site plan approval request for a proposed 5 story over parking condo-hotel structure comprised of 17 hotel/motel units.

SITE LOCATION: 11580 Gulf Blvd
Treasure Island, FL 33706



PARCEL ID #: 23-31-15-00000-240-0200

LEGAL DESCRIPTION: PART OF GOVT LOT 2 LYING WITHIN NW 1/4 OF SEC 23-31-15 DESC AS BEG MOST S'LY COR OF BLK C, LOT 4 OF TREASURE ISLAND, CITY OF TH N52D00'50"E 189.34FT TO SW'LY RD R/W OF SR 699 TH S45D54'47"E 100.85FT ALG SD RD R/W TH S52D00' 50"W 194.24FT TO COASTAL CONTROL CORNER TH N43D07' 27"W 100.49FT TO POB

PROPERTY OWNER: ATM Arvilla LLC
11580 Gulf Blvd
Treasure Island, FL 33706

GENERAL INFORMATION:

Land Use: RFH (Resort Facilities High)

Zoning: RFH-50 (Resort Facilities High)

Adjacent Property (Use):

North: 11600 Gulf Blvd – Hotel/Motel

West: Gulf of Mexico- Public Beach

South: 11500 Gulf Blvd– Condo/Hotel

East: 11555 Gulf Blvd – Condominiums

Site Area: Approximately 0.44 acres | 19,098 sf

Flood Zone: AE- 11 (Coastal A Zone) Flood Insurance Rate Map Community Panel No. 12103C0194H eff. August 24, 2021.



PROPERTY SUMMARY:

The subject property has 1 existing structure constructed in 1950, comprised of 15 hotel/motel units.

On December 13, 1977, Res No. 77-34 approved site plan #047 for a commercial pool.

TREASURE ISLAND CODE OF ORDINANCES:

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

Condo-hotel means a hotel or motel comprised of units that are owned by an individual, corporation, or any other legal entity having mandatory membership into an association comprised of all owners within the same development, and is a building or buildings, collectively, "facility", containing individual guest rooms, units or efficiencies for which daily, weekly or monthly lodging is provided as transient accommodations.

Hotel or motel means a building or buildings, collectively, "facility," containing individual guest rooms, units or efficiencies for which daily, weekly or monthly lodging is provided as transient accommodations.

Hotel or motel unit means a room or group of rooms within a hotel or motel, as defined, with individual sleeping facilities having one entrance door.

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:
   a) Hotel and motel

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 (Per Acre)	Maximum Building Height (Above BFE +2 feet of freeboard)	Floor Area Ratio (%)
RFM-50/Resort Facilities High						
Hotel/Motel	70	90	9,000	50 (5 living levels max.)	60	120
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. 68-486. – Off-street parking.

a) *Number and description of parking spaces required*

	Use	Minimum Spaces Required
(5)	Hotels, motels and motor inns	2 spaces for the first unit and 1 space per hotel/motel unit. Restaurants, lounges, meeting rooms and other assembly areas: 1 space per 5 occupants, calculated at 20 square feet of net usable area per occupant.

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.

Gulf Boulevard from north side of St. Petersburg's Public Beach to 119th Avenue:
West side:
Street: 25 feet
Side: 7½ feet

ARTICLE VII. – SUPPLEMENTAL LOT AND USE REGULATIONS

DIVISION 3. – USE REGULATIONS

Sec. 68-494. - Condo-hotels, hotels and motels, and transient segmented uses (such as time share and fractional interests).

The city recognizes that the condo-hotel is a hybrid form of ownership of the traditional hotel/motel concept. It must be recognized that condo-hotel is considered to be a transient hotel/motel use, and not a residential use. Additionally, segmented uses, such as time share and fractional interests, are often transient in nature and must also be regulated as a transient use rather than a residential use. Exceptions to the general transient character of segmented uses can be found under the definition of "dwelling tourist" in section 68-2. It is the intent of this regulation to ensure that condo-hotels are operated and governed in substantially the same manner as conventional hotels/motels. It is also the intent of this section to regulate all segmented uses not exempted under the definition of "dwelling, tourist" to be operated and governed in substantially the same manner as conventional hotels/motels. Further, this zoning regulation is designed to protect and preserve the density requirements mandated in zoning districts where traditional hotels and motels are allowed, as well as preserving future transient accommodations on the open market, and made available to the general public and tourists. The operation of condo-hotels, hotels and motels, and transient segmented uses is strictly a commercial activity and is inconsistent with residential use. Transient and business related activities have different impacts on governmental facilities and infrastructure (e.g., density, traffic, parking, schools). As such, this regulation is to ensure that the use and operation of condo-hotels, hotels and motels, and segmented uses remain an exclusively commercial enterprise, and not a residential use.

In addition to any existing regulations relating to hotel/motel development found elsewhere in the land development regulations, the following criteria shall apply to all condo-hotels, hotels and motels, and transient segmented uses except where noted:

(1) All units in a condo-hotel, hotel or motel, or transient segmented use shall be considered transient accommodation units and must be made available as rentals on a continual daily, weekly or monthly basis. If the occupancy of any such unit does not change more frequently than six times or more in any continuous 12-month period, then a rebuttable presumption shall arise that the unit is not being used for transient accommodations.

(2) Proper licensing will be required of all transient accommodation units through all applicable agencies that license hotels prior to any certificate of occupancy being issued. All licenses must be kept current.

(3) A reservation system shall be required as an integral part of the transient accommodation facility for the rental of units.

(4) There shall be a lobby/front desk area that is internally oriented and must be operated as a typical hotel/motel lobby/front desk area would be operated.

(5) All units shall be subject to all applicable tourist tax collections, when rented.

(6) Transient accommodation units shall not be used for homesteading purposes or home occupational licensing.

(7) Notwithstanding subsection (12), one unit may be used on a full-time basis by a resident manager(s), and, if applicable, subject to the governance of the condominium or transient segmented use association.

(8) All transient accommodation units, except the resident manager unit, must be included in the inventory of units that are available for rent.

(9) A condo-hotel or transient segmented use may be allowed in any district where a hotel or motel is allowed.

(10) Annual occupational licenses for each business operating a condo-hotel unit or transient segmented use shall be required for each such unit from the city, and for each business operating a hotel/motel facility, whichever is applicable.

(11) All transient accommodation facilities must have sufficient signage viewable by the general public designating the use as a hotel, motel, or transient accommodation.

(12) Owner-occupation. Units in a condo-hotel, hotel or motel or segmented use facility, may not be occupied by their owner(s) for more than a total of 90 days in any consecutive 12-month period.

(13) The books and records of the condo-hotel, hotel or motel, or transient segmented use pertaining to the rentals of each unit in the transient

accommodation facility shall be open for inspection by authorized representatives of the city, upon reasonable notice, in order to confirm compliance with these regulations as allowed by general law.

(14) The city may require affidavits of compliance with this section from each condo-hotel unit owner, hotel/motel facility owner, or transient segmented use owner.

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 use and density is not in conflict with the goals, objectives and policies of the Comprehensive Plan.

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 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	100.85 ft.
Lot Depth (min.)	90	189 ft.- N Property Line 194 ft.- S Property Line
Lot Area (min.)	9,000	19,098 sq. ft.
Density	Hotel/Motel- 50 dwelling units per acre (5 living levels max.) 50 x 0.44 AC. = 22	17
Lot Coverage (max.)	50%	32%
ISR (max.)	95%	62%
FAR	120	120
Building Height **Max. above DFE** **Height Encroachment** **From Grade**	 60’ 7’ above roof -	 56’-10” 7’ above roof 63’-4”
Height Encroachment	7’ above roof	7’ 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	 34.7’ 39.1’ 19’ 100.85 x .30 = 30.25’ (divided among two sides) 63’ – 4” x .30 = 18.99’ on all sides
Design Elevation	13’ NAVD Lowest Living Level	16’-10” NAVD Lowest Living Level
Loading Berths	Varies	N/A
Parking Spaces **Total Spaces** **Standard** **Compact (max.)** **ADA-accessible**	 18 17 0 1	 18 17 0 1

Bicycle	1 Bike Rack (5 spaces per rack)	1 Bike Rack (6 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 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 meets the purpose and intent of RFH-50 Zoning District and will not impact compatibility with the planning character of the RFH-50 Zoning District.

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.
The proposed site plan meets drive aisle widths, parking space width and length. Driveway and sidewalk connections within the right-of-way appear to adhere to all applicable FDOT standards.

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.
Proposed site plan is in conformance with landscaping requirements set forth in Chapter 72- Resources; Vegetation and Environmentally Sensitive Lands. Additionally, the applicant is proposing to remove impervious surfaces seaward of the property line and CCCL. Refer to Sheet C2.1 of Civil Plans.

d. Building arrangements, both between buildings in the proposed development and in relation to those on properties adjacent to the site.
The development consists of one structure that meets all setback requirements. There are no other proposed buildings on site.

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).
The proposed site plan will not impact the use of the existing public beach or access to the waterfront. Applicant is proposing to improve the sidewalk on the 10 foot waterfront access easement and will require approval by the City of Treasure Island

Public Works Dept. prior to commencement of work. Refer to civil plans sheet C2.1 and C3.1 for proposed sidewalk replacement.

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 historically/architecturally significant structures on the site.

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.
Any proposed work on City property will require approval by the City of Treasure Island Public Works Dept. prior to commencement of work. Refer to civil plans sheet C2.1 and C3.1 for proposed sidewalk replacement on City property.

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.
The proposed site plan will require a permit or exemption from the Southwest Florida Water Management District and the Florida Department of Transportation.

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 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. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

4. Proposed Condo/Hotel shall adhere to all applicable criteria for Condo/Hotel uses set forth in Sec. 68-494.

5. Any proposed work on City property will require approval by the City of Treasure Island Public Works Dept. prior to commencement of work.

6. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

[Remainder of this page left intentionally blank.]

MAY 30, 2024
PLANNING AND ZONING BOARD
DEVELOPMENT ORDER

CASE NO. SITE-000428-2023
LOCATION: 11580 GULF BLVD TREASURE ISLAND, FL 33706

The Planning and Zoning Board has made a motion to:

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

A site plan approval request for a proposed 5 story over parking condo-hotel structure comprised of 17 hotel/motel units.

CONDITIONS:

1. 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. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

4. Proposed Condo/Hotel shall adhere to all applicable criteria for Condo/Hotel uses set forth in Sec. 68-494.

5. Any proposed work on City property will require approval by the City of Treasure Island Public Works Dept. prior to commencement of work.

6. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

_____ _____
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: ATM Arvilla LLC
Address: 11580 Gulf Boulevard
Treasure Island, Florida 33706
Phone: _____
Fax: _____
Email: alliemallad1@gmail.com

Agent: Housh Ghovaee, CEO
Northside Engineering, Inc.
Address: 300 South Belcher Road
Clearwater, Florida 33765
Phone: 727-443-2869 / 727-709-0943
Fax: 727-446-8036
Email: Housh@northsideengineering.net

List all Legal Owner(s) of Property: ATM Arvilla LLC - Allie Mallad, Title Manager

Complete legal description (may be placed on attached separate page): See attached Warranty Deed and Civil Site Plan Sheet C1.1.

Development Name: Arvilla - Balboa Shores

Site Location/Address: 11580 Gulf Blvd., Treasure Island, FL 33706

Area of Development (Acreage or Square Feet) 0.438 acres / 19,0987s.f.

Parcel Identification Number (list all): 23-31-15-00000-240-0200

Application Request: Redevelopment of an existing site to include the demolition of an existing 15 unit hotel and a proposed new 17 unit condo-hotel - one unit may be used on a full-time basis by a resident manager(s) per Sec. 68-494(7)

Future Land Use Designation: RFH - 50
Proposed Future Land Use: N/A

Current Zoning: RFH - 50
Proposed Zoning: N/A

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

Apr 5 '24
Date

LETTER OF AUTHORIZATION

This letter will serve as authorization for **Housh Ghovaee** and **Northside Engineering, Inc.** to act as an agent for: ATM Arvilla, LLC and to execute any and all documents related to securing permits and approvals for the construction on the property generally located: 11580 Gulf Blvd (City of Treasure Island) lying within PINELLAS County, State of FLORIDA.

Allie T. Mallas — Signature of Property Owner

ALLIE T. MALLAS — Print Name of Property Owner

26300 FORD RD, #198, [redacted] — Address of Property Owner

OWNER — Title

DEARBORN HEIGHTS, MI 48127 — City/State/Zip Code

(313) 942-9900 — Telephone Number

State of ~~Florida~~ Michigan
County of ~~Pinellas~~ Jackson

The foregoing instrument was acknowledged before me this 21st day of Dec, 2023, by Allie Tallas, as Individual who is personally known to me or who has produced Drivers License as identification and who did (did not) take an oath.

Ronald L Ellison — Notary Public (Signature)

Commission # _____ Expires: RONALD L. ELLISON NOTARY PUBLIC, Jackson County, MI My Commission Expires April 14, 2024 Acting in Jackson County

(SEAL ABOVE) _____ (Name of Notary Typed, Printed or Stamped)

RECEIVED
DEC 27 2023
BY:

I#: 2023205173 BK: 22528 PG: 2104, 08/08/2023 at 09:57 AM, RECORDING 2 PAGES $18.50 D DOC STAMP COLLECTION $33600.00 KEN BURKE, CLERK OF COURT AND COMPTROLLER PINELLAS COUNTY, FL BY DEPUTY CLERK: CLKPR14

Prepared by and return to:
Monica Hellbaum
Aegis Title & Escrow LLC
709 West Azeele Street
Tampa, FL 33606
(727) 616-4321
File No 23-2

Parcel Identification No 23-31-15-00000-240-0200

|Space Above This Line For Recording Data|

WARRANTY DEED

(STATUTORY FORM – SECTION 689 02, F S)

This indenture made the 31st **day of July, 2023 between Arvilla Motel Inc., a Florida Corporation**, whose post office address is **1618 80th Street North, St. Petersburg, FL 33710**, of the County of Pinellas, State of Florida, Grantor, to **ATM Arvilla LLC, a Florida Limited Liability Company**, whose post office address is **11580 Gulf Boulevard, Treasure Island, FL 33706**, 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:

For a Point of Beginning, commence at the most Southerly corner of Lot 4, Block C, CITY OF TREASURE ISLAND BLOCK "C", as recorded in Plat Book 28, Page 2, Pinellas County, Florida, go thence along the Southerly Boundary of said Lot 4, Block C, N. 52°00'50" E. a distance of 189.34' ± to the now Southwesterly constructed right-of-way line of Gulf Boulevard (State Road 699) being a 80.00 foot right-of-way as shown on State Road Maps Project Section #1500-2510, thence along Southwesterly of said right-of-way as shown in aforesaid State Road Project Section # 1500-2510, S. 45°54'47" E., a distance of 100.85' ± to a point in the Northerly Boundary Line of property described in Official Records Book 21761, Pages 2265 and 2266 of Pinellas County, Florida, thence along the Northerly property line as described of said Official Records Book 21761, Pages 2265 and 2266, S. 52°00'50" W. 194.24' ± to a Coastal Control Corner # 1307-104, dated July 10, 2013, thence along a line N. 43°07'27" W., a distance of 100.49' ± to the most Southerly Corner of said Lot 4, Block "C", CITY OF TREASURE ISLAND BLOCK "C" and to the Point of Beginning.

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.

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: Michael V. Hargett

WITNESS
PRINT NAME: Delayni Kovalchek

Arvilla Motel Inc., a Florida Corporation

By: Anne M. Maurer
Anne M. Maurer, President

STATE OF FLORIDA
COUNTY OF Hillsborough

The foregoing instrument was acknowledged before me by means of (X) physical presence or ( ) online notarization this 31st day of July, 2023 by Anne M. Maurer, President of Arvilla Motel Inc., a FL Corporation, on behalf of the Corporation.

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

MICHAEL V. HARGETT
NOTARY PUBLIC
MY COMMISSION
EXPIRES 12-20-2026
STATE OF FLORIDA
COMMISSION NUMBER HH 336161

Personally known: ____
OR Produced Identification: ✓

Type of Identification Produced: Florida Driver

Detail by Entity Name

Florida Limited Liability Company
ATM ARVILLA LLC

Filing Information

Document Number	L23000179591
FEI/EIN Number	92-3502490
Date Filed	04/11/2023
Effective Date	04/11/2023
State	FL
Status	ACTIVE

Principal Address

11580 GULF BLVD
TREASURE ISLAND, FL 33706

Mailing Address

26300 FORD RD
DEARBORN HEIGHTS, MI 48127

Registered Agent Name & Address

MALLAD, ALLIE
11580 GULF BLVD
TREASURE ISLAND, FL 33706

Authorized Person(s) Detail

Name & Address

Title MGR

MALLAD, ALLIE
11580 GULF BLVD
TREASURE ISLAND, FL 33706

Annual Reports

Report Year	Filed Date
2024	01/12/2024

Document Images

01/12/2024 -- ANNUAL REPORT	View image in PDF format
04/11/2023 -- Florida Limited Liability	View image in PDF format



Front Elevation | Scale: NTS



Side Elevation | Scale: NTS



Rear Elevation | Scale: NTS



Front Elevation | Scale: NTS

BALBOA SHORES

11580 GULF BOULEVARD
TREASURE ISLAND, FLORIDA
FDI# 23132.00

OWNER:
ATM ARVILLA, LLC.
26300 FORD ROAD
DEARBORN HEIGHTS, MICHIGAN

CONTRACTOR:
SUNWEST CONSTRUCTION
1311 WALSINGHAM ROAD
LARGO, FLORIDA 33774

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

STRUCTURAL ENGINEER:
B&W STRUCTURAL
1025 S. ALBANY AVENUE
TAMPA, FLORIDA 33606

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

CIVIL ENGINEER:
NORTHSIDE ENGINEERING, INC.
300 S. BELCHER ROAD
CLEARWATER, FLORIDA 33765

FIRE SAFETY ENGINEER:
FIRE SAFETY, INC.
2721 ROOSEVELT BOULEVARD
CLEARWATER, FLORIDA 33760

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* THE DRAWINGS & DESIGN ARE VALID FOR 12 MONTHS FROM DATE OF BEING SEALED.

TO THE BEST OF THE ARCHITECT OR ENGINEER'S KNOWLEDGE AND BELIEF, THESE PLANS AND SPECIFICATIONS COMPLY WITH THE 8TH EDITION 2023 FLORIDA BUILDING CODE. IN ADDITION TO ANY OTHER APPLICABLE BUILDING CODES AND MINIMUM FIRE SAFETY STANDARDS

ALL DIMENSIONS AND JOB CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ANY AND ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

ISSUE	DATE	BY:
REVIEW	05/07/24	FR/MK
PERMIT	05/07/24	FR/MK
REV.		
REV.		
REV.		
REV.		
REV.		
REV.		
REV.		

MEMBER OF AIA American Institute of Architects

FDI# 23132.00

Construction Documents for:

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

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FRAZE design
commercial residential architecture
FL. LIC. NO. AA26006585
1750 CENTRAL AVENUE
ST. PETERSBURG, FLORIDA 33712
PHONE: 727/328-3668
FAX: 727/328-3669
STUDIO: 727/328-3607
E-MAIL: fd@frazedesign.com

SHEET TITLE
COVER PAGE

SHEET NUMBER
A-0

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE CURRENT EDITION OF THE FLORIDA BUILDING CODES, AND ALL OTHER GOVERNMENTAL OR REGULATORY AUTHORITIES.
- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO VERIFY ALL DIMENSIONS IN THE FIELD. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. DO NOT SCALE PLANS.
- THE CONTRACTORS SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE INTENT OF THE DRAWINGS. CONTRACTOR AGREES THAT HE SHALL BE HELD RESPONSIBLE FOR HAVING EXAMINED THE SITE, THE LOCATION OF ALL PROPOSED WORK AND FOR HAVING SATISFIED HIMSELF, AS TO THE CHARACTER AND THE NATURE OF THE EXISTING CONDITIONS AND WORK TO BE PERFORMED; ALONG WITH THE LOCATION OF EXISTING UTILITIES AND ANY OTHER OBSTRUCTIONS.
- IT SHALL BE THE RESPONSIBILITY OF ALL SUBCONTRACTORS TO HAVE EXAMINED AND REVIEWED THE COMPLETE SET OF WORKING DRAWINGS AND/OR SPECIFICATIONS TO PROVIDE ALL LABOR AND MATERIALS FOR THEIR RESPECTIVE AREA OF WORK, FOR THE COMPLETE AND FINISHED INSTALLATION IN COMPLIANCE WITH THE INTENT OF THE DRAWINGS AND/OR SPECIFICATIONS WHETHER IT IS INDICATED OR NOT. ALL WORK, WHETHER INDICATED OR NOT, SHALL BE IN COMPLIANCE WITH ALL BUILDING CODES AND ORDINANCES WHICH ARE APPLICABLE TO THE PROJECT.
- CONTRACTOR TO PROVIDE ALL BARRICADES, SCAFFOLDING, SIGNS, LIGHTING AND OTHER MEANS OF PROTECTION AS REQUIRED TO COMPLY WITH ALL STATE LAWS AND LOCAL ORDINANCES TO SAFEGUARD PROPERTY AND PERSONS. OBSTRUCTIONS SHALL BE PLACED SO AS NOT TO DIMINISH THE LIFE SAFETY REQUIREMENTS.
- ALL WORK SHALL BE PERFORMED BY QUALIFIED CONTRACTORS IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
- ALL MATERIAL AND EQUIPMENT SHALL BE NEW, STORED AND INSTALLED IN A WORKMANLIKE MANNER STANDARD TO THE TRADE AND THE AMERICAN SOCIETY OF TESTING MATERIALS.
- THE DESIGN INFORMATION INDICATED ON THE PLANS ARE INDICATED TO BE A COMPLETE AND WORKABLE SYSTEM IN ACCORDANCE WITH ALL PRODUCT MANUFACTURER'S SPECIFICATION, EXISTING AND/OR PROPOSED BUILDING DESIGN, FIELD CONDITIONS, ETC. ALL MISCELLANEOUS MATERIALS, PARTS, DESIGN DIMENSIONS, WHETHER INDICATED ON THE PLANS OR NOT, SHALL BE INCLUDED AS PART OF THIS DRAWING PACKAGE.
- THE GENERAL CONTRACTOR OR SUBCONTRACTORS SHALL BE HELD RESPONSIBLE FOR THE REMOVAL AND THE PROPER DISPOSAL OF MATERIALS AND ITEMS REFERRED TO AS "DEBRIS" OR DETERMINED BY THE OWNER OR ARCHITECT TO BE REFUSED.
- THE GENERAL CONTRACTOR SHALL HAVE MADE ALL REQUIRED PROVISIONS FOR THE REMOVAL OF THE DEBRIS ON SITE.
- GENERAL CONTRACTOR SHALL TAKE ORDINARY PRECAUTIONS TO SECURE AND PROTECT MATERIALS.
- ALL WOOD MEMBERS IN CONTACT WITH MASONRY SHALL BE PRESSURE TREATED.
- ALL METAL USED FOR CONNECTING WOOD MEMBERS TO BE GALVANIZED OR CORROSION RESISTANT.
- THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THESE DRAWINGS.
- SPECIFIC SECTIONS, DETAILS AND STANDARD DETAILS ARE INDICATED ON THE DWGS AT LOCATIONS WHERE THEY OCCUR, OR AT CHARACTERISTIC LOCATIONS. THEY APPLY, U.O.N. TO OTHER LOCATIONS WHERE IMPLIED BY SIMILARITY OF CONSTRUCTION.
- CONTRACTOR TO COORDINATE SPACE REQUIREMENTS AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WHICH ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. FOLLOW ROUTING SHOWN FOR PIPES, DUCTS, AND CONDUIT AS CLOSELY AS PRACTICABLE. PLACE RUNS PARALLEL WITH LINE OF BLDG. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS AND FOR MAINTENANCE AND REPAIRS.
- IN FINISHED AREAS, U.O.N. CONCEAL PIPES, DUCTS, AND WIRING WITHIN THE CONSTRUCTION. COORDINATE LOCATIONS OF FIXTURES AND OUTLETS WITH FINISH ELEMENTS.
- TRANSPORT AND HANDLE PRODUCTS IN ACCORDANCE W/ MFR INSTRUCTIONS.
- PROMPTLY INSPECT SHIPMENTS TO ASSURE THAT PRODUCTS COMPLY W/ REQUIREMENTS, QUANTITIES ARE CORRECT, AND PRODUCTS ARE UNDAMAGED.
- SHOULD MFR INSTRUCTIONS CONFLICT W/ THE DWGS, REQUEST CLARIFICATION FROM ARCHITECT/ENGINEER BEFORE PROCEEDING.
- ALL THRESHOLDS SHALL COMPLY WITH FLORIDA ACCESSIBILITY CODE, 404.2.5 AS FOLLOWS:
  - A. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 1/2"
  - B. EXISTING OR ALTERED THRESHOLDS 3/4" MAX WITH A BEVELLED EDGE ON EACH SIDE & A SLOPE NO STEEPER THAN 1:2 SHALL NOT BE REQUIRED TO COMPLY WITH 404.2.5
- G.C. SHALL FURNISH AND INSTALL CONT. WOOD BLOCKG IN STUD PARTITIONS FOR ANCHORAGE OF WALL ATTACHED ITEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: GRAB BARS, TOILET ACCESSORIES, HANDRAIL BRACKETS, WALL CABINETS, WALL-MOUNTED FIXTURES ETC.
- THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING THE CONTRACTOR W/ ROUGH-IN INFO. NECESSARY TO ACCOMMODATE THE INSTALLATIONS OF OWNER FURNISHED AND INSTALLED ITEMS.
- THE CONTRACTOR SHALL INCLUDE ALL OWNER FURNISHED AND INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE W/ THE OWNER TO ACCOMMODATE THESE ITEMS.
- COORDINATE ALL DEMOLITION EFFORTS W/ THE OWNER. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OPERATION AND TO PROVIDE PATRON SAFETY. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED W/THE OWNER.
- COORDINATE W/ THE OWNER THE PRE-APPROVED DISRUPTION AND VERIFICATION OF SERVICE WITHIN THE EXISTING BUILDING SO AS TO MINIMIZE THE DISRUPTION OF SERVICE.
- CONSTRUCT TEMPORARY CONSTRUCTION PARTITIONS WITHIN THE EXISTING BUILDING WHICH OFFER AN ENCLOSURE TO ISOLATE ANY DEMOLITION/ CONSTRUCTION WORK FROM THE GENERAL PUBLIC AND AS DEEMED NECESSARY BY THE OWNER.

ABBREVIATIONS:

A	
AFF.	ABOVE FINISH FLOOR
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABV	ABOVE
AC	ACCESSORIES
ACF	ACCESS FLOORING
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADD	ADDENDUM/ ADJACENT
ADJ	ADJUSTABLE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURE / (URAL)
ASPH	ASPHALT
AUTO	AUTOMATIC
AUX	AUXILIARY
AVG	AVERAGE
AWN	AWNING
AUT	ACOUSTICAL WALL TREATMENT
B	
BD	BOARD
BF	BI-FOLD
BFF	BELOW FINISHED FLOOR
BIT/BITUM	BITUMINOUS
BLD	BOLLARD
BLDG	BUILDING
BLK/BLI	BLOCKING
BLW	BELOW
BM	BEAM/BENCHMARK
BN	BENCH
BR/BRK	BRICK
BRG	BEARING
BRKT	BRACKET
BS	BOTH SIDES
BTN	BOTTOM
BTW	BETWEEN
BUR	BUILT-UP ROOF
BVL	BEVELED
C	
C/C	CENTER TO CENTER
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN/ COVE BASIN
CEM	CEMENT
CER	CERAMIC
CG	CORNER GUARD
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CLST	CLOSET
CPT	CARPET
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMB	COMBINATION
COMPR	COMPRESS/COMPRESSIBLE
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONTR	CONTRACTOR CONST CONSTRUCTION
CPT	CARPET
CR	CHAIR RAIL
CT	CERAMIC TILE / COUNTER TOP
CTR	COUNTER
CW	COLD WATER
D	
D	DRYER
D.A.S.S	DIRECT APPLIED SYNTHETIC STUCCO
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET/DTL	DETAIL
DF	DRINKING FOUNTAIN
DIAM	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DR	DOOR
DS	DOWN SPOUT
DW	DISHWASHER
DWG	DRAWING
E	
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
EP	ELASTOMERIC PAINT
EQ	EQUAL
EQUIP/EQPT	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXP	EXPOSED/ EXPANSION
EXSTG	EXISTING
EXT	EXTERIOR
F	
FA	FIRE ALARM
FB	FABRICATION
FBR	FACE OF BRICK
FC	FILE CABINET
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FHC	FIRE HOSE CABINET
FIN	FINISH(ED)
FIXT	FIXTURE
FL/FLR	FLOOR
FLMTD	FLOOR MOUNTED
FLOUR	FLOURESCENT
FO	FINISHED OPENING
FOB	FACE OF BLOCK
FOS	FACE OF STUD
FP	FIREPROOF(ING)
FRM	FRAME
FS	FULL SIZE
FT	FEET/FOOT
FTG	FOOTING
FUT	FUTURE
G	
GA	GAGE / GAUGE
GALV	GALVANIZED
GAR	GARAGE
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GL	GLASS
GRN	GRAIN (WOOD)
GRND	GROUND
GRT	GROUT
GSF	GROSS SQUARE FOOTAGE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H	
HB	HOSE BIB
HC	HANDICAP
HCR	HOLLOW CORE
HDW/HDWE	HARDWARE
HDWD	HARDWOOD
HGT/HT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HTG	HEATING
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
I	
ID	INSIDE DIAMETER/ INSIDE DIMENSION
INCAND	INCANDESCENT
INCL	INCLUDE(D) / ING)
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
J	
JAN	JANITOR
JB	JUNCTION BOX
JC	JANITOR CLOSET
JST	JOIST
JT	JOINT
K	
KIT	KITCHEN
KO	KNOCKOUT
KPL	KICK PLATE
L	
LAM	LAMINATE(D)
LAV	LAVATORY
LB	POUND
LBL	LABEL
LF	LINEAR FOOT/FEET
LG/L	LONG/LENGTH
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LL	LIVE LOAD
LQ	LACQUER
LTG/G	LIGHTING
LVL	LAMINATED VENEER LUMBER
LWT/LTWT	LIGHTWEIGHT
M	
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MIN	MINUTES
MISC	MISCELLANEOUS
ML	MATCH LINE
MLDG	MOLDING
MO	MASONRY OPENING
MOD	MODIFIED
MTD	MOUNT(ED) / ING)
MTG	MOUNTING
MTL	METAL
MLL	MILLION
MW	MILLWORK
N	
N	NORTH
N/A	NOT APPLICABLE
NR	NOT REQUIRED
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NSF	NET SQUARE FOOTAGE
NTS	NOT TO SCALE
O	
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OVERHEAD
OPP/OD	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
P	
PCJ	PLASTIC CORNER GUARD
PED	PEDASTAL/STAND
PL	PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTIC
PLWD	PLYWOOD
PNL	PANEL
PNT	PAINT
POL	POLISHED
PR	PAIR
PRT	PARTITION
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD/D	PAPER TOWEL DISPENSER/D/SPOSAL
PVC	POLY VINYL CHLORIDE
Q	
QT	QUARRY TILE
QTY	QUANTITY
R	
R/RAD	RADIUS / RISER(S)
RA	RETURN AIR
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RCVG	RECEIVING
REF/REFR	REFER / REFRENCE
RECPT	RECEPTACLE
REFL	REFLECTED / (IVE)
REFR	REFRIGERATOR / REFRIGERATOR
REG	REGISTER
REINF	REINFORCED/D / ING)
REQD	REQUIRED
RES	RESILIENT
REV	REVISION
RGS	RIGID GALVANIZED STEEL
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
RT	RESILIENT TILE
RTD	RATED
RUB	RUBBER
RWC	RAIN WATER CONDUCTOR
S	
S	SOUTH
S.Y.P	SOUTHERN YELLOW PINE
S/R	SHELF + ROD
SA	SUPPLY AIR
SAB	SOUND ATTENUATION BLANKET
SC	SCALE/SOLID CORE
SCHED	SCHEDULE(D)
SECT	SECTION
SERV	SERVICE
SF	SQUARE FEET/FOOT
SGD	SLIDING GLASS DOOR
SH	SINGLE HUNG
SHLV	SHELVES
SHT	SHEET
SIM	SIMILAR
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SOH	SPELLAR - OPPOSITE HAND
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STG	SEATING
STL	STEEL
STOR	STORAGE
STRUC	STRUCTURAL/STRUCTURE
SURF	SURFACE
SUSP	SUSPENDED S/W SWITCH
SXD	STACKED WASHER & DRYER
SYM	SYMMETRICAL
T	
T	THREAD(S)
T & G	TONGUE & GROOVE
T.O.M.	TOP OF MASONRY
TBA	TO BE ASSIGNED
TBL	TABLE
TC	TOP OF CURB
TD	TOP OF DRAIN
TEL/TP	TELEPHONE
TEMP	TEMPERATURE / TEMPERED
TER	TERRAZZO
THK	THICK(NESS)
THRESH	THRESHOLD
TJ	TOOLED JOINT
TOJ	TOP OF JOIST
TOS	TOP OF SLAB
TOW	TOP OF STEEL
TPD	TOILET PAPER DISPENSER
TYP	TYPICAL
U	
U	UNDERCUT
UL	UNDERWRITER'S LABORATORY
UNFIN	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	
VAR	VARIES/(D)
VB	VAPOR BARRIER/ VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBLE
VIF	VERIFY IN FIELD
VNR	VENEER
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	
W	WIDTH / WEST / WASHER
W.C.	WATER CLOSET
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD/ WOOD VENEER
WGT/ WT	WEIGHT
WH	WATER HEATER/ HYDRANT
WI	WROUGHT IRON
WIC	WALK-IN CLOSET
WIN	WINDOW
WLBP	WALL BUMPER
WLP	WALLPAPER
WM	WIRE MESH
WP	WATERPROOF
WS	WIRE SHELVING
Y	
Y	YARD

TERMITE PROTECTION:

1. A PERMANENT SIGN WHICH IDENTIFIES THE TERMITE TREATMENT PROVIDER AND NEED FOR RE-INSPECTION AND TREATMENT CONTRACT RENEWAL SHALL BE PROVIDED. THE SIGN SHALL BE POSTED NEAR THE WATER HEATER OR ELECTRIC PANEL. FBC 2023.
2. CONDENSATE AND ROOF DOWNSPOUTS SHALL DISCHARGE AT LEAST 1'-0" AWAY FROM BUILDING SIDE WALLS FBC 2023
3. IRRIGATION/SPRINKLER SYSTEM INCLUDING ALL RISERS AND SPRAY HEADS SHALL NOT BE INSTALLED WITHIN 1'-0" OF THE BUILDING SIDE WALLS. FBC 2023
4. TO PROVIDE FOR INSPECTOR FOR TERMITE INFESTATION BETWEEN WALL COVERING AND FINAL EARTH GRADE SHALL NOT BE LESS THAN 6". EXCEPTION: PAINT OR DECORATIVE CEMENTATION FINISH LESS THAN . . ." THICK ADHERED DIRECTLY TO THE FOUNDATION WALL. FBC 2023
5. INITIAL TREATMENT SHALL BE DONE AFTER ALL EXCAVATION AND BACKFILL IS COMPLETE FBC 2023
6. SOIL DISTURBED AFTER THE INITIAL TREATMENT SHALL BE RETREATED INCLUDING SPACES BOXED OR FORMED. FBC 2023
7. BOXED AREAS IN CONCRETE FLOORS FOR SUBSEQUENT INSTALLATION OF TRAPS, ETC., SHALL BE MADE WITH PERMANENT METAL OR PLASTIC FORMS. PERMANENT FORMS MUST BE OF A SIZE AND DEPTH THAT WILL ELIMINATE THE DISTURBANCE OF SOIL AFTER THE INITIAL FBC 2023
8. MINIMUM 6 MIL VAPOR RETARDER MUST BE INSTALLED TO PROTECT AGAINST RAINFALL DILUTION. IF RAINFALL OCCURS BEFORE VAPOR RETARDER PLACEMENT, RETREATMENT IS REQUIRED. FBC 2023
9. CONCRETE OVERPOUR AND MORTAR ALONG THE FOUNDATION PERIMETER MUST BE REMOVED BEFORE EXTERIOR SOIL TREATMENT. FBC 2023
10. SOIL TREATMENT MUST BE APPLIED UNDER ALL EXTERIOR CONCRETE OR GRADE WITHIN 1'-0" OF THE STRUCTURE SIDEWALLS. FBC 2023
11. AN EXTERIOR CHEMICAL BARRIER MUST BE INSTALLED AFTER CONSTRUCTION IS COMPLETE INCLUDING LANDSCAPING AND IRRIGATION. ANY SOIL DISTURBED AFTER THE VERTICAL BARRIER IS APPLIED, SHALL BE RETREATED. FBC 2023
12. ALL BUILDINGS ARE REQUIRED TO HAVE PRE-CONSTRUCTION TREATMENT. FBC 2023
13. A CERTIFICATE OF COMPLIANCE MUST BE ISSUED TO THE BUILDING DEPARTMENT BY A LICENSED PEST CONTROL COMPANY BEFORE A CERTIFICATE OF OCCUPANCY IS ISSUED. THE CERTIFICATE OF COMPLIANCE SHALL STATE: "THE BUILDING HAS RECEIVED COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. THE TREATMENT IS IN ROOFS ACCORDANCE WITH THE RULES AND THE LAWS OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES." FBC 2023
14. AFTER ALL WORK IS COMPLETED, LOOSE WOOD AND FILL MUST BE REMOVED FORM BELOW AND WITHIN 1'-0" OF THE BUILDING. THIS INCLUDES ALL GRADE STAKES, TUB TRAP BOXES, FORMS, SHORING OR OTHER CELLULOSE CONTAINING MATERIAL. FBC 2023
15. NO WOOD, VEGETATION, STUMPS, CARDBOARD, TRASH, ETC., SHALL BE BURIED WITHIN 15'-0" OF ANY BUILDING OR PROPOSED BUILDING. FBC 2023
16. ALL ROOFING MATERIALS SHALL COMPLY W/ CHAPTER 15 OF THE FLORIDA BUILDING CODE 2023

BUILDING CODE SUMMARY

BUILDING DATA :

OCCUPANCY : ☐ ASSEMBLY ☐ BUSINESS ☐ EDUCATIONAL ☐ FACTORY ☐ HIGH HAZARD ☐ INSTITUTIONAL ☐ MERCANTILE ☑ RESIDENTIAL ☐ STORAGE ☐ UTILITY/MISC ☐ DAY CARE

USE CONDITION R-3

CHANGE OF OCCUPANCY: ☐ YES ☑ NO

MIXED OCCUPANCY ☑ YES ☐ NO

SEPERATION 2 HR

CONSTRUCTION TYPE: ☐ IA ☐ IB ☐ IIA ☑ IIB ☐ IIIA ☐ IIIB ☐ IV ☐ VA ☐ VB

MIXED CONSTRUCTION: ☐ YES ☑ NO TYPE:

SPRINKLED: ☑ YES ☐ NO ☐ N/A (13 13R 13D) TYPE:

COMPLIANCE METHOD: ☐ PRESCRIPTIVE ☑ WORK AREA ☐ PERFORMANCE

LEVEL OF ALTERATION: ☑ N/A ☐ I ☐ II ☐ III

LIFE SAFETY SYSTEM:

EMER. LIGHTING & EXIT SIGNAGE	☑ YES	☐ NO	☐ N/A
FIRE ALARM & SMOKE DETECT. SYSTEM	☑ YES	☐ NO	☐ N/A
PANIC HARDWARE	☑ YES	☐ NO	☐ N/A

PERMITTING AGENCY:

CITY OF TREASURE ISLAND BUILDING DEPARTMENT

APPLICABLE CODES

8TH EDITION	2023 FLORIDA BUILDING CODE - RESIDENTIAL
8TH EDITION	2023 FLORIDA BUILDING CODE - BUILDING
8TH EDITION	2023 FLORIDA BUILDING CODE - ENERGY
8TH EDITION	2023 FLORIDA BUILDING CODE - TEST PROTOCOL
8TH EDITION	2023 FLORIDA BUILDING CODE - PLUMBING
8TH EDITION	2023 FLORIDA BUILDING CODE - MECHANICAL
8TH EDITION	2023 FLORIDA BUILDING CODE - EXISTING BUILDING
8TH EDITION	2023 FLORIDA BUILDING CODE - FUEL GAS
8TH EDITION	2023 FLORIDA BUILDING CODE - ACCESSIBILITY
8TH EDITION	2023 FLORIDA FIRE PREVENTION CODE
NEC 2020	NATIONAL ELECTRIC CODE - NFPA 70
	FAIR HOUSING GUIDELINES

DESIGNED IN ACCORDANCE WITH THE 7TH EDITION FLORIDA BUILDING CODE 2023, SECTION 1609 FOR DESIGN PRESSURES.



PROJECT LOCATION

VICINITY MAP

SYMBOLS:

SECTION OR DETAIL KEY

- SECTION NO.
- SHEET NO.
- HOSE BIB
- ACOUSTIC PANELS
- FACE BRICK
- CONCRETE
- CONCRETE BLOCK - C.M.U.
- INTERIOR FRAME WALL
- WASHED GRAVEL
- GYPSUMBOARD
- RIGID INSULATION
- BLANKET INSULATION
- DIMENSIONAL LUMBER
- METAL IN ELEVATION
- UNDISTURBED SOIL OR COMPACTED FILL
- PLYWOOD
- METAL - LARGE SCALE
- INSULATING SHEATHING
- ELEVATION
- SECTION CUT
- DETAIL NUMBER
- SHEET NUMBER
- DETAIL SYMBOL
- DETAIL NUMBER
- SHEET NUMBER
- ELEVATION SYMBOL
- ELEVATION NUMBER
- SHEET NUMBER
- PARTITION TYPE
- NORTH ARROW

NOTE THAT NORTH ARROWS SHOWN IN THESE DRAWINGS IS FOR "REFERENCE" ONLY AND DO NOT REPRESENT TRUE OR MAGNETIC NORTH.

- REVISION CLOUD:
- REVISION #
- AREA REVISED
- DOOR TYPE SYMBOL
- WINDOW TYPE SYMBOL

STRUCTURAL WIND DESIGN CRITERIA

FLORIDA BUILDING CODE 2023 AND ASCE 7-10
BASIC WIND SPEED : 150 MPH.
RISK FACTOR: II
STRUCTURE HEIGHT = 28'
WIND DIRECTIONALITY (Kd) : 0.85
WIND EXPOSURE CATEGORY: D
TOPOGRAPHIC FACTOR Kzt= 1.0
GUST EFFECT FACTOR= 0.85
BUILDING HEIGHT ADJUSTMENT FACTOR = 1.35
INTERNAL PRESSURE COEFFICIENT: (+/-) 0.18

AS DEFINED IN ASCE1-10 THIS STRUCTURE MEETS THE REQUIREMENTS OF AN ENCLOSED STRUCTURE IN WIND DEBRIS REGION AND HAS BEEN DESIGNED WITH AN INTERNAL PRESSURE COEFFICIENT OF +0.18 AND -0.18.
COMPONENT AND CLADDING DESIGN PRESSURE LISTED IN TABLES BELOW

COMPONENT AND CLADDING DESIGN PRESSURE

BASIC WIND SPEED = 150 MPH
EXPOSURE C
ADJUSTMENT FACTOR = 1.35
ROOF SLOPE (1 ° TO 21°)
ALL VALUES EXPRESSED IN ASD

DESIGN WIND PRESSURE (PSF)

Zone	Effective Wind Area SQ FT	Basic Wind Speed 150 MPH +	Basic Wind Speed 150 MPH -	Zone	Effective Wind Area SQ FT	Basic Wind Speed 150 MPH +	Basic Wind Speed 150 MPH -
1	10	18.9	29.7	4	10	32.8	35.1
	20	17.3	28.4		20	31.3	33.8
	50	15.0	27.0		50	29.3	31.1
	100	13.4	27.0		100	27.8	29.7
2	10	18.9	51.3	5	10	32.8	43.2
	20	17.3	47.3		20	31.3	40.5
	50	15.0	41.9		50	29.3	36.5
	100	13.4	37.8		100	27.8	33.8
3	10	18.9	77.0				
	20	17.3	71.6				
	50	15.0	64.8				
	100	13.4	59.4				
GARAGE DOOR		9'-0" WIDE 7'-0" HEIGHT				30.8	-32.5
		16'-0" WIDE 7'-0" HEIGHT				29.4	-30.6

NOTES: DESIGN PRESSURES ABOVE REPRESENT THE NET PRESSURE (SUM OF EXTERNAL AND INTERNAL PRESSURES) APPLIED NORMAL TO ALL SURFACES. COMPONENT MANUFACTURER SHALL USE THE HIGHER OF THE TWO NUMBERS FOR APPLICABLE SQUARE FOOTAGE.

CONSTRUCTION DOCUMENTS FOR:

BALBOA SHORES
11580 GULF BLVD.
TREASURE ISLAND, FL

PROJECT SUMMARY

THE PROJECT CONSISTS OF A 17 UNITS WITHIN A LOW-RISE TOWER.
17 TOURISTS UNITS STRUCTURE (5 LIVING LEVELS OVER 1 LEVEL OF PARKING).

CONSTRUCTION TYPE = TYPE II SPRINKLERED INCLUDES, POURED IN PLACE CONCRETE, AND CMU EXTERIOR WALLS. INTERIOR WALLS ARE METAL STUD AND GYPSUM BOARD. ROOFING SYSTEM IS A BUILT-UP ROOF AS SPECIFIED.

INDEX OF DRAWINGS

ARCHITECTURE

A-0 COVER PAGE
A-1 INDEX, SPECS, & VICINITY MAP
A-1.1 CODE REFERENCES, SQUARE FOOTAGE, AND MISC. CHARTS
A-2 SITE PLAN
A-3 FLOOR PLAN - GROUND LEVEL
A-4 FLOOR PLAN - 2ND LEVEL
A-5 FLOOR PLAN- 3RD- 5TH LEVELS
A-6 FLOOR PLAN - PENTHOUSE LEVEL
A-7 ROOF PLAN
A-8 TYPICAL UNIT PLANS
A-9 PENTHOUSE UNIT PLAN
A-10 EXTERIOR ELEVATIONS
A-11 EXTERIOR ELEVATIONS
A-12 BUILDING SECTIONS
A-13 TRASH CHUTE & MISCELLANEOUS DETAILS
A-14 ELEVATOR SECTION AND DETAILS
A-15 WALL SECTION AND WALL TYPES
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A-17 DOOR SCHEDULE
A-18 DOOR & WINDOW SCHEDULES
A-19 DOOR & WINDOW DETAILS
A-20 POOL RESTROOM DETAILS
A-21 ROOF ACCESS HATCH DETAILS
L.S-1 LIFE SAFETY PLAN - GROUND LEVEL
L.S-2 LIFE SAFETY PLAN - 2ND LEVEL
L.S-3 LIFE SAFETY PLAN - 3RD-5TH LEVELS
L.S-4 LIFE SAFETY PLAN - PENTHOUSE LEVEL

STRUCTURAL

S1.00 STRUCTURAL NOTES
S1.01 THRESHOLD NOTES
S1.02 TYPICAL DETAILS
S1.03 TYPICAL DETAILS
S1.04 FLOOD SECTIONS
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S2.00 FOUNDATION FRAMING PLAN
S2.01 GROUND FLOOR FRAMING PLAN
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S3.00 COLUMN SCHEDULES & DETAILS
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S3.03 SHEARWALL DETAILS & SCHEDULE
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S4.00 STAIR 1 & 2 SECTION & DETAILS
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MECHANICAL

M-0 MECHANICAL COVER SHEET
M-1 GROUND LEVEL MECHANICAL PLAN
M-2 2ND LEVEL MECHANICAL PLAN
M-3 3RD LEVEL MECHANICAL PLAN
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M-7 ROOF MECHANICAL PLAN
M-8 MECHANICAL DETAILS
M-9 MECHANICAL DETAILS
M-10 MECHANICAL SCHEDULE
M-11 MECHANICAL SPECIFICATIONS
M-12 MECHANICAL

BUILDING HEIGHT / TOP OF PARAPET : 63'-4" AFF. NUMBER OF STORIES 6

MEZZANINE : YES ☐ NO ☑

HIGH RISE : YES ☐ NO ☑

GARAGE LEVEL	=	6138 SF.
2ND FLOOR	=	6532 SF.
3RD FLOOR	=	6532 SF.
4TH FLOOR	=	6532 SF.
5TH FLOOR	=	6532 SF.
6TH FLOOR	=	6532 SF.

TOTAL GROSS AREA: 38,990 SF.

AREA INCREASE ? YES ☐ NO ☑ CODE REFERENCE : _____

LIFE SAFETY SYSTEM :

EMERGENCY LIGHTING and EXIT SIGNAGE	YES ☑	NO ☐
FIRE ALARM and SMOKE DETECTION SYSTEMS	YES ☑	NO ☐
PANIC HARDWARE	YES ☑	NO ☐

SPRINKLED YES ☑ NO ☐ (13 13R 13D) : _____

EXIT REQUIREMENTS:
MAXIMUM EXIT ACCESS TRAVEL DISTANCE - 300'-0" FROM ANY POINT:
(WITH SPRINKLER SYSTEM)
MINIMUM CORRIDOR AISLE WIDTH - 44"
MINIMUM CLEAR OPENING OF EXIT - 32"
EGRESS WIDTH PER PERSON - 2" LEVEL - Ø.3" STAIRS

OCCUPANT LOAD: FBC 2023

1ST LEVEL (GARAGE)
TOTAL SQFT OF FLOOR 6138 SF.

ELEVATOR (ASSEMBLY CONCENTRATE)	= 10 SQFT/NET 1 SQFT PER OCCUPANT	= 10 PEOPLE
DUMPSTER (ACCESSORY STORAGE)	= 95 SQFT/GROSS 300 SQFT PER OCCUPANT	= 1 PERSONS
PARKING GARAGE, CABANAS, RESTROOMS	= 5593 SQFT/GROSS 200 SQFT PER OCCUPANT	= 28 PERSONS
SWIMMING POOL DECK	= 3,064 SQFT / GROSS 15 SQFT PER OCCUPANT	= 92 PERSONS
SWIMMING POOL	= 900 SQFT / GROSS 50 SQFT PER OCCUPANT	= 18 PERSONS
MAX OCCUPANCY OF LEVEL 1 = 149		

2ND LEVEL
TOTAL SQFT OF FLOOR 6138 SF.

RESIDENTIAL	= 5054 SQFT / NET 200 SQFT PER OCCUPANT	= 26 PERSONS
OFFICE AREA (ASSEMBLY UNCONCENTRATE)	= 154 SQFT/NET 15 SQFT PER OCCUPANT	= 10 PERSONS
STORAGE, MECH, ELEC (ACCESSORY STORAGE)	= 95 SQFT/GROSS 300 SQFT PER OCCUPANT	= 1 PERSONS
PUBLIC BALCONY (ASSEMBLY UNCONCENTRATE)	= 372 SQFT / GROSS 15 SQFT PER OCCUPANT	= 25 PERSONS
MAX OCCUPANCY OF LEVEL 2 = 62		

3RD - 5TH LEVELS
TOTAL SQFT OF EACH FLOOR 6132 SF.

RESIDENTIAL	= 5208 SQFT / NET 200 SQFT PER OCCUPANT	= 27 PERSONS
MECHANICAL (ACCESSORY STORAGE)	= 95 SQFT / GROSS 300 SQFT PER OCCUPANT	= 1 PERSONS
PUBLIC BALCONY (ASSEMBLY UNCONCENTRATE)	= 372 SQFT / GROSS 15 SQFT PER OCCUPANT	= 25 PERSONS
MAX OCCUPANCY OF LEVEL 3 = 53		
MAX OCCUPANCY OF LEVEL 4 = 53		
MAX OCCUPANCY OF LEVEL 5 = 53		

6TH LEVEL
TOTAL SQFT OF EACH FLOOR 6377 SF.

RESIDENTIAL	= 5721 SQFT / NET 200 SQFT PER OCCUPANT	= 29 PERSONS
MECHANICAL (ACCESSORY STORAGE)	= 95 SQFT / GROSS 300 SQFT PER OCCUPANT	= 1 PERSONS
MAX OCCUPANCY OF LEVEL 6 = 30		

GRAND TOTAL OCCUPANCY: FBC 2023 = 400

OCCUPANT LOAD: NFPA 101

NUMBER EXITS : GARAGE LEVEL
TOTAL SQUARE FOOTAGE OF FLOOR 6138 SF. DIVIDED BY NET/SQ. FT PER OCCUPANCY 200
= 31 MAX. TOTAL NUMBER OF PEOPLE ALLOWED ON FLOOR.
NUMBER OF DOORS PROVIDED 2
NUMBER OF DOORS REQUIRED: 2

NUMBER EXITS : 2ND THRU 6TH LEVELS
TOTAL SQUARE FOOTAGE OF FLOOR 6132 SF. DIVIDED BY NET/SQ. FT PER OCCUPANCY 200
= 31 MAX. TOTAL NUMBER OF PEOPLE ALLOWED ON FLOOR.
NUMBER OF DOORS PROVIDED 2
NUMBER OF DOORS REQUIRED: 2

GRAND TOTAL OCCUPANCY: NFPA 101 = 186

ELEVATOR NOTE:

THE ELEVATOR IN THIS BUILDING WILL COMPLY WITH CHAPTER 30 OF THE 2023 FBC, 8TH EDITION AND SECTION 407 OF THE FLORIDA ACCESSIBILITY CODE.

ELEVATOR TO MEET REQUIREMENTS OF NFPA 101 2021 EDITION, SECTION 7.3.4 ACCESSIBLE MEANS OF EGRESS.

ACCESSIBILITY NOTE:

THIS 6 STORY BUILDING WILL FULLY COMPLY THE 8TH EDITION OF THE 2023 FLORIDA BUILDING CODE - ACCESSIBILITY.

FIRE RESISTANT RATING REQUIREMENTS:

FBC TABLE 601 - IIB CONSTRUCTION TYPE

PRIMARY STRUCTURAL FRAME = Ø HR.
BEARING WALLS (EXTERIOR AND INTERIOR) = Ø HR.
NON-BEARING WALLS AND PARTITIONS (EXTERIOR) = Ø HR.
NON-BEARING WALLS AND PARTITIONS (INTERIOR) = Ø HR.
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS = Ø HR.
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS - Ø HR

NOTE: AN APPROVED AUTOMATIC SPRINKLER SYSTEM SHALL BE ALLOWED TO BE SUBSTITUTED FOR 1-HR. FIRE RATED CONSTRUCTION.

MECHANICAL NOTE:

PER FBC - MECHANICAL 8TH EDITION 2023, ALL MECHANICAL EQUIPMENT SHALL BE LOCATED ABOVE FEMA BFE.

FIRE SPRINKLER NOTE:

1. PER FBC 903.3.1.1 NFPA 13R SPRINKLER SYSTEM. WHERE THE PROVISIONS OF THIS CODE REQUIRE THAT A BUILDING OR PORTION THEREOF BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH THIS SECTION, SPRINKLERS SHALL BE INSTALLED THROUGHOUT IN ACCORDANCE WITH NFPA 13.
2. FIRE SPRINKLER DRAWINGS WILL BE PERMITTED SEPARATELY BY A LICENSED FIRE SUPPRESSION CONTRACTOR.

BUILDING HEIGHT:

1. PER FBC 8TH EDITION 2023 TABLE 504.3 - TYPE IIB CONSTRUCTION WITH A R-3 OCCUPANCY HAS AN ALLOWABLE BUILDING HEIGHT OF 75 FEET.
2. PER FBC 8TH EDITION 2023, SECTION 504.3, BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM, THE MAXIMUM BUILDING HEIGHT CAN BE INCREASED BY 20 FEET AND A MAXIMUM STORY INCREASE BY ONE.
3. THIS BUILDING IS 5 STORIES ABOVE PARKING. TOP OF ROOF SLAB IS 58'-10" ABOVE DESIGN FLOOD.

FIRE NOTES:

1. PER FBC SEC. 703.4, UNDER THE PRESCRIPTIVE FIRE-RESISTANCE REQUIREMENTS OF THIS CODE, THE FIRE-RESISTANCE RATING OF A BUILDING ELEMENT, COMPONENT OR ASSEMBLY SHALL BE ESTABLISHED WITHOUT THE USE OF AUTOMATIC SPRINKLERS.
2. FIRE BARRIERS CONSTRUCTED IN ACCORDANCE WITH SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH SECTION 711 BETWEEN THE PARKING OCCUPANCY AND THE UPPER OCCUPANCY SHALL CORRESPOND TO THE REQUIRED FIRE-RESISTANCE RATING PRESCRIBED IN TABLE 508.4 FOR THE USES INVOLVED. ADDITIONALLY, MEANS OF EGRESS FOR THE UPPER OCCUPANCY SHALL CONFORM TO CHAPTER 10 AND SHALL BE SEPARATED FROM THE PARKING OCCUPANCY BY FIRE BARRIERS HAVING NOT LESS THAN A 2-HOUR FIRE-RESISTANCE RATING AS REQUIRED BY SECTION 707 WITH SELF-CLOSING DOORS COMPLYING WITH SECTION 716 OR HORIZONTAL ASSEMBLIES HAVING NOT LESS THAN A 2-HOUR FIRE-RESISTANCE RATING AS REQUIRED BY SECTION 711, WITH SELF-CLOSING DOORS COMPLYING WITH SECTION 716.
3. MONITORED FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72
4. NFPA 13 - AUTOMATIC SPRINKLER SYSTEM
   A. FDC - STORZ CONNECTION (NEAR HYDRANT, SOUTH ENTRANCE)
   B. FIRE PUMP BASE ON ENGINEERED HYDRAULIC CALCULATION | 2-HOUR ROOM RATING
5. STANDPIPE SYSTEM WITH 2 ½ FIRE DEPARTMENT CONNECTION (TYPE 1)
6. KNOX - LOCK BOX
7. AREA OF REFUGE
   A. MINIMUM 44-INCH CORRIDOR
   B. 1-HOUR RATING
8. EMERGENCY LIGHTING AND EXIT SIGNS IN ACCORDANCE WITH NFPA 101
9. BUILDING ADDRESS - 6-INCH NUMBERS
10. FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10
    A. 2A EXTINGUISHER, 75 FT. TRAVEL DISTANCE

FAR TABLE

TOTAL FLOOR AREA GROUND LEVEL - (2) RESTROOMS, ELEVATOR, & DUMPSTER ROOM	383 SF.
TOTAL FLOOR AREA LEVEL 2 - ALL UNITS, UTILITY ROOM (FIRE PUMP)	4551 SF.
TOTAL FLOOR AREA LEVEL 3 - ALL UNITS, UTILITY ROOM (ELECTRICAL ROOM)	4551 SF.
TOTAL FLOOR AREA LEVEL 4 - ALL UNITS, UTILITY ROOM	4551 SF.
TOTAL FLOOR AREA LEVEL 5- ALL UNITS, UTILITY ROOM	4551 SF.
TOTAL FLOOR AREA LEVEL 6- ALL UNITS, UTILITY ROOM	4464 SF.
TOTAL FLOOR AREA ALL LIVING LEVELS	**23,051 SF.**
TOTAL SITE AREA	**19,098 SF.**
TOTAL FAR (1.20 ALLOWED)	**1.20**

BUILDING CODE SUMMARY

BUILDING DATA :

OCCUPANCY : ☐ ASSEMBLY ☐ BUSINESS ☐ EDUCATIONAL ☐ FACTORY ☐ HIGH HAZARD ☐ INSTITUTIONAL ☐ MERCANTILE ☑ RESIDENTIAL ☐ STORAGE ☐ UTILITY/MISC ☐ DAY CARE
USE CONDITION R-3

CHANGE OF OCCUPANCY: ☐ YES ☑ NO MIXED OCCUPANCY ☑ YES ☐ NO SEPERATION 2 HR.

CONSTRUCTION TYPE: ☐ IA ☐ IB ☑ IIB ☐ IIIA ☐ IIIB ☐ IV ☐ VA ☐ VB
MIXED CONSTRUCTION: ☐ YES ☑ NO TYPE:

SPRINKLED: ☑ YES ☐ NO ☐ N/A (13 13R 13D): TYPE:

COMPLIANCE METHOD: ☐ PRESCRIPTIVE ☑ WORK AREA ☐ PERFORMANCE

LEVEL OF ALTERATION: ☑ N/A ☐ I ☐ II ☐ III

LIFE SAFETY SYSTEM:

EMER. LIGHTING & EXIT SIGNAGE	☑ YES	☐ NO	☐ N/A
FIRE ALARM & SMOKE DETECT. SYSTEM	☑ YES	☐ NO	☐ N/A
PANIC HARDWARE	☑ YES	☐ NO	☐ N/A

PERMITTING AGENCY:
CITY OF TREASURE ISLAND BUILDING DEPARTMENT

APPLICABLE CODES

8TH EDITION	2023 FLORIDA BUILDING CODE - RESIDENTIAL
8TH EDITION	2023 FLORIDA BUILDING CODE - BUILDING
8TH EDITION	2023 FLORIDA BUILDING CODE - ENERGY
8TH EDITION	2023 FLORIDA BUILDING CODE - TEST PROTOCOL
8TH EDITION	2023 FLORIDA BUILDING CODE - PLUMBING
8TH EDITION	2023 FLORIDA BUILDING CODE - MECHANICAL
8TH EDITION	2023 FLORIDA BUILDING CODE - EXISTING BUILDING
8TH EDITION	2023 FLORIDA BUILDING CODE - FUEL GAS
8TH EDITION	2023 FLORIDA BUILDING CODE - ACCESSIBILITY
8TH EDITION	2023 FLORIDA FIRE PREVENTION CODE
NEC 2023	NATIONAL ELECTRIC CODE - NFPA 70
	FAIR HOUSING GUIDELINES

DESIGNED IN ACCORDANCE WITH THE 7TH EDITION FLORIDA BUILDING CODE 2023, SECTION 1609 FOR DESIGN PRESSURES.

SQUARE FOOTAGE CALCS

UNIT SQUARE FOOTAGE:

GROUND LEVEL

GARAGE/CABANAS/RESTROOMS - NON A/C	5593 SF.
STAIRWELL (2) - OPEN AIR - NON AC	380 SF.
ELEVATOR - A/C	70 SF.
DUMPSTER ROOM - NON A/C	95 SF.
TOTAL FOOTPRINT	**6138 SF.**

2ND - 6TH LEVEL COMMON AREA

STAIRWELL (2) - OPEN AIR - NON A/C	380 SF.
ELEVATOR - A/C	70 SF.
UTILITY ROOM - NON A/C	95 SF.
BALCONY - NON A/C	372 SF.
TOTAL COMMON AREA	**727 SF.**

2ND LEVEL - OFFICE-AC 152 SF.

EXTERIOR UNITS - 201 AND 204

INTERIOR LIVING AREA - A/C	1128 SF.
BALCONY - NON A/C	188 SF.
TOTAL AREA (2)	**2632 SF.**

INTERIOR UNIT - 202

INTERIOR LIVING AREA - A/C	1104 SF.
BALCONY - NON A/C	184 SF.
TOTAL AREA	**1288 SF.**

INTERIOR UNIT - 203 - ADA UNIT

INTERIOR LIVING AREA - A/C	952 SF.
BALCONY - NON A/C	184 SF.
TOTAL AREA	**1136 SF.**

2ND LEVEL - TOTAL AC	4534 SF.
2ND LEVEL - TOTAL FOOTPRINT	6138 SF.

SQUARE FOOTAGE CALCS

UNIT SQUARE FOOTAGE:

EXTERIOR UNITS - 301, 401, 501 AND 304, 404, 504

INTERIOR LIVING AREA - A/C	1128 SF.
BALCONY - NON A/C	188 SF.
TOTAL AREA (2) UNITS PER FLOOR	**2632 SF.**

INTERIOR UNIT - 302, 402, 502 AND 303, 403, 503

INTERIOR LIVING AREA - A/C	1104 SF.
BALCONY - NON A/C	188 SF.
TOTAL AREA (2) UNITS PER FLOOR	**2576 SF.**

3RD-5TH LEVEL - TOTAL AC	4464 SF.
3RD-5TH LEVEL - TOTAL FOOTPRINT	6138 SF.

PENTHOUSE COMMON AREA

STAIRWELL (2) - NON A/C	380 SF.
ELEVATOR - A/C	70 SF.
UTILITY ROOM - NON A/C	95 SF.
HALLWAY	104 SF.
TOTAL COMMON AREA	**649 SF.**

PENTHOUSE UNIT

INTERIOR LIVING AREA - A/C	4378 SF.
BALCONY - NON A/C	1355 SF.
TOTAL SF OF UNIT	**5733 SF.**

PENTHOUSE - TOTAL FOOTPRINT 6371 SF.

TOTAL SQUARE FOOTAGE:

GROUND LEVEL SF	6330 SF.
2ND LEVEL SF.	6138 SF.
3RD LEVEL SF.	6138 SF.
4TH LEVEL SF.	6138 SF.
5TH LEVEL SF.	6138 SF.
PENTHOUSE LEVEL SF.	6371 SF.
TOTAL GROSS S.F. OF BUILDING	**37,259 SF.**

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FD#: 23132.00

Construction Documents for:

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

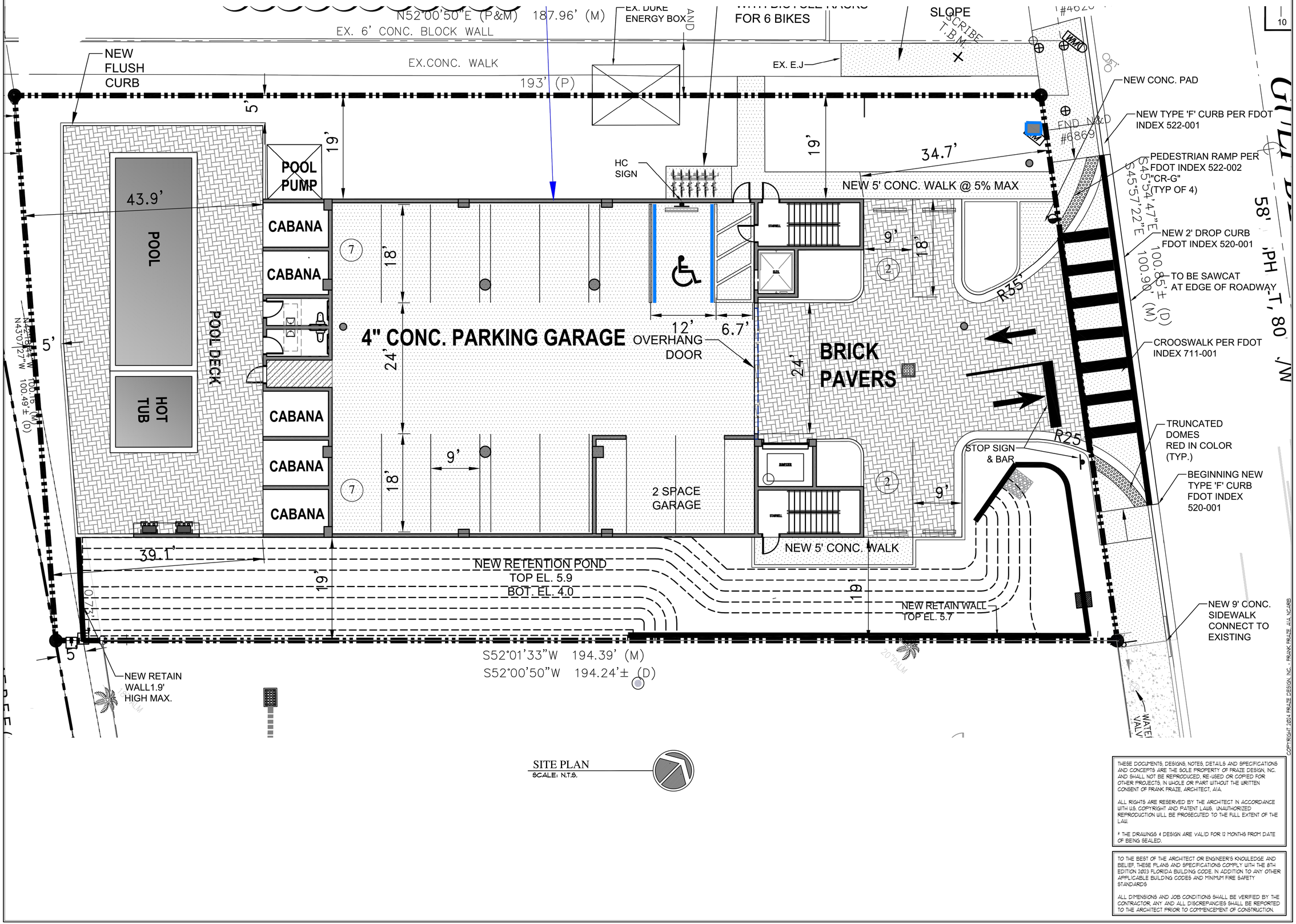
STATE OF FLORIDA — ORA FRANKLIN FRAZE IV — AR0014705 — REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

FRAZE design — commercial residential architecture
FL LIC. NO. AA26006585
1750 CENTRAL AVENUE ST. PETERSBURG, FLORIDA 33712
PHONE: 727/328-3668 FAX: 727/328-3669
E-MAIL: fd@frazedesign.com STUDIO: 727/328-3607

SHEET TITLE
CODE REFERENCE, SQUARE FOOTAGE, & MISC. CHARTS

SHEET NUMBER
A-1.1



SITE PLAN
SCALE: N.T.S.

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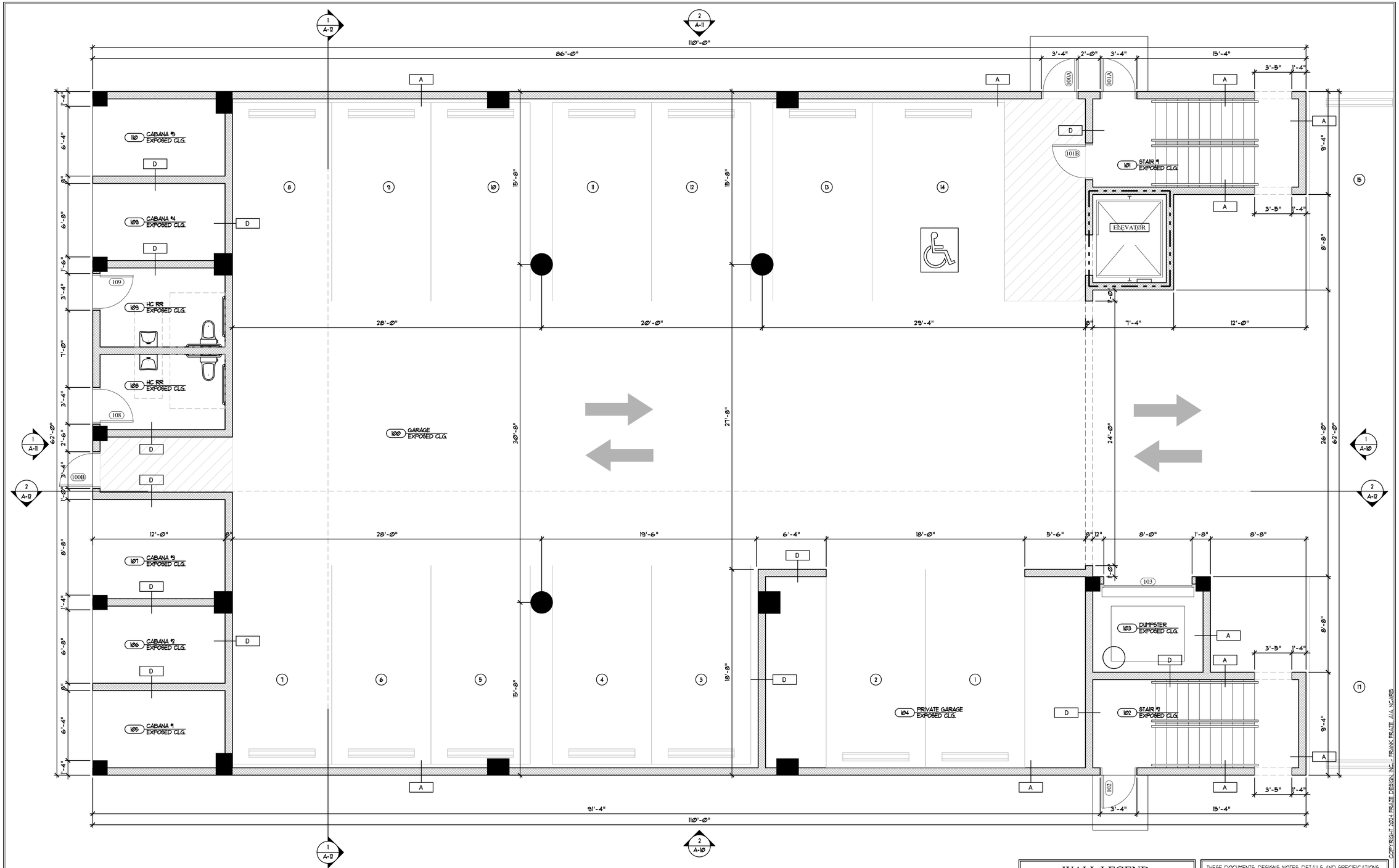
FL. LIC. NO. AA26006585

SHEET TITLE
SITE PLAN

SHEET NUMBER
A-2



GROUND LEVEL FLOOR PLAN

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

ELEVATOR NOTE:

- THE ELEVATOR IN THIS BUILDING WILL COMPLY WITH CHAPTER 30 OF THE 2023 FBC, 7TH EDITION AND SECTION 407 OF THE FLORIDA ACCESSIBILITY CODE.
- ELEVATOR TO MEET REQUIREMENTS OF NFPA 101 2021 EDITION, SECTION 7.5.4 ACCESSIBLE MEANS OF EGRESS
- ELEVATOR INSPECTION COMPLIES WITH FEMA TECHNICAL BULLETIN 4/ NOVEMBER 2020.

WALL LEGEND:

- METAL STUD WALL. REFERENCE SHEET A-16, DETAIL 2, TYPES P-1 AND P-2.
- 1- HOUR FIRE RATED METAL STUD WALL. UL DETAIL U419.
- MASONRY WALL. REFERENCE SHEET A-16, DETAIL 2, TYPES A-D
- 1-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- 2-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- C.I.P. CONCRETE WALL. REFERENCE STRUCTURAL DRAWINGS
- 1-HOUR FIRE RATED C.I.P. CONCRETE WALL. UL. DETAIL U904.
- 2-HOUR FIRE RATED C.I.P. CONCRETE WALL. DETAIL U904.

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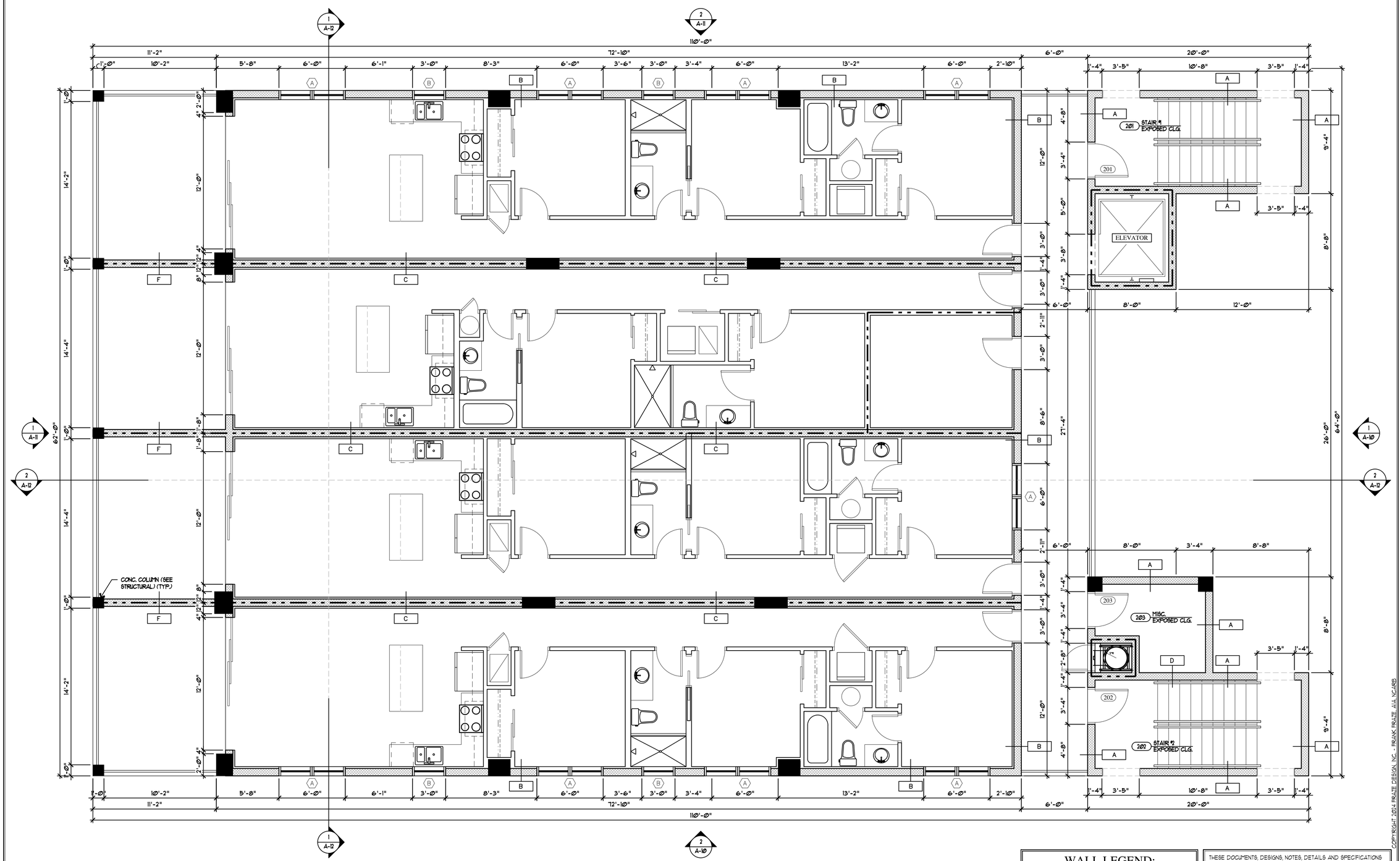
SHEET TITLE

FLOOR PLAN - GROUND LEVEL

SHEET NUMBER

A-3



2ND LEVEL FLOOR PLAN

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

ELEVATOR NOTE:

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TREASURE ISLAND, FL

PROFESSIONAL SEAL

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

ORA FRANKLIN FRAZE, IV

FRAZE design — commercial residential architecture

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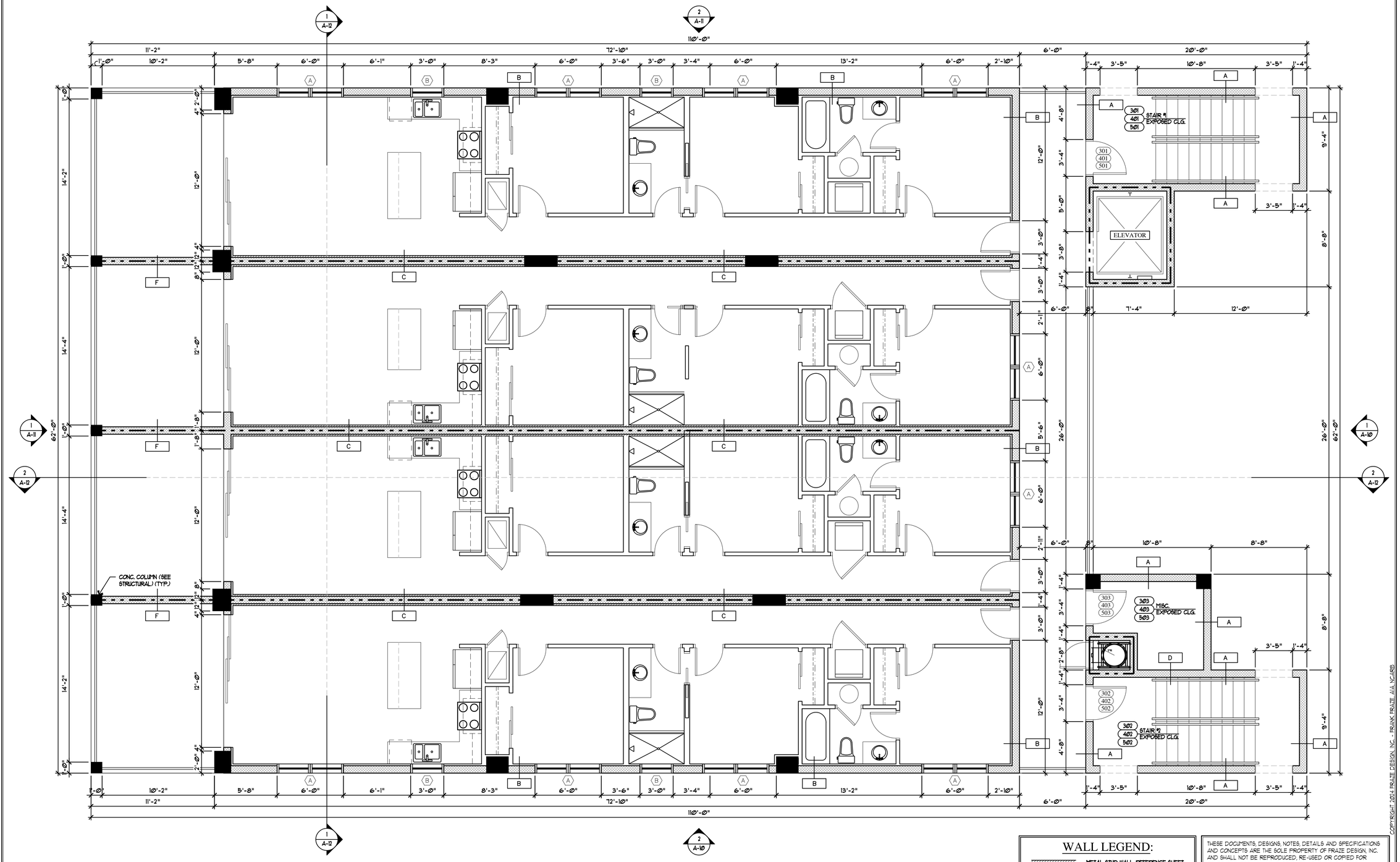
SHEET TITLE

FLOOR PLAN - 2ND LEVEL

SHEET NUMBER

A-4



3RD-5TH LEVEL FLOOR PLAN

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

ELEVATOR NOTE:

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- 2-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- C.I.P. CONCRETE WALL. REFERENCE STRUCTURAL DRAWINGS
- 1-HOUR FIRE RATED C.I.P. CONCRETE WALL. UL DETAIL U904.
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Construction Documents for:

FDH# 23132.00

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

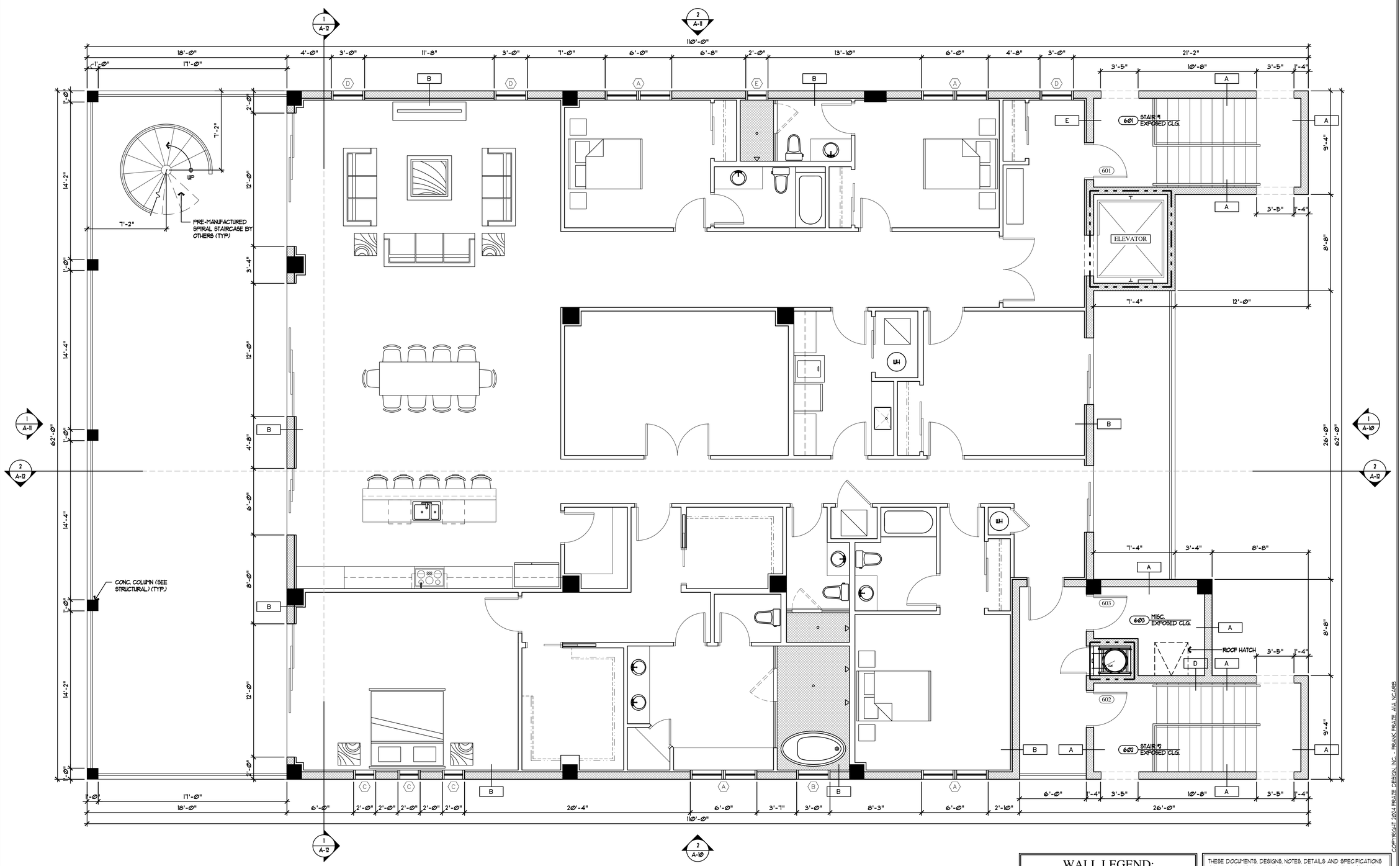
STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL LIC NO. AA26000585
ST. PETERSBURG, FLORIDA 33712
STUDIO: 727/328-3607
FAX: 727/328-3609
1750 CENTRAL AVENUE
PHONE: 727/328-3608
E-MAIL: fdi@frazedesign.com

SHEET TITLE
FLOOR PLAN - 3RD-5TH LEVEL

SHEET NUMBER
A-5



PENTHOUSE LEVEL FLOOR PLAN

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

ELEVATOR NOTE:

- THE ELEVATOR IN THIS BUILDING WILL COMPLY WITH CHAPTER 30 OF THE 2023 FBC, 7TH EDITION AND SECTION 407 OF THE FLORIDA ACCESSIBILITY CODE.
- ELEVATOR TO MEET REQUIREMENTS OF NFPA 101 2021 EDITION, SECTION 7.5.4 ACCESSIBLE MEANS OF EGRESS
- ELEVATOR INSPECTION COMPLIES WITH FEMA TECHNICAL BULLETIN 4/ NOVEMBER 2010.

WALL LEGEND:

- METAL STUD WALL. REFERENCE SHEET A-16, DETAIL 2, TYPES P-1 AND P-2.
- 1- HOUR FIRE RATED METAL STUD WALL. UL DETAIL U419.
- MASONRY WALL. REFERENCE SHEET A-16, DETAIL 2, TYPES A-D
- 1-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- 2-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- C.I.P. CONCRETE WALL. REFERENCE STRUCTURAL DRAWINGS
- 1-HOUR FIRE RATED C.I.P. CONCRETE WALL. UL. DETAIL U904.
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BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

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

ORA FRANKLIN FRAZE, IV

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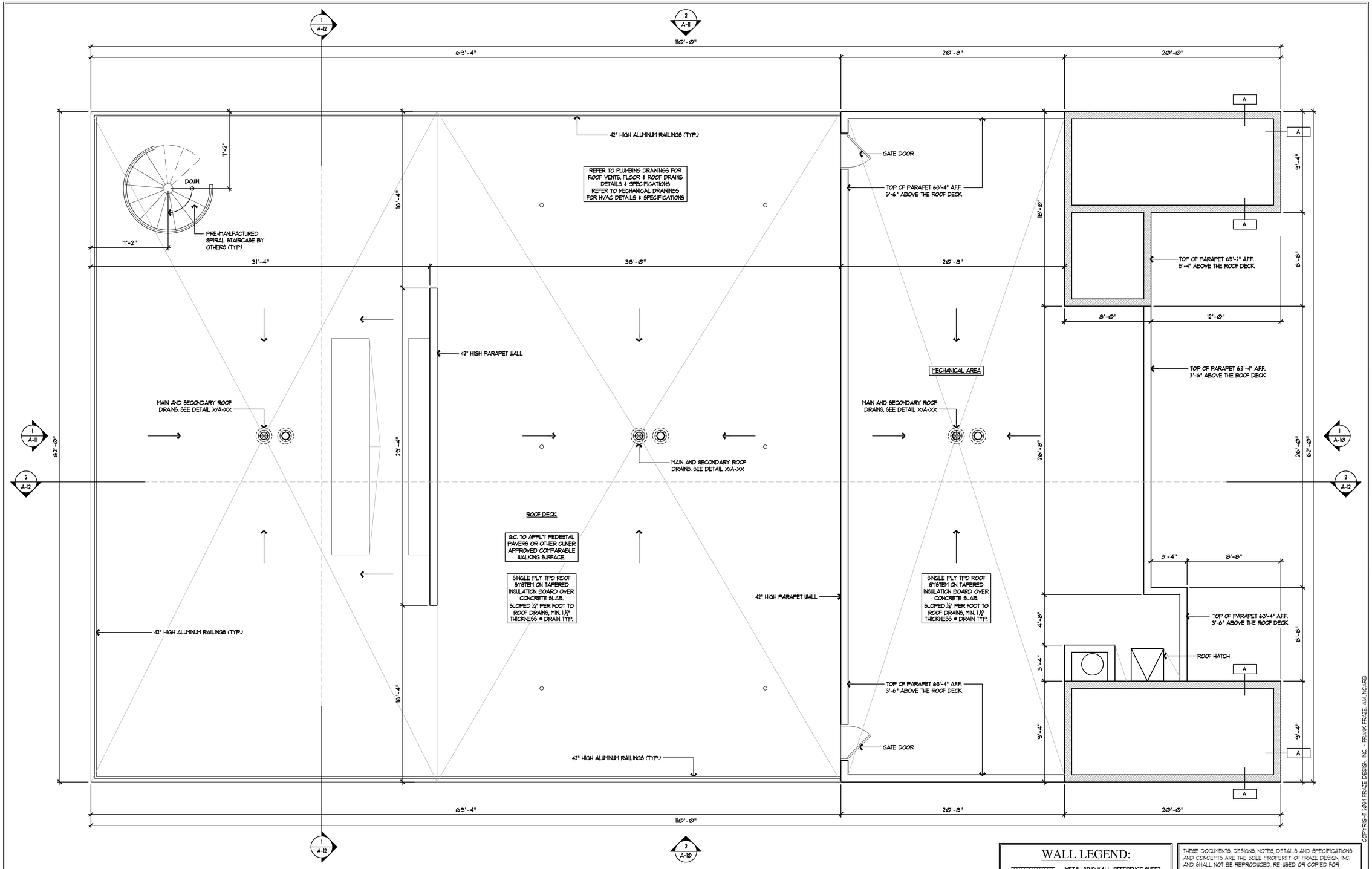
FAX: 727/328-3609
E-MAIL: info@frazedesign.com
1750 CENTRAL AVENUE
PHONE: 727/328-3608

SHEET TITLE
FLOOR PLAN - PENTHOUSE

SHEET NUMBER
A-6



ROOF DECK PLAN

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

WALL LEGEND:

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- 1-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
- 2-HOUR FIRE RATED MASONRY WALL. UL DETAIL U904.
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Construction Documents for:

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

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

ORA FRANKLIN FRAZE, IV

FRAZE design
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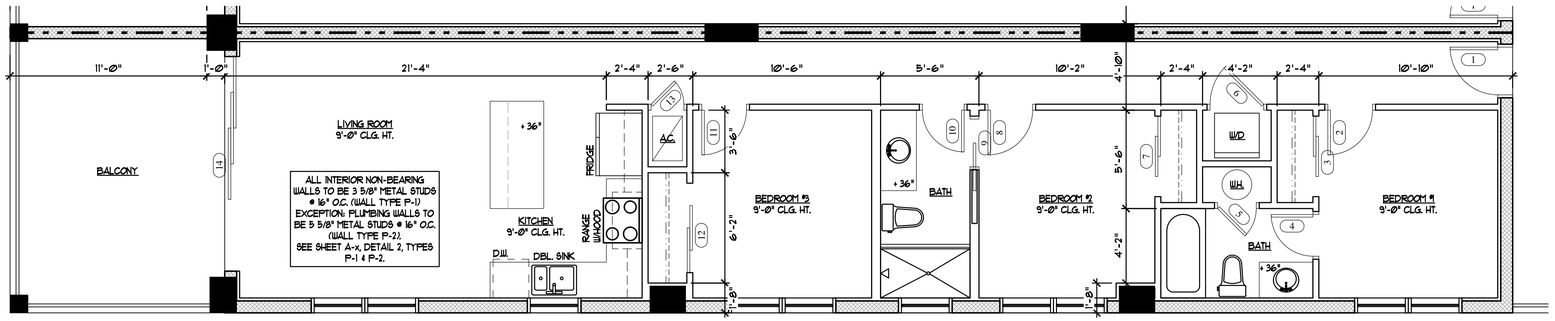
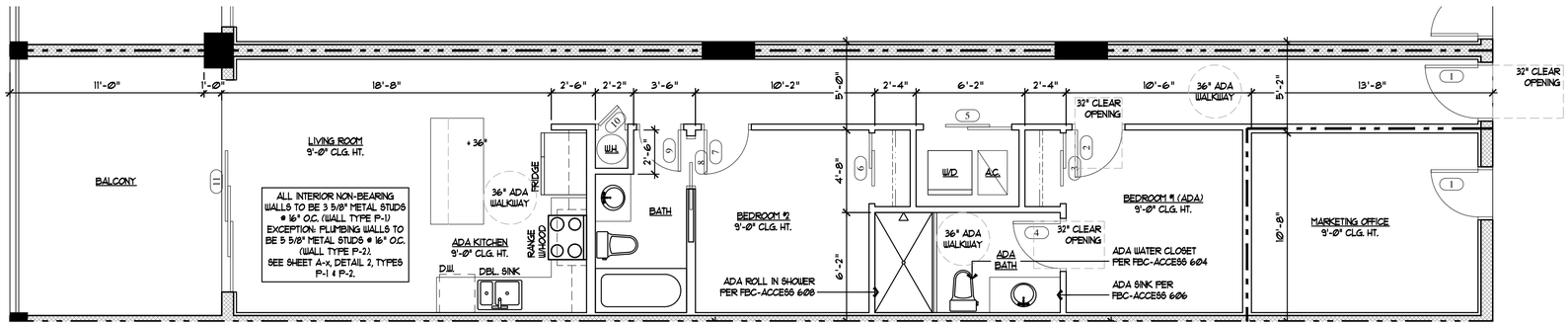
FAX: 727/328-3609
STUDIO: 727/328-3607
E-MAIL: fdi@frazedesign.com

SHEET TITLE
ROOF DECK PLAN

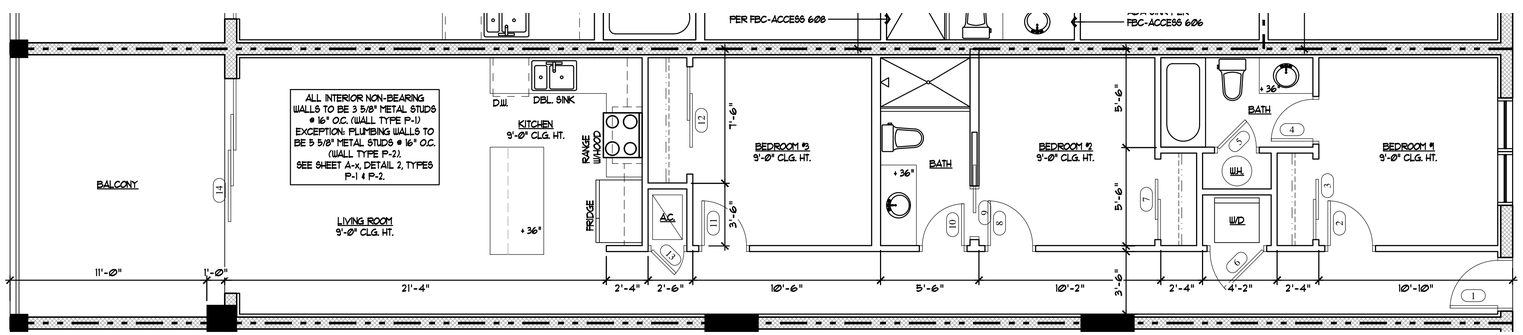
SHEET NUMBER
A-7



1 TYPICAL END UNIT PLAN
SCALE: 1/4" = 1'-0"



2 ADA UNIT & OFFICE PLAN
SCALE: 1/4" = 1'-0"



3 TYPICAL INTERIOR UNIT PLAN
SCALE: 1/4" = 1'-0"

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11580 GULF BOULEVARD
TREASURE ISLAND, FL

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

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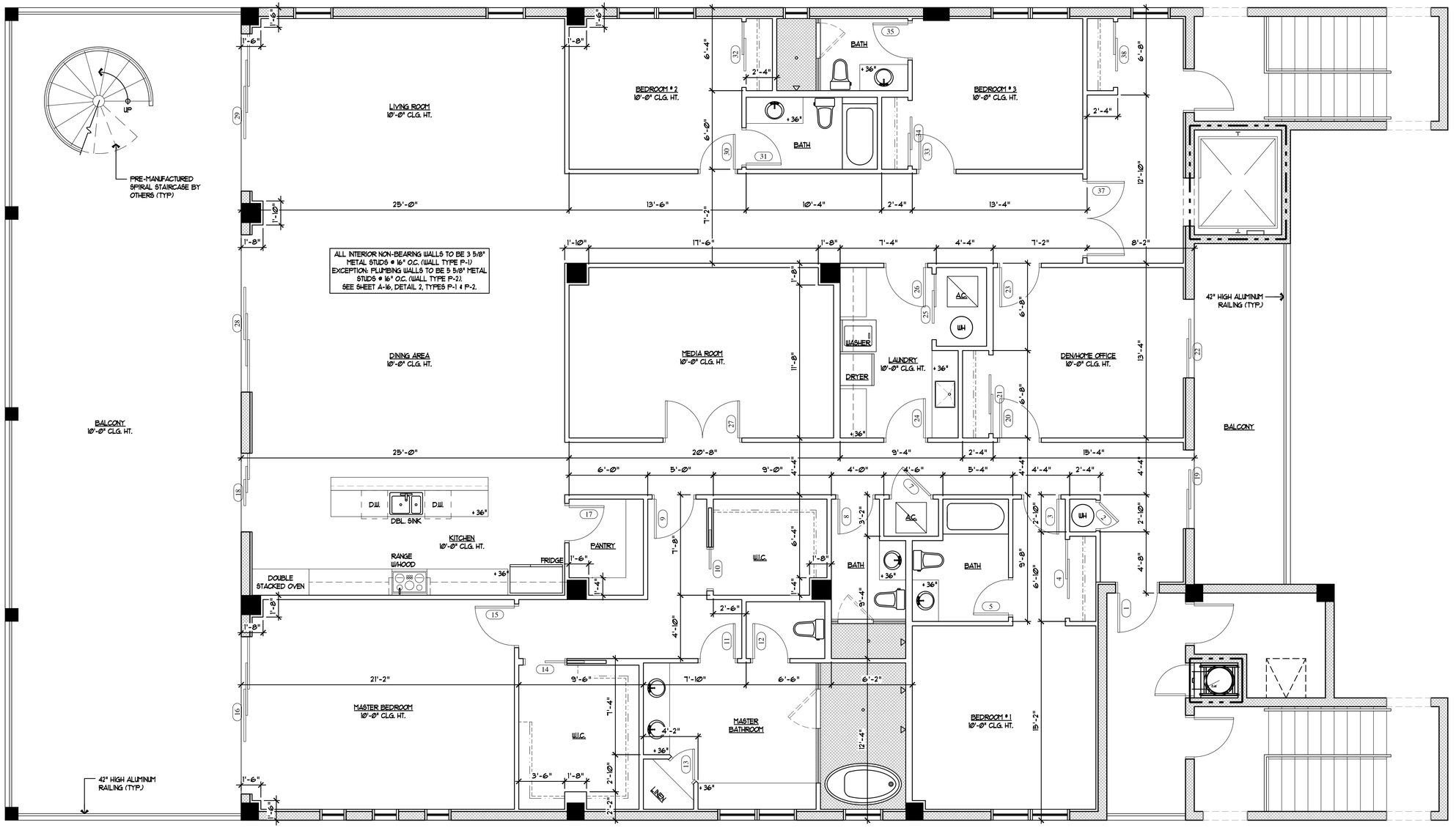
SHEET TITLE
TYPICAL UNIT PLANS

SHEET NUMBER
A-8



3 TYPICAL INTERIOR UNIT PLAN
SCALE: 1/4" = 1'-0"

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TREASURE ISLAND, FL

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

FRAZE design
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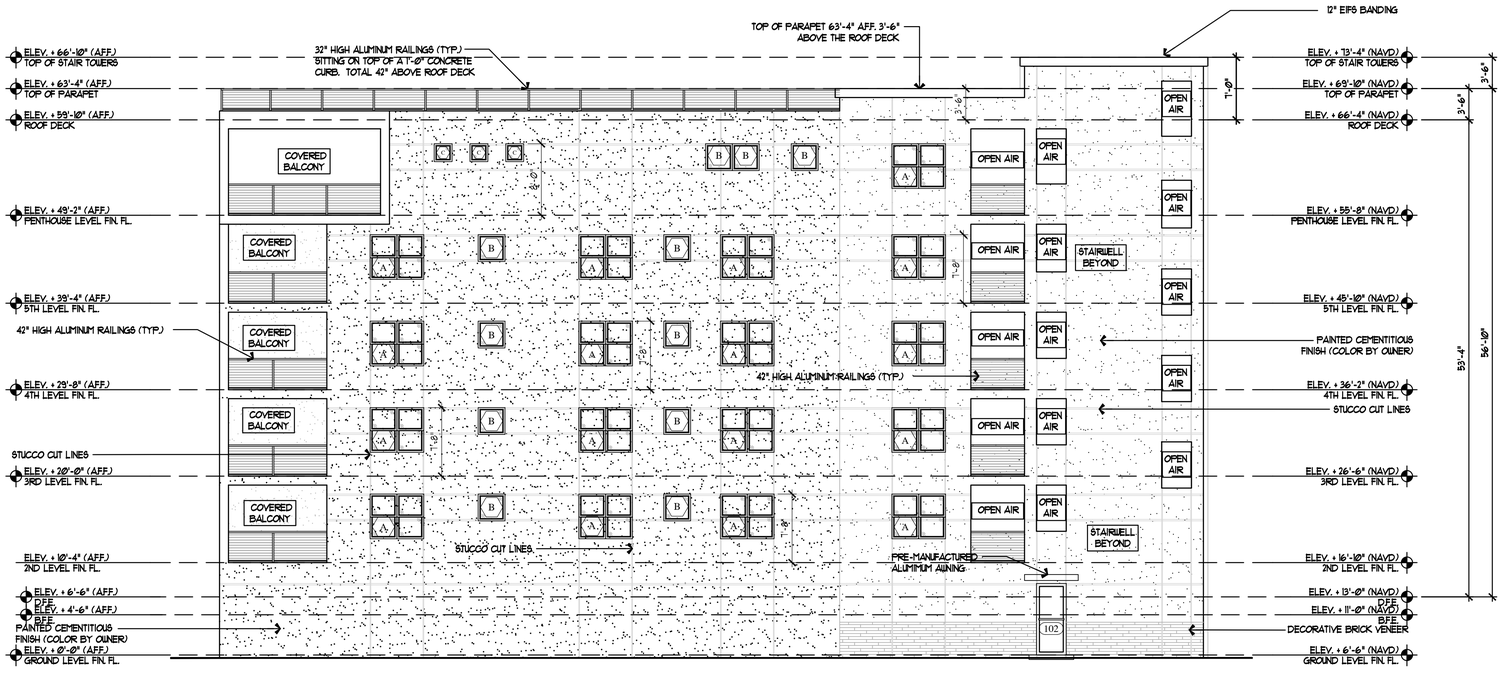
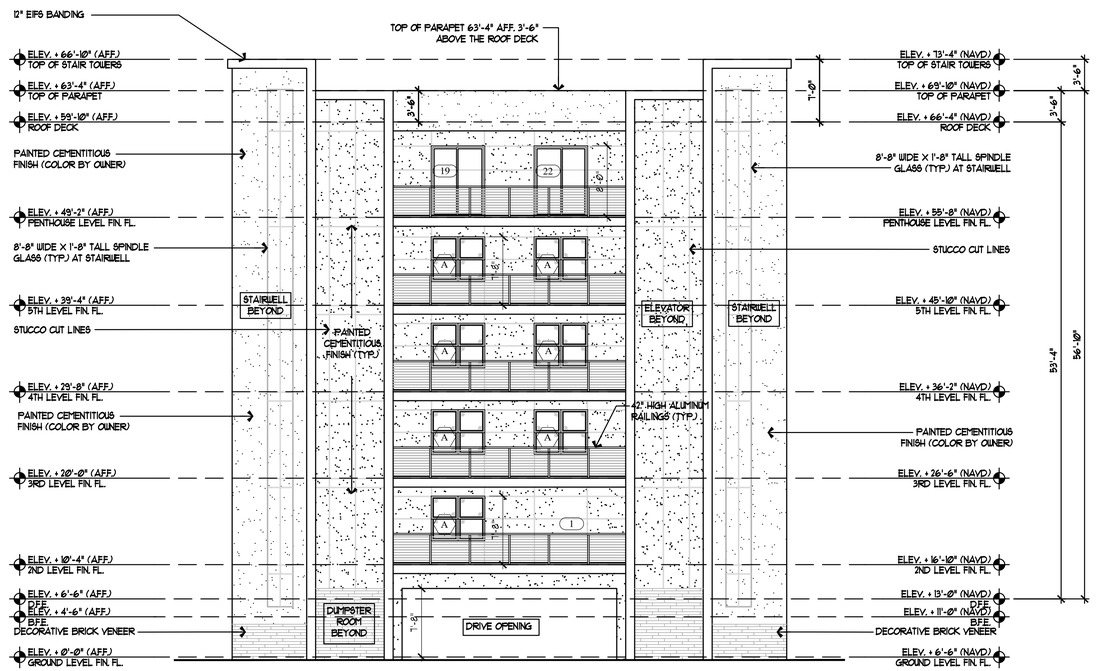
PHONE: 727/328-3608

SHEET TITLE
PENTHOUSE UNIT PLAN

SHEET NUMBER
A-9



2 SIDE ELEVATION
SCALE: 1/8 = 1'-0"



1 FRONT ELEVATION
SCALE: 1/8 = 1'-0"

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11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

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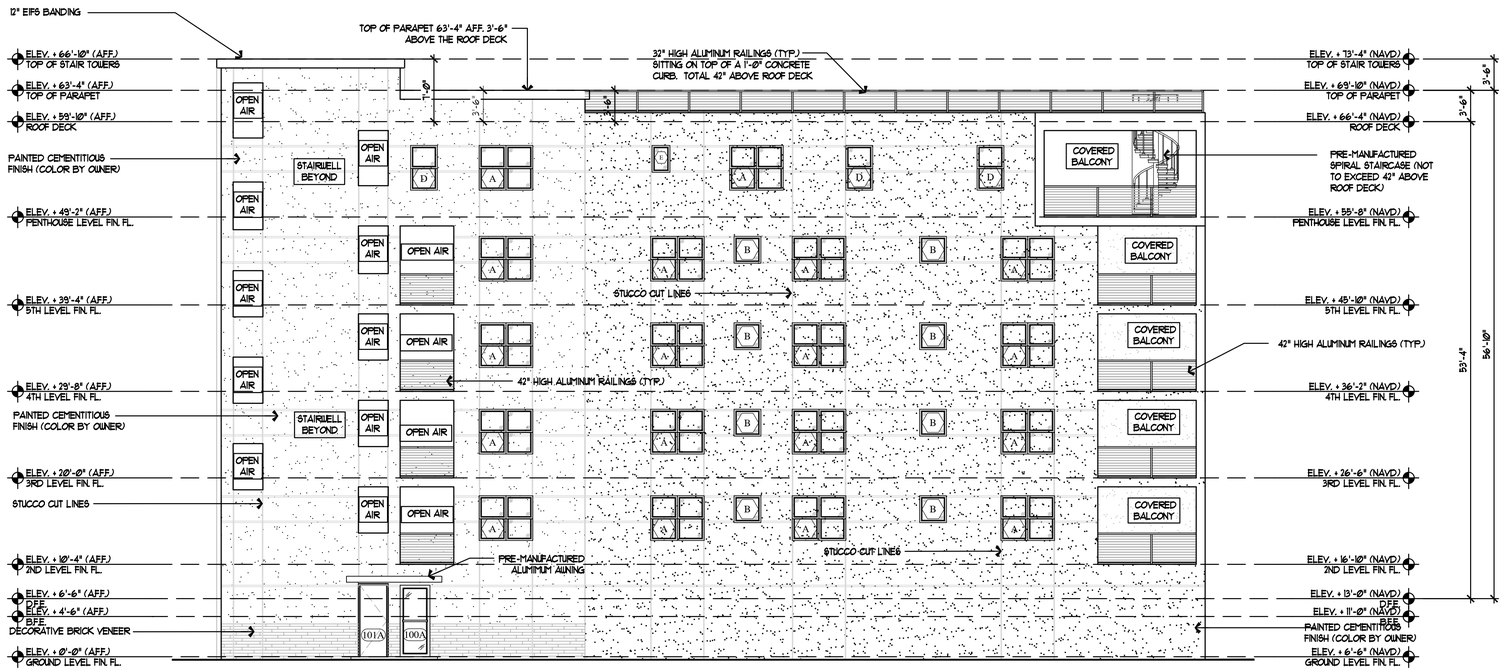
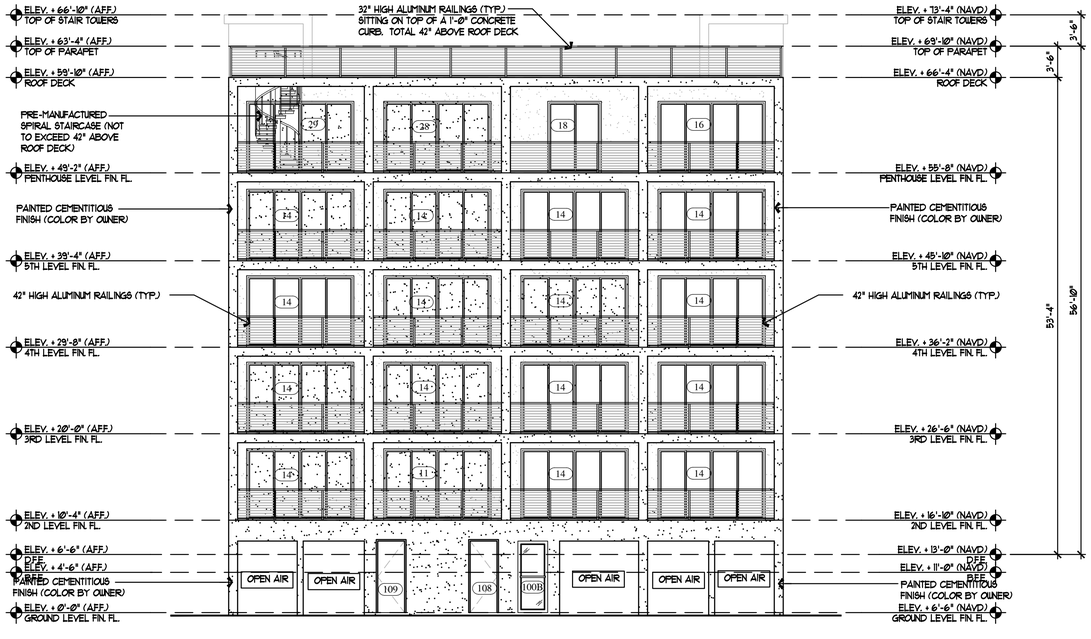
SHEET TITLE
EXTERIOR
ELEVATIONS

SHEET NUMBER
A-10



2 SIDE ELEVATION

SCALE: 1/8 = 1'-0"



1 REAR ELEVATION

SCALE: 1/8 = 1'-0"

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FDI# 23132.00

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

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

ORA FRANKLIN FRAZE, IV

FRAZE design — commercial residential architecture

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E-MAIL: fd@frazedesign.com

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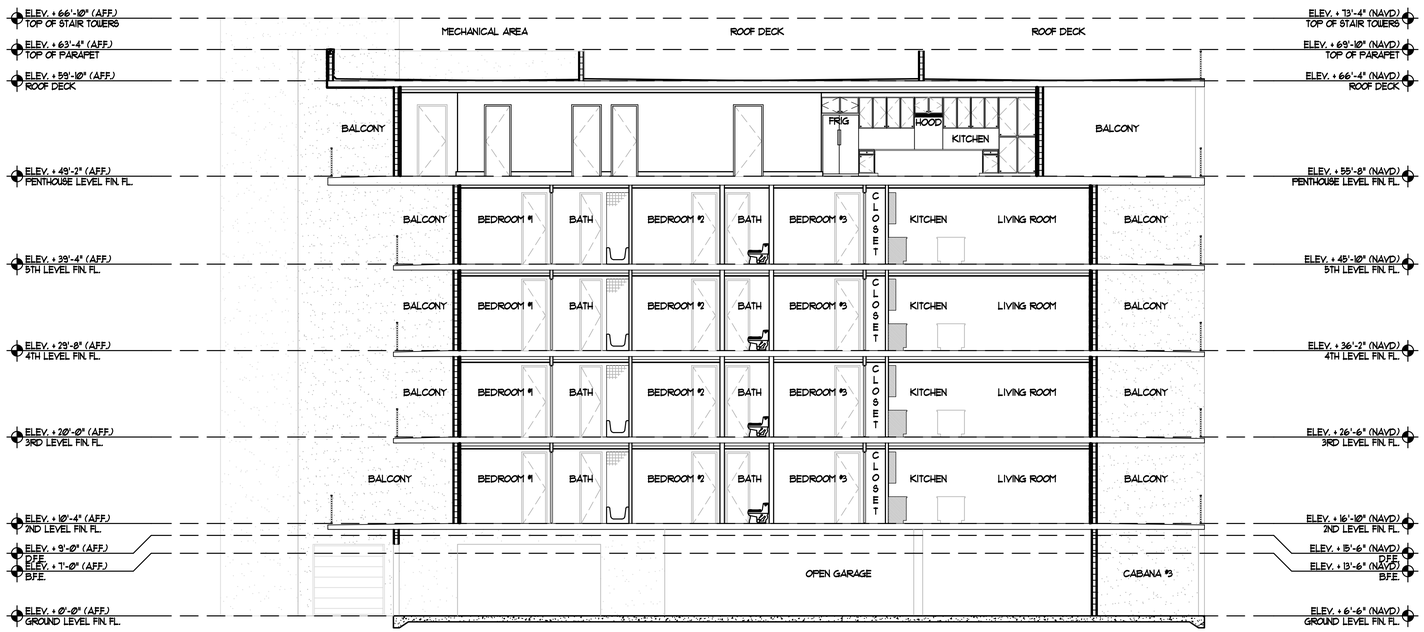
SHEET TITLE

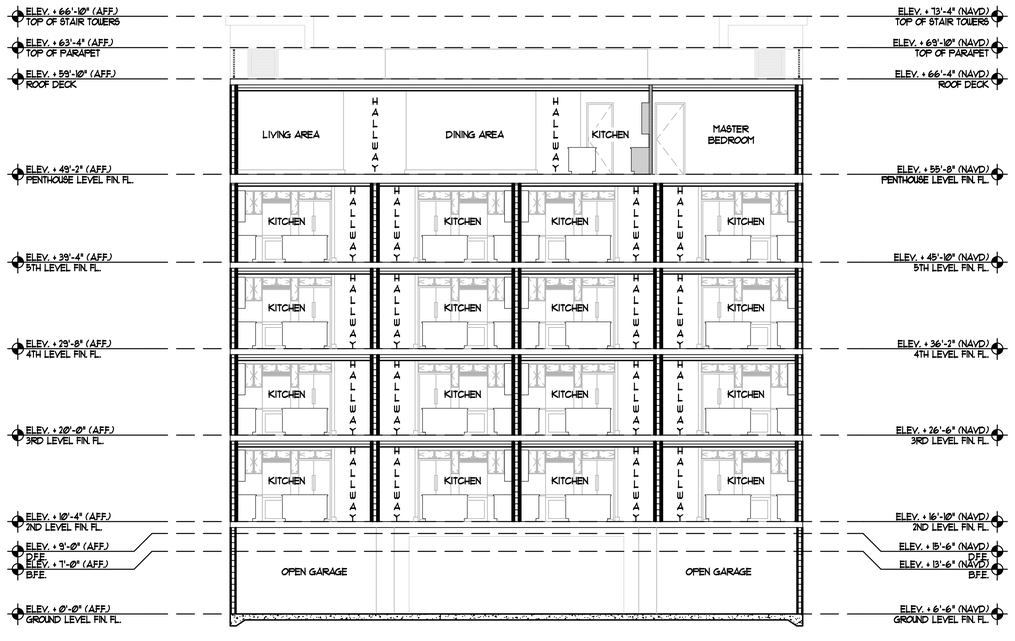
EXTERIOR ELEVATIONS

SHEET NUMBER

A-11



2 BUILDING SECTION
SCALE: 1/8 = 1'-0"



1 FRONT ELEVATION
SCALE: 1/8 = 1'-0"

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Construction Documents for:

BALBOA SHORES
11580 GULF BOULEVARD
TREASURE ISLAND, FL

PROFESSIONAL SEAL

STATE OF FLORIDA
ORA FRANKLIN FRAZE IV
AR0014705
REGISTERED ARCHITECT

ORA FRANKLIN FRAZE, IV

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SHEET TITLE
BUILDING SECTIONS

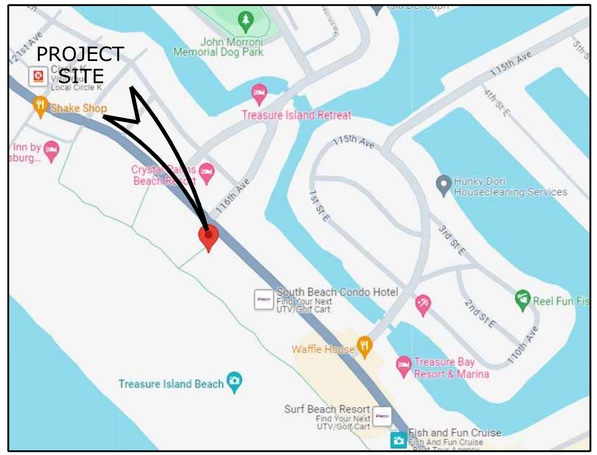
SHEET NUMBER
A-12

BALBOA SHORES

SECTION 23 - TOWNSHIP 31 S - RANGE 15 E
PARCEL NO. 23-31-15-00000-240-0200
TREASURE ISLAND, FLORIDA

LEGAL DESCRIPTION

For a Point of Beginning, commence at the most Southerly corner of Lot 4, Block C, CITY OF TREASURE ISLAND BLOCK "C° as recorded in Plat Book 28, Page 2, Pinellas County, Florida, go thence along the Southerly Boundary of said Lot 4, Block C, N. 52°00'50" E. a distance of 189.34'± to the now Southwesterly constructed right-of-way line of Gulf Boulevard (State Road 699) being a 80.00 foot right-of-way as shown on State Road Maps Project Section #1500-2510, thence along Southwesterly of said right-of-way as shown in aforesaid State Road Project Section #1500-2510, S. 45'54'47" E., a distance of 100.85'± to a point in the Northerly Boundary Line of property described in Official Records Book 21761, Pages 2265 and 2266 of Pinellas County, Florida, thence along the Northerly property line as described of said Official Records Book 21761, Pages 2265 and 2266, S. 52'80'50 "W. 194,24'± to a Coastal Control Corner #1307-104, dated July 10, 20I3, thence along a line N.43°07'27"W., a distance of lOO.49 ± to the most Southerly Corner of said Lot 4, Bock "C", CITY OF TREASURE ISLAND BLOCK "C" and to the Point of Beginning.



STREET MAP



AERIAL MAP

NORTH

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SITE DATA

MATRIX		EXISTING	PROPOSED	ALLOWED/CODE
ZONING:		RFH-50	RFH-50	RFH-50
USAGE:		MOTEL/HOTEL	CONDO-HOTEL	OK.
FUTURE LAND USE:		RFH	RFH	RFH
LOT AREA (GROSS):		19,098.7 S.F. 0.438 ACRES	19,098.7 S.F. 0.438 ACRES	9,000 S.F. 0.206 ACRES
BUILDING COVERAGE:		6,182 S.F. (REMOVE)	6,138 S.F. 32 %	50%
FLOOR AREA RATIO: (FAR)		12,364 S.F. 0.65	23,051 S.F. 1.2	1.2 (MAX)
DENSITY:		15 UNITS	16 UNITS CONDOS HOTEL + 1 UNIT TO BE USED BY RESIDENT MANAGER	50 UNITS/ACRE (5 LIVING LEVELS MAX.)
BLDG. SETBACKS:	FRONT (EAST)	19.6'	34.7'	25' MIN.
	SIDE (SOUTH)	7.7'	19'	19' BASED UPON 63'-4" HEIGHT
	SIDE (NORTH)	7.5'	19'	19' BASED UPON 63'-4" HEIGHT
	REAR (WEST)	14.7'	39.1'	19' BASED UPON 63'-4" HEIGHT
BLDG. HEIGHT:		2 STORY	56'- 10" ABOVE DFE TO TOP OF PARAPET	60' (ABOVE BFE+2' OF FREEBOARD)
VEHICULAR USE AREA (VUA):		3,219 S.F.	2,254 S.F.	-
IMPERVIOUS SURFACE RATIO: (I.S.R.)		13,633 S.F. 0.71	11,935 S.F. 0.62	0.95
OPEN SPACE: (S.F. & % OF GROSS SITE)		5,456 S.F. 29%	7,163.7 S.F. 38%	5% MIN
PARKING:		13 SPACES	18 SPACES	18 SPACES

PARKING CALCULATIONS: 1 SPACE PER UNIT + 1 ADDITIONAL SPACE = 17 + 1 = 18 SPACES

3

OWNER CONTACT

ATM ARVILLA LLC
11580 GULF BLVD
TREASURE ISLAND FL 33706-4646

DESIGN PROFESSIONALS

CIVIL ENGINEER/PLANNER:
NORTHSIDE ENGINEERING, INC.
300 SOUTH BELCHER ROAD
CLEARWATER, FLORIDA 33765
727-443-2869

ARCHITECT
FRAZE DESIGN INC.
1750 CENTRAL AVENUE
ST.PETERSBURG, FLORIDA 33712
PHONE : 727 328 3608 EXT.307

SURVEY
JOHN C. BRENDLA AND ASSOCIATES, INC
4015 82ND AVENUE NORTH
PINELLAS PARK, FLORIDA 33781
PHONE (727) 576-7546

GEOTECH
GULF COAST TESTING LABORATORY, INC.
5671 70TH AVE N
PINELLAS PARK, FL 33781
727-544-4080

FLOOD ZONE INFORMATION

AE (EL. 11') SEAWARD OF LiMWA
COMMUNITY PANEL #125153 12103C0194 H, EFFECTIVE 8/24/21

"INVESTIGATE BEFORE YOU EXCAVATE"



CALL SUNSHINE @ 1-800-432-4770
FL. STATUTE 553.851 (1979) REQUIRES A MIN. OF 2 DAYS AND MAX. OF 5 DAYS NOTICE BEFORE YOU EXCAVATE.

UTILITIES / AGENCIES

POWER	–	DUKE ENERGY FLORIDA
WATER	–	PINELLAS COUNTY
SEWER	–	TREASURE ISLAND
CABLE	–	SPECTRUM
TELEPHONE	–	FRONTIER
GAS	–	CLEARWATER GAS SYSTEM
FIRE PROTECTION	–	TREASURE ISLAND FIRE DEPARTMENT
RIGHT-OF-WAY	–	F.D.O.T.
STORM WATER	–	TREASURE ISLAND

AGENCY RESPONSE STAMPS

Northside Engineering, Inc.
300 South Belcher Road, Clearwater, Florida 33765
Tel: 727-443-2869 Fax: 727-446-8036
Web: www.northsideengineering.net
Est. 1989

Civil · Land Planning · Traffic Studies · Landscape
Due Diligence Reports · Land Use · Re-Zoning
Site Development · Water Resources · Utility Design
Construction Administration

Donald B. Fairbairn, P.E. #44971 — Registry # 31306

Digitally signed by Donald B Fairbairn
DN: E=don@northsideengineering.net, C=US, O=NORTHSIDE ENGINEERING, INC., SERIALNUMBER=A01.7L2016105764E, CN=Donald B Fairbairn
Reason: I have reviewed this document
Date: 2024.05.15 14:23:57-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY Donald B. Fairbairn, 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.

PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

CIVIL SITE DATA

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C1.1

Z:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.15.2024.dwg, 5/15/2024 2:11:11 PM, Tech3, DWG To PDF.pc3

GENERAL NOTES

1. ALL ELEVATIONS REFER TO N.A.V.D. OF 1988.
2. ALL WORK TO BE DONE ACCORDING TO LOCAL REGULATORY AGENCY SPECIFICATIONS.
3. ALL DISTURBED AREAS WITHIN PUBLIC RIGHT-OF-WAY ARE TO BE ORIGINAL CONDITION OR BETTER.
4. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE, CONTRACTOR TO VERIFY ALL LOCATIONS BEFORE BEGINNING WORK.
5. ALL PIPE SHALL BE PLACED ON DRY, UNDISTURBED SOIL. WET UNSUITABLE MATERIAL SHALL BE REPLACED WITH COMPACTED SELECTED BACKFILL MATERIAL.
6. BACKFILL MATERIAL SHALL BE SOLIDLY TAMPERED AROUND PIPES IN 6" LAYERS UP TO A LEVEL OF AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE. SEE TESTING SCHEDULE FOR COMPACTION REQUIREMENTS.
7. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 3,000 P.S.I. IN 20 DAYS, UNLESS OTHERWISE NOTED.
8. RE-INFORCING SHALL BE BILLET STEEL BARS CONFORMING TO ASTM A615 GRADE 40 OR BETTER.
9. PROTECTION OF EXISTING STORM SEWER SYSTEMS: DURING CONSTRUCTION, ALL STORM SEWER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC. WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
10. ALL LANDSCAPING IS TO COMPLY WITH THE LOCAL REGULATORY AGENCY LANDSCAPE CODE.
11. ALL STOP BARS, STOP PAVEMENT MARKINGS, ARROWS AND HANDICAP SYMBOLS ARE TO BE THERMO PLASTIC.
12. ALL PAVEMENT STRIPING IS TO COMPLY WITH BOTH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PAINTING TRAFFIC STRIPES OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITIONS.
13. TREE BARRICADES MUST 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.
14. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMITS AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, EXEMPTION NOTICES, AND UTILITY LICENSES, PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
15. CONSTRUCTION EQUIPMENT IS NOT ALLOWED ON THE SITE UNTIL TREE REMOVAL PERMIT AND SITE WORK PERMIT ARE OBTAINED FROM THE LOCAL REGULATORY AGENCY.
16. THE QUANTITIES SHOWN ON THE ENGINEERING CONSTRUCTION DRAWINGS ARE ONLY ESTIMATES AND SHOULD BE RECALCULATED BY THE CONTRACTOR/SUBCONTRACTOR FOR BID SUBMITTALS.
17. SIDEWALK CONSTRUCTION SHALL BE FLUSH WITH PAVEMENT WHERE THEY ARE ADJACENT OR MEET, UNLESS OTHERWISE SHOWN.
18. MATERIALS AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE, CONSTRUCTION, LATEST REVISION AND SUPPLEMENTAL SPECIFICATIONS THERETO.
19. ALL PIPES NOTED ON THE PLANS AS RCP SHALL BE REINFORCED CONCRETE PIPE, CLASS III, WITH RUBBER GASKET JOINTS. NO LIFTING HOLES ARE ALLOWED.
20. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION WORK UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
21. ALL DISTURBED AREAS WHICH ARE NOT TO BE SODDED ARE TO BE SEEDED AND MULCHED TO F.D.O.T. STANDARDS AND MAINTAINED UNTIL A SATISFACTORY STRAND OF GRASS ACCEPTABLE TO THE REGULATORY AGENCY AND ENGINEER OF RECORD HAVE BEEN OBTAINED. ANY WASHOUTS, RE-GRADING, RE-SEEDING AND GRASSING WORK, AND OTHER EROSION WORK REQUIRED, WILL BE PERFORMED BY THE CONTRACTOR/SUBCONTRACTOR UNTIL THE SYSTEM IS ACCEPTED FOR MAINTENANCE BY THE REGULATORY AGENCY AND ENGINEER OF RECORD. NO ADDITIONAL COMPENSATION IS ALLOWED FOR THIS WORK.
22. THE LOCATION OF THE EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR/SUBCONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY PRIOR TO START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTORS/SUBCONTRACTORS RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR/SUBCONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFACE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR/SUBCONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANIES DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR/SUBCONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
23. CHAPTER 77-153 OF THE FLORIDA STATUES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATING. MAPS SHOW ONLY THE APPROXIMATE LOCATION OF GAS MAINS AND DO NOT SHOW SERVICE LINES. THE ONLY SAFE AND PROPER WAY TO LOCATE EITHER MAINS OR SERVICES LINES IS BY AN ON-SITE INSPECTION BY THE RESPECTIVE GAS PERSONNEL. THEREFORE, EXCAVATORS ARE INSTRUCTED TO TELEPHONE THE RESPECTIVE GAS COMPANY TWO WORKING DAYS BEFORE ENTERING A CONSTRUCTION AREA.
24. COMPLETE "AS-BUILT" INFORMATION IS REQUIRED FOR:
    - A. STORM SEWER INVERTS, RIM ELEVATIONS, PIPE SLOPES, GRATE ELEVATIONS, OUTFALL STRUCTURE INFORMATION, PIPE LENGTHS, PIPE TYPES, PAVEMENT ELEVATIONS, TOP OF BANK ELEVATIONS, BOTTOM OF BANK ELEVATIONS, BANK SIDE SLOPES, UNDER DRAIN INVERT AND LOCATION, LITTORAL AREA SIZE AND ELEVATIONS PLUS ANY OTHER INFORMATION REQUESTED BY THE ENGINEER OF RECORD.
    - B. PAVEMENT GRADE, HIGH POINTS, LOW POINTS, CROSS-SLOPES AND ANY OTHER INFORMATION REQUESTED BY THE ENGINEER OF RECORD.
    - C. GATE VALVES, FITTING LOCATIONS AND ELEVATIONS, FIRE HYDRANT LOCATIONS FITTING, SWING TIES (2 EACH) PER FITTING GATE I.E.
    - D. SANITARY SEWER MANHOLE RIM AND INVERT ELEVATION, PIPE LENGTHS, TYPES AND SLOPES.

    THE ABOVE INFORMATION SHALL BE ACCURATELY RECORDED AND SUBMITTED TO THE ENGINEER IN CAD, ON A REPRODUCIBLE MYLAR PRIOR TO FINAL INSPECTION OF WORK AND TEN (10) SETS OF THE "AS-BUILT" DRAWINGS MUST BE SIGNED AND SEALED BY A LICENSED SURVEYOR. THE AS-BUILT SURVEY MUST BE REVIEWED BY THE SURVEYOR AND CONTRACTOR FOR COMPLETENESS PRIOR TO SUBMITTING TO EAGLE CONSULTANTS, INC. IF ENGINEER'S IS REQUIRED TO REVIEW THE AS-BUILT SURVEY MORE THAN TWICE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGINEER'S FEES AND COSTS TO REVIEW THE REVISED SURVEY AFTER THE SECOND TIME.
25. CLASS B, BEDDING SHALL BE USED UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR BY THE ENGINEER OF RECORD OR SOILS ENGINEER.
26. ALL EXCESS SUITABLE AND UNSUITABLE DELETERIOUS MATERIAL FROM CLEARING, AND OTHER ACTIVITIES SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR.
27. TESTING ENGINEER IS TO SUPPLY THE ENGINEER WITH A PHOTOCOPY OF ALL BASE, SUB-BASE, ASPHALT AND CONCRETE COMPACTION AND THICKNESS TEST RESULTS. PLUS ALL UTILITY, TRENCH EMBANKMENT, BACKFILL COMPACTION TEST RESULTS AS WELL AS CONCRETE STRENGTH RESULTS. THE TESTING ENGINEER IS TO CERTIFY TO THE ENGINEER OF RECORD IN WRITING THAT ALL TESTING REQUIREMENTS REQUIRED BY THE LOCAL REGULATORY AGENCY, FLORIDA DEPARTMENT OF TRANSPORTATION OR THE TESTING SCHEDULE SHOWN ON THESE PLANS, WHICHEVER IS MORE STRINGENT FOR THE IMPROVEMENTS AS REQUIRED BY THE ENGINEERING CONSTRUCTION DRAWINGS HAVE BEEN SATISFIED.
28. ALL DRAINAGE STRUCTURE GRATES & COVERS, AND ALL SANITARY COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
29. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
30. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE OWNERS ENGINEER FOR APPROVAL.
31. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS AT NO COST TO THE OWNER.
32. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO SHALL BE OF LATEST REVISION.
33. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATORY AND ORDINANCES, OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK, AND ACCORDING TO MANUFACTURES RECOMMENDATION.
34. AT LEAST 14 (FOURTEEN) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND GOVERNMENTAL AGENCIES AND SUPPLY THEM WITH ALL THE CONTRACTORS NAMES, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. ANY WORK PERFORMED PRIOR TO NOTIFYING THE GOVERNMENTAL AGENCY AND ENGINEER OR WITHOUT AN AGENCY OR ENGINEERS INSPECTOR PRESENT WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.
35. SAFETY:
    - A. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THE PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
    - B. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
    - C. 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 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.
    - D. 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.
    - E. 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 CONTRACTORS INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
36. ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
37. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES.
38. PRIOR TO PLACING ANY FILL ON THE SITE, CONTRACTOR TO REMOVE ALL UNSUITABLE MATERIAL FROM THE SITE. IF THERE IS A QUESTION ON WHAT IS A UNSUITABLE MATERIAL THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
39. ALL STORM DRAINAGE STRUCTURES DEEPER THAN TEN (10) FEET HAVE LADDER BARS AS PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD.
40. WHEN NECESSARY CONTRACTOR TO USE A F.D.O.T. "J" OR "P" BOX FOR AN INLET BOTTOM TO ACCOMMODATE PROPOSED PIPE SIZES.
41. THE STORM DRAINAGE FACILITY IS SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL REGULATORY AGENCY ENGINEERING DEPARTMENT, BUILDING DEPARTMENT, AND THE ENGINEER OF RECORD. CONTRACTOR TO CONTACT THE ENGINEER OF RECORD TO LAMP THE STORM DRAINAGE SYSTEM PRIOR TO THE LAKES OR DETENTION PONDS FILLING WITH WATER. IF THE LAKES OR DETENTION PONDS FILL WITH WATER PRIOR TO LAMPING BY THE ENGINEER, CONTRACTOR TO PUMP DOWN THE LAKES OR DETENTION PONDS AT NO COST TO OWNER AND FILL THE LAKES AND DETENTION PONDS UPON COMPLETION OF THE INSPECTION AT NO COST TO THE OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY REQUIRED "ON-SITE PIPING PERMIT". THIS PERMIT MUST BE OBTAINED BY A LICENSED PLUMBING CONTRACTOR (OR CLASS A GENERAL CONTRACTOR) PRIOR TO START OF CONSTRUCTION. THESE PLANS AND SUBSEQUENT REVISIONS TO THESE PLANS THAT ARE ISSUED BY THE ENGINEER WILL BE SUBJECT TO THE APPROVAL CONDITIONS OF THIS PERMIT.
42. RAMPS, FLARES, PARKING SPACES, ACCESS AISLES WALKS, ETC. USED FOR HANDICAPPED ACCESSIBILITY ARE TO COMPLY WITH FLORIDA ACCESSIBILITY CODE LATEST EDITION.
43. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALLS SHALL BE "ALKYD" THERMO-PLASTICS 90 MILS IN THICKNESS. ALL STOP BARS, STOP PAVEMENT MARKINGS, ARROWS, PARKING STALLS ARE TO BE WHITE. ALL HANDICAP PARKING SPACES SHALL BE MARKED ACCORDING TO LOCAL REQUIREMENTS.
44. ALL HANDICAP RAMPS ARE TO BE EMBOSSED PER F.D.O.T. INDEX NO. 522-002. SAW CUTTING GROOVES IN RAMPS IS NOT ALLOWED.
45. IF DEWATERING IS NECESSARY, CONTRACTOR TO SUBMIT DE-WATERING PLAN TO S.W.F.W.M.D. FOR REVIEW AND APPROVAL PRIOR TO COMMENCING DE-WATERING. DE-WATERING PLAN MUST BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING TO S.W.F.W.M.D.
46. ALL DRAINAGE CULVERTS SHALL BE WRAPPED AS PER F.D.O.T. INDEX NO. 430-001. IN ADDITION, CONTRACTOR TO WRAP JOINT AT PIPE AND INLET OR JUNCTION BOX OR OUTFALL STRUCTURE LOCATIONS. FILTER FABRIC TO EXTEND 2' ALONG PIPE AND STRUCTURE WALL.
47. WHERE NECESSARY, EXISTING TELEPHONE BOXES, POWER BOXES, CABLE BOXES, TELEPHONE VAULTS ALONG RIGHT-OF WAY WITHIN LANDSCAPE BUFFER ARE TO BE ADJUSTED BY UTILITY COMPANY IN ORDER TO ACCOMMODATE PROPOSED IMPROVEMENTS.
48. THE BEST MANAGEMENT PRACTICES (BMP) SHOWN ON THE CONSTRUCTION PLANS SHALL BE IMPLEMENTED DURING CONSTRUCTION. ADDITIONAL TEMPORARY EROSION CONTROLS SHALL BE LOCATED BY THE ENGINEER/CONTRACTOR, AS NECESSARY, IN ORDER TO PREVENT SILTATION OF EXISTING UTILITY AND STORM WATER DRAIN ENTRANCES, DRAINAGE DITCHES, WATERBODIES, WETLANDS, AND ADJACENT PROPERTY.

THE EFFECTIVENESS OF THE BMP PLAN AND THE TEMPORARY CONTROLS SHALL BE CHECKED DAILY BY THE CONTRACTOR/ENGINEER DURING CONSTRUCTION. IF TURBIDITY PROBLEMS OCCUR THAT NECESSITATE REPAIRS TO THE TEMPORARY EROSION CONTROLS, THOSE REPAIRS SHOULD BE MADE AS SOON AS POSSIBLE. TURBID RUNOFF CONDITIONS (I.E. IN EXCESS OF 29 NTUS ABOVE BOOKGROUND LEVEL) SHALL BE REPORTED WITHIN 24 HOURS.

49. IF OPEN BURNING IS ANTICIPATED DURING LAND CLEARING ACTIVITIES, A BURN PERMIT SHALL BE OBTAINED.
50. NOISE GENERATED AT THE CONSTRUCTION SITE SHALL COMPLY WITH THE LOCAL ORDINANCE.
51. MATERIAL AND PRODUCTS PROPOSED FOR THE PROJECT ARE TO BE INSTALLED ACCORDING TO THE MANUFACTURES RECOMMENDATIONS AND/OR INSTALLATION GUIDELINES.

CLEARING & SITE PREPARATION NOTES

1. PRIOR TO ANY SITE CLEARING ALL TREES SHOWN TO REMAIN ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE LOCAL TREE ORDINANCE AND THE DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. TREES SHOWN TO BE REMOVED SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER. NO FILL IS TO BE PLACED WITHIN THE DRIP LINE OF TREES TO BE SAVED.
2. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
3. ANY EXISTING STRUCTURES ARE TO BE REMOVED FROM THE SITE UNLESS OTHERWISE SHOWN ON THESE PLANS.
4. HE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR/SUBCONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR/SUB-CONTRACTOR IS RESPONSIBLE TO:

1. PROVIDE ALL BRACING, SHEETING OR SHORING NECESSARY TO CONSTRUCT AND PROTECT ANY EXCAVATION AGAINST COLLAPSING, ACCORDING TO OSHA SAFETY AND HEALTH STANDARDS. TRENCHES SHALL BE KEPT DRY WHILE PIPE IS LAID. DE-WATERING SHALL BE PROVIDED WHERE NECESSARY.
2. BECOME FAMILIAR WITH THE PERMITS AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, EXEMPTION NOTICES, AND UTILITY LICENSES, PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
3. PROVIDE A THREE (3) FOOT STRIP OF SOD AROUND ALL PARKING AREAS, DRIVE AREAS AND INTERNAL ROADS (BEHIND CURBS), IN ADDITION TO THE DESIGNATED AREAS ARE SHOWN ON THE ENGINEERING DRAWINGS.
4. PLACE A 1" DEEP CONTRACTION JOINT EVERY 4' IN THE SIDEWALK.
5. LOCATE FORM, AND SLOPE THE SIDEWALKS IN ACCORDANCE WITH THE SITE GRADING PLAN. MINIMUM % AND MAXIMUM SIDEWALK CROSS SLOPE SHALL NOT BE GREATER THAN 2.0%
6. CONSTRUCT PAVEMENT IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTION DETAILS. THE FINISH PAVEMENT GRADES SHALL CONFORM TO THOSE SPECIFIED ON THE PAVING, GRADING AND DRAINAGE PLAN.
7. TAKE PRECAUTIONS AS NECESSARY TO PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. IF UTILITIES ARE DAMAGED AS A RESULT OF THE PROPOSED WORK, THE CONTRACTOR/SUBCONTRACTOR SHALL REPAIR THE UTILITIES AT NO ADDITIONAL EXPENSE TO THE OWNER.
8. MEET ALL REQUIREMENTS OF THE LOCAL REGULATORY AGENCY UTILITY DEPARTMENT AND THE LOCAL REGULATORY AGENCY. INCLUDING ADVANCE NOTIFICATION TO THE LOCAL REGULATORY AGENCIES AND ENGINEER OF RECORD SO THAT THEY CAN WITNESS ALL REQUIRED TESTS OF THE SANITARY SEWER SYSTEM. INFILTRATION TESTING OF THE SANITARY SEWER SYSTEM WILL BE REQUIRED TO BE PERFORMED BY THE CONTRACTOR/SUBCONTRACTOR. INFILTRATION SHALL NOT EXCEED 300 GALLONS PER DAY PER INCH OF DIAMETER PER MILE OF LENGTH. IN THE EVENT THAT GROUNDWATER IS NOT ENCOUNTERED DURING SANITARY SEWER CONSTRUCTION OR IF THE GROUNDWATER ENCOUNTERED IS NOT 24" ABOVE THE TOP OF THE PIPE, EX-FILTRATION TESTING OF THE SANITARY SEWER SYSTEM WILL BE NECESSARY. THE TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR/SUBCONTRACTOR AND SHALL OBTAIN ALL NECESSARY TESTS AND INSPECTIONS PRIOR TO FINAL INSPECTION BY THE OWNER & ENGINEER.
9. COORDINATE THE WORK WITHIN PUBLIC RIGHT-OF-WAYS WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC, CONSTRUCTION, AND REPAIR WORK. CONTRACTOR TO SUPPLY AND INSTALL ALL REQUIRED TRAFFIC CONTROL DEVICES AS REQUIRED BY THE GOVERNMENTAL AGENCY/AGENCIES.
10. TRIM, TACK, AND MATCH EXISTING PAVEMENT AT LOCATION WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
11. STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS, ANY DISTURBED AREAS WITHIN THREE (3) DAYS FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.
12. PROVIDE AND MAINTAIN EROSION CONTROL/SEDIMENTATION BARRIER (HAY) BALES TO PROTECT ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND AT SITE EXIT. IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES AT NO COST TO THE OWNER.
13. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS AT NO COST TO THE OWNER.
14. COORDINATING APPLICABLE TESTING WITH THE TESTING ENGINEER, UPON COMPLETION OF THE WORK, TESTING ENGINEER TO SUBMIT CERTIFICATIONS TO THE OWNER AND OWNERS ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MEET.
15. INSTALL ALL SIDEWALKS AS SHOWN ON SITE PLAN.
16. PROVIDE THE FOLLOWING LETTER TO THE OWNER AND ENGINEER PRIOR TO COMMENCING THE FINAL INSPECTION. THE BELOW LETTER MUST BE SIGNED BY THE PRESIDENT OF THE COMPANY AND MUST BE NOTORIZED.

HAVING FIRST BEEN DULY SWORN, DEPOSE AND SAY:
THAT ALL OF THE MATERIAL, INSTALLATION, TESTING AND QUALITY OF WORK USED IN THE CONSTRUCTION OF THE IMPROVEMENTS MEET THE REQUIREMENTS OF THE ENGINEERING PLANS.

BY:_____
(PRINT)
_____
TITLE: _____
COMPANY: _____
ADDRESS: _____
_____

STATE OF FLORIDA
COUNTY OF: _____

BEFORE ME PERSONALLY APPEARED _____, TO ME WELL KNOWN, AND KNOWN TO BE THE PERSON DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO AND BEFORE ME THAT _____

EXECUTED SAID INSTRUMENT FOR THE PURPOSES THEREIN EXPRESSED.
WITNESS MY HAND AND OFFICIAL SEAL, THIS _____DAY OF _____A.D. 2018

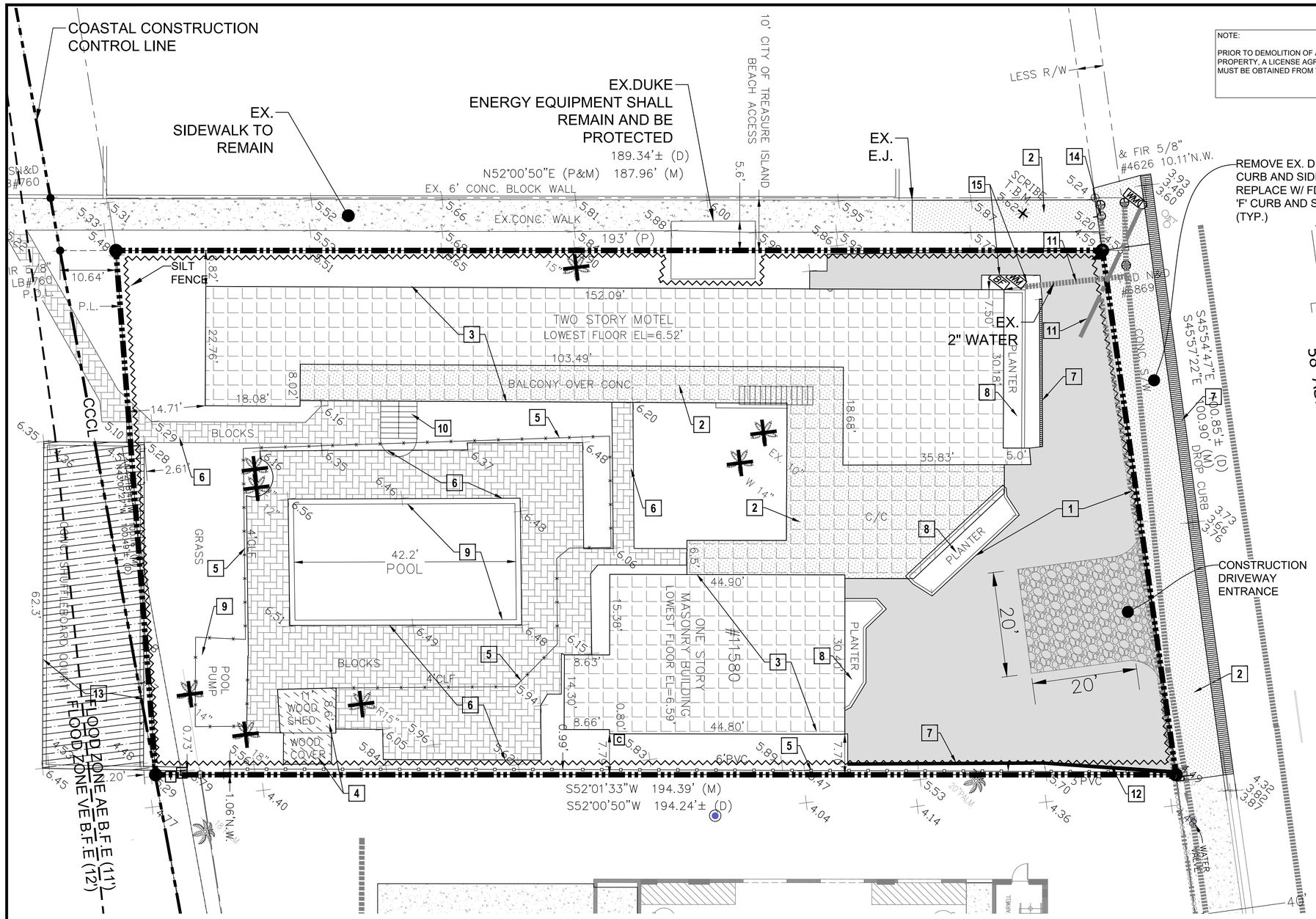
_____
NOTARY PUBLIC
STATE OF FLORIDA

MY COMMISION EXPIRES: _____

17. PROVIDE 3' DROP CURB AT ALL DRIVEWAY CONNECTIONS AS PER F.D.O.T. INDEX NO. 520-001.
18. COMPLY WITH MOST CURRENT SOILS REPORT FOR THIS PROJECT. CONTRACTOR TO OBTAIN A COPY OF REPORT AND INCLUDE ALL RECOMMENDATIONS AND ALL SITE WORK PREPARATIONS INTO SCOPE OF WORK. A COPY OF SOILS REPORT CAN BE OBTAINED BY CALLING OWNER OF PROJECT.
19. REMOVE ALL SILT, MUCK AND ANY UNSUITABLE MATERIAL PRIOR TO BACK FILLING WITH CLEAN FILL. COMPACTION OF CLEAN FILL TO BE AS PER TESTING SCHEDULE SHOWN ON THESE PLANS.
20. PROTECT EXCAVATIONS AGAINST COLLAPSE AND TO PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. TRENCHES SHALL BE KEPT DRY WHILE PIPE APPURTENANCES ARE BEING PLACED. DE-WATERING SHALL BE USED AS REQUIRED.
21. PROVIDE 3/8" EXPANSION MATERIAL WITH SEALER BETWEEN ANY STORM DRAINAGE STRUCTURE AND CONCRETE.
22. PROVIDE A 1/4" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE.
23. INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT ELEVATION AND THE TOP OF THE PIPE OR BELL IS LESS THAN TWELVE (12) INCHES. SEE "EXTRA BASE FOR CROSS CULVERTS UNDER FLEXIBLE PAVEMENT DETAIL" UNDER F.D.O.T. STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITIONS.
24. MAINTAIN THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNERS ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES.
25. PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING AND OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM. COPIES OF BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.
26. CALL FOR SITE INSPECTIONS BY THE ENGINEER OF RECORD OR HIS REPRESENTIVE FOR THE FOLLOWING ITEMS;
    - A. ALL PIPING PRIOR TO BURYING (INCLUDING WATER, SANITARY SEWER AND STORM)
    - B. SUB-BASE
    - C. BASE
    - D. ASPHALT
    - E. CONCRETE STRUCTURAL STEEL
    - F. ALL MATERIALS STORED ON SITE
    - G. EROSION CONTROL AFTER INSTALLATION
    - H. POND SLOPES AND BANKS PRIOR TO SODDING
    - I. POND UNDER DRAIN AND MATERIALS (BEFORE AND DURING INSTALLATION)

WATER SYSTEM NOTES

1. A VERTICAL DISTANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE INVERT AND CROWN OF SANITARY SEWER AND WATER MAIN OR STORM SEWER CROSSINGS. IF THE WATER MAIN CANNOT BE ADJUSTED TO OBTAIN 18 INCHES CLEARANCE, OR THE REQUIRED CLEARANCE CANNOT BE MAINTAINED, THEN THE CROSSING SHALL BE ARRANGED SO THAT THE SANITARY SEWER PIPE JOINTS AND WATER MAIN OR STORM SEWER JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET ON EACH SIDE OF CROSSING. ALTERNATIVELY, THE SANITARY SEWER MAY BE DIP, PLACED IN A SLEEVE OR ENCASED IN CONCRETE TO OBTAIN THE EQUIVALENT OF THE REQUIRED 10 FEET SEPARATION.
2. A LATERAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.
3. ALL WATER MAINS SHALL HAVE AN MINIMUM OF 36 INCHES OF COVER.
4. ALL WORK PERFORMED SHALL CONFORM WITH THE UTILITIES DEPARTMENT OF THE AGENCY HAVING JURISDICTION OVER THE WORK.
5. CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.
6. ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C-900. PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF DR 14 FOR 4" AND DR 18 FOR 6" THROUGH 12" PIPE.
7. ALL PVC WATER MAINS SMALLER THAN 4" SHALL BE CLASS 200 AND MEET THE REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D-2241.
8. ALL DUCTILE IRON PIPE SHALL BE CLASS 52 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C150) AND ANSI A 21.31 (AWWA C151). PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8, OR A 21.51 AND SHALL BE CEMENT MORTAR LINED, STANDARD THICKNESS AND BITUMINOUS SEALED IN ACCORDANCE WITH ANSI A 21.4 (AWWA C 104-71).
9. ALL FITTINGS LARGER THAN 2" SHALL BE DUCTILE IRON CLASS 53 IN ACCORDANCE WITH AWWA C-110 WITH A PRESSURE RATING OF 350 PSI. JOINTS SHALL BE MECHANICAL JOINTS IN ACCORDANCE WITH AWWA C-111. FITTINGS SHALL BE CEMENT MORTAR LINED AND COATED IN ACCORDANCE WITH AWWA C-104.
10. ALL FITTINGS 2" AND SMALLER SHAL



NOTE:

PRIOR TO DEMOLITION OF ANY WORK ON CITY PROPERTY, A LICENSE AGREEMENT DOCUMENT MUST BE OBTAINED FROM THE CITY.

NORTH

SCALE: 1"=10'

10 0 5 10 20

SITE PREPARATION NOTES

PREPARATION OF THE SITE INCLUDES THE REMOVAL/RELOCATION OF ALL EXISTING STRUCTURES WITHIN PROJECT AREA, PAVING AND BASE, UTILITY LINES (SANITARY SEWER, STORM PIPES, WATER LINES, POWER POLES, OVERHEAD AND UNDERGROUND POWER AND TELEPHONE CABLES, GAS LINES, TREES, SHRUBS, ETC.) AND IS NOT LIMITED TO WHAT IS SHOWN ON PLANS.

1. REMOVE EXISTING ASPHALT AND BASE
2. REMOVE EXISTING CONCRETE (REMOVE SIDEWALKS TO NEAREST EXPANSION JOINT
3. REMOVE EXISTING STRUCTURE AND FOUNDATION
4. REMOVE EXISTING WOOD COVERED/ WOOD RAMP
5. REMOVE EXISTING FENCE
6. REMOVE EXISTING PAVERS/BRICK
7. REMOVE EXISTING CURB
8. REMOVE EXISTING PLANTER
9. REMOVE EXISTING POOL, POOL PUMP. FILL CAVITY WITH APPROVING SOIL TO COMPACT PER GEOTECH SPECS.
10. REMOVE EXISTING STAIRS AND LANDING
11. REMOVE EXISTING ON- SITE WATER AND SEWER TO PROPERTY LINE AND CAP FOR RECCONECTION.
12. REMOVE EXISTING SIGN
13. REMOVE EXISTING CONC. SHUFFLEBOARD COURT
14. REMOVE EXISTING FH
15. REMOVE EXISTING BF AND WM

REMOVE EXISTING TREE ×

A. ALL CAVITY & EXCAVATION RESULTING FROM REMOVAL OF TREES, SHRUBS, PIPES, INLETS, GREASE TRAPS, SIGN, AND POLE BASE SHALL BE FILLED WITH APPROVED SUITABLE MATERIAL AND COMPACTED IN 12" LIFTS TO 95% OF MAX DENSITY.

B. OFF-SITE DISPOSAL OF STRUCTURES, UTILITIES AND CONSTRUCTION DEBRIS SHALL OCCUR IN SOLID WASTE DISPOSAL FACILITIES APPROVED BY F.D.E.P., AND LOCAL JURISDICTION'S STANDARDS AND SPECIFICATIONS.

LEGEND

PROPERTY LINE

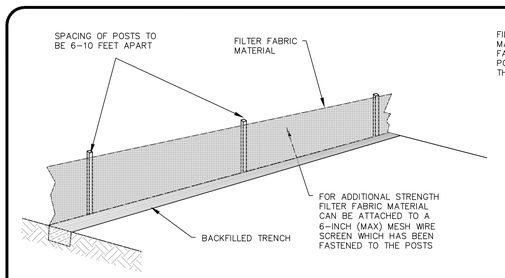
SILT FENCE

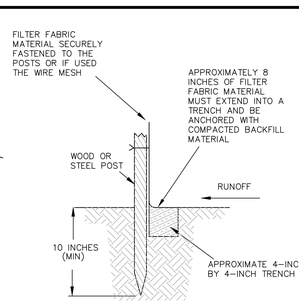
TEMPORARY ACCESS ROAD

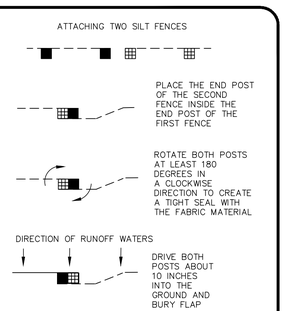
NOTES:

1. ALL DEMOLITION AND CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF TREASURE ISLAND'S STANDARDS AND SPECIFICATIONS.
2. COORDINATE EXTENT OF DEMOLITION WORK WITH NEW WORK.
3. ALL EXCESS MATERIAL SHALL BE LEGALLY DISPOSED OF OFFSITE BY THE CONTRACTOR.
4. ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL, AND WILL BE CLEANED OUT AND/OR REPAIRED AS NEEDED.
5. ALL APPLICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
6. CONTRACTOR TO BE RESPONSIBLE FOR THE CONTROL OF FUGITIVE DUST FOR THE DURATION OF CONSTRUCTION.
7. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION, AND SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION.
8. ALL DISTURBED AREAS IN F.D.O.T. RIGHT-OF-WAY SHALL BE RETURNED TO PRE-DEVELOPMENT CONDITION OR BETTER.
9. ALL SIDEWALK REMOVAL IS TO BE DONE TO THE NEAREST FULL PANEL.

1. CONTRACTOR SHALL REMOVE:
   A. ALL TREES, SHRUBS, VEGETATION
   B. ALL EXISTING STRUCTURES SUCH AS CONCRETE WALKS, CONCRETE SLABS, ASPHALT PAVEMENT, BUILDINGS, AND FENCING..
   C. ALL UTILITY FITTINGS SUCH AS PIPES, VALVES WITHIN PROJECT AREA.
2. CONTRACTOR SHALL REMOVE/RELOCATE LIGHT POLES, POWER POLES, OVERHEAD WIRES, GUY ANCHORS IF NECESSARY.

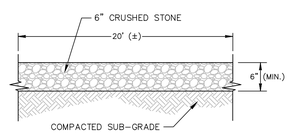






SILT FENCE
NTS

TEMPORARY CONSTRUCTION ROADWAY SHALL BE CONSTRUCTED AT NATURAL GRADE WITHIN FLOOD PLAIN AREA TO AVOID IMPACTS.



NOTES:
1. TEMPORARY ACCESS ROAD SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE POSSIBLE.
2. SLOPE SHOULD NOT EXCEED 10 PERCENT.
3. ROADBEDS SHALL BE AT LEAST 20 FEET WIDE FOR TWO WAY TRAFFIC.

TEMPORARY ACCESS ROAD
NTS

Northside Engineering, Inc.
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northsideengineering.com
Est. 1989

Civil · Land Planning · Traffic Studies · Landscape
Due Diligence Reports · Land Use · Re-Zoning
Site Development · Utility Design
Construction Administration

Donald B. Fairbairn, P.E. #44971 Registry # 31306

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY Donald B. Fairbairn, P.E. ON THE DATE ADJACENT TO THE SEAL.
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PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
	/ /	
	/ /	
	/ /	

DRAWN BY : EH

SITE PREPARATION PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

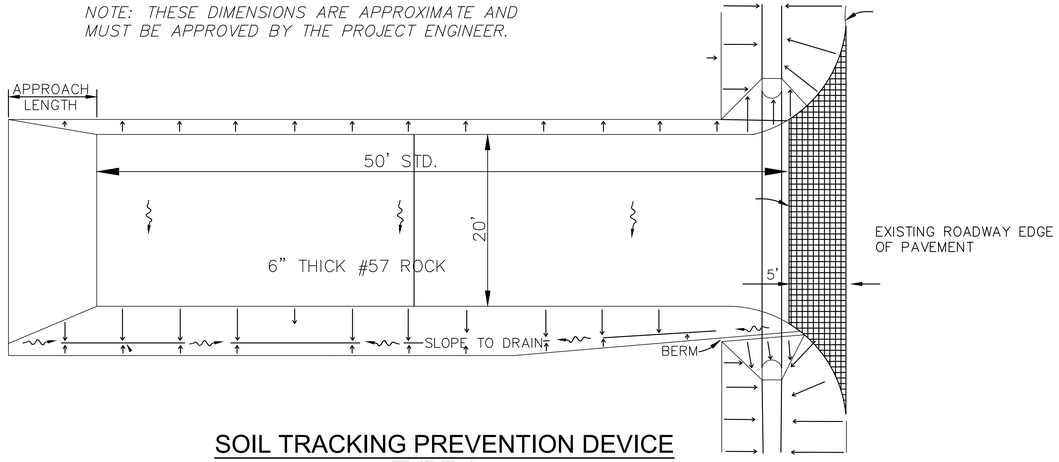
Northside Engineering, Inc.

C2.1

J:\2023 AutoCAD Projects\2370 - Avilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 11:2:37 PM, Tech3, DWG To PDF.pc3

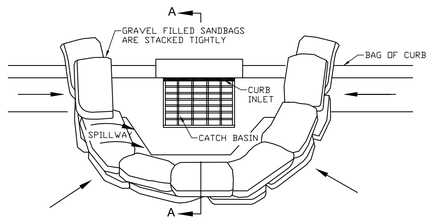
SOIL TRACKING PREVENTION DEVICE NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the Engineer for points of egress from unstabilized areas of the project to public roads where off site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed through a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The contractor may propose an alternative technique to minimize off site tracking of sediment. The alternative must be reviewed and approved by the Engineer (and City staff must approve any alternate techniques) prior to its use.
3. All materials spilled, dropped or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently or if directed by the City staff.
4. Aggregated shall be described in section 901 excluding 901-2.3. Aggregates shall be FDOT side #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are not suitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15'x50'=100 ft.³ 30'x50'=200 ft.³
   as an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.2% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the side drain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent offset tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward through the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD: including but not limited to excavation, grading, temporary pipe (including M.E.S. when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, L.F.
10. The nominal size of a standard STPD is 15'X50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.



SOIL TRACKING PREVENTION DEVICE
TYPE A
NTS

3

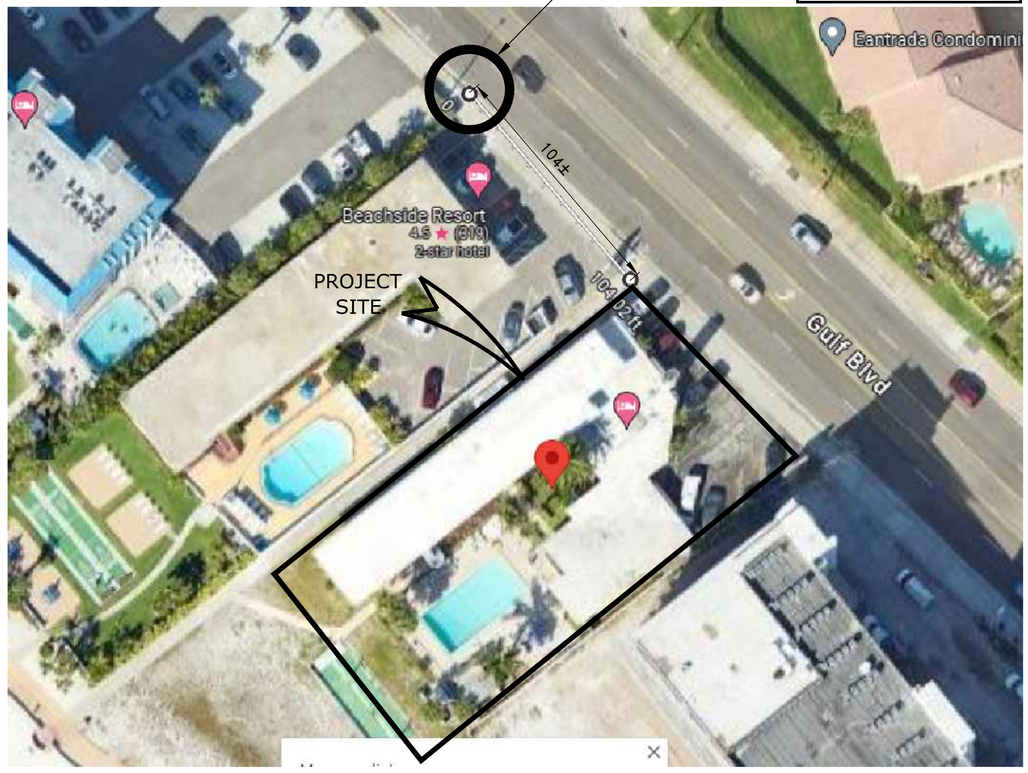


NOTE:
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF
2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW
4. INSPECT BARRIERS AND REMOVE SEDIMENT AS NECESSARY, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY

CURB INLET PROTECTION DETAIL
NTS

EX. CURB INLET TO BE PROTECTED (SEE DETAIL ON THIS SHEET)

SCALE: 1"=30'
0 15 30 60
NORTH



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DRAWN BY : EH

SITE PREPARATION DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.
C2.2

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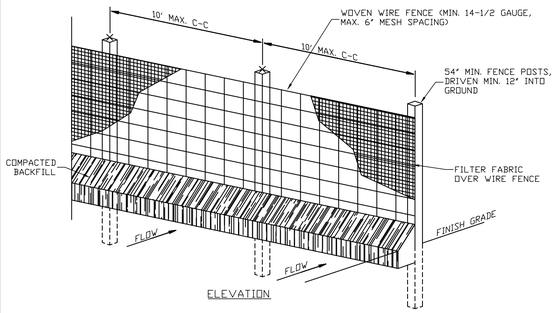
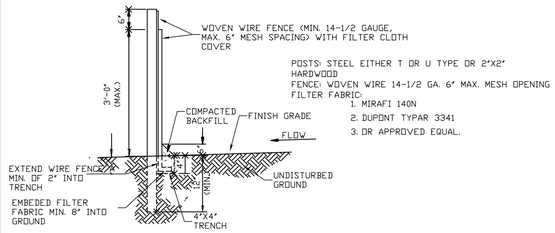


ELEVATION

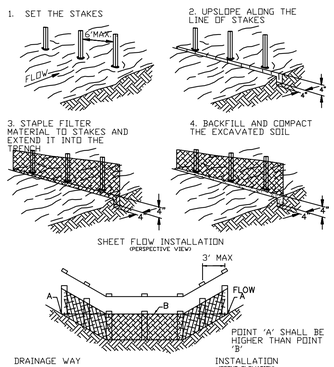


POSTS: STEEL EITHER T OR U TYPE OR 2"X2" HARDWOOD
FENCE: WOVEN WIRE 14-1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:
1. MIRAFI 140N
2. DUPONT TYPAR 3341
3. OR APPROVED EQUAL.

XCROSS-SECTION

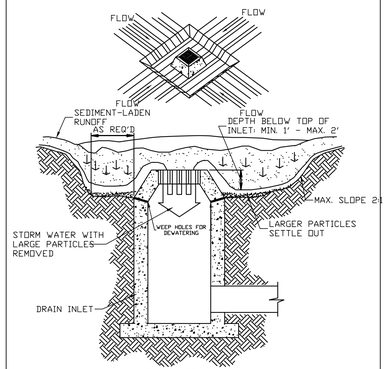
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO HALF THE HEIGHT OF THE SILT FENCE.

SEDIMENTATION SILT/FENCE W/ WIRE SUPPORT
NTS

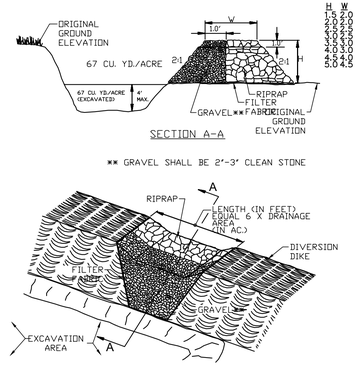


NOTE: INSTALL IN ACCORDANCE WITH SILT FENCE DETAIL, EXCEPT AS NOTED ABOVE.

SEDIMENTATION / SILT FENCE WITHOUT WIRE SUPORT
NTS

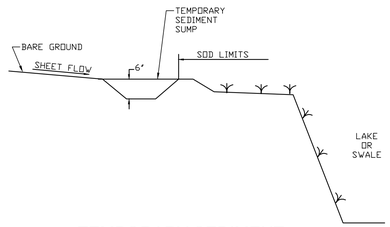


EXCAVATED INLET SEDIMENT TRAP
NTS

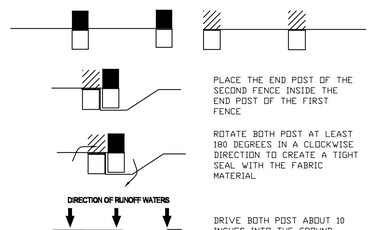


H W
1.5 2.0
2.0 2.0
2.5 2.5
3.0 2.5
3.5 3.0
4.0 3.0
4.5 4.0
5.0 4.5

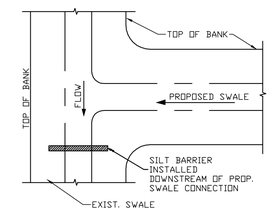
TEMPORARY SEDIMENT TRAP
NTS



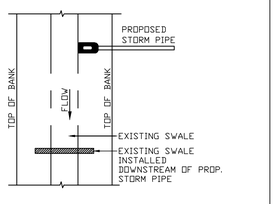
TEMPORARY SEDIMENT SUMP
NTS



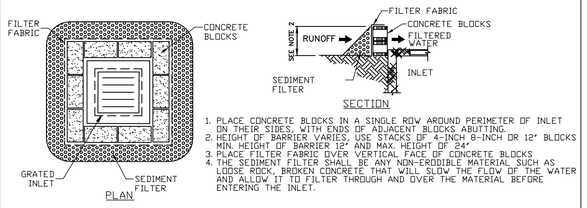
ATTACHING TWO SILT FENCES
NTS



SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
NTS



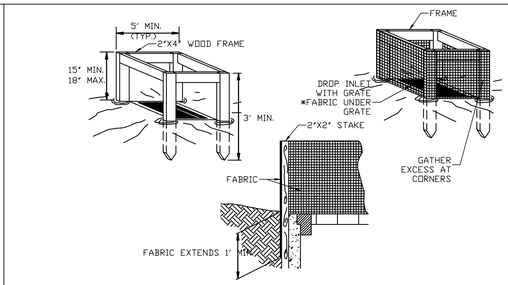
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
NTS



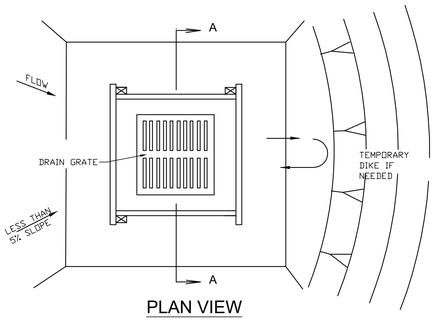
1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES, USE STACKS OF 4-INCH, 8-INCH OR 12" BLOCKS MIN. HEIGHT OF BARRIER 12" AND MAX. HEIGHT OF 24"
3. PLACE FILTER FABRIC OVER VERTICAL FACE OF CONCRETE BLOCKS
4. THE SEDIMENT FILTER SHALL BE ANY NON-ERODIBLE MATERIAL SUCH AS LOOSE ROCK, BROKEN CONCRETE THAT WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.

BLOCK AND AGGREGATE INLET SEDIMENT FILTER
NTS

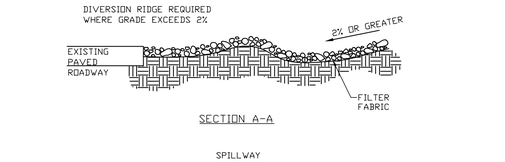
NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS, (LESS THAN 5%)
2. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

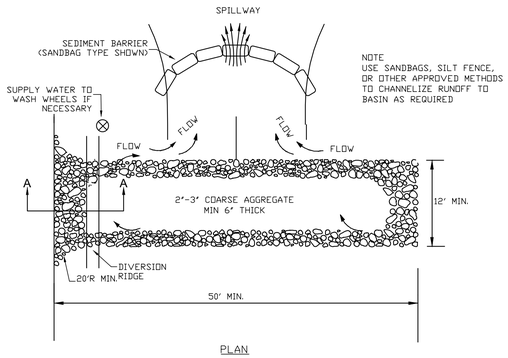


SILT FENCE INLET PROTECTION
NTS



PLAN VIEW





NOTE:
1. THE ENGINEER SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUTS OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN

TEMPORARY CONSTRUCTION ACCESS DETAIL
NTS

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tech@northsideengineering.net
Est. 1989

Donald B. Fairbairn, P.E. #44971
Registry # 31306

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NPDES DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.
C2.3

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

GULF OF MEXICO PUBLIC BEACH

GULF BLVD. - S.R. 699

10' CITY OF TREASURE ISLAND BEACH ACCESS

EX. 6' CONC. BLOCK WALL

CONC. WALK

EX.CONC. WALK

SIR&D LB#760

SIR 5/8" LB#760 P.O.L.

10.64'

P.L.

CCCL

N43°09'27"W 100.49'± (M) N43°09'27"W 100.49'± (D)

FLOOD ZONE AE B.F.E (11') FLOOD ZONE VE B.F.E (12')

FIR T.B.M.

N52°00'50"E (P&M) 189.34'± (D) 187.96' (M)

193' (P)

EX. DUKE ENERGY BOX

6' x 12' x 4" THICK CONCRETE WITH BICYCLE RACKS FOR 6 BIKES

NEW 6' CONCRETE WALK @5% MAX SLOPE

LESS R/W

& FIR 5/8" #4626 10.11'N.W.

SCRIBE T.B.M.

EX. E.J

NEW CONC. PAD

FND N&D #6869

NEW TYPE 'F' CURB PER FDOT INDEX 522-001

PEDESTRIAN RAMP PER FDOT INDEX 522-002 "CR-G" (TYP OF 4)

S45°54'47"E 100.85'± (D) S45°57'22"E 100.99' (M)

NEW 2' DROP CURB FDOT INDEX 520-001

TO BE SAWCAT AT EDGE OF ROADWAY

CROOSWALK PER FDOT INDEX 711-001

TRUNCATED DOMES RED IN COLOR (TYP.)

BEGINNING NEW TYPE 'F' CURB FDOT INDEX 520-001

NEW 9' CONC. SIDEWALK CONNECT TO EXISTING

58' ROW

PAVT, 80 'W

HC SIGN

NEW 5' CONC. WALK @ 5% MAX

POOL PUMP

POOL

POOL DECK

HOT TUB

CABANA

CABANA

CABANA

CABANA

43.9'

5'

19'

34.7'

4" CONC. PARKING GARAGE

12' OVERHANG

6.7'

DOOR

24'

18'

9'

R35'

R25'

BRICK PAVERS

STOP SIGN & BAR

2 SPACE GARAGE

NEW 5' CONC. WALK

39.1'

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

WATER VALVE

40'

STAIRWELL

SCALE: 1"=10'

10 0 5 10 20

NOTES:

1. STRUCTURAL FILL WILL NOT BE USED FOR THIS SITE.
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.
3. INTERIOR AND EXTERIOR LIGHTING SHALL ADHERE TO SEC. 68-466 AND ARTICLE V- COASTAL LIGHTING STANDARDS. THIS ARTICLE IS INTENDED TO ENSURE LIGHTING FROM ALL PROPERTIES CANNOT BE SEEN FROM TREASURE ISLAND'S GULF BEACHES.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED 6" CONC.
- PROPOSED BRICK PAVERS

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	/ /	

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CIVIL SITE PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C3.1

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

GULF OF MEXICO PUBLIC BEACH

GULF BL VD. - S.R. 699

58' ASPHALT, 80' R/W

10' CITY OF TREASURE ISLAND BEACH ACCESS

LESS R/W

2' BLOCK WALL

CONC. WALK

EX.CONC. WALK

EX. 6' CONC. BLOCK WALL

N52°00'50"E (P&M) 189.34'± (D) 187.96' (M)

193' (P)

SIR&D LB#760

SIR 5/8" LB#760 P.O.L.

10.64' P.L.

& FIR 5/8" #4626 10.11'N.W.

SCRIBE T.B.M. 5.62

FND NAIL #3869

S45°54'47"E 100.85'± (D) S45°57'22"E 100.90' (M)

CCCL

N43°07'27"W 100.49'± (D)

FLOOD ZONE AE B.F.E (11') FLOOD ZONE VE B.F.E (12')

DECO DRAIN TOP EL. 5.88

DECO DRAIN TOP EL. 5.92

POOL PUMP

CABANA

CABANA

CABANA

CABANA

POOL

HOT TUB

POOL DECK

2% MAX SLOPE (TYP.)

NEW 5' CONC. WALK @ 5% MAX

25 L.F. RETAIN WALL TOP.EL.5.7

SPREADER SWALE

27 L.F. RETAIN WALL TOP.EL.5.1

MEET EX. CONC. WALK

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

NEW RETAIN WALL1.9' HIGH MAX.

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

85' RETAIN WALL

NEW RETAIN WALL TOP EL. 5.7

WEIR LOCATION SEE DETAILON SHEET C4.2

EX. RETENTION SPREADER SWALE BOT.EL. 4.0

EX. BUILDING

SPA

POOL

STAIRWELL

DUMPSTER ROOM

SECTION 1 STA - 0+00

SECTION 2 STA - 0+100

NORTH

SCALE: 1"=10'

10 0 5 10 20

STORM STRUCTURE TABLE

#	STRUCTURE TYPE	RIM ELEV.	INV. ELEV.
1	NEW TYPE "F" INLET	5.6	3.6
2	OPENNING IN CURB WALL 3	–	3.5

STORM DRAIN TABLE

PIPE	LENGTH	DIAMETER	TYPE	SLOPE
1-2	30'	12"	PVC C-900	0.33%

LEGEND

- PROPERTY LINE
- EXIST. SAN. SEWER
- NEW SAN. SEWER
- EXIST. WATER SERVICE
- NEW WATER SERVICE
- NEW STORM SERVICE
- EXIST STORM SERVICE
- EXISTING RECLAIMED WATER
- NEW SWALE
- PROPOSED SAN. MH
- PROPOSED CLEAN-OUT
- NEW STORM INLET
- NEW MITERED END
- FLOW ARROW
- EX. ELEV. +XXX
- PROP. ELEV. +XXX

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GRADING & DRAINAGE PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

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C4.1

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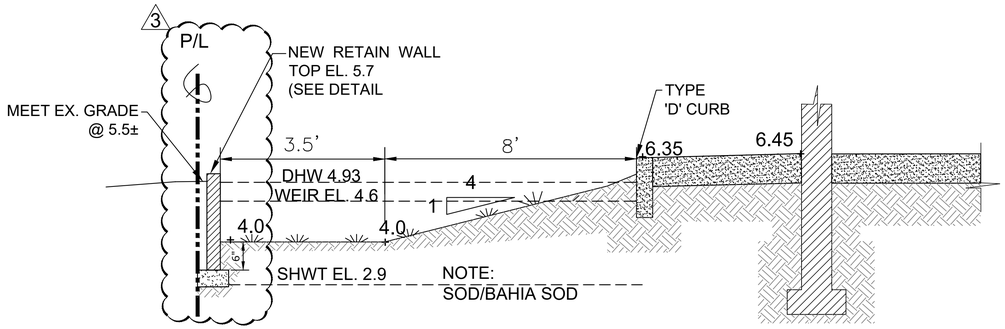
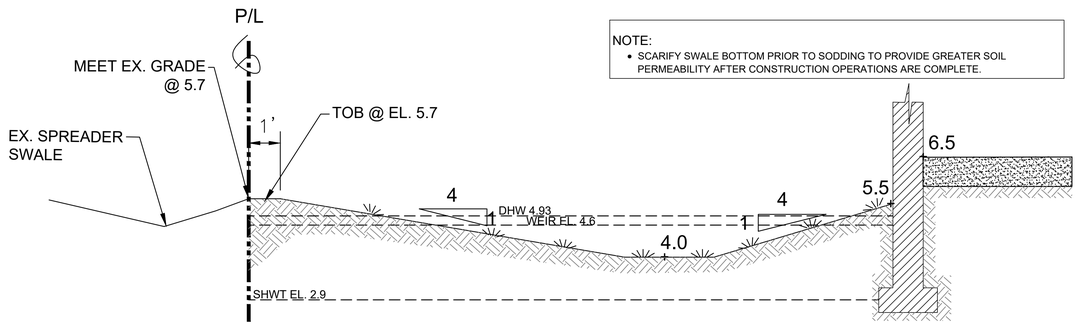


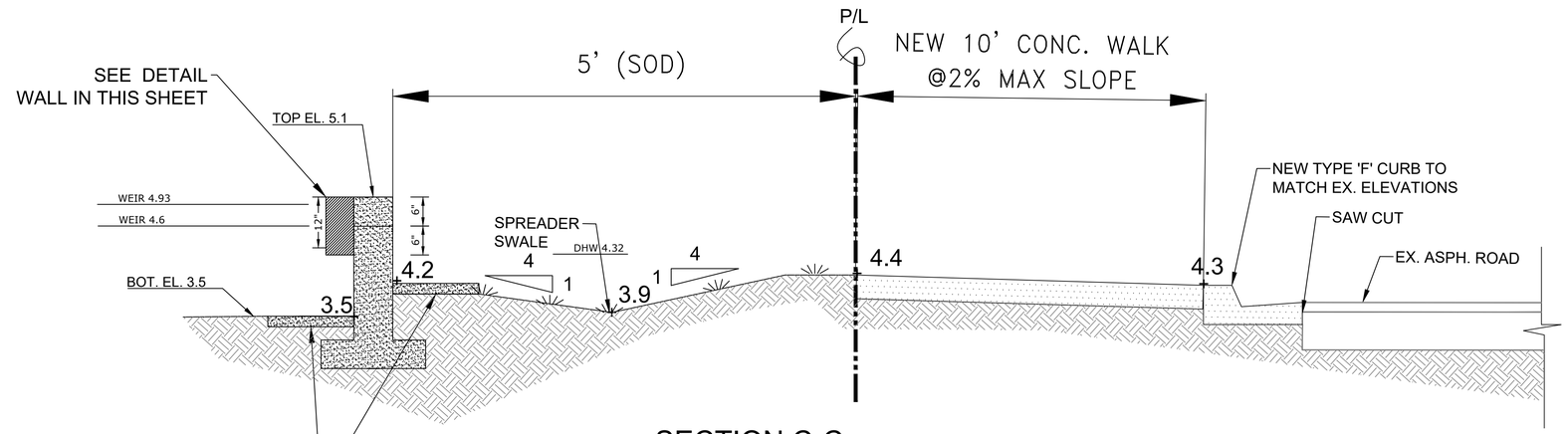
POND SECTION A-A

N.T.S.



POND SECTION B-B

N.T.S.



SECTION C-C

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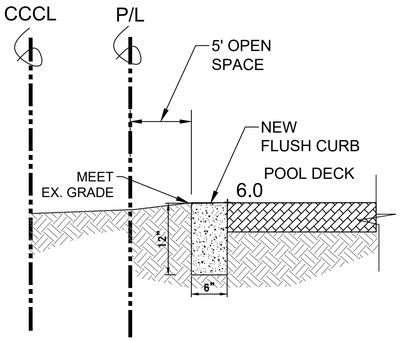

SECTION E-E

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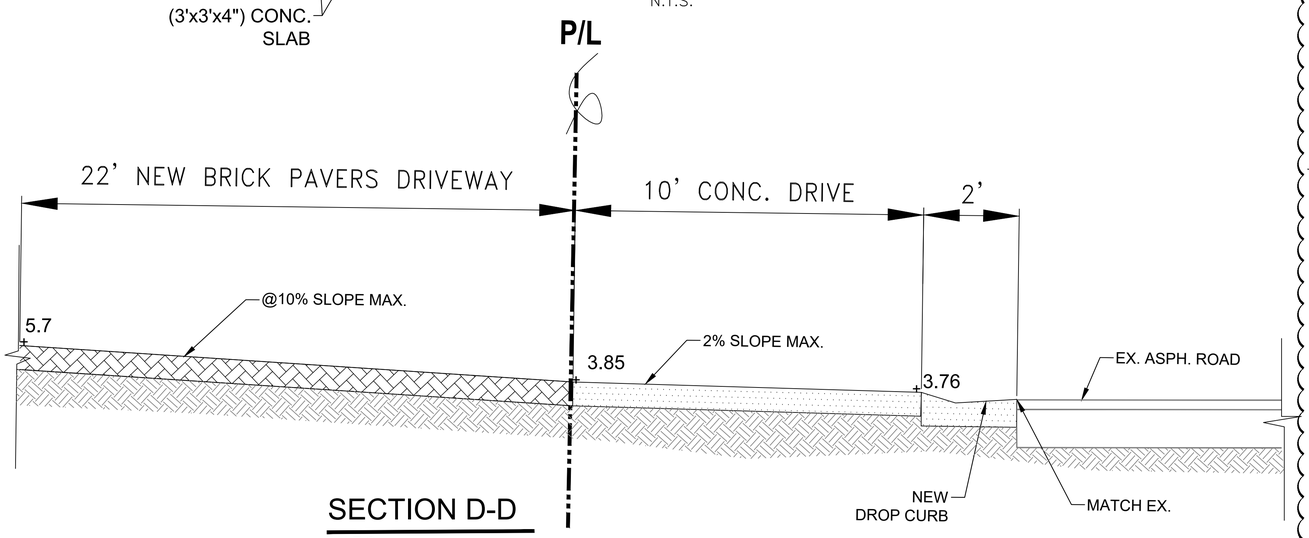

SECTION D-D

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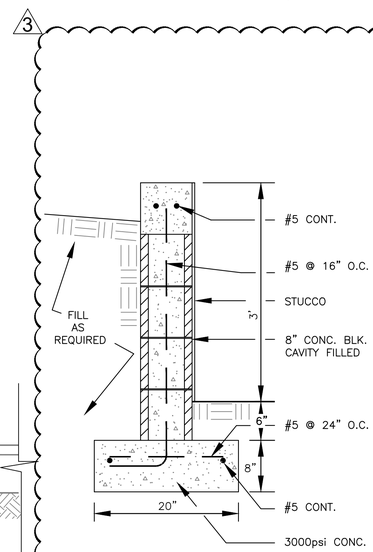

SECTION F-F

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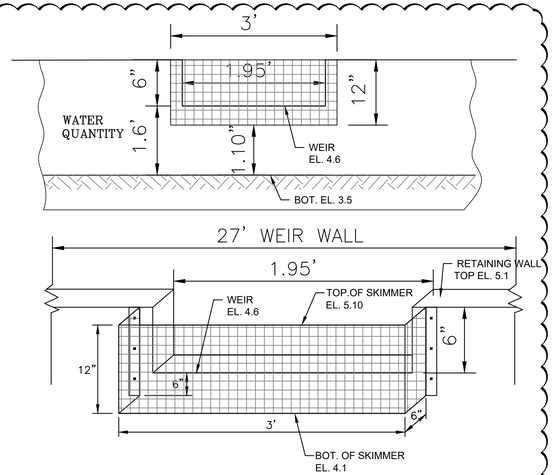

WEIR & GREASE SKIMMER DETAIL

N.T.S.

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CROSS SECTIONS

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Northside Engineering, Inc.
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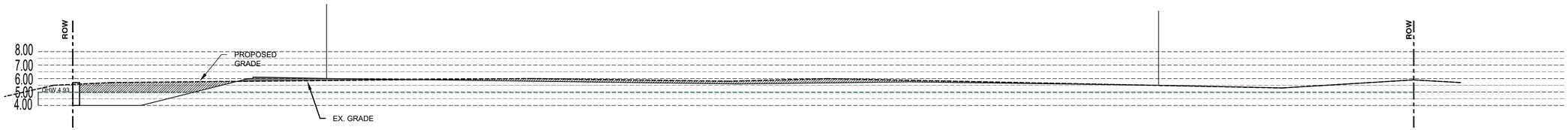
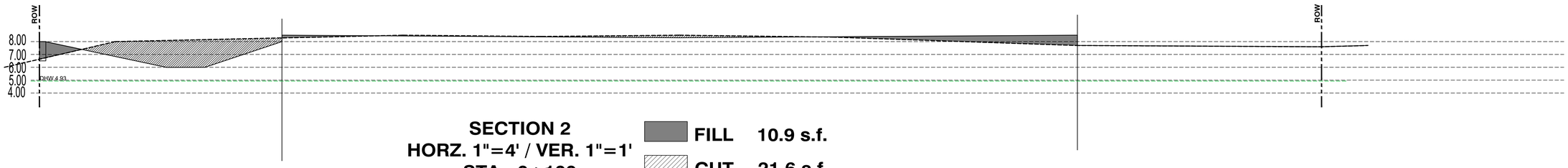


SECTION 1
HORZ. 1"=4' / VER. 1"=1'
STA - 0+0

FILL 1.9 s.f.
CUT 7.8 s.f.



SECTION 2
HORZ. 1"=4' / VER. 1"=1'
STA - 0+100

FILL 10.9 s.f.
CUT 21.6 s.f.

FLOOD PLAIN VOLUME COMPENSATION

		FILL			CUT		
SECTION	STATION	sq. ft. FILL AREA	DISTANCE	cu. ft. FILL VOLUME	sq. ft. CUT AREA	DISTANCE	cu. ft. CUT VOLUME
1	0+00	1.8			7.8		
			100	635		100	1,470
2	0+100	10.9			21.6		
		TOTAL FILL VOLUME		635 cu.ft.	TOTAL CUT VOLUME		1,470 cu.ft.

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CROSS SECTIONS

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Northside Engineering, Inc.

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

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GULF BL VD. - S.R. 699

58' ASPHALT, 80' R/W

10' CITY OF TREASURE ISLAND BEACH ACCESS

2' BLOCK WALL

EX. 6' CONC. BLOCK WALL

CONC. WALK

EX.CONC. WALK

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FLOOD ZONE AE B.F.E (11')
FLOOD ZONE VE B.F.E (12')

POOL

POOL DECK

HOT TUB

POOL PUMP

CABANA

CABANA

CABANA

CABANA

NEW 6" FIRE DR 18

NEW 6" DCVA

NEW 2" WATER

CONNECT NEW SAN. TO EX.

SCRIBE T.B.M.

EX. GV

EX. 6" FIRE

EX. C.O

EX. 6" SAN. LATERAL

NEW 6" ELBOW

EX. 2" X 4" WATER TAP

NEW 4" FDC

NEW FHA

NEW 4" DR 14

NEW CO. TOP EL. 6.25 INV. EL. 2.72

NEW 6" SAN. @ 1% MIN 113 LF.

6" x 6" WYE

NEW CO. TOP EL. 5.75 INV. EL. 1.5

NEW CO. TOP EL. 4.0 INV. EL. 1.1

NEW 6" SAN @ 1% MIN 35 LF.

EX. 4" WATER

EX.16" WATER MAIN

EX RECLAIMED WATER MAIN

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

S45°54'47"E 100.85'± (D)
S45°57'22"E 100.90' (M)

LESS R/W

& FIR 5/8" #4626 10.11' N.W.

& FIR 5/8" #4869

SCALE: 1"=10'

10 0 5 10 20

WATER / FIRE CONNECTION DETAIL

N.T.S.

EX. 6" F
REMOVE EX. FH
EX.GV TO REMAIN
NEW FH
NEW. 6" GV
NEW 6"TEE.
NEW 6" F DR 18
NEW 6" DCVA
EX. 4" WATER
NEW 2" WATER
NEW 2" WM & BFP
NEW 6" TEE
EX. 2" X 4" WATER TAP
NEW. 4" F DR 14

LEGEND

- PROPERTY LINE
- EXIST. SAN. SEWER
- NEW SAN. SEWER
- EXIST. WATER SERVICE
- NEW WATER SERVICE
- NEW STORM SERVICE
- EXIST STORM SERVICE
- EXISTING RECLAIMED WATER
- NEW SWALE
- PROPOSED SAN. MH
- PROPOSED CLEAN-OUT
- NEW STORM INLET
- NEW MITERED END
- FLOW ARROW
- EX. ELEV. +XXX
- PROP. ELEV. ±XXX

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Construction Administration

Registry # 31306

Donald B. Fairbairn, P.E. #44971

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PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

UTILITY PLAN

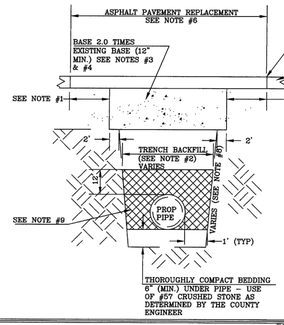
BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C5.1

C:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:22:55 PM, Tech3, DWG To PDF.pc3

NOTES:
1. MILLING AND RESURFACING LIMITS: 3'-0" FOR RESIDENTIAL ROADWAYS; 25'-0" FOR ALL OTHER TYPES OF ROADWAYS. SHALL INCLUDE ENTIRE LANE WIDTH.
2. BACKFILL FOR TRENCH SHALL BE PLACED IN 6" COMPACTED LAYERS TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. (EXCAVATABLE FLOWABLE FILL OPTION IS SUBJECT TO COUNTY ENGINEER'S APPROVAL). TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY.
3. BASE MATERIAL SHALL BE LIME ROCK OR CRUSHED CONCRETE (MIN. LBR 100) AND SHALL BE PLACED IN 6" COMPACTED LAYERS TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 (MODIFIED) (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
4. AS AN ALTERNATIVE TO COMPACTED BASE AND IN WET AREAS, FULL-LIFT ASPHALTIC CONCRETE, FINE TRAFFIC LEVEL C TYPES SP9.5 OR 12.5, SHALL BE PLACED IN 2" COMPACTED LAYERS WITH A MINIMUM THICKNESS EQUAL TO THE EXISTING BASE (6" MIN.).
5. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE SAW-CUT AND ALL SURFACES TACK COATED.
6. ASPHALT SURFACE SHALL BE CONSISTENT WITH EXISTING GRADE. IN ACCORDANCE WITH PINELLAS COUNTY SPECIFICATIONS, THE FOLLOWING ROADWAY CLASSIFICATION TYPE/THICKNESS ARE REQUIRED: ARTERIAL-3" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; COLLECTOR-2" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; RESIDENTIAL-1½" MIN. TYPE SP-9.5 TRAFFIC LEVEL "C" (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
7. OVERLAY OF CONSTRUCTION SCARS TO PAVEMENT AND TRENCH SHALL BE REQUIRED AS DIRECTED BY THE COUNTY ENGINEER.
8. EXCAVATION SHALL COMPLY WITH THE TRENCH SAFETY ACT REQUIREMENTS.
9. INSTALL DRY COMPACTABLE MATERIAL AROUND THE PIPE.
10. ALL MATERIAL, WORK AND TESTING SHALL MEET PINELLAS COUNTY STANDARD SPECIFICATIONS.
11. CONTRACTOR SHALL RESTORE PAVEMENT TO MATCH THE GRADES THAT EXISTED PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY NECESSARY TO ENSURE THAT THIS REQUIREMENT IS MET SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

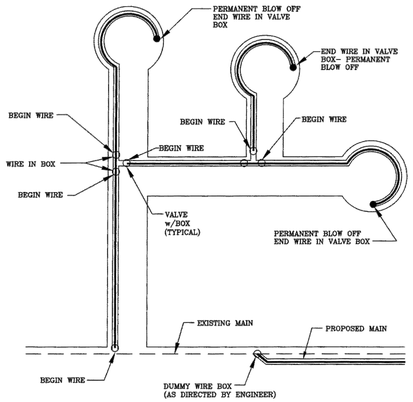


PINELLAS COUNTY

PAVEMENT CUTS, EXCAVATION AND RESTORATION

DETAIL INDEX I.D.: 1291
DATE: FEB/2016
IVAN J. FERNANDEZ, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF STREET IS A SHORT CUL-DE-SAC, LOCATOR WIRE IS TO RUN FROM MAIN VALVE TO BLOW-OFF VALVE BOX.

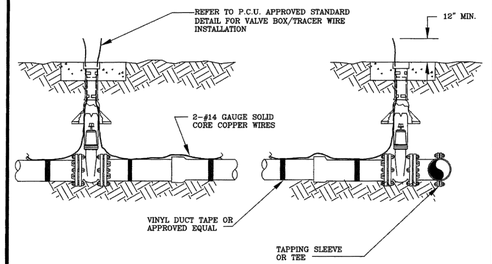


PINELLAS COUNTY

TRACER WIRE LAYOUT DETAIL

DETAIL INDEX I.D.: PCU GD 3
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. USE 2-#14 GAUGE (MINIMUM), SOLID CORE COPPER WIRE WITH COLOR CODED INSULATION PER SERVICE.
3. THERE SHALL BE SUFFICIENT SLACK IN TRACER WIRE TO EXTEND A MIN. OF 12" ABOVE VALVE BOX.
4. WIRE IS TO CONTINUE THROUGH TEES ON MAIN LINE WHERE NO VALVES EXIST.
5. ATTACH WIRE TO TOP CENTER LINE OF MAIN USING DUCT TAPE OR APPROVED EQUAL @ 5'- 0" INTERVALS.
6. DUMMY BOXES ARE TO CONSIST OF A TOP SECTION OF A VALVE BOX ASSEMBLY ENCASED IN A CONCRETE VALVE BOX COLLAR PER P.C.U. APPROVED STANDARD DETAIL.

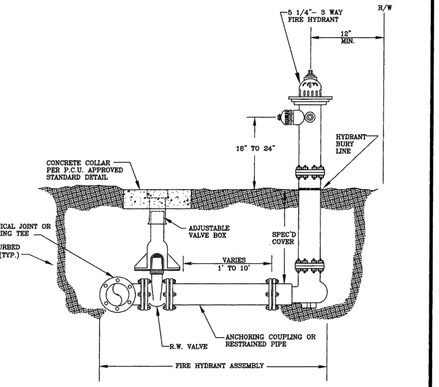


PINELLAS COUNTY

TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.: PCU GD 3a
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BOLTED FITTINGS SHALL BE POLYETHYLENE WRAPPED, COLOR CODED PER SERVICE.
3. VALVE BOX(ES) SHALL HAVE A CONCRETE COLLAR PER P.C.U. APPROVED STANDARD DETAIL.
4. IF FIRE HYDRANT IS INSTALLED WITHIN AN OFF-STREET VEHICULAR AREA, AND IS LOCATED WITHIN 10 FT. OR LESS OF A VEHICULAR USE AREA, GUARD POSTS (BOLLARDS) SHALL BE INSTALLED PER P.C.U. APPROVED STANDARD DETAIL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
5. IF DISTANCE BETWEEN VALVE AND HYDRANT IS 10 FT. OR GREATER, AN ADDITIONAL VALVE SHALL BE INSTALLED FOR CONTROL OF HYDRANT UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
6. HYDRANT SHALL BE INSTALLED PLUMB.
7. HYDRANT SHALL BE PAINTED UPON INSTALLATION PER P.C.U. APPROVED MATERIAL SPECIFICATIONS.
8. ALL CHAINS SHALL BE REMOVED AFTER INSTALLATION.

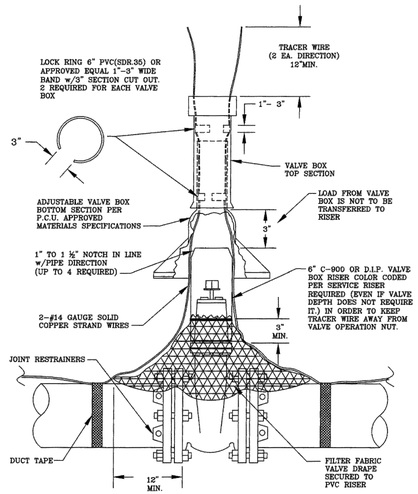


PINELLAS COUNTY

FIRE HYDRANT ASSEMBLY DETAIL

DETAIL INDEX I.D.: PCU WD 6
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER
   VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
   COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.

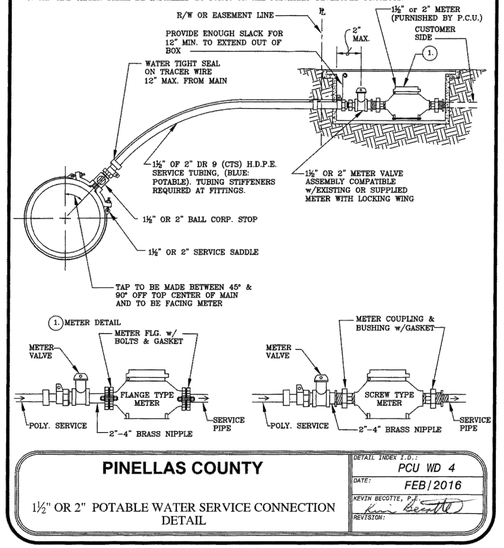


PINELLAS COUNTY

VALVE BOX/TRACER WIRE INSTALLION DETAIL

DETAIL INDEX I.D.: PCU GD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
9. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.

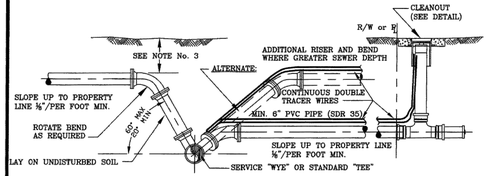


PINELLAS COUNTY

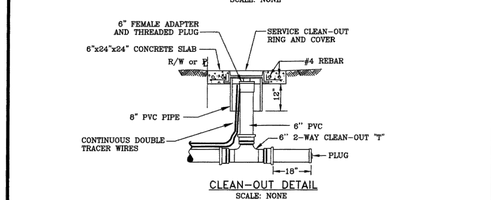
1½" OR 2" POTABLE WATER SERVICE CONNECTION DETAIL

DETAIL INDEX I.D.: PCU WD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
3. MINIMUM DEPTH UNDER ROADWAY 42" MINIMUM DEPTH AT PROPERTY LINE 36" (OR AS REQUIRED FOR SERVICE).
4. SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
5. NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
6. RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
7. RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
8. THE TRACER WIRE SHALL START AT THE CLEAN-OUT AND RUN ALONG THE SEWER SERVICE TO THE MAIN AND BACK TO THE CLEAN-OUT AS ONE CONTINUOUS WIRE.



SERVICE CONNECTION - DETAIL
SCALE: NONE



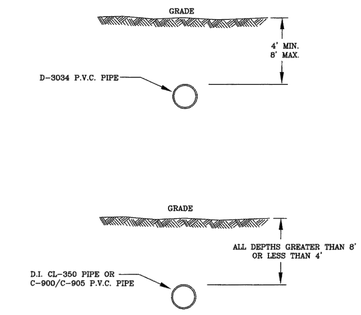
CLEAN-OUT DETAIL
SCALE: NONE

PINELLAS COUNTY

SEWER SERVICE CONNECTION AND CLEAN-OUT DETAIL

DETAIL INDEX I.D.: PCU SD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.



PINELLAS COUNTY

DEPTH LIMITATIONS OF SANITARY SEWER PIPE DETAIL

DETAIL INDEX I.D.: PCU SD 5
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

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Donald B. Fairbairn, P.E. #44971
Registry # 31306

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PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	

DRAWN BY : EH

COUNTY DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C6.1

P:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:23:16 PM, Tech3, DWG To PDF.pc3

GENERAL NOTES:

1. For curb, gutter and curb & gutter provide ¾" - ½" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement shall match the joints in the pavement. For pavement joints, with intermediate joints not to exceed 30' 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

TYPE A

TYPE E

TYPE F

SHOULDER GUTTER

TYPE A, TYPE E, TYPE F, AND SHOULDER GUTTER
(Other Types Similar)

CONCRETE BUMPER GUARD

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

TYPE A

NOTE: For use adjacent to concrete or flexible pavement, concrete shown (See Note 4).

TYPE B

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

TYPE D

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

NOTES:

1. For 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 roadways, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 6", unless otherwise shown on Plans.

3. For Type RA, rotate entire 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.

TYPE E

TYPE F

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

TYPE RA

DROP CURB

NOTE: See the toll site details for conduit requirements.

TOLL HEADER CURB

PLAN VIEW

SECTION A-A

SECTION B-B

SECTION C-C

VALLEY GUTTER

SHOULDER GUTTER

CONCRETE CURB AND GUTTER

LAST REVISION 11/01/18 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | CURB AND GUTTER | INDEX 520-001 | SHEET 2 of 3

TYPE A | TYPE B | TYPE D

CONTRACTION JOINTS IN CURB

TYPE E | TYPE F | SHOULDER GUTTER

NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINTS IN CURB & GUTTER

PLAN | ELEVATION

FLARED END | STRAIGHT END

CURB TYPE A

CURB AND GUTTER TYPE E AND TYPE F

NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS

CONCRETE BUMPER GUARD

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

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

NOTES:

1. Surface on Low Side of Pavement to be ½" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.

2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

CURB AND GUTTER TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

ASPHALTIC CONCRETE CURB

CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

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

GENERAL NOTES:

1. Construct sidewalks in accordance with Specification 522. Use 8" 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 522-001.

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)

OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:

A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and; driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).

B- ¾" Dummy Joints, Tooled

C- ¼" Formed Open Joints

D- ⅝" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers

E- ⅝" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers (joints) Required When Length Exceeds 30'

F- ½" Expansion Joint When Run Of 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

Back of Sidewalk Variations

See Index 522-002 For Joints

A (Signal Pole or Controller Base, Ex.)

A (Utility Pole, Ex.)

Curb or Curb And Gutter

Drainage Inlet

PLAN

SIDEWALK WITH UTILITY STRIP

LEGEND:

4" Thick Sidewalk

6" Thick Sidewalk

Utility Strip

Driveway or Side Road (Full Return Shown)

Driveway or Side Road (Partial Return Shown)

SIDEWALK WITHOUT UTILITY STRIP

Utility Strip Varies

Sidewalk Varies

0.02 Max.

SECTION A-A

SECTION B-B

Railing (See Index 515-052, 515-062, 515-070 or 515-080)

Clear Width

Varies Based on Railing Used

RAILING DETAIL

GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

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

OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:

A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).

B- ¾" Dummy Joints, Tooled

C- ¼" Formed Open Joints

D- ⅝" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers

E- ⅝" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers (joints) Required When Length Exceeds 30'

F- ½" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

SIDEWALK JOINTS

2' Detectable Warning Surface

Driveway

Border

Shoulder Line

Side Road

Edge of Travel Way

PLAN

CONTINUOUS SIDEWALK

DISCONTINUOUS SIDEWALK

SECTION C-C

CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | CONCRETE SIDEWALK | INDEX 522-001 | SHEET 2 of 2

ISOMETRIC VIEW

OPTION A

OPTION B

PLAN VIEW

CR-D | CR-E | CR-F | CR-G

SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX 522-002 | SHEET 4 of 7

MERGE | ONLY | LANE | TURN | LEFT | RIGHT

25 | MPH | SUN | PASS | STOP | BUS | EXPRESS

Route Shield For Limited Access Facilities (Interstate Route Shield Shown; U.S. and State Route Shield Similar)

Route Shield For Arterials (Alternate Route Shield Shown; U.S. and State Route Shield Similar)

In Pavement Warning Marking

Wrong-Way Arrow

Turn and Through Lane-Use Arrow

R1=2'-11"
R2=2'-3.563"
R3=2'-3.375"

U Turn Lane-Use Arrow

Through Lane-Use Arrow

Turn Lane-Use Arrow (Left Turn Shown - Right Turn Similar)

R1=2-3.375"
R2=2-3.563"

Roundabout Approach Arrow

Preferential Lane Symbol

PAVEMENT MESSAGES NOTES:

1. Place all pavement messages 25' back from the stop line.

2. Dimensions are within 1" ±.

3. All grids are 4" x 4".

4. All pavement messages must be white except Route Shields and In Pavement Warning Markings.

5. Increase width of route shield for routes with three digits.

PAVEMENT MESSAGE AND ARROW DETAILS

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 1 of 13

Crosswalk Width

4'-0" Min. (When Stop Line Present)

Edge Line

Lane line

12" White

24" White (Typ.)

STANDARD CROSSWALK DETAILS

SPECIAL EMPHASIS CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.

2. Dimensions are within 1" ±.

3. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.

4. Refer to Index 522-002 when Curb Ramps are present.

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 9 of 13

Face of Curb

Curb Ramp

Sidewalk

Sign FTP-21-06 And FTP-22-06

3-4" White Diagonal Equally Spaced Per Axis

6" White

TYPICAL

6" White (Typ.)

FORWARD-IN PARKING

REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
A & B	"a"	"b"	"c"	"d"	"e"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING

(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTES:

1. Dimensions are to the centerline of markings.

2. An Access Aisle is required for each accessible space marked on a curb ramp or loading zone.

3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.

4. Mount FTP-22-06 sign below the FTP-21-06 sign.

5. Use of the pavement symbol in accessible parking spaces is optional. When the symbol is used, the symbol is either 3'-0" or 3'-6" high and white in color.

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 11 of 13

Northside Engineering, Inc.
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Donald B. Fairbairn, P.E. #44971 Registry # 31306

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PROJECT # 2370
ISSUE DATE: 11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
	/ /	
	/ /	

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FDOT DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C6.2

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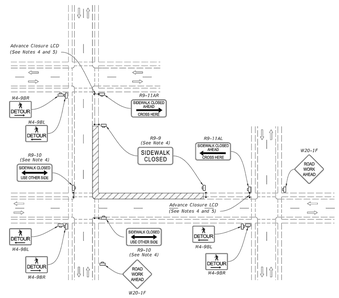
NOTES:

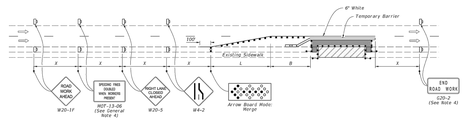
1. Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
2. Place pedestrian LCDs across the full width of the closed sidewalk.
3. For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
4. "Sidewalk Closed" signs (R9-9X) may be mounted on pedestrian LCDs in accordance with the manufacturer's instructions.
5. Omit the Advance Closure LCD if it blocks access to other pedestrian facilities (e.g., transit stops, residences, or business entrances).

SYMBOLS:

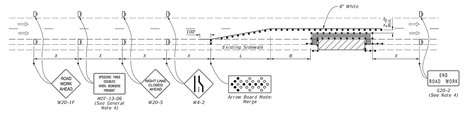
- Work Area
- Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Lane Identification and Direction of Traffic



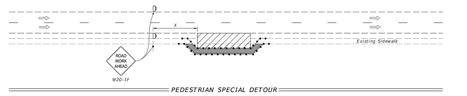
PEDESTRIAN DETOUR



PEDESTRIAN DIVERSION - OPTION 1
(Temporary Barrier Shown, Low Profile Barrier Similar)



PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)



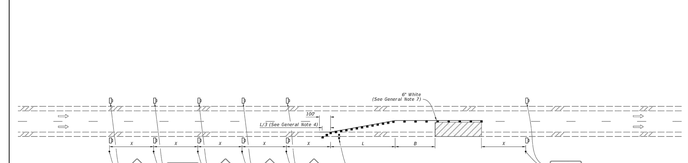
PEDESTRIAN SPECIAL DETOUR

NOTES:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", channelizing device spacing values.
2. Provide a 3' wide temporary pedestrian way with a maximum cross-slope of 5.0%, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary pedestrian ways less than 5' in width at intervals not to exceed 200'.
3. When temporary pedestrian ways require curb ramps, meet the requirements of Index 522-002. Detectable warnings are not required for curb ramps diverting pedestrian traffic into a closed lane.
4. The "Speeding Fines Doubled When Workers Present" signs (M3T-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less.
5. Pedestrian Diversion Option 2 may only be used when called for in the Plans or as approved by an Engineer.

SYMBOLS:

- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic



SINGLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic

GENERAL NOTE:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.
2. On undivided highways the median signs as shown are to be omitted.
3. On limited access facilities, omit "Right Shoulder Closed" signs (W21-5a) and associated work zone sign spacing distances.
4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.
5. The "Speeding Fines Doubled When Workers Present" signs (M3T-13-06) and "End Road Work" signs (G20-2) and "Right Shoulder Closed" (W21-5a), along with associated work zone sign spacing distances, may be omitted when the work operation will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS		INDEX	SHEET
11/01/21				SIDEWALK CLOSURE	102-660	1 of 2
11/01/21				SIDEWALK CLOSURE	102-660	2 of 2
11/01/21				MULTILANE ROADWAY, LANE CLOSURES	102-613	1 of 5

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PROJECT #	2370
ISSUE DATE:	11/29/23

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3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

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MOT DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

CLEAR SIGHT TRIANGLE PER SECTION 212.11 OF FDOT DESIGN MANUAL

10'X10' DRIVEWAY VISIBILITY TRIANGLE PER SECTION 68-454, CODE OF ORDINANCES OF THE CITY OF TREASURE ISLAND.

10' CITY OF TREASURE ISLAND BEACH ACCESS

189.34'± (D)
N52°00'50"E (P&M) 187.96' (M)

LOCK WALL
CONC. WALK
EX. 6' CONC. BLOCK WALL
EX.CONC. WALK
193' (P)

SW&D LB#760
SIR 5/8" LB#760 P.O.L.
10.64'
P.L.

GULF OF MEXICO PUBLIC BEACH

CCCL

FLOOD ZONE AE B.F.E (11')
FLOOD ZONE VE B.F.E (12')

FIR T.B.M.

POOL
HOT TUB
POOL DECK
POOL PUMP
CABANA
CABANA
CABANA
CABANA

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

20' PALM

STAIRWELL

LESS R/W

SCRIBE T.B.M.

FIR & FIR 5/8" #4626 10.11'N.W.

FND N&D #8869

S45°54'47"E 100.85'± (D)
S45°57'22"E 100.90' (M)

GULF BLVD. - S.R. 699
58' ASPHALT, 80' R/W

130.00

WATER VALVE

40'

PLANT SCHEDULE

TREES	CODE	QTY	COMMON	BOTANICAL	NATIVE	CONT	CAL	SIZE	GR.
	SP	3	Slash Pine	Pinus Elliottii	YES	45 gal	2" Cal	10' ht	Grade #1
	WM	2	Wax Myrtle	Myrica Cenfera	YES	30 gal	1.5" Cal	8` ht	Grade #1
	CP	3	Sabal Palmetto	Cabbage Palm	YES	Staggered Heights 12' C.T.			Grade #1

SHRUBS	CODE	QTY	COMMON	BOTANICAL	NATIVE	CONT	HT.	O.C.	GR.
	IH	123	India Hawthorn	Raphiolepsis Indica	NO	3 gal	24" ht	30" oc	#1

NORTH

SCALE: 1"=10'

10 0 5 10 20

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6	/ /	

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LANDSCAPE PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

L1.1

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XERISCAPING

1. ORGANIC MULCHES AND/OR DROUGHT TOLERANT GROUNDCOVERS WITHIN PROPOSED LANDSCAPE PLANTER BEDS.

2. DROUGHT AND COLD TOLERANT PLANT MATERIAL.

3. GROUPING OR ZONING PLANT MATERIAL BASE ON SIMILAR WATER REQUIREMENTS AND THE LOCATION OF PROPOSED IRRIGATION WATERING SYSTEMS.

4. THE USE OF SOIL TESTING TO IDENTIFY SOIL CONDITIONS NECESSARY FOR THE CONTINUED SURVIVAL OF PROPOSED LANDSCAPING.

5. ORGANIC SOIL AMENDMENTS (SUCH AS TOP SOILS, MANURE'S, PEAT AND COMPOSTED MATERIALS) MIXED EXISTING SOILS WITHIN LANDSCAPING PLANTER BEDS TO DEPTHS CONSISTENT WITH THE ROOT DEPTH OF PROPOSED PLANTED MATERIAL (USE ONLY IF EXISTING SOIL CONDITIONS WARRANT THESE AMENDMENTS).

6. THE PRESERVATION AND INCORPORATION OF EXISTING PLANT COMMUNITIES ON SITE INTO THE LANDSCAPE PLAN.

7. THE MINIMAL USE OF TURF GRASSES WHICH REQUIRE FREQUENT IRRIGATION.

8. LOW-MAINTENANCE DESIGN.

TREE & SHRUB PLANTING DETAILS

1. THE ROOT MASS FORM OF EACH TREE PROPOSED FOR INSTALLATION SHALL BE BALLED OR BURLAPPED, BARE ROOT TREES ARE NOT ACCEPTABLE. ALL NONBIODEGRADABLE WRAPPINGS WILL BE REMOVED AND BURLAP WILL BE FOLDED DOWN TO ENHANCE WATER ABSORPTION. IF WIRE BASKETS ARE USED IN CONJUNCTION WITH BALLED AND BURLAPPED TREES. THE FIRST FEW ROWS OF EACH BASKET WILL BE REMOVED AT THE TIME OF INSTALLATION.

2. SUPPORTING APPARATUS SHALL BE REMOVED AFTER 1 COMPLETE GROWING SEASON. ALSO THE FLEXIBLE ATTACHMENTS SHALL BE USED WHERE SUPPORT WIRES ARE WRAPPED AROUND TREE TRUNKS/STEMS TO PREVENT CAMBIAL DAMAGE.

3. PLANTING HOLES ASSOCIATED WITH PROPOSED TREES MUST SLOPE (NOT COMPACTED) AND A MINIMUM OF 18-24 INCHES WIDER THAN THE DIAMETER OF THE ROOT BALL. TREES SHALL BE INSTALLED SUCH THAT THE TOP OF THE ROOT MASS IS LEVEL WITH THE SURFACE OF THE PLANTING HOLE. TREES SHOULD BE INSTALLED 3 - 5 INCHES ABOVE GRADE ON SITES CONTAINING CLAY. A 3 INCH LAYER OF ORGANIC MULCH MUST ALSO BE PLACED OVER THE ENTIRE SURFACE OF EACH PLANTING HOLE. TO PREVENT FUNGAL INFECTION MULCH SHOULD BE PULLED BACK A FEW INCHES FROM THE BASE OF EACH TREE.

4. IF ON SITE SOIL CONDITIONS ARE SUCH THAT SOIL AMENDMENTS WILL BE NECESSARY, THE PLANTING MUST INCLUDE SOIL MIXTURE THROUGHOUT THE ENTIRE SECTION OF EACH PLANTER AREA TO A DEPTH CONSISTENT WITH THE ROOT DEVELOPMENT OF PROPOSED PLANT MATERIAL.

5. PLANTERS ADJACENT TO OR WITHIN VEHICULAR USE AREAS MUST BE CONSTRUCTED SUCH THAT LIMEROCK, ASPHALT, CONCRETE OR ANY OTHER OBSTRUCTIONS DO NOT EXTEND UNDER THE SURFACE INTO THE PLANTING AREAS.

6. THE PRACTICE OF TREE TRUNK WRAPPING AND THE APPLICATION OF PAINTS/TAR ONTO PRUNED TREE BRANCHES IS NOT RECOMMENDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURAL.

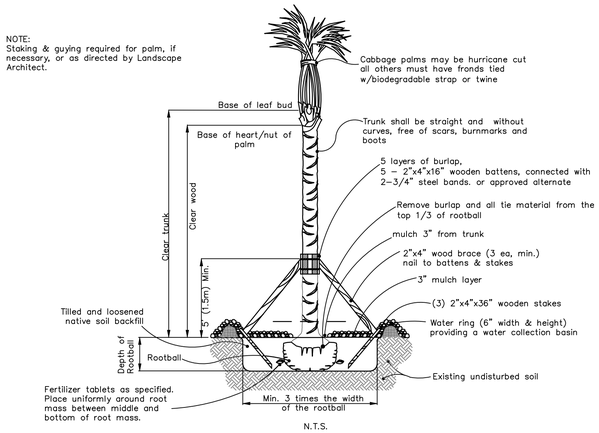
HABITAT MANAGEMENT AND LANDSCAPING PERMITS:

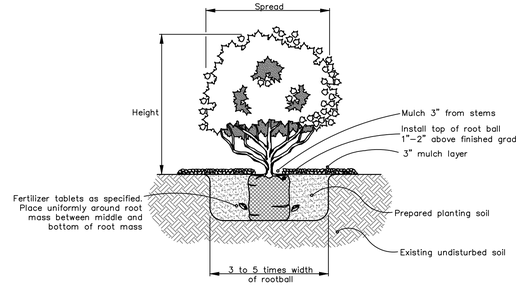
1. A HABITAT MANAGEMENT AND LANDSCAPING PERMIT IS REQUIRED FOR THE DEVELOPMENT OF THIS PROJECT. APPLICATION SHOULD NOT BE MADE UNTIL FINAL ADMINISTRATIVE APPROVAL HAS BEEN GRANTED.

a. AN APPLICATION AND AN EXTRA COPY OF THE APPROVED FINAL APPLICATION PLAN MUST BE SUBMITTED TO THIS DEPARTMENT IN ORDER TO PROCESS THE PERMIT.

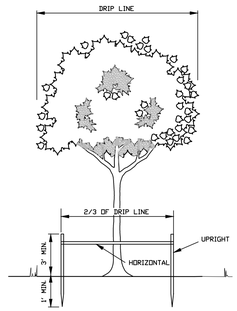
b. ALL EXOTIC SPECIES, I.E., BRAZILIAN PEPPER (SCHINUS TEREBINTHIFOLIUS), PUNK TREES (MELALEUCA QUINQUENERVIA), AND CHINESE TALLOW (SAPIUM SEBIFERUM) MUST BE REMOVED AS A CONDITION OF SITE DEVELOPMENT. WHERE NECESSARY DUE TO THEIR PROXIMITY TO PROTECTED PLANT MATERIAL, HAND REMOVAL WILL BE REQUIRED. SHOULD THIS REMOVAL BE TO A DEGREE THAT A POTENTIAL FOR EROSION IS CREATED, THE AREA MUST BE RESTABILIZED WITH SUITABLE MATERIAL.

c. ONCE FINAL ADMINISTRATIVE APPROVAL (FAA) HAS BEEN GRANTED, A BARRICADE INSPECTION CAN BE SCHEDULED. WHEN THE BARRICADES HAVE BEEN APPROVED THE PERMIT CAN BE TYPED AND RELEASED.





HARDWOODS

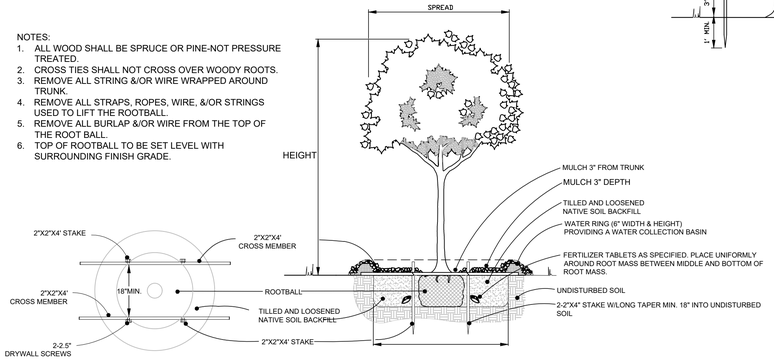


SPECIFICATIONS - WOOD BARRIER

1. MINIMUM RADIUS TO BE PROTECTED:
   A. HARDWOODS - 2/3 DRIPLINE
   B. CONIFERS & SABAL PALMS - ENTIRE DRIPLINE.
2. UPRIGHTS - NO LESS THAN 2" X 2" LUMBER.
3. HORIZONTALS - NO LESS THAN 1" X 4" LUMBER.
4. BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED TREES AND PALMS, AND INSPECTED BY CITY REPRESENTATIVE BEFORE CONSTRUCTION BEGINS.
5. UPRIGHT POSTS ARE TO BE AT LEAST 4 FEET IN LENGTH WITH A MINIMUM OF 1 FOOT ANCHORED IN GROUND AND 3 FEET ABOVE GROUND.
6. BARRIERS TO REMAIN IN PLACE UNTIL ALL PAVING, CONSTRUCTION AND HEAVY EQUIPMENT IS OUT OF AREA.

FURTHER INFORMATION MAY BE OBTAINED FROM THE LAND RESOURCE SPECIALIST AT 562-4741.

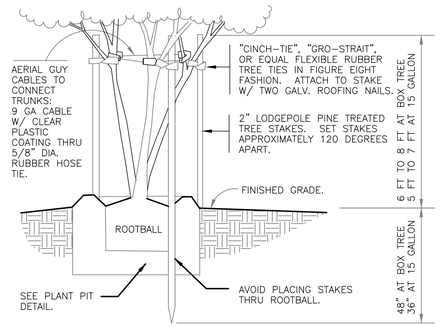
NOTES:
1. ALL WOOD SHALL BE SPRUCE OR PINE-NOT PRESSURE TREATED.
2. CROSS TIES SHALL NOT CROSS OVER WOODY ROOTS.
3. REMOVE ALL STRING &/OR WIRE WRAPPED AROUND TRUNK.
4. REMOVE ALL STRAPS, ROPES, WIRE, &/OR STRINGS USED TO LIFT THE ROOTBALL.
5. REMOVE ALL BURLAP &/OR WIRE FROM THE TOP OF THE ROOT BALL.
6. TOP OF ROOTBALL TO BE SET LEVEL WITH SURROUNDING FINISH GRADE.



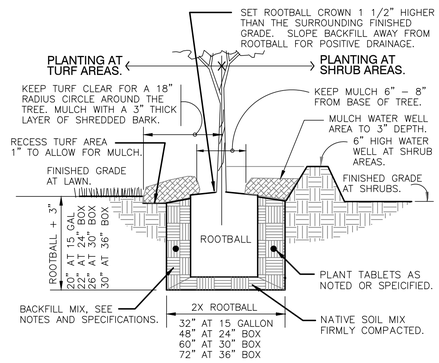
TREE PLANTING DETAIL

IRRIGATION NOTES

1. A LOW VOLUME IRRIGATION SYSTEM, THAT PROVIDES 100% COVERAGE TO ALL PROPOSED PLANTINGS, WILL BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
2. THE PROPOSED IRRIGATION SYSTEM MUST MEET OR EXCEED ALL APPLICABLE CITY CODE REQUIREMENTS. (I.E., BACK FLOW PREVENTION, AUTOMATIC RAIN SHUTOFF DEVICE, ETC...)
3. IRRIGATION SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE CITY PRIOR TO THE COMMENCEMENT OF WORK.
4. IRRIGATION SYSTEM MUST BE INSPECTED AND ACCEPTED BY CITY PROJECT MANAGER PRIOR TO INSTALLATION OF MULCH.
5. IRRIGATION AS-BUILT DRAWINGS, WHICH ACCURATELY AND CLEARLY IDENTIFY ALL MODIFICATION &/OR SUBSTITUTIONS, MUST BE SUBMITTED PRIOR TO FINAL INSPECTION AND ACCEPTANCE.
6. THE EXISTING 5/8" WATER METER WILL BE UTILIZED FOR THIS IRRIGATION SYSTEM.
7. THE LANDSCAPE CONTRACTOR MUST COORDINATE THE PLACEMENT AND POWER SUPPLY FOR THE IRRIGATION CONTROL TIMER WITH THE CITY AND THE GENERAL CONTRACTOR.
8. THE FOLLOWING IRRIGATION SYSTEM COMPONENTS WILL BE UTILIZED, PER EACH MANUFACTURERS' SPECIFICATIONS.
   TORO-NETAFIM TECHLINE SELF CLEANING, PRESSURE-COMPENSATING EMITTER LINE
   HARDIE - RAINDIAL 6 STATION OUTDOOR CONTROL TIMER
   RICHDALE - 214APR 1" ELECTRIC VALVE
   AMTEC - 10" ROUND VALVE BOX.



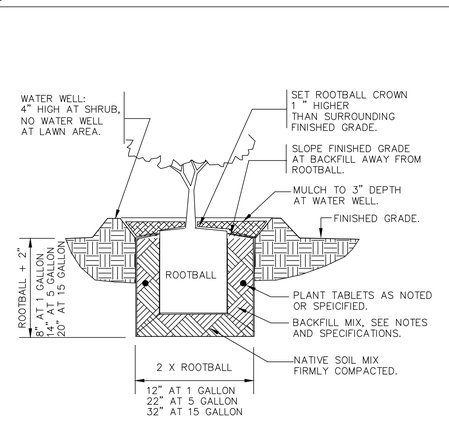
STAKING DETAIL



PLANT PIT DETAIL

1 TREE PLANTING MULTI-STAKE

1" = 1'–0" 32 9343.23–03



00 SHRUB PLANTING

1" = 1'–0" DETAIL–FILE

GENERAL LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL GRADE PLANTING BEDS, AS REQUIRED, TO PROVIDE POSITIVE DRAINAGE AND PROMOTE OPTIMUM PLANT GROWTH.
2. ALL RECOMMENDED TREES AND PLANT MATERIALS WILL BE GRADED AS NURSERY GRADE NO. 1 OR BETTER AS OUTLINED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF PLANT INDUSTRY "GRADES AND STANDARDS FOR NURSERY PLANTS", 7TH EDITION, 1998 AS REVISED FROM TIME TO TIME.
3. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE FLORIDA NURSERYMEN'S AND GROWER'S ASSOCIATIONS APPROVED PRACTICES.
4. ALL PLANTS SHALL BE FERTILIZED WITH AGRIFORM 20-10-5 TABLETS AS PER THE MANUFACTURERS SPECIFICATIONS IN CONJUNCTION WITH NOTE # 5.
5. THE PLANTING SOIL SHALL BE THE APPROXIMATE PROPORTIONS AS FOLLOWS: 50% SAND AND 50% ORGANIC MATERIAL CONSISTING OF NATIVE PEAT, WELL-DECOMPOSED SAWDUST, LEAF MOLD AND TOP SOIL. IT SHALL PROVIDE A GOOD PLIABLE AND THOROUGHLY MIXED MEDIUM WITH ADEQUATE AERATION, DRAINAGE AND WATER-HOLDING CAPACITY. IT SHALL ALSO BE FREE OF ALL EXTRANEOUS DEBRIS, SUCH AS ROOTS, STONES, WEEDS, ETC.
6. ALL PLANTING AREAS SHALL RECEIVE A 3" LAYER OF RECYCLED HARDWOOD LOG MULCH, WHICH IS TO BE WATERED-IN AFTER INSTALLATION.
7. THE PLANT MATERIAL SCHEDULE IS PRESENTED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT KEY, THE PLAN SHALL PREVAIL.
8. PLANTS SHALL MEET SIZE, CONTAINER, AND SPACING SPECIFICATIONS. ANY MATERIAL NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
9. ALL TREE AND SHRUB LOCATIONS ARE SUBJECT TO CHANGE. ALL LOCATIONS SHALL BE APPROVED BY THE CITY PROJECT MANAGER PRIOR TO PLANTING.
10. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING FULLY BOTH THE SITE AND THE BID DOCUMENTS. DISCREPANCIES IN THE DOCUMENTS OR THE ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE CITY PROJECT MANAGER IN WRITING AT THE TIME OF BIDDING OR DISCOVERY. NO ACCOUNT SHALL BE MADE AFTER CONTRACT COMPLETION FOR FAILURE TO REPORT SUCH CONDITION, OR FOR ERRORS ON THE PART OF THE LANDSCAPE CONTRACTOR AT THE TIME OF BIDDING.
11. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY APPLICABLE PERMITS AND LICENSES TO PERFORM THE WORK SET FORTH IN THIS PLAN SET AND THE SPECIFICATIONS.
12. PLANT MATERIAL SHALL BE BID AS SPECIFIED UNLESS UNAVAILABLE, AT WHICH TIME THE CITY PROJECT MANAGER WILL BE NOTIFIED BY TELEPHONE AND IN WRITING OF INTENDED CHANGES.
13. ANY AND ALL QUESTIONS CONCERNING THE PLAN SET AND/OR SPECIFICATIONS SHALL BE DIRECTED TO THE CITY PROJECT MANAGER AT (727) 562-4737.
14. THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTIONS WITHOUT THE WRITTEN APPROVAL OF THE CITY PROJECT MANAGER.
15. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE, IN WRITING, PLANT SURVIVABILITY FOR A PERIOD OF TWELVE (12) MONTHS FROM FINAL ACCEPTANCE BY THE CITY PROJECT MANAGER.
16. ALL DIMENSIONS TO BE FIELD-CHECKED BY THE LANDSCAPE CONTRACTOR PRIOR TO LANDSCAPE MATERIAL INSTALLATION. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE CITY PROJECT MANAGER.
17. ALL MATERIALS MUST BE AS SPECIFIED ON THE LANDSCAPE PLAN. IF MATERIALS OR LABOR DO NOT ADHERE TO SPECIFICATIONS, THEY WILL BE REJECTED BY THE CITY PROJECT MANAGER WITH PROPER INSTALLATION CARRIED OUT BY LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST.
18. ALL PERMITS NECESSARY ARE TO BE PROVIDED BY THE INSTALLING CONTRACTOR UNLESS OTHERWISE SPECIFICALLY STATED IN THE SPECIFICATIONS.
19. NO CONTRACTOR IDENTIFICATION SIGNS SHALL BE PERMITTED ON THE PROJECT, EXCEPT FOR THE PROJECT INFORMATION SIGNS.
20. EXISTING SOD SHALL BE REMOVED AS NECESSARY TO ACCOMODATE NEW PLANTINGS.
21. ANY EXISTING SOD AREAS THAT ARE UNNECESSARILY DISTURBED DURING THE LANDSCAPE INSTALLATION SHALL BE RESODDED TO MATCH EXISTING.
22. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THIS PROJECT.

FERTILIZATION NOTES

SHRUBS AND TREES

ALL TREES AND SHRUBS SHALL BE FERTILIZED WITH "AGRIFORM" 20-15-5 PLANTING TABLETS AT TIME OF INSTALLATION AND PRIOR TO COMPLETION OF PIT BACKFILLING. TABLETS SHALL BE PLACED UNIFORMLY AROUND THE ROOT MASS AT A DEPTH THAT IS BETWEEN THE MIDDLE AND BOTTOM OF THE ROOT MASS.

APPLICATION RATE:

1 GALLON CAN:	1 - 21 GRAM TABLET
3 GALLON CAN:	2 - 21 GRAM TABLETS
5 GALLON CAN:	3 - 21 GRAM TABLETS
7 GALLON CAN:	4 - 21 GRAM TABLETS
TREES:	3 - 21 GRAM TABLETS EACH 1/2" OF CALIPER
PALMS:	7 - 21 GRAM TABLETS

GROUNDCOVER AREAS

ALL GROUNDCOVER AREAS SHALL RECEIVE FERTILIZATION WITH "OZMOCOTE" TIME RELEASE FERTILIZER AS PER MANUFACTURER'S SPECIFICATIONS.

TREE PROTECTION AND PRESERVATION:

TREE BARRICADES AND EROSION CONTROL MEASURE REQUIREMENTS:
1. TREE BARRICADES AND/OR SILT SCREENS OR HAYBALES SHALL BE REQUIRED ALONG THE EDGES OF VEGETATED AREAS TO BE PROTECTED PRIOR TO THE ISSUANCE OF HABITAT MANAGEMENT AND LANDSCAPE PERMITS. THE LOCATION FOR EROSION CONTROL MEASURES ARE SHOWN ON THE CONSTRUCTION DRAWINGS.

2. ALL DESIRABLE TREES MUST BE RETAINED WHEREVER POSSIBLE. IT WILL BE REQUIRED THAT PROPOSED IMPROVEMENTS (i.e. BUILDINGS, WALKWAYS, DRIVEWAYS, POND BANKS, DRAINAGE SYSTEMS, ETC.) BE ADJUSTED TO RETAIN DESIRABLE TREES. GRADE CHANGES MUST BE SENSITIVE TO TREES REMAINING. IN GENERAL, NO GRADE CHANGES SHOULD OCCUR WITHIN THE CANOPY DRIP LINE OF PINE TREES AND 2/3 THE CANOPY DRIP LINE OF HARDWOOD TREES TO BE SAVED.

Northside Engineering, Inc.
300 South Belcher Road, Clearwater, Florida 33765
Tel: 727-443-3869 Fax: 727-446-8036
tech@northsideengineering.net
Est. 1989
Civil - Land Planning - Traffic Studies - Landscape
Due Diligence Reports - Land Use - Re-Zoning
Site Development - Utility Design
Construction Administration

Donald B. Fairbairn, P.E. #44971 Registry # 31306

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY Donald B. Fairbairn, 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.

PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

LANDSCAPE NOTES & DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.
L1.2

Z:\2023 AutoCAD Projects\2370 - Avilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:25:04 PM, Tech3, DWG To PDF.pc3

City of Treasure Island

120 108th Avenue
Treasure Island, FL 33706-4702

(727) 547-4575
Fax (727) 547-4584

IMPERVIOUS SURFACE RATIO WORKSHEET

IMPERVIOUS SURFACE means a surface that has been compacted or covered with a layer of material so that it is highly resistant to or prevents infiltration by stormwater. It includes surfaces such as compacted limerock, or clay, as well as most conventionally surfaced streets, roofs, sidewalks, parking lots and other similar surfaces.

IMPERVIOUS SURFACE RATIO (ISR) means a measure of the intensity of hard surfaced development on a site. An impervious surface ratio is the relationship between the total impervious surface area on a site and the gross land area. The ISR is calculated by dividing the square footage of the area of all impervious surfaces on the site by the square footage of the gross land area.

LOT AREA: The area included within the lot lines of the lot. No public right-of-way shall be included in the calculation of the lot area.

CONTRACTOR NAME: TBD

CONTRACTOR ADDRESS: TBD

CONTRACTOR PHONE #: TBD

CONTRACTOR EMAIL: TBD

SITE ADDRESS: 11580 Gulf Blvd. Treasure Island, Florida 33706-4646

LOT AREA SQ. FT. 19,098.7 SQ.FT

IMPERVIOUS SURFACES:

1. Building footprint: 6,138 SQ. FT.
2. Parking & Drive areas: 2,254 SQ. FT.
3. Pool & Patio areas: 2,784 SQ. FT.
4. Walkways: 581 SQ. FT.
5. Other: 178 SQ. FT.

TOTAL IMPERVIOUS SURFACES: 11,935 SQ. FT.

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Donald B Fairbairn 5/08/2024

11,935 SQ.FT	÷	19,098.7 SQ.FT	=	62%
Total Impervious Surface		**Lot Area**		**Impervious Surface Ratio %**

I, Donald B. Fairbairn, certify that the calculations submitted above for the Impervious Surface Ratio are accurate and complete.

~~Contractor~~ Signature: Donald B Fairbairn Date: 05.08.2024
Engineer

Northside
Engineering Inc.

Civil
Land Planning
Due Diligence Reports
Re-Zoning, Land Use, Annexation
Stormwater Management
Utility Design
Traffic
Construction Administration

DRAINAGE NARRATIVE
BALBOA SHORES
LOCATION:

11580 Gulf Boulevard, Treasure Island FL 33706-4646

PROPOSED ACTIVITY:

Construction of a new Hotel

DESIGN CRITERIA:

Treasure Island Stormwater Drainage Manual
25-Year Storm Event; using the Rational Method
Use of 1.0 inch treatment

DONALD B. FAIRBAIRN LICENSE No. 44971 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Donald B Fairbairn
DN: E=don@northsideengineering.net, CN=Donald B Fairbairn, O="NORTHSIDE ENGINEERING, INC.", SERIALNUMBER=AATL20230510297648, L=Clearwater, S=Florida, C=US
Reason: I have reviewed this document
Date: 2024.04.05 15:36:29-04'00'

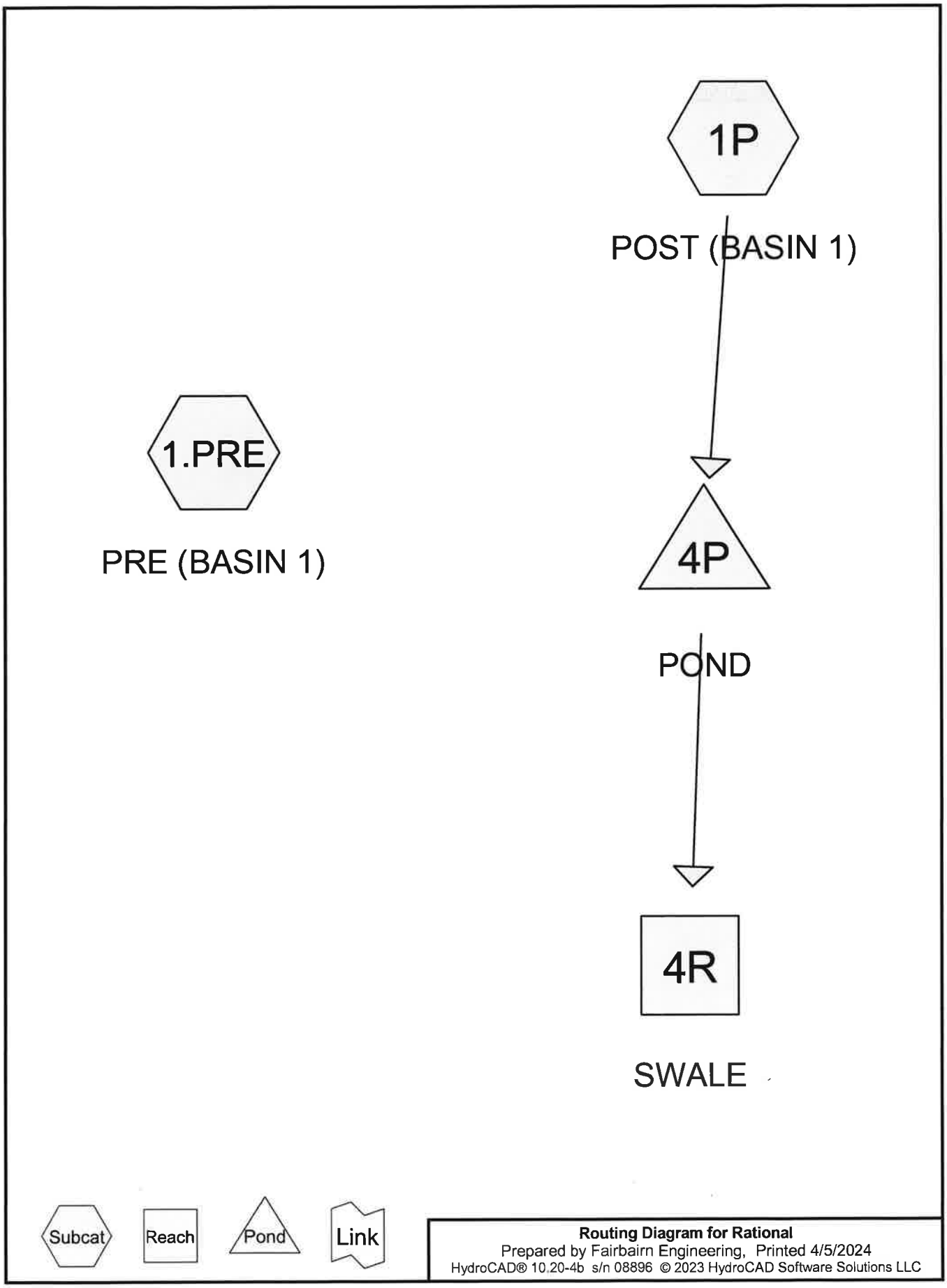
PRE-DEVELOPMENT CONDITION:

Area = 19,099 square feet (0.438 acres)
Design Storm = 25-year C1 =0.81 Tc = 15 Min
Rainfall Depth = 7.2 inches /hour
Pre-Condition Discharge = **1.56 cubic feet per second**

PROPOSED POST-DEVELOPMENT CONDITION:

Area = 19,099 square feet (0.438 acres)
Design Storm = 25-year C2 =0. 87 Duration for max volume = 45 Min
Rainfall Depth = 4.36 inches /hour
Design High Water = 4.93 feet
Post-Condition Discharge = 1.12 **cubic feet per second**
Required Treatment Volume = 1591.58 cubic feet
(19,099 square feet X 1.00 inches / 12 in. per ft.)
Provided Treatment Volume = 1,724.04 cubic feet
1,724.04 cubic feet of treatment volume draws down in 22.43 hours by effluent filtration.
SHWT has been determined to be the elevation of 0.81 ft. (NAVD 88 Datum)

300 South Belcher Road
Clearwater, Florida 33765
727 443 2869 Fax 727 446 8036



Routing Diagram for Rational
Prepared by Fairbairn Engineering, Printed 4/5/2024
HydroCAD® 10.20-4b s/n 08896 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.208	0.39	>75% Grass cover, Good, HSG A (1.PRE, 1P)
0.282	0.98	Paved parking, HSG A (1P)
0.313	0.98	Paved parking, HSG B (1.PRE)
0.074	1.00	pond (1P)
0.877	**0.84**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.490	HSG A	1.PRE, 1P
0.313	HSG B	1.PRE
0.000	HSG C	
0.000	HSG D	
0.074	Other	1P
0.877		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.208	0.000	0.000	0.000	0.000	0.208	>75% Grass cover, Good	1.PRE, 1P
0.282	0.313	0.000	0.000	0.000	0.595	Paved parking	1.PRE, 1P
0.000	0.000	0.000	0.000	0.074	0.074	pond	1P
0.490	**0.313**	**0.000**	**0.000**	**0.074**	**0.877**	**TOTAL AREA**	

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.PRE: PRE (BASIN 1) Runoff Area=19,099 sf 71.38% Impervious Runoff Depth=2.65"
Tc=15.0 min C=0.81 Runoff=1.56 cfs 0.097 af

Subcatchment 1P: POST (BASIN 1) Runoff Area=19,099 sf 81.17% Impervious Runoff Depth=2.85"
Tc=15.0 min C=0.87 Runoff=1.68 cfs 0.104 af

Reach 4R: SWALE Avg. Flow Depth=0.42' Max Vel=0.46 fps Inflow=1.12 cfs 0.037 af
n=0.150 L=50.0' S=0.0100 '/' Capacity=2.68 cfs Outflow=1.11 cfs 0.037 af

Pond 4P: POND Peak Elev=4.93' Storage=2,551 cf Inflow=1.68 cfs 0.104 af
Discarded=0.33 cfs 0.058 af Primary=1.12 cfs 0.037 af Outflow=1.44 cfs 0.095 af

Total Runoff Area = 0.877 ac Runoff Volume = 0.201 af Average Runoff Depth = 2.75"
23.73% Pervious = 0.208 ac 76.27% Impervious = 0.669 ac

Summary for Subcatchment 1.PRE: PRE (BASIN 1)

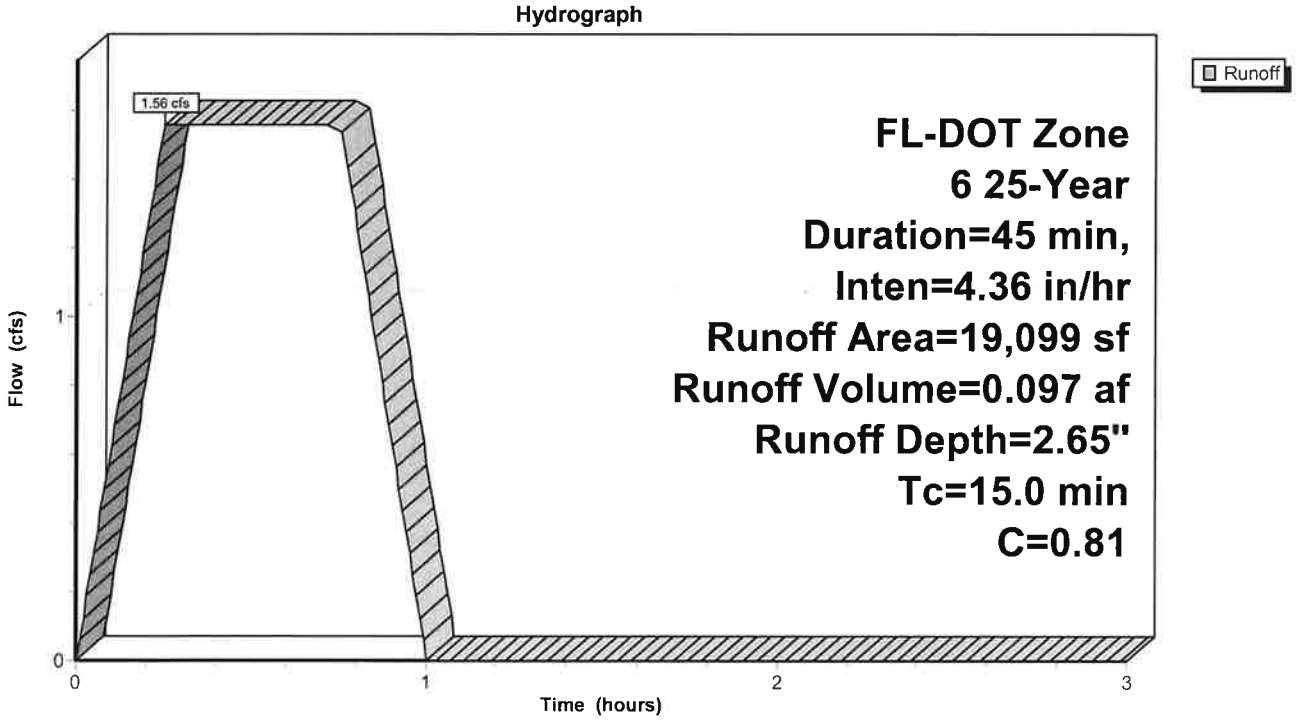
Runoff = 1.56 cfs @ 0.25 hrs, Volume= 0.097 af, Depth= 2.65"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
FL-DOT Zone 6 25-Year Duration=45 min, Inten=4.36 in/hr

Area (sf)	C	Description
13,633	0.98	Paved parking, HSG B
5,466	0.39	>75% Grass cover, Good, HSG A
19,099	0.81	Weighted Average
5,466		28.62% Pervious Area
13,633		71.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry, DIRECT ENTRY**

Subcatchment 1.PRE: PRE (BASIN 1)



Summary for Subcatchment 1P: POST (BASIN 1)

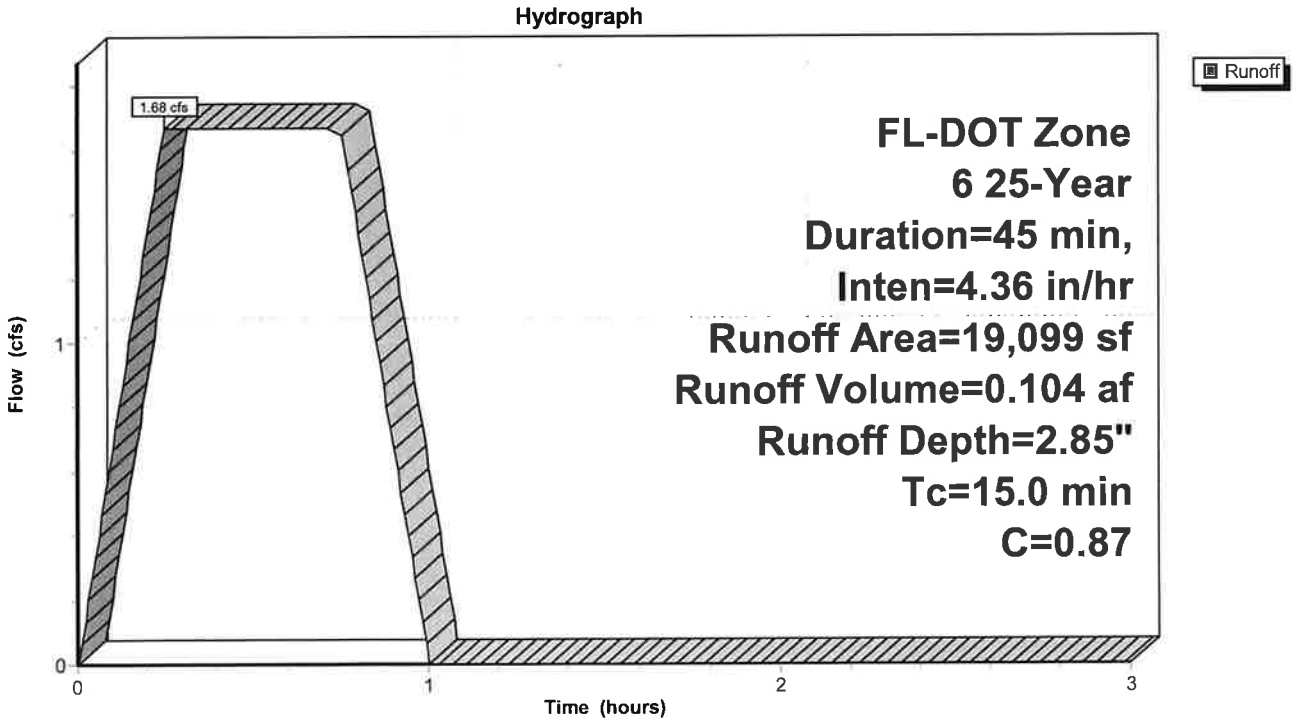
Runoff = 1.68 cfs @ 0.25 hrs, Volume= 0.104 af, Depth= 2.85"
Routed to Pond 4P : POND

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
FL-DOT Zone 6 25-Year Duration=45 min, Inten=4.36 in/hr

Area (sf)	C	Description
12,285	0.98	Paved parking, HSG A
3,597	0.39	>75% Grass cover, Good, HSG A
3,217	1.00	pond
19,099	0.87	Weighted Average
3,597		18.83% Pervious Area
15,502		81.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry, DIRECT ENTRY**

Subcatchment 1P: POST (BASIN 1)



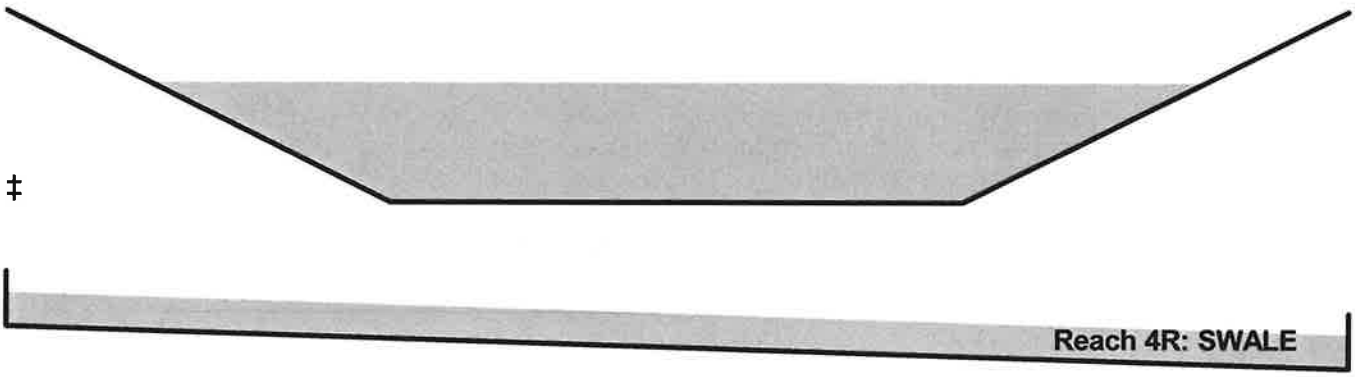
Summary for Reach 4R: SWALE

Inflow Area = 0.438 ac, 81.17% Impervious, Inflow Depth = 1.02" for 25-Year event
Inflow = 1.12 cfs @ 0.78 hrs, Volume= 0.037 af
Outflow = 1.11 cfs @ 0.84 hrs, Volume= 0.037 af, Atten= 1%, Lag= 3.1 min

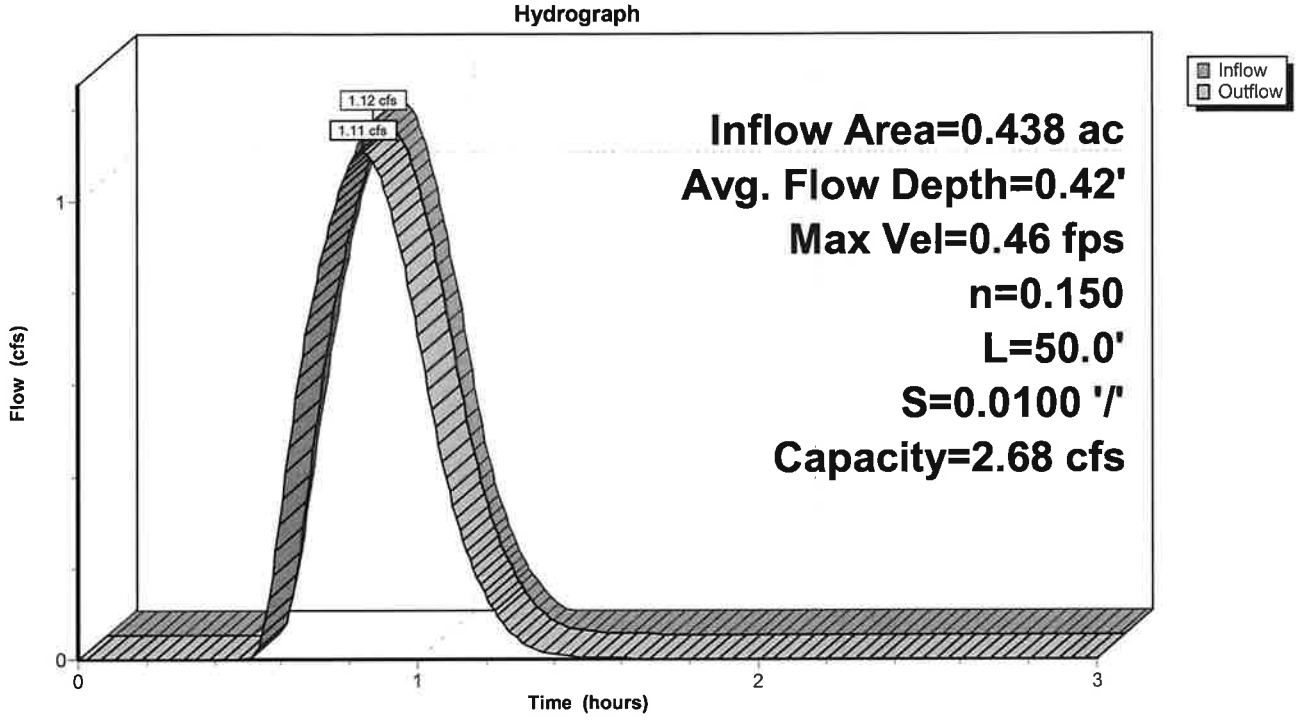
Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.46 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 6.1 min

Peak Storage= 120 cf @ 0.81 hrs
Average Depth at Peak Storage= 0.42' , Surface Width= 7.37'
Bank-Full Depth= 0.67' Flow Area= 4.5 sf, Capacity= 2.68 cfs

4.00' x 0.67' deep channel, n= 0.150 Sheet flow over Short Grass
Side Slope Z-value= 4.0 '/' Top Width= 9.36'
Length= 50.0' Slope= 0.0100 '/'
Inlet Invert= 4.00', Outlet Invert= 3.50'



Reach 4R: SWALE



Stage-Area-Storage for Reach 4R: SWALE

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
4.00	0.0	0
4.01	0.0	2
4.02	0.1	4
4.03	0.1	6
4.04	0.2	8
4.05	0.2	11
4.06	0.3	13
4.07	0.3	15
4.08	0.3	17
4.09	0.4	20
4.10	0.4	22
4.11	0.5	24
4.12	0.5	27
4.13	0.6	29
4.14	0.6	32
4.15	0.7	35
4.16	0.7	37
4.17	0.8	40
4.18	0.8	42
4.19	0.9	45
4.20	1.0	48
4.21	1.0	51
4.22	1.1	54
4.23	1.1	57
4.24	1.2	60
4.25	1.3	63
4.26	1.3	66
4.27	1.4	69
4.28	1.4	72
4.29	1.5	75
4.30	1.6	78
4.31	1.6	81
4.32	1.7	84
4.33	1.8	88
4.34	1.8	91
4.35	1.9	95
4.36	2.0	98
4.37	2.0	101
4.38	2.1	105
4.39	2.2	108
4.40	2.2	112
4.41	2.3	116
4.42	2.4	119
4.43	2.5	123
4.44	2.5	127
4.45	2.6	131
4.46	2.7	134
4.47	2.8	138
4.48	2.8	142
4.49	2.9	146
4.50	3.0	150
4.51	3.1	154
4.52	3.2	158
4.53	3.2	162
4.54	3.3	166
4.55	3.4	171
4.56	3.5	175
4.57	3.6	179
4.58	3.7	183
4.59	3.8	188
4.60	3.8	192
4.61	3.9	196
4.62	4.0	201
4.63	4.1	205
4.64	4.2	210
4.65	4.3	215
4.66	4.4	219
4.67	**4.5**	**224**

Summary for Pond 4P: POND

Inflow Area = 0.438 ac, 81.17% Impervious, Inflow Depth = 2.85" for 25-Year event
Inflow = 1.68 cfs @ 0.25 hrs, Volume= 0.104 af
Outflow = 1.44 cfs @ 0.78 hrs, Volume= 0.095 af, Atten= 14%, Lag= 32.1 min
Discarded = 0.33 cfs @ 0.78 hrs, Volume= 0.058 af
Primary = 1.12 cfs @ 0.78 hrs, Volume= 0.037 af
Routed to Reach 4R : SWALE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 4.93' @ 0.78 hrs Surf.Area= 2,663 sf Storage= 2,551 cf

Plug-Flow detention time= 43.3 min calculated for 0.095 af (91% of inflow)
Center-of-Mass det. time= 41.4 min (71.4 - 30.0)

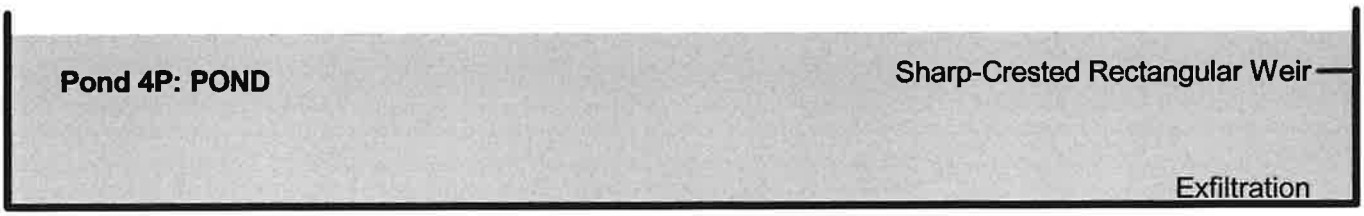
Volume	Invert	Avail.Storage	Storage Description
#1	3.50'	3,039 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
3.50	278	0	0
4.00	1,675	488	488
4.50	2,323	1,000	1,488
5.00	2,722	1,261	2,749
5.10	3,072	290	3,039

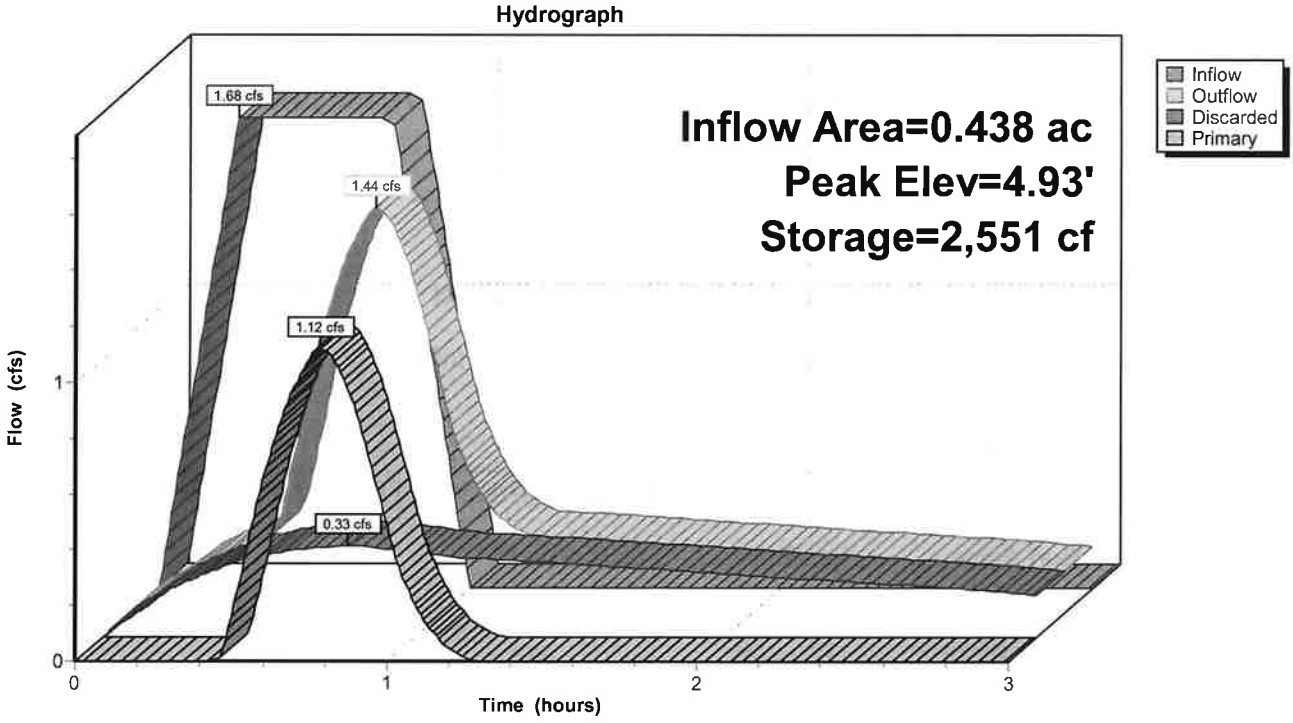
Device	Routing	Invert	Outlet Devices
#1	Primary	4.60'	**1.9' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	3.50'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 0.81'

Discarded OutFlow Max=0.33 cfs @ 0.78 hrs HW=4.93' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.33 cfs)

Primary OutFlow Max=1.12 cfs @ 0.78 hrs HW=4.93' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.12 cfs @ 1.87 fps)



Pond 4P: POND


Hydrograph
Inflow Area=0.438 ac
Peak Elev=4.93'
Storage=2,551 cf
1.68 cfs
1.44 cfs
1.12 cfs
0.33 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
0
1
0
1
2
3
Time (hours)

Stage-Area-Storage for Pond 4P: POND

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
3.50	278	0	4.01	1,688	505
3.51	306	3	4.02	1,701	522
3.52	334	6	4.03	1,714	539
3.53	362	10	4.04	1,727	556
3.54	390	13	4.05	1,740	574
3.55	418	17	4.06	1,753	591
3.56	446	22	4.07	1,766	609
3.57	474	26	4.08	1,779	626
3.58	502	31	4.09	1,792	644
3.59	529	36	4.10	1,805	662
3.60	557	42	4.11	1,818	680
3.61	585	47	4.12	1,831	699
3.62	613	53	4.13	1,843	717
3.63	641	60	4.14	1,856	735
3.64	669	66	4.15	1,869	754
3.65	697	73	4.16	1,882	773
3.66	725	80	4.17	1,895	792
3.67	753	88	4.18	1,908	811
3.68	781	95	4.19	1,921	830
3.69	809	103	4.20	1,934	849
3.70	837	111	4.21	1,947	869
3.71	865	120	4.22	1,960	888
3.72	893	129	4.23	1,973	908
3.73	921	138	4.24	1,986	928
3.74	949	147	4.25	1,999	948
3.75	977	157	4.26	2,012	968
3.76	1,004	167	4.27	2,025	988
3.77	1,032	177	4.28	2,038	1,008
3.78	1,060	187	4.29	2,051	1,028
3.79	1,088	198	4.30	2,064	1,049
3.80	1,116	209	4.31	2,077	1,070
3.81	1,144	220	4.32	2,090	1,091
3.82	1,172	232	4.33	2,103	1,112
3.83	1,200	244	4.34	2,116	1,133
3.84	1,228	256	4.35	2,129	1,154
3.85	1,256	268	4.36	2,142	1,175
3.86	1,284	281	4.37	2,155	1,197
3.87	1,312	294	4.38	2,167	1,218
3.88	1,340	307	4.39	2,180	1,240
3.89	1,368	321	4.40	2,193	1,262
3.90	1,396	335	4.41	2,206	1,284
3.91	1,424	349	4.42	2,219	1,306
3.92	1,451	363	4.43	2,232	1,328
3.93	1,479	378	4.44	2,245	1,351
3.94	1,507	393	4.45	2,258	1,373
3.95	1,535	408	4.46	2,271	1,396
3.96	1,563	423	4.47	2,284	1,419
3.97	1,591	439	4.48	2,297	1,442
3.98	1,619	455	4.49	2,310	1,465
3.99	1,647	472	4.50	2,323	1,488
4.00	1,675	488	4.51	2,331	1,511

Stage-Area-Storage for Pond 4P: POND (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
4.52	2,339	1,534
4.53	2,347	1,558
4.54	2,355	1,581
4.55	2,363	1,605
4.56	2,371	1,629
4.57	2,379	1,652
4.58	2,387	1,676
4.59	2,395	1,700
4.60	2,403	1,724
4.61	2,411	1,748
4.62	2,419	1,772
4.63	2,427	1,796
4.64	2,435	1,821
4.65	2,443	1,845
4.66	2,451	1,870
4.67	2,459	1,894
4.68	2,467	1,919
4.69	2,475	1,944
4.70	2,483	1,968
4.71	2,491	1,993
4.72	2,499	2,018
4.73	2,507	2,043
4.74	2,515	2,068
4.75	2,523	2,093
4.76	2,530	2,119
4.77	2,538	2,144
4.78	2,546	2,169
4.79	2,554	2,195
4.80	2,562	2,221
4.81	2,570	2,246
4.82	2,578	2,272
4.83	2,586	2,298
4.84	2,594	2,324
4.85	2,602	2,350
4.86	2,610	2,376
4.87	2,618	2,402
4.88	2,626	2,428
4.89	2,634	2,454
4.90	2,642	2,481
4.91	2,650	2,507
4.92	2,658	2,534
4.93	2,666	2,560
4.94	2,674	2,587
4.95	2,682	2,614
4.96	2,690	2,641
4.97	2,698	2,668
4.98	2,706	2,695
4.99	2,714	2,722
5.00	2,722	2,749
5.01	2,757	2,776
5.02	2,792	2,804
5.03	2,827	2,832
5.04	2,862	2,861
5.05	2,897	2,889
5.06	2,932	2,919
5.07	2,967	2,948
5.08	3,002	2,978
5.09	3,037	3,008
5.10	**3,072**	**3,039**

NORTHSIDE ENGINEERING
DRAINAGE CALCULATIONS

Arville - Balboa Shores

EXISTING CONDITIONS - DETERMINE RUNOFF FACTOR

	Impervious	13633.00	X	0.90	=	12269.7				
	Pond	0.00	X	1.00	=	0				
	Pervious	5466.00	X	0.20	=	1093.2				
	Total	19099.00				13362.9		C 1 =	0.700	
		0.44		Acre						
		EXISTING CONDITIONS - PRE DEVELOPMENT FLOW								
	Time Of Concentration		15	Minutes		Area =	0.44	Q=CiA		
	Rain Fall		7.2	In/hr		C1 =	0.700	Q=	2.21	cfs
	Storm		25	yr.						
	Zone		6							
		PROPOSED CONDITIONS - DETERMINE RUNOFF FACTOR								
	Impervious	12285.00	X	0.95	=	11670.75				
	Pond	3217	X	1.00	=	3217				
	Pervious	3597.00	X	0.20	=	719.4				
	Total	19099.00				15607.15		C 2 =	0.817	
		0.44		Acre						
	Storm		25	yr.						
		PROPOSED CONDITIONS - DETERMINE POND VOLUME								
	Design Storm 25 Year Zone 6									
	D	i		P		S	R			
	RAINFALL	INTENSITY		PEAK		STORM	RELEASE	REQUIRED		
	DURATION	IN/HR		RUN OFF		VOLUME	PRE VOL.	STORAGE		
				Q=CiA		Cu. Ft	Cu. Ft.	Cu. Ft.		
10	600	8.4		3.01		1805.79	1325.25	480.54		
15	900	7.2		2.59		2331.40	1987.87	343.53		
20	1200	6.4		2.29		2751.67	2650.49	101.18		
30	1800	5.2		1.86		3353.60	3975.74	-622.14		
40	2400	4.6		1.65		3955.53	5300.99	-1345.45		
50	3000	4.0		1.43		4299.49	6626.23	-2326.74		
60	3600	3.7		1.31		4707.94	7951.48	-3243.54		
75	4500	3.2	4	1.15		5159.39	9939.35	-4779.96		
	CRITICAL STORM VOLUME			480.54		Cu.Ft.				
	TREATMENT (1.0 inch)			1591.58		Cu.Ft.				
	TOTAL POND VOLUME			2072.12		Cu.Ft.				

STAGE STORAGE TABLE

Required Treatment **1,591.58 Cu.Ft.**

Provided Treatnment 1,724.04 Cu.Ft.

Multiplier 1.00

Input stage only

	Stage	Area	Inc. Vol	Cum Vol	Interp	Interp Inc.	**Interp Cum**	Area	Cum Vol
	(ft)	(sf)	(cf)	(cf)	Area (sf)	Vol (cf)	**Vol (cf)**	(ac)	(ac ft)
								0.0000	0.0000
					0.00	0.00	**0.00**		
TOB	5.10	3,072.00		3,038.70				0.0705	0.0698
			289.70		0.00	0.00	0.00		
	5.00	2,722.00		2,749.00				0.0625	0.0631
	4.60		1,261.25		2,402.80	236.29	1,724.04		
	4.50	2,323.00		1,487.75				0.0533	0.0342
			999.50		0.00	0.00	0.00		
	4.00	1,675.00		488.25				0.0385	0.0112
			488.25		0.00	0.00	0.00		
BOT	**3.50**	278.00		0.00				0.0064	0.0000
			0.00		0.00	0.00	0.00		
	0.00	0.00		0.00				0.0000	0.0000

REPORT OF
GEOTECHNICAL EXPLORATION
BALBOA SHORES
11580 GULF BOULEVARD
PINELLAS COUNTY, FLORIDA

Prepared for:

ATM ARVILLA, LLC

Prepared by:

Gulf Coast Testing Laboratory, Inc.

GCTL Project No. 30583

December 7, 2023

State of Florida Certificate of Authorization Number 00002370

GULF COAST TESTING LABORATORY INC.

PINELLAS PARK, FL 33781

CONSTRUCTION MATERIALS ENGINEERING COUNCIL CERTIFIED

December 7, 2023

Mr. Allie T. Mallad
Atm Arvilla, LLC

11580 Gulf Boulevard
Treasure Island, Florida 33706

Subject: **Report of Geotechnical Exploration**
Balboa Shores
11580 Gulf Boulevard
Pinellas County, FL
GCTL Project No. 30583

Dear Mr. Mallad:

Gulf Coast Testing Laboratory, Inc. (GCTL) has completed the requested Geotechnical Exploration for the above-referenced project. The results of the subsurface exploration have been evaluated and are presented in this Report of Geotechnical Exploration.

This report presents a review of the project information provided to us, a description of the site and subsurface conditions encountered as well as our foundation and earthwork recommendations. The Appendices to the report contain site and boring location figures, USDA soil survey information, FEMA FIRM map information, boring logs, site photographs, static pile bearing capacity analyses, and the lateral pile capacity analyses.

5671 70th AVENUE NORTH
PINELLAS PARK, FL 33781
CONSTRUCTION MATERIALS ENGINEERING COUNCIL CERTIFIED
CERTIFICATE of AUTHORIZATION # 00002370
PHONE*: (727) 544-4080 *FAX*: (727) 544-753*2
Email: info@gctlfl.com

We appreciate this opportunity to provide our services to you and we look forward to serving as your geotechnical consultant throughout this project. Should you have any questions in regard to the information presented in this report, please do not hesitate to contact us at your earliest convenience.

Sincerely,

GULF COAST TESTING LABORATORY, INC.

Digitally signed by Ora F Fraze
Date: 2024.04.17 13:33:06 -04'00'

Rick Davis

Don R. Stites, P.E.
Principal Geotechnical Engineer
Florida Registration No. 42290

Rick Davis
President

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- **Figure 1 – General Site Vicinity Map**
- **Figure 2 – Local Site Vicinity Map**
- **Figure 3 – 2023 Aerial Photograph**
- **Figure 4 – 2015 Aerial Photograph**
- **Figure 5 – 2007 Aerial Photograph**
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- **Figure 8 – Field Exploration Plan**
- **USDA Soil Map Information**
- **FEMA FRIM Map Information**
- **Soil Boring Logs**
- **Photographs**
- **Static Pile Bearing Capacity Analyses**
- **Lateral Pile Capacity Analyses**

1.0 EXECUTIVE SUMMARY

- Due to the existing development, access to the subject property is limited. In this regard, additional confirmation subsurface explorations are recommended to be performed following substantial demolition of the existing structure.

- It is understood the subject project is located at 11580 Gulf Boulevard in Pinellas County, Florida and is known as Balboa Shores. This property was observed to consist of a generally level area developed as a low-rise hotel facility. It is understood that this property is primarily located within FEMA FIRM Zone A and within 300 feet of the Coastal Construction Line. This property is located immediately adjacent to the Gulf-of-Mexico.

- The subject project is expected to be developed as a six-story condominium structure, with the ground floor utilized for vehicle parking. It is anticipated that the primary support of the structure is to be provided by columns and load-bearing walls. The bottom floor of the building is anticipated to be constructed as a concrete slab-on-grade. The finished grades of the facility area are expected to generally coincide with the existing grade levels. The maximum loadings associated with the proposed structure are expected to be as follows:

Wall Load:	15 kips/linear ft
Column Loads:	700 kips
Floor Load:	100 lbs/sq ft

- The borings indicate the subsurface soils were generally arranged in three soil layers. The first soil layer consisted of pale brown to light gray loose to medium dense fine SAND (SP) with traces of marine shell fragments extending to approximate depths of nine feet below the existing ground surface. Underlying the surface material and extending to an approximate depth of 55 feet below the existing ground surface, gray very loose to loose silty SAND (SM) was encountered. The final soil layer encountered consisted of firm to very hard highly plastic CLAY (CH) which extended to maximum boring termination depths of 90 feet below the existing ground surface elevations.

- As recorded immediately after drilling during the time of our subsurface exploration, groundwater was encountered at an approximate depth of five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will closely coincide with the tidal fluctuations of the adjacent Gulf of Mexico. It is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

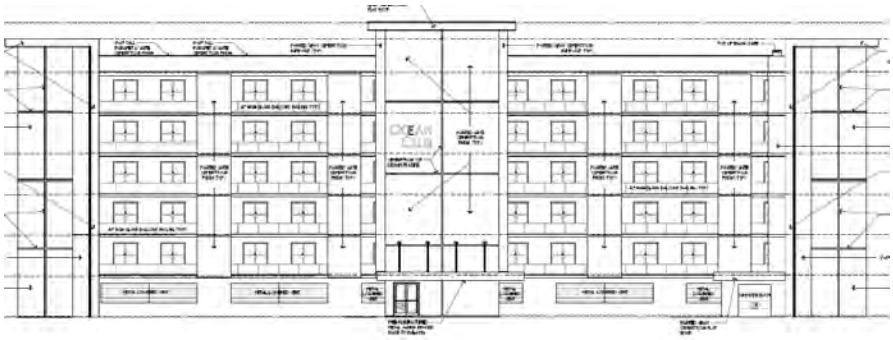
- Based on the subsurface conditions and the expected structural characteristics, it is recommended that the proposed structure should be supported with the use of a deep foundation system (piles). Efficient deep foundation systems are expected to consist of 14-inch square precast pre-stressed concrete (SPPC) piles. SPPC piles embedded to an approximate depth of 78 feet below the existing ground surface elevations are expected to attain allowable compressive capacities of at least 80 tons.

- The soils excavated from the near surface are expected to predominately consist of fine SAND with marine shell fragments. These soils are expected to be generally SUITABLE for use as structural fill.

2.0 INTRODUCTION

2.1 PROJECT CHARACTERISTICS

The subject project is expected to be developed as a six-story condominium structure, with the ground floor utilized for vehicle parking (see illustration).



It is anticipated the primary support of the structure is to be provided by columns and load-bearing walls. The bottom floor of the building is anticipated to be constructed as a concrete slab-on-grade. The finished grades of the facility area are expected to generally coincide with the existing grade levels.

The structure loading conditions were not available during the time of this report. Based on our previous experience with similar structures, the maximum loadings associated with the proposed structures are expected to be as follows:

Wall Load:	15 kips/linear ft
Column Loads:	700 kips
Floor Load:	100 lbs/sq ft

2.2 SITE DESCRIPTION



It is understood the subject project is located at 11580 Gulf Boulevard in Pinellas County, Florida and is known as Balboa Shores.

This property was observed to consist of a generally level area developed as a low-rise hotel facility (see photograph).

It is understood that this property is primarily located within FEMA FIRM Zone A and within 300 feet of the Coastal Construction Line. This property is located immediately adjacent to the Gulf-of-Mexico.

The approximate site location is illustrated on Figures in the Appendix of this report. Photographs of the subject property have been included in the Appendix of this report.

2.3 PURPOSE AND SCOPE

The purpose of this study was to obtain information on the general subsurface conditions at the proposed project site. Due to the existing development, access to the subject property is limited. In this regard, additional confirmation subsurface explorations are recommended to be performed following substantial demolition of the existing structure. The subsurface materials encountered were then evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

- General location and description of potentially deleterious materials encountered in the borings, which may interfere with construction progress or structure performance, including existing fills or surficial/subsurface organics.

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.

- Evaluation of active raveling ("sinkhole-type") activity, if any, in the borings performed.

- Evaluation of utilizing an appropriate foundation system, such as precast prestressed square concrete piles, for support of the proposed structure. Identification of recommended foundation design parameters, including pile tip elevation, allowable compressive, tensile, and lateral capacities, and total and differential settlements.

- Recommended soil subgrade preparation operations, including stripping, grubbing and compaction. Recommended engineering criteria for placement and compaction of approved structural fill materials.

- Evaluation of the suitability and availability of materials on-site that may be moved during site grading for use as structural fill in the building area, as pavement subgrade fill, and as general backfill.

- Presentation of construction recommendations, including expected ground water control measures, temporary slope stability recommendations, and unsuitable soil removal guidelines.

The following services were performed during the initial Geotechnical Exploration to achieve the preceding objectives:

- Reviewed readily-available published geologic and topographic information. This included information from zoning maps published by the Federal Emergency Management Agency (FEMA), and available soil survey information published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS), as deemed appropriate.

- Reviewed readily available aerial photographs obtained from Google Earth Pro.

- Coordinated underground utility location services through Sunshine State One Call of Florida, Inc.

- Executed a program of subsurface exploration consisting of subsurface sampling and field testing.

    - Two Standard Penetration Test (SPT) borings were performed to approximate depths ranging from eighty to ninety feet below the existing ground surface elevations. In the borings, soil samples were collected and SPT resistance were measured "continually" to an approximate depth of ten feet, and at approximate intervals of five feet thereafter to boring termination.

    - Containerize and transport drilling mud off-site for disposal. Perform a field cleanup of the soil boring locations.

    - Backfill completed borings utilizing a bentonite pellets. Patch borings within asphaltic concrete with manually compacted asphalt cold-patch.

- Visually classified and stratified representative soil samples in the laboratory using the Unified Soil Classification System (USCS). Identified soil conditions at each boring location and formed an opinion of the site soil stratigraphy.

- Collected groundwater level measurements and estimated normal wet seasonal high groundwater levels.

The results of the field exploration and laboratory tests were used in the engineering analyses and in the formulation of the recommendations. The results of the subsurface exploration, including the recommendations and the data upon which they are based, are presented in this formal written report prepared by an experienced Professional Engineer.

The scope of our services does not include an environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in the report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

3.0 FIELD EXPLORATION



The general foundation soil types and associated design parameters were developed by performing two soil test borings in readily accessible locations which were within the proposed condominium development area. Due to the current developed and operating site conditions, this subsurface exploration was limited to two soil test borings; additional soil test borings are recommended to be performed following demolition of the existing structure.

The boring locations were determined in the field from existing ground surface features. The ground surface elevations at the boring locations were neither furnished nor determined. The soil test boring locations are depicted in the figures in the Appendix of this report. The scope of this exploration does not include a thorough evaluation of potential deep soil conditions, such as sinkholes.

The soil test borings were advanced with a track-mounted drill rig using “Mud” Rotary drilling procedures (see photograph). The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils." Samples were obtained at intervals of two feet to a depth of ten feet, and at intervals of five feet thereafter to approximate boring termination depths ranging from 80 to 90 feet below the existing ground surface elevations. It is noted that one boring was extended ten feet from the proposed termination depth due to the subsurface conditions encountered. Representative portions of these soil samples were sealed in “air-tight” containers, labeled and transferred to our laboratory for classification and testing.

4.0 LABORATORY TESTING

The soil samples were transported to our laboratory and were classified by the Geotechnical Engineer using the Unified Soil Classification System (USCS) in general accordance with ASTM Test Designation D-2488. Due to the structural characteristics of the proposed facility and the nature of the soils encountered, refined laboratory testing was not considered necessary.

It should be noted that all soil samples will be properly disposed of 30 days following the submittal of the **GCTL** subsurface exploration report.

5.0 GENERALIZED SUBSURFACE CONDITIONS

5.1 AERIAL PHOTOGRAPH

The aerial photographs dated 2023, 2015, 2007, 2002, and 1995 were reviewed for pertinent ground surface features at the subject property. Based on our review, the subject property illustrated in the aerial photographs appeared to be generally consistent with the site conditions observed during the time of the subsurface exploration. Copies of the aerial photographs have been included in the Appendix of this report.

5.2 COUNTY SOIL SURVEY

The "Soil Survey of Pinellas County, Florida", published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS), was reviewed for general near-surface soil information within the general vicinity of the subject project. This information indicates that there is one primary soil mapping unit within the proposed project area. The soil map unit is identified as predominately consisting of Matlacha and St. Augustine Soils and Urban Land (16). The soil map unit characteristics are tabulated below:

SOIL SERIES	DEPTH (INCHES)	UNIFIED SOIL CLASS	PERMEABILITY RATING (INCHES/HOUR)	USDA SEASONAL HIGH GROUNDWATER TABLE	
				DEPTH (FEET)	MONTHS
Matlacha Soils (16)	0-42 42-80	SP, SP-SM SP, SP-SM	2.0-6.0 6.0-20	2.0-3.0	June-October
St. Augustine Soils (16)	0-22 22-33 33-48 48 – 63 63 - 80	SP, SP-SM SM SM, SP-SM SM, SP-SM SP, SP-SM	6.0-20 2.0-6.0 6.0-20.0 2.0 – 20 6.0 – 20	1.5-3.0	June-October

Urban Land is reported to consist of land areas which have "undergone extensive urban development. The soils have been modified by cutting, grading, filling, and shaping or otherwise generally altered. Urban facilities including paved parking areas, streets, industrial buildings, houses and other structures, and underground utilities have been constructed on 75 percent or more of this association. Places not covered by urban facilities remain as altered soils or soil material." Based on the altered state of the soil material, published soil and groundwater characteristics are not considered reliable. A copy of the soil survey information has been included in the Appendix of this report.

5.3 SEISMIC SITE CLASSIFICATION

Based on our review of the International Building Code (IBC), dated 2024, this structure is anticipated to be considered as Risk Category III. Based on the American Society of Civil Engineers (ASCE) Publication 7 and our knowledge of the general subsurface conditions at the site, we believe the site should be considered to be a Site Class D. In this regard, the site appears to be within seismic design category A. It should be noted that this classification is based on the subsurface exploration results and our experience in the area. A soil test boring extending to a depth of at least 100 feet may be performed to verify this site classification.

5.4 SUBSURFACE CONDITIONS

Soil stratification was based on visual observation of the recovered soil samples, laboratory testing and interpretation of the field boring logs by an experienced **GCTL** Engineering Technician. The boring stratification lines represent the approximate boundaries between soil types of significantly different engineering properties; however, the actual transition may be gradual. In some cases, small variations in properties not considered pertinent to our engineering evaluation may have been abbreviated or omitted for clarity. The boring profiles present the conditions at the particular boring location and variations do occur among the borings and between soil samples. The borings indicate the subsurface soils were generally arranged in three soil layers.

The first soil layer consisted of pale brown to light gray loose to medium dense fine SAND (SP) with traces of marine shell fragments extending to approximate depths of nine feet below the existing ground surface. Standard Penetration Test (SPT) values recorded within this soil layer generally varied from 4 to 29 blows per foot (bpf), with the higher SPT values possibly artificially increased by marine shell fragments. It is believed that a near-surface portion of this material consists of an EARTHFILL material.

Underlying the surface material and extending to an approximate depth of 55 feet below the existing ground surface, gray very loose to loose silty SAND (SM) was encountered. SPT values recorded within this soil layer generally varied from Weight-of-Hammer (WH) to 19 bpf.

The final soil layer encountered consisted of firm to very hard highly plastic CLAY (CH) which extended to maximum boring termination depths of 90 feet below the existing ground surface elevations. SPT values recorded within this soil layer were highly variable, with SPT values ranging from Weight of Rod (WR) to 50 blows per five inches of penetration.

No "raveled" conditions indicative of “active” sinkhole type activity was considered to be encountered during this subsurface exploration program.

5.5 GROUNDWATER CONDITIONS

As recorded immediately after drilling during the time of our subsurface exploration, groundwater was encountered at an approximate depth of five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will be tidally influenced and closely coincide with the surface water elevations of the adjacent Gulf of Mexico. It is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

Groundwater observation wells may be installed on-site to monitor groundwater fluctuations over a period of time and to permit more accurate determinations of wet season and dry season levels.

5.6 FEMA FIRM INFORMATION

Based on our review of the published Federal Emergency Management Agency (FEMA) Flood Insurance Rating Map (FIRM) indicates the property is partially within zone VE. A copy of the FIRM information has been included in the Appendix of this report.

6.0 DESIGN RECOMMENDATIONS

The following design recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered during this exploration. Additional soil test borings are considered essential following demolition of the existing structure.

The test boring data was evaluated utilizing correlations between the measured standard penetration test resistances and the engineering performance characteristics of similar subsurface conditions. If there is any change in these project criteria, including project building locations on the site, a review must be made by **GCTL** to determine if any modifications to the recommendations will be required. The findings of such a review should then be presented in a supplemental report.

6.1 GENERAL

It is understood that the subject property is partially located within flood zone VE and is with 300 feet of the Coastal Construction Line. Based on this property location and zoning, a deep foundation system (piles) is required by code to be utilized for this property. In addition, based upon the proposed structure characteristics and the subsurface soils encountered, a deep foundation system consisting of Square Precast Prestressed Concrete (SPPC) piles are considered the preferred foundation system. Recommendations for this foundation system are presented for your consideration.

6.2 SQUARE PRECAST PRESTRESSED CONCRETE PILES

SPPC piles are capable of obtaining reasonable design capacities. Piles should be driven through possible thin layers of cemented sand-shell to achieve a minimum pile tip depth of 40 feet below the existing land surface. It is expected that the piles will develop their capacity from a combination of skin friction and end bearing in the hard clay layer. The variability of the subsurface materials across the site tends to promote difficulty in having consistent pile lengths and reliable pile capacities. In this regard, some pile waste and/or splicing should be expected, and some conservativeness should be used regarding the allowable pile capacities.

Driven piles have the advantage that the installation procedure provides a means to confirm pile capacity, by monitoring blow counts, and does not produce excessive debris in the form of auger cuttings or concrete spills. Installation of driven piles does, however, produce significant noise and vibration levels that may affect adjacent structures (such as retaining walls); vibration monitoring is recommended to be performed.

6.2.1 Compressive and Uplift Capacities

The allowable axial capacities for 14-inch square driven concrete piles have been evaluated using the computer program FB-Deep (version 3.1.0) developed by the Florida Bridge Software Institute (FBSI), and our extensive experience with similar conditions. In this regard, the compressive and uplift capacities of the piles are tabulated below.

Pile Size (Inch)	Estimated Embedment Depth (Feet)	Compressive Capacity (Tons)	Uplift Capacity (Tons)
14x14	78	80	20

Based on our experience with similar subsurface conditions, it is expected that the pile capacities will be attained within an approximate depth of 78 feet below the existing ground surface elevations.

The uplift capacity of the piles are based on achieving a minimum embedment length of 60 feet below the existing ground surface. The static pile bearing capacity analysis using the FBSI design program FB-Deep has been attached in the Appendix of this report.

6.2.2 Lateral Capacity

The lateral deflection of a single pile under working load conditions has been determined for 14-inch square prestressed concrete piles. The analyses were conducted using the computer program (LPILE) developed by Ensoft, Inc. The program uses a finite difference technique to model pile behavior under lateral loads, axial loads and moments applied at the pile head. In performing the analyses, the following information was utilized in the computer program LPILE developed by Reese (1984).

Area (In^2)	196
Concrete Compressive Strength (PSI)	5000
Effective Prestress (PSI)	682
Minimum Pile Length (Ft.)	40
Distance From Top of Pile to Ground Surface (Ft.)	2
Loading Condition	Static free-head

Lateral capacity analyses for the SPPC pile were performed by applying the actual design load cases to the minimum pile length. The results of the analyses have been included in the Appendix of this report, with a summary tabulated below.

14-inch Square Prestressed Precast Concrete Piles Lateral Stability Analysis				
Pile Width (In)	**Axial Load (Tons)**	**Lateral Load (pounds)**	**Pile Head Deflection (In.)**	**Maximum Moment (In-K)**
14	80	4,000	0.24	267
		6,000	0.43	437
		8,000	0.64	616
		10,000	0.88	801
		12,000	1.25	1009

6.2.3 Settlement

Settlement is expected to primarily consist of elastic shortening of the pile material and associated settlement required to mobilize resistance. Total settlement at these capacities is expected to be on the order of ½ inch with differential settlement of ¼ inch.

6.2.4 Pile Installation

Prior to casting all piles for the project, it is recommended that at least five indicator piles be installed at various locations around the site. It is recommended the test piles have lengths more than five feet beyond the expected pile embedment. In this regard, it is recommended that pile lengths of 85 feet be considered for the five indicator piles. The piling contractor should submit the proposed pile hammer to the Geotechnical Engineer for approval prior to pile driving operations. The hammer, as well as the cushioning material, should be the same for production piles as those used in the indicator/test program.

In order to reduce vibrations to nearby structures, it is recommended that all pile locations be predrilled to an approximate depth of 5 to 10 feet immediately prior to pile driving operations and vibration monitoring should be performed. Pile driving should be as continuous an operation as possible and should proceed without stopping over the last ten feet of penetration. During pile installation, the contractor should exercise caution as not to overstress the piles. Piles should not be driven beyond practical refusal to meet the bearing requirements. Due to the variation of the consistency of the subsurface soils, variations in pile length should be expected to result in the need for splicing and/or waste.

The contractor should exercise caution in pile driving so that the effects of heave are minimized. Careful monitoring by the contractor for possible heave during driving should be exercised. All piles that heave ¼ inch or more should be re-driven unless otherwise instructed by **GCTL**.

Piles should be installed under continuous monitoring by a qualified field technician or soils engineer from the office of **GCTL** in order to make field judgments of pile penetration and construction, and to check for satisfactory foundation support conditions. Driven piles should be monitored for penetration, blow counts during driving, and hammer action.

6.3 PILE LOAD TEST PROGRAM

It is recommended that at least two piles be tested to two times the allowable compression design capacity. The compression load tests should be performed in general accordance dynamic load testing may performed with the use of a Pile Driving Analyzer (PDA) in general accordance with ASTM D4945.

6.4 FLOOR SLAB

Floor slabs are considered to be non-structural elements. It is our experience that lightly loaded floor slabs may be satisfactorily supported as a slab-on-grade member provided that any undesirable surface materials are removed and replaced with controlled structural fill.

It is also recommended that the floor slab bearing soils be covered by a lapped polyethylene sheeting of in order to reduce the potential for floor dampness which can affect the performance of moisture sensitive materials, such as paint, glued tile, and carpet, if any are used. This membrane should consist of a 10-mil single layer of non-corroding, non-deteriorating polyethylene sheeting material placed so as to minimize seams and to cover all of the soil below the building floor slab. This membrane should be cut in a “cross shape” to allow for pipes or other penetrations and the membrane should extend to within ½ inch of all such pipes or penetrations. All seams of the membrane should be lapped at least 12 inches. Punctures or tears in the membrane should be repaired with the same or comparable material and sealed in a waterproof manner.

The performance of concrete floor slabs is also affected by the concrete mix that is used. A relatively high water-cement ratio of the mix can cause aesthetic disruptions, such as unsightly slab “curling” and shrinkage cracking. Also, an additional waiting period may be required prior to installing moisture-sensitive floor covering because of the moisture loss from the concrete floor slab.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 FILL PLACEMENT AND SUBGRADE PREPARATION

The following are our recommendations for overall site preparation and mechanical densification work for construction of the proposed development, based on the anticipated construction and our boring results. These recommendations should be used as a guideline for the project general specifications prepared by the Design Engineer.

1. Prior to grading operations, underground structures, such as foundations and utilities, should be removed or properly abandoned in-place. The location of any existing underground utility lines within the construction area should be established. Provision should then be made to relocate any interfering utility lines from the construction area to appropriate locations. In this regard, it should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which subsequently may result in excessive settlements.

2. The exposed materials should be evaluated and proofrolled, as directed by **GCTL** to confirm that all unsuitable materials, if any, have been removed and that the soils are capable of supporting the proposed floor slab structure. The proofrolling should be performed with a self-propelled vibratory drum roller having a static drum weight on the order of eight tons. Careful observations should be made during proofrolling to help identify any areas of soft yielding soils that may require over-excavation and replacement. Vibratory compaction within 50 feet of existing structures should be carefully monitored in order to avoid the transmission of structurally significant vibrations.

3. It is recommended that the natural ground be compacted to a dry density of at least 95 percent of the Modified Proctor Test maximum dry density (ASTM D-1557) to a minimum depth of one foot below stripped grade within the building area.

4. Following satisfactory completion of the proofrolling and compaction operations, the proposed structure area may be brought up to finished subgrade levels, if required. It is recommended that off-site fill consist of soils having less than 12 percent passing the No. 200 sieve, and be free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved by **GCTL** prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness. The fill soils should be compacted to a dry density of at least 95 percent of the Modified Proctor Test maximum dry density.

5. Soil moisture content may need to be controlled in order to facilitate proper compaction. If additional moisture is necessary to achieve the compaction objectives of imported fill, then water should be applied in such a way that will not cause erosion or removal of the subgrade soils. A moisture content within two percentage points of the optimum indicated by the Modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

6. A representative from **GCTL** should be retained to provide on-site observation of earthwork and ground modification activities. It is important that **GCTL** be retained to observe that the subsurface conditions are as we have discussed and reported herein, and that foundation construction, ground modification and fill placement are in accordance with our recommendations.

7.2 GROUNDWATER CONTROL

Groundwater was encountered at an approximate depth five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will be tidally influenced and closely coincide with the surface water elevations of the adjacent Gulf of Mexico; it is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

Groundwater levels should be determined immediately prior to excavations and construction. It is recommended that groundwater be kept at least two feet below the lowest working area to facilitate construction operations proper material placement and compaction. It is expected that natural infiltration and/or pumping from excavated sumps will satisfactorily provide for dewatering.

Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in conditions, such as physical disturbance or rain water. Surface runoff water should be drained away from the excavations and not be allowed to pond. If possible, all foundation concrete should be placed the same day that the excavations are made. If this is not possible, the foundation excavations should be adequately protected in the interim.

7.3 TEMPORARY SIDE SLOPES

Following any necessary dewatering, the side slopes for temporary excavations are expected to remain stable at two horizontal to one vertical (2 H:1V) to a maximum excavation depth of four feet. Where restrictions do not permit slopes to be constructed as recommended above, the excavation should be shored and braced in accordance with current OSHA requirements. Excavated materials should not be stockpiled at the top of any slope within a horizontal distance equal to the excavation depth.

7.4 ON-SITE SOIL SUITABILITY

All materials to be used for backfill or compacted fill construction should be evaluated and, if necessary, tested by **GCTL** prior to placement to determine if they are suitable for the intended use. In general, based upon the boring results, the near-surface soils generally consist of fine SAND with marine shell fragments. This material is considered to be suitable for use as structural backfill.

It is recommended that off-site structural fill materials consist of soils having less than 12 percent passing the No. 200 sieve, and be free of rubble, organics, clay, debris and other unsuitable material. All structural fill should be approved by an experienced Professional Engineer prior to acquisition and placement.

8.0 BASIS FOR RECOMMENDATIONS

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based upon this data.

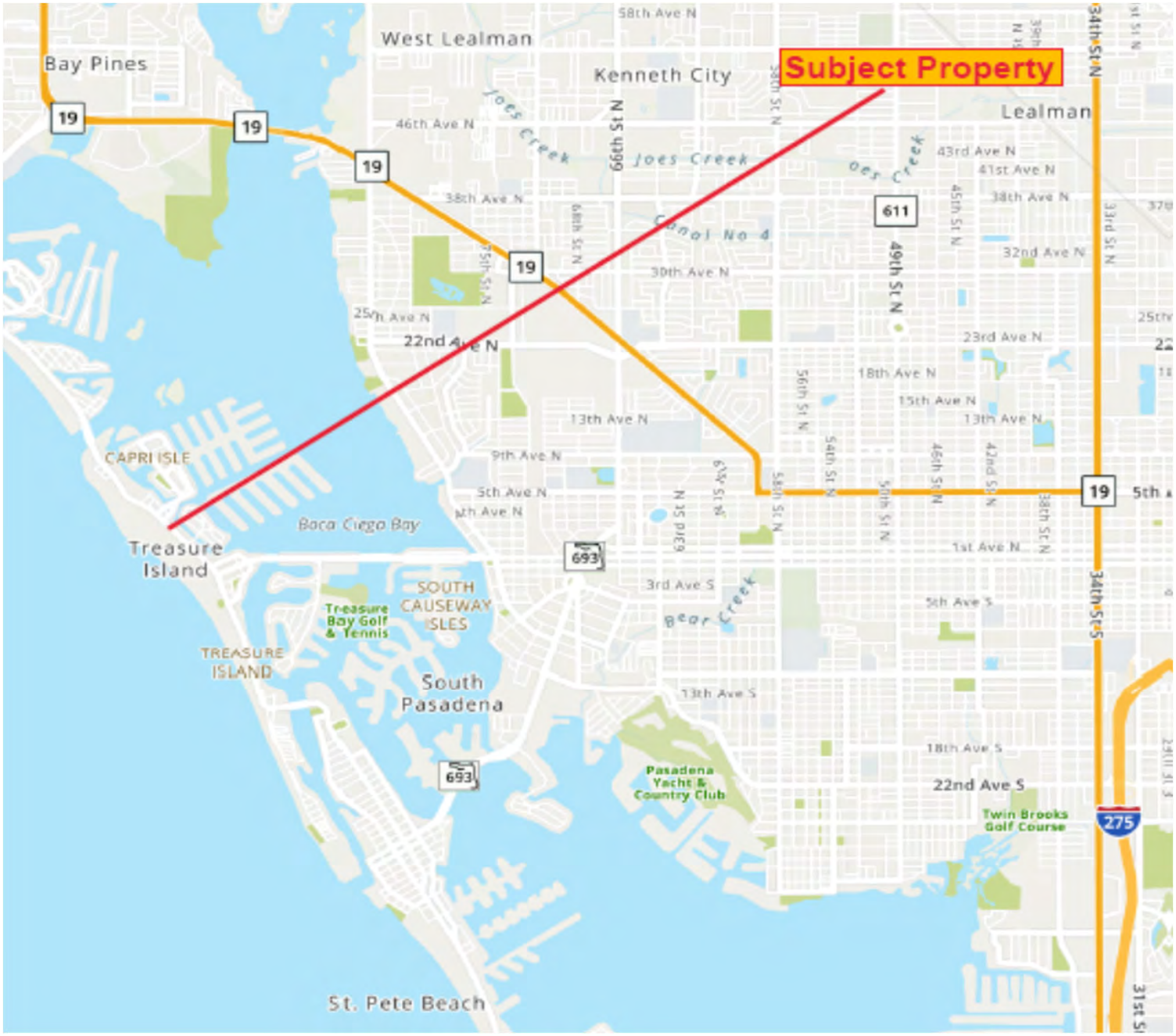
The scope of the exploration was intended to evaluate soil conditions within the primary influence of the proposed structure and does not include a thorough evaluation of potential deep soil conditions, such as sinkholes. The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process itself may alter soil conditions.

If any subsoil variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. The applicability of this report should also be reviewed in the event that significant changes occur in the design, nature or location of the proposed construction.

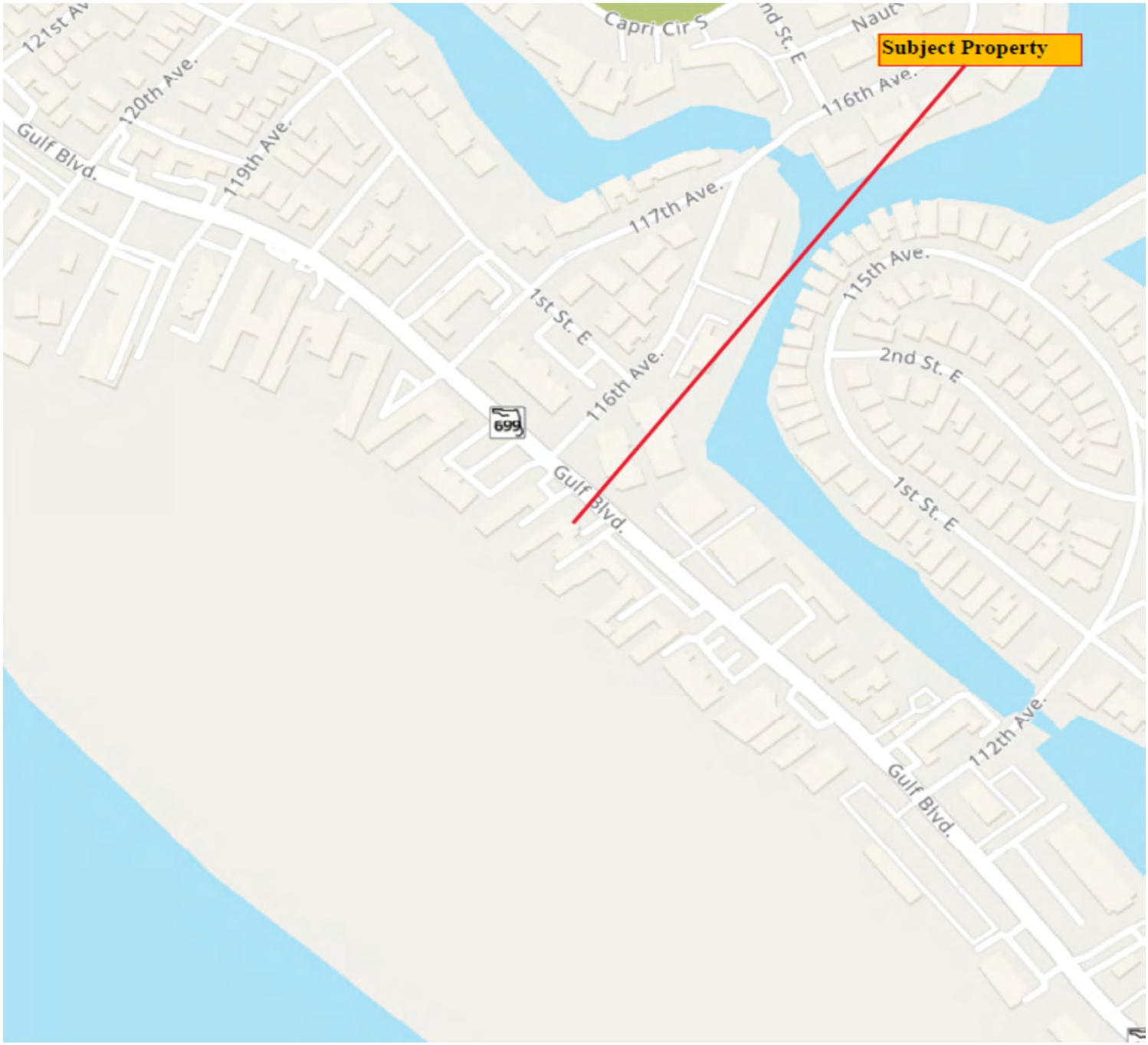
The recommendations provided herein are based in part upon project information provided to us and they apply only to the specific project and site discussed in this report. If the project information is incorrect or if additional information is available, the correct or additional information should be conveyed to us for review. Our recommendations may then be modified, if necessary. Experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team. We recommend that the owner retain **GCTL** to provide these services based upon our familiarity with the project, the subsurface conditions, and the intent of the recommendations and design criteria.

APPENDIX

FIGURES



General Site Vicinity Map Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 1	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



Local Site Vicinity Map Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 2	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2023 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 3	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2015 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 4	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2007 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 5	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2002 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 6	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



1995 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 7	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



Field Exploration Plan Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 8	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532

USDA SOIL SURVEY INFORMATION



Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pinellas County, Florida
Survey Area Data: Version 20, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 20, 2020—Jan 28, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
16	Matlacha and St. Augustine soils and Urban land	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Pinellas County, Florida

16—Matlacha and St. Augustine soils and Urban land

Map Unit Setting

National map unit symbol: 134ch
Elevation: 0 to 80 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Matlacha and similar soils: 33 percent
St. augustine and similar soils: 32 percent
Urban land: 31 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matlacha

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy mine spoil or earthy fill

Typical profile

C - 0 to 42 inches: sand
A/Eb - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: No

Description of St. Augustine

Setting

Landform: Ridges on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy mine spoil or earthy fill

Typical profile

A - 0 to 8 inches: sand
C1 - 8 to 33 inches: loamy fine sand
C2 - 33 to 48 inches: fine sand
C3 - 48 to 63 inches: sandy loam
C4 - 63 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Unranked

Minor Components

Kesson

Percent of map unit: 2 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Yes

Wulfert

Percent of map unit: 2 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Yes

Data Source Information

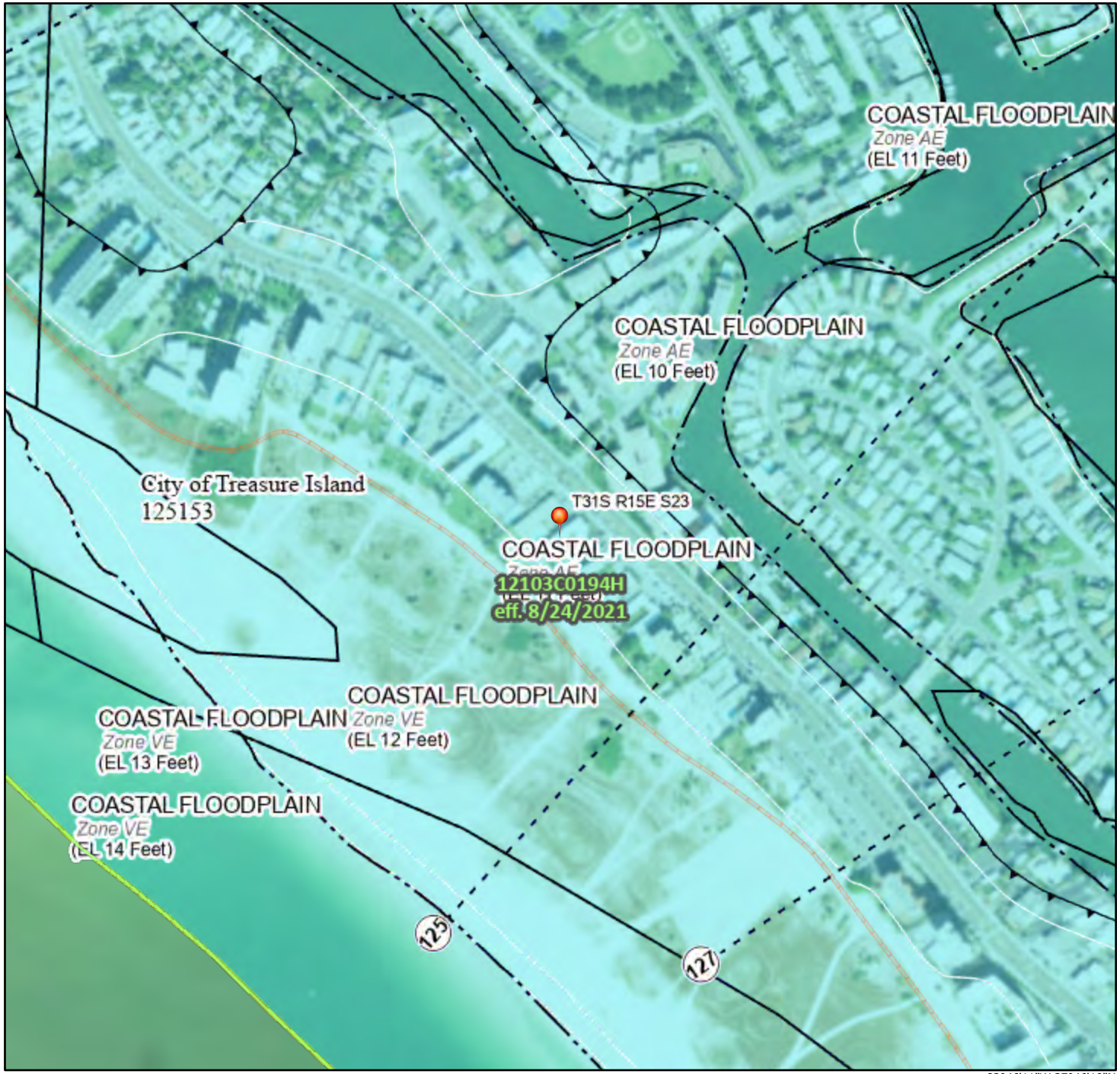
Soil Survey Area: Pinellas County, Florida
Survey Area Data: Version 20, Aug 28, 2023

FEMA FIRM MAP INFORMATION

National Flood Hazard Layer FIRMette

FEMA

82°46'48"W 27°46'42"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

82°46'11"W 27°46'10"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/28/2023 at 11:40 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

SOIL BORING LOGS

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. : 30583 | Project Name: Balboa Shores | Boring Number: B-1 Page 1 of 2
Site Location: Pinellas County, FL | Start Date: 12/05/23
Drilling Method: MR | Completion Date: 12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
0	SS	0 - 1.0	3-6	9	**Light Gray Fine SAND (SP) Trace Marine Shell Fragments**	
	SS	1.0 - 2.0	7-7	14		
	SS	2.0 - 3.0	4-3	7		
	SS	3.0 - 4.0	2-3	5		
5	SS	4.0 - 5.0	4-3	7		
	SS	5.0 - 6.0	3-4	7		
	SS	6.0 - 7.0	4-7	11		
	SS	7.0 - 8.0	12-17	29		**Groundwater Encountered 5.0 Feet BLS**
	SS	8.0 - 9.0	8-5	13		
10	SS	9.0 - 10.0	4-5	9		
15	SS	13.5 - 15.0	4-4-4	8		
20	SS	18.5 - 20.0	WH/12"-1	1	**Gray Silty SAND (SM) Trace Marine Shell Fragments**	
25	SS	23.5 - 25.0	WH	WH		
30	SS	28.5 - 30.0	WH/12"-4	4		
35	SS	33.5 - 35.0	1/12"-1	1		
40	SS	38.5 - 40.0	2-2-3	5		
45	SS	43.5 - 45.0	8-8-11	19	**Light Brown Fine SAND (SP) With Marine Shell Fragments**	
50	SS	48.5 - 50.0	6-6-4	10		

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. : 30583

Project Name: Balboa Shores
Site Location: Pinellas County, FL
Drilling Method: MR

Boring Number: B-1 Page 2 of 2
Start Date: 12/05/23
Completion Date: 12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
51					**Light Brown Fine SAND (SP) With Marine Shell Fragments**	
55	SS	53.5 - 55.0	6-2-2	4		**Groundwater Encountered 4.0 Feet BLS**
60	SS	58.5 - 60.0	1-2-3	5	**Olive Gray CLAY (CH)**	
65	SS	63.5 - 65.0	3-4-4	8		
70	SS	68.5 - 70.0	3-4-6	10		
75	SS	73.5 - 75.0	WR	WR	**Gray Silty SAND (SM)**	
80	SS	78.5 - 80.0	3-5-7	12	**Olive Gray CLAY (CH)**	
85	SS	83.5 - 85.0	10-13-14	27		**EOB 90 Feet BLS** **Boring Bentonite Sealed**
90	SS	88.5 - 90.0	16-19-25	44		

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. :	30583	Project Name:	Balboa Shores	Boring Number:	B-2 Page 1 of 2
		Site Location:	Pinellas County, FL	Start Date:	12/05/23
		Drilling Method:	MR	Completion Date:	12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
0	SS	0 - 1.0	4-5	9	**Pale Brown Fine SAND (SP) Trace Marine Shell Fragments**	
	SS	1.0 - 2.0	5-3	8		
	SS	2.0 - 3.0	3-3	6		
	SS	3.0 - 4.0	4-4	8		
5	SS	4.0 - 5.0	2-2	4		
	SS	5.0 - 6.0	3-4	7		
	SS	6.0 - 7.0	1-3	4		
	SS	7.0 - 8.0	3-5	8		**Groundwater Encountered 5.0 Feet BLS**
	SS	8.0 - 9.0	6-2	8		
10	SS	9.0 - 10.0	1/12"	1		
15	SS	13.5 - 15.0	5-4-3	7	**Gray Silty SAND (SM) Trace Marine Shell Fragments**	
20	SS	18.5 - 20.0	WH	WH		
25	SS	23.5 - 25.0	WH	WH		
30	SS	28.5 - 30.0	WH-1-4	5		
35	SS	33.5 - 35.0	1/12"-1	1		
40	SS	38.5 - 40.0	3-2-3	5		
45	SS	43.5 - 45.0	14-9-10	19	**Light Brown to Dark Gray Fine SAND (SP) With Marine Shell Fragments**	
50	SS	48.5 - 50.0	1/12"-1	1	**Gray Silty SAND (SM)**	

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. :	30583	Project Name:	Balboa Shores	Boring Number:	B-2 Page 2 of 2
		Site Location:	Pinellas County, FL	Start Date:	12/05/23
		Drilling Method:	MR	Completion Date:	12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
51					**Gray Silty SAND (SM)**	
55	SS	53.5 - 55.0	2-2-4	6		**Groundwater Encountered 5.0 Feet BLS**
60	SS	58.5 - 60.0	3-2-5	7		
65	SS	63.5 - 65.0	9-9-11	20	**Olive Gray CLAY (CH)**	
70	SS	68.5 - 70.0	4-6-9	15		
75	SS	73.5 - 75.0	50/5"	50/5"		
80	SS	78.5 - 80.0	11-22-21	43		
					EOB 80 Feet BLS	
					Boring Grout Sealed	

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

SITE PHOTOGRAPHS



Photograph No. 1: View of soil boring operations at boring B-1.



Photograph No. 2: View of soil boring operations at boring B-2.

STATIC PILE BEARING CAPACITY ANALYSES

General Information:
====================
Input file: .....30583\Boring B2 Pile Capacity Input.in
Project number: 30583
Job name: Balboa Shores Boring B-2
Engineer: DRS
Units: English

Analysis Information:
=====================
Analysis Type: SPT

Soil Information:
==========
Boring date: 12/5/23, Boring Number: B-2
Station number: Offset:

Ground Elevation: 0.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.00

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	9.00	1.00	2- Clay and silty sand
3	10.00	1.00	2- Clay and silty sand
4	15.00	7.00	2- Clay and silty sand
5	20.00	0.00	2- Clay and silty sand
6	25.00	0.00	2- Clay and silty sand
7	30.00	5.00	2- Clay and silty sand
8	35.00	1.00	2- Clay and silty sand
9	40.00	5.00	2- Clay and silty sand
10	42.00	19.00	3- Clean sand
11	45.00	19.00	3- Clean sand
12	47.00	1.00	2- Clay and silty sand
13	50.00	1.00	2- Clay and silty sand
14	52.00	6.00	1- Plastic Clay
15	55.00	6.00	1- Plastic Clay
16	60.00	7.00	1- Plastic Clay
17	62.00	7.00	2- Clay and silty sand
18	62.10	20.00	1- Plastic Clay
19	65.00	20.00	1- Plastic Clay
20	70.00	15.00	1- Plastic Clay
21	75.00	100.00	1- Plastic Clay
22	80.00	43.00	1- Plastic Clay
23	85.00	27.00	1- Plastic Clay
24	90.00	44.00	1- Plastic Clay
25	91.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	0.00	-9.00	9.00	7.00	3-Clean Sand
2	-9.00	-42.00	33.00	2.45	2-Clay and Silty Sand
3	-42.00	-47.00	5.00	19.00	3-Clean Sand
4	-47.00	-52.00	5.00	1.00	2-Clay and Silty Sand
5	-52.00	-62.00	10.00	6.20	1-Plastic Clay
6	-62.00	-62.10	0.10	7.00	2-Clay and Silty Sand
7	-62.10	-91.00	28.90	39.00	1-Plastic Clay
8	-91.00	-91.00	0.00	0.00	5-

Driven Pile Data:
==========
Pile unit weight = 145.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
14.00	40.00	-40.00
14.00	41.00	-41.00
14.00	42.00	-42.00
14.00	43.00	-43.00
14.00	44.00	-44.00
14.00	45.00	-45.00
14.00	46.00	-46.00
14.00	47.00	-47.00
14.00	48.00	-48.00
14.00	49.00	-49.00
14.00	50.00	-50.00
14.00	51.00	-51.00
14.00	52.00	-52.00
14.00	53.00	-53.00
14.00	54.00	-54.00
14.00	55.00	-55.00
14.00	56.00	-56.00
14.00	57.00	-57.00
14.00	58.00	-58.00
14.00	59.00	-59.00
14.00	60.00	-60.00
14.00	61.00	-61.00
14.00	62.00	-62.00
14.00	63.00	-63.00
14.00	64.00	-64.00
14.00	65.00	-65.00
14.00	66.00	-66.00
14.00	67.00	-67.00
14.00	68.00	-68.00
14.00	69.00	-69.00
14.00	70.00	-70.00
14.00	71.00	-71.00
14.00	72.00	-72.00
14.00	73.00	-73.00
14.00	74.00	-74.00
14.00	75.00	-75.00
14.00	76.00	-76.00
14.00	77.00	-77.00
14.00	78.00	-78.00
14.00	79.00	-79.00
14.00	80.00	-80.00
14.00	81.00	-81.00
14.00	82.00	-82.00
14.00	83.00	-83.00
14.00	84.00	-84.00
14.00	85.00	-85.00

Driven Pile Capacity:
==========

Section Type: Square
Pile Width: 14.00 (in)

Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
40.00	14.0	18.15	11.71	29.86	14.93	53.28
41.00	14.0	19.38	14.27	33.65	16.82	62.19
42.00	14.0	20.91	15.07	35.97	17.99	66.10
43.00	14.0	22.59	13.80	36.39	18.20	64.00
44.00	14.0	24.28	11.87	36.15	18.07	59.89
45.00	14.0	25.96	9.96	35.92	17.96	55.84
46.00	14.0	27.22	8.49	35.71	17.86	52.70
47.00	14.0	27.64	0.14	27.78	13.89	28.06
48.00	14.0	27.64	0.16	27.81	13.90	28.13
49.00	14.0	27.64	0.29	27.93	13.97	28.50
50.00	14.0	27.64	0.51	28.16	14.08	29.18
51.00	14.0	27.83	0.84	28.67	14.33	30.34
52.00	14.0	29.10	5.99	35.08	17.54	47.05
53.00	14.0	30.55	4.62	35.17	17.59	44.42
54.00	14.0	32.01	3.27	35.27	17.64	41.80
55.00	14.0	33.46	2.08	35.54	17.77	39.71
56.00	14.0	34.94	1.60	36.54	18.27	39.74
57.00	14.0	36.46	1.80	38.26	19.13	41.85
58.00	14.0	38.02	2.21	40.23	20.12	44.65
59.00	14.0	39.64	2.84	42.48	21.24	48.16
60.00	14.0	41.29	3.46	44.75	22.37	51.66
61.00	14.0	42.92	3.97	46.89	23.45	54.84
62.00	14.0	44.44	4.33	48.77	24.38	57.42
63.00	14.0	48.39	4.41	52.80	26.40	61.63
64.00	14.0	52.39	4.59	56.98	28.49	66.17
65.00	14.0	56.53	4.74	61.27	30.64	70.76
66.00	14.0	60.63	4.81	65.45	32.72	75.07
67.00	14.0	64.57	5.09	69.66	34.83	79.83
68.00	14.0	68.33	5.73	74.06	37.03	85.51
69.00	14.0	71.92	6.74	78.66	39.33	92.13
70.00	14.0	75.33	8.10	83.43	41.72	99.63
71.00	14.0	79.02	9.65	88.67	44.34	107.97
72.00	14.0	83.44	10.97	94.41	47.20	116.36
73.00	14.0	88.58	11.94	100.52	50.26	124.39
74.00	14.0	94.45	12.57	107.03	53.51	132.17
75.00	14.0	101.06	12.88	113.94	56.97	139.70
76.00	14.0	108.01	13.01	121.02	60.51	147.04
77.00	14.0	114.90	13.11	128.01	64.00	154.22
78.00	14.0	121.74	13.17	134.91	67.45	161.25
79.00	14.0	128.52	13.20	141.72	70.86	168.12
80.00	14.0	135.25	13.16	148.41	74.20	174.72
81.00	14.0	141.81	12.92	154.73	77.36	180.57
82.00	14.0	148.07	12.63	160.69	80.35	185.94
83.00	14.0	154.03	12.38	166.41	83.20	191.17
84.00	14.0	159.69	12.18	171.88	85.94	196.24
85.00	14.0	165.06	12.08	177.14	88.57	201.31

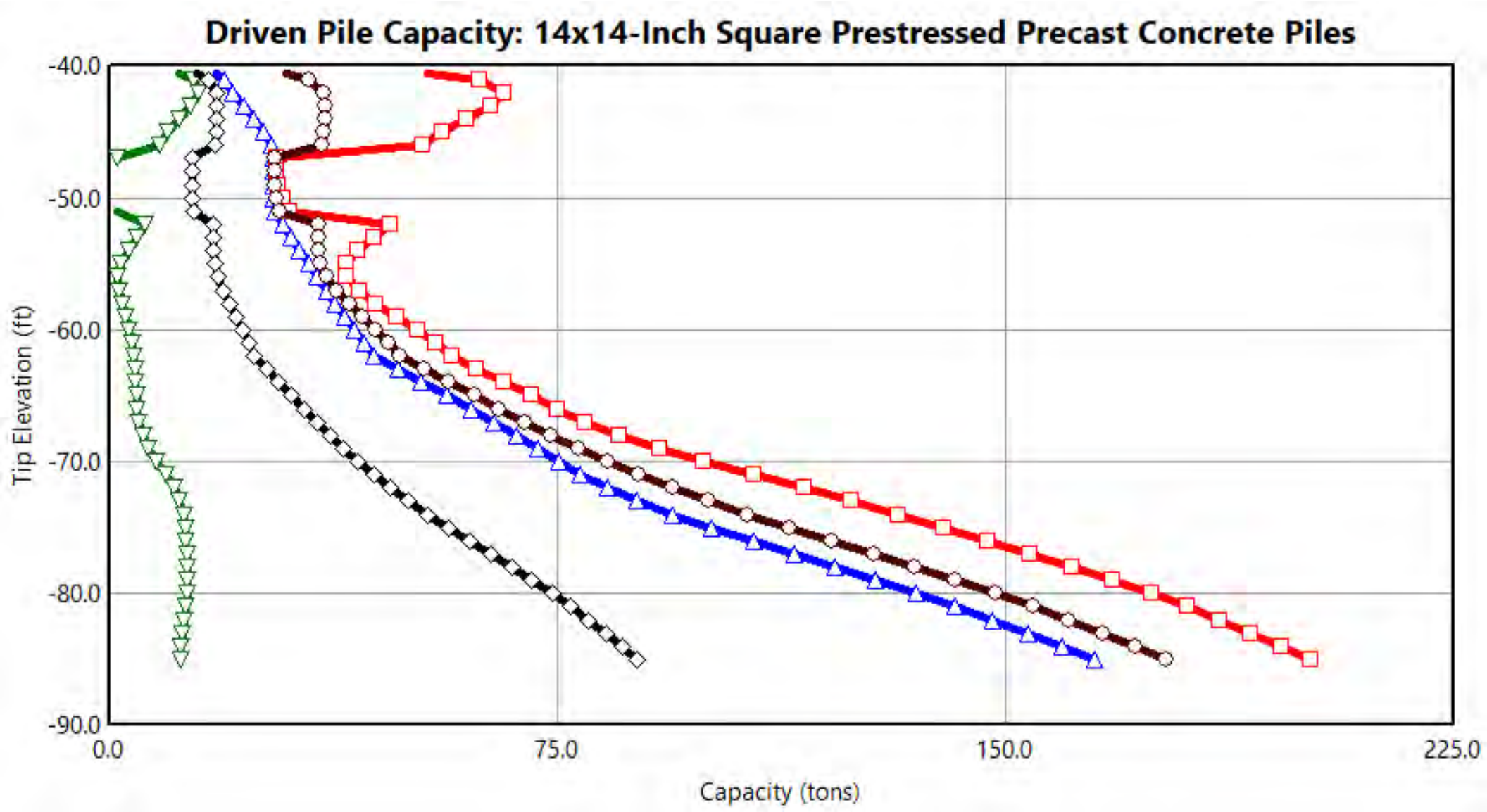
NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.

2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.

3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.

4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
   EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.


Driven Pile Capacity: 14x14-Inch Square Prestressed Precast Concrete Piles
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Tip Elevation (ft)
0.0
75.0
150.0
225.0
Capacity (tons)

LATERAL PILE CAPACITY ANALYSES

```
================================================================================

                  LPile Plus for Windows, Version 2012-06.037

               Analysis of Individual Piles and Drilled Shafts
              Subjected to Lateral Loading Using the p-y Method

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================================================================================

This copy of LPile is licensed to:

Don Stites, PE
Odessa, FL

Serial Number of Security Device:        160773735
Company Name Stored in Security Device:  Don Stites


--------------------------------------------------------------------------------
                            Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:        C:\Documents\! Gulf Coast Engineering\2023 Projects\30583
Balboa Shores 11580 Gulf Boulevard Treasure Island\
Name of input data file:       Balboa Shores 14 Inch SPPC Pile.lp6d
Name of output report file:    Balboa Shores 14 Inch SPPC Pile.lp6o
Name of plot output file:      Balboa Shores 14 Inch SPPC Pile.lp6p
Name of runtime messeage file: Balboa Shores 14 Inch SPPC Pile.lp6r


--------------------------------------------------------------------------------
                          Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  December 7, 2023     Time:  20:44:14


--------------------------------------------------------------------------------
                               Problem Title
--------------------------------------------------------------------------------

Project Name: Balboa Shores
Job Number: 30583
Client: ATM Arvilla, LLC
Engineer: DRS
Description: 14x14 Inch Square Precast Prestressed Concrete Piles
```

Program Options

Engineering units are US Customary Units: pounds, inches, feet

Basic Program Options:

This analysis computes pile response to lateral loading and will compute nonlinear moment-curvature and nominal moment capacity for section types with nonlinear properties.

Computation Options:
- Analysis does not use p-y multipliers (individual pile or shaft only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix values
- Report pile response for full length of pile
- Analysis assumes no loading by soil movements acting on pile
- No p-y curves to be computed and reported for user-specified depths

Solution Control Parameters:

- Number of pile increments	=	100	
- Maximum number of iterations allowed	=	100	
- Deflection tolerance for convergence	=	1.0000E-05	in
- Maximum allowable deflection	=	100.0000	in

Pile Response Output Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (nodal spacing of output points) = 1

Pile Structural Properties and Geometry

Total number of pile sections	=	1
Total length of pile	=	40.00 ft
Depth of ground surface below top of pile	=	2.00 ft

Pile diameter values used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile.

Point	Depth X ft	Pile Diameter in
1	0.00000	14.0000000
2	40.000000	14.0000000

Input Structural Properties:

Pile Section No. 1:

Section Type = Square Solid Prestressed Pile

Section Length	=	40.00000000 ft
Pile Width	=	14.00000000 in
Corner Chamfer	=	1.50000000 in

Ground Slope and Pile Batter Angles

Ground Slope Angle	=	0.000 degrees
	=	0.000 radians
Pile Batter Angle	=	0.000 degrees
	=	0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 5 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	2.00000 ft
Distance from top of pile to bottom of layer	=	9.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	33.00000 deg.
Friction angle at bottom of layer	=	33.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 2 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	9.00000 ft
Distance from top of pile to bottom of layer	=	42.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	28.00000 deg.
Friction angle at bottom of layer	=	28.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 3 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	42.00000 ft
Distance from top of pile to bottom of layer	=	47.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	36.00000 deg.
Friction angle at bottom of layer	=	36.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 4 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	47.00000 ft
Distance from top of pile to bottom of layer	=	52.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	28.00000 deg.
Friction angle at bottom of layer	=	28.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 5 is stiff clay with water-induced erosion

Distance from top of pile to top of layer	=	52.00000	ft
Distance from top of pile to bottom of layer	=	80.00000	ft
Effective unit weight at top of layer	=	58.00000	pcf
Effective unit weight at bottom of layer	=	58.00000	pcf
Undrained cohesion at top of layer	=	400.00000	psf
Undrained cohesion at bottom of layer	=	400.00000	psf
Epsilon-50 at top of layer	=	0.0000	
Epsilon-50 at bottom of layer	=	0.0000	
Subgrade k at top of layer	=	0.0000	pci
Subgrade k at bottom of layer	=	0.0000	pci

NOTE: Internal default values for Epsilon-50 will be computed for the above soil layer.

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

(Depth of lowest soil layer extends 40.00 ft below pile tip)

Summary of Soil Properties

Layer Num.	Layer Soil Type (p-y Curve Criteria)	Layer Depth ft	Effective Unit Wt. pcf	Undrained Cohesion psf	Angle of Friction deg.	Strain Factor Epsilon 50	kpy pci
1	Sand (Reese, et al.)	2.000	56.000	--	33.000	--	default
		9.000	56.000	--	33.000	--	default
2	Sand (Reese, et al.)	9.000	56.000	--	28.000	--	default
		42.000	56.000	--	28.000	--	default
3	Sand (Reese, et al.)	42.000	56.000	--	36.000	--	default
		47.000	56.000	--	36.000	--	default
4	Sand (Reese, et al.)	47.000	56.000	--	28.000	--	default
		52.000	56.000	--	28.000	--	default
5	Stiff Clay with Free Water	52.000	58.000	400.000	--	default	default
		80.000	58.000	400.000	--	default	default

Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 4000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
2	1	V = 6000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
3	1	V = 8000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
4	1	V = 10000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
5	1	V = 12000. lbs	M = 0.0000 in-lbs	160000.	Yes

V = perpendicular shear force applied to pile head
M = bending moment applied to pile head
y = lateral deflection relative to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applie to pile head
Axial thrust is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions of Square Prestressed Pile Section:

Length of Section	=	40.000 ft
Pile Width	=	14.000 in
Corner Chamfer	=	1.500 in

Prestressing Strand Details:

Strand Type	=	PCI 270
Yield Stress, fpu	=	270. ksi

Stress-strain curve for reinforcement defined ssing PCI 270 Lo-lax equation
If eps > 0.008 fpu = 268 - 0.075/(eps-0.0065) < 0.98 fpu (ksi)

Number of Reinforcing Strands	=	5
Cross-sectional Area of Single Strand	=	0.153 sq. in.
Concrete Cover Thickness Over Strands	=	3.000 in

Prestressing Strand Geometry:

Strand No.	Diameter in	Area Sq. in	X in	Y in
1	0.500	0.153	-3.750	-3.750
2	0.500	0.153	3.750	-3.750
3	0.500	0.153	3.750	3.750
4	0.500	0.153	-3.750	3.750
5	0.500	0.153	0.000	0.000

Computation of Loss of Prestress:

Initial Prestressing Force	=	144.550 kips
Fraction of Loss of Prestress	=	0.100
Effective Prestressing Force	=	130.095 kips
Area of Concrete, Ac	=	190.735 Sq. in
Area of Steel, As	=	0.765 Sq. in
Stress in Concrete After Losses, f_pc	=	0.682 ksi
Stress in Steel After Losses	=	-170.059 ksi
Compressive Strain in Concrete	=	0.0001692
Tensile Strain in Steel	=	-0.0060735

Estimated Structural Capacities Computed Using PCI Equations:

Nom. Axial Cap., Pn = (0.85 f'c - 0.60 f_pc) Ag	=	735.505 kips
Unfac. Axial Load Cap. N = (0.33 f'c - 0.27 f_pc) Ag	=	280.708 kips
Axial Capacity in Tension, Nt = As fpu	=	-206.550 kips
Nom. Moment Capacity, Mn = 0.37 D As fpu	=	1069.929 in-kip

Note: The above value of nominal moment capacity is based on equations that assume a concrete compressive strength of 6,000 psi (41.4 MPa), a prestressing level after losses of 700 psi (4.83 MPa), and an axial thrust loading of zero. When different values for these factors are input, the estimated value of Mn may differ greatly from the capacity computed by LPile and should be considered only as an approximate check.

Concrete Properties:

Compressive Strength of Concrete	=	5.00000000 ksi
Modulus of Elasticity of Concrete	=	4030.50865276 ksi
Modulus of Rupture of Prestressed Concrete	=	-0.28284273 ksi
Compression Strain at Peak Stress	=	0.00210892
Tensile Strain at Fracture of Concrete	=	-0.00006052
Maximum Coarse Aggregate Size	=	0.75000000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 1

Number	Axial Thrust Force kips
1	160.000

Definitions of Run Messages and Notes:

C = concrete in section has cracked in tension.
Y = stress in reinforcing steel has reached yield stress.
T = ACI 318-08 criteria for tension-controlled section met, tensile strain in reinforcement exceeds 0.005 while simultaneously compressive strain in concrete more than than 0.003. See ACI 318-08, Section 10.3.4.
Z = depth of tensile zone in concrete section is less than 10 percent of section depth.

Bending Stiffness (EI) = Computed Bending Moment / Curvature.
Position of neutral axis is measured from edge of compression side of pile.
Compressive stresses and strains are positive in sign.
Tensile stresses and strains are negative in sign.

Axial Thrust Force = 160.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Depth to N Axis in	Max Comp Strain in/in	Max Tens Strain in/in	Max Concrete Stress ksi	Max Steel Stress ksi	Run Msg
0.000001250	11.4943139	9195451.	281.3536384	0.0005209	0.0003342	1.5282468	-163.5686244	
0.000002500	26.7002088	10680084.	144.1845859	0.0005297	0.0003255	1.5624662	-163.8149522	
0.000003750	41.9054436	11174785.	98.4651779	0.0005385	0.0003167	1.5965690	-164.0608943	
0.000005000	57.1096757	11421935.	75.6081813	0.0005473	0.0003080	1.6305546	-164.3064506	
0.000006250	72.3125624	11570010.	61.8961493	0.0005561	0.0002994	1.6644220	-164.5516211	
0.000007500	87.5137615	11668502.	52.7565998	0.0005649	0.0002907	1.6981705	-164.7964059	
0.000008750	102.7129292	11738620.	46.2298977	0.0005737	0.0002820	1.7317993	-165.0408046	
0.0000100	117.9097232	11790972.	41.3362254	0.0005826	0.0002734	1.7653076	-165.2848172	
0.0000113	133.1038007	11831449.	37.5312397	0.0005915	0.0002647	1.7986947	-165.5284440	
0.0000125	148.2948188	11863586.	34.4883350	0.0006003	0.0002561	1.8319597	-165.7716846	
0.0000138	163.4824337	11889632.	31.9996712	0.0006092	0.0002475	1.8651019	-166.0145390	
0.0000150	178.6663028	11911087.	29.9266882	0.0006181	0.0002389	1.8981204	-166.2570072	
0.0000163	193.8460823	11928990.	28.1734599	0.0006270	0.0002303	1.9310144	-166.4990890	
0.0000175	209.0214287	11944082.	26.6714677	0.0006360	0.0002218	1.9637833	-166.7407844	
0.0000188	224.1919983	11956907.	25.3704646	0.0006449	0.0002132	1.9964260	-166.9820931	
0.0000200	239.3574472	11967872.	24.2327654	0.0006539	0.0002047	2.0289420	-167.2230152	
0.0000213	254.5174312	11977291.	23.2295518	0.0006629	0.0001961	2.0613303	-167.4635503	
0.0000225	269.6716061	11985405.	22.3384099	0.0006718	0.0001876	2.0935903	-167.7036985	
0.0000238	284.8196273	11992405.	21.5416444	0.0006808	0.0001791	2.1257210	-167.9434596	
0.0000250	299.9611501	11998446.	20.8250991	0.0006899	0.0001706	2.1577217	-168.1828333	
0.0000263	315.0958294	12003651.	20.1773140	0.0006989	0.0001622	2.1895916	-168.4218196	
0.0000275	330.2233200	12008121.	19.5889132	0.0007079	0.0001537	2.2213299	-168.6604182	
0.0000288	345.3432764	12011940.	19.0521509	0.0007170	0.0001452	2.2529358	-168.8986290	
0.0000300	360.4553527	12015178.	18.5605727	0.0007260	0.0001368	2.2844085	-169.1364517	
0.0000313	375.5592028	12017894.	18.1087566	0.0007351	0.0001284	2.3157472	-169.3738863	
0.0000325	390.6544804	12020138.	17.6921150	0.0007442	0.0001200	2.3469511	-169.6109323	
0.0000338	405.7408387	12021951.	17.3067399	0.0007533	0.0001116	2.3780193	-169.8475897	
0.0000350	420.8179306	12023369.	16.9492814	0.0007625	0.0001032	2.4089512	-170.0838582	
0.0000363	435.8854086	12024425.	16.6168518	0.0007716	0.0000949	2.4397459	-170.3197376	
0.0000375	450.9429249	12025145.	16.3069486	0.0007807	0.0000865	2.4704026	-170.5552275	
0.0000388	465.9901315	12025552.	16.0173920	0.0007899	0.0000782	2.5009204	-170.7903279	
0.0000400	481.0266797	12025667.	15.7462746	0.0007991	0.0000699	2.5312986	-171.0250383	
0.0000413	496.0522205	12025508.	15.4919206	0.0008083	0.0000615	2.5615364	-171.2593585	
0.0000425	511.0664046	12025092.	15.2528509	0.0008175	0.0000532	2.5916330	-171.4932882	
0.0000438	526.0688822	12024432.	15.0277557	0.0008267	0.0000450	2.6215875	-171.7268272	
0.0000450	541.0593030	12023540.	14.8154708	0.0008359	0.0000367	2.6513991	-171.9599751	
0.0000463	556.0373162	12022428.	14.6149576	0.0008452	0.0000284	2.6810671	-172.1927316	
0.0000475	571.0025708	12021107.	14.4252871	0.0008544	0.0000202	2.7105906	-172.4250964	
0.0000488	585.9547149	12019584.	14.2456255	0.0008637	0.0000120	2.7399689	-172.6570692	
0.0000513	615.8182461	12015966.	13.9134003	0.0008823	-0.000004438	2.7982861	-173.1198373	
0.0000538	645.6164156	12011468.	13.6130736	0.0009009	-0.0000208	2.8560070	-173.5810829	
0.0000563	675.3241502	12005763.	13.3403123	0.0009196	-0.0000371	2.9131111	-174.0409345	
0.0000588	704.9193607	11998627.	13.0915266	0.0009384	-0.0000534	2.9695796	-174.4995102	
0.0000613	731.3062611	11939694.	12.8535493	0.0009565	-0.0000702	3.0235392	-174.9746705	C
0.0000638	753.2857919	11816248.	12.6204768	0.0009738	-0.0000879	3.0741915	-175.4748313	C
0.0000663	773.6440933	11677647.	12.3997223	0.0009907	-0.0001060	3.1231717	-175.9849468	C
0.0000688	792.5149634	11527490.	12.1900410	0.0010073	-0.0001244	3.1705388	-176.5048234	C
0.0000713	812.9838345	11410299.	12.0006172	0.0010243	-0.0001425	3.2184185	-177.0134443	C
0.0000738	829.1221741	11242335.	11.8097958	0.0010402	-0.0001615	3.2627292	-177.5519956	C
0.0000763	847.1445283	11110092.	11.6378989	0.0010566	-0.0001801	3.3078308	-178.0766135	C
0.0000788	861.0963014	10934556.	11.4632276	0.0010720	-0.0001998	3.3494037	-178.6319535	C
0.0000813	877.1135682	10795244.	11.3063636	0.0010879	-0.0002189	3.3920020	-179.1709493	C
0.0000838	884.0396341	10555697.	11.1257190	0.0011010	-0.0002407	3.4266684	-179.7890595	C
0.0000863	898.2267111	10414223.	10.9811587	0.0011164	-0.0002604	3.4667630	-180.3442118	C
0.0000888	911.8348925	10274196.	10.8429867	0.0011315	-0.0002802	3.5059362	-180.9038056	C
0.0000913	924.9255079	10136170.	10.7108457	0.0011466	-0.0003001	3.5442429	-181.4674045	C
0.0000938	937.5000901	10000001.	10.5841852	0.0011615	-0.0003202	3.5816811	-182.0351902	C
0.0000963	949.6151873	9866132.	10.4627337	0.0011763	-0.0003405	3.6183028	-182.6067363	C
0.0000988	961.2943284	9734626.	10.3461304	0.0011909	-0.0003608	3.6541294	-183.1819442	C
0.0001013	972.5734568	9605664.	10.2341102	0.0012054	-0.0003813	3.6891966	-183.7605432	C
0.0001038	983.4898229	9479420.	10.1264504	0.0012198	-0.0004019	3.7235428	-184.3422119	C
0.0001063	994.0247446	9355527.	10.0227245	0.0012341	-0.0004226	3.7571486	-184.9273097	C
0.0001088	1004.1504259	9233567.	9.9224859	0.0012483	-0.0004434	3.7899810	-185.5163805	C
0.0001113	1014.0006525	9114613.	9.8260067	0.0012624	-0.0004644	3.8221830	-186.1078148	C
0.0001138	1023.5952005	8998639.	9.7331056	0.0012764	-0.0004854	3.8537795	-186.7013982	C
0.0001163	1032.7725228	8884065.	9.6428304	0.0012902	-0.0005065	3.8845898	-187.2995201	C

0.0001188	1041.7559766	8772682.	9.5559044	0.0013040	-0.0005277	3.9148619	-187.8991710	C
0.0001213	1050.4771308	8663729.	9.4718244	0.0013177	-0.0005490	3.9445224	-188.5013743	C
0.0001238	1058.8985070	8556756.	9.3902137	0.0013313	-0.0005705	3.9735252	-189.1068502	C
0.0001263	1067.1941134	8453023.	9.3116508	0.0013448	-0.0005919	4.0020747	-189.7129889	C
0.0001288	1075.1141677	8350401.	9.2348634	0.0013582	-0.0006135	4.0298786	-190.3238083	C
0.0001313	1082.9591131	8251117.	9.1610051	0.0013716	-0.0006351	4.0572907	-190.9346126	C
0.0001338	1090.4781760	8153108.	9.0888220	0.0013849	-0.0006569	4.0840152	-191.5495566	C
0.0001363	1097.9216141	8058140.	9.0192715	0.0013981	-0.0006786	4.1103510	-192.1645639	C
0.0001388	1105.0633117	7964420.	8.9512212	0.0014112	-0.0007005	4.1360275	-192.7835494	C
0.0001413	1112.1599314	7873699.	8.8856842	0.0014243	-0.0007224	4.1613567	-193.4021148	C
0.0001438	1118.9399249	7783930.	8.8213293	0.0014373	-0.0007444	4.1860072	-194.0251763	C
0.0001463	1125.6960867	7697067.	8.7593608	0.0014503	-0.0007664	4.2103414	-194.6474614	C
0.0001488	1132.1758627	7611266.	8.6985293	0.0014631	-0.0007886	4.2340451	-195.2737575	C
0.0001588	1156.9734359	7288022.	8.4721620	0.0015142	-0.0008775	4.3246394	-197.7888967	C
0.0001688	1179.5833499	6990124.	8.2671569	0.0015643	-0.0009674	4.4080294	-200.3303313	C
0.0001788	1200.5553847	6716394.	8.0816347	0.0016138	-0.0010579	4.4849874	-202.8893572	C
0.0001888	1220.0437590	6463808.	7.9127237	0.0016628	-0.0011490	4.5557761	-205.4647774	C
0.0001988	1238.1210916	6229540.	7.7577984	0.0017111	-0.0012406	4.6205522	-208.0572582	C
0.0002088	1255.0384199	6012160.	7.6156141	0.0017590	-0.0013327	4.6796999	-210.6622411	C
0.0002188	1270.9319103	5809974.	7.4847852	0.0018065	-0.0014252	4.7334453	-213.2774778	C
0.0002288	1285.8380733	5621150.	7.3637406	0.0018537	-0.0015180	4.7818837	-215.9034990	C
0.0002388	1299.8625374	5444450.	7.2515190	0.0019005	-0.0016112	4.8251902	-218.5384818	C
0.0002488	1313.1424600	5278965.	7.1475680	0.0019472	-0.0017045	4.8635626	-221.1787952	C
0.0002588	1325.7791459	5123784.	7.0513610	0.0019938	-0.0017980	4.8971350	-223.8212542	C
0.0002688	1337.6872236	4977441.	6.9614695	0.0020401	-0.0018916	4.9258430	-226.4701800	C
0.0002788	1348.9921980	4839434.	6.8777375	0.0020864	-0.0019853	4.9498260	-229.1214093	C
0.0002888	1359.8163272	4709321.	6.8002070	0.0021328	-0.0020789	4.9691821	-231.7693315	C
0.0002988	1369.9639320	4585653.	6.7270294	0.0021789	-0.0021728	4.9837768	-234.4243859	C
0.0003088	1379.7440476	4468807.	6.6595887	0.0022254	-0.0022664	4.9937805	-237.0706668	C
0.0003188	1388.8889674	4357299.	6.5956715	0.0022716	-0.0023601	4.9990638	-239.7233840	C
0.0003288	1397.6110953	4251289.	6.5367560	0.0023182	-0.0024535	4.9990549	-242.3656668	C
0.0003388	1405.7312938	4149760.	6.4818302	0.0023649	-0.0025468	4.9988662	-245.0030159	C
0.0003488	1413.3020002	4052479.	6.4305494	0.0024119	-0.0026398	4.9984486	-246.3168250	C
0.0003588	1420.5011094	3959585.	6.3835639	0.0024593	-0.0027324	4.9977412	-247.5383524	C
0.0003688	1427.1762279	3870308.	6.3391663	0.0025068	-0.0028249	4.9999849	-248.6398874	C
0.0003788	1433.4437540	3784670.	6.2978751	0.0025545	-0.0029172	4.9997392	-249.6354400	C
0.0003888	1439.4161043	3702678.	6.2599126	0.0026028	-0.0030090	4.9990456	-250.5378919	C
0.0003988	1445.0871768	3624043.	6.2247292	0.0026513	-0.0031004	4.9976734	-251.3607236	C
0.0004088	1450.3400471	3548233.	6.1909971	0.0026998	-0.0031919	4.9999362	-252.1176842	C
0.0004188	1455.3306895	3475417.	6.1599867	0.0027487	-0.0032830	4.9991353	-252.8121282	C
0.0004288	1460.1091813	3405502.	6.1313530	0.0027980	-0.0033737	4.9971517	-253.4519225	C
0.0004388	1464.6504536	3338235.	6.1050277	0.0028478	-0.0034639	4.9997837	-254.0429939	C
0.0004488	1468.9311800	3273384.	6.0802928	0.0028978	-0.0035540	4.9981971	-254.5921867	C
0.0004588	1472.9702734	3210834.	6.0566443	0.0029477	-0.0036440	4.9999742	-255.1048134	C
0.0004688	1476.7889813	3150483.	6.0349840	0.0029981	-0.0037336	4.9986460	-255.5820424	C
0.0004788	1480.4733731	3092373.	6.0148841	0.0030489	-0.0038229	5.0000000	-256.0281097	C
0.0004888	1483.9369430	3036188.	5.9965769	0.0031001	-0.0039117	4.9987458	-256.4452262	C
0.0004988	1487.2875936	2982030.	5.9795706	0.0031515	-0.0040002	4.9997413	-256.8369352	C
0.0005088	1490.4156870	2929564.	5.9641084	0.0032035	-0.0040883	4.9985258	-257.2048179	C
0.0005188	1493.2649559	2878583.	5.9493239	0.0032554	-0.0041763	4.9999889	-257.5525325	C
0.0005288	1495.6261747	2828607.	5.9344475	0.0033071	-0.0042647	4.9977799	-257.8831123	C
0.0005388	1497.3077088	2779225.	5.9191803	0.0033582	-0.0043535	4.9997915	-258.1983565	C
0.0005488	1498.6086843	2730950.	5.9044693	0.0034093	-0.0044424	4.9960032	-258.4976138	C
0.0006088	1502.5128278	2468194.	5.8320530	0.0037195	-0.0049722	4.9971793	-260.0078811	C
0.0006688	1502.5128278	2246748.	5.8747495	0.0040980	-0.0054338	4.9999613	-261.0323516	C

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	160.000	1476.925	0.00300000

Note note that the values of moment capacity in the table above are not factored by a strength reduction factor (phi-factor).

In ACI 318-08, the value of the strength reduction factor depends on whether the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.70).

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to ACI 318-08, Section 9.3.2.2 or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Load No.	Resistance Factor for Moment	Nominal Moment Capacity in-kip	Ultimate (Factored) Axial Thrust kips	Ultimate (Factored) Moment Capacity in-kip	Bending Stiffness at Ult. Mom. Cap. kip-in^2
1	0.65	1476.925	104.000	960.001	9749185.739
1	0.70	1476.925	112.000	1033.848	8870735.856
1	0.75	1476.925	120.000	1107.694	7930792.436

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 1

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 4000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.2391	-1.772E-07	4000.0000	-0.002660	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.2263	21243.	4000.0000	-0.002654	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.2136	42477.	4000.0000	-0.002640	0.000	1.119E+10	0.000	0.000	0.000
1.200	0.2010	63697.	4000.0000	-0.002617	0.000	1.149E+10	0.000	0.000	0.000
1.600	0.1885	84897.	4000.0000	-0.002587	0.000	1.165E+10	0.000	0.000	0.000
2.000	0.1762	106070.	4000.0000	-0.002547	0.000	1.175E+10	0.000	0.000	0.000
2.400	0.1640	127210.	3963.8682	-0.002500	0.000	1.182E+10	-15.0549	440.5347	0.000
2.800	0.1522	147963.	3851.2423	-0.002444	0.000	1.186E+10	-31.8726	1005.4393	0.000
3.200	0.1406	167936.	3658.3323	-0.002380	0.000	1.190E+10	-48.5066	1656.3113	0.000
3.600	0.1293	186739.	3389.5489	-0.002309	0.000	1.192E+10	-63.4864	2356.6288	0.000
4.000	0.1184	204022.	3054.4554	-0.002230	0.000	1.194E+10	-76.1359	3086.3884	0.000
4.400	0.1079	219488.	2666.0317	-0.002145	0.000	1.195E+10	-85.7073	3812.7632	0.000
4.800	0.0978	232911.	2238.4949	-0.002054	0.000	1.196E+10	-92.4330	4535.9228	0.000
5.200	0.0882	244133.	1787.7745	-0.001959	0.000	1.197E+10	-95.3672	5191.3611	0.000
5.600	0.0790	253082.	1331.6469	-0.001859	0.000	1.198E+10	-94.6859	5752.2664	0.000
6.000	0.0703	259772.	880.8471	-0.001756	0.000	1.198E+10	-93.1473	6357.1666	0.000
6.400	0.0622	264236.	448.8584	-0.001651	0.000	1.198E+10	-86.8480	6707.3870	0.000
6.800	0.0545	266618.	46.3126	-0.001545	0.000	1.198E+10	-80.8794	7126.1025	0.000
7.200	0.0473	267054.	-345.1382	-0.001438	0.000	1.198E+10	-82.2251	8340.8194	0.000
7.600	0.0407	265513.	-738.7297	-0.001331	0.000	1.198E+10	-81.7714	9650.2039	0.000
8.000	0.0345	262007.	-1130.1965	-0.001226	0.000	1.198E+10	-81.3398	11305.	0.000
8.400	0.0289	256546.	-1522.3152	-0.001122	0.000	1.198E+10	-82.0430	13624.	0.000
8.800	0.0238	249116.	-1914.4200	-0.001021	0.000	1.197E+10	-81.3340	16426.	0.000
9.200	0.0191	239735.	-2206.8281	-0.000923	0.000	1.197E+10	-40.5027	10174.	0.000
9.600	0.0149	229348.	-2383.5054	-0.000828	0.000	1.196E+10	-33.1128	10660.	0.000
10.000	0.0112	218126.	-2525.1361	-0.000739	0.000	1.195E+10	-25.9000	11145.	0.000
10.400	0.007820	206241.	-2632.7678	-0.000653	0.000	1.194E+10	-18.9465	11630.	0.000
10.800	0.004882	193855.	-2707.8149	-0.000573	0.000	1.193E+10	-12.3231	12116.	0.000
11.200	0.002319	181126.	-2752.0030	-0.000497	0.000	1.191E+10	-6.0886	12601.	0.000
11.600	0.000107	168200.	-2767.3135	-0.000427	0.000	1.190E+10	-0.2908	13086.	0.000
12.000	-0.001780	155215.	-2755.9313	-0.000362	0.000	1.188E+10	5.0334	13571.	0.000
12.400	-0.003366	142299.	-2720.1938	-0.000302	0.000	1.185E+10	9.8573	14057.	0.000
12.800	-0.004675	129565.	-2662.5434	-0.000246	0.000	1.182E+10	14.1637	14542.	0.000
13.200	-0.005732	117117.	-2585.4839	-0.000196	0.000	1.179E+10	17.9444	15027.	0.000
13.600	-0.006560	105046.	-2491.5397	-0.000151	0.000	1.175E+10	21.1990	15513.	0.000
14.000	-0.007181	93430.	-2383.2197	-0.000110	0.000	1.170E+10	23.9343	15998.	0.000
14.400	-0.007619	82336.	-2262.9849	-7.421E-05	0.000	1.164E+10	26.1635	16483.	0.000
14.800	-0.007894	71819.	-2133.2205	-4.233E-05	0.000	1.157E+10	27.9050	16968.	0.000
15.200	-0.008025	61922.	-1996.2124	-1.448E-05	0.000	1.148E+10	29.1818	17454.	0.000
15.600	-0.008033	52678.	-1854.1267	9.596E-06	0.000	1.136E+10	30.0206	17939.	0.000
16.000	-0.007933	44108.	-1708.9951	3.016E-05	0.000	1.122E+10	30.4509	18424.	0.000
16.400	-0.007743	36225.	-1562.7025	4.747E-05	0.000	1.103E+10	30.5043	18910.	0.000
16.800	-0.007478	29033.	-1416.9792	6.181E-05	0.000	1.079E+10	30.2137	19395.	0.000
17.200	-0.007150	22527.	-1273.3965	7.345E-05	0.000	1.044E+10	29.6124	19880.	0.000
17.600	-0.006772	16696.	-1133.3648	8.265E-05	0.000	9.952E+09	28.7341	20365.	0.000
18.000	-0.006356	11520.	-998.1354	8.968E-05	0.000	9.200E+09	27.6115	20851.	0.000
18.400	-0.005911	6975.8978	-868.8039	9.451E-05	0.000	9.195E+09	26.2766	21336.	0.000
18.800	-0.005449	3034.3651	-746.2868	9.712E-05	0.000	9.195E+09	24.7722	21821.	0.000
19.200	-0.004979	-337.6318	-631.2997	9.782E-05	0.000	9.195E+09	23.1391	22307.	0.000
19.600	-0.004510	-3176.3697	-524.3703	9.691E-05	0.000	9.195E+09	21.4149	22792.	0.000
20.000	-0.004049	-5520.4358	-425.8521	9.464E-05	0.000	9.195E+09	19.6344	23277.	0.000
20.400	-0.003601	-7409.9123	-335.9395	9.126E-05	0.000	9.195E+09	17.8292	23763.	0.000
20.800	-0.003173	-8885.6344	-254.6841	8.701E-05	0.000	9.195E+09	16.0273	24248.	0.000
21.200	-0.002766	-9988.5262	-182.0106	8.208E-05	0.000	9.195E+09	14.2534	24733.	0.000
21.600	-0.002385	-10759.	-117.7335	7.667E-05	0.000	9.195E+09	12.5288	25218.	0.000

22.000	-0.002030	-11237.	-61.5730	7.093E-05	0.000	9.195E+09	10.8714	25704.	0.000
22.400	-0.001704	-11459.	-13.1713	6.500E-05	0.000	9.195E+09	9.2960	26189.	0.000
22.800	-0.001406	-11463.	27.8927	5.902E-05	0.000	9.195E+09	7.8141	26674.	0.000
23.200	-0.001137	-11282.	62.0892	5.308E-05	0.000	9.195E+09	6.4345	27160.	0.000
23.600	-0.000897	-10948.	89.9240	4.728E-05	0.000	9.195E+09	5.1633	27645.	0.000
24.000	-0.000683	-10491.	111.9264	4.169E-05	0.000	9.195E+09	4.0043	28130.	0.000
24.400	-0.000496	-9937.8396	128.6379	3.636E-05	0.000	9.195E+09	2.9588	28615.	0.000
24.800	-0.000334	-9312.2203	140.6029	3.133E-05	0.000	9.195E+09	2.0265	29101.	0.000
25.200	-0.000196	-8636.1762	148.3593	2.665E-05	0.000	9.195E+09	1.2053	29586.	0.000
25.600	-7.846E-05	-7928.8999	152.4317	2.232E-05	0.000	9.195E+09	0.4916	30071.	0.000
26.000	1.875E-05	-7207.1194	153.3250	1.837E-05	0.000	9.195E+09	-0.1194	30557.	0.000
26.400	9.791E-05	-6485.2002	151.5188	1.480E-05	0.000	9.195E+09	-0.6332	31042.	0.000
26.800	0.000161	-5775.2700	147.4640	1.160E-05	0.000	9.195E+09	-1.0563	31527.	0.000
27.200	0.000209	-5087.3615	141.5794	8.764E-06	0.000	9.195E+09	-1.3956	32012.	0.000
27.600	0.000245	-4429.5681	134.2498	6.280E-06	0.000	9.195E+09	-1.6584	32498.	0.000
28.000	0.000270	-3808.2087	125.8245	4.130E-06	0.000	9.195E+09	-1.8522	32983.	0.000
28.400	0.000285	-3227.9962	116.6168	2.293E-06	0.000	9.195E+09	-1.9844	33468.	0.000
28.800	0.000292	-2692.2093	106.9047	7.480E-07	0.000	9.195E+09	-2.0624	33954.	0.000
29.200	0.000292	-2202.8603	96.9307	-5.296E-07	0.000	9.195E+09	-2.0934	34439.	0.000
29.600	0.000286	-1760.8607	86.9041	-1.564E-06	0.000	9.195E+09	-2.0843	34924.	0.000
30.000	0.000277	-1366.1786	77.0017	-2.380E-06	0.000	9.195E+09	-2.0417	35409.	0.000
30.400	0.000264	-1017.9883	67.3704	-3.003E-06	0.000	9.195E+09	-1.9714	35895.	0.000
30.800	0.000248	-714.8109	58.1291	-3.455E-06	0.000	9.195E+09	-1.8791	36380.	0.000
31.200	0.000230	-454.6424	49.3712	-3.760E-06	0.000	9.195E+09	-1.7700	36865.	0.000
31.600	0.000212	-235.0718	41.1671	-3.940E-06	0.000	9.195E+09	-1.6484	37351.	0.000
32.000	0.000193	-53.3861	33.5667	-4.015E-06	0.000	9.195E+09	-1.5184	37836.	0.000
32.400	0.000173	93.3365	26.6022	-4.005E-06	0.000	9.195E+09	-1.3835	38321.	0.000
32.800	0.000154	208.1461	20.2901	-3.926E-06	0.000	9.195E+09	-1.2465	38807.	0.000
33.200	0.000136	294.1521	14.6344	-3.795E-06	0.000	9.195E+09	-1.1100	39292.	0.000
33.600	0.000118	354.4658	9.6285	-3.626E-06	0.000	9.195E+09	-0.9758	39777.	0.000
34.000	0.000101	392.1550	5.2575	-3.431E-06	0.000	9.195E+09	-0.8454	40262.	0.000
34.400	8.481E-05	410.2081	1.5005	-3.222E-06	0.000	9.195E+09	-0.7200	40748.	0.000
34.800	6.987E-05	411.5079	-1.6679	-3.007E-06	0.000	9.195E+09	-0.6002	41233.	0.000
35.200	5.595E-05	398.8151	-4.2753	-2.796E-06	0.000	9.195E+09	-0.4862	41718.	0.000
35.600	4.303E-05	374.7593	-6.3502	-2.594E-06	0.000	9.195E+09	-0.3783	42204.	0.000
36.000	3.105E-05	341.8368	-7.9209	-2.407E-06	0.000	9.195E+09	-0.2761	42689.	0.000
36.400	1.992E-05	302.4156	-9.0136	-2.239E-06	0.000	9.195E+09	-0.1792	43174.	0.000
36.800	9.557E-06	258.7443	-9.6524	-2.092E-06	0.000	9.195E+09	-0.0869	43659.	0.000
37.200	-1.602E-07	212.9663	-9.8575	-1.969E-06	0.000	9.195E+09	0.001473	44145.	0.000
37.600	-9.344E-06	167.1369	-9.6454	-1.870E-06	0.000	9.195E+09	0.0869	44630.	0.000
38.000	-1.811E-05	123.2422	-9.0284	-1.794E-06	0.000	9.195E+09	0.1702	45115.	0.000
38.400	-2.657E-05	83.2199	-8.0142	-1.740E-06	0.000	9.195E+09	0.2524	45601.	0.000
38.800	-3.481E-05	48.9790	-6.6062	-1.706E-06	0.000	9.195E+09	0.3343	46086.	0.000
39.200	-4.294E-05	22.4198	-4.8041	-1.687E-06	0.000	9.195E+09	0.4166	46571.	0.000
39.600	-5.101E-05	5.4503	-2.6041	-1.680E-06	0.000	9.195E+09	0.5001	47056.	0.000
40.000	-5.906E-05	0.000	0.000	-1.678E-06	0.000	9.195E+09	0.5850	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.

The above values of total stress are computed for combined axial and bending stress in elastic

sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 1:

```
Pile-head deflection             =      0.2390995 inches
Computed slope at pile head      =     -0.0026599 radians
Maximum bending moment           =        267054. inch-lbs
Maximum shear force              =   4000.0000000 lbs
Depth of maximum bending moment  =     86.4000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             12
Number of zero deflection points =              3
```

Pile-head Deflection vs. Pile Length for Load Case 1

Boundary Condition Type 1, Shear and Moment

```
Shear      =           4000. lbs
Moment     =              0. in-lbs
Axial Load =         160000. lbs
```

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.2390995	267054.	4000.0000000
38.0000	0.2390173	266573.	4000.0000001
36.0000	0.2380946	266710.	4000.0000000
34.0000	0.2388123	266875.	4000.0000000
32.0000	0.2381034	266853.	4000.0000000
30.0000	0.2382825	266691.	4000.0000000
28.0000	0.2383854	266807.	4000.0000000
26.0000	0.2391480	266642.	4000.0000000
24.0000	0.2391019	266642.	4000.0000000
22.0000	0.2396538	266713.	4000.0000000
20.0000	0.2400208	266604.	4000.0000001
18.0000	0.2477804	265595.	4000.0000000
16.0000	0.2788393	263553.	4000.0000002
14.0000	0.3880173	264107.	-4901.7818047
12.0000	0.9623617	297336.	-8169.7642365

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 2

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 6000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.4309	-2.215E-07	6000.0000	-0.004523	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.4092	32273.	6000.0000	-0.004514	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.3876	64534.	6000.0000	-0.004492	0.000	1.150E+10	0.000	0.000	0.000
1.200	0.3661	96773.	6000.0000	-0.004459	0.000	1.171E+10	0.000	0.000	0.000
1.600	0.3448	128983.	6000.0000	-0.004413	0.000	1.182E+10	0.000	0.000	0.000
2.000	0.3237	161152.	6000.0000	-0.004354	0.000	1.189E+10	0.000	0.000	0.000
2.400	0.3030	193271.	5956.9247	-0.004283	0.000	1.193E+10	-17.9480	284.3521	0.000
2.800	0.2826	224916.	5822.0652	-0.004199	0.000	1.196E+10	-38.2434	649.5679	0.000
3.200	0.2627	255612.	5589.9329	-0.004102	0.000	1.198E+10	-58.4784	1068.6535	0.000
3.600	0.2432	284881.	5264.8139	-0.003994	0.000	1.199E+10	-76.9879	1519.3864	0.000
4.000	0.2243	312289.	4856.4499	-0.003875	0.000	1.200E+10	-93.1638	1993.5229	0.000
4.400	0.2060	337455.	4378.3533	-0.003745	0.000	1.201E+10	-106.0432	2470.6614	0.000
4.800	0.1884	360073.	3846.5893	-0.003605	0.000	1.202E+10	-115.5251	2943.7981	0.000
5.200	0.1714	379920.	3277.3794	-0.003458	0.000	1.202E+10	-121.6457	3406.4852	0.000
5.600	0.1552	396847.	2686.7263	-0.003303	0.000	1.202E+10	-124.4598	3849.8822	0.000
6.000	0.1397	410785.	2082.8976	-0.003141	0.000	1.202E+10	-127.1355	4368.1878	0.000
6.400	0.1250	421668.	1479.6960	-0.002975	0.000	1.202E+10	-124.1985	4768.5175	0.000
6.800	0.1111	429560.	891.4552	-0.002805	0.000	1.202E+10	-120.9019	5221.5248	0.000
7.200	0.0981	434535.	300.0209	-0.002633	0.000	1.202E+10	-125.5291	6142.8517	0.000
7.600	0.0859	436484.	-307.9739	-0.002459	0.000	1.202E+10	-127.8021	7144.1991	0.000
8.000	0.0745	435355.	-926.1833	-0.002285	0.000	1.202E+10	-129.7852	8364.0103	0.000
8.400	0.0639	431103.	-1556.7077	-0.002112	0.000	1.202E+10	-132.9333	9980.6711	0.000
8.800	0.0542	423655.	-2197.9943	-0.001941	0.000	1.202E+10	-134.2695	11889.	0.000
9.200	0.0453	412984.	-2750.6624	-0.001774	0.000	1.202E+10	-96.0089	10174.	0.000
9.600	0.0372	399974.	-3179.2107	-0.001612	0.000	1.202E+10	-82.5529	10660.	0.000
10.000	0.0298	384940.	-3543.5007	-0.001455	0.000	1.202E+10	-69.2346	11145.	0.000
10.400	0.0232	368192.	-3844.5848	-0.001305	0.000	1.202E+10	-56.2171	11630.	0.000
10.800	0.0173	350036.	-4084.2503	-0.001161	0.000	1.201E+10	-43.6435	12116.	0.000
11.200	0.0121	330767.	-4264.9240	-0.001025	0.000	1.201E+10	-31.6372	12601.	0.000
11.600	0.007447	310668.	-4389.5769	-0.000897	0.000	1.200E+10	-20.3016	13086.	0.000
12.000	0.003438	290005.	-4461.6311	-0.000777	0.000	1.199E+10	-9.7210	13571.	0.000
12.400	-1.322E-05	269030.	-4484.8685	-0.000665	0.000	1.199E+10	0.0387	14057.	0.000
12.800	-0.002947	247972.	-4463.3448	-0.000562	0.000	1.197E+10	8.9295	14542.	0.000
13.200	-0.005404	227044.	-4401.3067	-0.000466	0.000	1.196E+10	16.9197	15027.	0.000
13.600	-0.007424	206436.	-4303.1159	-0.000379	0.000	1.194E+10	23.9931	15513.	0.000
14.000	-0.009045	186317.	-4173.1785	-0.000300	0.000	1.192E+10	30.1474	15998.	0.000
14.400	-0.0103	166835.	-4015.8815	-0.000229	0.000	1.189E+10	35.3930	16483.	0.000
14.800	-0.0112	148116.	-3835.5357	-0.000165	0.000	1.186E+10	39.7511	16968.	0.000
15.200	-0.0119	130268.	-3636.3259	-0.000109	0.000	1.182E+10	43.2530	17454.	0.000
15.600	-0.0123	113375.	-3422.2684	-5.951E-05	0.000	1.178E+10	45.9377	17939.	0.000
16.000	-0.0125	97505.	-3197.1750	-1.644E-05	0.000	1.172E+10	47.8512	18424.	0.000
16.400	-0.0124	82707.	-2964.6247	2.059E-05	0.000	1.164E+10	49.0448	18910.	0.000
16.800	-0.0123	69013.	-2727.9409	5.199E-05	0.000	1.154E+10	49.5735	19395.	0.000
17.200	-0.0120	56439.	-2490.1764	7.820E-05	0.000	1.141E+10	49.4951	19880.	0.000
17.600	-0.0115	44987.	-2254.1027	9.968E-05	0.000	1.124E+10	48.8690	20365.	0.000
18.000	-0.0110	34647.	-2022.2058	0.000117	0.000	1.099E+10	47.7547	20851.	0.000
18.400	-0.0104	25395.	-1796.6869	0.000130	0.000	1.061E+10	46.2115	21336.	0.000
18.800	-0.009744	17199.	-1579.4668	0.000140	0.000	1.001E+10	44.2969	21821.	0.000
19.200	-0.009052	10017.	-1372.1951	0.000147	0.000	9.195E+09	42.0663	22307.	0.000
19.600	-0.008335	3800.1421	-1176.2521	0.000150	0.000	9.195E+09	39.5766	22792.	0.000
20.000	-0.007608	-1506.1986	-992.7183	0.000151	0.000	9.195E+09	36.8958	23277.	0.000
20.400	-0.006885	-5961.8566	-822.3603	0.000149	0.000	9.195E+09	34.0867	23763.	0.000
20.800	-0.006178	-9629.7666	-665.6555	0.000145	0.000	9.195E+09	31.2069	24248.	0.000
21.200	-0.005494	-12575.	-522.8188	0.000139	0.000	9.392E+09	28.3084	24733.	0.000
21.600	-0.004841	-14863.	-393.8381	0.000132	0.000	9.734E+09	25.4336	25218.	0.000

22.000	-0.004223	-16559.	-278.5210	0.000125	0.000	9.937E+09	22.6152	25704.	0.000
22.400	-0.003644	-17728.	-176.5292	0.000116	0.000	1.006E+10	19.8814	26189.	0.000
22.800	-0.003105	-18433.	-87.3995	0.000108	0.000	1.013E+10	17.2560	26674.	0.000
23.200	-0.002608	-18733.	-10.5633	9.907E-05	0.000	1.015E+10	14.7591	27160.	0.000
23.600	-0.002154	-18686.	54.6342	9.022E-05	0.000	1.015E+10	12.4065	27645.	0.000
24.000	-0.001742	-18347.	108.9155	8.145E-05	0.000	1.012E+10	10.2107	28130.	0.000
24.400	-0.001372	-17766.	153.0548	7.286E-05	0.000	1.006E+10	8.1807	28615.	0.000
24.800	-0.001043	-16989.	187.8623	6.454E-05	0.000	9.984E+09	6.3224	29101.	0.000
25.200	-0.000753	-16061.	214.1704	5.655E-05	0.000	9.881E+09	4.6393	29586.	0.000
25.600	-0.000500	-15020.	232.8215	4.896E-05	0.000	9.754E+09	3.1320	30071.	0.000
26.000	-0.000283	-13901.	244.6572	4.179E-05	0.000	9.601E+09	1.7995	30557.	0.000
26.400	-9.879E-05	-12736.	250.5094	3.507E-05	0.000	9.420E+09	0.6389	31042.	0.000
26.800	5.396E-05	-11550.	251.1921	2.881E-05	0.000	9.206E+09	-0.3544	31527.	0.000
27.200	0.000178	-10369.	247.4958	2.309E-05	0.000	9.195E+09	-1.1858	32012.	0.000
27.600	0.000276	-9209.8601	240.1709	1.798E-05	0.000	9.195E+09	-1.8663	32498.	0.000
28.000	0.000350	-8090.5041	229.9127	1.347E-05	0.000	9.195E+09	-2.4080	32983.	0.000
28.400	0.000405	-7023.3849	217.3571	9.523E-06	0.000	9.195E+09	-2.8235	33468.	0.000
28.800	0.000442	-6018.5036	203.0794	6.119E-06	0.000	9.195E+09	-3.1256	33954.	0.000
29.200	0.000464	-5083.2222	187.5936	3.222E-06	0.000	9.195E+09	-3.3269	34439.	0.000
29.600	0.000473	-4222.5542	171.3532	7.930E-07	0.000	9.195E+09	-3.4399	34924.	0.000
30.000	0.000471	-3439.4496	154.7530	-1.207E-06	0.000	9.195E+09	-3.4768	35409.	0.000
30.400	0.000461	-2735.0714	138.1314	-2.818E-06	0.000	9.195E+09	-3.4489	35895.	0.000
30.800	0.000444	-2109.0596	121.7731	-4.083E-06	0.000	9.195E+09	-3.3670	36380.	0.000
31.200	0.000422	-1559.7788	105.9135	-5.040E-06	0.000	9.195E+09	-3.2412	36865.	0.000
31.600	0.000396	-1084.5488	90.7418	-5.730E-06	0.000	9.195E+09	-3.0804	37351.	0.000
32.000	0.000367	-679.8555	76.4061	-6.191E-06	0.000	9.195E+09	-2.8929	37836.	0.000
32.400	0.000336	-341.5410	63.0170	-6.457E-06	0.000	9.195E+09	-2.6859	38321.	0.000
32.800	0.000305	-64.9734	50.6527	-6.564E-06	0.000	9.195E+09	-2.4659	38807.	0.000
33.200	0.000273	154.8063	39.3630	-6.540E-06	0.000	9.195E+09	-2.2382	39292.	0.000
33.600	0.000242	322.9566	29.1739	-6.415E-06	0.000	9.195E+09	-2.0073	39777.	0.000
34.000	0.000212	444.7298	20.0920	-6.215E-06	0.000	9.195E+09	-1.7769	40262.	0.000
34.400	0.000183	525.3860	12.1081	-5.962E-06	0.000	9.195E+09	-1.5498	40748.	0.000
34.800	0.000155	570.1252	5.2014	-5.676E-06	0.000	9.195E+09	-1.3280	41233.	0.000
35.200	0.000128	584.0376	-0.6573	-5.375E-06	0.000	9.195E+09	-1.1131	41718.	0.000
35.600	0.000103	572.0703	-5.5023	-5.073E-06	0.000	9.195E+09	-0.9056	42204.	0.000
36.000	7.937E-05	539.0075	-9.3700	-4.783E-06	0.000	9.195E+09	-0.7059	42689.	0.000
36.400	5.709E-05	489.4652	-12.2964	-4.514E-06	0.000	9.195E+09	-0.5135	43174.	0.000
36.800	3.603E-05	427.8961	-14.3153	-4.275E-06	0.000	9.195E+09	-0.3277	43659.	0.000
37.200	1.605E-05	358.6047	-15.4560	-4.070E-06	0.000	9.195E+09	-0.1476	44145.	0.000
37.600	-3.039E-06	285.7693	-15.7424	-3.902E-06	0.000	9.195E+09	0.0283	44630.	0.000
38.000	-2.141E-05	213.4703	-15.1917	-3.771E-06	0.000	9.195E+09	0.2012	45115.	0.000
38.400	-3.924E-05	145.7218	-13.8140	-3.678E-06	0.000	9.195E+09	0.3728	45601.	0.000
38.800	-5.671E-05	86.5046	-11.6124	-3.617E-06	0.000	9.195E+09	0.5445	46086.	0.000
39.200	-7.397E-05	39.7983	-8.5832	-3.584E-06	0.000	9.195E+09	0.7176	46571.	0.000
39.600	-9.112E-05	9.6105	-4.7170	-3.571E-06	0.000	9.195E+09	0.8933	47056.	0.000
40.000	-0.000108	0.000	0.000	-3.569E-06	0.000	9.195E+09	1.0721	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 2:

Pile-head deflection	=	0.4309134 inches
Computed slope at pile head	=	-0.0045226 radians
Maximum bending moment	=	436484. inch-lbs
Maximum shear force	=	6000.0000000 lbs
Depth of maximum bending moment	=	91.2000000 inches below pile head
Depth of maximum shear force	=	4.8000000 inches below pile head
Number of iterations	=	12
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 2

Boundary Condition Type 1, Shear and Moment

Shear = 6000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.4309134	436484.	6000.0000000
38.0000	0.4307067	435938.	6000.0000000
36.0000	0.4282584	436120.	6000.0000000
34.0000	0.4305183	435918.	6000.0000000
32.0000	0.4296533	436125.	6000.0000001
30.0000	0.4287901	435991.	6000.0000002
28.0000	0.4301456	436021.	6000.0000000
26.0000	0.4311049	435794.	6000.0000001
24.0000	0.4310234	435975.	6000.0000005
22.0000	0.4318431	435923.	6000.0000003
20.0000	0.4341337	435515.	6000.0000004
18.0000	0.4550667	433230.	6000.0000001
16.0000	0.5319299	429468.	-6584.8531626
14.0000	0.7900981	430953.	-8703.4555949

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 3

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 8000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.6423	3.545E-07	8000.0000	-0.006525	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.6110	43411.	8000.0000	-0.006514	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.5798	86805.	8000.0000	-0.006484	0.000	1.166E+10	0.000	0.000	0.000
1.200	0.5488	130171.	8000.0000	-0.006440	0.000	1.182E+10	0.000	0.000	0.000
1.600	0.5180	173497.	8000.0000	-0.006379	0.000	1.190E+10	0.000	0.000	0.000
2.000	0.4875	216769.	8000.0000	-0.006300	0.000	1.195E+10	0.000	0.000	0.000
2.400	0.4575	259974.	7949.6749	-0.006205	0.000	1.198E+10	-20.9688	219.9991	0.000
2.800	0.4280	302616.	7792.0358	-0.006092	0.000	1.200E+10	-44.7141	501.5018	0.000
3.200	0.3990	344135.	7520.9158	-0.005963	0.000	1.201E+10	-68.2525	821.0438	0.000
3.600	0.3707	383976.	7141.9423	-0.005817	0.000	1.202E+10	-89.6531	1160.7829	0.000
4.000	0.3432	421633.	6666.7161	-0.005656	0.000	1.202E+10	-108.3578	1515.6132	0.000
4.400	0.3164	456665.	6110.4255	-0.005481	0.000	1.203E+10	-123.4299	1872.3620	0.000
4.800	0.2906	488712.	5491.0975	-0.005293	0.000	1.203E+10	-134.6234	2224.0035	0.000
5.200	0.2656	517508.	4824.5902	-0.005092	0.000	1.202E+10	-143.0880	2585.7534	0.000
5.600	0.2417	542849.	4123.7047	-0.004880	0.000	1.202E+10	-148.9476	2958.3237	0.000
6.000	0.2188	564592.	3392.3241	-0.004659	0.000	1.202E+10	-155.7943	3418.2665	0.000
6.400	0.1969	582572.	2642.2754	-0.004430	0.000	1.202E+10	-156.7260	3819.7210	0.000
6.800	0.1762	596762.	1889.8237	-0.004194	0.000	1.202E+10	-156.7956	4270.3640	0.000
7.200	0.1567	607157.	1118.1403	-0.003954	0.000	1.202E+10	-164.7391	5046.8636	0.000
7.600	0.1383	613569.	314.9896	-0.003710	0.000	1.202E+10	-169.9070	5897.6755	0.000
8.000	0.1211	615879.	-511.2885	-0.003465	0.000	1.202E+10	-174.3755	6913.7641	0.000
8.400	0.1050	613983.	-1361.2179	-0.003219	0.000	1.202E+10	-179.7617	8215.8416	0.000
8.800	0.0902	607756.	-2231.7120	-0.002975	0.000	1.202E+10	-182.9442	9739.6032	0.000
9.200	0.0765	597128.	-3057.4309	-0.002734	0.000	1.202E+10	-161.1054	10113.	0.000
9.600	0.0639	582605.	-3784.7206	-0.002499	0.000	1.202E+10	-141.9320	10660.	0.000
10.000	0.0525	564633.	-4417.7762	-0.002270	0.000	1.202E+10	-121.8412	11145.	0.000
10.400	0.0421	543680.	-4955.1392	-0.002048	0.000	1.202E+10	-102.0601	11630.	0.000
10.800	0.0328	520210.	-5398.8394	-0.001836	0.000	1.202E+10	-82.8150	12116.	0.000
11.200	0.0245	494672.	-5751.9246	-0.001634	0.000	1.203E+10	-64.3038	12601.	0.000
11.600	0.0171	467501.	-6018.3219	-0.001442	0.000	1.203E+10	-46.6951	13086.	0.000
12.000	0.0107	439110.	-6202.7000	-0.001261	0.000	1.202E+10	-30.1291	13571.	0.000
12.400	0.005026	409891.	-6310.3343	-0.001091	0.000	1.202E+10	-14.7185	14057.	0.000
12.800	0.000181	380207.	-6346.9770	-0.000933	0.000	1.202E+10	-0.5493	14542.	0.000
13.200	-0.003935	350394.	-6318.7328	-0.000787	0.000	1.201E+10	12.3177	15027.	0.000
13.600	-0.007378	320757.	-6231.9420	-0.000653	0.000	1.201E+10	23.8451	15513.	0.000
14.000	-0.0102	291570.	-6093.0725	-0.000531	0.000	1.200E+10	34.0172	15998.	0.000
14.400	-0.0125	263078.	-5908.6201	-0.000420	0.000	1.198E+10	42.8380	16483.	0.000
14.800	-0.0142	235493.	-5685.0191	-0.000320	0.000	1.197E+10	50.3291	16968.	0.000
15.200	-0.0155	208994.	-5428.5628	-0.000231	0.000	1.194E+10	56.5277	17454.	0.000
15.600	-0.0165	183733.	-5145.3342	-0.000152	0.000	1.192E+10	61.4842	17939.	0.000
16.000	-0.0170	159831.	-4841.1468	-8.240E-05	0.000	1.188E+10	65.2605	18424.	0.000
16.400	-0.0172	137384.	-4521.4961	-2.228E-05	0.000	1.184E+10	67.9273	18910.	0.000
16.800	-0.0172	116459.	-4191.5203	2.928E-05	0.000	1.179E+10	69.5626	19395.	0.000
17.200	-0.0170	97101.	-3855.9708	7.288E-05	0.000	1.172E+10	70.2497	19880.	0.000
17.600	-0.0165	79330.	-3519.1913	0.000109	0.000	1.162E+10	70.0751	20365.	0.000
18.000	-0.0159	63149.	-3185.1059	0.000139	0.000	1.149E+10	69.1272	20851.	0.000
18.400	-0.0152	48540.	-2857.2141	0.000162	0.000	1.130E+10	67.4945	21336.	0.000
18.800	-0.0144	35470.	-2538.5928	0.000180	0.000	1.101E+10	65.2644	21821.	0.000
19.200	-0.0135	23893.	-2231.9056	0.000193	0.000	1.053E+10	62.5220	22307.	0.000
19.600	-0.0125	13747.	-1939.4158	0.000202	0.000	9.578E+09	59.3488	22792.	0.000
20.000	-0.0115	4963.3462	-1663.0053	0.000207	0.000	9.195E+09	55.8222	23277.	0.000
20.400	-0.0105	-2536.0438	-1404.1494	0.000208	0.000	9.195E+09	52.0344	23763.	0.000
20.800	-0.009517	-8835.5452	-1163.8837	0.000205	0.000	9.195E+09	48.0764	24248.	0.000
21.200	-0.008545	-14024.	-942.8250	0.000199	0.000	9.619E+09	44.0314	24733.	0.000
21.600	-0.007607	-18192.	-741.2298	0.000191	0.000	1.010E+10	39.9665	25218.	0.000

22.000	-0.006710	-21433.	-559.0684	0.000182	0.000	1.037E+10	35.9341	25704.	0.000
22.400	-0.005861	-23839.	-396.0743	0.000171	0.000	1.053E+10	31.9801	26189.	0.000
22.800	-0.005065	-25499.	-251.7751	0.000160	0.000	1.062E+10	28.1445	26674.	0.000
23.200	-0.004323	-26502.	-125.5224	0.000149	0.000	1.067E+10	24.4608	27160.	0.000
23.600	-0.003639	-26932.	-16.5205	0.000137	0.000	1.069E+10	20.9567	27645.	0.000
24.000	-0.003012	-26870.	76.1460	0.000124	0.000	1.069E+10	17.6544	28130.	0.000
24.400	-0.002444	-26392.	153.4862	0.000112	0.000	1.066E+10	14.5707	28615.	0.000
24.800	-0.001933	-25569.	216.5786	0.000101	0.000	1.062E+10	11.7178	29101.	0.000
25.200	-0.001477	-24468.	266.5493	8.941E-05	0.000	1.056E+10	9.1033	29586.	0.000
25.600	-0.001074	-23148.	304.5518	7.855E-05	0.000	1.048E+10	6.7310	30071.	0.000
26.000	-0.000723	-21665.	331.7492	6.825E-05	0.000	1.039E+10	4.6012	30557.	0.000
26.400	-0.000419	-20068.	349.2989	5.855E-05	0.000	1.027E+10	2.7111	31042.	0.000
26.800	-0.000161	-18401.	358.3387	4.950E-05	0.000	1.012E+10	1.0555	31527.	0.000
27.200	5.595E-05	-16704.	359.9762	4.111E-05	0.000	9.953E+09	-0.3731	32012.	0.000
27.600	0.000234	-15009.	355.2796	3.339E-05	0.000	9.753E+09	-1.5838	32498.	0.000
28.000	0.000376	-13344.	345.2703	2.633E-05	0.000	9.518E+09	-2.5868	32983.	0.000
28.400	0.000487	-11735.	330.9181	1.991E-05	0.000	9.242E+09	-3.3933	33468.	0.000
28.800	0.000568	-10198.	313.1376	1.421E-05	0.000	9.195E+09	-4.0152	33954.	0.000
29.200	0.000623	-8750.2770	292.7727	9.260E-06	0.000	9.195E+09	-4.4702	34439.	0.000
29.600	0.000657	-7401.8217	270.5801	5.044E-06	0.000	9.195E+09	-4.7768	34924.	0.000
30.000	0.000671	-6160.4561	247.2277	1.504E-06	0.000	9.195E+09	-4.9534	35409.	0.000
30.400	0.000671	-5030.7463	223.2976	-1.416E-06	0.000	9.195E+09	-5.0175	35895.	0.000
30.800	0.000658	-4014.6237	199.2889	-3.777E-06	0.000	9.195E+09	-4.9861	36380.	0.000
31.200	0.000635	-3111.7707	175.6231	-5.637E-06	0.000	9.195E+09	-4.8747	36865.	0.000
31.600	0.000604	-2319.9834	152.6486	-7.055E-06	0.000	9.195E+09	-4.6980	37351.	0.000
32.000	0.000567	-1635.5076	130.6474	-8.087E-06	0.000	9.195E+09	-4.4692	37836.	0.000
32.400	0.000526	-1053.3461	109.8408	-8.789E-06	0.000	9.195E+09	-4.2002	38321.	0.000
32.800	0.000483	-567.5356	90.3963	-9.212E-06	0.000	9.195E+09	-3.9017	38807.	0.000
33.200	0.000438	-171.3922	72.4338	-9.405E-06	0.000	9.195E+09	-3.5827	39292.	0.000
33.600	0.000392	142.2749	56.0328	-9.413E-06	0.000	9.195E+09	-3.2511	39777.	0.000
34.000	0.000347	380.9807	41.2385	-9.276E-06	0.000	9.195E+09	-2.9132	40262.	0.000
34.400	0.000303	552.4129	28.0682	-9.032E-06	0.000	9.195E+09	-2.5744	40748.	0.000
34.800	0.000261	664.3089	16.5169	-8.715E-06	0.000	9.195E+09	-2.2386	41233.	0.000
35.200	0.000220	724.3614	6.5637	-8.352E-06	0.000	9.195E+09	-1.9086	41718.	0.000
35.600	0.000180	740.1493	-1.8241	-7.970E-06	0.000	9.195E+09	-1.5863	42204.	0.000
36.000	0.000143	719.0926	-8.6852	-7.589E-06	0.000	9.195E+09	-1.2725	42689.	0.000
36.400	0.000108	668.4285	-14.0611	-7.227E-06	0.000	9.195E+09	-0.9674	43174.	0.000
36.800	7.370E-05	595.2067	-17.9919	-6.897E-06	0.000	9.195E+09	-0.6704	43659.	0.000
37.200	4.134E-05	506.3006	-20.5134	-6.610E-06	0.000	9.195E+09	-0.3802	44145.	0.000
37.600	1.025E-05	408.4312	-21.6546	-6.371E-06	0.000	9.195E+09	-0.0953	44630.	0.000
38.000	-1.982E-05	308.2026	-21.4362	-6.184E-06	0.000	9.195E+09	0.1863	45115.	0.000
38.400	-4.912E-05	212.1427	-19.8691	-6.048E-06	0.000	9.195E+09	0.4666	45601.	0.000
38.800	-7.788E-05	126.7490	-16.9545	-5.960E-06	0.000	9.195E+09	0.7478	46086.	0.000
39.200	-0.000106	58.5335	-12.6838	-5.912E-06	0.000	9.195E+09	1.0317	46571.	0.000
39.600	-0.000135	14.0645	-7.0400	-5.893E-06	0.000	9.195E+09	1.3199	47056.	0.000
40.000	-0.000163	0.000	0.000	-5.889E-06	0.000	9.195E+09	1.6135	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 3:

Pile-head deflection	=	0.6423416 inches
Computed slope at pile head	=	-0.0065250 radians
Maximum bending moment	=	615879. inch-lbs
Maximum shear force	=	8000.0000000 lbs
Depth of maximum bending moment	=	96.0000000 inches below pile head
Depth of maximum shear force	=	19.2000000 inches below pile head
Number of iterations	=	12
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 3

Boundary Condition Type 1, Shear and Moment

Shear = 8000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.6423416	615879.	8000.0000000
38.0000	0.6420037	615203.	8000.0000001
36.0000	0.6395174	615305.	8000.0000001
34.0000	0.6419199	615218.	8000.0000001
32.0000	0.6412338	615330.	8000.0000000
30.0000	0.6401460	615337.	8000.0000001
28.0000	0.6418768	615189.	8000.0000001
26.0000	0.6427826	615102.	8000.0000000
24.0000	0.6427087	615073.	8000.0000000
22.0000	0.6438080	614974.	8000.0000003
20.0000	0.6499571	613913.	8000.0000003
18.0000	0.6876142	609346.	8000.0000004
16.0000	0.8224022	602150.	-9683.4504066
14.0000	1.4498801	643163.	-14024.

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 4

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 10000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.8773	3.102E-07	10000.0000	-0.008725	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.8354	54700.	10000.0000	-0.008710	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.7937	109379.	10000.0000	-0.008674	0.000	1.176E+10	0.000	0.000	0.000
1.200	0.7521	164023.	10000.0000	-0.008618	0.000	1.189E+10	0.000	0.000	0.000
1.600	0.7109	218617.	10000.0000	-0.008541	0.000	1.195E+10	0.000	0.000	0.000
2.000	0.6701	273143.	10000.0000	-0.008443	0.000	1.199E+10	0.000	0.000	0.000
2.400	0.6299	327585.	9946.5082	-0.008323	0.000	1.201E+10	-22.2883	169.8486	0.000
2.800	0.5902	381413.	9775.3364	-0.008181	0.000	1.202E+10	-49.0333	398.7512	0.000
3.200	0.5513	433994.	9472.1762	-0.008018	0.000	1.202E+10	-77.2834	672.8344	0.000
3.600	0.5133	484661.	9037.5482	-0.007835	0.000	1.203E+10	-103.8116	970.8282	0.000
4.000	0.4761	532789.	8487.5906	-0.007632	0.000	1.202E+10	-125.3374	1263.5722	0.000
4.400	0.4400	577865.	7844.3214	-0.007410	0.000	1.202E+10	-142.6914	1556.6187	0.000
4.800	0.4050	619476.	7128.9956	-0.007171	0.000	1.202E+10	-155.3610	1841.3597	0.000
5.200	0.3712	657317.	6358.5827	-0.006916	0.000	1.201E+10	-165.6444	2142.1614	0.000
5.600	0.3386	691141.	5544.2682	-0.006646	0.000	1.200E+10	-173.6533	2461.7206	0.000
6.000	0.3074	720751.	4687.1488	-0.006363	0.000	1.196E+10	-183.4798	2865.3748	0.000
6.400	0.2775	745912.	3796.8031	-0.006068	0.000	1.186E+10	-187.4976	3243.0808	0.000
6.800	0.2491	766520.	2889.1853	-0.005760	0.000	1.172E+10	-190.6765	3674.0747	0.000
7.200	0.2222	782495.	1947.2920	-0.005441	0.000	1.161E+10	-201.7790	4358.5662	0.000
7.600	0.1969	793572.	959.3980	-0.005114	0.000	1.152E+10	-209.8435	5116.2079	0.000
8.000	0.1731	799560.	-64.3878	-0.004782	0.000	1.149E+10	-216.7340	6009.2608	0.000
8.400	0.1510	800299.	-1122.4832	-0.004447	0.000	1.148E+10	-224.1391	7126.3825	0.000
8.800	0.1304	795616.	-2209.9781	-0.004114	0.000	1.151E+10	-228.9838	8427.2151	0.000
9.200	0.1115	785402.	-3245.7878	-0.003786	0.000	1.158E+10	-202.6036	8724.0089	0.000
9.600	0.0941	770271.	-4209.6858	-0.003465	0.000	1.170E+10	-199.0206	10154.	0.000
10.000	0.0782	750311.	-5123.1693	-0.003155	0.000	1.183E+10	-181.5976	11145.	0.000
10.400	0.0638	725934.	-5930.0104	-0.002857	0.000	1.195E+10	-154.5862	11630.	0.000
10.800	0.0508	697771.	-6608.6810	-0.002571	0.000	1.200E+10	-128.1932	12116.	0.000
11.200	0.0391	666440.	-7162.7909	-0.002299	0.000	1.201E+10	-102.6859	12601.	0.000
11.600	0.0287	632539.	-7597.1687	-0.002039	0.000	1.201E+10	-78.3048	13086.	0.000
12.000	0.0195	596639.	-7917.7050	-0.001793	0.000	1.202E+10	-55.2520	13571.	0.000
12.400	0.0115	559283.	-8131.1717	-0.001563	0.000	1.202E+10	-33.6925	14057.	0.000
12.800	0.004540	520980.	-8245.0461	-0.001347	0.000	1.202E+10	-13.7552	14542.	0.000
13.200	-0.001426	482200.	-8267.3417	-0.001147	0.000	1.203E+10	4.4653	15027.	0.000
13.600	-0.006469	443375.	-8206.4491	-0.000962	0.000	1.202E+10	20.9066	15513.	0.000
14.000	-0.0107	404896.	-8070.9865	-0.000793	0.000	1.202E+10	35.5361	15998.	0.000
14.400	-0.0141	367111.	-7869.6625	-0.000639	0.000	1.202E+10	48.3489	16483.	0.000
14.800	-0.0168	330328.	-7611.1511	-0.000499	0.000	1.201E+10	59.3642	16968.	0.000
15.200	-0.0189	294811.	-7303.9804	-0.000374	0.000	1.200E+10	68.6236	17454.	0.000
15.600	-0.0204	260785.	-6956.4339	-0.000263	0.000	1.198E+10	76.1874	17939.	0.000
16.000	-0.0214	228433.	-6576.4668	-0.000165	0.000	1.196E+10	82.1322	18424.	0.000
16.400	-0.0220	197904.	-6171.6342	-7.932E-05	0.000	1.193E+10	86.5480	18910.	0.000
16.800	-0.0222	169307.	-5749.0337	-5.363E-06	0.000	1.190E+10	89.5355	19395.	0.000
17.200	-0.0220	142721.	-5315.2599	5.769E-05	0.000	1.185E+10	91.2035	19880.	0.000
17.600	-0.0216	118192.	-4876.3719	0.000111	0.000	1.179E+10	91.6665	20365.	0.000
18.000	-0.0210	95738.	-4437.8709	0.000154	0.000	1.171E+10	91.0422	20851.	0.000
18.400	-0.0201	75352.	-4004.6898	0.000190	0.000	1.159E+10	89.4499	21336.	0.000
18.800	-0.0191	57002.	-3581.1910	0.000217	0.000	1.142E+10	87.0079	21821.	0.000
19.200	-0.0180	40639.	-3171.1743	0.000238	0.000	1.115E+10	83.8324	22307.	0.000
19.600	-0.0169	26193.	-2777.8910	0.000253	0.000	1.065E+10	80.0357	22792.	0.000
20.000	-0.0156	13583.	-2404.0657	0.000262	0.000	9.554E+09	75.7249	23277.	0.000
20.400	-0.0143	2712.2438	-2051.9231	0.000266	0.000	9.195E+09	71.0012	23763.	0.000
20.800	-0.0131	-6523.8351	-1723.1546	0.000265	0.000	9.195E+09	65.9857	24248.	0.000
21.200	-0.0118	-14237.	-1418.8794	0.000260	0.000	9.649E+09	60.7957	24733.	0.000
21.600	-0.0106	-20544.	-1139.7009	0.000251	0.000	1.030E+10	55.5287	25218.	0.000

22.000	-0.009386	-25564.	-885.8100	0.000241	0.000	1.062E+10	50.2592	25704.	0.000
22.400	-0.008257	-29418.	-657.0612	0.000228	0.000	1.080E+10	45.0528	26189.	0.000
22.800	-0.007192	-32223.	-453.0135	0.000215	0.000	1.091E+10	39.9670	26674.	0.000
23.200	-0.006195	-34097.	-272.9703	0.000200	0.000	1.097E+10	35.0509	27160.	0.000
23.600	-0.005269	-35151.	-116.0186	0.000185	0.000	1.100E+10	30.3456	27645.	0.000
24.000	-0.004417	-35495.	18.9335	0.000170	0.000	1.101E+10	25.8844	28130.	0.000
24.400	-0.003639	-35230.	133.1209	0.000154	0.000	1.101E+10	21.6937	28615.	0.000
24.800	-0.002935	-34454.	227.8884	0.000139	0.000	1.098E+10	17.7928	29101.	0.000
25.200	-0.002303	-33256.	304.6590	0.000124	0.000	1.094E+10	14.1950	29586.	0.000
25.600	-0.001741	-31720.	364.9068	0.000110	0.000	1.089E+10	10.9082	30071.	0.000
26.000	-0.001246	-29922.	410.1304	9.643E-05	0.000	1.082E+10	7.9350	30557.	0.000
26.400	-0.000815	-27931.	441.8312	8.355E-05	0.000	1.074E+10	5.2737	31042.	0.000
26.800	-0.000444	-25809.	461.4933	7.148E-05	0.000	1.064E+10	2.9189	31527.	0.000
27.200	-0.000129	-23611.	470.5673	6.027E-05	0.000	1.051E+10	0.8619	32012.	0.000
27.600	0.000134	-21384.	470.4559	4.993E-05	0.000	1.037E+10	-0.9084	32498.	0.000
28.000	0.000350	-19171.	462.5031	4.046E-05	0.000	1.019E+10	-2.4053	32983.	0.000
28.400	0.000523	-17006.	447.9853	3.186E-05	0.000	9.985E+09	-3.6438	33468.	0.000
28.800	0.000656	-14919.	428.1054	2.409E-05	0.000	9.741E+09	-4.6395	33954.	0.000
29.200	0.000754	-12933.	403.9890	1.714E-05	0.000	9.452E+09	-5.4090	34439.	0.000
29.600	0.000820	-11067.	376.6817	1.096E-05	0.000	9.195E+09	-5.9690	34924.	0.000
30.000	0.000859	-9334.0713	347.1452	5.638E-06	0.000	9.195E+09	-6.3379	35409.	0.000
30.400	0.000875	-7743.2456	316.2392	1.181E-06	0.000	9.195E+09	-6.5397	35895.	0.000
30.800	0.000870	-6299.9894	284.7100	-2.484E-06	0.000	9.195E+09	-6.5975	36380.	0.000
31.200	0.000851	-5006.2143	253.1960	-5.435E-06	0.000	9.195E+09	-6.5333	36865.	0.000
31.600	0.000818	-3860.9599	222.2339	-7.749E-06	0.000	9.195E+09	-6.3675	37351.	0.000
32.000	0.000776	-2860.8653	192.2665	-9.504E-06	0.000	9.195E+09	-6.1189	37836.	0.000
32.400	0.000727	-2000.6037	163.6501	-1.077E-05	0.000	9.195E+09	-5.8046	38321.	0.000
32.800	0.000673	-1273.2776	136.6636	-1.163E-05	0.000	9.195E+09	-5.4398	38807.	0.000
33.200	0.000615	-670.7737	111.5172	-1.213E-05	0.000	9.195E+09	-5.0379	39292.	0.000
33.600	0.000556	-184.0742	88.3611	-1.236E-05	0.000	9.195E+09	-4.6105	39777.	0.000
34.000	0.000497	196.4737	67.2945	-1.235E-05	0.000	9.195E+09	-4.1672	40262.	0.000
34.400	0.000438	480.9294	48.3743	-1.218E-05	0.000	9.195E+09	-3.7162	40748.	0.000
34.800	0.000380	679.5721	31.6232	-1.187E-05	0.000	9.195E+09	-3.2635	41233.	0.000
35.200	0.000324	802.7520	17.0376	-1.149E-05	0.000	9.195E+09	-2.8139	41718.	0.000
35.600	0.000270	860.7783	4.5947	-1.105E-05	0.000	9.195E+09	-2.3706	42204.	0.000
36.000	0.000218	863.8400	-5.7403	-1.060E-05	0.000	9.195E+09	-1.9356	42689.	0.000
36.400	0.000168	821.9589	-14.0087	-1.016E-05	0.000	9.195E+09	-1.5096	43174.	0.000
36.800	0.000120	744.9680	-20.2528	-9.755E-06	0.000	9.195E+09	-1.0922	43659.	0.000
37.200	7.419E-05	642.5153	-24.5114	-9.392E-06	0.000	9.195E+09	-0.6823	44145.	0.000
37.600	2.991E-05	524.0855	-26.8162	-9.088E-06	0.000	9.195E+09	-0.2781	44630.	0.000
38.000	-1.306E-05	399.0390	-27.1890	-8.847E-06	0.000	9.195E+09	0.1227	45115.	0.000
38.400	-5.503E-05	276.6606	-25.6398	-8.671E-06	0.000	9.195E+09	0.5227	45601.	0.000
38.800	-9.630E-05	166.2153	-22.1662	-8.555E-06	0.000	9.195E+09	0.9246	46086.	0.000
39.200	-0.000137	77.0056	-16.7535	-8.492E-06	0.000	9.195E+09	1.3307	46571.	0.000
39.600	-0.000178	18.4246	-9.3761	-8.467E-06	0.000	9.195E+09	1.7432	47056.	0.000
40.000	-0.000218	0.000	0.000	-8.462E-06	0.000	9.195E+09	2.1635	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 4:

Pile-head deflection	=	0.8772812 inches
Computed slope at pile head	=	-0.0087246 radians
Maximum bending moment	=	800299. inch-lbs
Maximum shear force	=	10000.0000000 lbs
Depth of maximum bending moment	=	100.8000000 inches below pile head
Depth of maximum shear force	=	0.000000 inches below pile head
Number of iterations	=	14
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 4

Boundary Condition Type 1, Shear and Moment

Shear = 10000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.8772812	800299.	10000.0000000
38.0000	0.8766666	799713.	10000.
36.0000	0.8731180	800277.	10000.
34.0000	0.8765595	800036.	10000.
32.0000	0.8755883	799968.	10000.
30.0000	0.8740958	799852.	10000.
28.0000	0.8764916	799720.	10000.
26.0000	0.8777500	799757.	10000.
24.0000	0.8775735	799774.	10000.
22.0000	0.8794831	799421.	10000.
20.0000	0.8898417	797812.	10000.
18.0000	0.9504133	792514.	-10477.
16.0000	1.1878420	795196.	-13278.

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 5

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 12000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	1.2488	-1.507E-06	12000.	-0.0123	0.000	9.195E+09	0.000	0.000	0.000
0.400	1.1899	67026.	12000.	-0.0123	0.000	9.195E+09	0.000	0.000	0.000
0.800	1.1311	134026.	12000.	-0.0122	0.000	1.183E+10	0.000	0.000	0.000
1.200	1.0726	200984.	12000.	-0.0121	0.000	1.194E+10	0.000	0.000	0.000
1.600	1.0145	267880.	12000.	-0.0121	0.000	1.198E+10	0.000	0.000	0.000
2.000	0.9569	334693.	12000.	-0.0119	0.000	1.201E+10	0.000	0.000	0.000
2.400	0.9000	401404.	11947.	-0.0118	0.000	1.202E+10	-22.2883	118.8714	0.000
2.800	0.8438	467478.	11775.	-0.0116	0.000	1.203E+10	-49.0334	278.9211	0.000
3.200	0.7885	532279.	11472.	-0.0114	0.000	1.202E+10	-77.2835	470.4359	0.000
3.600	0.7343	595136.	11035.	-0.0112	0.000	1.202E+10	-104.9773	686.2284	0.000
4.000	0.6812	655392.	10467.	-0.0109	0.000	1.201E+10	-131.5798	927.1971	0.000
4.400	0.6293	712415.	9776.9643	-0.0107	0.000	1.198E+10	-155.9402	1189.4068	0.000
4.800	0.5788	765626.	8977.6441	-0.0104	0.000	1.173E+10	-177.1098	1468.7047	0.000
5.200	0.5298	814516.	8076.1259	-0.0100	0.000	1.139E+10	-198.5228	1798.4745	0.000
5.600	0.4825	858569.	7094.8663	-0.009674	0.000	1.097E+10	-210.3354	2092.4321	0.000
6.000	0.4370	897486.	6052.7767	-0.009280	0.000	1.042E+10	-223.8686	2459.1282	0.000
6.400	0.3934	930929.	4961.1858	-0.008851	0.000	1.007E+10	-230.9609	2817.8694	0.000
6.800	0.3520	958709.	3839.6485	-0.008393	0.000	9.763E+09	-236.3463	3222.8818	0.000
7.200	0.3128	980682.	2675.6954	-0.007910	0.000	9.511E+09	-248.6341	3814.8048	0.000
7.600	0.2761	996546.	1460.5163	-0.007406	0.000	9.325E+09	-257.6905	4480.5416	0.000
8.000	0.2417	1006079.	204.7234	-0.006888	0.000	9.210E+09	-265.5565	5272.8094	0.000
8.400	0.2099	1009091.	-1089.9669	-0.006362	0.000	9.173E+09	-273.8978	6262.2582	0.000
8.800	0.1807	1005386.	-2417.3104	-0.005836	0.000	9.219E+09	-279.1621	7416.5665	0.000
9.200	0.1539	994848.	-3678.9288	-0.005319	0.000	9.346E+09	-246.5123	7687.5769	0.000
9.600	0.1296	978238.	-4850.9297	-0.004817	0.000	9.540E+09	-241.8215	8955.2702	0.000
10.000	0.1077	955678.	-5993.9589	-0.004337	0.000	9.797E+09	-234.4407	10451.	0.000
10.400	0.0880	927357.	-7068.2502	-0.003882	0.000	1.011E+10	-213.1806	11630.	0.000
10.800	0.0704	893786.	-8006.3761	-0.003457	0.000	1.046E+10	-177.7052	12116.	0.000
11.200	0.0548	855806.	-8778.0955	-0.003065	0.000	1.100E+10	-143.8446	12601.	0.000
11.600	0.0410	814225.	-9391.4375	-0.002707	0.000	1.140E+10	-111.7146	13086.	0.000
12.000	0.0288	769807.	-9855.0196	-0.002378	0.000	1.170E+10	-81.4446	13571.	0.000
12.400	0.0181	723269.	-10178.	-0.002075	0.000	1.196E+10	-53.1518	14057.	0.000
12.800	0.008888	675284.	-10370.	-0.001795	0.000	1.201E+10	-26.9265	14542.	0.000
13.200	0.000922	626471.	-10442.	-0.001534	0.000	1.201E+10	-2.8856	15027.	0.000
13.600	-0.005843	577400.	-10403.	-0.001294	0.000	1.202E+10	18.8836	15513.	0.000
14.000	-0.0115	528586.	-10266.	-0.001073	0.000	1.202E+10	38.3319	15998.	0.000
14.400	-0.0161	480494.	-10041.	-0.000872	0.000	1.203E+10	55.4463	16483.	0.000
14.800	-0.0199	433532.	-9739.3468	-0.000689	0.000	1.202E+10	70.2457	16968.	0.000
15.200	-0.0228	388055.	-9372.0911	-0.000525	0.000	1.202E+10	82.7775	17454.	0.000
15.600	-0.0249	344367.	-8949.9500	-0.000379	0.000	1.201E+10	93.1146	17939.	0.000
16.000	-0.0264	302718.	-8483.2325	-0.000250	0.000	1.200E+10	101.3510	18424.	0.000
16.400	-0.0273	263312.	-7981.7529	-0.000136	0.000	1.198E+10	107.5988	18910.	0.000
16.800	-0.0277	226303.	-7454.7532	-3.833E-05	0.000	1.196E+10	111.9844	19395.	0.000
17.200	-0.0277	191805.	-6910.8413	4.569E-05	0.000	1.193E+10	114.6455	19880.	0.000
17.600	-0.0273	159889.	-6357.9456	0.000117	0.000	1.188E+10	115.7277	20365.	0.000
18.000	-0.0266	130589.	-5803.2838	0.000175	0.000	1.183E+10	115.3814	20851.	0.000
18.400	-0.0256	103908.	-5253.3449	0.000223	0.000	1.174E+10	113.7598	21336.	0.000
18.800	-0.0244	79815.	-4713.8845	0.000261	0.000	1.162E+10	111.0154	21821.	0.000
19.200	-0.0231	58254.	-4189.9310	0.000290	0.000	1.144E+10	107.2986	22307.	0.000
19.600	-0.0216	39147.	-3685.8015	0.000310	0.000	1.111E+10	102.7554	22792.	0.000
20.000	-0.0201	22394.	-3205.1272	0.000324	0.000	1.044E+10	97.5256	23277.	0.000
20.400	-0.0185	7880.0052	-2750.8856	0.000331	0.000	9.195E+09	91.7418	23763.	0.000
20.800	-0.0169	-4523.1854	-2325.4119	0.000332	0.000	9.195E+09	85.5389	24248.	0.000
21.200	-0.0153	-14954.	-1930.3477	0.000327	0.000	9.746E+09	79.0712	24733.	0.000
21.600	-0.0138	-23557.	-1566.6533	0.000318	0.000	1.051E+10	72.4682	25218.	0.000

22.000	-0.0123	-30482.	-1234.7426	0.000306	0.000	1.084E+10	65.8279	25704.	0.000
22.400	-0.0109	-35880.	-934.5854	0.000291	0.000	1.102E+10	59.2376	26189.	0.000
22.800	-0.009497	-39901.	-665.7583	0.000275	0.000	1.113E+10	52.7737	26674.	0.000
23.200	-0.008218	-42694.	-427.4965	0.000257	0.000	1.119E+10	46.5021	27160.	0.000
23.600	-0.007028	-44400.	-218.7439	0.000238	0.000	1.123E+10	40.4782	27645.	0.000
24.000	-0.005929	-45160.	-38.2019	0.000219	0.000	1.124E+10	34.7477	28130.	0.000
24.400	-0.004923	-45104.	115.6248	0.000200	0.000	1.124E+10	29.3468	28615.	0.000
24.800	-0.004009	-44357.	244.3839	0.000181	0.000	1.123E+10	24.3029	29101.	0.000
25.200	-0.003186	-43036.	349.8356	0.000162	0.000	1.120E+10	19.6353	29586.	0.000
25.600	-0.002451	-41248.	433.8151	0.000144	0.000	1.116E+10	15.3561	30071.	0.000
26.000	-0.001802	-39093.	498.1986	0.000127	0.000	1.111E+10	11.4704	30557.	0.000
26.400	-0.001234	-36660.	544.8742	0.000110	0.000	1.105E+10	7.9777	31042.	0.000
26.800	-0.000742	-34031.	575.7145	9.501E-05	0.000	1.097E+10	4.8724	31527.	0.000
27.200	-0.000322	-31279.	592.5547	8.066E-05	0.000	1.087E+10	2.1444	32012.	0.000
27.600	3.249E-05	-28467.	597.1733	6.740E-05	0.000	1.076E+10	-0.2199	32498.	0.000
28.000	0.000326	-25650.	591.2766	5.526E-05	0.000	1.063E+10	-2.2371	32983.	0.000
28.400	0.000563	-22875.	576.4860	4.423E-05	0.000	1.047E+10	-3.9257	33468.	0.000
28.800	0.000750	-20183.	554.3298	3.427E-05	0.000	1.028E+10	-5.3061	33954.	0.000
29.200	0.000892	-17606.	526.2359	2.535E-05	0.000	1.005E+10	-6.3997	34439.	0.000
29.600	0.000993	-15171.	493.5292	1.741E-05	0.000	9.774E+09	-7.2281	34924.	0.000
30.000	0.001059	-12895.	457.4298	1.041E-05	0.000	9.446E+09	-7.8133	35409.	0.000
30.400	0.001093	-10795.	419.0542	4.319E-06	0.000	9.195E+09	-8.1765	35895.	0.000
30.800	0.001101	-8879.0681	379.4105	-8.162E-07	0.000	9.195E+09	-8.3417	36380.	0.000
31.200	0.001086	-7151.5873	339.3806	-5.000E-06	0.000	9.195E+09	-8.3374	36865.	0.000
31.600	0.001053	-5613.3342	299.7130	-8.332E-06	0.000	9.195E+09	-8.1907	37351.	0.000
32.000	0.001006	-4261.5447	261.0318	-1.091E-05	0.000	9.195E+09	-7.9265	37836.	0.000
32.400	0.000948	-3090.6724	223.8464	-1.283E-05	0.000	9.195E+09	-7.5675	38321.	0.000
32.800	0.000882	-2092.9153	188.5625	-1.418E-05	0.000	9.195E+09	-7.1342	38807.	0.000
33.200	0.000812	-1258.6902	155.4932	-1.506E-05	0.000	9.195E+09	-6.6447	39292.	0.000
33.600	0.000738	-577.0551	124.8702	-1.553E-05	0.000	9.195E+09	-6.1149	39777.	0.000
34.000	0.000663	-36.0747	96.8556	-1.569E-05	0.000	9.195E+09	-5.5579	40262.	0.000
34.400	0.000587	376.8657	71.5526	-1.561E-05	0.000	9.195E+09	-4.9850	40748.	0.000
34.800	0.000513	674.8007	49.0167	-1.533E-05	0.000	9.195E+09	-4.4049	41233.	0.000
35.200	0.000440	870.9753	29.2660	-1.493E-05	0.000	9.195E+09	-3.8245	41718.	0.000
35.600	0.000369	978.6837	12.2905	-1.445E-05	0.000	9.195E+09	-3.2486	42204.	0.000
36.000	0.000301	1011.1520	-1.9386	-1.393E-05	0.000	9.195E+09	-2.6802	42689.	0.000
36.400	0.000236	981.4630	-13.4611	-1.341E-05	0.000	9.195E+09	-2.1208	43174.	0.000
36.800	0.000173	902.5168	-22.3204	-1.291E-05	0.000	9.195E+09	-1.5706	43659.	0.000
37.200	0.000112	787.0230	-28.5578	-1.247E-05	0.000	9.195E+09	-1.0283	44145.	0.000
37.600	5.293E-05	647.5211	-32.2068	-1.210E-05	0.000	9.195E+09	-0.4921	44630.	0.000
38.000	-4.335E-06	496.4212	-33.2901	-1.180E-05	0.000	9.195E+09	0.0407	45115.	0.000
38.400	-6.035E-05	346.0611	-31.8162	-1.158E-05	0.000	9.195E+09	0.5734	45601.	0.000
38.800	-0.000116	208.7726	-27.7786	-1.144E-05	0.000	9.195E+09	1.1090	46086.	0.000
39.200	-0.000170	96.9518	-21.1553	-1.136E-05	0.000	9.195E+09	1.6507	46571.	0.000
39.600	-0.000225	23.1242	-11.9110	-1.132E-05	0.000	9.195E+09	2.2011	47056.	0.000
40.000	-0.000279	0.000	0.000	-1.132E-05	0.000	9.195E+09	2.7619	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 5:

Pile-head deflection	=	1.2487698 inches
Computed slope at pile head	=	-0.0122741 radians
Maximum bending moment	=	1009091. inch-lbs
Maximum shear force	=	12000. lbs
Depth of maximum bending moment	=	100.8000000 inches below pile head
Depth of maximum shear force	=	4.8000000 inches below pile head
Number of iterations	=	24
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 5

Boundary Condition Type 1, Shear and Moment

Shear = 12000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	1.2487698	1009091.	12000.
38.0000	1.2476194	1008361.	12000.
36.0000	1.2419256	1008130.	12000.
34.0000	1.2475941	1008359.	12000.
32.0000	1.2459044	1008295.	12000.
30.0000	1.2432476	1008342.	12000.
28.0000	1.2475637	1008418.	12000.
26.0000	1.2492353	1008231.	12000.
24.0000	1.2488056	1008349.	12000.
22.0000	1.2518371	1008124.	12000.
20.0000	1.2669427	1006744.	12000.
18.0000	1.3651134	1006892.	-13593.
16.0000	1.8566114	1047937.	-18295.

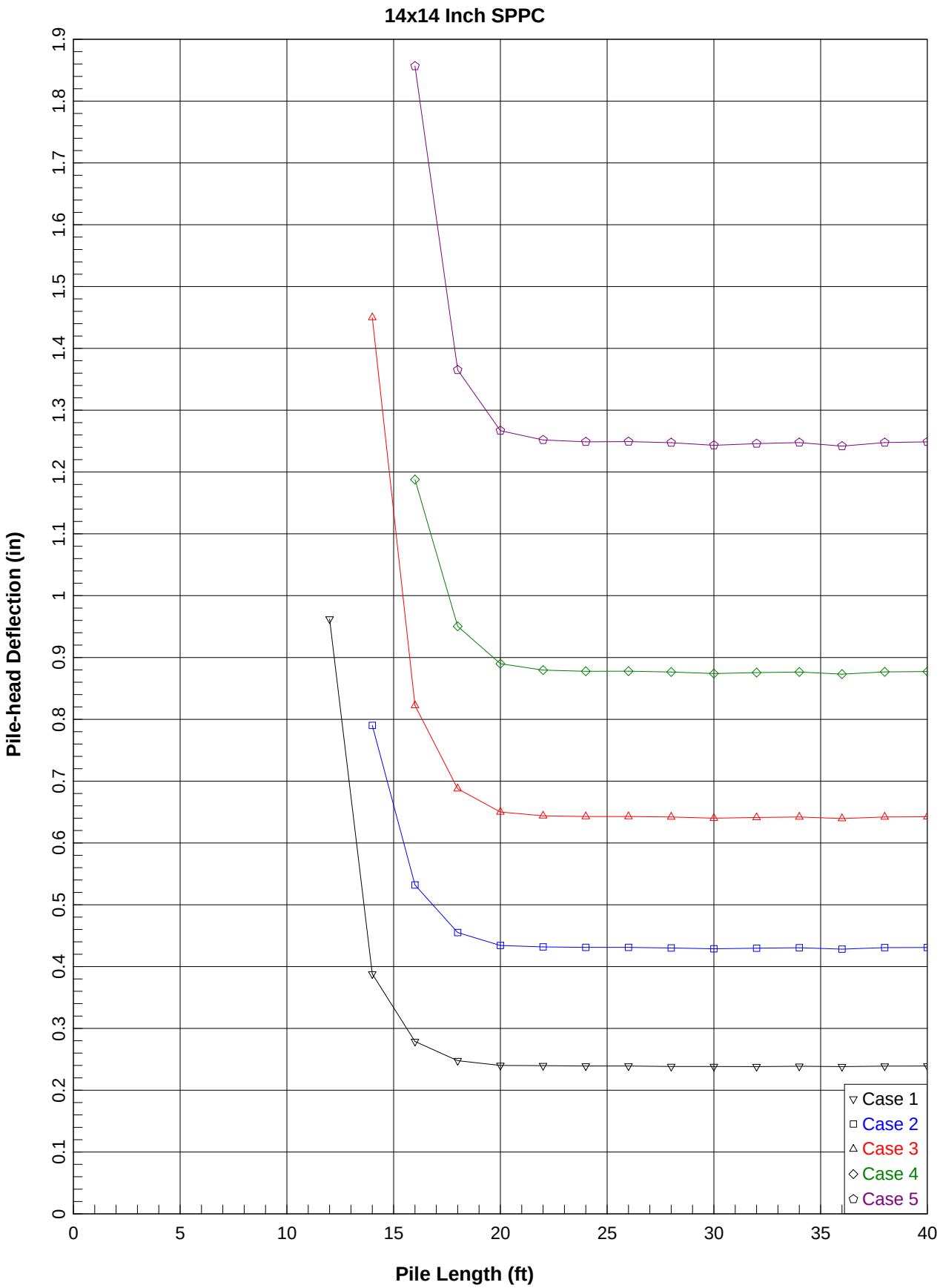
Summary of Pile Response(s)

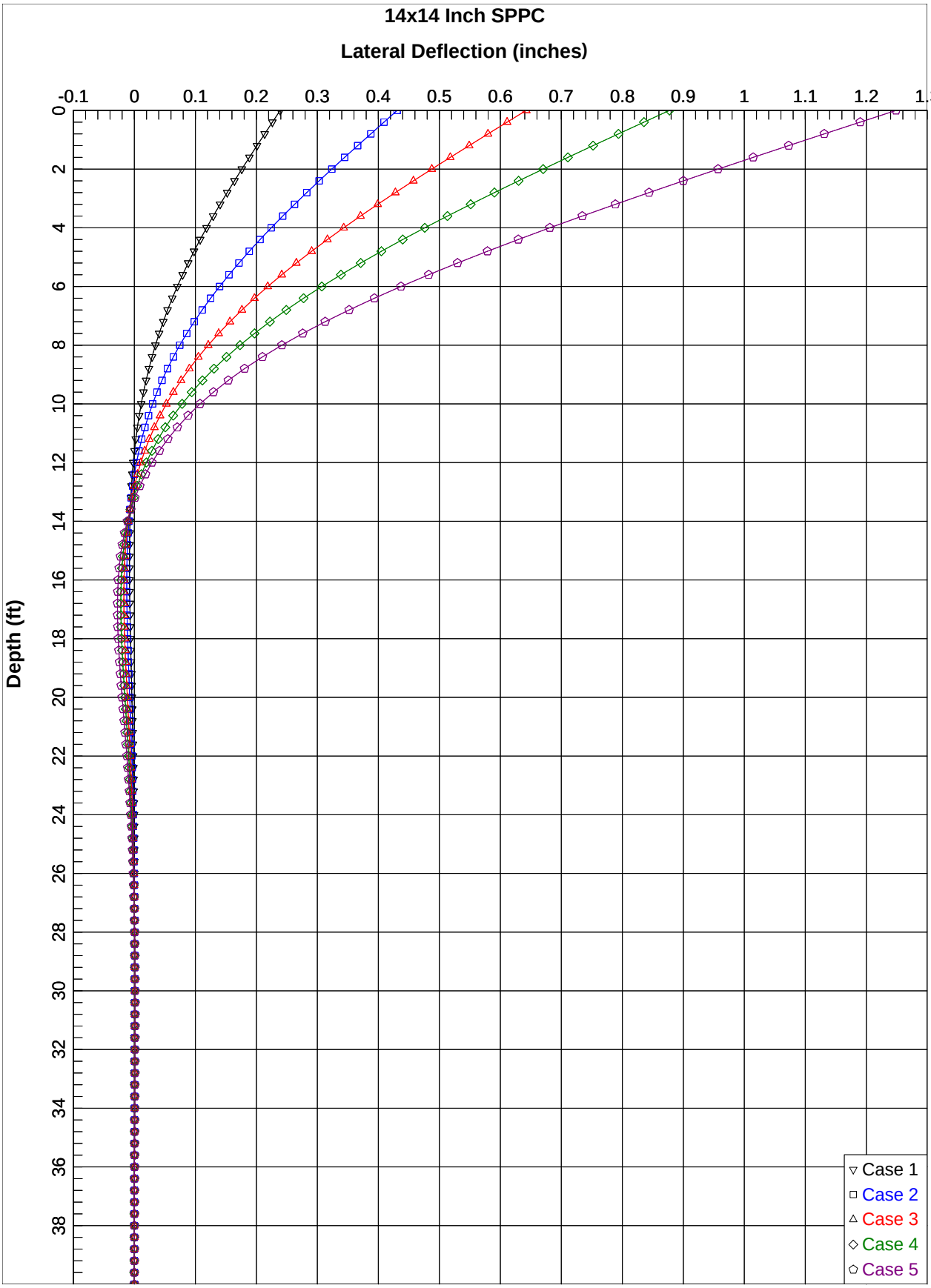
Definitions of Pile-head Loading Conditions:

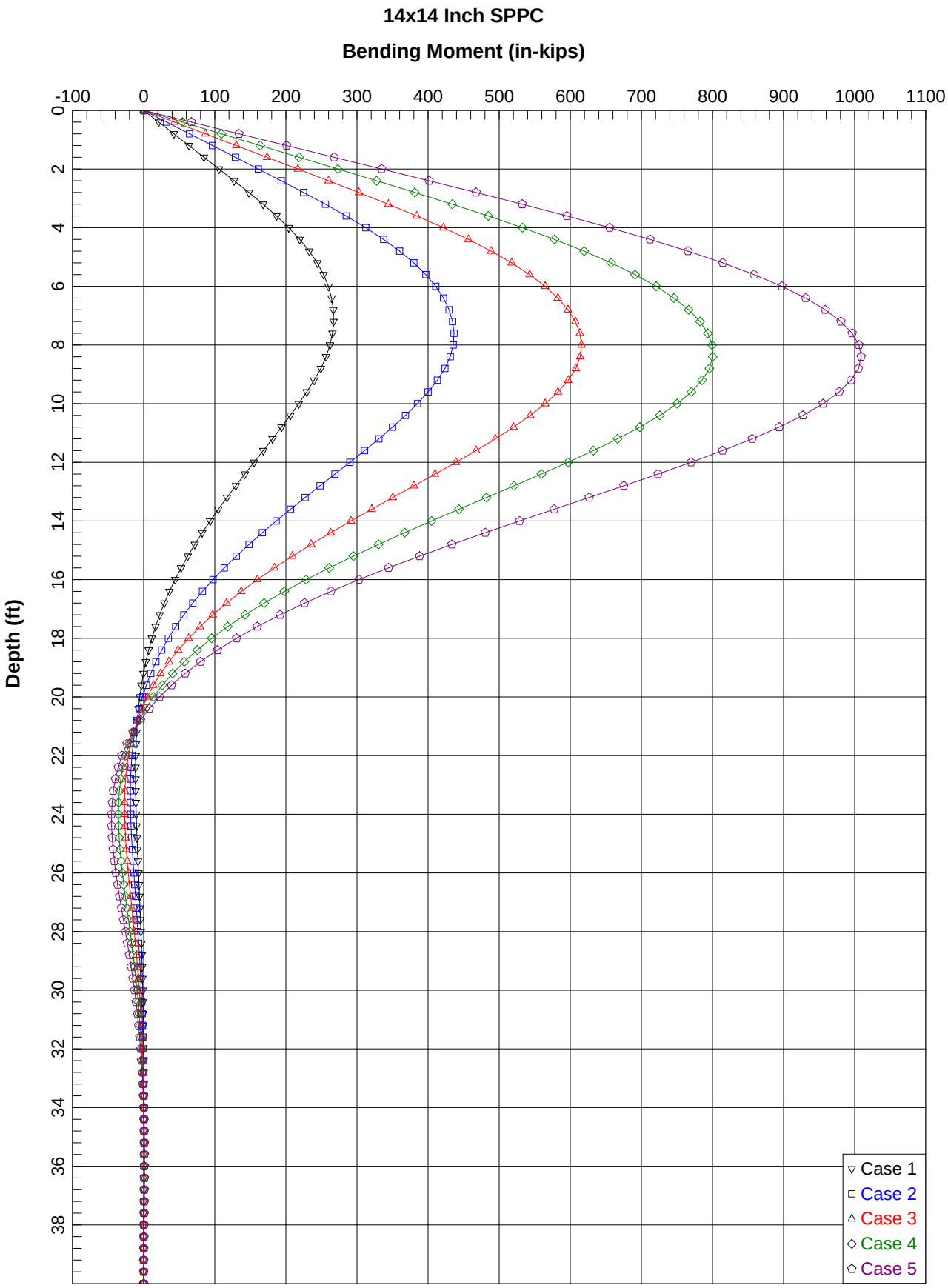
Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians

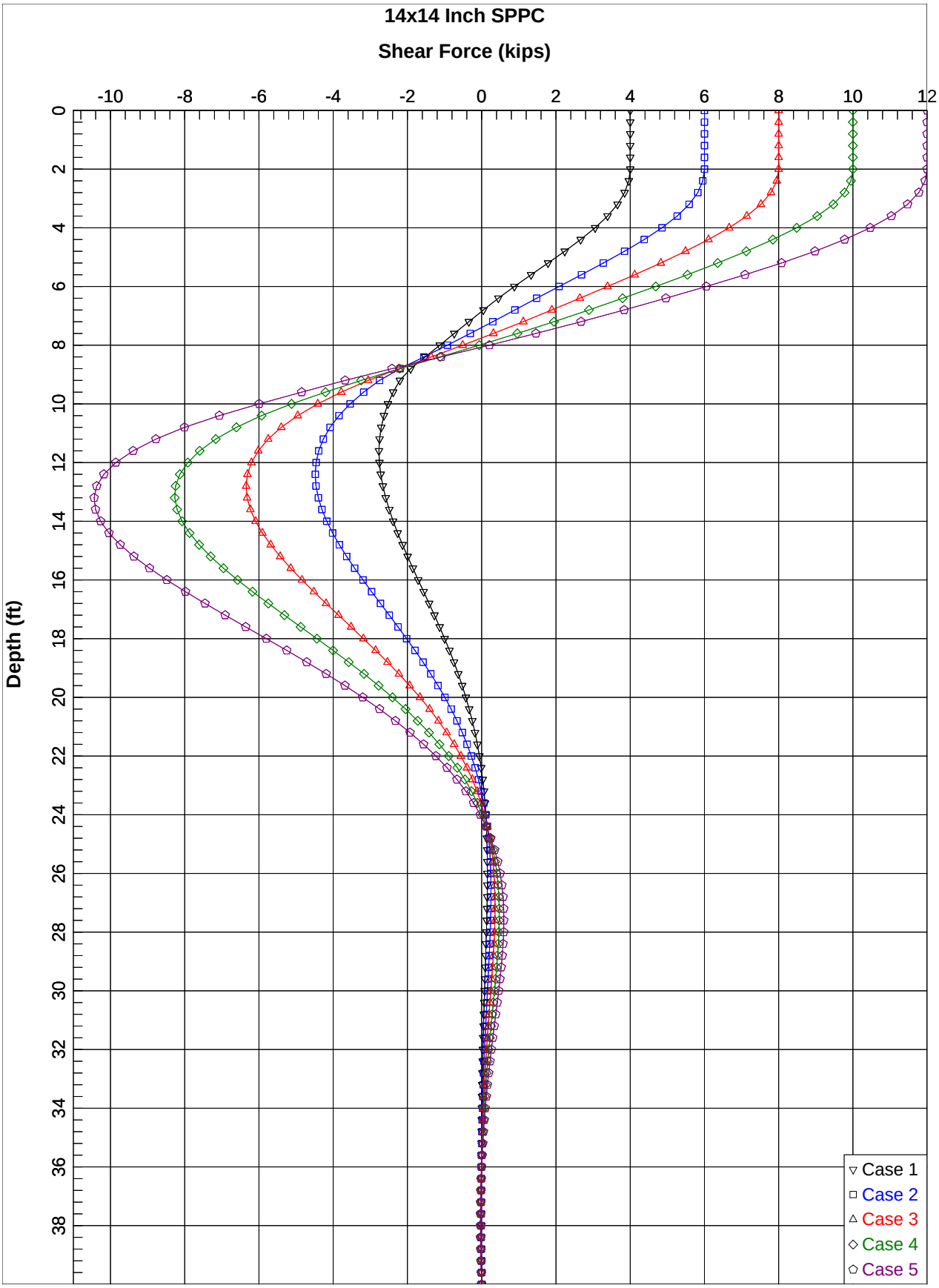
Load Case No.	Load Type No.	Pile-head Condition 1 V(lbs) or y(inches)	Pile-head Condition 2 in-lb, rad., or in-lb/rad.	Axial Loading lbs	Pile-head Deflection inches	Maximum Moment in Pile in-lbs	Maximum Shear in Pile lbs	Pile-head Rotation radians
1	1	V = 4000.0000	M = 0.000	160000.	0.23909946	267054.	4000.0000	-0.00265994
2	1	V = 6000.0000	M = 0.000	160000.	0.43091344	436484.	6000.0000	-0.00452255
3	1	V = 8000.0000	M = 0.000	160000.	0.64234158	615879.	8000.0000	-0.00652496
4	1	V = 10000.0000	M = 0.000	160000.	0.87728123	800299.	10000.0000	-0.00872459
5	1	V = 12000.	M = 0.000	160000.	1.24876984	1009091.	12000.	-0.01227407

The analysis ended normally.


14x14 Inch SPPC
Pile-head Deflection (in)
Pile Length (ft)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
0
5
10
15
20
25
30
35
40
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Lateral Deflection (inches)
Depth (ft)
-0.1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Bending Moment (in-kips)
-100
0
100
200
300
400
500
600
700
800
900
1000
1100
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Shear Force (kips)
-10
-8
-6
-4
-2
0
2
4
6
8
10
12
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5

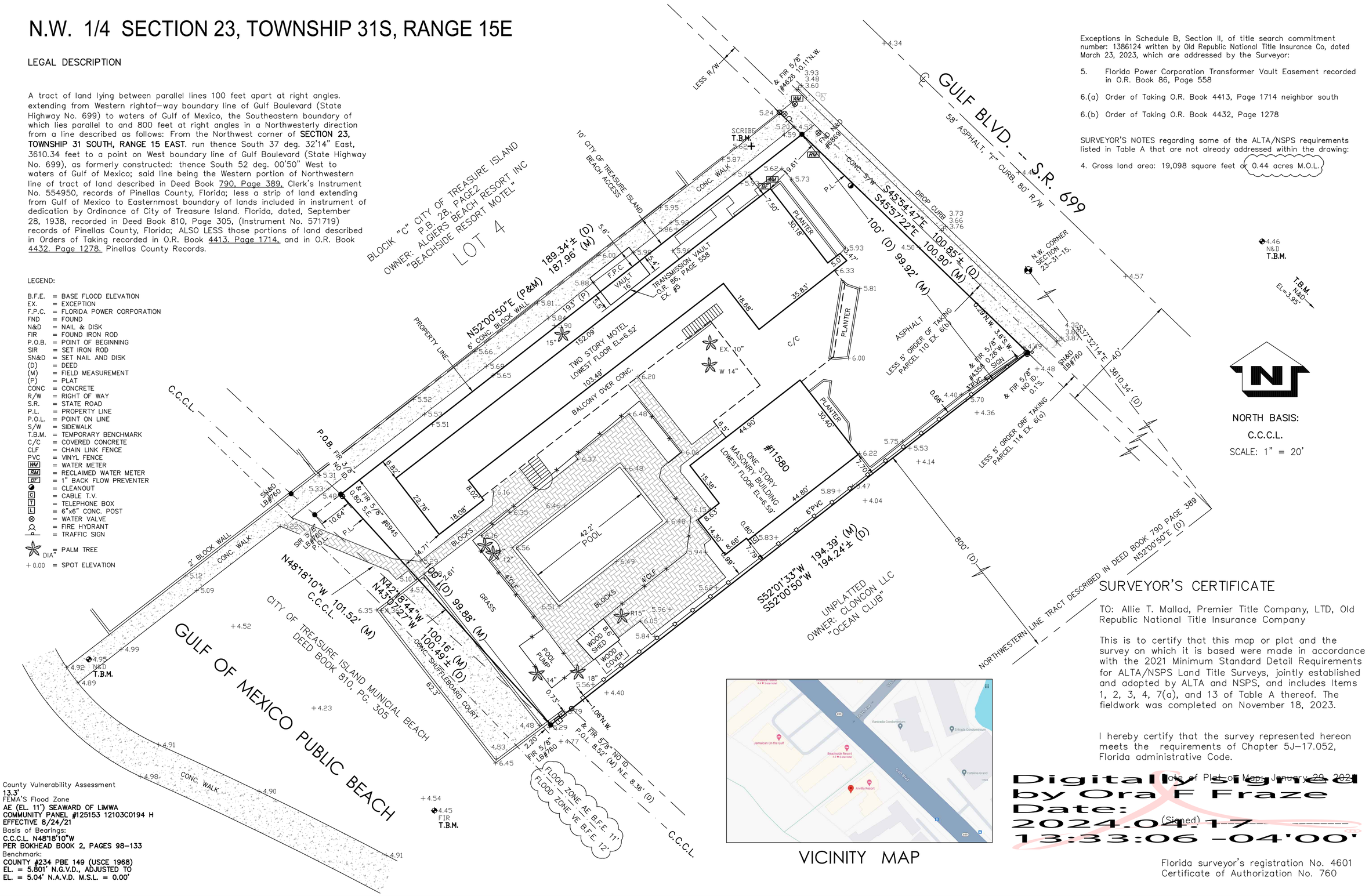
N.W. 1/4 SECTION 23, TOWNSHIP 31S, RANGE 15E

LEGAL DESCRIPTION

A tract of land lying between parallel lines 100 feet apart at right angles. extending from Western rightof–way boundary line of Gulf Boulevard (State Highway No. 699) to waters of Gulf of Mexico, the Southeastern boundary of which lies parallel to and 800 feet at right angles in a Northwesterly direction from a line described as follows: From the Northwest corner of **SECTION 23, TOWNSHIP 31 SOUTH, RANGE 15 EAST**. run thence South 37 deg. 32'14" East, 3610.34 feet to a point on West boundary line of Gulf Boulevard (State Highway No. 699), as formerly constructed: thence South 52 deg. 00'50" West to waters of Gulf of Mexico; said line being the Western portion of Northwestern line of tract of land described in Deed Book 790, Page 389, Clerk's Instrument No. 554950, records of Pinellas County, Florida; less a strip of land extending from Gulf of Mexico to Easternmost boundary of lands included in instrument of dedication by Ordinance of City of Treasure Island. Florida, dated, September 28, 1938, recorded in Deed Book 810, Page 305, (Instrument No. 571719) records of Pinellas County, Florida; ALSO LESS those portions of land described in Orders of Taking recorded in O.R. Book 4413, Page 1714, and in O.R. Book 4432, Page 1278, Pinellas County Records.

LEGEND:

B.F.E. = BASE FLOOD ELEVATION
EX. = EXCEPTION
F.P.C. = FLORIDA POWER CORPORATION
FND = FOUND
N&D = NAIL & DISK
FIR = FOUND IRON ROD
P.O.B. = POINT OF BEGINNING
SIR = SET IRON ROD
SN&D = SET NAIL AND DISK
(D) = DEED
(M) = FIELD MEASUREMENT
(P) = PLAT
CONC = CONCRETE
R/W = RIGHT OF WAY
S.R. = STATE ROAD
P.L. = PROPERTY LINE
P.O.L. = POINT ON LINE
S/W = SIDEWALK
T.B.M. = TEMPORARY BENCHMARK
C/C = COVERED CONCRETE
CLF = CHAIN LINK FENCE
PVC = VINYL FENCE
WM = WATER METER
RM = RECLAIMED WATER METER
BF = 1" BACK FLOW PREVENTER
= CLEANOUT
C = CABLE T.V.
T = TELEPHONE BOX
L = 6"x6" CONC. POST
= WATER VALVE
= FIRE HYDRANT
= TRAFFIC SIGN
= PALM TREE
DIA"
+0.00 = SPOT ELEVATION



NORTH BASIS:
C.C.C.L.
SCALE: 1" = 20'

Exceptions in Schedule B, Section II, of title search commitment number: 1386124 written by Old Republic National Title Insurance Co, dated March 23, 2023, which are addressed by the Surveyor:

5. Florida Power Corporation Transformer Vault Easement recorded in O.R. Book 86, Page 558

6.(a) Order of Taking O.R. Book 4413, Page 1714 neighbor south

6.(b) Order of Taking O.R. Book 4432, Page 1278

SURVEYOR'S NOTES regarding some of the ALTA/NSPS requirements listed in Table A that are not already addressed within the drawing:

4. Gross land area: 19,098 square feet or 0.44 acres M.O.L.

County Vulnerability Assessment
13.3'
FEMA'S Flood Zone
AE (EL. 11') SEAWARD OF LIMWA
COMMUNITY PANEL #125153 12103C0194 H
EFFECTIVE 8/24/21
Basis of Bearings:
C.C.C.L. N48°18'10"W
PER BOKHEAD BOOK 2, PAGES 98–133
Benchmark:
COUNTY #234 PBE 149 (USCE 1968)
EL. = 5.801' N.G.V.D., ADJUSTED TO
EL. = 5.04' N.A.V.D. M.S.L. = 0.00'

VICINITY MAP

SURVEYOR'S CERTIFICATE

TO: Allie T. Mallad, Premier Title Company, LTD, Old Republic National Title Insurance Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 7(a), and 13 of Table A thereof. The fieldwork was completed on November 18, 2023.

I hereby certify that the survey represented hereon meets the requirements of Chapter 5J–17.052, Florida administrative Code.

Date of Plat or Map: January 29, 2024

Digitally Signed by Ora F Fraze
Date: 2024.04.17 13:33:06 -04'00'

(Signed)

Florida surveyor's registration No. 4601
Certificate of Authorization No. 760

NOTE: This survey is made for the exclusive use of the current owners of the property and also those who purchase, mortgage or guarantee the title thereto within one (1) year from date hereof.

NOTE: Survey not valid without the signature and the original raised seal of a Florida Licensed Surveyor and Mapper.

JOHN C. BRENDLA AND ASSOCIATES, INC.
Professional Land Surveyors and Mappers
JCB
4015 82nd Avenue North
Pinellas Park, Florida 33781
Telephone (727) 576–7546
Facsimile (727) 577–9932
LB 760

"ARVILLA RESORT"
ALTA/NSPS
LAND TITLE SURVEY

1307–04E.CRD

REVISIONS

No.	DESCRIPTION	DATE
1.	ALTA	1/4/2024
2.	CITY COMMENTS	1/29/2024

FB: 982 PG: 54–55
FB: 964 PG: 22

Job Number: 2310–63
Survey date: 11/18/23

DWN: JM
CHK: JOB

Item Cover Page

PLANNING & ZONING BOARD AGENDA ITEM REPORT

DATE:	May 30, 2024
SUBMITTED BY:	Jesse Miller, Community Development
ITEM TYPE:	Public Hearings
AGENDA SECTION:	PRESENTATION OF ITEMS
SUBJECT:	SITE-000442-2024- 10126 Gulf Blvd- Site Plan approval request for a proposed 4 story over parking multi-family dwelling structure comprised of 4 dwelling units.
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.

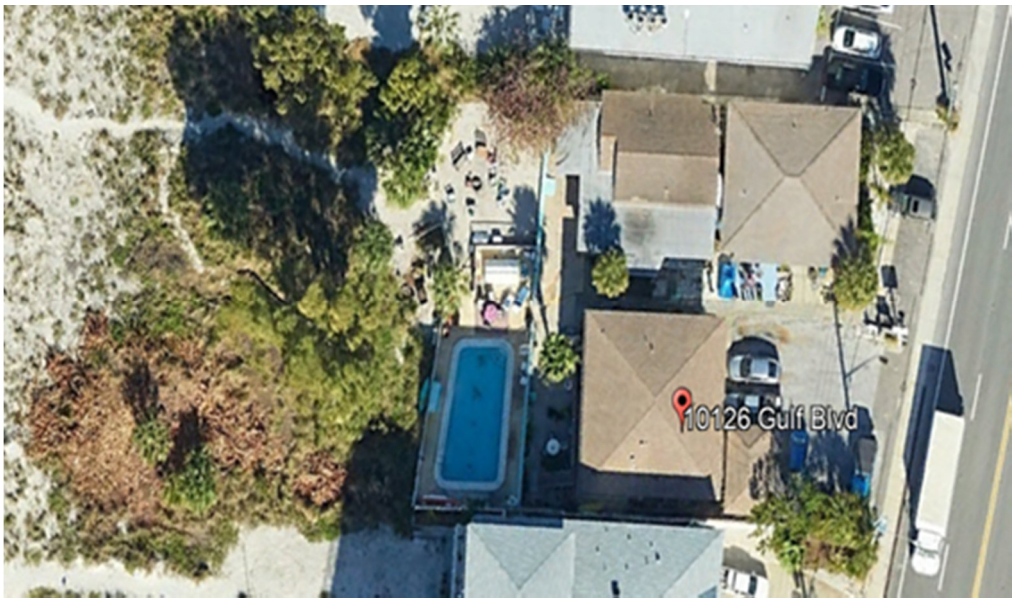
ATTACHMENTS:
1. Staff Report.docx
2. Application.pdf
3. Affidavit to Authorize Agent.pdf
4. Warranty Deed.pdf
5. SunBiz- The Treasure Island Pearl LLC.pdf
6. Architectural Plans.pdf
7. Civil Plans.pdf
8. Drainage Narrative.pdf
9. Survey.PDF

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. SITE-000442-2024
STAFF REPORT
THURSDAY, MAY 30, 2024, AT 10:00 A.M.

DESCRIPTION: Site plan approval request for a proposed 4 story over parking multi-family dwelling structure comprised of 4 dwelling units.

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 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.

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 base 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 (Per Acre)	Maximum Building Height (Above BFE +2 feet of freeboard)	Floor Area Ratio (%)
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 use and density is not in conflict with the goals, objectives and policies of the Comprehensive Plan.

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 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% P- 20%	RFH-50- 69.9% P- 0%
FAR	120	N/A
Building Height **Max. above DFE** **Height Encroachment** **From Grade**	 60’ 7’ above roof	 52’-8” from DFE 4’ above roof 55’-8” from grade
Height Encroachment	7’ above roof	4’ above roof
Setbacks **Front– Gulf Blvd.**	 25’	 25.2’

Rear **Side** **Alternate Setbacks** **Greater of above setbacks apply.**	5' 7.5' Open Space/Side: 30% of Lot Width 30% of Building Height above Grade All Sides	17.3' 17.1' 100.04 x .30 = 30.01' (divided among two sides) 55'-8" x .30 = 16.7' 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.
The proposed site plan 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 meets the purpose and intent of RFH-50 Zoning District and will not impact compatibility with the planning character of the RFH-50 Zoning District.

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.
The proposed site plan meets drive aisle widths, parking space width and length. Driveway and sidewalk connections within the right-of-way appear to adhere to all applicable FDOT standards.

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.
Proposed site plan is in conformance with landscaping requirements set forth in Chapter 72- Resources; Vegetation and Environmentally Sensitive Lands. Additionally, no development is proposed within the preservation area of the subject property.

d. Building arrangements, both between buildings in the proposed development and in relation to those on properties adjacent to the site.
The development consists of one structure that meets all setback requirements. There are no other proposed buildings on site.

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.
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.
The proposed site plan will require a permit or exemption from the Southwest Florida Water Management District and the Florida Department of Transportation.

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 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. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

4. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

[Remainder of this page left intentionally blank.]

MAY 30, 2024
PLANNING AND ZONING BOARD
DEVELOPMENT ORDER

CASE NO. SITE-000442-2024
LOCATION: 10126 GULF BLVD TREASURE ISLAND, FL 33706

The Planning and Zoning Board has made a motion to:

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

A site plan approval request for a proposed 4 story over parking multi-family structure comprised of 4 dwelling units.

CONDITIONS:

1. 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. Where necessary to accommodate the proposed development, the property owner shall be responsible for the removal/relocation of any and all public utilities located on the subject site. This is regardless of whether the public utilities are known at the time of site plan approval or discovered after such approval. Any removal or relocation will require the approval of the City's Public Works Department and/or Pinellas County Utilities Department.

3. 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).

4. The Planning and Zoning Board authorizes Staff to approve site plan modifications to ensure compliance with the City's proposed Terrain Modification Program (if adopted) provided that the general architectural and civil design maintains a fair and accurate representation of the approved site plan with the exception to grade.

_____ _____
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.

SITE PLAN APPLICATION

Required for Application Process

A pre-application meeting is required prior to the submission of any site plan application to the Community Development Department, for referral to the Planning & Zoning Board/City Commission.

A complete application packet must consist of, at a minimum, the following:
One copy (unless otherwise noted) & and a PDF of the following:

a. Application to Planning & Zoning Board or City Commission
b. Site Plan Application Fee
   Single-Family / Duplex - $500
   Multi-family / Commercial - $1,000*
   Any modification to a previously approved site plan – ½ fee above*
   *Engineering Review Fee - $140/hour, charged after review
c. Proof of ownership of the property: i.e. deed, title abstract, etc.
d. For LLC's, HOA's and other corporations - articles of organization, annual report, etc. showing designated member. A designated person must be the one to sign the application or affidavit to authorize agent.
e. Affidavit to authorize agent (if anyone other than the designated property owner is submitting the application).
f. Boundary survey of the property to scale on 24" x 36" sheet – must meet all criteria in Treasure Island Code of Ordinances - Sec. 70-52(3).
   1 signed and sealed, 9 copies, & PDF – All plans must be folded
g. Site plan drawings to scale on 24" x 36" sheets – must meet all criteria in Treasure Island Code of Ordinances - Sec. 70-52(6).
   1 signed and sealed, 9 copies, & PDF – All plans must be folded

Once your application is received, the Community Development Department will review the application for completeness within 30 days (per Fla. Stat.).

- If the application is complete → you will be notified of your scheduled Planning & Zoning Board/City Commission hearing date and time, and next steps in the process. This will include the applicant mailing a notice to all surrounding properties within a 200 ft. radius.
- If the application is incomplete → you will be notified which items must be provided or corrected prior to referral to the Planning & Zoning Board/City Commission.

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)

Alex Mill — Owner/Agent

4/18/24 — 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: 4/18/2024

STATE OF: Florida
COUNTY OF: Pinellas
The foregoing instrument was acknowledged before me this 18th day of April, 2024, by (company/agent) Treasure Island Pearl LLC. by (persons name) Alex Millman, it's (title) title manager 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

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): Treasure Island Pearl LLC, Alex Millman
SIGNATURE OF PROPERTY OWNER(S): Alex Mill
DATE: 2/29/24

STATE OF: Florida
COUNTY OF: Pinellas
The foregoing instrument was acknowledged before me this 29th day of February, 2024, by (company/agent) Treasure Island Pearl, LLC by (persons name) Alex Millman, it's (title) Title Member who is personally known to me, or who has produced _____ as identification and who _____ did X did not take an oath.

_____
(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

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

[Space Above This Line For Recording Data]

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.

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: Nadia McQuiggan

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: Y

Type of Identification Produced: NY DL

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:

MiKeyla Davis
WITNESS
PRINT NAME: MiKeyla Davis

Carol D. Mahon
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.

Carol D Mahon
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 Drivers License

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 18 U.S.C. SECTION 1044A
SEAL

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

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 368990
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 BIGNDX®

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Detail by Entity Name

Florida Limited Liability Company
THE TREASURE ISLAND PEARL LLC

Filing Information

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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
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ST PETERSBURG, FL 33703

Authorized Person(s) Detail

Name & Address

Title AMBR

MILLMAN, ALEX
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ST PETERSBURG, FL 33703

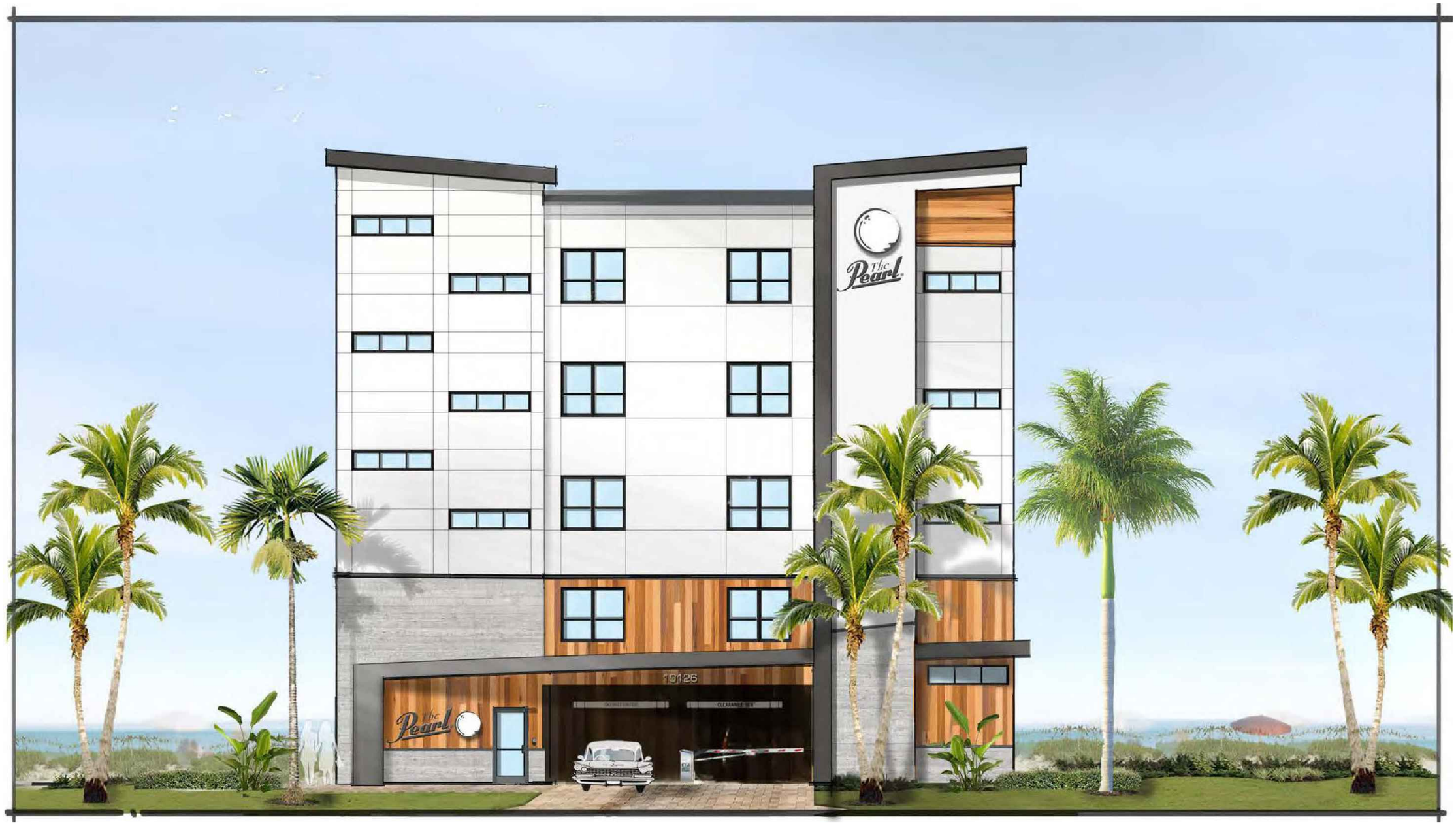
Annual Reports

Report Year	Filed Date
2024	01/31/2024

Document Images

01/31/2024 -- ANNUAL REPORT | View image in PDF format

09/21/2023 -- Florida Limited Liability | View image in PDF format



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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ALL DIMENSIONS AND JOB CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR, ANY AND ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

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Construction Documents for:

FDI# 23146.00

THE PEARL
10126 GULF BLVD.
TREASURE INSLAND, FLORIDA

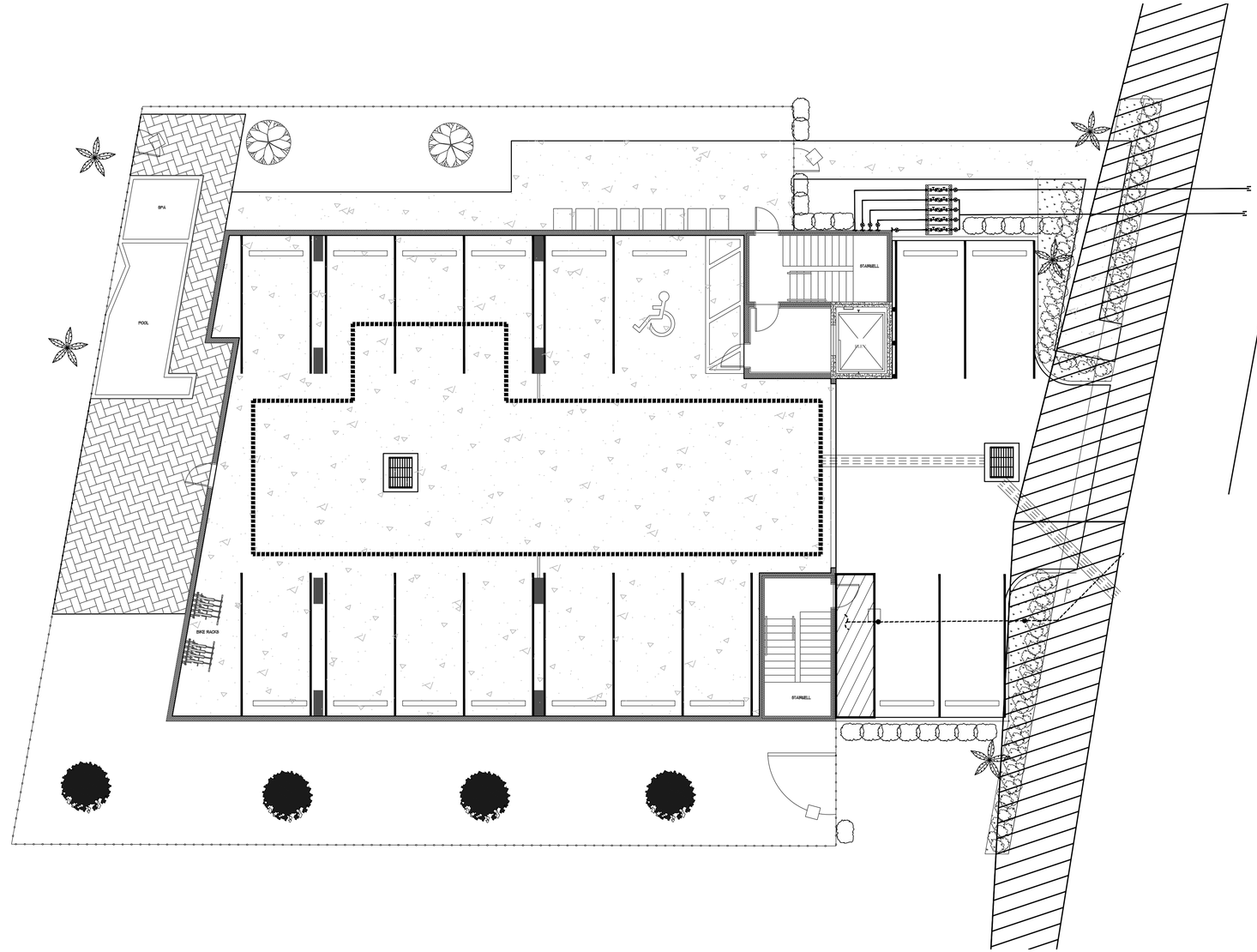
PROFESSIONAL SEAL

Digitally signed by Ora F Fraze
Date: 2024.04.17 13:33:06 -04'00'
ORA FRANKLIN FRAZE, IV
FL LIC. NO. AA26006585

FRAZE design
commercial residential architecture
ST. PETERSBURG, FLORIDA 33712
STUDIO: 727/328-3607
FAX: 727/328-3609
1750 CENTRAL AVENUE
PHONE: 727/328-3608
E-MAIL: fd@frazedesign.com

SHEET TITLE
COVER PAGE

SHEET NUMBER
A-1



ARCHITECTURAL SITE PLAN
SCALE: 1/8" = 1'-0"

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THE PEARL
10126 GULF BLVD.
TREASURE INSLAND, FLORIDA

PROFESSIONAL SEAL
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ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
EL. LIC. NO. AA26000585
1750 CENTRAL AVENUE
ST. PETERSBURG, FLORIDA 33712
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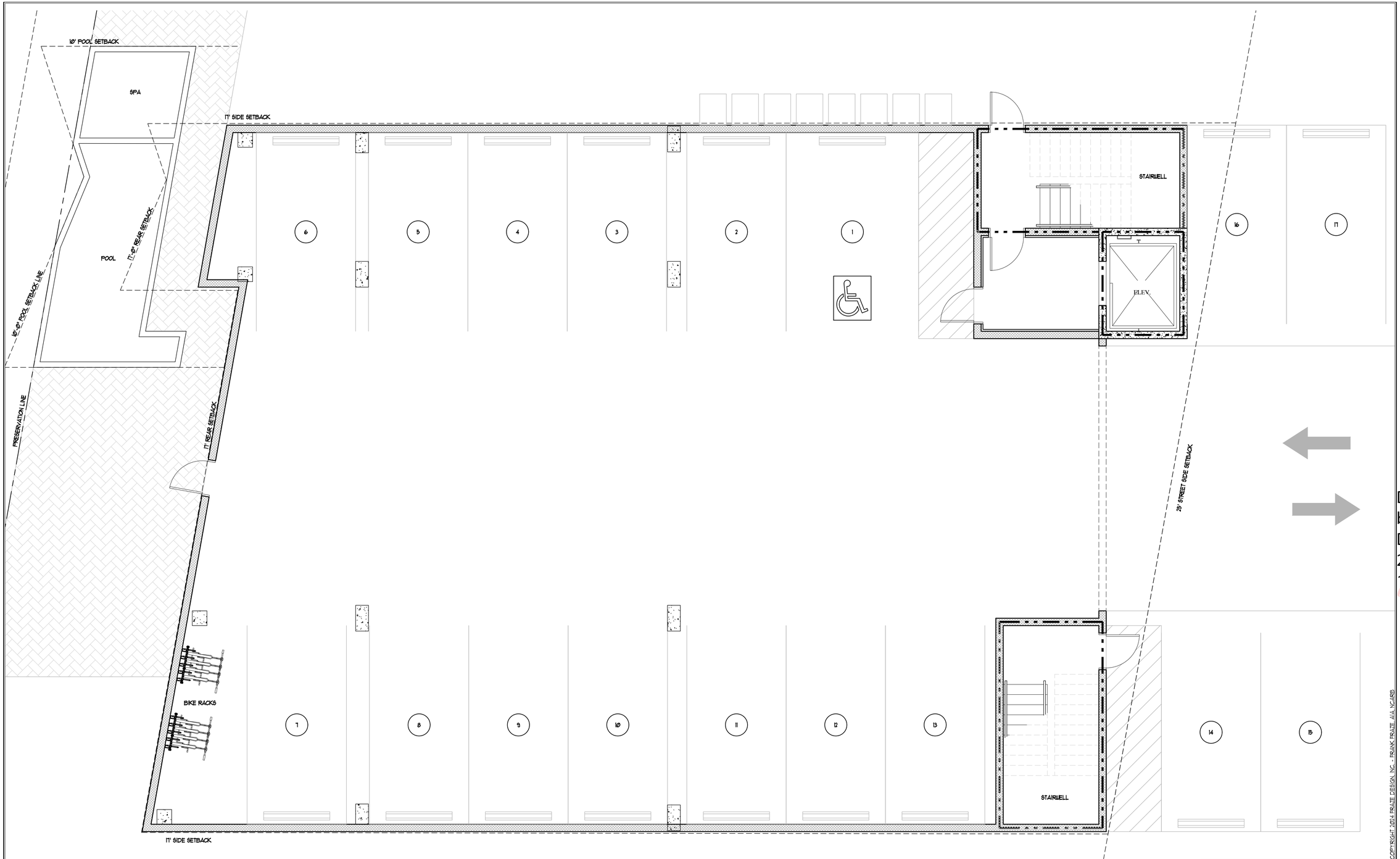
SHEET TITLE
ARCHITECTURAL
SITE PLAN

SHEET NUMBER
A-2



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

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THE PEARL
10126 GULF BLVD.
TREASURE INSLAND, FLORIDA

PROFESSIONAL SEAL

Digitally signed by Ora F Fraze
Date: 2024.04.17 13:35:54 -04'00'

ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
EL. LIC. NO. AA26000585
ST. PETERSBURG, FLORIDA 33712
STUDIO: 727/328-3607
FAX: 727/328-3609
E-MAIL: fdi@frazedesign.com
1750 CENTRAL AVENUE
PHONE: 727/328-3608

SHEET TITLE
GROUND LEVEL FLOOR PLAN

SHEET NUMBER
A-3



2ND-5TH LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

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Construction Documents for:

FDI# 23146.00

THE PEARL
10126 GULF BLVD.
TREASURE INSLAND, FLORIDA

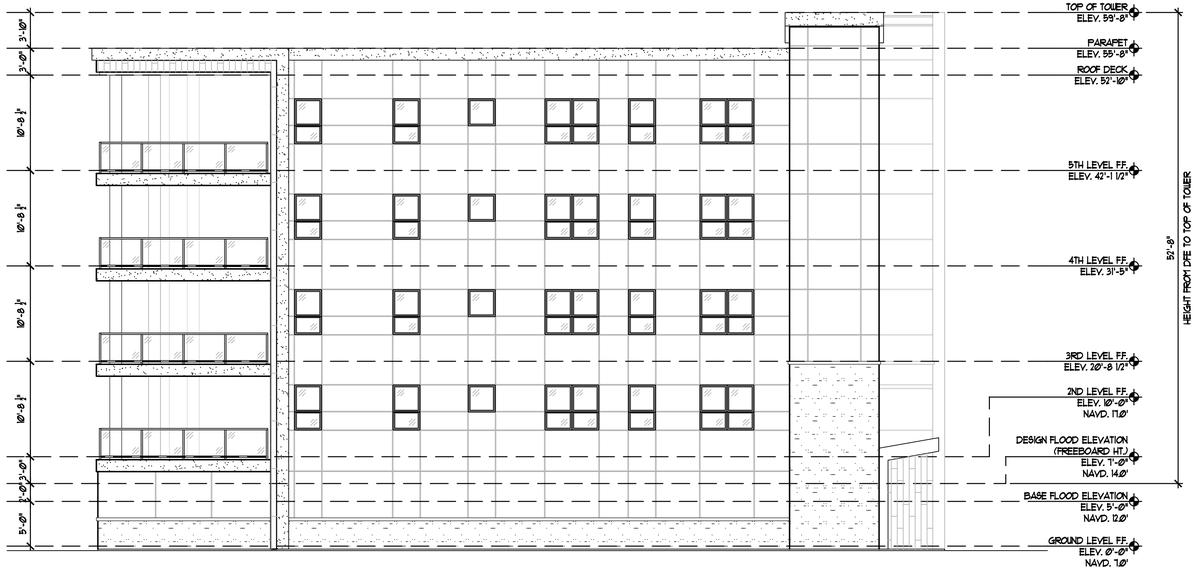
PROFESSIONAL SEAL

Digitally signed by Ora F Fraze
Date: 2024.04.17 13:35:54 -04'00'
ORA FRANKLIN FRAZE, IV

FRAZE design
commercial residential architecture
FL LIC. NO. AA26000585
1750 CENTRAL AVENUE ST. PETERSBURG, FLORIDA 33712
PHONE: 727/328-3608 FAX: 727/328-3609
E-MAIL: fd@frazedesign.com STUDIO: 727/328-3607

SHEET TITLE
2ND-5TH LEVEL FLOOR PLAN

SHEET NUMBER
A-4



2 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"

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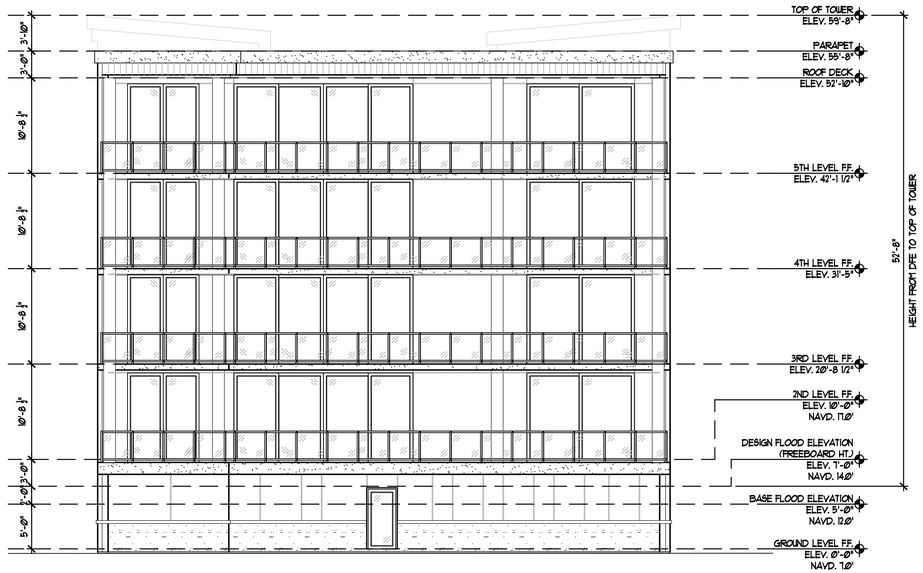
SHEET TITLE
FRONT AND SOUTH ELEVATIONS

SHEET NUMBER
A-5



2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



1 REAR ELEVATION
SCALE: 1/8" = 1'-0"

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THE PEARL
10126 GULF BLVD.
TREASURE INSLAND, FLORIDA

PROFESSIONAL SEAL

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Date: 2024.04.17 13:35:54 -04'00'

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FRAZE design
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SHEET TITLE
REAR AND NORTH ELEVATIONS

SHEET NUMBER
A-6

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
C-2	EXISTING & DEMOLITION PLAN
C-3	HORIZONTAL CONTROL PLAN
C-4	PAVING GRADING & DRAINAGE PLAN
C-5	UTILITY PLAN
C-6	LANDSCAPING PLAN
C-7	MISCELLANEOUS DETAILS
C-8	STANDARD DETAILS

SECTION 26, TOWNSHIP 31S, RANGE 16E

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.05.06 16:06:37-04'00'

05/06/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE :	DRAWN BY:
03/01/2024	TL
CHECKED BY:	JOB NO.:
DE	B34-24-TI047C

REVISIONS:
1 04/18/2024 - P&Z COMMENTS
2 05/06/2024 - P&Z COMMENTS

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.)

1

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

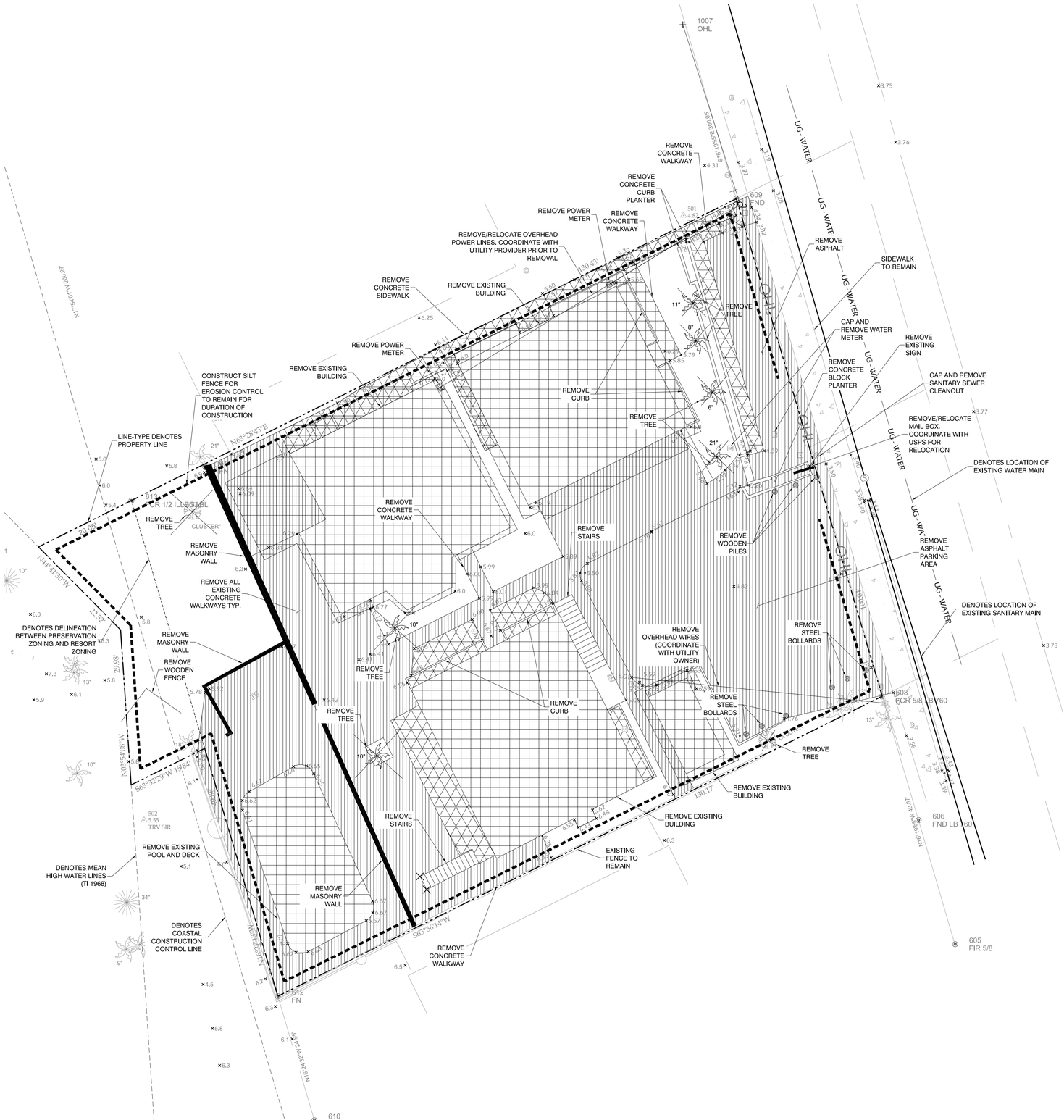
1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE ENGINEER AND LOCAL AUTHORITIES. PRESSURE TESTS SHALL BE IN ACCORDANCE WITH LOCAL WATER DEPARTMENT & FDEP SPECIFICATIONS. CONTRACTOR SHALL 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 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 WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXIST





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.

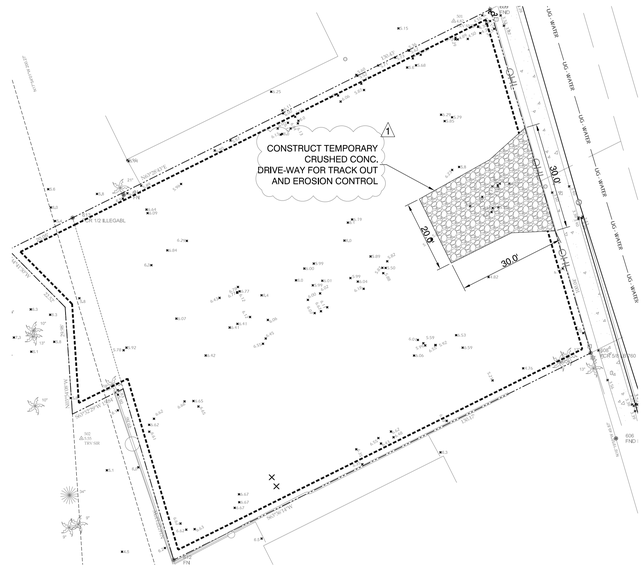
2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO ALL UTILITY COMPANIES BEFORE PERFORMING ANY EXCAVATION. THE CONTRACTOR SHALL HAVE UTILITY LOCATIONS MARKED BY CALLING "SUNSHINE" PRIOR TO THE START OF ANY EXCAVATION. CONTRACTOR 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



Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.05.06 16:06:52-04'00'

05/06/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE :	DRAWN BY:
03/01/2024	TL
CHECKED BY:	JOB NO.:
DE	B34-24-TI047C

REVISIONS:
1. 04/18/2024 - P&Z COMMENTS
2. 05/06/2024 - P&Z COMMENTS

THE PEARL

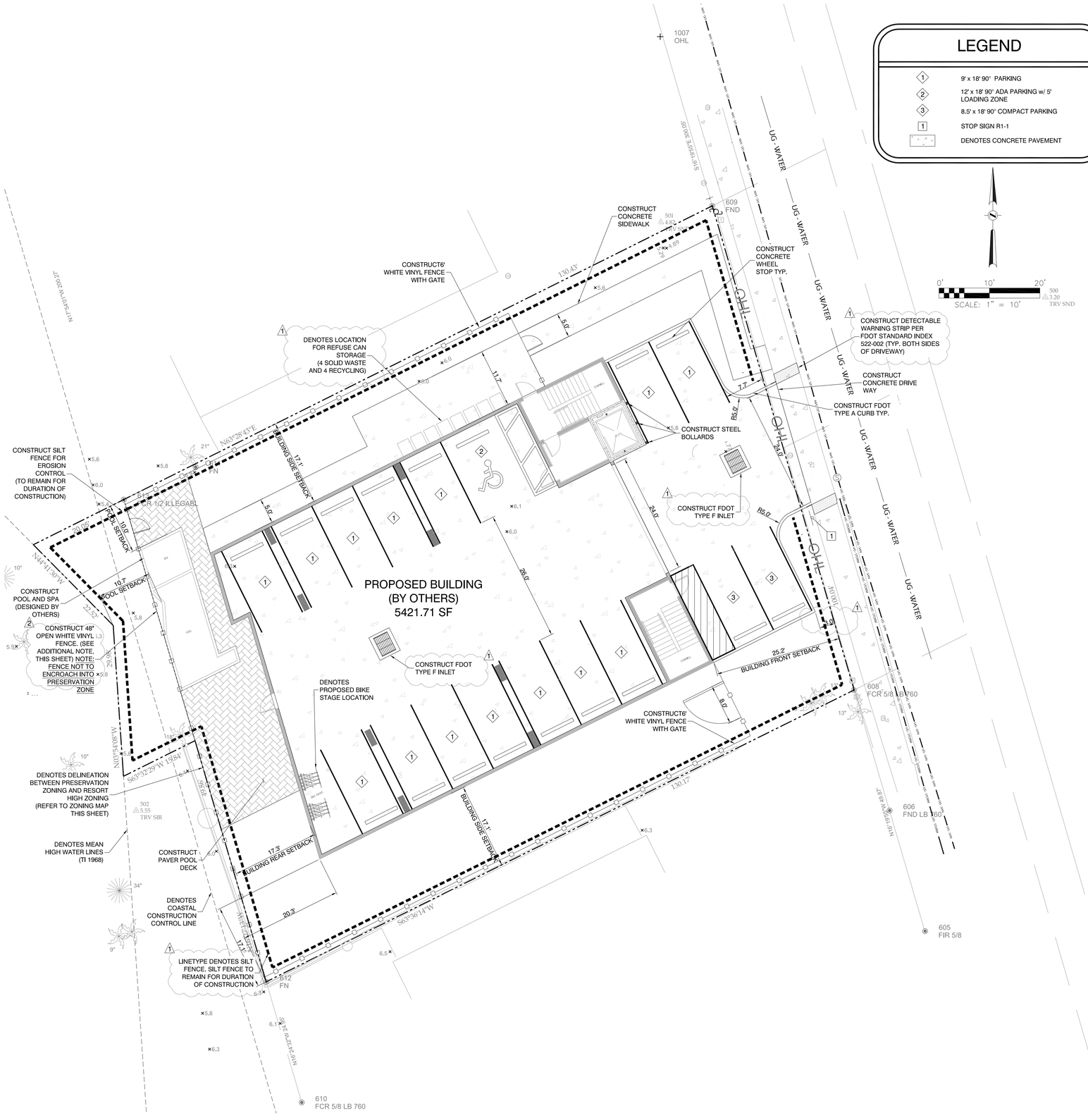
EXISTING & DEMOLITION PLAN

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. 28819

PRELIMINARY
PERMITTING
ISSUED FOR CONSTRUCTION [X]
RECORD DRAWING

C-2



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

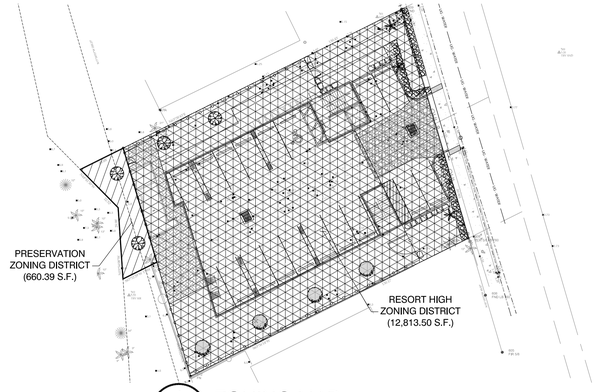
RESORT HIGH DISTRICT
IMPERVIOUS SURFACE RATIO (RH DISTRICT AREA / IMPERIOUS AREA WITHIN RH DISTRICT)
0.700 MAX
0.699 PROPOSED (8,958.16 S.F. / 12,813.50 S.F.)

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

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.05.06 16:06:58-04'00'

05/06/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE :	DRAWN BY:
03/01/2024	TL
CHECKED BY:	JOB NO.:
DE	B34-24-TI047C

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THE PEARL

HORIZONTAL CONTROL PLAN

10126 GULF BLVD.
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33706

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CERTIFICATE NO. 28819

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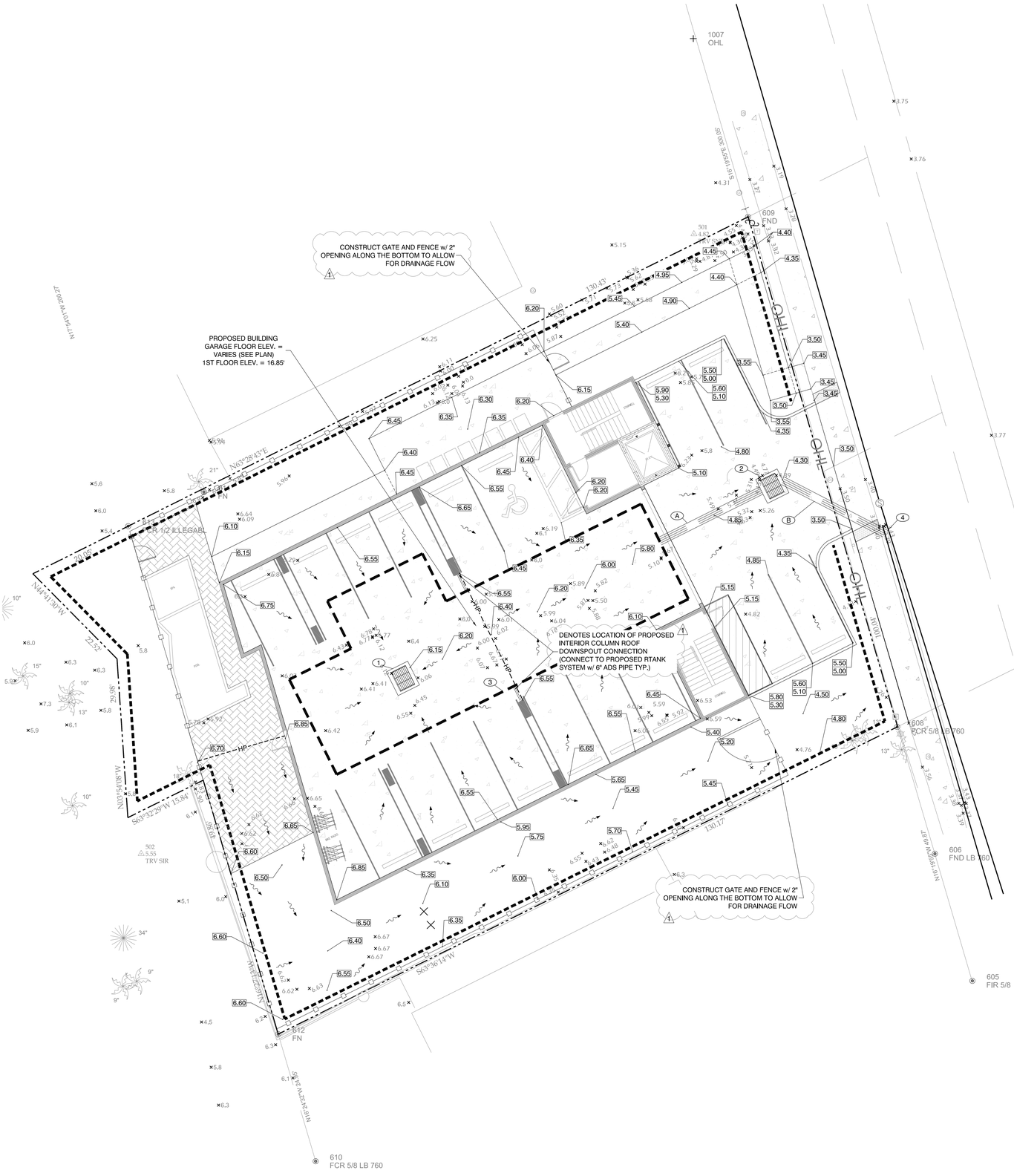
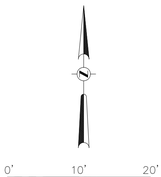
C-3





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.
- 6.38 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%)

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

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DANIEL J. EPPERLY, PE
PE NO. 94679

DATE :	DRAWN BY:
03/01/2024	TL
CHECKED BY:	JOB NO.:
DE	B34-24-TI047C

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1. 04/18/2024 - P&Z COMMENTS
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THE PEARL

PAVING GRADING & DRAINAGE PLAN

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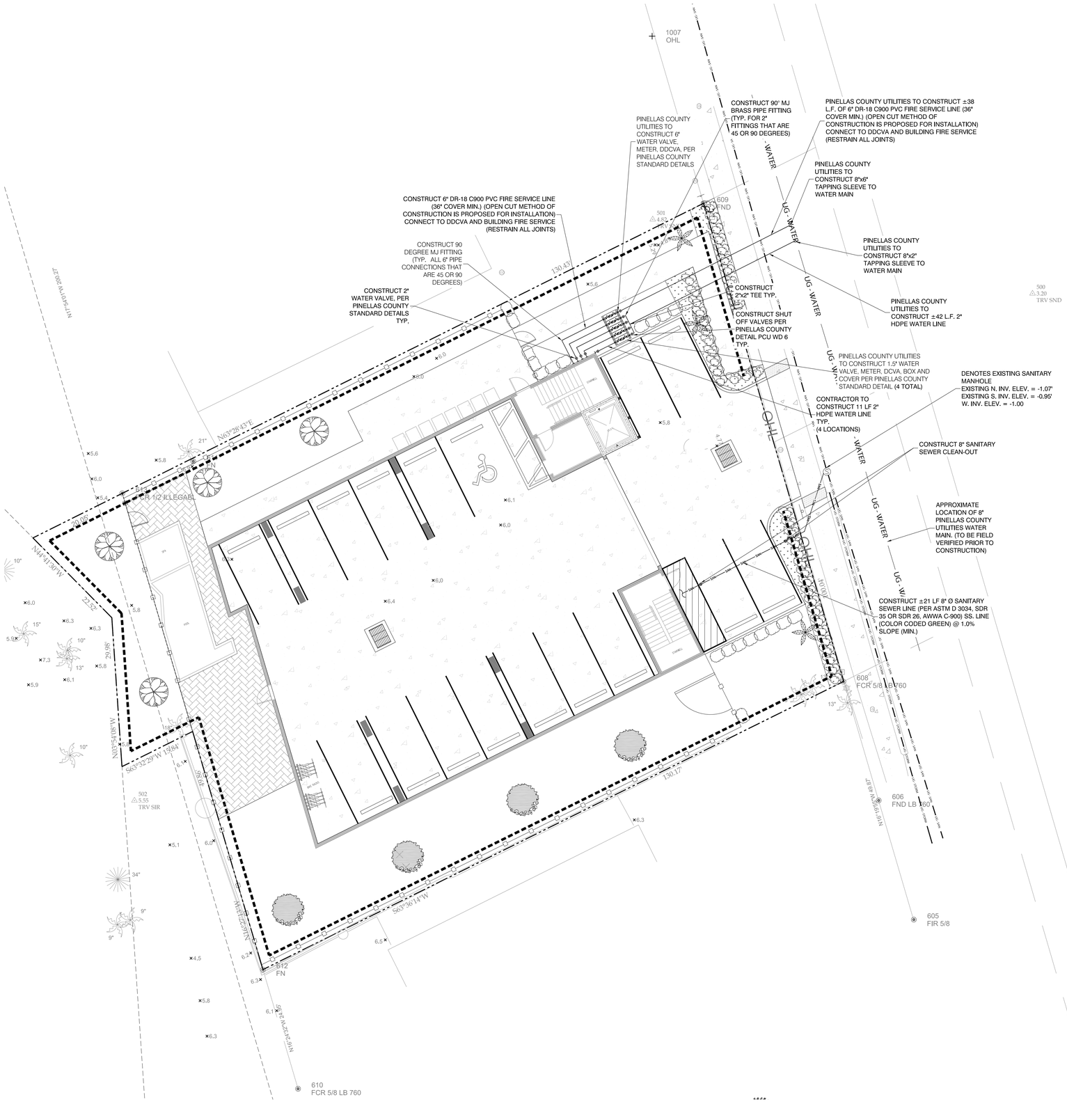
RECORD DRAWING	☐

C-4



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.

0' 10' 20'
SCALE: 1" = 10'

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

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CHECKED BY: DE	JOB NO.: B34-24-TI047C

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THE PEARL

UTILITY PLAN

10126 GULF BLVD.
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CERTIFICATE NO. 28819

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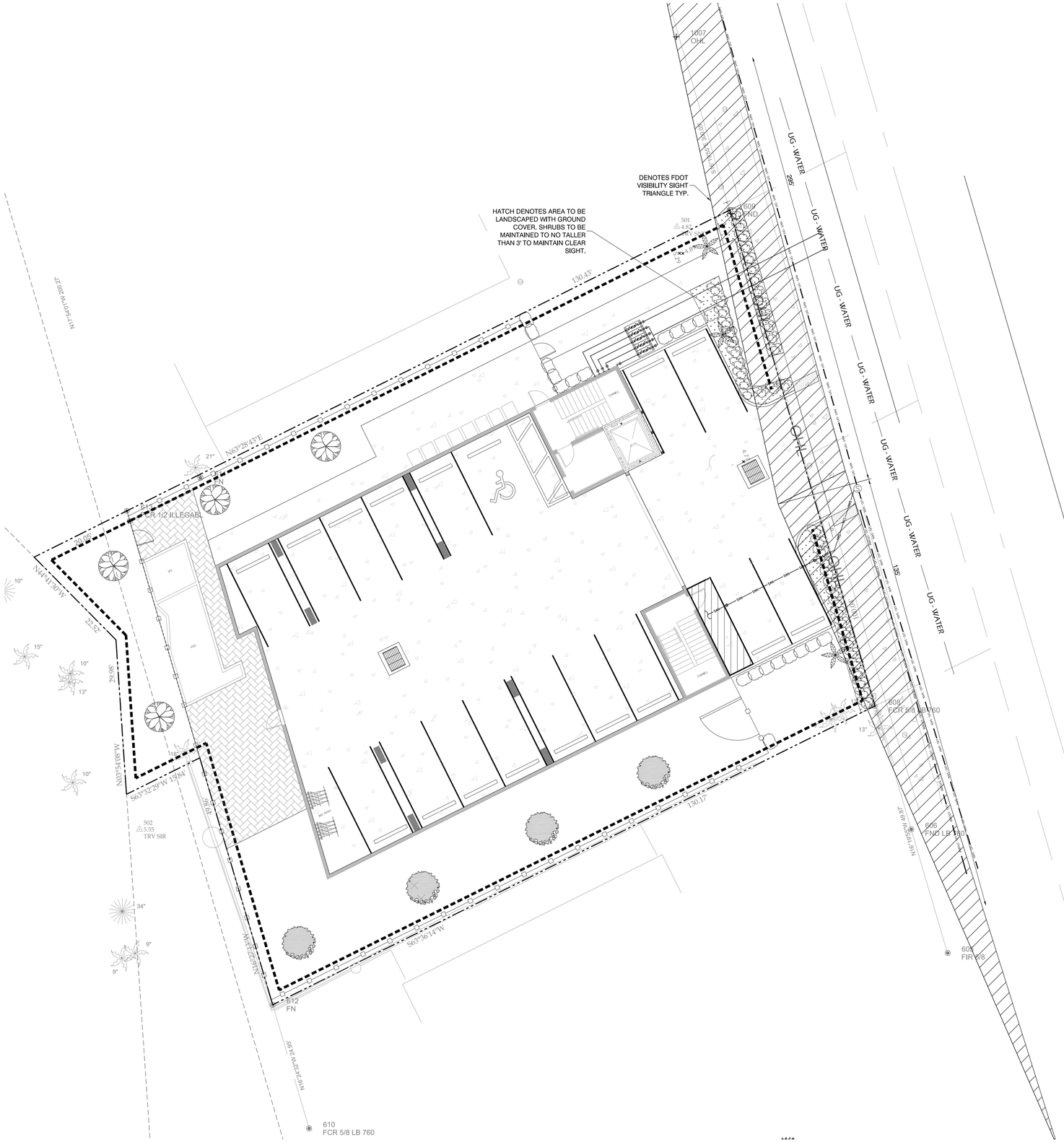

PLANT TABLE

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

1

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THE PEARL

LANDSCAPING PLAN

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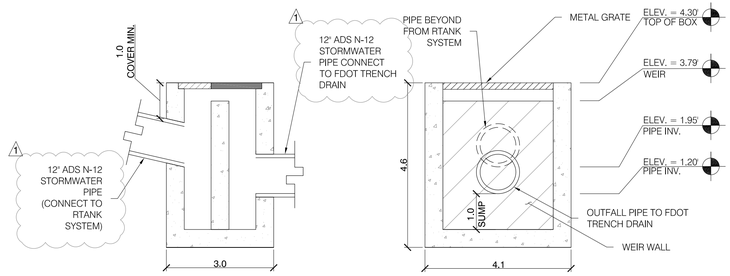
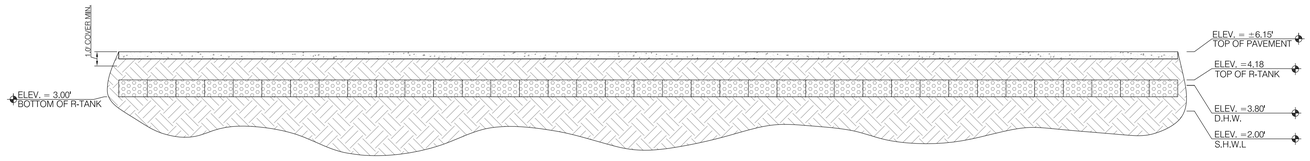
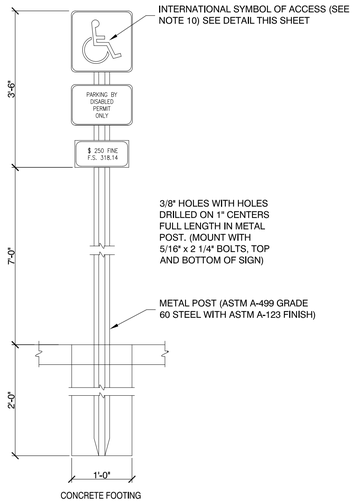
C-6

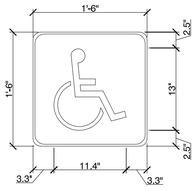


3 OUTFALL STRUCTURE 2 DETAIL
C-7 N.T.S.



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





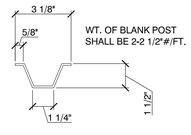
ALL LETTERS 1-1/2" SERIES C
1" SPACING BETWEEN LINES OF TEXT

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

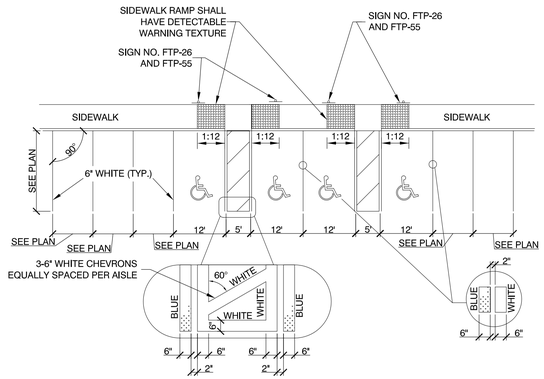
COLOR	TOP	BOTTOM
BACKGROUND	BLUE	WHITE
LEGEND AND BORDER	WHITE	BLACK

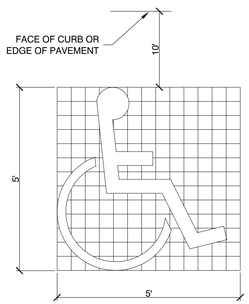
FTP-55
1'-0" x 6"
1-1/2" RADII 3/4" BORDER
1" SERICES C
WHITE BACKGROUND
BLACK LEGEND & BORDER

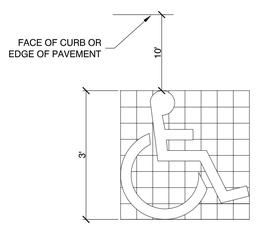
SUPPLEMENTAL PANEL FOR THE FTP-25 AND
FTP-26 SIGNS



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.

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

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THE PEARL

MISCELLANEOUS DETAILS

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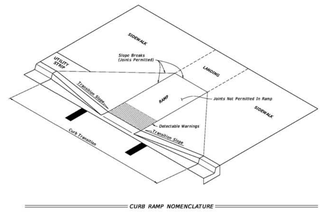
C-7

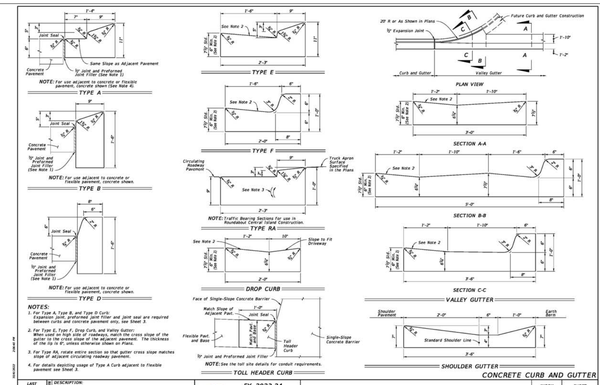
GENERAL NOTES:

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 that will meet the requirements of this Index.
   - 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

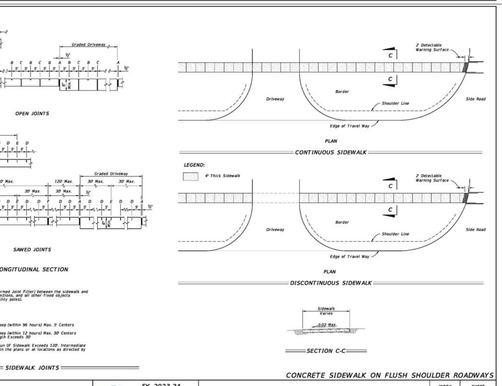
LAST REVISION: 11/01/21 | DESCRIPTION: | FDOT | FY 2023-24 STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX 522-002 | SHEET 1 of 7



NOTES:
1. For 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 traffic lane, including superelevation, if any. The thickness of the lip is 6" unless otherwise shown on Plans.
3. For Type RA, rotate entire 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.

TOLL HEADER CURB

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



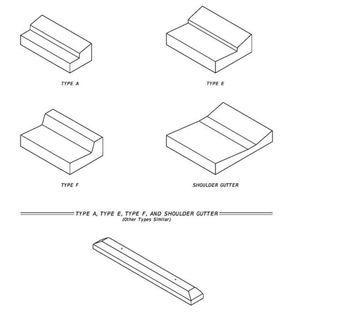
LAST REVISION: 11/01/18 | DESCRIPTION: | FDOT | FY 2023-24 STANDARD PLANS | CONCRETE SIDEWALK | INDEX 522-001 | SHEET 2 of 2

GENERAL NOTES:

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

TABLE OF CONTENTS:

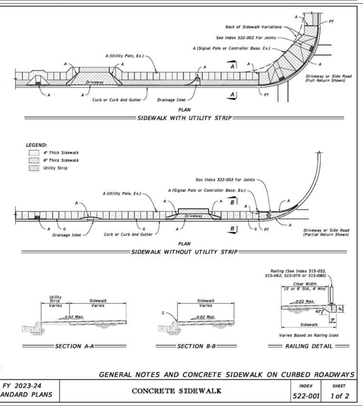
Sheet	Description
1	General Notes and Contents
2	Concrete Curb and Gutter
3	Curb and Gutter Joints and Endings, Concrete Bumper Guard, and Asphaltic Concrete Curb



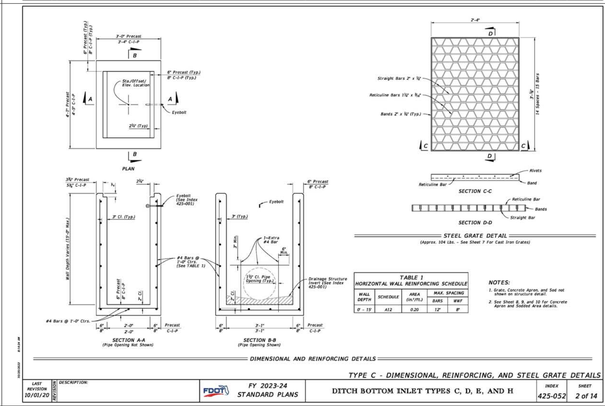
LAST REVISION: 11/01/21 | DESCRIPTION: | FDOT | FY 2023-24 STANDARD PLANS | CURB AND GUTTER | INDEX 520-001 | SHEET 1 of 3

GENERAL NOTES:

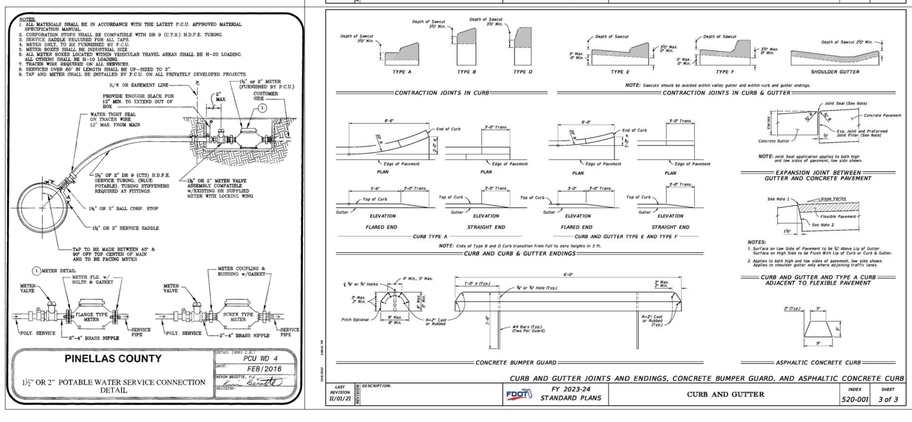
1. Construct sidewalks in accordance with Specification 522. Use 6" concrete for Sidewalks and Curb Ramps Located within Curb Returns (See Plan Views). Install all other concrete with thickness as shown, unless otherwise detailed in the Plans.
2. Include detectable warnings on sidewalk curb ramps in 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)



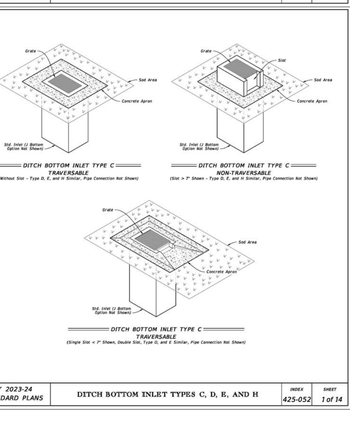
LAST REVISION: 11/01/18 | DESCRIPTION: | FDOT | FY 2023-24 STANDARD PLANS | CONCRETE SIDEWALK | INDEX 522-001 | SHEET 1 of 2



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



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



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

NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (CTS) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. ALL TAPS TO BE MADE BY PINELLAS COUNTY.
5. METER SIZES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. TRACER WIRE REQUIRED ON ALL SERVICES.
9. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
10. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.

PINELLAS COUNTY

1½" OR 2" POTABLE WATER SERVICE CONNECTION DETAIL

DETAIL INDEX NO. PCU WD 4
DATE: FEB/2016
KNOX WELDING, Inc.
REVISION:

Digitally signed by Daniel J. Epperly, P.E.
Date: 2024.05.06 16:07:33-04'00'

05/06/2024
DANIEL J. EPPERLY, PE
PE NO. 94679

DATE : 03/01/2024	DRAWN BY: TL
CHECKED BY: DE	JOB NO.: B34-24-TI047C

REVISIONS:
1. 04/18/2024 - P&Z COMMENTS
2. 05/06/2024 - P&Z COMMENTS

THE PEARL

STANDARD DETAILS

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. 28819

PRELIMINARY
PERMITTING
ISSUED FOR CONSTRUCTION
RECORD DRAWING

C-8

ARO ENGINEERING
CIVIL - STRUCTURAL - COASTAL
780 94TH AVENUE N. SUITE 102, ST. PETERSBURG, FL 33702
TEL 727.527.5900 (CA No. 28919) (CGC 1519972)

March 1, 2024

City of Treasure Island
Planning and Zoning Department
120 108th St.
Treasure Island, Florida 33706

Re: The Pearl, 10126 Gulf Blvd., Treasure Island, FL
Planning and Zoning Stormwater Narrative

To whom it may concern,

The purpose of this letter is to provide a narrative in relation to the drainage design for the above referenced project. In general, this project consists of a new multi-story building with onsite parking and all associated utility infrastructure. Due to the constraints of the proposed development, stormwater for this site shall be retained in an underground exfiltration system within the proposed parking area. Runoff from the parking area, as well as the proposed building shall be directly connected to the underground trench by utilizing a system of surface inlets and ads piping.

The adjacent stormwater facilities located within the right of way are owned by FDOT For the design of this project the proposed exfiltration trench shall connect to an outfall structure which will ultimately discharge east, and directly connection to FDOT infrastructure. A FDOT critical duration storm analysis shall be modeled to ensure the onsite exfiltration system can support all storm events as required by FDOT. This analysis shall also include the 25yr storm as required by Treasure Island and The Southwest Florida Water Management District.

For the purpose of this submission, please see the attached calculations showing that the proposed exfiltration trench shall adequately hold the required 1" of treatment for the 25yr storm as required by Treasure Island. A final copy of the stormwater management report as well as approved FDOT permits shall be forwarded to the City of Treasure Island during the permit application process.

If you have any questions or concerns regarding the above information, please do not hesitate to call me at 727-527-5900.

Sincerely,

ARO ENGINEERING

Daniel Epperly

Daniel J. Epperly, P.E.

Drainage Calculations for The Pearl

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 / City of Treasure Island

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 Are	0.309			Sum =	0.28

Runoff Coefficient Calculations: C=Sum of $C_{surface}$ / Total Area = 0.90

25yr - 24hr

Pre-Drainage Area =	0.31	ac
'C' Pre-development =	0.90	
Intensity for (Tc (8 min)) =	8.40	in/hr

Discharge Rate: 'Q' Pre-development (25-yr)= 2.34 cfs

Post-Development Basin 100:
Runoff Coefficient Calculations:

Use: Buildings, Parking lots, and Ponds

Surface	Area (ac)	x	C	=	$C_{surface}$
Impervious	0.19	x	0.95	=	0.18
Pervious	0.09	x	0.61	=	0.05
Ponds	0.03	x	1.00	=	0.03
Total Area	0.309			Sum =	0.27

'(

C=Sum of $C_{surface}$ / Total Area = 0.86 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 (Modified Area + Remaining Basin Area) = 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	2.25	2.34	0
15	7.30	0.25	1.94	2.34	0
20	6.40	0.33	1.70	2.34	0
30	5.25	0.50	1.39	2.34	0
45	4.25	0.75	1.13	2.34	0
60	3.70	1.00	0.98	2.34	0
75	3.20	1.25	0.85	2.34	0
90	2.80	1.50	0.74	2.34	0
105	2.60	1.75	0.69	2.34	0
120	2.35	2.00	0.62	2.34	0
150	2.00	2.50	0.53	2.34	0
180	1.80	3.00	0.48	2.34	0
240	1.50	4.00	0.40	2.34	0
360	1.10	6.00	0.29	2.34	0
480	0.90	8.00	0.24	2.34	0
720	0.70	12.00	0.19	2.34	0
960	0.56	16.00	0.15	2.34	0
1200	0.50	20.00	0.13	2.34	0
1440	0.44	24.00	0.12	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	1,310	0.0301	0.000	0.00	Pond Bottom
3.25	1,383	0.0317	0.008	0.00773	
3.50	1,458	0.0335	0.008	0.01588	
3.75	1,536	0.0353	0.009	0.02447	
4.00	1,615	0.0371	0.009	0.03351	Treatment Elev.
4.20	1,680	0.0386	0.008	0.04108	

Trench Area at Water Quality =	1,547.40	sq ft
Trench Water Quality Treatment Elevation =	3.79	ft
Water Quality + Quantity Elev. DHWL25 =	3.79	ft

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 = 1.2
$A_{trench\ Section}$ = 50.04 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} = 50.04 ft^3 per ft
$V_{trench} - V_{pipe}$ = 50.04 ft^3 per ft ($V_{rock} = V_{trench} - V_{pipe}$)
V_{allow} = 47.54 ft^3 per ft

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

Total Trench Volume = **1,901.52** ft^3

Solve for Equivalent Pond Section:

Side Slope = 2 to 1
Pond Depth = 1.20

Bottom of Pond Width = 37.22

Top of Pond Width = 42.02

Pond Length = 40.00

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:

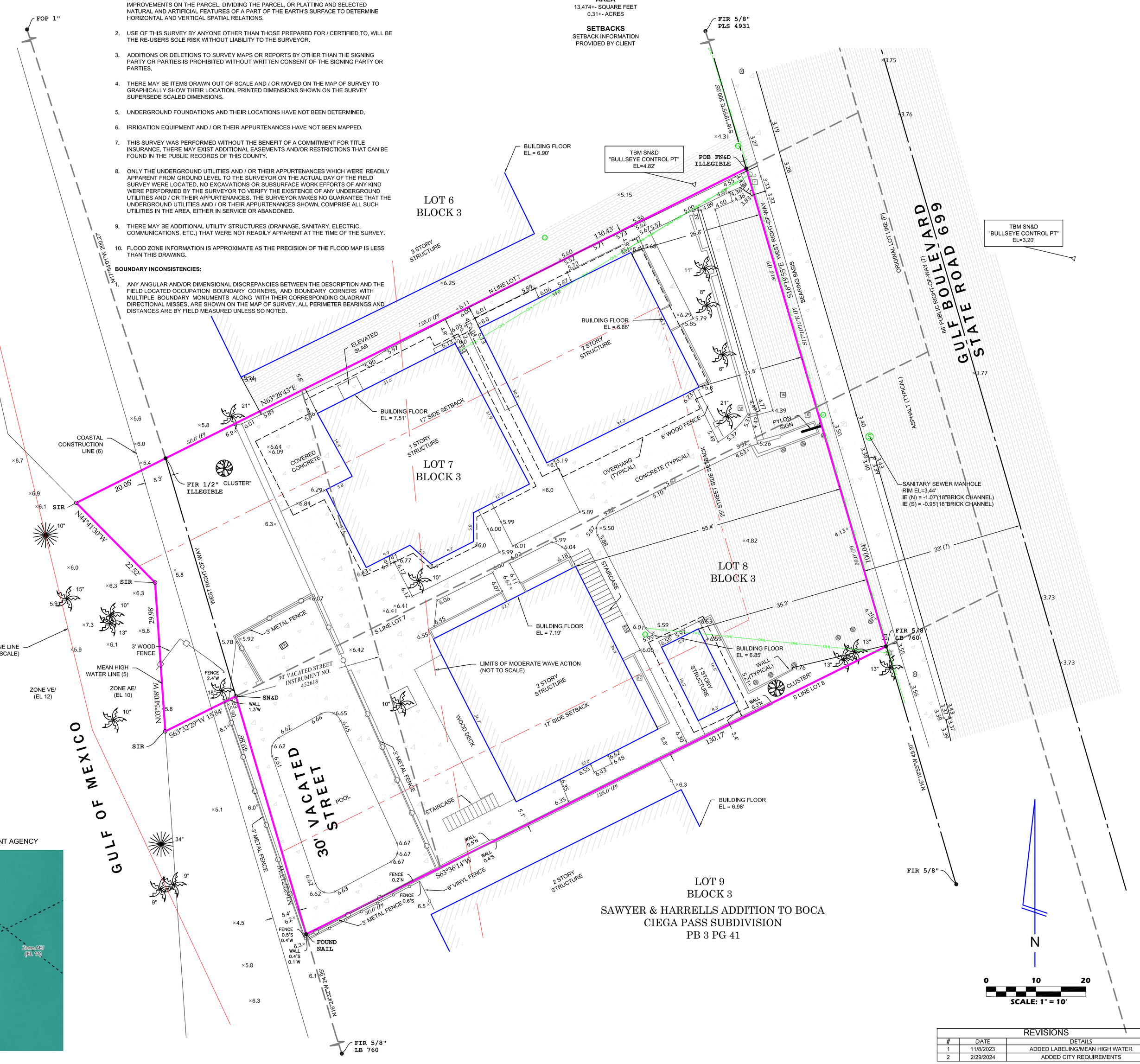
1. THE BASIS OF BEARING IS WEST RIGHT-OF-WAY LINE OF GULF BOULEVARD, BEING S17°10'10"E (2).
2. PLAT OF BOCA SAWYER & HARRELLS ADDITION TO BOCA CIEGA PASS SUBDIVISION, RECORDED PLAT BOOK 3, PAGE 41, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.
3. WARRANTY DEED, RECORDED IN OFFICIAL RECORDS BOOK 21856, 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:

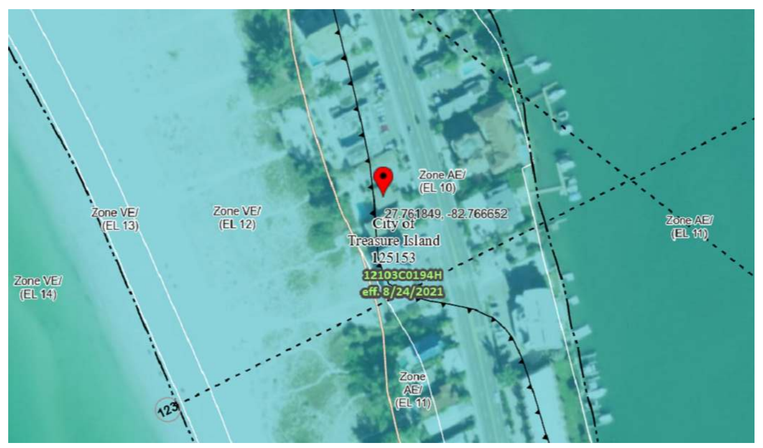
1. PURPOSE OF SURVEY: TO DOCUMENT THE PERIMETERS, OR ANY ONE OF THEM, OF A PARCEL OR TRACT OF LAND BY ESTABLISHING OR RE-ESTABLISHING CORNERS, MONUMENTS,AND BOUNDARY LINES FOR THE PURPOSES OF DESCRIBING THE PARCEL, LOCATING FIXED IMPROVEMENTS ON THE PARCEL, DIVIDING THE PARCEL, OR PLATTING AND SELECTED 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	

REPORT OF
GEOTECHNICAL EXPLORATION
BALBOA SHORES
11580 GULF BOULEVARD
PINELLAS COUNTY, FLORIDA

Prepared for:

ATM ARVILLA, LLC

Prepared by:

Gulf Coast Testing Laboratory, Inc.

GCTL Project No. 30583

December 7, 2023

State of Florida Certificate of Authorization Number 00002370

GULF COAST TESTING LABORATORY INC.

PINELLAS PARK, FL 33781

CONSTRUCTION MATERIALS ENGINEERING COUNCIL CERTIFIED

December 7, 2023

Mr. Allie T. Mallad
Atm Arvilla, LLC

11580 Gulf Boulevard
Treasure Island, Florida 33706

Subject: **Report of Geotechnical Exploration**
Balboa Shores
11580 Gulf Boulevard
Pinellas County, FL
GCTL Project No. 30583

Dear Mr. Mallad:

Gulf Coast Testing Laboratory, Inc. (GCTL) has completed the requested Geotechnical Exploration for the above-referenced project. The results of the subsurface exploration have been evaluated and are presented in this Report of Geotechnical Exploration.

This report presents a review of the project information provided to us, a description of the site and subsurface conditions encountered as well as our foundation and earthwork recommendations. The Appendices to the report contain site and boring location figures, USDA soil survey information, FEMA FIRM map information, boring logs, site photographs, static pile bearing capacity analyses, and the lateral pile capacity analyses.

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PINELLAS PARK, FL 33781
CONSTRUCTION MATERIALS ENGINEERING COUNCIL CERTIFIED
CERTIFICATE of AUTHORIZATION # 00002370
PHONE*: (727) 544-4080 *FAX*: (727) 544-753*2
Email: info@gctlfl.com

We appreciate this opportunity to provide our services to you and we look forward to serving as your geotechnical consultant throughout this project. Should you have any questions in regard to the information presented in this report, please do not hesitate to contact us at your earliest convenience.

Sincerely,

GULF COAST TESTING LABORATORY, INC.

Digitally signed by Ora F Fraze
Date: 2024.04.17 13:33:06 -04'00'

Rick Davis

Don R. Stites, P.E.
Principal Geotechnical Engineer
Florida Registration No. 42290

Rick Davis
President

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1.0 EXECUTIVE SUMMARY

- Due to the existing development, access to the subject property is limited. In this regard, additional confirmation subsurface explorations are recommended to be performed following substantial demolition of the existing structure.

- It is understood the subject project is located at 11580 Gulf Boulevard in Pinellas County, Florida and is known as Balboa Shores. This property was observed to consist of a generally level area developed as a low-rise hotel facility. It is understood that this property is primarily located within FEMA FIRM Zone A and within 300 feet of the Coastal Construction Line. This property is located immediately adjacent to the Gulf-of-Mexico.

- The subject project is expected to be developed as a six-story condominium structure, with the ground floor utilized for vehicle parking. It is anticipated that the primary support of the structure is to be provided by columns and load-bearing walls. The bottom floor of the building is anticipated to be constructed as a concrete slab-on-grade. The finished grades of the facility area are expected to generally coincide with the existing grade levels. The maximum loadings associated with the proposed structure are expected to be as follows:

Wall Load:	15 kips/linear ft
Column Loads:	700 kips
Floor Load:	100 lbs/sq ft

- The borings indicate the subsurface soils were generally arranged in three soil layers. The first soil layer consisted of pale brown to light gray loose to medium dense fine SAND (SP) with traces of marine shell fragments extending to approximate depths of nine feet below the existing ground surface. Underlying the surface material and extending to an approximate depth of 55 feet below the existing ground surface, gray very loose to loose silty SAND (SM) was encountered. The final soil layer encountered consisted of firm to very hard highly plastic CLAY (CH) which extended to maximum boring termination depths of 90 feet below the existing ground surface elevations.

- As recorded immediately after drilling during the time of our subsurface exploration, groundwater was encountered at an approximate depth of five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will closely coincide with the tidal fluctuations of the adjacent Gulf of Mexico. It is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

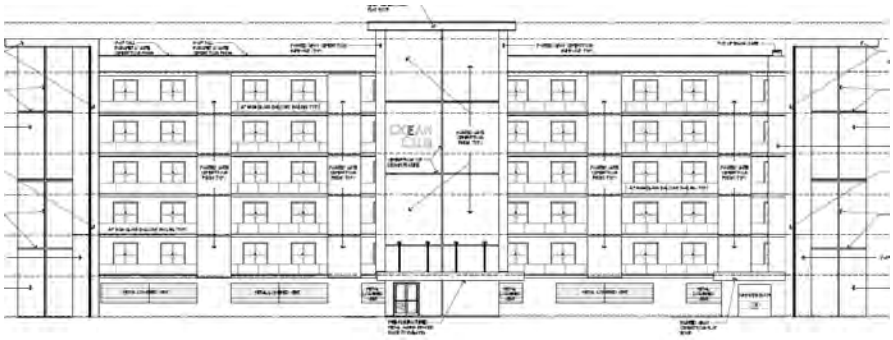
- Based on the subsurface conditions and the expected structural characteristics, it is recommended that the proposed structure should be supported with the use of a deep foundation system (piles). Efficient deep foundation systems are expected to consist of 14-inch square precast pre-stressed concrete (SPPC) piles. SPPC piles embedded to an approximate depth of 78 feet below the existing ground surface elevations are expected to attain allowable compressive capacities of at least 80 tons.

- The soils excavated from the near surface are expected to predominately consist of fine SAND with marine shell fragments. These soils are expected to be generally SUITABLE for use as structural fill.

2.0 INTRODUCTION

2.1 PROJECT CHARACTERISTICS

The subject project is expected to be developed as a six-story condominium structure, with the ground floor utilized for vehicle parking (see illustration).



It is anticipated the primary support of the structure is to be provided by columns and load-bearing walls. The bottom floor of the building is anticipated to be constructed as a concrete slab-on-grade. The finished grades of the facility area are expected to generally coincide with the existing grade levels.

The structure loading conditions were not available during the time of this report. Based on our previous experience with similar structures, the maximum loadings associated with the proposed structures are expected to be as follows:

Wall Load:	15 kips/linear ft
Column Loads:	700 kips
Floor Load:	100 lbs/sq ft

2.2 SITE DESCRIPTION



It is understood the subject project is located at 11580 Gulf Boulevard in Pinellas County, Florida and is known as Balboa Shores.

This property was observed to consist of a generally level area developed as a low-rise hotel facility (see photograph).

It is understood that this property is primarily located within FEMA FIRM Zone A and within 300 feet of the Coastal Construction Line. This property is located immediately adjacent to the Gulf-of-Mexico.

The approximate site location is illustrated on Figures in the Appendix of this report. Photographs of the subject property have been included in the Appendix of this report.

2.3 PURPOSE AND SCOPE

The purpose of this study was to obtain information on the general subsurface conditions at the proposed project site. Due to the existing development, access to the subject property is limited. In this regard, additional confirmation subsurface explorations are recommended to be performed following substantial demolition of the existing structure. The subsurface materials encountered were then evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items were formulated:

- General location and description of potentially deleterious materials encountered in the borings, which may interfere with construction progress or structure performance, including existing fills or surficial/subsurface organics.

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.

- Evaluation of active raveling ("sinkhole-type") activity, if any, in the borings performed.

- Evaluation of utilizing an appropriate foundation system, such as precast prestressed square concrete piles, for support of the proposed structure. Identification of recommended foundation design parameters, including pile tip elevation, allowable compressive, tensile, and lateral capacities, and total and differential settlements.

- Recommended soil subgrade preparation operations, including stripping, grubbing and compaction. Recommended engineering criteria for placement and compaction of approved structural fill materials.

- Evaluation of the suitability and availability of materials on-site that may be moved during site grading for use as structural fill in the building area, as pavement subgrade fill, and as general backfill.

- Presentation of construction recommendations, including expected ground water control measures, temporary slope stability recommendations, and unsuitable soil removal guidelines.

The following services were performed during the initial Geotechnical Exploration to achieve the preceding objectives:

- Reviewed readily-available published geologic and topographic information. This included information from zoning maps published by the Federal Emergency Management Agency (FEMA), and available soil survey information published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS), as deemed appropriate.

- Reviewed readily available aerial photographs obtained from Google Earth Pro.

- Coordinated underground utility location services through Sunshine State One Call of Florida, Inc.

- Executed a program of subsurface exploration consisting of subsurface sampling and field testing.

    - Two Standard Penetration Test (SPT) borings were performed to approximate depths ranging from eighty to ninety feet below the existing ground surface elevations. In the borings, soil samples were collected and SPT resistance were measured "continually" to an approximate depth of ten feet, and at approximate intervals of five feet thereafter to boring termination.

    - Containerize and transport drilling mud off-site for disposal. Perform a field cleanup of the soil boring locations.

    - Backfill completed borings utilizing a bentonite pellets. Patch borings within asphaltic concrete with manually compacted asphalt cold-patch.

- Visually classified and stratified representative soil samples in the laboratory using the Unified Soil Classification System (USCS). Identified soil conditions at each boring location and formed an opinion of the site soil stratigraphy.

- Collected groundwater level measurements and estimated normal wet seasonal high groundwater levels.

The results of the field exploration and laboratory tests were used in the engineering analyses and in the formulation of the recommendations. The results of the subsurface exploration, including the recommendations and the data upon which they are based, are presented in this formal written report prepared by an experienced Professional Engineer.

The scope of our services does not include an environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in the report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

3.0 FIELD EXPLORATION



The general foundation soil types and associated design parameters were developed by performing two soil test borings in readily accessible locations which were within the proposed condominium development area. Due to the current developed and operating site conditions, this subsurface exploration was limited to two soil test borings; additional soil test borings are recommended to be performed following demolition of the existing structure.

The boring locations were determined in the field from existing ground surface features. The ground surface elevations at the boring locations were neither furnished nor determined. The soil test boring locations are depicted in the figures in the Appendix of this report. The scope of this exploration does not include a thorough evaluation of potential deep soil conditions, such as sinkholes.

The soil test borings were advanced with a track-mounted drill rig using “Mud” Rotary drilling procedures (see photograph). The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils." Samples were obtained at intervals of two feet to a depth of ten feet, and at intervals of five feet thereafter to approximate boring termination depths ranging from 80 to 90 feet below the existing ground surface elevations. It is noted that one boring was extended ten feet from the proposed termination depth due to the subsurface conditions encountered. Representative portions of these soil samples were sealed in “air-tight” containers, labeled and transferred to our laboratory for classification and testing.

4.0 LABORATORY TESTING

The soil samples were transported to our laboratory and were classified by the Geotechnical Engineer using the Unified Soil Classification System (USCS) in general accordance with ASTM Test Designation D-2488. Due to the structural characteristics of the proposed facility and the nature of the soils encountered, refined laboratory testing was not considered necessary.

It should be noted that all soil samples will be properly disposed of 30 days following the submittal of the **GCTL** subsurface exploration report.

5.0 GENERALIZED SUBSURFACE CONDITIONS

5.1 AERIAL PHOTOGRAPH

The aerial photographs dated 2023, 2015, 2007, 2002, and 1995 were reviewed for pertinent ground surface features at the subject property. Based on our review, the subject property illustrated in the aerial photographs appeared to be generally consistent with the site conditions observed during the time of the subsurface exploration. Copies of the aerial photographs have been included in the Appendix of this report.

5.2 COUNTY SOIL SURVEY

The "Soil Survey of Pinellas County, Florida", published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS), was reviewed for general near-surface soil information within the general vicinity of the subject project. This information indicates that there is one primary soil mapping unit within the proposed project area. The soil map unit is identified as predominately consisting of Matlacha and St. Augustine Soils and Urban Land (16). The soil map unit characteristics are tabulated below:

SOIL SERIES	DEPTH (INCHES)	UNIFIED SOIL CLASS	PERMEABILITY RATING (INCHES/HOUR)	USDA SEASONAL HIGH GROUNDWATER TABLE	
				DEPTH (FEET)	MONTHS
Matlacha Soils (16)	0-42 42-80	SP, SP-SM SP, SP-SM	2.0-6.0 6.0-20	2.0-3.0	June-October
St. Augustine Soils (16)	0-22 22-33 33-48 48 – 63 63 - 80	SP, SP-SM SM SM, SP-SM SM, SP-SM SP, SP-SM	6.0-20 2.0-6.0 6.0-20.0 2.0 – 20 6.0 – 20	1.5-3.0	June-October

Urban Land is reported to consist of land areas which have "undergone extensive urban development. The soils have been modified by cutting, grading, filling, and shaping or otherwise generally altered. Urban facilities including paved parking areas, streets, industrial buildings, houses and other structures, and underground utilities have been constructed on 75 percent or more of this association. Places not covered by urban facilities remain as altered soils or soil material." Based on the altered state of the soil material, published soil and groundwater characteristics are not considered reliable. A copy of the soil survey information has been included in the Appendix of this report.

5.3 SEISMIC SITE CLASSIFICATION

Based on our review of the International Building Code (IBC), dated 2024, this structure is anticipated to be considered as Risk Category III. Based on the American Society of Civil Engineers (ASCE) Publication 7 and our knowledge of the general subsurface conditions at the site, we believe the site should be considered to be a Site Class D. In this regard, the site appears to be within seismic design category A. It should be noted that this classification is based on the subsurface exploration results and our experience in the area. A soil test boring extending to a depth of at least 100 feet may be performed to verify this site classification.

5.4 SUBSURFACE CONDITIONS

Soil stratification was based on visual observation of the recovered soil samples, laboratory testing and interpretation of the field boring logs by an experienced **GCTL** Engineering Technician. The boring stratification lines represent the approximate boundaries between soil types of significantly different engineering properties; however, the actual transition may be gradual. In some cases, small variations in properties not considered pertinent to our engineering evaluation may have been abbreviated or omitted for clarity. The boring profiles present the conditions at the particular boring location and variations do occur among the borings and between soil samples. The borings indicate the subsurface soils were generally arranged in three soil layers.

The first soil layer consisted of pale brown to light gray loose to medium dense fine SAND (SP) with traces of marine shell fragments extending to approximate depths of nine feet below the existing ground surface. Standard Penetration Test (SPT) values recorded within this soil layer generally varied from 4 to 29 blows per foot (bpf), with the higher SPT values possibly artificially increased by marine shell fragments. It is believed that a near-surface portion of this material consists of an EARTHFILL material.

Underlying the surface material and extending to an approximate depth of 55 feet below the existing ground surface, gray very loose to loose silty SAND (SM) was encountered. SPT values recorded within this soil layer generally varied from Weight-of-Hammer (WH) to 19 bpf.

The final soil layer encountered consisted of firm to very hard highly plastic CLAY (CH) which extended to maximum boring termination depths of 90 feet below the existing ground surface elevations. SPT values recorded within this soil layer were highly variable, with SPT values ranging from Weight of Rod (WR) to 50 blows per five inches of penetration.

No "raveled" conditions indicative of “active” sinkhole type activity was considered to be encountered during this subsurface exploration program.

5.5 GROUNDWATER CONDITIONS

As recorded immediately after drilling during the time of our subsurface exploration, groundwater was encountered at an approximate depth of five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will be tidally influenced and closely coincide with the surface water elevations of the adjacent Gulf of Mexico. It is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

Groundwater observation wells may be installed on-site to monitor groundwater fluctuations over a period of time and to permit more accurate determinations of wet season and dry season levels.

5.6 FEMA FIRM INFORMATION

Based on our review of the published Federal Emergency Management Agency (FEMA) Flood Insurance Rating Map (FIRM) indicates the property is partially within zone VE. A copy of the FIRM information has been included in the Appendix of this report.

6.0 DESIGN RECOMMENDATIONS

The following design recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered during this exploration. Additional soil test borings are considered essential following demolition of the existing structure.

The test boring data was evaluated utilizing correlations between the measured standard penetration test resistances and the engineering performance characteristics of similar subsurface conditions. If there is any change in these project criteria, including project building locations on the site, a review must be made by **GCTL** to determine if any modifications to the recommendations will be required. The findings of such a review should then be presented in a supplemental report.

6.1 GENERAL

It is understood that the subject property is partially located within flood zone VE and is with 300 feet of the Coastal Construction Line. Based on this property location and zoning, a deep foundation system (piles) is required by code to be utilized for this property. In addition, based upon the proposed structure characteristics and the subsurface soils encountered, a deep foundation system consisting of Square Precast Prestressed Concrete (SPPC) piles are considered the preferred foundation system. Recommendations for this foundation system are presented for your consideration.

6.2 SQUARE PRECAST PRESTRESSED CONCRETE PILES

SPPC piles are capable of obtaining reasonable design capacities. Piles should be driven through possible thin layers of cemented sand-shell to achieve a minimum pile tip depth of 40 feet below the existing land surface. It is expected that the piles will develop their capacity from a combination of skin friction and end bearing in the hard clay layer. The variability of the subsurface materials across the site tends to promote difficulty in having consistent pile lengths and reliable pile capacities. In this regard, some pile waste and/or splicing should be expected, and some conservativeness should be used regarding the allowable pile capacities.

Driven piles have the advantage that the installation procedure provides a means to confirm pile capacity, by monitoring blow counts, and does not produce excessive debris in the form of auger cuttings or concrete spills. Installation of driven piles does, however, produce significant noise and vibration levels that may affect adjacent structures (such as retaining walls); vibration monitoring is recommended to be performed.

6.2.1 Compressive and Uplift Capacities

The allowable axial capacities for 14-inch square driven concrete piles have been evaluated using the computer program FB-Deep (version 3.1.0) developed by the Florida Bridge Software Institute (FBSI), and our extensive experience with similar conditions. In this regard, the compressive and uplift capacities of the piles are tabulated below.

Pile Size (Inch)	Estimated Embedment Depth (Feet)	Compressive Capacity (Tons)	Uplift Capacity (Tons)
14x14	78	80	20

Based on our experience with similar subsurface conditions, it is expected that the pile capacities will be attained within an approximate depth of 78 feet below the existing ground surface elevations.

The uplift capacity of the piles are based on achieving a minimum embedment length of 60 feet below the existing ground surface. The static pile bearing capacity analysis using the FBSI design program FB-Deep has been attached in the Appendix of this report.

6.2.2 Lateral Capacity

The lateral deflection of a single pile under working load conditions has been determined for 14-inch square prestressed concrete piles. The analyses were conducted using the computer program (LPILE) developed by Ensoft, Inc. The program uses a finite difference technique to model pile behavior under lateral loads, axial loads and moments applied at the pile head. In performing the analyses, the following information was utilized in the computer program LPILE developed by Reese (1984).

Area (In^2)	196
Concrete Compressive Strength (PSI)	5000
Effective Prestress (PSI)	682
Minimum Pile Length (Ft.)	40
Distance From Top of Pile to Ground Surface (Ft.)	2
Loading Condition	Static free-head

Lateral capacity analyses for the SPPC pile were performed by applying the actual design load cases to the minimum pile length. The results of the analyses have been included in the Appendix of this report, with a summary tabulated below.

14-inch Square Prestressed Precast Concrete Piles Lateral Stability Analysis				
Pile Width (In)	**Axial Load (Tons)**	**Lateral Load (pounds)**	**Pile Head Deflection (In.)**	**Maximum Moment (In-K)**
14	80	4,000	0.24	267
		6,000	0.43	437
		8,000	0.64	616
		10,000	0.88	801
		12,000	1.25	1009

6.2.3 Settlement

Settlement is expected to primarily consist of elastic shortening of the pile material and associated settlement required to mobilize resistance. Total settlement at these capacities is expected to be on the order of ½ inch with differential settlement of ¼ inch.

6.2.4 Pile Installation

Prior to casting all piles for the project, it is recommended that at least five indicator piles be installed at various locations around the site. It is recommended the test piles have lengths more than five feet beyond the expected pile embedment. In this regard, it is recommended that pile lengths of 85 feet be considered for the five indicator piles. The piling contractor should submit the proposed pile hammer to the Geotechnical Engineer for approval prior to pile driving operations. The hammer, as well as the cushioning material, should be the same for production piles as those used in the indicator/test program.

In order to reduce vibrations to nearby structures, it is recommended that all pile locations be predrilled to an approximate depth of 5 to 10 feet immediately prior to pile driving operations and vibration monitoring should be performed. Pile driving should be as continuous an operation as possible and should proceed without stopping over the last ten feet of penetration. During pile installation, the contractor should exercise caution as not to overstress the piles. Piles should not be driven beyond practical refusal to meet the bearing requirements. Due to the variation of the consistency of the subsurface soils, variations in pile length should be expected to result in the need for splicing and/or waste.

The contractor should exercise caution in pile driving so that the effects of heave are minimized. Careful monitoring by the contractor for possible heave during driving should be exercised. All piles that heave ¼ inch or more should be re-driven unless otherwise instructed by **GCTL**.

Piles should be installed under continuous monitoring by a qualified field technician or soils engineer from the office of **GCTL** in order to make field judgments of pile penetration and construction, and to check for satisfactory foundation support conditions. Driven piles should be monitored for penetration, blow counts during driving, and hammer action.

6.3 PILE LOAD TEST PROGRAM

It is recommended that at least two piles be tested to two times the allowable compression design capacity. The compression load tests should be performed in general accordance dynamic load testing may performed with the use of a Pile Driving Analyzer (PDA) in general accordance with ASTM D4945.

6.4 FLOOR SLAB

Floor slabs are considered to be non-structural elements. It is our experience that lightly loaded floor slabs may be satisfactorily supported as a slab-on-grade member provided that any undesirable surface materials are removed and replaced with controlled structural fill.

It is also recommended that the floor slab bearing soils be covered by a lapped polyethylene sheeting of in order to reduce the potential for floor dampness which can affect the performance of moisture sensitive materials, such as paint, glued tile, and carpet, if any are used. This membrane should consist of a 10-mil single layer of non-corroding, non-deteriorating polyethylene sheeting material placed so as to minimize seams and to cover all of the soil below the building floor slab. This membrane should be cut in a “cross shape” to allow for pipes or other penetrations and the membrane should extend to within ½ inch of all such pipes or penetrations. All seams of the membrane should be lapped at least 12 inches. Punctures or tears in the membrane should be repaired with the same or comparable material and sealed in a waterproof manner.

The performance of concrete floor slabs is also affected by the concrete mix that is used. A relatively high water-cement ratio of the mix can cause aesthetic disruptions, such as unsightly slab “curling” and shrinkage cracking. Also, an additional waiting period may be required prior to installing moisture-sensitive floor covering because of the moisture loss from the concrete floor slab.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 FILL PLACEMENT AND SUBGRADE PREPARATION

The following are our recommendations for overall site preparation and mechanical densification work for construction of the proposed development, based on the anticipated construction and our boring results. These recommendations should be used as a guideline for the project general specifications prepared by the Design Engineer.

1. Prior to grading operations, underground structures, such as foundations and utilities, should be removed or properly abandoned in-place. The location of any existing underground utility lines within the construction area should be established. Provision should then be made to relocate any interfering utility lines from the construction area to appropriate locations. In this regard, it should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which subsequently may result in excessive settlements.

2. The exposed materials should be evaluated and proofrolled, as directed by **GCTL** to confirm that all unsuitable materials, if any, have been removed and that the soils are capable of supporting the proposed floor slab structure. The proofrolling should be performed with a self-propelled vibratory drum roller having a static drum weight on the order of eight tons. Careful observations should be made during proofrolling to help identify any areas of soft yielding soils that may require over-excavation and replacement. Vibratory compaction within 50 feet of existing structures should be carefully monitored in order to avoid the transmission of structurally significant vibrations.

3. It is recommended that the natural ground be compacted to a dry density of at least 95 percent of the Modified Proctor Test maximum dry density (ASTM D-1557) to a minimum depth of one foot below stripped grade within the building area.

4. Following satisfactory completion of the proofrolling and compaction operations, the proposed structure area may be brought up to finished subgrade levels, if required. It is recommended that off-site fill consist of soils having less than 12 percent passing the No. 200 sieve, and be free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved by **GCTL** prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness. The fill soils should be compacted to a dry density of at least 95 percent of the Modified Proctor Test maximum dry density.

5. Soil moisture content may need to be controlled in order to facilitate proper compaction. If additional moisture is necessary to achieve the compaction objectives of imported fill, then water should be applied in such a way that will not cause erosion or removal of the subgrade soils. A moisture content within two percentage points of the optimum indicated by the Modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

6. A representative from **GCTL** should be retained to provide on-site observation of earthwork and ground modification activities. It is important that **GCTL** be retained to observe that the subsurface conditions are as we have discussed and reported herein, and that foundation construction, ground modification and fill placement are in accordance with our recommendations.

7.2 GROUNDWATER CONTROL

Groundwater was encountered at an approximate depth five feet below the existing ground surface elevations. It is expected that the groundwater levels across the subject site will be tidally influenced and closely coincide with the surface water elevations of the adjacent Gulf of Mexico; it is recommended the seasonal high be considered at an approximate depth of three feet below the existing ground surface elevations.

Groundwater levels should be determined immediately prior to excavations and construction. It is recommended that groundwater be kept at least two feet below the lowest working area to facilitate construction operations proper material placement and compaction. It is expected that natural infiltration and/or pumping from excavated sumps will satisfactorily provide for dewatering.

Soils exposed in the bases of all satisfactory foundation excavations should be protected against any detrimental change in conditions, such as physical disturbance or rain water. Surface runoff water should be drained away from the excavations and not be allowed to pond. If possible, all foundation concrete should be placed the same day that the excavations are made. If this is not possible, the foundation excavations should be adequately protected in the interim.

7.3 TEMPORARY SIDE SLOPES

Following any necessary dewatering, the side slopes for temporary excavations are expected to remain stable at two horizontal to one vertical (2 H:1V) to a maximum excavation depth of four feet. Where restrictions do not permit slopes to be constructed as recommended above, the excavation should be shored and braced in accordance with current OSHA requirements. Excavated materials should not be stockpiled at the top of any slope within a horizontal distance equal to the excavation depth.

7.4 ON-SITE SOIL SUITABILITY

All materials to be used for backfill or compacted fill construction should be evaluated and, if necessary, tested by **GCTL** prior to placement to determine if they are suitable for the intended use. In general, based upon the boring results, the near-surface soils generally consist of fine SAND with marine shell fragments. This material is considered to be suitable for use as structural backfill.

It is recommended that off-site structural fill materials consist of soils having less than 12 percent passing the No. 200 sieve, and be free of rubble, organics, clay, debris and other unsuitable material. All structural fill should be approved by an experienced Professional Engineer prior to acquisition and placement.

8.0 BASIS FOR RECOMMENDATIONS

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This company is not responsible for the conclusions, opinions or recommendations made by others based upon this data.

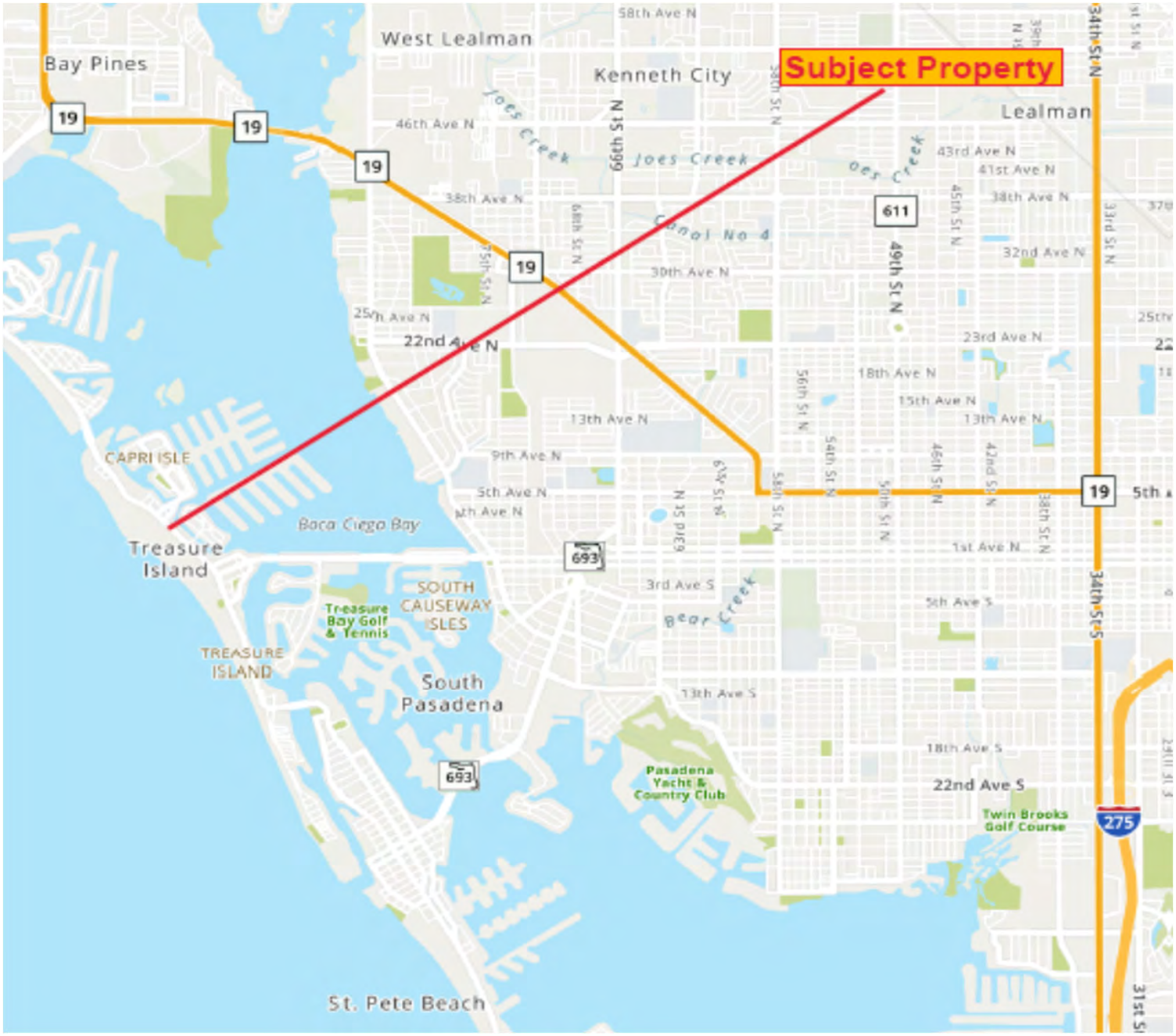
The scope of the exploration was intended to evaluate soil conditions within the primary influence of the proposed structure and does not include a thorough evaluation of potential deep soil conditions, such as sinkholes. The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process itself may alter soil conditions.

If any subsoil variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. The applicability of this report should also be reviewed in the event that significant changes occur in the design, nature or location of the proposed construction.

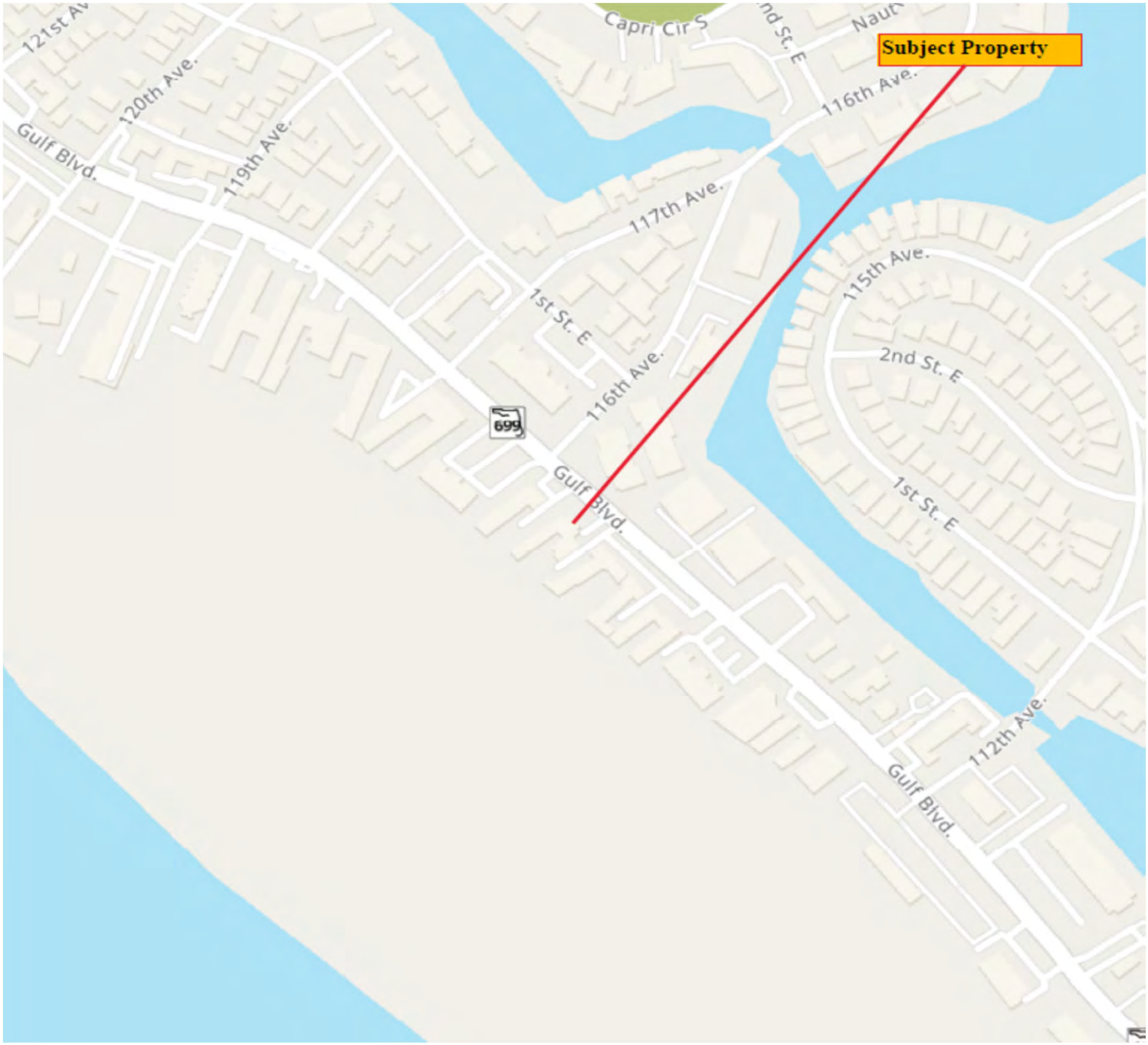
The recommendations provided herein are based in part upon project information provided to us and they apply only to the specific project and site discussed in this report. If the project information is incorrect or if additional information is available, the correct or additional information should be conveyed to us for review. Our recommendations may then be modified, if necessary. Experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team. We recommend that the owner retain **GCTL** to provide these services based upon our familiarity with the project, the subsurface conditions, and the intent of the recommendations and design criteria.

APPENDIX

FIGURES



General Site Vicinity Map Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 1	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



Local Site Vicinity Map Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 2	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2023 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 3	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2015 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 4	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2007 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 5	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



2002 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 6	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



1995 Aerial Photograph Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 7	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532



Field Exploration Plan Subject Property Pinellas County, Florida	Project No.: 30583 Scale: As Shown Figure No.: 8	Gulf Coast Testing Laboratory, Inc. 5671 70th Avenue North Pinellas Park, Florida PH: (727)-544-4080 FX: (727)-544-7532

USDA SOIL SURVEY INFORMATION



Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pinellas County, Florida
Survey Area Data: Version 20, Aug 28, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 20, 2020—Jan 28, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
16	Matlacha and St. Augustine soils and Urban land	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Pinellas County, Florida

16—Matlacha and St. Augustine soils and Urban land

Map Unit Setting

National map unit symbol: 134ch
Elevation: 0 to 80 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 70 to 77 degrees F
Frost-free period: 335 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Matlacha and similar soils: 33 percent
St. augustine and similar soils: 32 percent
Urban land: 31 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matlacha

Setting

Landform: Ridges on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy mine spoil or earthy fill

Typical profile

C - 0 to 42 inches: sand
A/Eb - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: B
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: No

Description of St. Augustine

Setting

Landform: Ridges on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy mine spoil or earthy fill

Typical profile

A - 0 to 8 inches: sand
C1 - 8 to 33 inches: loamy fine sand
C2 - 33 to 48 inches: fine sand
C3 - 48 to 63 inches: sandy loam
C4 - 63 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G154XB999FL)
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Unranked

Minor Components

Kesson

Percent of map unit: 2 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Yes

Wulfert

Percent of map unit: 2 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G154XB999FL)
Hydric soil rating: Yes

Data Source Information

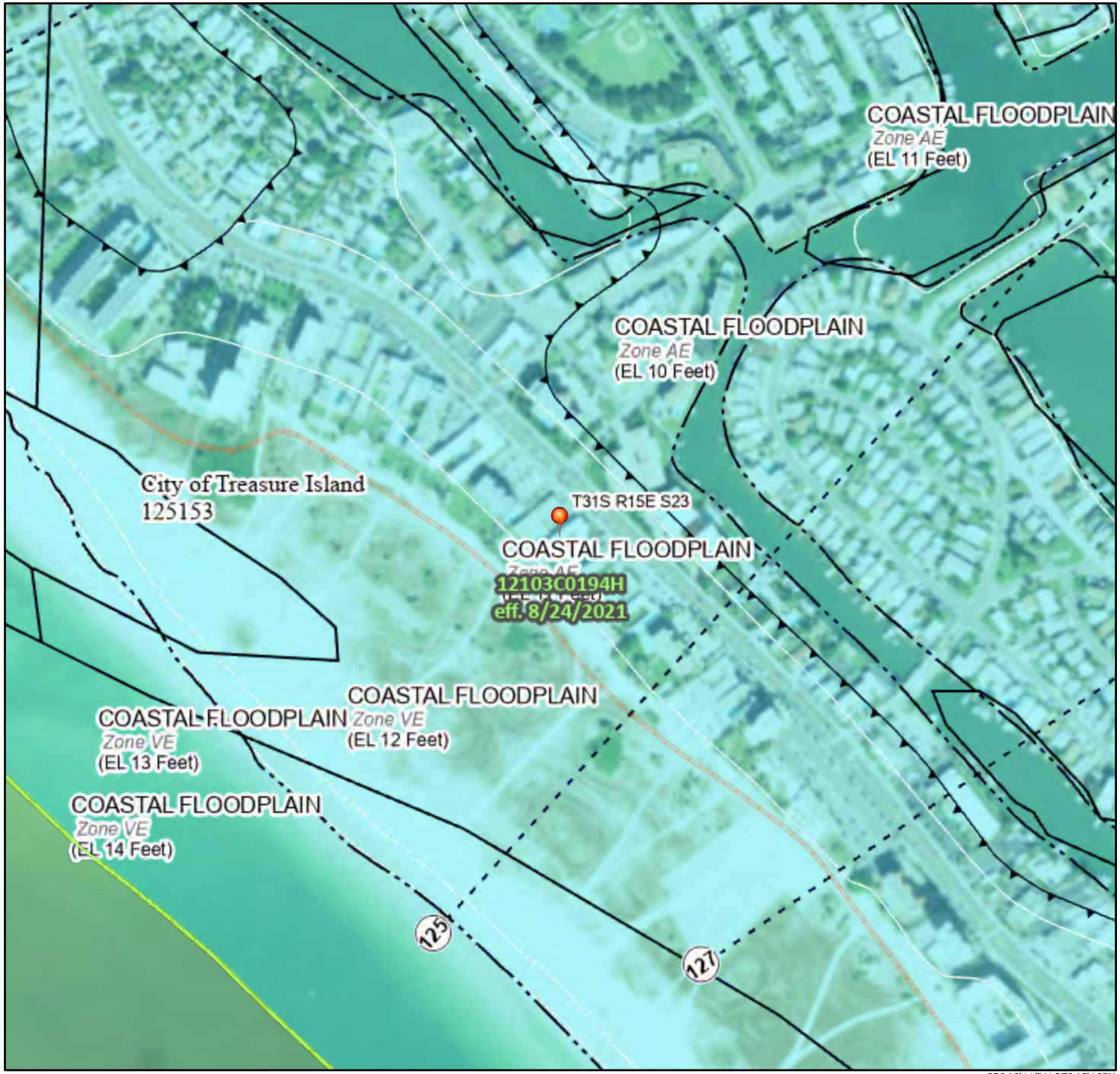
Soil Survey Area: Pinellas County, Florida
Survey Area Data: Version 20, Aug 28, 2023

FEMA FIRM MAP INFORMATION

National Flood Hazard Layer FIRMette

FEMA

82°46'48"W 27°46'42"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

82°46'11"W 27°46'10"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/28/2023 at 11:40 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

SOIL BORING LOGS

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. : 30583 | Project Name: Balboa Shores | Boring Number: B-1 Page 1 of 2
Site Location: Pinellas County, FL | Start Date: 12/05/23
Drilling Method: MR | Completion Date: 12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
0	SS	0 - 1.0	3-6	9	**Light Gray Fine SAND (SP) Trace Marine Shell Fragments**	
	SS	1.0 - 2.0	7-7	14		
	SS	2.0 - 3.0	4-3	7		
	SS	3.0 - 4.0	2-3	5		
5	SS	4.0 - 5.0	4-3	7		
	SS	5.0 - 6.0	3-4	7		
	SS	6.0 - 7.0	4-7	11		
	SS	7.0 - 8.0	12-17	29		**Groundwater Encountered 5.0 Feet BLS**
	SS	8.0 - 9.0	8-5	13		
10	SS	9.0 - 10.0	4-5	9		
15	SS	13.5 - 15.0	4-4-4	8		
20	SS	18.5 - 20.0	WH/12"-1	1	**Gray Silty SAND (SM) Trace Marine Shell Fragments**	
25	SS	23.5 - 25.0	WH	WH		
30	SS	28.5 - 30.0	WH/12"-4	4		
35	SS	33.5 - 35.0	1/12"-1	1		
40	SS	38.5 - 40.0	2-2-3	5		
45	SS	43.5 - 45.0	8-8-11	19	**Light Brown Fine SAND (SP) With Marine Shell Fragments**	
50	SS	48.5 - 50.0	6-6-4	10		

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. : 30583

Project Name: Balboa Shores
Site Location: Pinellas County, FL
Drilling Method: MR

Boring Number: B-1 Page 2 of 2
Start Date: 12/05/23
Completion Date: 12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
51					**Light Brown Fine SAND (SP) With Marine Shell Fragments**	
55	SS	53.5 - 55.0	6-2-2	4		**Groundwater Encountered 4.0 Feet BLS**
60	SS	58.5 - 60.0	1-2-3	5	**Olive Gray CLAY (CH)**	
65	SS	63.5 - 65.0	3-4-4	8		
70	SS	68.5 - 70.0	3-4-6	10		
75	SS	73.5 - 75.0	WR	WR	**Gray Silty SAND (SM)**	
80	SS	78.5 - 80.0	3-5-7	12	**Olive Gray CLAY (CH)**	
85	SS	83.5 - 85.0	10-13-14	27		**EOB 90 Feet BLS** **Boring Bentonite Sealed**
90	SS	88.5 - 90.0	16-19-25	44		

(HA) = HAND AUGER
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(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. :	30583	Project Name:	Balboa Shores	Boring Number:	B-2 Page 1 of 2
		Site Location:	Pinellas County, FL	Start Date:	12/05/23
		Drilling Method:	MR	Completion Date:	12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
0	SS	0 - 1.0	4-5	9	**Pale Brown Fine SAND (SP) Trace Marine Shell Fragments**	
	SS	1.0 - 2.0	5-3	8		
	SS	2.0 - 3.0	3-3	6		
	SS	3.0 - 4.0	4-4	8		
5	SS	4.0 - 5.0	2-2	4		
	SS	5.0 - 6.0	3-4	7		
	SS	6.0 - 7.0	1-3	4		
	SS	7.0 - 8.0	3-5	8		**Groundwater Encountered 5.0 Feet BLS**
	SS	8.0 - 9.0	6-2	8		
10	SS	9.0 - 10.0	1/12"	1		
15	SS	13.5 - 15.0	5-4-3	7	**Gray Silty SAND (SM) Trace Marine Shell Fragments**	
20	SS	18.5 - 20.0	WH	WH		
25	SS	23.5 - 25.0	WH	WH		
30	SS	28.5 - 30.0	WH-1-4	5		
35	SS	33.5 - 35.0	1/12"-1	1		
40	SS	38.5 - 40.0	3-2-3	5		
45	SS	43.5 - 45.0	14-9-10	19	**Light Brown to Dark Gray Fine SAND (SP) With Marine Shell Fragments**	
50	SS	48.5 - 50.0	1/12"-1	1	**Gray Silty SAND (SM)**	

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

GULF COAST TESTING LABORATORY INC.

5671 70th Avenue North
Pinellas Park, FL 33781

Soil Boring Log

GCTL Project No. :	30583	Project Name:	Balboa Shores	Boring Number:	B-2 Page 2 of 2
		Site Location:	Pinellas County, FL	Start Date:	12/05/23
		Drilling Method:	MR	Completion Date:	12/05/23

FEET (BLS)	SAMPLE TYPE	SAMPLE INTERVAL (BLS)	BLOW COUNT	N-Value	MATERIAL DESCRIPTION	COMMENTS
51					**Gray Silty SAND (SM)**	
55	SS	53.5 - 55.0	2-2-4	6		**Groundwater Encountered 5.0 Feet BLS**
60	SS	58.5 - 60.0	3-2-5	7		
65	SS	63.5 - 65.0	9-9-11	20	**Olive Gray CLAY (CH)**	
70	SS	68.5 - 70.0	4-6-9	15		
75	SS	73.5 - 75.0	50/5"	50/5"		
80	SS	78.5 - 80.0	11-22-21	43		
					EOB 80 Feet BLS	
					Boring Grout Sealed	

(HA) = HAND AUGER
(MR) = MUD ROTARY
(SS) = SPLIT SPOON
(WR) = WEIGHT OF ROD
(WH) = WEIGHT OF HAMMER

(BLS) = BELOW LAND SURFACE
(EOB) = END OF BORING
(NR) = NOT RECORDED
(NA) = NOT APPLICABLE

SITE PHOTOGRAPHS



Photograph No. 1: View of soil boring operations at boring B-1.



Photograph No. 2: View of soil boring operations at boring B-2.

STATIC PILE BEARING CAPACITY ANALYSES

General Information:
====================
Input file: .....30583\Boring B2 Pile Capacity Input.in
Project number: 30583
Job name: Balboa Shores Boring B-2
Engineer: DRS
Units: English

Analysis Information:
=====================
Analysis Type: SPT

Soil Information:
==========
Boring date: 12/5/23, Boring Number: B-2
Station number: Offset:

Ground Elevation: 0.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.00

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	9.00	1.00	2- Clay and silty sand
3	10.00	1.00	2- Clay and silty sand
4	15.00	7.00	2- Clay and silty sand
5	20.00	0.00	2- Clay and silty sand
6	25.00	0.00	2- Clay and silty sand
7	30.00	5.00	2- Clay and silty sand
8	35.00	1.00	2- Clay and silty sand
9	40.00	5.00	2- Clay and silty sand
10	42.00	19.00	3- Clean sand
11	45.00	19.00	3- Clean sand
12	47.00	1.00	2- Clay and silty sand
13	50.00	1.00	2- Clay and silty sand
14	52.00	6.00	1- Plastic Clay
15	55.00	6.00	1- Plastic Clay
16	60.00	7.00	1- Plastic Clay
17	62.00	7.00	2- Clay and silty sand
18	62.10	20.00	1- Plastic Clay
19	65.00	20.00	1- Plastic Clay
20	70.00	15.00	1- Plastic Clay
21	75.00	100.00	1- Plastic Clay
22	80.00	43.00	1- Plastic Clay
23	85.00	27.00	1- Plastic Clay
24	90.00	44.00	1- Plastic Clay
25	91.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	0.00	-9.00	9.00	7.00	3-Clean Sand
2	-9.00	-42.00	33.00	2.45	2-Clay and Silty Sand
3	-42.00	-47.00	5.00	19.00	3-Clean Sand
4	-47.00	-52.00	5.00	1.00	2-Clay and Silty Sand
5	-52.00	-62.00	10.00	6.20	1-Plastic Clay
6	-62.00	-62.10	0.10	7.00	2-Clay and Silty Sand
7	-62.10	-91.00	28.90	39.00	1-Plastic Clay
8	-91.00	-91.00	0.00	0.00	5-

Driven Pile Data:
==========
Pile unit weight = 145.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
14.00	40.00	-40.00
14.00	41.00	-41.00
14.00	42.00	-42.00
14.00	43.00	-43.00
14.00	44.00	-44.00
14.00	45.00	-45.00
14.00	46.00	-46.00
14.00	47.00	-47.00
14.00	48.00	-48.00
14.00	49.00	-49.00
14.00	50.00	-50.00
14.00	51.00	-51.00
14.00	52.00	-52.00
14.00	53.00	-53.00
14.00	54.00	-54.00
14.00	55.00	-55.00
14.00	56.00	-56.00
14.00	57.00	-57.00
14.00	58.00	-58.00
14.00	59.00	-59.00
14.00	60.00	-60.00
14.00	61.00	-61.00
14.00	62.00	-62.00
14.00	63.00	-63.00
14.00	64.00	-64.00
14.00	65.00	-65.00
14.00	66.00	-66.00
14.00	67.00	-67.00
14.00	68.00	-68.00
14.00	69.00	-69.00
14.00	70.00	-70.00
14.00	71.00	-71.00
14.00	72.00	-72.00
14.00	73.00	-73.00
14.00	74.00	-74.00
14.00	75.00	-75.00
14.00	76.00	-76.00
14.00	77.00	-77.00
14.00	78.00	-78.00
14.00	79.00	-79.00
14.00	80.00	-80.00
14.00	81.00	-81.00
14.00	82.00	-82.00
14.00	83.00	-83.00
14.00	84.00	-84.00
14.00	85.00	-85.00

Driven Pile Capacity:
==========

Section Type: Square
Pile Width: 14.00 (in)

Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
40.00	14.0	18.15	11.71	29.86	14.93	53.28
41.00	14.0	19.38	14.27	33.65	16.82	62.19
42.00	14.0	20.91	15.07	35.97	17.99	66.10
43.00	14.0	22.59	13.80	36.39	18.20	64.00
44.00	14.0	24.28	11.87	36.15	18.07	59.89
45.00	14.0	25.96	9.96	35.92	17.96	55.84
46.00	14.0	27.22	8.49	35.71	17.86	52.70
47.00	14.0	27.64	0.14	27.78	13.89	28.06
48.00	14.0	27.64	0.16	27.81	13.90	28.13
49.00	14.0	27.64	0.29	27.93	13.97	28.50
50.00	14.0	27.64	0.51	28.16	14.08	29.18
51.00	14.0	27.83	0.84	28.67	14.33	30.34
52.00	14.0	29.10	5.99	35.08	17.54	47.05
53.00	14.0	30.55	4.62	35.17	17.59	44.42
54.00	14.0	32.01	3.27	35.27	17.64	41.80
55.00	14.0	33.46	2.08	35.54	17.77	39.71
56.00	14.0	34.94	1.60	36.54	18.27	39.74
57.00	14.0	36.46	1.80	38.26	19.13	41.85
58.00	14.0	38.02	2.21	40.23	20.12	44.65
59.00	14.0	39.64	2.84	42.48	21.24	48.16
60.00	14.0	41.29	3.46	44.75	22.37	51.66
61.00	14.0	42.92	3.97	46.89	23.45	54.84
62.00	14.0	44.44	4.33	48.77	24.38	57.42
63.00	14.0	48.39	4.41	52.80	26.40	61.63
64.00	14.0	52.39	4.59	56.98	28.49	66.17
65.00	14.0	56.53	4.74	61.27	30.64	70.76
66.00	14.0	60.63	4.81	65.45	32.72	75.07
67.00	14.0	64.57	5.09	69.66	34.83	79.83
68.00	14.0	68.33	5.73	74.06	37.03	85.51
69.00	14.0	71.92	6.74	78.66	39.33	92.13
70.00	14.0	75.33	8.10	83.43	41.72	99.63
71.00	14.0	79.02	9.65	88.67	44.34	107.97
72.00	14.0	83.44	10.97	94.41	47.20	116.36
73.00	14.0	88.58	11.94	100.52	50.26	124.39
74.00	14.0	94.45	12.57	107.03	53.51	132.17
75.00	14.0	101.06	12.88	113.94	56.97	139.70
76.00	14.0	108.01	13.01	121.02	60.51	147.04
77.00	14.0	114.90	13.11	128.01	64.00	154.22
78.00	14.0	121.74	13.17	134.91	67.45	161.25
79.00	14.0	128.52	13.20	141.72	70.86	168.12
80.00	14.0	135.25	13.16	148.41	74.20	174.72
81.00	14.0	141.81	12.92	154.73	77.36	180.57
82.00	14.0	148.07	12.63	160.69	80.35	185.94
83.00	14.0	154.03	12.38	166.41	83.20	191.17
84.00	14.0	159.69	12.18	171.88	85.94	196.24
85.00	14.0	165.06	12.08	177.14	88.57	201.31

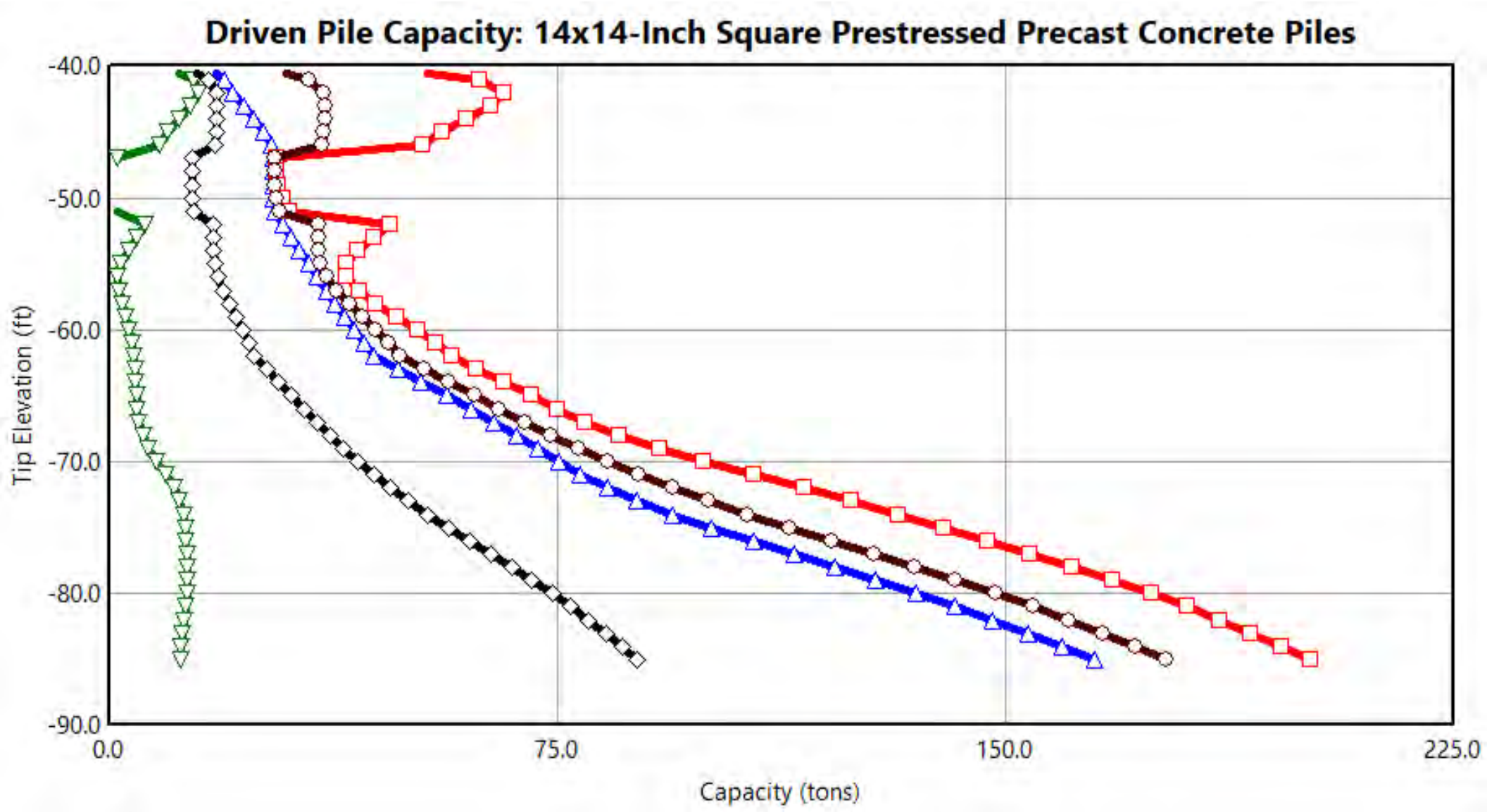
NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.

2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.

3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.

4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
   EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.


Driven Pile Capacity: 14x14-Inch Square Prestressed Precast Concrete Piles
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
Tip Elevation (ft)
0.0
75.0
150.0
225.0
Capacity (tons)

LATERAL PILE CAPACITY ANALYSES

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================================================================================

                  LPile Plus for Windows, Version 2012-06.037

               Analysis of Individual Piles and Drilled Shafts
              Subjected to Lateral Loading Using the p-y Method

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================================================================================

This copy of LPile is licensed to:

Don Stites, PE
Odessa, FL

Serial Number of Security Device:        160773735
Company Name Stored in Security Device:  Don Stites


--------------------------------------------------------------------------------
                            Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:        C:\Documents\! Gulf Coast Engineering\2023 Projects\30583
Balboa Shores 11580 Gulf Boulevard Treasure Island\
Name of input data file:       Balboa Shores 14 Inch SPPC Pile.lp6d
Name of output report file:    Balboa Shores 14 Inch SPPC Pile.lp6o
Name of plot output file:      Balboa Shores 14 Inch SPPC Pile.lp6p
Name of runtime messeage file: Balboa Shores 14 Inch SPPC Pile.lp6r


--------------------------------------------------------------------------------
                          Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  December 7, 2023     Time:  20:44:14


--------------------------------------------------------------------------------
                               Problem Title
--------------------------------------------------------------------------------

Project Name: Balboa Shores
Job Number: 30583
Client: ATM Arvilla, LLC
Engineer: DRS
Description: 14x14 Inch Square Precast Prestressed Concrete Piles
```

Program Options

Engineering units are US Customary Units: pounds, inches, feet

Basic Program Options:

This analysis computes pile response to lateral loading and will compute nonlinear moment-curvature and nominal moment capacity for section types with nonlinear properties.

Computation Options:
- Analysis does not use p-y multipliers (individual pile or shaft only)
- Analysis assumes no shear resistance at pile tip
- Analysis for fixed-length pile or shaft only
- No computation of foundation stiffness matrix values
- Report pile response for full length of pile
- Analysis assumes no loading by soil movements acting on pile
- No p-y curves to be computed and reported for user-specified depths

Solution Control Parameters:

- Number of pile increments	=	100	
- Maximum number of iterations allowed	=	100	
- Deflection tolerance for convergence	=	1.0000E-05	in
- Maximum allowable deflection	=	100.0000	in

Pile Response Output Options:
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (nodal spacing of output points) = 1

Pile Structural Properties and Geometry

Total number of pile sections	=	1
Total length of pile	=	40.00 ft
Depth of ground surface below top of pile	=	2.00 ft

Pile diameter values used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile.

Point	Depth X ft	Pile Diameter in
1	0.00000	14.0000000
2	40.000000	14.0000000

Input Structural Properties:

Pile Section No. 1:

Section Type = Square Solid Prestressed Pile

Section Length	=	40.00000000 ft
Pile Width	=	14.00000000 in
Corner Chamfer	=	1.50000000 in

Ground Slope and Pile Batter Angles

Ground Slope Angle	=	0.000 degrees
	=	0.000 radians
Pile Batter Angle	=	0.000 degrees
	=	0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 5 layers

Layer 1 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	2.00000 ft
Distance from top of pile to bottom of layer	=	9.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	33.00000 deg.
Friction angle at bottom of layer	=	33.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 2 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	9.00000 ft
Distance from top of pile to bottom of layer	=	42.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	28.00000 deg.
Friction angle at bottom of layer	=	28.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 3 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	42.00000 ft
Distance from top of pile to bottom of layer	=	47.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	36.00000 deg.
Friction angle at bottom of layer	=	36.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 4 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	47.00000 ft
Distance from top of pile to bottom of layer	=	52.00000 ft
Effective unit weight at top of layer	=	56.00000 pcf
Effective unit weight at bottom of layer	=	56.00000 pcf
Friction angle at top of layer	=	28.00000 deg.
Friction angle at bottom of layer	=	28.00000 deg.
Subgrade k at top of layer	=	0.0000 pci
Subgrade k at bottom of layer	=	0.0000 pci

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

Layer 5 is stiff clay with water-induced erosion

Distance from top of pile to top of layer	=	52.00000	ft
Distance from top of pile to bottom of layer	=	80.00000	ft
Effective unit weight at top of layer	=	58.00000	pcf
Effective unit weight at bottom of layer	=	58.00000	pcf
Undrained cohesion at top of layer	=	400.00000	psf
Undrained cohesion at bottom of layer	=	400.00000	psf
Epsilon-50 at top of layer	=	0.0000	
Epsilon-50 at bottom of layer	=	0.0000	
Subgrade k at top of layer	=	0.0000	pci
Subgrade k at bottom of layer	=	0.0000	pci

NOTE: Internal default values for Epsilon-50 will be computed for the above soil layer.

NOTE: Internal default values for subgrade k will be computed for the above soil layer.

(Depth of lowest soil layer extends 40.00 ft below pile tip)

Summary of Soil Properties

Layer Num.	Layer Soil Type (p-y Curve Criteria)	Layer Depth ft	Effective Unit Wt. pcf	Undrained Cohesion psf	Angle of Friction deg.	Strain Factor Epsilon 50	kpy pci
1	Sand (Reese, et al.)	2.000	56.000	--	33.000	--	default
		9.000	56.000	--	33.000	--	default
2	Sand (Reese, et al.)	9.000	56.000	--	28.000	--	default
		42.000	56.000	--	28.000	--	default
3	Sand (Reese, et al.)	42.000	56.000	--	36.000	--	default
		47.000	56.000	--	36.000	--	default
4	Sand (Reese, et al.)	47.000	56.000	--	28.000	--	default
		52.000	56.000	--	28.000	--	default
5	Stiff Clay with Free Water	52.000	58.000	400.000	--	default	default
		80.000	58.000	400.000	--	default	default

Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 5

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 4000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
2	1	V = 6000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
3	1	V = 8000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
4	1	V = 10000.00000 lbs	M = 0.0000 in-lbs	160000.	Yes
5	1	V = 12000. lbs	M = 0.0000 in-lbs	160000.	Yes

V = perpendicular shear force applied to pile head
M = bending moment applied to pile head
y = lateral deflection relative to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applie to pile head
Axial thrust is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions of Square Prestressed Pile Section:

Length of Section	=	40.000 ft
Pile Width	=	14.000 in
Corner Chamfer	=	1.500 in

Prestressing Strand Details:

Strand Type	=	PCI 270
Yield Stress, fpu	=	270. ksi

Stress-strain curve for reinforcement defined ssing PCI 270 Lo-lax equation
If eps > 0.008 fpu = 268 - 0.075/(eps-0.0065) < 0.98 fpu (ksi)

Number of Reinforcing Strands	=	5
Cross-sectional Area of Single Strand	=	0.153 sq. in.
Concrete Cover Thickness Over Strands	=	3.000 in

Prestressing Strand Geometry:

Strand No.	Diameter in	Area Sq. in	X in	Y in
1	0.500	0.153	-3.750	-3.750
2	0.500	0.153	3.750	-3.750
3	0.500	0.153	3.750	3.750
4	0.500	0.153	-3.750	3.750
5	0.500	0.153	0.000	0.000

Computation of Loss of Prestress:

Initial Prestressing Force	=	144.550 kips
Fraction of Loss of Prestress	=	0.100
Effective Prestressing Force	=	130.095 kips
Area of Concrete, Ac	=	190.735 Sq. in
Area of Steel, As	=	0.765 Sq. in
Stress in Concrete After Losses, f_pc	=	0.682 ksi
Stress in Steel After Losses	=	-170.059 ksi
Compressive Strain in Concrete	=	0.0001692
Tensile Strain in Steel	=	-0.0060735

Estimated Structural Capacities Computed Using PCI Equations:

Nom. Axial Cap., Pn = (0.85 f'c - 0.60 f_pc) Ag	=	735.505 kips
Unfac. Axial Load Cap. N = (0.33 f'c - 0.27 f_pc) Ag	=	280.708 kips
Axial Capacity in Tension, Nt = As fpu	=	-206.550 kips
Nom. Moment Capacity, Mn = 0.37 D As fpu	=	1069.929 in-kip

Note: The above value of nominal moment capacity is based on equations that assume a concrete compressive strength of 6,000 psi (41.4 MPa), a prestressing level after losses of 700 psi (4.83 MPa), and an axial thrust loading of zero. When different values for these factors are input, the estimated value of Mn may differ greatly from the capacity computed by LPile and should be considered only as an approximate check.

Concrete Properties:

Compressive Strength of Concrete	=	5.00000000 ksi
Modulus of Elasticity of Concrete	=	4030.50865276 ksi
Modulus of Rupture of Prestressed Concrete	=	-0.28284273 ksi
Compression Strain at Peak Stress	=	0.00210892
Tensile Strain at Fracture of Concrete	=	-0.00006052
Maximum Coarse Aggregate Size	=	0.75000000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 1

Number	Axial Thrust Force kips
1	160.000

Definitions of Run Messages and Notes:

C = concrete in section has cracked in tension.
Y = stress in reinforcing steel has reached yield stress.
T = ACI 318-08 criteria for tension-controlled section met, tensile strain in reinforcement exceeds 0.005 while simultaneously compressive strain in concrete more than than 0.003. See ACI 318-08, Section 10.3.4.
Z = depth of tensile zone in concrete section is less than 10 percent of section depth.

Bending Stiffness (EI) = Computed Bending Moment / Curvature.
Position of neutral axis is measured from edge of compression side of pile.
Compressive stresses and strains are positive in sign.
Tensile stresses and strains are negative in sign.

Axial Thrust Force = 160.000 kips

Bending Curvature rad/in.	Bending Moment in-kip	Bending Stiffness kip-in2	Depth to N Axis in	Max Comp Strain in/in	Max Tens Strain in/in	Max Concrete Stress ksi	Max Steel Stress ksi	Run Msg
0.000001250	11.4943139	9195451.	281.3536384	0.0005209	0.0003342	1.5282468	-163.5686244	
0.000002500	26.7002088	10680084.	144.1845859	0.0005297	0.0003255	1.5624662	-163.8149522	
0.000003750	41.9054436	11174785.	98.4651779	0.0005385	0.0003167	1.5965690	-164.0608943	
0.000005000	57.1096757	11421935.	75.6081813	0.0005473	0.0003080	1.6305546	-164.3064506	
0.000006250	72.3125624	11570010.	61.8961493	0.0005561	0.0002994	1.6644220	-164.5516211	
0.000007500	87.5137615	11668502.	52.7565998	0.0005649	0.0002907	1.6981705	-164.7964059	
0.000008750	102.7129292	11738620.	46.2298977	0.0005737	0.0002820	1.7317993	-165.0408046	
0.0000100	117.9097232	11790972.	41.3362254	0.0005826	0.0002734	1.7653076	-165.2848172	
0.0000113	133.1038007	11831449.	37.5312397	0.0005915	0.0002647	1.7986947	-165.5284440	
0.0000125	148.2948188	11863586.	34.4883350	0.0006003	0.0002561	1.8319597	-165.7716846	
0.0000138	163.4824337	11889632.	31.9996712	0.0006092	0.0002475	1.8651019	-166.0145390	
0.0000150	178.6663028	11911087.	29.9266882	0.0006181	0.0002389	1.8981204	-166.2570072	
0.0000163	193.8460823	11928990.	28.1734599	0.0006270	0.0002303	1.9310144	-166.4990890	
0.0000175	209.0214287	11944082.	26.6714677	0.0006360	0.0002218	1.9637833	-166.7407844	
0.0000188	224.1919983	11956907.	25.3704646	0.0006449	0.0002132	1.9964260	-166.9820931	
0.0000200	239.3574472	11967872.	24.2327654	0.0006539	0.0002047	2.0289420	-167.2230152	
0.0000213	254.5174312	11977291.	23.2295518	0.0006629	0.0001961	2.0613303	-167.4635503	
0.0000225	269.6716061	11985405.	22.3384099	0.0006718	0.0001876	2.0935903	-167.7036985	
0.0000238	284.8196273	11992405.	21.5416444	0.0006808	0.0001791	2.1257210	-167.9434596	
0.0000250	299.9611501	11998446.	20.8250991	0.0006899	0.0001706	2.1577217	-168.1828333	
0.0000263	315.0958294	12003651.	20.1773140	0.0006989	0.0001622	2.1895916	-168.4218196	
0.0000275	330.2233200	12008121.	19.5889132	0.0007079	0.0001537	2.2213299	-168.6604182	
0.0000288	345.3432764	12011940.	19.0521509	0.0007170	0.0001452	2.2529358	-168.8986290	
0.0000300	360.4553527	12015178.	18.5605727	0.0007260	0.0001368	2.2844085	-169.1364517	
0.0000313	375.5592028	12017894.	18.1087566	0.0007351	0.0001284	2.3157472	-169.3738863	
0.0000325	390.6544804	12020138.	17.6921150	0.0007442	0.0001200	2.3469511	-169.6109323	
0.0000338	405.7408387	12021951.	17.3067399	0.0007533	0.0001116	2.3780193	-169.8475897	
0.0000350	420.8179306	12023369.	16.9492814	0.0007625	0.0001032	2.4089512	-170.0838582	
0.0000363	435.8854086	12024425.	16.6168518	0.0007716	0.0000949	2.4397459	-170.3197376	
0.0000375	450.9429249	12025145.	16.3069486	0.0007807	0.0000865	2.4704026	-170.5552275	
0.0000388	465.9901315	12025552.	16.0173920	0.0007899	0.0000782	2.5009204	-170.7903279	
0.0000400	481.0266797	12025667.	15.7462746	0.0007991	0.0000699	2.5312986	-171.0250383	
0.0000413	496.0522205	12025508.	15.4919206	0.0008083	0.0000615	2.5615364	-171.2593585	
0.0000425	511.0664046	12025092.	15.2528509	0.0008175	0.0000532	2.5916330	-171.4932882	
0.0000438	526.0688822	12024432.	15.0277557	0.0008267	0.0000450	2.6215875	-171.7268272	
0.0000450	541.0593030	12023540.	14.8154708	0.0008359	0.0000367	2.6513991	-171.9599751	
0.0000463	556.0373162	12022428.	14.6149576	0.0008452	0.0000284	2.6810671	-172.1927316	
0.0000475	571.0025708	12021107.	14.4252871	0.0008544	0.0000202	2.7105906	-172.4250964	
0.0000488	585.9547149	12019584.	14.2456255	0.0008637	0.0000120	2.7399689	-172.6570692	
0.0000513	615.8182461	12015966.	13.9134003	0.0008823	-0.000004438	2.7982861	-173.1198373	
0.0000538	645.6164156	12011468.	13.6130736	0.0009009	-0.0000208	2.8560070	-173.5810829	
0.0000563	675.3241502	12005763.	13.3403123	0.0009196	-0.0000371	2.9131111	-174.0409345	
0.0000588	704.9193607	11998627.	13.0915266	0.0009384	-0.0000534	2.9695796	-174.4995102	
0.0000613	731.3062611	11939694.	12.8535493	0.0009565	-0.0000702	3.0235392	-174.9746705	C
0.0000638	753.2857919	11816248.	12.6204768	0.0009738	-0.0000879	3.0741915	-175.4748313	C
0.0000663	773.6440933	11677647.	12.3997223	0.0009907	-0.0001060	3.1231717	-175.9849468	C
0.0000688	792.5149634	11527490.	12.1900410	0.0010073	-0.0001244	3.1705388	-176.5048234	C
0.0000713	812.9838345	11410299.	12.0006172	0.0010243	-0.0001425	3.2184185	-177.0134443	C
0.0000738	829.1221741	11242335.	11.8097958	0.0010402	-0.0001615	3.2627292	-177.5519956	C
0.0000763	847.1445283	11110092.	11.6378989	0.0010566	-0.0001801	3.3078308	-178.0766135	C
0.0000788	861.0963014	10934556.	11.4632276	0.0010720	-0.0001998	3.3494037	-178.6319535	C
0.0000813	877.1135682	10795244.	11.3063636	0.0010879	-0.0002189	3.3920020	-179.1709493	C
0.0000838	884.0396341	10555697.	11.1257190	0.0011010	-0.0002407	3.4266684	-179.7890595	C
0.0000863	898.2267111	10414223.	10.9811587	0.0011164	-0.0002604	3.4667630	-180.3442118	C
0.0000888	911.8348925	10274196.	10.8429867	0.0011315	-0.0002802	3.5059362	-180.9038056	C
0.0000913	924.9255079	10136170.	10.7108457	0.0011466	-0.0003001	3.5442429	-181.4674045	C
0.0000938	937.5000901	10000001.	10.5841852	0.0011615	-0.0003202	3.5816811	-182.0351902	C
0.0000963	949.6151873	9866132.	10.4627337	0.0011763	-0.0003405	3.6183028	-182.6067363	C
0.0000988	961.2943284	9734626.	10.3461304	0.0011909	-0.0003608	3.6541294	-183.1819442	C
0.0001013	972.5734568	9605664.	10.2341102	0.0012054	-0.0003813	3.6891966	-183.7605432	C
0.0001038	983.4898229	9479420.	10.1264504	0.0012198	-0.0004019	3.7235428	-184.3422119	C
0.0001063	994.0247446	9355527.	10.0227245	0.0012341	-0.0004226	3.7571486	-184.9273097	C
0.0001088	1004.1504259	9233567.	9.9224859	0.0012483	-0.0004434	3.7899810	-185.5163805	C
0.0001113	1014.0006525	9114613.	9.8260067	0.0012624	-0.0004644	3.8221830	-186.1078148	C
0.0001138	1023.5952005	8998639.	9.7331056	0.0012764	-0.0004854	3.8537795	-186.7013982	C
0.0001163	1032.7725228	8884065.	9.6428304	0.0012902	-0.0005065	3.8845898	-187.2995201	C

0.0001188	1041.7559766	8772682.	9.5559044	0.0013040	-0.0005277	3.9148619	-187.8991710	C
0.0001213	1050.4771308	8663729.	9.4718244	0.0013177	-0.0005490	3.9445224	-188.5013743	C
0.0001238	1058.8985070	8556756.	9.3902137	0.0013313	-0.0005705	3.9735252	-189.1068502	C
0.0001263	1067.1941134	8453023.	9.3116508	0.0013448	-0.0005919	4.0020747	-189.7129889	C
0.0001288	1075.1141677	8350401.	9.2348634	0.0013582	-0.0006135	4.0298786	-190.3238083	C
0.0001313	1082.9591131	8251117.	9.1610051	0.0013716	-0.0006351	4.0572907	-190.9346126	C
0.0001338	1090.4781760	8153108.	9.0888220	0.0013849	-0.0006569	4.0840152	-191.5495566	C
0.0001363	1097.9216141	8058140.	9.0192715	0.0013981	-0.0006786	4.1103510	-192.1645639	C
0.0001388	1105.0633117	7964420.	8.9512212	0.0014112	-0.0007005	4.1360275	-192.7835494	C
0.0001413	1112.1599314	7873699.	8.8856842	0.0014243	-0.0007224	4.1613567	-193.4021148	C
0.0001438	1118.9399249	7783930.	8.8213293	0.0014373	-0.0007444	4.1860072	-194.0251763	C
0.0001463	1125.6960867	7697067.	8.7593608	0.0014503	-0.0007664	4.2103414	-194.6474614	C
0.0001488	1132.1758627	7611266.	8.6985293	0.0014631	-0.0007886	4.2340451	-195.2737575	C
0.0001588	1156.9734359	7288022.	8.4721620	0.0015142	-0.0008775	4.3246394	-197.7888967	C
0.0001688	1179.5833499	6990124.	8.2671569	0.0015643	-0.0009674	4.4080294	-200.3303313	C
0.0001788	1200.5553847	6716394.	8.0816347	0.0016138	-0.0010579	4.4849874	-202.8893572	C
0.0001888	1220.0437590	6463808.	7.9127237	0.0016628	-0.0011490	4.5557761	-205.4647774	C
0.0001988	1238.1210916	6229540.	7.7577984	0.0017111	-0.0012406	4.6205522	-208.0572582	C
0.0002088	1255.0384199	6012160.	7.6156141	0.0017590	-0.0013327	4.6796999	-210.6622411	C
0.0002188	1270.9319103	5809974.	7.4847852	0.0018065	-0.0014252	4.7334453	-213.2774778	C
0.0002288	1285.8380733	5621150.	7.3637406	0.0018537	-0.0015180	4.7818837	-215.9034990	C
0.0002388	1299.8625374	5444450.	7.2515190	0.0019005	-0.0016112	4.8251902	-218.5384818	C
0.0002488	1313.1424600	5278965.	7.1475680	0.0019472	-0.0017045	4.8635626	-221.1787952	C
0.0002588	1325.7791459	5123784.	7.0513610	0.0019938	-0.0017980	4.8971350	-223.8212542	C
0.0002688	1337.6872236	4977441.	6.9614695	0.0020401	-0.0018916	4.9258430	-226.4701800	C
0.0002788	1348.9921980	4839434.	6.8777375	0.0020864	-0.0019853	4.9498260	-229.1214093	C
0.0002888	1359.8163272	4709321.	6.8002070	0.0021328	-0.0020789	4.9691821	-231.7693315	C
0.0002988	1369.9639320	4585653.	6.7270294	0.0021789	-0.0021728	4.9837768	-234.4243859	C
0.0003088	1379.7440476	4468807.	6.6595887	0.0022254	-0.0022664	4.9937805	-237.0706668	C
0.0003188	1388.8889674	4357299.	6.5956715	0.0022716	-0.0023601	4.9990638	-239.7233840	C
0.0003288	1397.6110953	4251289.	6.5367560	0.0023182	-0.0024535	4.9990549	-242.3656668	C
0.0003388	1405.7312938	4149760.	6.4818302	0.0023649	-0.0025468	4.9988662	-245.0030159	C
0.0003488	1413.3020002	4052479.	6.4305494	0.0024119	-0.0026398	4.9984486	-246.3168250	C
0.0003588	1420.5011094	3959585.	6.3835639	0.0024593	-0.0027324	4.9977412	-247.5383524	C
0.0003688	1427.1762279	3870308.	6.3391663	0.0025068	-0.0028249	4.9999849	-248.6398874	C
0.0003788	1433.4437540	3784670.	6.2978751	0.0025545	-0.0029172	4.9997392	-249.6354400	C
0.0003888	1439.4161043	3702678.	6.2599126	0.0026028	-0.0030090	4.9990456	-250.5378919	C
0.0003988	1445.0871768	3624043.	6.2247292	0.0026513	-0.0031004	4.9976734	-251.3607236	C
0.0004088	1450.3400471	3548233.	6.1909971	0.0026998	-0.0031919	4.9999362	-252.1176842	C
0.0004188	1455.3306895	3475417.	6.1599867	0.0027487	-0.0032830	4.9991353	-252.8121282	C
0.0004288	1460.1091813	3405502.	6.1313530	0.0027980	-0.0033737	4.9971517	-253.4519225	C
0.0004388	1464.6504536	3338235.	6.1050277	0.0028478	-0.0034639	4.9997837	-254.0429939	C
0.0004488	1468.9311800	3273384.	6.0802928	0.0028978	-0.0035540	4.9981971	-254.5921867	C
0.0004588	1472.9702734	3210834.	6.0566443	0.0029477	-0.0036440	4.9999742	-255.1048134	C
0.0004688	1476.7889813	3150483.	6.0349840	0.0029981	-0.0037336	4.9986460	-255.5820424	C
0.0004788	1480.4733731	3092373.	6.0148841	0.0030489	-0.0038229	5.0000000	-256.0281097	C
0.0004888	1483.9369430	3036188.	5.9965769	0.0031001	-0.0039117	4.9987458	-256.4452262	C
0.0004988	1487.2875936	2982030.	5.9795706	0.0031515	-0.0040002	4.9997413	-256.8369352	C
0.0005088	1490.4156870	2929564.	5.9641084	0.0032035	-0.0040883	4.9985258	-257.2048179	C
0.0005188	1493.2649559	2878583.	5.9493239	0.0032554	-0.0041763	4.9999889	-257.5525325	C
0.0005288	1495.6261747	2828607.	5.9344475	0.0033071	-0.0042647	4.9977799	-257.8831123	C
0.0005388	1497.3077088	2779225.	5.9191803	0.0033582	-0.0043535	4.9997915	-258.1983565	C
0.0005488	1498.6086843	2730950.	5.9044693	0.0034093	-0.0044424	4.9960032	-258.4976138	C
0.0006088	1502.5128278	2468194.	5.8320530	0.0037195	-0.0049722	4.9971793	-260.0078811	C
0.0006688	1502.5128278	2246748.	5.8747495	0.0040980	-0.0054338	4.9999613	-261.0323516	C

Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	160.000	1476.925	0.00300000

Note note that the values of moment capacity in the table above are not factored by a strength reduction factor (phi-factor).

In ACI 318-08, the value of the strength reduction factor depends on whether the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.70).

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to ACI 318-08, Section 9.3.2.2 or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Load No.	Resistance Factor for Moment	Nominal Moment Capacity in-kip	Ultimate (Factored) Axial Thrust kips	Ultimate (Factored) Moment Capacity in-kip	Bending Stiffness at Ult. Mom. Cap. kip-in^2
1	0.65	1476.925	104.000	960.001	9749185.739
1	0.70	1476.925	112.000	1033.848	8870735.856
1	0.75	1476.925	120.000	1107.694	7930792.436

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 1

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 4000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.2391	-1.772E-07	4000.0000	-0.002660	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.2263	21243.	4000.0000	-0.002654	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.2136	42477.	4000.0000	-0.002640	0.000	1.119E+10	0.000	0.000	0.000
1.200	0.2010	63697.	4000.0000	-0.002617	0.000	1.149E+10	0.000	0.000	0.000
1.600	0.1885	84897.	4000.0000	-0.002587	0.000	1.165E+10	0.000	0.000	0.000
2.000	0.1762	106070.	4000.0000	-0.002547	0.000	1.175E+10	0.000	0.000	0.000
2.400	0.1640	127210.	3963.8682	-0.002500	0.000	1.182E+10	-15.0549	440.5347	0.000
2.800	0.1522	147963.	3851.2423	-0.002444	0.000	1.186E+10	-31.8726	1005.4393	0.000
3.200	0.1406	167936.	3658.3323	-0.002380	0.000	1.190E+10	-48.5066	1656.3113	0.000
3.600	0.1293	186739.	3389.5489	-0.002309	0.000	1.192E+10	-63.4864	2356.6288	0.000
4.000	0.1184	204022.	3054.4554	-0.002230	0.000	1.194E+10	-76.1359	3086.3884	0.000
4.400	0.1079	219488.	2666.0317	-0.002145	0.000	1.195E+10	-85.7073	3812.7632	0.000
4.800	0.0978	232911.	2238.4949	-0.002054	0.000	1.196E+10	-92.4330	4535.9228	0.000
5.200	0.0882	244133.	1787.7745	-0.001959	0.000	1.197E+10	-95.3672	5191.3611	0.000
5.600	0.0790	253082.	1331.6469	-0.001859	0.000	1.198E+10	-94.6859	5752.2664	0.000
6.000	0.0703	259772.	880.8471	-0.001756	0.000	1.198E+10	-93.1473	6357.1666	0.000
6.400	0.0622	264236.	448.8584	-0.001651	0.000	1.198E+10	-86.8480	6707.3870	0.000
6.800	0.0545	266618.	46.3126	-0.001545	0.000	1.198E+10	-80.8794	7126.1025	0.000
7.200	0.0473	267054.	-345.1382	-0.001438	0.000	1.198E+10	-82.2251	8340.8194	0.000
7.600	0.0407	265513.	-738.7297	-0.001331	0.000	1.198E+10	-81.7714	9650.2039	0.000
8.000	0.0345	262007.	-1130.1965	-0.001226	0.000	1.198E+10	-81.3398	11305.	0.000
8.400	0.0289	256546.	-1522.3152	-0.001122	0.000	1.198E+10	-82.0430	13624.	0.000
8.800	0.0238	249116.	-1914.4200	-0.001021	0.000	1.197E+10	-81.3340	16426.	0.000
9.200	0.0191	239735.	-2206.8281	-0.000923	0.000	1.197E+10	-40.5027	10174.	0.000
9.600	0.0149	229348.	-2383.5054	-0.000828	0.000	1.196E+10	-33.1128	10660.	0.000
10.000	0.0112	218126.	-2525.1361	-0.000739	0.000	1.195E+10	-25.9000	11145.	0.000
10.400	0.007820	206241.	-2632.7678	-0.000653	0.000	1.194E+10	-18.9465	11630.	0.000
10.800	0.004882	193855.	-2707.8149	-0.000573	0.000	1.193E+10	-12.3231	12116.	0.000
11.200	0.002319	181126.	-2752.0030	-0.000497	0.000	1.191E+10	-6.0886	12601.	0.000
11.600	0.000107	168200.	-2767.3135	-0.000427	0.000	1.190E+10	-0.2908	13086.	0.000
12.000	-0.001780	155215.	-2755.9313	-0.000362	0.000	1.188E+10	5.0334	13571.	0.000
12.400	-0.003366	142299.	-2720.1938	-0.000302	0.000	1.185E+10	9.8573	14057.	0.000
12.800	-0.004675	129565.	-2662.5434	-0.000246	0.000	1.182E+10	14.1637	14542.	0.000
13.200	-0.005732	117117.	-2585.4839	-0.000196	0.000	1.179E+10	17.9444	15027.	0.000
13.600	-0.006560	105046.	-2491.5397	-0.000151	0.000	1.175E+10	21.1990	15513.	0.000
14.000	-0.007181	93430.	-2383.2197	-0.000110	0.000	1.170E+10	23.9343	15998.	0.000
14.400	-0.007619	82336.	-2262.9849	-7.421E-05	0.000	1.164E+10	26.1635	16483.	0.000
14.800	-0.007894	71819.	-2133.2205	-4.233E-05	0.000	1.157E+10	27.9050	16968.	0.000
15.200	-0.008025	61922.	-1996.2124	-1.448E-05	0.000	1.148E+10	29.1818	17454.	0.000
15.600	-0.008033	52678.	-1854.1267	9.596E-06	0.000	1.136E+10	30.0206	17939.	0.000
16.000	-0.007933	44108.	-1708.9951	3.016E-05	0.000	1.122E+10	30.4509	18424.	0.000
16.400	-0.007743	36225.	-1562.7025	4.747E-05	0.000	1.103E+10	30.5043	18910.	0.000
16.800	-0.007478	29033.	-1416.9792	6.181E-05	0.000	1.079E+10	30.2137	19395.	0.000
17.200	-0.007150	22527.	-1273.3965	7.345E-05	0.000	1.044E+10	29.6124	19880.	0.000
17.600	-0.006772	16696.	-1133.3648	8.265E-05	0.000	9.952E+09	28.7341	20365.	0.000
18.000	-0.006356	11520.	-998.1354	8.968E-05	0.000	9.200E+09	27.6115	20851.	0.000
18.400	-0.005911	6975.8978	-868.8039	9.451E-05	0.000	9.195E+09	26.2766	21336.	0.000
18.800	-0.005449	3034.3651	-746.2868	9.712E-05	0.000	9.195E+09	24.7722	21821.	0.000
19.200	-0.004979	-337.6318	-631.2997	9.782E-05	0.000	9.195E+09	23.1391	22307.	0.000
19.600	-0.004510	-3176.3697	-524.3703	9.691E-05	0.000	9.195E+09	21.4149	22792.	0.000
20.000	-0.004049	-5520.4358	-425.8521	9.464E-05	0.000	9.195E+09	19.6344	23277.	0.000
20.400	-0.003601	-7409.9123	-335.9395	9.126E-05	0.000	9.195E+09	17.8292	23763.	0.000
20.800	-0.003173	-8885.6344	-254.6841	8.701E-05	0.000	9.195E+09	16.0273	24248.	0.000
21.200	-0.002766	-9988.5262	-182.0106	8.208E-05	0.000	9.195E+09	14.2534	24733.	0.000
21.600	-0.002385	-10759.	-117.7335	7.667E-05	0.000	9.195E+09	12.5288	25218.	0.000

22.000	-0.002030	-11237.	-61.5730	7.093E-05	0.000	9.195E+09	10.8714	25704.	0.000
22.400	-0.001704	-11459.	-13.1713	6.500E-05	0.000	9.195E+09	9.2960	26189.	0.000
22.800	-0.001406	-11463.	27.8927	5.902E-05	0.000	9.195E+09	7.8141	26674.	0.000
23.200	-0.001137	-11282.	62.0892	5.308E-05	0.000	9.195E+09	6.4345	27160.	0.000
23.600	-0.000897	-10948.	89.9240	4.728E-05	0.000	9.195E+09	5.1633	27645.	0.000
24.000	-0.000683	-10491.	111.9264	4.169E-05	0.000	9.195E+09	4.0043	28130.	0.000
24.400	-0.000496	-9937.8396	128.6379	3.636E-05	0.000	9.195E+09	2.9588	28615.	0.000
24.800	-0.000334	-9312.2203	140.6029	3.133E-05	0.000	9.195E+09	2.0265	29101.	0.000
25.200	-0.000196	-8636.1762	148.3593	2.665E-05	0.000	9.195E+09	1.2053	29586.	0.000
25.600	-7.846E-05	-7928.8999	152.4317	2.232E-05	0.000	9.195E+09	0.4916	30071.	0.000
26.000	1.875E-05	-7207.1194	153.3250	1.837E-05	0.000	9.195E+09	-0.1194	30557.	0.000
26.400	9.791E-05	-6485.2002	151.5188	1.480E-05	0.000	9.195E+09	-0.6332	31042.	0.000
26.800	0.000161	-5775.2700	147.4640	1.160E-05	0.000	9.195E+09	-1.0563	31527.	0.000
27.200	0.000209	-5087.3615	141.5794	8.764E-06	0.000	9.195E+09	-1.3956	32012.	0.000
27.600	0.000245	-4429.5681	134.2498	6.280E-06	0.000	9.195E+09	-1.6584	32498.	0.000
28.000	0.000270	-3808.2087	125.8245	4.130E-06	0.000	9.195E+09	-1.8522	32983.	0.000
28.400	0.000285	-3227.9962	116.6168	2.293E-06	0.000	9.195E+09	-1.9844	33468.	0.000
28.800	0.000292	-2692.2093	106.9047	7.480E-07	0.000	9.195E+09	-2.0624	33954.	0.000
29.200	0.000292	-2202.8603	96.9307	-5.296E-07	0.000	9.195E+09	-2.0934	34439.	0.000
29.600	0.000286	-1760.8607	86.9041	-1.564E-06	0.000	9.195E+09	-2.0843	34924.	0.000
30.000	0.000277	-1366.1786	77.0017	-2.380E-06	0.000	9.195E+09	-2.0417	35409.	0.000
30.400	0.000264	-1017.9883	67.3704	-3.003E-06	0.000	9.195E+09	-1.9714	35895.	0.000
30.800	0.000248	-714.8109	58.1291	-3.455E-06	0.000	9.195E+09	-1.8791	36380.	0.000
31.200	0.000230	-454.6424	49.3712	-3.760E-06	0.000	9.195E+09	-1.7700	36865.	0.000
31.600	0.000212	-235.0718	41.1671	-3.940E-06	0.000	9.195E+09	-1.6484	37351.	0.000
32.000	0.000193	-53.3861	33.5667	-4.015E-06	0.000	9.195E+09	-1.5184	37836.	0.000
32.400	0.000173	93.3365	26.6022	-4.005E-06	0.000	9.195E+09	-1.3835	38321.	0.000
32.800	0.000154	208.1461	20.2901	-3.926E-06	0.000	9.195E+09	-1.2465	38807.	0.000
33.200	0.000136	294.1521	14.6344	-3.795E-06	0.000	9.195E+09	-1.1100	39292.	0.000
33.600	0.000118	354.4658	9.6285	-3.626E-06	0.000	9.195E+09	-0.9758	39777.	0.000
34.000	0.000101	392.1550	5.2575	-3.431E-06	0.000	9.195E+09	-0.8454	40262.	0.000
34.400	8.481E-05	410.2081	1.5005	-3.222E-06	0.000	9.195E+09	-0.7200	40748.	0.000
34.800	6.987E-05	411.5079	-1.6679	-3.007E-06	0.000	9.195E+09	-0.6002	41233.	0.000
35.200	5.595E-05	398.8151	-4.2753	-2.796E-06	0.000	9.195E+09	-0.4862	41718.	0.000
35.600	4.303E-05	374.7593	-6.3502	-2.594E-06	0.000	9.195E+09	-0.3783	42204.	0.000
36.000	3.105E-05	341.8368	-7.9209	-2.407E-06	0.000	9.195E+09	-0.2761	42689.	0.000
36.400	1.992E-05	302.4156	-9.0136	-2.239E-06	0.000	9.195E+09	-0.1792	43174.	0.000
36.800	9.557E-06	258.7443	-9.6524	-2.092E-06	0.000	9.195E+09	-0.0869	43659.	0.000
37.200	-1.602E-07	212.9663	-9.8575	-1.969E-06	0.000	9.195E+09	0.001473	44145.	0.000
37.600	-9.344E-06	167.1369	-9.6454	-1.870E-06	0.000	9.195E+09	0.0869	44630.	0.000
38.000	-1.811E-05	123.2422	-9.0284	-1.794E-06	0.000	9.195E+09	0.1702	45115.	0.000
38.400	-2.657E-05	83.2199	-8.0142	-1.740E-06	0.000	9.195E+09	0.2524	45601.	0.000
38.800	-3.481E-05	48.9790	-6.6062	-1.706E-06	0.000	9.195E+09	0.3343	46086.	0.000
39.200	-4.294E-05	22.4198	-4.8041	-1.687E-06	0.000	9.195E+09	0.4166	46571.	0.000
39.600	-5.101E-05	5.4503	-2.6041	-1.680E-06	0.000	9.195E+09	0.5001	47056.	0.000
40.000	-5.906E-05	0.000	0.000	-1.678E-06	0.000	9.195E+09	0.5850	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.

The above values of total stress are computed for combined axial and bending stress in elastic

sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 1:

```
Pile-head deflection             =      0.2390995 inches
Computed slope at pile head      =     -0.0026599 radians
Maximum bending moment           =        267054. inch-lbs
Maximum shear force              =   4000.0000000 lbs
Depth of maximum bending moment  =     86.4000000 inches below pile head
Depth of maximum shear force     =      4.8000000 inches below pile head
Number of iterations             =             12
Number of zero deflection points =              3
```

Pile-head Deflection vs. Pile Length for Load Case 1

Boundary Condition Type 1, Shear and Moment

```
Shear      =           4000. lbs
Moment     =              0. in-lbs
Axial Load =         160000. lbs
```

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.2390995	267054.	4000.0000000
38.0000	0.2390173	266573.	4000.0000001
36.0000	0.2380946	266710.	4000.0000000
34.0000	0.2388123	266875.	4000.0000000
32.0000	0.2381034	266853.	4000.0000000
30.0000	0.2382825	266691.	4000.0000000
28.0000	0.2383854	266807.	4000.0000000
26.0000	0.2391480	266642.	4000.0000000
24.0000	0.2391019	266642.	4000.0000000
22.0000	0.2396538	266713.	4000.0000000
20.0000	0.2400208	266604.	4000.0000001
18.0000	0.2477804	265595.	4000.0000000
16.0000	0.2788393	263553.	4000.0000002
14.0000	0.3880173	264107.	-4901.7818047
12.0000	0.9623617	297336.	-8169.7642365

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 2

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 6000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.4309	-2.215E-07	6000.0000	-0.004523	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.4092	32273.	6000.0000	-0.004514	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.3876	64534.	6000.0000	-0.004492	0.000	1.150E+10	0.000	0.000	0.000
1.200	0.3661	96773.	6000.0000	-0.004459	0.000	1.171E+10	0.000	0.000	0.000
1.600	0.3448	128983.	6000.0000	-0.004413	0.000	1.182E+10	0.000	0.000	0.000
2.000	0.3237	161152.	6000.0000	-0.004354	0.000	1.189E+10	0.000	0.000	0.000
2.400	0.3030	193271.	5956.9247	-0.004283	0.000	1.193E+10	-17.9480	284.3521	0.000
2.800	0.2826	224916.	5822.0652	-0.004199	0.000	1.196E+10	-38.2434	649.5679	0.000
3.200	0.2627	255612.	5589.9329	-0.004102	0.000	1.198E+10	-58.4784	1068.6535	0.000
3.600	0.2432	284881.	5264.8139	-0.003994	0.000	1.199E+10	-76.9879	1519.3864	0.000
4.000	0.2243	312289.	4856.4499	-0.003875	0.000	1.200E+10	-93.1638	1993.5229	0.000
4.400	0.2060	337455.	4378.3533	-0.003745	0.000	1.201E+10	-106.0432	2470.6614	0.000
4.800	0.1884	360073.	3846.5893	-0.003605	0.000	1.202E+10	-115.5251	2943.7981	0.000
5.200	0.1714	379920.	3277.3794	-0.003458	0.000	1.202E+10	-121.6457	3406.4852	0.000
5.600	0.1552	396847.	2686.7263	-0.003303	0.000	1.202E+10	-124.4598	3849.8822	0.000
6.000	0.1397	410785.	2082.8976	-0.003141	0.000	1.202E+10	-127.1355	4368.1878	0.000
6.400	0.1250	421668.	1479.6960	-0.002975	0.000	1.202E+10	-124.1985	4768.5175	0.000
6.800	0.1111	429560.	891.4552	-0.002805	0.000	1.202E+10	-120.9019	5221.5248	0.000
7.200	0.0981	434535.	300.0209	-0.002633	0.000	1.202E+10	-125.5291	6142.8517	0.000
7.600	0.0859	436484.	-307.9739	-0.002459	0.000	1.202E+10	-127.8021	7144.1991	0.000
8.000	0.0745	435355.	-926.1833	-0.002285	0.000	1.202E+10	-129.7852	8364.0103	0.000
8.400	0.0639	431103.	-1556.7077	-0.002112	0.000	1.202E+10	-132.9333	9980.6711	0.000
8.800	0.0542	423655.	-2197.9943	-0.001941	0.000	1.202E+10	-134.2695	11889.	0.000
9.200	0.0453	412984.	-2750.6624	-0.001774	0.000	1.202E+10	-96.0089	10174.	0.000
9.600	0.0372	399974.	-3179.2107	-0.001612	0.000	1.202E+10	-82.5529	10660.	0.000
10.000	0.0298	384940.	-3543.5007	-0.001455	0.000	1.202E+10	-69.2346	11145.	0.000
10.400	0.0232	368192.	-3844.5848	-0.001305	0.000	1.202E+10	-56.2171	11630.	0.000
10.800	0.0173	350036.	-4084.2503	-0.001161	0.000	1.201E+10	-43.6435	12116.	0.000
11.200	0.0121	330767.	-4264.9240	-0.001025	0.000	1.201E+10	-31.6372	12601.	0.000
11.600	0.007447	310668.	-4389.5769	-0.000897	0.000	1.200E+10	-20.3016	13086.	0.000
12.000	0.003438	290005.	-4461.6311	-0.000777	0.000	1.199E+10	-9.7210	13571.	0.000
12.400	-1.322E-05	269030.	-4484.8685	-0.000665	0.000	1.199E+10	0.0387	14057.	0.000
12.800	-0.002947	247972.	-4463.3448	-0.000562	0.000	1.197E+10	8.9295	14542.	0.000
13.200	-0.005404	227044.	-4401.3067	-0.000466	0.000	1.196E+10	16.9197	15027.	0.000
13.600	-0.007424	206436.	-4303.1159	-0.000379	0.000	1.194E+10	23.9931	15513.	0.000
14.000	-0.009045	186317.	-4173.1785	-0.000300	0.000	1.192E+10	30.1474	15998.	0.000
14.400	-0.0103	166835.	-4015.8815	-0.000229	0.000	1.189E+10	35.3930	16483.	0.000
14.800	-0.0112	148116.	-3835.5357	-0.000165	0.000	1.186E+10	39.7511	16968.	0.000
15.200	-0.0119	130268.	-3636.3259	-0.000109	0.000	1.182E+10	43.2530	17454.	0.000
15.600	-0.0123	113375.	-3422.2684	-5.951E-05	0.000	1.178E+10	45.9377	17939.	0.000
16.000	-0.0125	97505.	-3197.1750	-1.644E-05	0.000	1.172E+10	47.8512	18424.	0.000
16.400	-0.0124	82707.	-2964.6247	2.059E-05	0.000	1.164E+10	49.0448	18910.	0.000
16.800	-0.0123	69013.	-2727.9409	5.199E-05	0.000	1.154E+10	49.5735	19395.	0.000
17.200	-0.0120	56439.	-2490.1764	7.820E-05	0.000	1.141E+10	49.4951	19880.	0.000
17.600	-0.0115	44987.	-2254.1027	9.968E-05	0.000	1.124E+10	48.8690	20365.	0.000
18.000	-0.0110	34647.	-2022.2058	0.000117	0.000	1.099E+10	47.7547	20851.	0.000
18.400	-0.0104	25395.	-1796.6869	0.000130	0.000	1.061E+10	46.2115	21336.	0.000
18.800	-0.009744	17199.	-1579.4668	0.000140	0.000	1.001E+10	44.2969	21821.	0.000
19.200	-0.009052	10017.	-1372.1951	0.000147	0.000	9.195E+09	42.0663	22307.	0.000
19.600	-0.008335	3800.1421	-1176.2521	0.000150	0.000	9.195E+09	39.5766	22792.	0.000
20.000	-0.007608	-1506.1986	-992.7183	0.000151	0.000	9.195E+09	36.8958	23277.	0.000
20.400	-0.006885	-5961.8566	-822.3603	0.000149	0.000	9.195E+09	34.0867	23763.	0.000
20.800	-0.006178	-9629.7666	-665.6555	0.000145	0.000	9.195E+09	31.2069	24248.	0.000
21.200	-0.005494	-12575.	-522.8188	0.000139	0.000	9.392E+09	28.3084	24733.	0.000
21.600	-0.004841	-14863.	-393.8381	0.000132	0.000	9.734E+09	25.4336	25218.	0.000

22.000	-0.004223	-16559.	-278.5210	0.000125	0.000	9.937E+09	22.6152	25704.	0.000
22.400	-0.003644	-17728.	-176.5292	0.000116	0.000	1.006E+10	19.8814	26189.	0.000
22.800	-0.003105	-18433.	-87.3995	0.000108	0.000	1.013E+10	17.2560	26674.	0.000
23.200	-0.002608	-18733.	-10.5633	9.907E-05	0.000	1.015E+10	14.7591	27160.	0.000
23.600	-0.002154	-18686.	54.6342	9.022E-05	0.000	1.015E+10	12.4065	27645.	0.000
24.000	-0.001742	-18347.	108.9155	8.145E-05	0.000	1.012E+10	10.2107	28130.	0.000
24.400	-0.001372	-17766.	153.0548	7.286E-05	0.000	1.006E+10	8.1807	28615.	0.000
24.800	-0.001043	-16989.	187.8623	6.454E-05	0.000	9.984E+09	6.3224	29101.	0.000
25.200	-0.000753	-16061.	214.1704	5.655E-05	0.000	9.881E+09	4.6393	29586.	0.000
25.600	-0.000500	-15020.	232.8215	4.896E-05	0.000	9.754E+09	3.1320	30071.	0.000
26.000	-0.000283	-13901.	244.6572	4.179E-05	0.000	9.601E+09	1.7995	30557.	0.000
26.400	-9.879E-05	-12736.	250.5094	3.507E-05	0.000	9.420E+09	0.6389	31042.	0.000
26.800	5.396E-05	-11550.	251.1921	2.881E-05	0.000	9.206E+09	-0.3544	31527.	0.000
27.200	0.000178	-10369.	247.4958	2.309E-05	0.000	9.195E+09	-1.1858	32012.	0.000
27.600	0.000276	-9209.8601	240.1709	1.798E-05	0.000	9.195E+09	-1.8663	32498.	0.000
28.000	0.000350	-8090.5041	229.9127	1.347E-05	0.000	9.195E+09	-2.4080	32983.	0.000
28.400	0.000405	-7023.3849	217.3571	9.523E-06	0.000	9.195E+09	-2.8235	33468.	0.000
28.800	0.000442	-6018.5036	203.0794	6.119E-06	0.000	9.195E+09	-3.1256	33954.	0.000
29.200	0.000464	-5083.2222	187.5936	3.222E-06	0.000	9.195E+09	-3.3269	34439.	0.000
29.600	0.000473	-4222.5542	171.3532	7.930E-07	0.000	9.195E+09	-3.4399	34924.	0.000
30.000	0.000471	-3439.4496	154.7530	-1.207E-06	0.000	9.195E+09	-3.4768	35409.	0.000
30.400	0.000461	-2735.0714	138.1314	-2.818E-06	0.000	9.195E+09	-3.4489	35895.	0.000
30.800	0.000444	-2109.0596	121.7731	-4.083E-06	0.000	9.195E+09	-3.3670	36380.	0.000
31.200	0.000422	-1559.7788	105.9135	-5.040E-06	0.000	9.195E+09	-3.2412	36865.	0.000
31.600	0.000396	-1084.5488	90.7418	-5.730E-06	0.000	9.195E+09	-3.0804	37351.	0.000
32.000	0.000367	-679.8555	76.4061	-6.191E-06	0.000	9.195E+09	-2.8929	37836.	0.000
32.400	0.000336	-341.5410	63.0170	-6.457E-06	0.000	9.195E+09	-2.6859	38321.	0.000
32.800	0.000305	-64.9734	50.6527	-6.564E-06	0.000	9.195E+09	-2.4659	38807.	0.000
33.200	0.000273	154.8063	39.3630	-6.540E-06	0.000	9.195E+09	-2.2382	39292.	0.000
33.600	0.000242	322.9566	29.1739	-6.415E-06	0.000	9.195E+09	-2.0073	39777.	0.000
34.000	0.000212	444.7298	20.0920	-6.215E-06	0.000	9.195E+09	-1.7769	40262.	0.000
34.400	0.000183	525.3860	12.1081	-5.962E-06	0.000	9.195E+09	-1.5498	40748.	0.000
34.800	0.000155	570.1252	5.2014	-5.676E-06	0.000	9.195E+09	-1.3280	41233.	0.000
35.200	0.000128	584.0376	-0.6573	-5.375E-06	0.000	9.195E+09	-1.1131	41718.	0.000
35.600	0.000103	572.0703	-5.5023	-5.073E-06	0.000	9.195E+09	-0.9056	42204.	0.000
36.000	7.937E-05	539.0075	-9.3700	-4.783E-06	0.000	9.195E+09	-0.7059	42689.	0.000
36.400	5.709E-05	489.4652	-12.2964	-4.514E-06	0.000	9.195E+09	-0.5135	43174.	0.000
36.800	3.603E-05	427.8961	-14.3153	-4.275E-06	0.000	9.195E+09	-0.3277	43659.	0.000
37.200	1.605E-05	358.6047	-15.4560	-4.070E-06	0.000	9.195E+09	-0.1476	44145.	0.000
37.600	-3.039E-06	285.7693	-15.7424	-3.902E-06	0.000	9.195E+09	0.0283	44630.	0.000
38.000	-2.141E-05	213.4703	-15.1917	-3.771E-06	0.000	9.195E+09	0.2012	45115.	0.000
38.400	-3.924E-05	145.7218	-13.8140	-3.678E-06	0.000	9.195E+09	0.3728	45601.	0.000
38.800	-5.671E-05	86.5046	-11.6124	-3.617E-06	0.000	9.195E+09	0.5445	46086.	0.000
39.200	-7.397E-05	39.7983	-8.5832	-3.584E-06	0.000	9.195E+09	0.7176	46571.	0.000
39.600	-9.112E-05	9.6105	-4.7170	-3.571E-06	0.000	9.195E+09	0.8933	47056.	0.000
40.000	-0.000108	0.000	0.000	-3.569E-06	0.000	9.195E+09	1.0721	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 2:

Pile-head deflection	=	0.4309134 inches
Computed slope at pile head	=	-0.0045226 radians
Maximum bending moment	=	436484. inch-lbs
Maximum shear force	=	6000.0000000 lbs
Depth of maximum bending moment	=	91.2000000 inches below pile head
Depth of maximum shear force	=	4.8000000 inches below pile head
Number of iterations	=	12
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 2

Boundary Condition Type 1, Shear and Moment

Shear = 6000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.4309134	436484.	6000.0000000
38.0000	0.4307067	435938.	6000.0000000
36.0000	0.4282584	436120.	6000.0000000
34.0000	0.4305183	435918.	6000.0000000
32.0000	0.4296533	436125.	6000.0000001
30.0000	0.4287901	435991.	6000.0000002
28.0000	0.4301456	436021.	6000.0000000
26.0000	0.4311049	435794.	6000.0000001
24.0000	0.4310234	435975.	6000.0000005
22.0000	0.4318431	435923.	6000.0000003
20.0000	0.4341337	435515.	6000.0000004
18.0000	0.4550667	433230.	6000.0000001
16.0000	0.5319299	429468.	-6584.8531626
14.0000	0.7900981	430953.	-8703.4555949

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 3

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 8000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.6423	3.545E-07	8000.0000	-0.006525	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.6110	43411.	8000.0000	-0.006514	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.5798	86805.	8000.0000	-0.006484	0.000	1.166E+10	0.000	0.000	0.000
1.200	0.5488	130171.	8000.0000	-0.006440	0.000	1.182E+10	0.000	0.000	0.000
1.600	0.5180	173497.	8000.0000	-0.006379	0.000	1.190E+10	0.000	0.000	0.000
2.000	0.4875	216769.	8000.0000	-0.006300	0.000	1.195E+10	0.000	0.000	0.000
2.400	0.4575	259974.	7949.6749	-0.006205	0.000	1.198E+10	-20.9688	219.9991	0.000
2.800	0.4280	302616.	7792.0358	-0.006092	0.000	1.200E+10	-44.7141	501.5018	0.000
3.200	0.3990	344135.	7520.9158	-0.005963	0.000	1.201E+10	-68.2525	821.0438	0.000
3.600	0.3707	383976.	7141.9423	-0.005817	0.000	1.202E+10	-89.6531	1160.7829	0.000
4.000	0.3432	421633.	6666.7161	-0.005656	0.000	1.202E+10	-108.3578	1515.6132	0.000
4.400	0.3164	456665.	6110.4255	-0.005481	0.000	1.203E+10	-123.4299	1872.3620	0.000
4.800	0.2906	488712.	5491.0975	-0.005293	0.000	1.203E+10	-134.6234	2224.0035	0.000
5.200	0.2656	517508.	4824.5902	-0.005092	0.000	1.202E+10	-143.0880	2585.7534	0.000
5.600	0.2417	542849.	4123.7047	-0.004880	0.000	1.202E+10	-148.9476	2958.3237	0.000
6.000	0.2188	564592.	3392.3241	-0.004659	0.000	1.202E+10	-155.7943	3418.2665	0.000
6.400	0.1969	582572.	2642.2754	-0.004430	0.000	1.202E+10	-156.7260	3819.7210	0.000
6.800	0.1762	596762.	1889.8237	-0.004194	0.000	1.202E+10	-156.7956	4270.3640	0.000
7.200	0.1567	607157.	1118.1403	-0.003954	0.000	1.202E+10	-164.7391	5046.8636	0.000
7.600	0.1383	613569.	314.9896	-0.003710	0.000	1.202E+10	-169.9070	5897.6755	0.000
8.000	0.1211	615879.	-511.2885	-0.003465	0.000	1.202E+10	-174.3755	6913.7641	0.000
8.400	0.1050	613983.	-1361.2179	-0.003219	0.000	1.202E+10	-179.7617	8215.8416	0.000
8.800	0.0902	607756.	-2231.7120	-0.002975	0.000	1.202E+10	-182.9442	9739.6032	0.000
9.200	0.0765	597128.	-3057.4309	-0.002734	0.000	1.202E+10	-161.1054	10113.	0.000
9.600	0.0639	582605.	-3784.7206	-0.002499	0.000	1.202E+10	-141.9320	10660.	0.000
10.000	0.0525	564633.	-4417.7762	-0.002270	0.000	1.202E+10	-121.8412	11145.	0.000
10.400	0.0421	543680.	-4955.1392	-0.002048	0.000	1.202E+10	-102.0601	11630.	0.000
10.800	0.0328	520210.	-5398.8394	-0.001836	0.000	1.202E+10	-82.8150	12116.	0.000
11.200	0.0245	494672.	-5751.9246	-0.001634	0.000	1.203E+10	-64.3038	12601.	0.000
11.600	0.0171	467501.	-6018.3219	-0.001442	0.000	1.203E+10	-46.6951	13086.	0.000
12.000	0.0107	439110.	-6202.7000	-0.001261	0.000	1.202E+10	-30.1291	13571.	0.000
12.400	0.005026	409891.	-6310.3343	-0.001091	0.000	1.202E+10	-14.7185	14057.	0.000
12.800	0.000181	380207.	-6346.9770	-0.000933	0.000	1.202E+10	-0.5493	14542.	0.000
13.200	-0.003935	350394.	-6318.7328	-0.000787	0.000	1.201E+10	12.3177	15027.	0.000
13.600	-0.007378	320757.	-6231.9420	-0.000653	0.000	1.201E+10	23.8451	15513.	0.000
14.000	-0.0102	291570.	-6093.0725	-0.000531	0.000	1.200E+10	34.0172	15998.	0.000
14.400	-0.0125	263078.	-5908.6201	-0.000420	0.000	1.198E+10	42.8380	16483.	0.000
14.800	-0.0142	235493.	-5685.0191	-0.000320	0.000	1.197E+10	50.3291	16968.	0.000
15.200	-0.0155	208994.	-5428.5628	-0.000231	0.000	1.194E+10	56.5277	17454.	0.000
15.600	-0.0165	183733.	-5145.3342	-0.000152	0.000	1.192E+10	61.4842	17939.	0.000
16.000	-0.0170	159831.	-4841.1468	-8.240E-05	0.000	1.188E+10	65.2605	18424.	0.000
16.400	-0.0172	137384.	-4521.4961	-2.228E-05	0.000	1.184E+10	67.9273	18910.	0.000
16.800	-0.0172	116459.	-4191.5203	2.928E-05	0.000	1.179E+10	69.5626	19395.	0.000
17.200	-0.0170	97101.	-3855.9708	7.288E-05	0.000	1.172E+10	70.2497	19880.	0.000
17.600	-0.0165	79330.	-3519.1913	0.000109	0.000	1.162E+10	70.0751	20365.	0.000
18.000	-0.0159	63149.	-3185.1059	0.000139	0.000	1.149E+10	69.1272	20851.	0.000
18.400	-0.0152	48540.	-2857.2141	0.000162	0.000	1.130E+10	67.4945	21336.	0.000
18.800	-0.0144	35470.	-2538.5928	0.000180	0.000	1.101E+10	65.2644	21821.	0.000
19.200	-0.0135	23893.	-2231.9056	0.000193	0.000	1.053E+10	62.5220	22307.	0.000
19.600	-0.0125	13747.	-1939.4158	0.000202	0.000	9.578E+09	59.3488	22792.	0.000
20.000	-0.0115	4963.3462	-1663.0053	0.000207	0.000	9.195E+09	55.8222	23277.	0.000
20.400	-0.0105	-2536.0438	-1404.1494	0.000208	0.000	9.195E+09	52.0344	23763.	0.000
20.800	-0.009517	-8835.5452	-1163.8837	0.000205	0.000	9.195E+09	48.0764	24248.	0.000
21.200	-0.008545	-14024.	-942.8250	0.000199	0.000	9.619E+09	44.0314	24733.	0.000
21.600	-0.007607	-18192.	-741.2298	0.000191	0.000	1.010E+10	39.9665	25218.	0.000

22.000	-0.006710	-21433.	-559.0684	0.000182	0.000	1.037E+10	35.9341	25704.	0.000
22.400	-0.005861	-23839.	-396.0743	0.000171	0.000	1.053E+10	31.9801	26189.	0.000
22.800	-0.005065	-25499.	-251.7751	0.000160	0.000	1.062E+10	28.1445	26674.	0.000
23.200	-0.004323	-26502.	-125.5224	0.000149	0.000	1.067E+10	24.4608	27160.	0.000
23.600	-0.003639	-26932.	-16.5205	0.000137	0.000	1.069E+10	20.9567	27645.	0.000
24.000	-0.003012	-26870.	76.1460	0.000124	0.000	1.069E+10	17.6544	28130.	0.000
24.400	-0.002444	-26392.	153.4862	0.000112	0.000	1.066E+10	14.5707	28615.	0.000
24.800	-0.001933	-25569.	216.5786	0.000101	0.000	1.062E+10	11.7178	29101.	0.000
25.200	-0.001477	-24468.	266.5493	8.941E-05	0.000	1.056E+10	9.1033	29586.	0.000
25.600	-0.001074	-23148.	304.5518	7.855E-05	0.000	1.048E+10	6.7310	30071.	0.000
26.000	-0.000723	-21665.	331.7492	6.825E-05	0.000	1.039E+10	4.6012	30557.	0.000
26.400	-0.000419	-20068.	349.2989	5.855E-05	0.000	1.027E+10	2.7111	31042.	0.000
26.800	-0.000161	-18401.	358.3387	4.950E-05	0.000	1.012E+10	1.0555	31527.	0.000
27.200	5.595E-05	-16704.	359.9762	4.111E-05	0.000	9.953E+09	-0.3731	32012.	0.000
27.600	0.000234	-15009.	355.2796	3.339E-05	0.000	9.753E+09	-1.5838	32498.	0.000
28.000	0.000376	-13344.	345.2703	2.633E-05	0.000	9.518E+09	-2.5868	32983.	0.000
28.400	0.000487	-11735.	330.9181	1.991E-05	0.000	9.242E+09	-3.3933	33468.	0.000
28.800	0.000568	-10198.	313.1376	1.421E-05	0.000	9.195E+09	-4.0152	33954.	0.000
29.200	0.000623	-8750.2770	292.7727	9.260E-06	0.000	9.195E+09	-4.4702	34439.	0.000
29.600	0.000657	-7401.8217	270.5801	5.044E-06	0.000	9.195E+09	-4.7768	34924.	0.000
30.000	0.000671	-6160.4561	247.2277	1.504E-06	0.000	9.195E+09	-4.9534	35409.	0.000
30.400	0.000671	-5030.7463	223.2976	-1.416E-06	0.000	9.195E+09	-5.0175	35895.	0.000
30.800	0.000658	-4014.6237	199.2889	-3.777E-06	0.000	9.195E+09	-4.9861	36380.	0.000
31.200	0.000635	-3111.7707	175.6231	-5.637E-06	0.000	9.195E+09	-4.8747	36865.	0.000
31.600	0.000604	-2319.9834	152.6486	-7.055E-06	0.000	9.195E+09	-4.6980	37351.	0.000
32.000	0.000567	-1635.5076	130.6474	-8.087E-06	0.000	9.195E+09	-4.4692	37836.	0.000
32.400	0.000526	-1053.3461	109.8408	-8.789E-06	0.000	9.195E+09	-4.2002	38321.	0.000
32.800	0.000483	-567.5356	90.3963	-9.212E-06	0.000	9.195E+09	-3.9017	38807.	0.000
33.200	0.000438	-171.3922	72.4338	-9.405E-06	0.000	9.195E+09	-3.5827	39292.	0.000
33.600	0.000392	142.2749	56.0328	-9.413E-06	0.000	9.195E+09	-3.2511	39777.	0.000
34.000	0.000347	380.9807	41.2385	-9.276E-06	0.000	9.195E+09	-2.9132	40262.	0.000
34.400	0.000303	552.4129	28.0682	-9.032E-06	0.000	9.195E+09	-2.5744	40748.	0.000
34.800	0.000261	664.3089	16.5169	-8.715E-06	0.000	9.195E+09	-2.2386	41233.	0.000
35.200	0.000220	724.3614	6.5637	-8.352E-06	0.000	9.195E+09	-1.9086	41718.	0.000
35.600	0.000180	740.1493	-1.8241	-7.970E-06	0.000	9.195E+09	-1.5863	42204.	0.000
36.000	0.000143	719.0926	-8.6852	-7.589E-06	0.000	9.195E+09	-1.2725	42689.	0.000
36.400	0.000108	668.4285	-14.0611	-7.227E-06	0.000	9.195E+09	-0.9674	43174.	0.000
36.800	7.370E-05	595.2067	-17.9919	-6.897E-06	0.000	9.195E+09	-0.6704	43659.	0.000
37.200	4.134E-05	506.3006	-20.5134	-6.610E-06	0.000	9.195E+09	-0.3802	44145.	0.000
37.600	1.025E-05	408.4312	-21.6546	-6.371E-06	0.000	9.195E+09	-0.0953	44630.	0.000
38.000	-1.982E-05	308.2026	-21.4362	-6.184E-06	0.000	9.195E+09	0.1863	45115.	0.000
38.400	-4.912E-05	212.1427	-19.8691	-6.048E-06	0.000	9.195E+09	0.4666	45601.	0.000
38.800	-7.788E-05	126.7490	-16.9545	-5.960E-06	0.000	9.195E+09	0.7478	46086.	0.000
39.200	-0.000106	58.5335	-12.6838	-5.912E-06	0.000	9.195E+09	1.0317	46571.	0.000
39.600	-0.000135	14.0645	-7.0400	-5.893E-06	0.000	9.195E+09	1.3199	47056.	0.000
40.000	-0.000163	0.000	0.000	-5.889E-06	0.000	9.195E+09	1.6135	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 3:

Pile-head deflection	=	0.6423416 inches
Computed slope at pile head	=	-0.0065250 radians
Maximum bending moment	=	615879. inch-lbs
Maximum shear force	=	8000.0000000 lbs
Depth of maximum bending moment	=	96.0000000 inches below pile head
Depth of maximum shear force	=	19.2000000 inches below pile head
Number of iterations	=	12
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 3

Boundary Condition Type 1, Shear and Moment

Shear = 8000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.6423416	615879.	8000.0000000
38.0000	0.6420037	615203.	8000.0000001
36.0000	0.6395174	615305.	8000.0000001
34.0000	0.6419199	615218.	8000.0000001
32.0000	0.6412338	615330.	8000.0000000
30.0000	0.6401460	615337.	8000.0000001
28.0000	0.6418768	615189.	8000.0000001
26.0000	0.6427826	615102.	8000.0000000
24.0000	0.6427087	615073.	8000.0000000
22.0000	0.6438080	614974.	8000.0000003
20.0000	0.6499571	613913.	8000.0000003
18.0000	0.6876142	609346.	8000.0000004
16.0000	0.8224022	602150.	-9683.4504066
14.0000	1.4498801	643163.	-14024.

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 4

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 10000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	0.8773	3.102E-07	10000.0000	-0.008725	0.000	9.195E+09	0.000	0.000	0.000
0.400	0.8354	54700.	10000.0000	-0.008710	0.000	9.195E+09	0.000	0.000	0.000
0.800	0.7937	109379.	10000.0000	-0.008674	0.000	1.176E+10	0.000	0.000	0.000
1.200	0.7521	164023.	10000.0000	-0.008618	0.000	1.189E+10	0.000	0.000	0.000
1.600	0.7109	218617.	10000.0000	-0.008541	0.000	1.195E+10	0.000	0.000	0.000
2.000	0.6701	273143.	10000.0000	-0.008443	0.000	1.199E+10	0.000	0.000	0.000
2.400	0.6299	327585.	9946.5082	-0.008323	0.000	1.201E+10	-22.2883	169.8486	0.000
2.800	0.5902	381413.	9775.3364	-0.008181	0.000	1.202E+10	-49.0333	398.7512	0.000
3.200	0.5513	433994.	9472.1762	-0.008018	0.000	1.202E+10	-77.2834	672.8344	0.000
3.600	0.5133	484661.	9037.5482	-0.007835	0.000	1.203E+10	-103.8116	970.8282	0.000
4.000	0.4761	532789.	8487.5906	-0.007632	0.000	1.202E+10	-125.3374	1263.5722	0.000
4.400	0.4400	577865.	7844.3214	-0.007410	0.000	1.202E+10	-142.6914	1556.6187	0.000
4.800	0.4050	619476.	7128.9956	-0.007171	0.000	1.202E+10	-155.3610	1841.3597	0.000
5.200	0.3712	657317.	6358.5827	-0.006916	0.000	1.201E+10	-165.6444	2142.1614	0.000
5.600	0.3386	691141.	5544.2682	-0.006646	0.000	1.200E+10	-173.6533	2461.7206	0.000
6.000	0.3074	720751.	4687.1488	-0.006363	0.000	1.196E+10	-183.4798	2865.3748	0.000
6.400	0.2775	745912.	3796.8031	-0.006068	0.000	1.186E+10	-187.4976	3243.0808	0.000
6.800	0.2491	766520.	2889.1853	-0.005760	0.000	1.172E+10	-190.6765	3674.0747	0.000
7.200	0.2222	782495.	1947.2920	-0.005441	0.000	1.161E+10	-201.7790	4358.5662	0.000
7.600	0.1969	793572.	959.3980	-0.005114	0.000	1.152E+10	-209.8435	5116.2079	0.000
8.000	0.1731	799560.	-64.3878	-0.004782	0.000	1.149E+10	-216.7340	6009.2608	0.000
8.400	0.1510	800299.	-1122.4832	-0.004447	0.000	1.148E+10	-224.1391	7126.3825	0.000
8.800	0.1304	795616.	-2209.9781	-0.004114	0.000	1.151E+10	-228.9838	8427.2151	0.000
9.200	0.1115	785402.	-3245.7878	-0.003786	0.000	1.158E+10	-202.6036	8724.0089	0.000
9.600	0.0941	770271.	-4209.6858	-0.003465	0.000	1.170E+10	-199.0206	10154.	0.000
10.000	0.0782	750311.	-5123.1693	-0.003155	0.000	1.183E+10	-181.5976	11145.	0.000
10.400	0.0638	725934.	-5930.0104	-0.002857	0.000	1.195E+10	-154.5862	11630.	0.000
10.800	0.0508	697771.	-6608.6810	-0.002571	0.000	1.200E+10	-128.1932	12116.	0.000
11.200	0.0391	666440.	-7162.7909	-0.002299	0.000	1.201E+10	-102.6859	12601.	0.000
11.600	0.0287	632539.	-7597.1687	-0.002039	0.000	1.201E+10	-78.3048	13086.	0.000
12.000	0.0195	596639.	-7917.7050	-0.001793	0.000	1.202E+10	-55.2520	13571.	0.000
12.400	0.0115	559283.	-8131.1717	-0.001563	0.000	1.202E+10	-33.6925	14057.	0.000
12.800	0.004540	520980.	-8245.0461	-0.001347	0.000	1.202E+10	-13.7552	14542.	0.000
13.200	-0.001426	482200.	-8267.3417	-0.001147	0.000	1.203E+10	4.4653	15027.	0.000
13.600	-0.006469	443375.	-8206.4491	-0.000962	0.000	1.202E+10	20.9066	15513.	0.000
14.000	-0.0107	404896.	-8070.9865	-0.000793	0.000	1.202E+10	35.5361	15998.	0.000
14.400	-0.0141	367111.	-7869.6625	-0.000639	0.000	1.202E+10	48.3489	16483.	0.000
14.800	-0.0168	330328.	-7611.1511	-0.000499	0.000	1.201E+10	59.3642	16968.	0.000
15.200	-0.0189	294811.	-7303.9804	-0.000374	0.000	1.200E+10	68.6236	17454.	0.000
15.600	-0.0204	260785.	-6956.4339	-0.000263	0.000	1.198E+10	76.1874	17939.	0.000
16.000	-0.0214	228433.	-6576.4668	-0.000165	0.000	1.196E+10	82.1322	18424.	0.000
16.400	-0.0220	197904.	-6171.6342	-7.932E-05	0.000	1.193E+10	86.5480	18910.	0.000
16.800	-0.0222	169307.	-5749.0337	-5.363E-06	0.000	1.190E+10	89.5355	19395.	0.000
17.200	-0.0220	142721.	-5315.2599	5.769E-05	0.000	1.185E+10	91.2035	19880.	0.000
17.600	-0.0216	118192.	-4876.3719	0.000111	0.000	1.179E+10	91.6665	20365.	0.000
18.000	-0.0210	95738.	-4437.8709	0.000154	0.000	1.171E+10	91.0422	20851.	0.000
18.400	-0.0201	75352.	-4004.6898	0.000190	0.000	1.159E+10	89.4499	21336.	0.000
18.800	-0.0191	57002.	-3581.1910	0.000217	0.000	1.142E+10	87.0079	21821.	0.000
19.200	-0.0180	40639.	-3171.1743	0.000238	0.000	1.115E+10	83.8324	22307.	0.000
19.600	-0.0169	26193.	-2777.8910	0.000253	0.000	1.065E+10	80.0357	22792.	0.000
20.000	-0.0156	13583.	-2404.0657	0.000262	0.000	9.554E+09	75.7249	23277.	0.000
20.400	-0.0143	2712.2438	-2051.9231	0.000266	0.000	9.195E+09	71.0012	23763.	0.000
20.800	-0.0131	-6523.8351	-1723.1546	0.000265	0.000	9.195E+09	65.9857	24248.	0.000
21.200	-0.0118	-14237.	-1418.8794	0.000260	0.000	9.649E+09	60.7957	24733.	0.000
21.600	-0.0106	-20544.	-1139.7009	0.000251	0.000	1.030E+10	55.5287	25218.	0.000

22.000	-0.009386	-25564.	-885.8100	0.000241	0.000	1.062E+10	50.2592	25704.	0.000
22.400	-0.008257	-29418.	-657.0612	0.000228	0.000	1.080E+10	45.0528	26189.	0.000
22.800	-0.007192	-32223.	-453.0135	0.000215	0.000	1.091E+10	39.9670	26674.	0.000
23.200	-0.006195	-34097.	-272.9703	0.000200	0.000	1.097E+10	35.0509	27160.	0.000
23.600	-0.005269	-35151.	-116.0186	0.000185	0.000	1.100E+10	30.3456	27645.	0.000
24.000	-0.004417	-35495.	18.9335	0.000170	0.000	1.101E+10	25.8844	28130.	0.000
24.400	-0.003639	-35230.	133.1209	0.000154	0.000	1.101E+10	21.6937	28615.	0.000
24.800	-0.002935	-34454.	227.8884	0.000139	0.000	1.098E+10	17.7928	29101.	0.000
25.200	-0.002303	-33256.	304.6590	0.000124	0.000	1.094E+10	14.1950	29586.	0.000
25.600	-0.001741	-31720.	364.9068	0.000110	0.000	1.089E+10	10.9082	30071.	0.000
26.000	-0.001246	-29922.	410.1304	9.643E-05	0.000	1.082E+10	7.9350	30557.	0.000
26.400	-0.000815	-27931.	441.8312	8.355E-05	0.000	1.074E+10	5.2737	31042.	0.000
26.800	-0.000444	-25809.	461.4933	7.148E-05	0.000	1.064E+10	2.9189	31527.	0.000
27.200	-0.000129	-23611.	470.5673	6.027E-05	0.000	1.051E+10	0.8619	32012.	0.000
27.600	0.000134	-21384.	470.4559	4.993E-05	0.000	1.037E+10	-0.9084	32498.	0.000
28.000	0.000350	-19171.	462.5031	4.046E-05	0.000	1.019E+10	-2.4053	32983.	0.000
28.400	0.000523	-17006.	447.9853	3.186E-05	0.000	9.985E+09	-3.6438	33468.	0.000
28.800	0.000656	-14919.	428.1054	2.409E-05	0.000	9.741E+09	-4.6395	33954.	0.000
29.200	0.000754	-12933.	403.9890	1.714E-05	0.000	9.452E+09	-5.4090	34439.	0.000
29.600	0.000820	-11067.	376.6817	1.096E-05	0.000	9.195E+09	-5.9690	34924.	0.000
30.000	0.000859	-9334.0713	347.1452	5.638E-06	0.000	9.195E+09	-6.3379	35409.	0.000
30.400	0.000875	-7743.2456	316.2392	1.181E-06	0.000	9.195E+09	-6.5397	35895.	0.000
30.800	0.000870	-6299.9894	284.7100	-2.484E-06	0.000	9.195E+09	-6.5975	36380.	0.000
31.200	0.000851	-5006.2143	253.1960	-5.435E-06	0.000	9.195E+09	-6.5333	36865.	0.000
31.600	0.000818	-3860.9599	222.2339	-7.749E-06	0.000	9.195E+09	-6.3675	37351.	0.000
32.000	0.000776	-2860.8653	192.2665	-9.504E-06	0.000	9.195E+09	-6.1189	37836.	0.000
32.400	0.000727	-2000.6037	163.6501	-1.077E-05	0.000	9.195E+09	-5.8046	38321.	0.000
32.800	0.000673	-1273.2776	136.6636	-1.163E-05	0.000	9.195E+09	-5.4398	38807.	0.000
33.200	0.000615	-670.7737	111.5172	-1.213E-05	0.000	9.195E+09	-5.0379	39292.	0.000
33.600	0.000556	-184.0742	88.3611	-1.236E-05	0.000	9.195E+09	-4.6105	39777.	0.000
34.000	0.000497	196.4737	67.2945	-1.235E-05	0.000	9.195E+09	-4.1672	40262.	0.000
34.400	0.000438	480.9294	48.3743	-1.218E-05	0.000	9.195E+09	-3.7162	40748.	0.000
34.800	0.000380	679.5721	31.6232	-1.187E-05	0.000	9.195E+09	-3.2635	41233.	0.000
35.200	0.000324	802.7520	17.0376	-1.149E-05	0.000	9.195E+09	-2.8139	41718.	0.000
35.600	0.000270	860.7783	4.5947	-1.105E-05	0.000	9.195E+09	-2.3706	42204.	0.000
36.000	0.000218	863.8400	-5.7403	-1.060E-05	0.000	9.195E+09	-1.9356	42689.	0.000
36.400	0.000168	821.9589	-14.0087	-1.016E-05	0.000	9.195E+09	-1.5096	43174.	0.000
36.800	0.000120	744.9680	-20.2528	-9.755E-06	0.000	9.195E+09	-1.0922	43659.	0.000
37.200	7.419E-05	642.5153	-24.5114	-9.392E-06	0.000	9.195E+09	-0.6823	44145.	0.000
37.600	2.991E-05	524.0855	-26.8162	-9.088E-06	0.000	9.195E+09	-0.2781	44630.	0.000
38.000	-1.306E-05	399.0390	-27.1890	-8.847E-06	0.000	9.195E+09	0.1227	45115.	0.000
38.400	-5.503E-05	276.6606	-25.6398	-8.671E-06	0.000	9.195E+09	0.5227	45601.	0.000
38.800	-9.630E-05	166.2153	-22.1662	-8.555E-06	0.000	9.195E+09	0.9246	46086.	0.000
39.200	-0.000137	77.0056	-16.7535	-8.492E-06	0.000	9.195E+09	1.3307	46571.	0.000
39.600	-0.000178	18.4246	-9.3761	-8.467E-06	0.000	9.195E+09	1.7432	47056.	0.000
40.000	-0.000218	0.000	0.000	-8.462E-06	0.000	9.195E+09	2.1635	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 4:

Pile-head deflection	=	0.8772812 inches
Computed slope at pile head	=	-0.0087246 radians
Maximum bending moment	=	800299. inch-lbs
Maximum shear force	=	10000.0000000 lbs
Depth of maximum bending moment	=	100.8000000 inches below pile head
Depth of maximum shear force	=	0.000000 inches below pile head
Number of iterations	=	14
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 4

Boundary Condition Type 1, Shear and Moment

Shear = 10000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	0.8772812	800299.	10000.0000000
38.0000	0.8766666	799713.	10000.
36.0000	0.8731180	800277.	10000.
34.0000	0.8765595	800036.	10000.
32.0000	0.8755883	799968.	10000.
30.0000	0.8740958	799852.	10000.
28.0000	0.8764916	799720.	10000.
26.0000	0.8777500	799757.	10000.
24.0000	0.8775735	799774.	10000.
22.0000	0.8794831	799421.	10000.
20.0000	0.8898417	797812.	10000.
18.0000	0.9504133	792514.	-10477.
16.0000	1.1878420	795196.	-13278.

Computed Values of Pile Loading and Deflection
for Lateral Loading for Load Case Number 5

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 12000.000 lbs
Applied moment at pile head = 0.000 in-lbs
Axial thrust load on pile head = 160000.000 lbs

Depth X feet	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in^2	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Distrib. Lat. Load lb/inch
0.00	1.2488	-1.507E-06	12000.	-0.0123	0.000	9.195E+09	0.000	0.000	0.000
0.400	1.1899	67026.	12000.	-0.0123	0.000	9.195E+09	0.000	0.000	0.000
0.800	1.1311	134026.	12000.	-0.0122	0.000	1.183E+10	0.000	0.000	0.000
1.200	1.0726	200984.	12000.	-0.0121	0.000	1.194E+10	0.000	0.000	0.000
1.600	1.0145	267880.	12000.	-0.0121	0.000	1.198E+10	0.000	0.000	0.000
2.000	0.9569	334693.	12000.	-0.0119	0.000	1.201E+10	0.000	0.000	0.000
2.400	0.9000	401404.	11947.	-0.0118	0.000	1.202E+10	-22.2883	118.8714	0.000
2.800	0.8438	467478.	11775.	-0.0116	0.000	1.203E+10	-49.0334	278.9211	0.000
3.200	0.7885	532279.	11472.	-0.0114	0.000	1.202E+10	-77.2835	470.4359	0.000
3.600	0.7343	595136.	11035.	-0.0112	0.000	1.202E+10	-104.9773	686.2284	0.000
4.000	0.6812	655392.	10467.	-0.0109	0.000	1.201E+10	-131.5798	927.1971	0.000
4.400	0.6293	712415.	9776.9643	-0.0107	0.000	1.198E+10	-155.9402	1189.4068	0.000
4.800	0.5788	765626.	8977.6441	-0.0104	0.000	1.173E+10	-177.1098	1468.7047	0.000
5.200	0.5298	814516.	8076.1259	-0.0100	0.000	1.139E+10	-198.5228	1798.4745	0.000
5.600	0.4825	858569.	7094.8663	-0.009674	0.000	1.097E+10	-210.3354	2092.4321	0.000
6.000	0.4370	897486.	6052.7767	-0.009280	0.000	1.042E+10	-223.8686	2459.1282	0.000
6.400	0.3934	930929.	4961.1858	-0.008851	0.000	1.007E+10	-230.9609	2817.8694	0.000
6.800	0.3520	958709.	3839.6485	-0.008393	0.000	9.763E+09	-236.3463	3222.8818	0.000
7.200	0.3128	980682.	2675.6954	-0.007910	0.000	9.511E+09	-248.6341	3814.8048	0.000
7.600	0.2761	996546.	1460.5163	-0.007406	0.000	9.325E+09	-257.6905	4480.5416	0.000
8.000	0.2417	1006079.	204.7234	-0.006888	0.000	9.210E+09	-265.5565	5272.8094	0.000
8.400	0.2099	1009091.	-1089.9669	-0.006362	0.000	9.173E+09	-273.8978	6262.2582	0.000
8.800	0.1807	1005386.	-2417.3104	-0.005836	0.000	9.219E+09	-279.1621	7416.5665	0.000
9.200	0.1539	994848.	-3678.9288	-0.005319	0.000	9.346E+09	-246.5123	7687.5769	0.000
9.600	0.1296	978238.	-4850.9297	-0.004817	0.000	9.540E+09	-241.8215	8955.2702	0.000
10.000	0.1077	955678.	-5993.9589	-0.004337	0.000	9.797E+09	-234.4407	10451.	0.000
10.400	0.0880	927357.	-7068.2502	-0.003882	0.000	1.011E+10	-213.1806	11630.	0.000
10.800	0.0704	893786.	-8006.3761	-0.003457	0.000	1.046E+10	-177.7052	12116.	0.000
11.200	0.0548	855806.	-8778.0955	-0.003065	0.000	1.100E+10	-143.8446	12601.	0.000
11.600	0.0410	814225.	-9391.4375	-0.002707	0.000	1.140E+10	-111.7146	13086.	0.000
12.000	0.0288	769807.	-9855.0196	-0.002378	0.000	1.170E+10	-81.4446	13571.	0.000
12.400	0.0181	723269.	-10178.	-0.002075	0.000	1.196E+10	-53.1518	14057.	0.000
12.800	0.008888	675284.	-10370.	-0.001795	0.000	1.201E+10	-26.9265	14542.	0.000
13.200	0.000922	626471.	-10442.	-0.001534	0.000	1.201E+10	-2.8856	15027.	0.000
13.600	-0.005843	577400.	-10403.	-0.001294	0.000	1.202E+10	18.8836	15513.	0.000
14.000	-0.0115	528586.	-10266.	-0.001073	0.000	1.202E+10	38.3319	15998.	0.000
14.400	-0.0161	480494.	-10041.	-0.000872	0.000	1.203E+10	55.4463	16483.	0.000
14.800	-0.0199	433532.	-9739.3468	-0.000689	0.000	1.202E+10	70.2457	16968.	0.000
15.200	-0.0228	388055.	-9372.0911	-0.000525	0.000	1.202E+10	82.7775	17454.	0.000
15.600	-0.0249	344367.	-8949.9500	-0.000379	0.000	1.201E+10	93.1146	17939.	0.000
16.000	-0.0264	302718.	-8483.2325	-0.000250	0.000	1.200E+10	101.3510	18424.	0.000
16.400	-0.0273	263312.	-7981.7529	-0.000136	0.000	1.198E+10	107.5988	18910.	0.000
16.800	-0.0277	226303.	-7454.7532	-3.833E-05	0.000	1.196E+10	111.9844	19395.	0.000
17.200	-0.0277	191805.	-6910.8413	4.569E-05	0.000	1.193E+10	114.6455	19880.	0.000
17.600	-0.0273	159889.	-6357.9456	0.000117	0.000	1.188E+10	115.7277	20365.	0.000
18.000	-0.0266	130589.	-5803.2838	0.000175	0.000	1.183E+10	115.3814	20851.	0.000
18.400	-0.0256	103908.	-5253.3449	0.000223	0.000	1.174E+10	113.7598	21336.	0.000
18.800	-0.0244	79815.	-4713.8845	0.000261	0.000	1.162E+10	111.0154	21821.	0.000
19.200	-0.0231	58254.	-4189.9310	0.000290	0.000	1.144E+10	107.2986	22307.	0.000
19.600	-0.0216	39147.	-3685.8015	0.000310	0.000	1.111E+10	102.7554	22792.	0.000
20.000	-0.0201	22394.	-3205.1272	0.000324	0.000	1.044E+10	97.5256	23277.	0.000
20.400	-0.0185	7880.0052	-2750.8856	0.000331	0.000	9.195E+09	91.7418	23763.	0.000
20.800	-0.0169	-4523.1854	-2325.4119	0.000332	0.000	9.195E+09	85.5389	24248.	0.000
21.200	-0.0153	-14954.	-1930.3477	0.000327	0.000	9.746E+09	79.0712	24733.	0.000
21.600	-0.0138	-23557.	-1566.6533	0.000318	0.000	1.051E+10	72.4682	25218.	0.000

22.000	-0.0123	-30482.	-1234.7426	0.000306	0.000	1.084E+10	65.8279	25704.	0.000
22.400	-0.0109	-35880.	-934.5854	0.000291	0.000	1.102E+10	59.2376	26189.	0.000
22.800	-0.009497	-39901.	-665.7583	0.000275	0.000	1.113E+10	52.7737	26674.	0.000
23.200	-0.008218	-42694.	-427.4965	0.000257	0.000	1.119E+10	46.5021	27160.	0.000
23.600	-0.007028	-44400.	-218.7439	0.000238	0.000	1.123E+10	40.4782	27645.	0.000
24.000	-0.005929	-45160.	-38.2019	0.000219	0.000	1.124E+10	34.7477	28130.	0.000
24.400	-0.004923	-45104.	115.6248	0.000200	0.000	1.124E+10	29.3468	28615.	0.000
24.800	-0.004009	-44357.	244.3839	0.000181	0.000	1.123E+10	24.3029	29101.	0.000
25.200	-0.003186	-43036.	349.8356	0.000162	0.000	1.120E+10	19.6353	29586.	0.000
25.600	-0.002451	-41248.	433.8151	0.000144	0.000	1.116E+10	15.3561	30071.	0.000
26.000	-0.001802	-39093.	498.1986	0.000127	0.000	1.111E+10	11.4704	30557.	0.000
26.400	-0.001234	-36660.	544.8742	0.000110	0.000	1.105E+10	7.9777	31042.	0.000
26.800	-0.000742	-34031.	575.7145	9.501E-05	0.000	1.097E+10	4.8724	31527.	0.000
27.200	-0.000322	-31279.	592.5547	8.066E-05	0.000	1.087E+10	2.1444	32012.	0.000
27.600	3.249E-05	-28467.	597.1733	6.740E-05	0.000	1.076E+10	-0.2199	32498.	0.000
28.000	0.000326	-25650.	591.2766	5.526E-05	0.000	1.063E+10	-2.2371	32983.	0.000
28.400	0.000563	-22875.	576.4860	4.423E-05	0.000	1.047E+10	-3.9257	33468.	0.000
28.800	0.000750	-20183.	554.3298	3.427E-05	0.000	1.028E+10	-5.3061	33954.	0.000
29.200	0.000892	-17606.	526.2359	2.535E-05	0.000	1.005E+10	-6.3997	34439.	0.000
29.600	0.000993	-15171.	493.5292	1.741E-05	0.000	9.774E+09	-7.2281	34924.	0.000
30.000	0.001059	-12895.	457.4298	1.041E-05	0.000	9.446E+09	-7.8133	35409.	0.000
30.400	0.001093	-10795.	419.0542	4.319E-06	0.000	9.195E+09	-8.1765	35895.	0.000
30.800	0.001101	-8879.0681	379.4105	-8.162E-07	0.000	9.195E+09	-8.3417	36380.	0.000
31.200	0.001086	-7151.5873	339.3806	-5.000E-06	0.000	9.195E+09	-8.3374	36865.	0.000
31.600	0.001053	-5613.3342	299.7130	-8.332E-06	0.000	9.195E+09	-8.1907	37351.	0.000
32.000	0.001006	-4261.5447	261.0318	-1.091E-05	0.000	9.195E+09	-7.9265	37836.	0.000
32.400	0.000948	-3090.6724	223.8464	-1.283E-05	0.000	9.195E+09	-7.5675	38321.	0.000
32.800	0.000882	-2092.9153	188.5625	-1.418E-05	0.000	9.195E+09	-7.1342	38807.	0.000
33.200	0.000812	-1258.6902	155.4932	-1.506E-05	0.000	9.195E+09	-6.6447	39292.	0.000
33.600	0.000738	-577.0551	124.8702	-1.553E-05	0.000	9.195E+09	-6.1149	39777.	0.000
34.000	0.000663	-36.0747	96.8556	-1.569E-05	0.000	9.195E+09	-5.5579	40262.	0.000
34.400	0.000587	376.8657	71.5526	-1.561E-05	0.000	9.195E+09	-4.9850	40748.	0.000
34.800	0.000513	674.8007	49.0167	-1.533E-05	0.000	9.195E+09	-4.4049	41233.	0.000
35.200	0.000440	870.9753	29.2660	-1.493E-05	0.000	9.195E+09	-3.8245	41718.	0.000
35.600	0.000369	978.6837	12.2905	-1.445E-05	0.000	9.195E+09	-3.2486	42204.	0.000
36.000	0.000301	1011.1520	-1.9386	-1.393E-05	0.000	9.195E+09	-2.6802	42689.	0.000
36.400	0.000236	981.4630	-13.4611	-1.341E-05	0.000	9.195E+09	-2.1208	43174.	0.000
36.800	0.000173	902.5168	-22.3204	-1.291E-05	0.000	9.195E+09	-1.5706	43659.	0.000
37.200	0.000112	787.0230	-28.5578	-1.247E-05	0.000	9.195E+09	-1.0283	44145.	0.000
37.600	5.293E-05	647.5211	-32.2068	-1.210E-05	0.000	9.195E+09	-0.4921	44630.	0.000
38.000	-4.335E-06	496.4212	-33.2901	-1.180E-05	0.000	9.195E+09	0.0407	45115.	0.000
38.400	-6.035E-05	346.0611	-31.8162	-1.158E-05	0.000	9.195E+09	0.5734	45601.	0.000
38.800	-0.000116	208.7726	-27.7786	-1.144E-05	0.000	9.195E+09	1.1090	46086.	0.000
39.200	-0.000170	96.9518	-21.1553	-1.136E-05	0.000	9.195E+09	1.6507	46571.	0.000
39.600	-0.000225	23.1242	-11.9110	-1.132E-05	0.000	9.195E+09	2.2011	47056.	0.000
40.000	-0.000279	0.000	0.000	-1.132E-05	0.000	9.195E+09	2.7619	23771.	0.000

* This analysis makes computations of pile response using nonlinear moment-curvature relationships.
  The above values of total stress are computed for combined axial and bending stress in elastic
  sections and do not equal actual stresses in concrete and steel in the range of nonlinear bending.

Output Summary for Load Case No. 5:

Pile-head deflection	=	1.2487698 inches
Computed slope at pile head	=	-0.0122741 radians
Maximum bending moment	=	1009091. inch-lbs
Maximum shear force	=	12000. lbs
Depth of maximum bending moment	=	100.8000000 inches below pile head
Depth of maximum shear force	=	4.8000000 inches below pile head
Number of iterations	=	24
Number of zero deflection points	=	3

Pile-head Deflection vs. Pile Length for Load Case 5

Boundary Condition Type 1, Shear and Moment

Shear = 12000. lbs
Moment = 0. in-lbs
Axial Load = 160000. lbs

Pile Length feet	Pile Head Deflection inches	Maximum Moment ln-lbs	Maximum Shear lbs
40.0000	1.2487698	1009091.	12000.
38.0000	1.2476194	1008361.	12000.
36.0000	1.2419256	1008130.	12000.
34.0000	1.2475941	1008359.	12000.
32.0000	1.2459044	1008295.	12000.
30.0000	1.2432476	1008342.	12000.
28.0000	1.2475637	1008418.	12000.
26.0000	1.2492353	1008231.	12000.
24.0000	1.2488056	1008349.	12000.
22.0000	1.2518371	1008124.	12000.
20.0000	1.2669427	1006744.	12000.
18.0000	1.3651134	1006892.	-13593.
16.0000	1.8566114	1047937.	-18295.

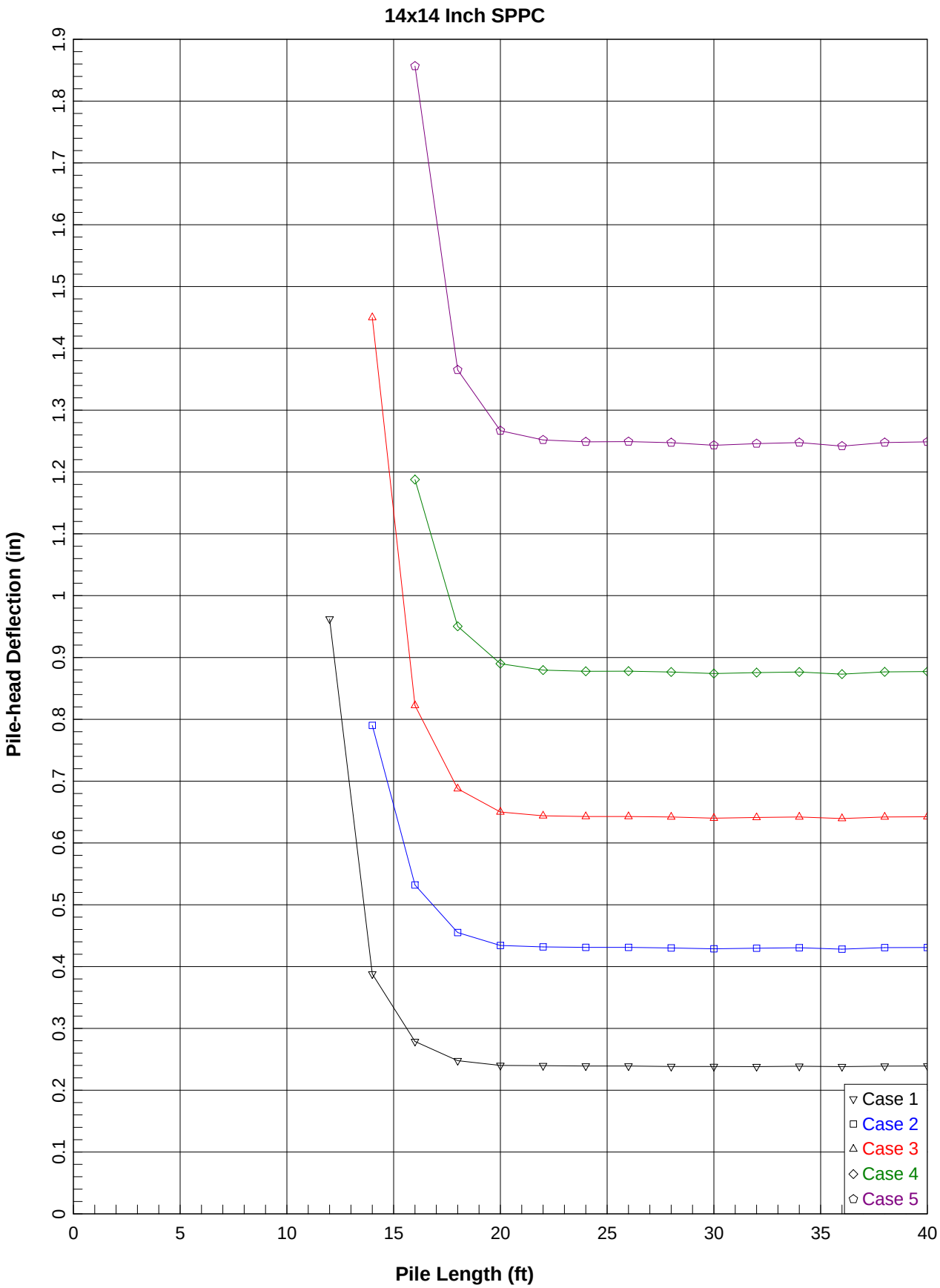
Summary of Pile Response(s)

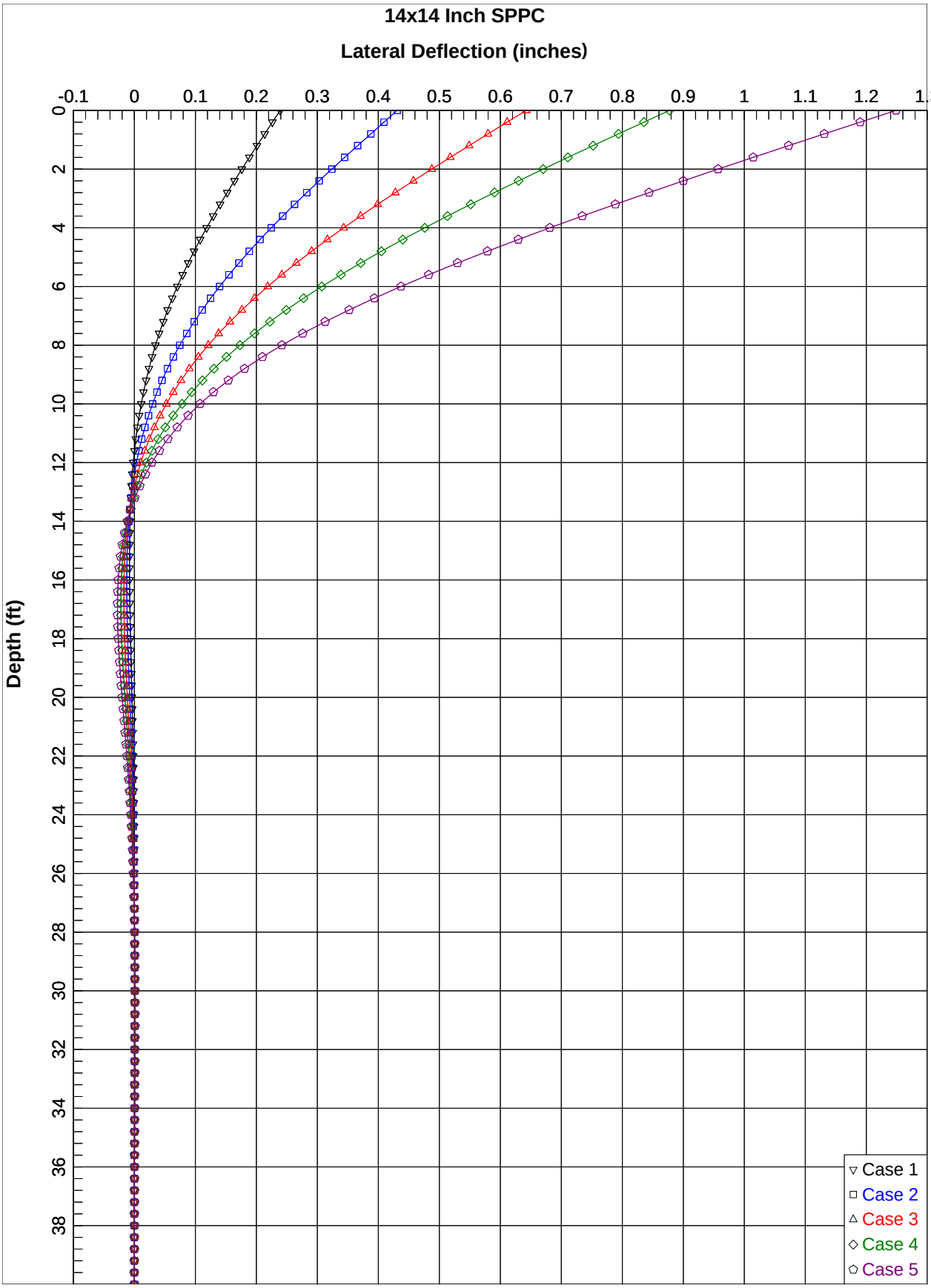
Definitions of Pile-head Loading Conditions:

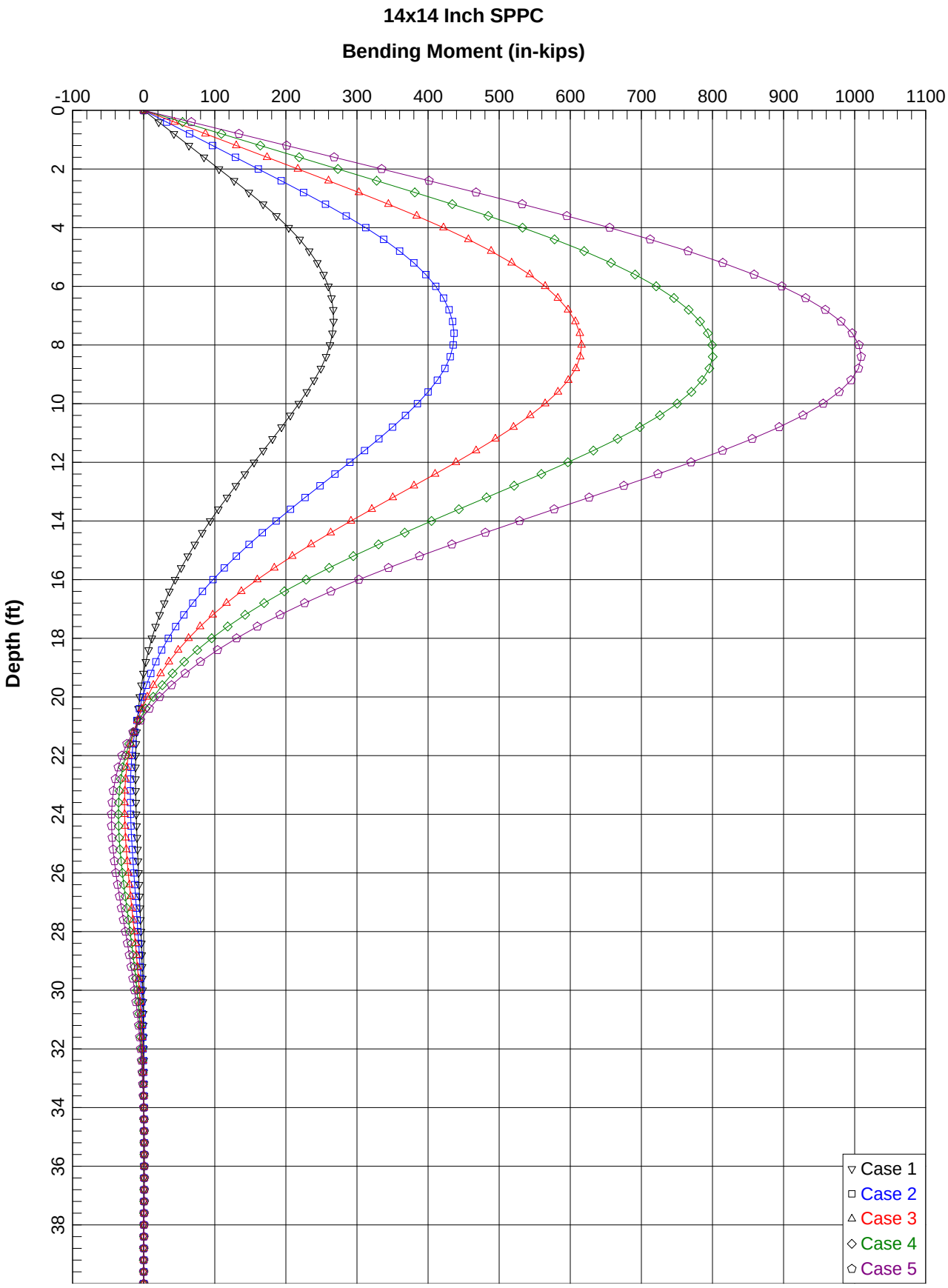
Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians

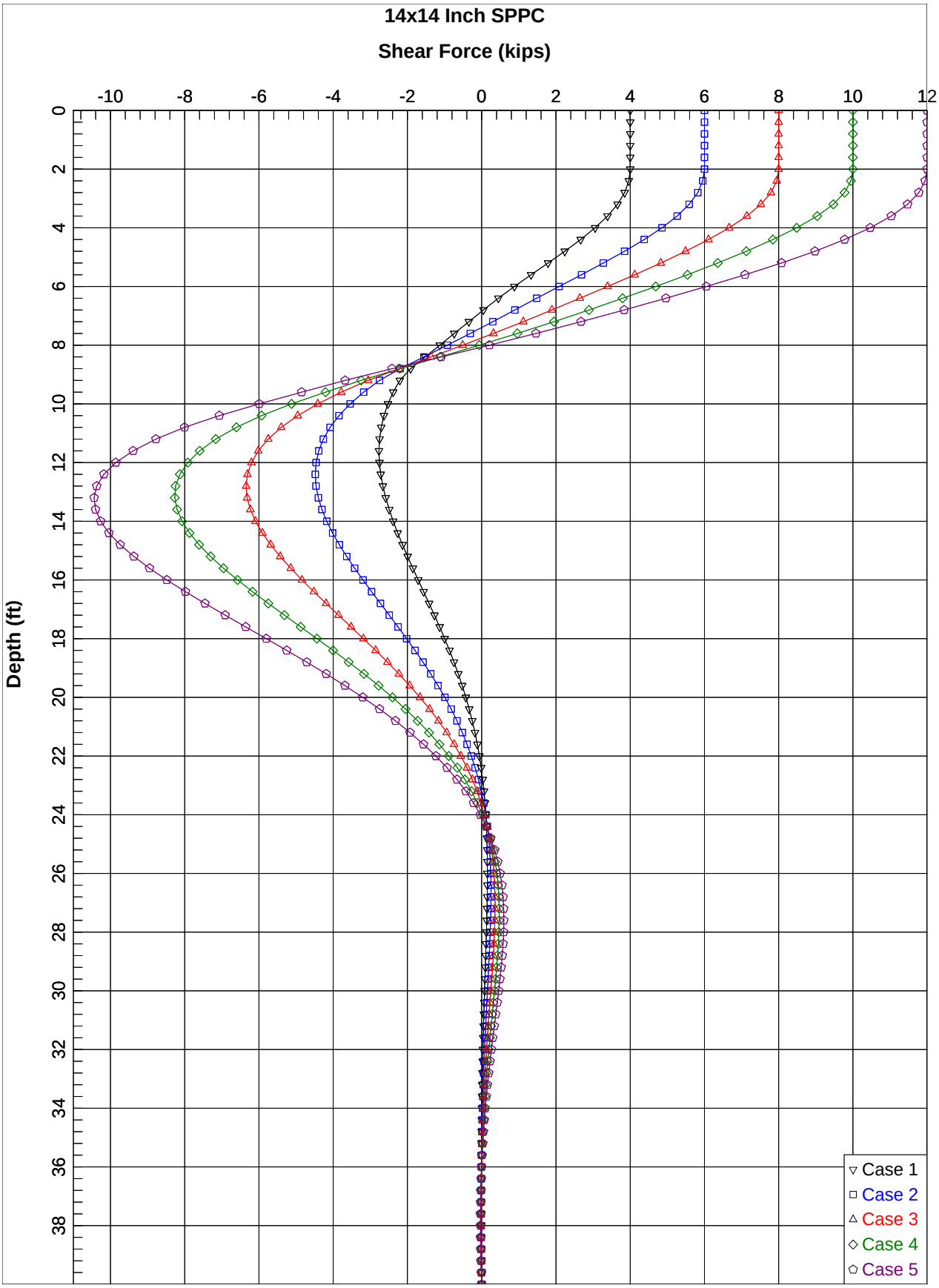
Load Case No.	Load Type No.	Pile-head Condition 1 V(lbs) or y(inches)	Pile-head Condition 2 in-lb, rad., or in-lb/rad.	Axial Loading lbs	Pile-head Deflection inches	Maximum Moment in Pile in-lbs	Maximum Shear in Pile lbs	Pile-head Rotation radians
1	1	V = 4000.0000	M = 0.000	160000.	0.23909946	267054.	4000.0000	-0.00265994
2	1	V = 6000.0000	M = 0.000	160000.	0.43091344	436484.	6000.0000	-0.00452255
3	1	V = 8000.0000	M = 0.000	160000.	0.64234158	615879.	8000.0000	-0.00652496
4	1	V = 10000.0000	M = 0.000	160000.	0.87728123	800299.	10000.0000	-0.00872459
5	1	V = 12000.	M = 0.000	160000.	1.24876984	1009091.	12000.	-0.01227407

The analysis ended normally.


14x14 Inch SPPC
Pile-head Deflection (in)
Pile Length (ft)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
0
5
10
15
20
25
30
35
40
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Lateral Deflection (inches)
Depth (ft)
-0.1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Bending Moment (in-kips)
-100
0
100
200
300
400
500
600
700
800
900
1000
1100
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5


14x14 Inch SPPC
Shear Force (kips)
-10
-8
-6
-4
-2
0
2
4
6
8
10
12
Depth (ft)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Case 1
Case 2
Case 3
Case 4
Case 5

Northside
Engineering Inc.

Civil
Land Planning
Due Diligence Reports
Re-Zoning, Land Use, Annexation
Stormwater Management
Utility Design
Traffic
Construction Administration

DRAINAGE NARRATIVE
BALBOA SHORES
LOCATION:

11580 Gulf Boulevard, Treasure Island FL 33706-4646

PROPOSED ACTIVITY:

Construction of a new Hotel

DESIGN CRITERIA:

Treasure Island Stormwater Drainage Manual
25-Year Storm Event; using the Rational Method
Use of 1.0 inch treatment

DONALD B. FAIRBAIRN LICENSE No. 44971 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Donald B Fairbairn
DN: E=don@northsideengineering.net, CN=Donald B Fairbairn, O="NORTHSIDE ENGINEERING, INC.", SERIALNUMBER=AATL20230510297648, L=Clearwater, S=Florida, C=US
Reason: I have reviewed this document
Date: 2024.04.05 15:36:29-04'00'

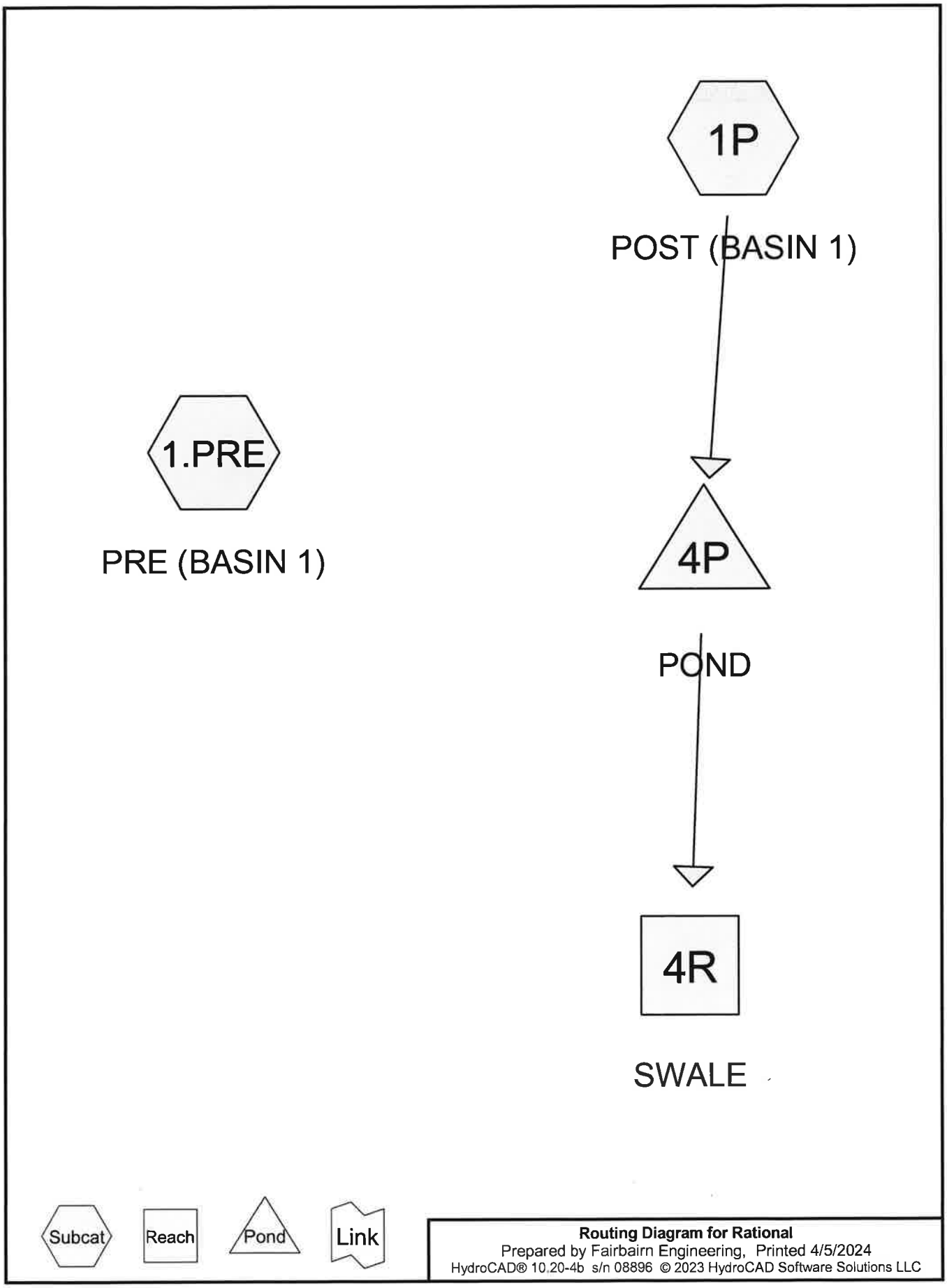
PRE-DEVELOPMENT CONDITION:

Area = 19,099 square feet (0.438 acres)
Design Storm = 25-year C1 =0.81 Tc = 15 Min
Rainfall Depth = 7.2 inches /hour
Pre-Condition Discharge = **1.56 cubic feet per second**

PROPOSED POST-DEVELOPMENT CONDITION:

Area = 19,099 square feet (0.438 acres)
Design Storm = 25-year C2 =0. 87 Duration for max volume = 45 Min
Rainfall Depth = 4.36 inches /hour
Design High Water = 4.93 feet
Post-Condition Discharge = 1.12 **cubic feet per second**
Required Treatment Volume = 1591.58 cubic feet
(19,099 square feet X 1.00 inches / 12 in. per ft.)
Provided Treatment Volume = 1,724.04 cubic feet
1,724.04 cubic feet of treatment volume draws down in 22.43 hours by effluent filtration.
SHWT has been determined to be the elevation of 0.81 ft. (NAVD 88 Datum)

300 South Belcher Road
Clearwater, Florida 33765
727 443 2869 Fax 727 446 8036



Routing Diagram for Rational
Prepared by Fairbairn Engineering, Printed 4/5/2024
HydroCAD® 10.20-4b s/n 08896 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.208	0.39	>75% Grass cover, Good, HSG A (1.PRE, 1P)
0.282	0.98	Paved parking, HSG A (1P)
0.313	0.98	Paved parking, HSG B (1.PRE)
0.074	1.00	pond (1P)
0.877	**0.84**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.490	HSG A	1.PRE, 1P
0.313	HSG B	1.PRE
0.000	HSG C	
0.000	HSG D	
0.074	Other	1P
0.877		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.208	0.000	0.000	0.000	0.000	0.208	>75% Grass cover, Good	1.PRE, 1P
0.282	0.313	0.000	0.000	0.000	0.595	Paved parking	1.PRE, 1P
0.000	0.000	0.000	0.000	0.074	0.074	pond	1P
0.490	**0.313**	**0.000**	**0.000**	**0.074**	**0.877**	**TOTAL AREA**	

Time span=0.00-3.00 hrs, dt=0.01 hrs, 301 points
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.PRE: PRE (BASIN 1) Runoff Area=19,099 sf 71.38% Impervious Runoff Depth=2.65"
Tc=15.0 min C=0.81 Runoff=1.56 cfs 0.097 af

Subcatchment 1P: POST (BASIN 1) Runoff Area=19,099 sf 81.17% Impervious Runoff Depth=2.85"
Tc=15.0 min C=0.87 Runoff=1.68 cfs 0.104 af

Reach 4R: SWALE Avg. Flow Depth=0.42' Max Vel=0.46 fps Inflow=1.12 cfs 0.037 af
n=0.150 L=50.0' S=0.0100 '/' Capacity=2.68 cfs Outflow=1.11 cfs 0.037 af

Pond 4P: POND Peak Elev=4.93' Storage=2,551 cf Inflow=1.68 cfs 0.104 af
Discarded=0.33 cfs 0.058 af Primary=1.12 cfs 0.037 af Outflow=1.44 cfs 0.095 af

Total Runoff Area = 0.877 ac Runoff Volume = 0.201 af Average Runoff Depth = 2.75"
23.73% Pervious = 0.208 ac 76.27% Impervious = 0.669 ac

Summary for Subcatchment 1.PRE: PRE (BASIN 1)

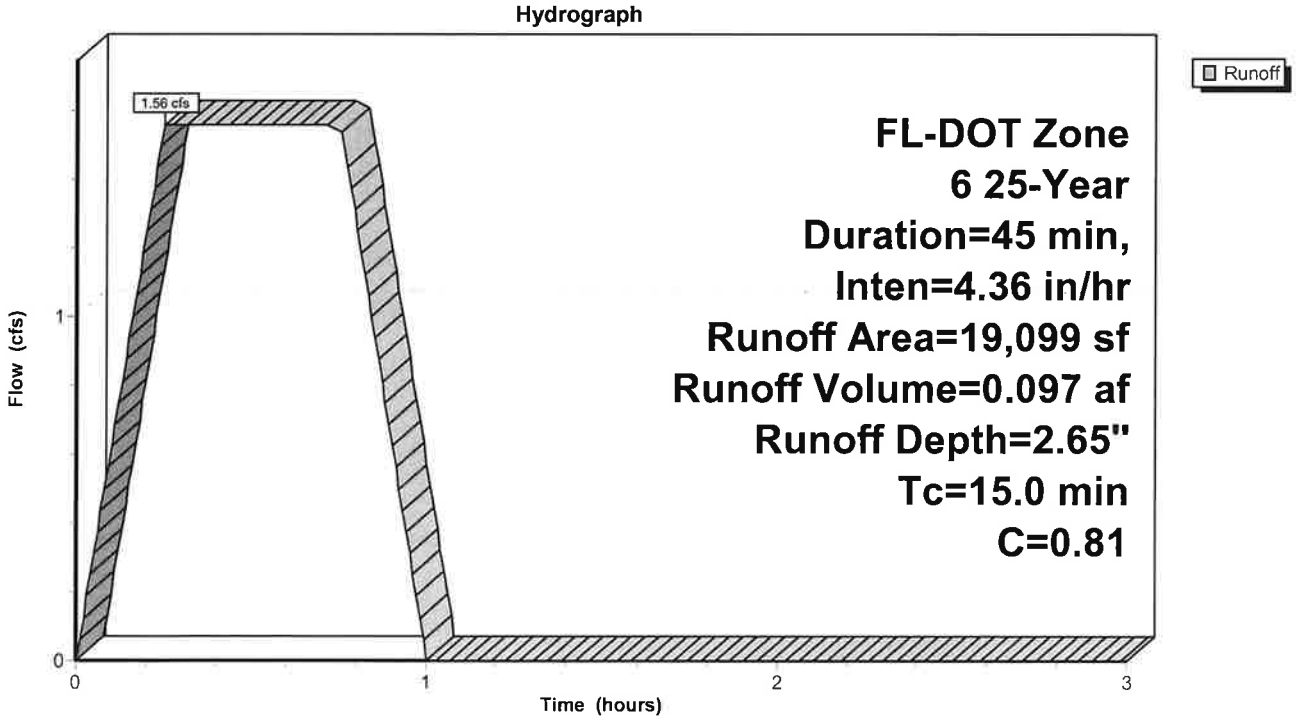
Runoff = 1.56 cfs @ 0.25 hrs, Volume= 0.097 af, Depth= 2.65"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
FL-DOT Zone 6 25-Year Duration=45 min, Inten=4.36 in/hr

Area (sf)	C	Description
13,633	0.98	Paved parking, HSG B
5,466	0.39	>75% Grass cover, Good, HSG A
19,099	0.81	Weighted Average
5,466		28.62% Pervious Area
13,633		71.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry, DIRECT ENTRY**

Subcatchment 1.PRE: PRE (BASIN 1)



Summary for Subcatchment 1P: POST (BASIN 1)

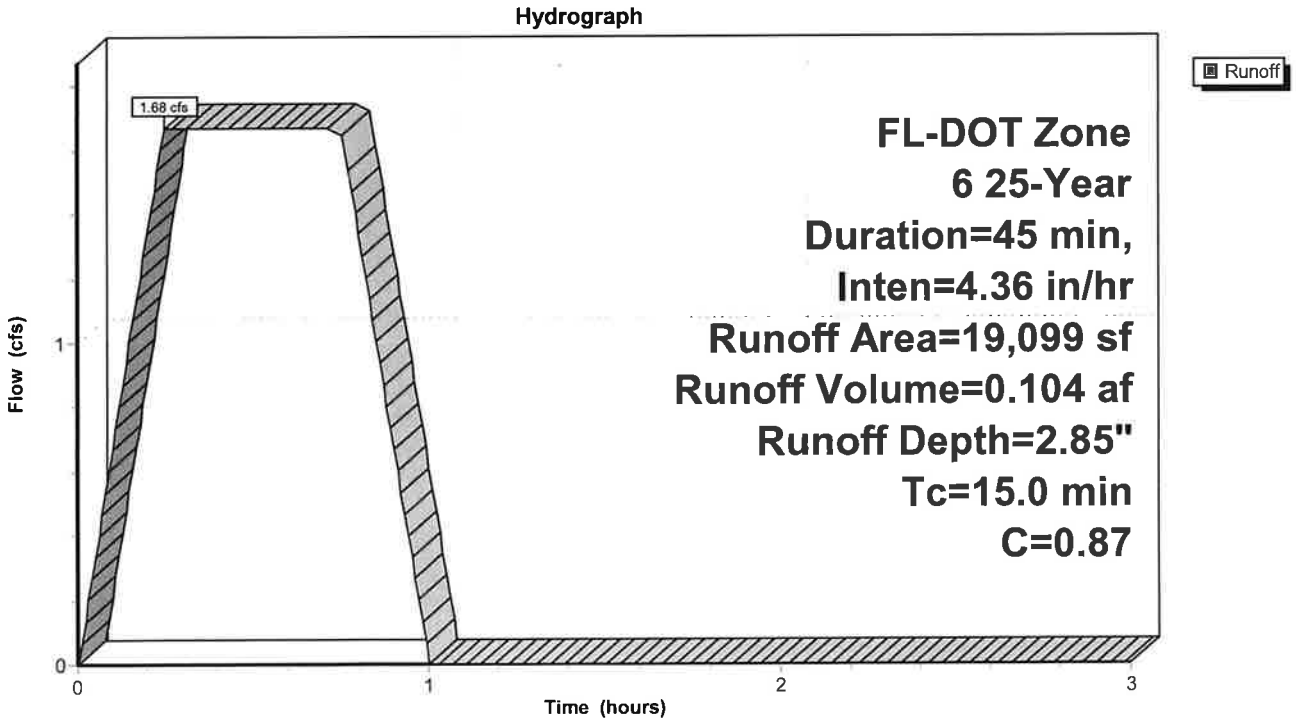
Runoff = 1.68 cfs @ 0.25 hrs, Volume= 0.104 af, Depth= 2.85"
Routed to Pond 4P : POND

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
FL-DOT Zone 6 25-Year Duration=45 min, Inten=4.36 in/hr

Area (sf)	C	Description
12,285	0.98	Paved parking, HSG A
3,597	0.39	>75% Grass cover, Good, HSG A
3,217	1.00	pond
19,099	0.87	Weighted Average
3,597		18.83% Pervious Area
15,502		81.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0					**Direct Entry, DIRECT ENTRY**

Subcatchment 1P: POST (BASIN 1)



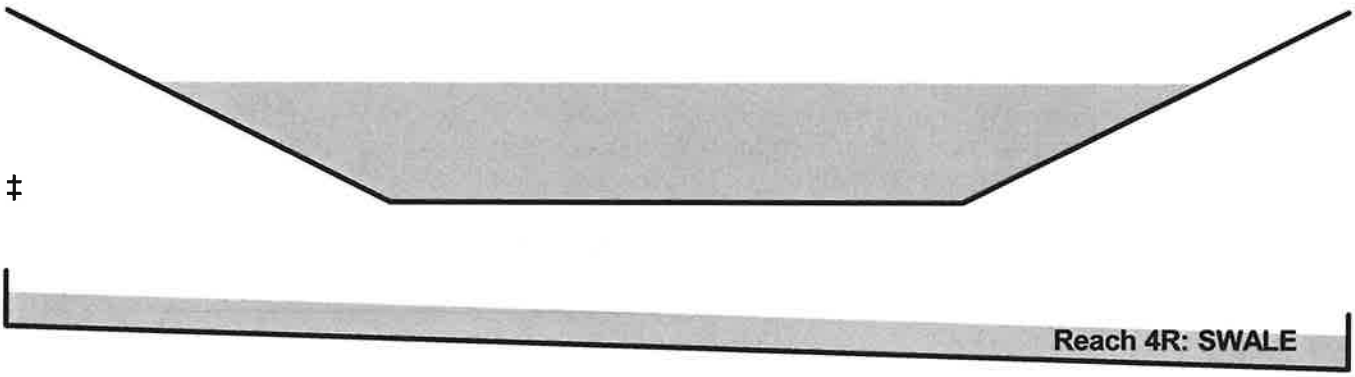
Summary for Reach 4R: SWALE

Inflow Area = 0.438 ac, 81.17% Impervious, Inflow Depth = 1.02" for 25-Year event
Inflow = 1.12 cfs @ 0.78 hrs, Volume= 0.037 af
Outflow = 1.11 cfs @ 0.84 hrs, Volume= 0.037 af, Atten= 1%, Lag= 3.1 min

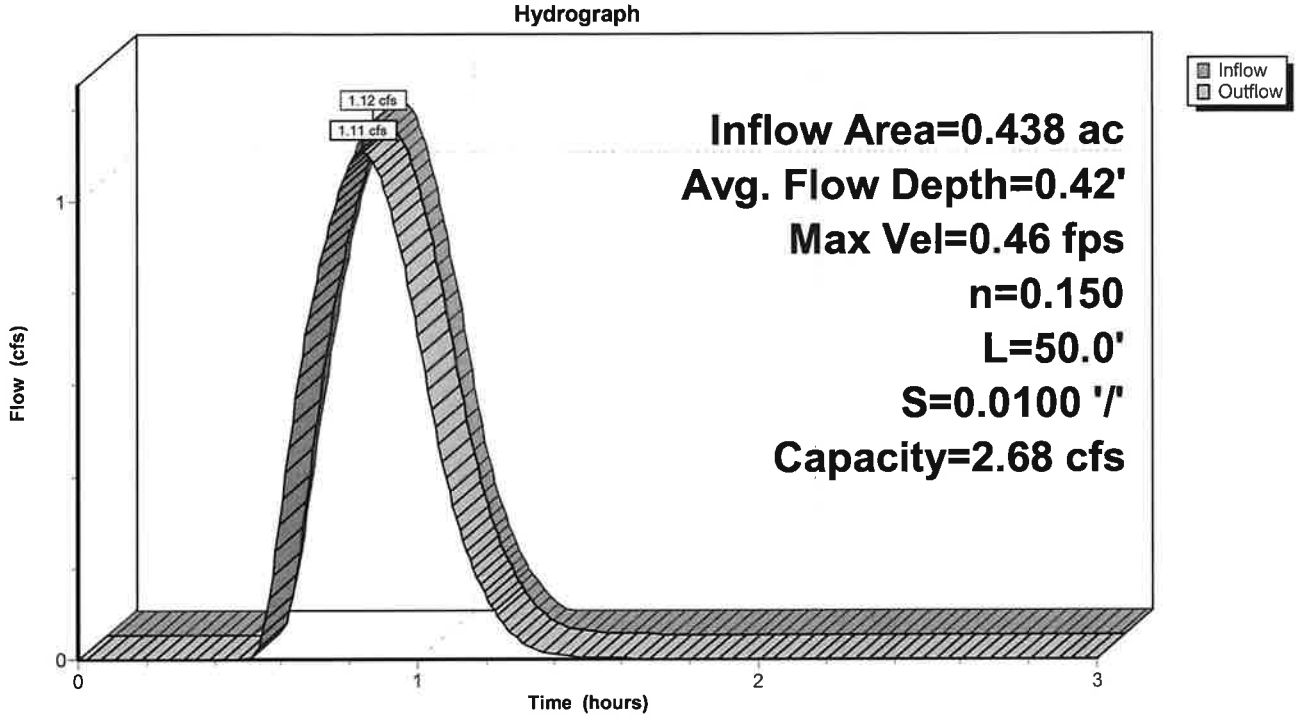
Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.46 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 6.1 min

Peak Storage= 120 cf @ 0.81 hrs
Average Depth at Peak Storage= 0.42' , Surface Width= 7.37'
Bank-Full Depth= 0.67' Flow Area= 4.5 sf, Capacity= 2.68 cfs

4.00' x 0.67' deep channel, n= 0.150 Sheet flow over Short Grass
Side Slope Z-value= 4.0 '/' Top Width= 9.36'
Length= 50.0' Slope= 0.0100 '/'
Inlet Invert= 4.00', Outlet Invert= 3.50'



Reach 4R: SWALE



Stage-Area-Storage for Reach 4R: SWALE

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
4.00	0.0	0
4.01	0.0	2
4.02	0.1	4
4.03	0.1	6
4.04	0.2	8
4.05	0.2	11
4.06	0.3	13
4.07	0.3	15
4.08	0.3	17
4.09	0.4	20
4.10	0.4	22
4.11	0.5	24
4.12	0.5	27
4.13	0.6	29
4.14	0.6	32
4.15	0.7	35
4.16	0.7	37
4.17	0.8	40
4.18	0.8	42
4.19	0.9	45
4.20	1.0	48
4.21	1.0	51
4.22	1.1	54
4.23	1.1	57
4.24	1.2	60
4.25	1.3	63
4.26	1.3	66
4.27	1.4	69
4.28	1.4	72
4.29	1.5	75
4.30	1.6	78
4.31	1.6	81
4.32	1.7	84
4.33	1.8	88
4.34	1.8	91
4.35	1.9	95
4.36	2.0	98
4.37	2.0	101
4.38	2.1	105
4.39	2.2	108
4.40	2.2	112
4.41	2.3	116
4.42	2.4	119
4.43	2.5	123
4.44	2.5	127
4.45	2.6	131
4.46	2.7	134
4.47	2.8	138
4.48	2.8	142
4.49	2.9	146
4.50	3.0	150
4.51	3.1	154
4.52	3.2	158
4.53	3.2	162
4.54	3.3	166
4.55	3.4	171
4.56	3.5	175
4.57	3.6	179
4.58	3.7	183
4.59	3.8	188
4.60	3.8	192
4.61	3.9	196
4.62	4.0	201
4.63	4.1	205
4.64	4.2	210
4.65	4.3	215
4.66	4.4	219
4.67	**4.5**	**224**

Summary for Pond 4P: POND

Inflow Area = 0.438 ac, 81.17% Impervious, Inflow Depth = 2.85" for 25-Year event
Inflow = 1.68 cfs @ 0.25 hrs, Volume= 0.104 af
Outflow = 1.44 cfs @ 0.78 hrs, Volume= 0.095 af, Atten= 14%, Lag= 32.1 min
Discarded = 0.33 cfs @ 0.78 hrs, Volume= 0.058 af
Primary = 1.12 cfs @ 0.78 hrs, Volume= 0.037 af
Routed to Reach 4R : SWALE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 4.93' @ 0.78 hrs Surf.Area= 2,663 sf Storage= 2,551 cf

Plug-Flow detention time= 43.3 min calculated for 0.095 af (91% of inflow)
Center-of-Mass det. time= 41.4 min (71.4 - 30.0)

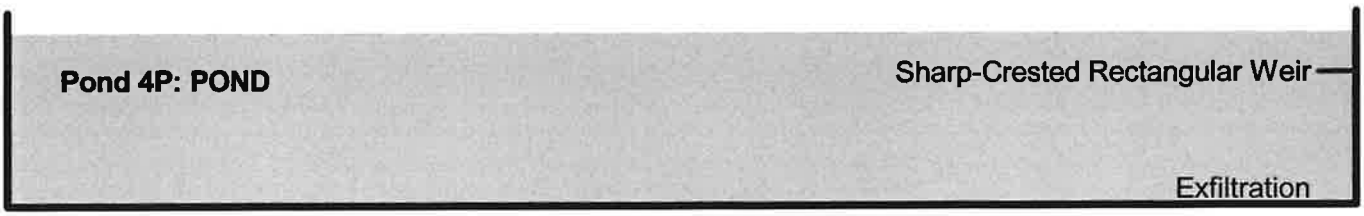
Volume	Invert	Avail.Storage	Storage Description
#1	3.50'	3,039 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
3.50	278	0	0
4.00	1,675	488	488
4.50	2,323	1,000	1,488
5.00	2,722	1,261	2,749
5.10	3,072	290	3,039

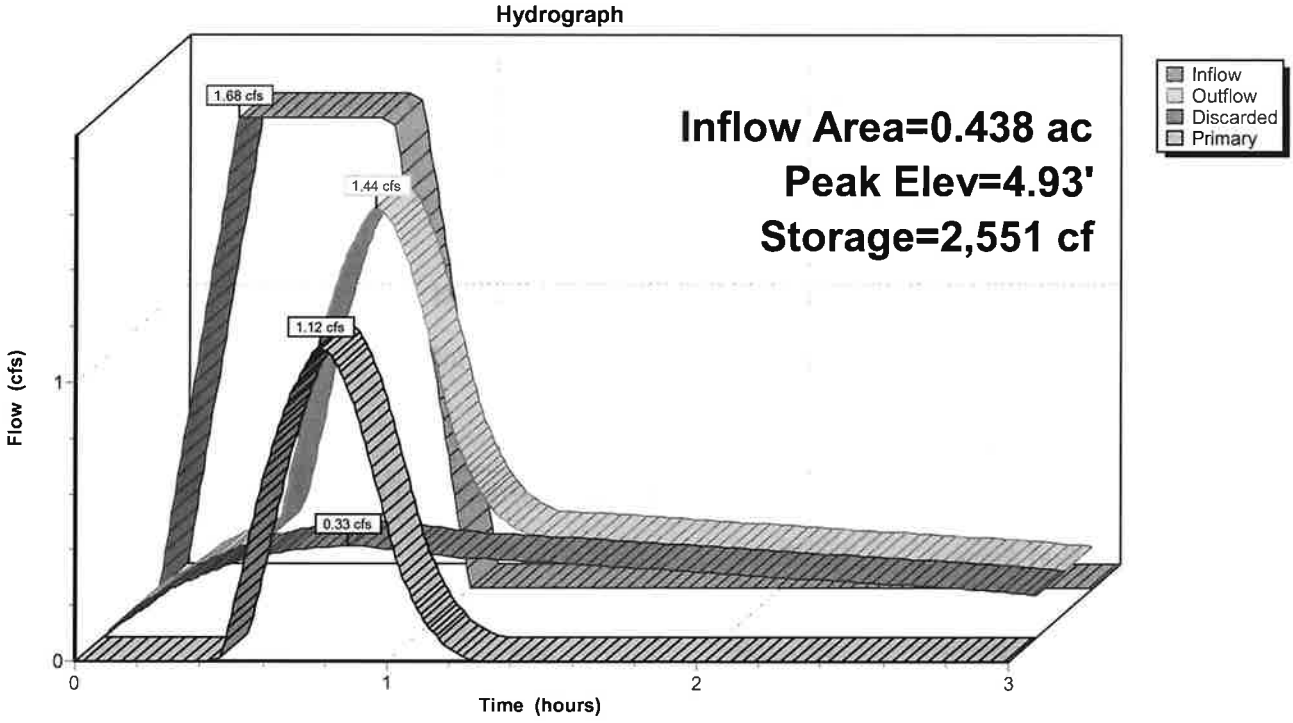
Device	Routing	Invert	Outlet Devices
#1	Primary	4.60'	**1.9' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	3.50'	**4.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 0.81'

Discarded OutFlow Max=0.33 cfs @ 0.78 hrs HW=4.93' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.33 cfs)

Primary OutFlow Max=1.12 cfs @ 0.78 hrs HW=4.93' (Free Discharge)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 1.12 cfs @ 1.87 fps)



Pond 4P: POND


Hydrograph
Inflow Area=0.438 ac
Peak Elev=4.93'
Storage=2,551 cf
1.68 cfs
1.44 cfs
1.12 cfs
0.33 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
0
1
0
1
2
3
Time (hours)

Stage-Area-Storage for Pond 4P: POND

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
3.50	278	0	4.01	1,688	505
3.51	306	3	4.02	1,701	522
3.52	334	6	4.03	1,714	539
3.53	362	10	4.04	1,727	556
3.54	390	13	4.05	1,740	574
3.55	418	17	4.06	1,753	591
3.56	446	22	4.07	1,766	609
3.57	474	26	4.08	1,779	626
3.58	502	31	4.09	1,792	644
3.59	529	36	4.10	1,805	662
3.60	557	42	4.11	1,818	680
3.61	585	47	4.12	1,831	699
3.62	613	53	4.13	1,843	717
3.63	641	60	4.14	1,856	735
3.64	669	66	4.15	1,869	754
3.65	697	73	4.16	1,882	773
3.66	725	80	4.17	1,895	792
3.67	753	88	4.18	1,908	811
3.68	781	95	4.19	1,921	830
3.69	809	103	4.20	1,934	849
3.70	837	111	4.21	1,947	869
3.71	865	120	4.22	1,960	888
3.72	893	129	4.23	1,973	908
3.73	921	138	4.24	1,986	928
3.74	949	147	4.25	1,999	948
3.75	977	157	4.26	2,012	968
3.76	1,004	167	4.27	2,025	988
3.77	1,032	177	4.28	2,038	1,008
3.78	1,060	187	4.29	2,051	1,028
3.79	1,088	198	4.30	2,064	1,049
3.80	1,116	209	4.31	2,077	1,070
3.81	1,144	220	4.32	2,090	1,091
3.82	1,172	232	4.33	2,103	1,112
3.83	1,200	244	4.34	2,116	1,133
3.84	1,228	256	4.35	2,129	1,154
3.85	1,256	268	4.36	2,142	1,175
3.86	1,284	281	4.37	2,155	1,197
3.87	1,312	294	4.38	2,167	1,218
3.88	1,340	307	4.39	2,180	1,240
3.89	1,368	321	4.40	2,193	1,262
3.90	1,396	335	4.41	2,206	1,284
3.91	1,424	349	4.42	2,219	1,306
3.92	1,451	363	4.43	2,232	1,328
3.93	1,479	378	4.44	2,245	1,351
3.94	1,507	393	4.45	2,258	1,373
3.95	1,535	408	4.46	2,271	1,396
3.96	1,563	423	4.47	2,284	1,419
3.97	1,591	439	4.48	2,297	1,442
3.98	1,619	455	4.49	2,310	1,465
3.99	1,647	472	4.50	2,323	1,488
4.00	1,675	488	4.51	2,331	1,511

Stage-Area-Storage for Pond 4P: POND (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
4.52	2,339	1,534
4.53	2,347	1,558
4.54	2,355	1,581
4.55	2,363	1,605
4.56	2,371	1,629
4.57	2,379	1,652
4.58	2,387	1,676
4.59	2,395	1,700
4.60	2,403	1,724
4.61	2,411	1,748
4.62	2,419	1,772
4.63	2,427	1,796
4.64	2,435	1,821
4.65	2,443	1,845
4.66	2,451	1,870
4.67	2,459	1,894
4.68	2,467	1,919
4.69	2,475	1,944
4.70	2,483	1,968
4.71	2,491	1,993
4.72	2,499	2,018
4.73	2,507	2,043
4.74	2,515	2,068
4.75	2,523	2,093
4.76	2,530	2,119
4.77	2,538	2,144
4.78	2,546	2,169
4.79	2,554	2,195
4.80	2,562	2,221
4.81	2,570	2,246
4.82	2,578	2,272
4.83	2,586	2,298
4.84	2,594	2,324
4.85	2,602	2,350
4.86	2,610	2,376
4.87	2,618	2,402
4.88	2,626	2,428
4.89	2,634	2,454
4.90	2,642	2,481
4.91	2,650	2,507
4.92	2,658	2,534
4.93	2,666	2,560
4.94	2,674	2,587
4.95	2,682	2,614
4.96	2,690	2,641
4.97	2,698	2,668
4.98	2,706	2,695
4.99	2,714	2,722
5.00	2,722	2,749
5.01	2,757	2,776
5.02	2,792	2,804
5.03	2,827	2,832
5.04	2,862	2,861
5.05	2,897	2,889
5.06	2,932	2,919
5.07	2,967	2,948
5.08	3,002	2,978
5.09	3,037	3,008
5.10	**3,072**	**3,039**

NORTHSIDE ENGINEERING
DRAINAGE CALCULATIONS

Arville - Balboa Shores

EXISTING CONDITIONS - DETERMINE RUNOFF FACTOR

	Impervious	13633.00	X	0.90	=	12269.7				
	Pond	0.00	X	1.00	=	0				
	Pervious	5466.00	X	0.20	=	1093.2				
	Total	19099.00				13362.9		C 1 =	0.700	
		0.44		Acre						
		EXISTING CONDITIONS - PRE DEVELOPMENT FLOW								
	Time Of Concentration		15	Minutes		Area =	0.44	Q=CiA		
	Rain Fall		7.2	In/hr		C1 =	0.700	Q=	2.21	cfs
	Storm		25	yr.						
	Zone		6							
		PROPOSED CONDITIONS - DETERMINE RUNOFF FACTOR								
	Impervious	12285.00	X	0.95	=	11670.75				
	Pond	3217	X	1.00	=	3217				
	Pervious	3597.00	X	0.20	=	719.4				
	Total	19099.00				15607.15		C 2 =	0.817	
		0.44		Acre						
	Storm		25	yr.						
		PROPOSED CONDITIONS - DETERMINE POND VOLUME								
	Design Storm 25 Year Zone 6									
	D	i		P		S	R			
	RAINFALL	INTENSITY		PEAK		STORM	RELEASE	REQUIRED		
	DURATION	IN/HR		RUN OFF		VOLUME	PRE VOL.	STORAGE		
				Q=CiA		Cu. Ft	Cu. Ft.	Cu. Ft.		
10	600	8.4		3.01		1805.79	1325.25	480.54		
15	900	7.2		2.59		2331.40	1987.87	343.53		
20	1200	6.4		2.29		2751.67	2650.49	101.18		
30	1800	5.2		1.86		3353.60	3975.74	-622.14		
40	2400	4.6		1.65		3955.53	5300.99	-1345.45		
50	3000	4.0		1.43		4299.49	6626.23	-2326.74		
60	3600	3.7		1.31		4707.94	7951.48	-3243.54		
75	4500	3.2	4	1.15		5159.39	9939.35	-4779.96		
	CRITICAL STORM VOLUME			480.54		Cu.Ft.				
	TREATMENT (1.0 inch)			1591.58		Cu.Ft.				
	TOTAL POND VOLUME			2072.12		Cu.Ft.				

STAGE STORAGE TABLE

Required Treatment **1,591.58 Cu.Ft.**

Provided Treatnment 1,724.04 Cu.Ft.

Multiplier 1.00

Input stage only

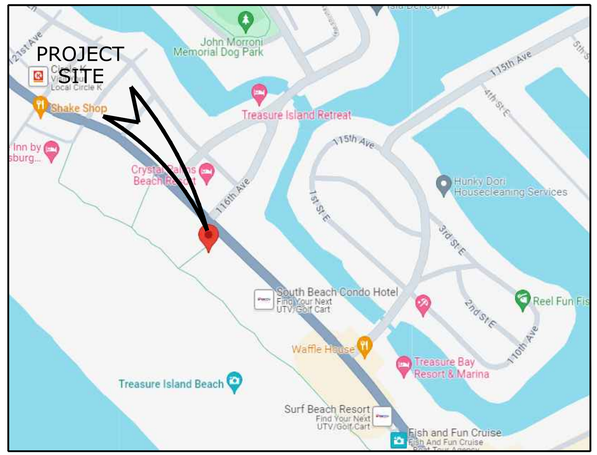
	Stage	Area	Inc. Vol	Cum Vol	Interp	Interp Inc.	**Interp Cum**	Area	Cum Vol
	(ft)	(sf)	(cf)	(cf)	Area (sf)	Vol (cf)	**Vol (cf)**	(ac)	(ac ft)
								0.0000	0.0000
					0.00	0.00	**0.00**		
TOB	5.10	3,072.00		3,038.70				0.0705	0.0698
			289.70		0.00	0.00	0.00		
	5.00	2,722.00		2,749.00				0.0625	0.0631
	4.60		1,261.25		2,402.80	236.29	1,724.04		
	4.50	2,323.00		1,487.75				0.0533	0.0342
			999.50		0.00	0.00	0.00		
	4.00	1,675.00		488.25				0.0385	0.0112
			488.25		0.00	0.00	0.00		
BOT	**3.50**	278.00		0.00				0.0064	0.0000
			0.00		0.00	0.00	0.00		
	0.00	0.00		0.00				0.0000	0.0000

BALBOA SHORES

SECTION 23 - TOWNSHIP 31 S - RANGE 15 E
PARCEL NO. 23-31-15-00000-240-0200
TREASURE ISLAND, FLORIDA

LEGAL DESCRIPTION

For a Point of Beginning, commence at the most Southerly corner of Lot 4, Block C, CITY OF TREASURE ISLAND BLOCK "C° as recorded in Plat Book 28, Page 2, Pinellas County, Florida, go thence along the Southerly Boundary of said Lot 4, Block C, N. 52°00'50" E. a distance of 189.34'± to the now Southwesterly constructed right-of-way line of Gulf Boulevard (State Road 699) being a 80.00 foot right-of-way as shown on State Road Maps Project Section #1500-2510, thence along Southwesterly of said right-of-way as shown in aforesaid State Road Project Section #1500-2510, S. 45'54'47" E., a distance of 100.85'± to a point in the Northerly Boundary Line of property described in Official Records Book 21761, Pages 2265 and 2266 of Pinellas County, Florida, thence along the Northerly property line as described of said Official Records Book 21761, Pages 2265 and 2266, S. 52'80'50 "W. 194,24'± to a Coastal Control Corner #1307-104, dated July 10, 20I3, thence along a line N.43°07'27"W., a distance of lOO.49 ± to the most Southerly Corner of said Lot 4, Bock "C", CITY OF TREASURE ISLAND BLOCK "C" and to the Point of Beginning.



STREET MAP



AERIAL MAP

NORTH

INDEX OF SHEETS

C1.1	CIVIL SITE DATA
C1.2	CIVIL SPECIFICATIONS
C2.1	SITE PREPARATION PLAN
C2.2	SITE PREPARATION DETAILS
C2.3	NPDES DETAILS
C3.1	PROPOSED SITE PLAN
C4.1	GRADING AND DRAINAGE PLAN
C4.2	CROSS SECTIONS
C4.3	CROSS SECTIONS
C5.1	UTILITY PLAN
C6.1	CIVIL DETAILS
C6.2	FDOT DETAILS
C6.3	MOT DETAILS
L1.1	LANDSCAPING PLAN
L1.2	LANDSCAPING DETAILS

SITE DATA

MATRIX		EXISTING	PROPOSED	ALLOWED/CODE
ZONING:		RFH-50	RFH-50	RFH-50
USAGE:		MOTEL/HOTEL	CONDO-HOTEL	OK.
FUTURE LAND USE:		RFH	RFH	RFH
LOT AREA (GROSS):		19,098.7 S.F. 0.438 ACRES	19,098.7 S.F. 0.438 ACRES	9,000 S.F. 0.206 ACRES
BUILDING COVERAGE:		6,182 S.F. (REMOVE)	6,138 S.F. 32 %	50%
FLOOR AREA RATIO: (FAR)		12,364 S.F. 0.65	23,051 S.F. 1.2	1.2 (MAX)
DENSITY:		15 UNITS	16 UNITS CONDOS HOTEL + 1 UNIT TO BE USED BY RESIDENT MANAGER	50 UNITS/ACRE (5 LIVING LEVELS MAX.)
BLDG. SETBACKS:	FRONT (EAST)	19.6'	34.7'	25' MIN.
	SIDE (SOUTH)	7.7'	19'	19' BASED UPON 63'-4" HEIGHT
	SIDE (NORTH)	7.5'	19'	19' BASED UPON 63'-4" HEIGHT
	REAR (WEST)	14.7'	39.1'	19' BASED UPON 63'-4" HEIGHT
BLDG. HEIGHT:		2 STORY	56'- 10" ABOVE DFE TO TOP OF PARAPET	60' (ABOVE BFE+2' OF FREEBOARD)
VEHICULAR USE AREA (VUA):		3,219 S.F.	2,254 S.F.	-
IMPERVIOUS SURFACE RATIO: (I.S.R.)		13,633 S.F. 0.71	11,935 S.F. 0.62	0.95
OPEN SPACE: (S.F. & % OF GROSS SITE)		5,456 S.F. 29%	7,163.7 S.F. 38%	5% MIN
PARKING:		13 SPACES	18 SPACES	18 SPACES

PARKING CALCULATIONS: 1 SPACE PER UNIT + 1 ADDITIONAL SPACE = 17 + 1 = 18 SPACES

3

OWNER CONTACT

ATM ARVILLA LLC
11580 GULF BLVD
TREASURE ISLAND FL 33706-4646

DESIGN PROFESSIONALS

CIVIL ENGINEER/PLANNER:
NORTHSIDE ENGINEERING, INC.
300 SOUTH BELCHER ROAD
CLEARWATER, FLORIDA 33765
727-443-2869

ARCHITECT
FRAZE DESIGN INC.
1750 CENTRAL AVENUE
ST.PETERSBURG, FLORIDA 33712
PHONE : 727 328 3608 EXT.307

SURVEY
JOHN C. BRENDLA AND ASSOCIATES, INC
4015 82ND AVENUE NORTH
PINELLAS PARK, FLORIDA 33781
PHONE (727) 576-7546

GEOTECH
GULF COAST TESTING LABORATORY, INC.
5671 70TH AVE N
PINELLAS PARK, FL 33781
727-544-4080

FLOOD ZONE INFORMATION

AE (EL. 11') SEAWARD OF LiMWA
COMMUNITY PANEL #125153 12103C0194 H, EFFECTIVE 8/24/21

"INVESTIGATE BEFORE YOU EXCAVATE"



CALL SUNSHINE @ 1-800-432-4770
FL. STATUTE 553.851 (1979) REQUIRES A MIN. OF 2 DAYS AND MAX. OF 5 DAYS NOTICE BEFORE YOU EXCAVATE.

UTILITIES / AGENCIES

POWER	–	DUKE ENERGY FLORIDA
WATER	–	PINELLAS COUNTY
SEWER	–	TREASURE ISLAND
CABLE	–	SPECTRUM
TELEPHONE	–	FRONTIER
GAS	–	CLEARWATER GAS SYSTEM
FIRE PROTECTION	–	TREASURE ISLAND FIRE DEPARTMENT
RIGHT-OF-WAY	–	F.D.O.T.
STORM WATER	–	TREASURE ISLAND

AGENCY RESPONSE STAMPS

Northside Engineering, Inc.
300 South Belcher Road, Clearwater, Florida 33765
Tel: 727-443-2869 Fax: 727-446-8036
Web: www.northsideengineering.net
Est. 1989

Civil · Land Planning · Traffic Studies · Landscape
Due Diligence Reports · Land Use · Re-Zoning
Site Development · Water Resources · Utility Design
Construction Administration

Donald B. Fairbairn, P.E. #44971 — Registry # 31306

Digitally signed by Donald B Fairbairn
DN: E=don@northsideengineering.net, C=US, O=NORTHSIDE ENGINEERING, INC., SERIALNUMBER=A01.7L2016105764E, CN=Donald B Fairbairn
Reason: I have reviewed this document
Date: 2024.05.15 14:23:57-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY Donald B. Fairbairn, 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.

PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

CIVIL SITE DATA

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C1.1

Z:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.15.2024.dwg, 5/15/2024 2:11:11 PM, Tech3, DWG To PDF.pc3

GENERAL NOTES

1. ALL ELEVATIONS REFER TO N.A.V.D. OF 1988.
2. ALL WORK TO BE DONE ACCORDING TO LOCAL REGULATORY AGENCY SPECIFICATIONS.
3. ALL DISTURBED AREAS WITHIN PUBLIC RIGHT-OF-WAY ARE TO BE ORIGINAL CONDITION OR BETTER.
4. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE, CONTRACTOR TO VERIFY ALL LOCATIONS BEFORE BEGINNING WORK.
5. ALL PIPE SHALL BE PLACED ON DRY, UNDISTURBED SOIL. WET UNSUITABLE MATERIAL SHALL BE REPLACED WITH COMPACTED SELECTED BACKFILL MATERIAL.
6. BACKFILL MATERIAL SHALL BE SOLIDLY TAMPERED AROUND PIPES IN 6" LAYERS UP TO A LEVEL OF AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE. SEE TESTING SCHEDULE FOR COMPACTION REQUIREMENTS.
7. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 3,000 P.S.I. IN 20 DAYS, UNLESS OTHERWISE NOTED.
8. RE-INFORCING SHALL BE BILLET STEEL BARS CONFORMING TO ASTM A615 GRADE 40 OR BETTER.
9. PROTECTION OF EXISTING STORM SEWER SYSTEMS: DURING CONSTRUCTION, ALL STORM SEWER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC. WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
10. ALL LANDSCAPING IS TO COMPLY WITH THE LOCAL REGULATORY AGENCY LANDSCAPE CODE.
11. ALL STOP BARS, STOP PAVEMENT MARKINGS, ARROWS AND HANDICAP SYMBOLS ARE TO BE THERMO PLASTIC.
12. ALL PAVEMENT STRIPING IS TO COMPLY WITH BOTH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PAINTING TRAFFIC STRIPES OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITIONS.
13. TREE BARRICADES MUST 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.
14. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMITS AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, EXEMPTION NOTICES, AND UTILITY LICENSES, PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
15. CONSTRUCTION EQUIPMENT IS NOT ALLOWED ON THE SITE UNTIL TREE REMOVAL PERMIT AND SITE WORK PERMIT ARE OBTAINED FROM THE LOCAL REGULATORY AGENCY.
16. THE QUANTITIES SHOWN ON THE ENGINEERING CONSTRUCTION DRAWINGS ARE ONLY ESTIMATES AND SHOULD BE RECALCULATED BY THE CONTRACTOR/SUBCONTRACTOR FOR BID SUBMITTALS.
17. SIDEWALK CONSTRUCTION SHALL BE FLUSH WITH PAVEMENT WHERE THEY ARE ADJACENT OR MEET, UNLESS OTHERWISE SHOWN.
18. MATERIALS AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE, CONSTRUCTION, LATEST REVISION AND SUPPLEMENTAL SPECIFICATIONS THERETO.
19. ALL PIPES NOTED ON THE PLANS AS RCP SHALL BE REINFORCED CONCRETE PIPE, CLASS III, WITH RUBBER GASKET JOINTS. NO LIFTING HOLES ARE ALLOWED.
20. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION WORK UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. ADDITIONAL COSTS ARE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
21. ALL DISTURBED AREAS WHICH ARE NOT TO BE SODDED ARE TO BE SEEDED AND MULCHED TO F.D.O.T. STANDARDS AND MAINTAINED UNTIL A SATISFACTORY STRAND OF GRASS ACCEPTABLE TO THE REGULATORY AGENCY AND ENGINEER OF RECORD HAVE BEEN OBTAINED. ANY WASHOUTS, RE-GRADING, RE-SEEDING AND GRASSING WORK, AND OTHER EROSION WORK REQUIRED, WILL BE PERFORMED BY THE CONTRACTOR/SUBCONTRACTOR UNTIL THE SYSTEM IS ACCEPTED FOR MAINTENANCE BY THE REGULATORY AGENCY AND ENGINEER OF RECORD. NO ADDITIONAL COMPENSATION IS ALLOWED FOR THIS WORK.
22. THE LOCATION OF THE EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR/SUBCONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY PRIOR TO START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTORS/SUBCONTRACTORS RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR/SUBCONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFACE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR/SUBCONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANIES DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR/SUBCONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
23. CHAPTER 77-153 OF THE FLORIDA STATUES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATING. MAPS SHOW ONLY THE APPROXIMATE LOCATION OF GAS MAINS AND DO NOT SHOW SERVICE LINES. THE ONLY SAFE AND PROPER WAY TO LOCATE EITHER MAINS OR SERVICES LINES IS BY AN ON-SITE INSPECTION BY THE RESPECTIVE GAS PERSONNEL. THEREFORE, EXCAVATORS ARE INSTRUCTED TO TELEPHONE THE RESPECTIVE GAS COMPANY TWO WORKING DAYS BEFORE ENTERING A CONSTRUCTION AREA.
24. COMPLETE "AS-BUILT" INFORMATION IS REQUIRED FOR:
    - A. STORM SEWER INVERTS, RIM ELEVATIONS, PIPE SLOPES, GRATE ELEVATIONS, OUTFALL STRUCTURE INFORMATION, PIPE LENGTHS, PIPE TYPES, PAVEMENT ELEVATIONS, TOP OF BANK ELEVATIONS, BOTTOM OF BANK ELEVATIONS, BANK SIDE SLOPES, UNDER DRAIN INVERT AND LOCATION, LITTORAL AREA SIZE AND ELEVATIONS PLUS ANY OTHER INFORMATION REQUESTED BY THE ENGINEER OF RECORD.
    - B. PAVEMENT GRADE, HIGH POINTS, LOW POINTS, CROSS-SLOPES AND ANY OTHER INFORMATION REQUESTED BY THE ENGINEER OF RECORD.
    - C. GATE VALVES, FITTING LOCATIONS AND ELEVATIONS, FIRE HYDRANT LOCATIONS FITTING, SWING TIES (2 EACH) PER FITTING GATE I.E.
    - D. SANITARY SEWER MANHOLE RIM AND INVERT ELEVATION, PIPE LENGTHS, TYPES AND SLOPES.

    THE ABOVE INFORMATION SHALL BE ACCURATELY RECORDED AND SUBMITTED TO THE ENGINEER IN CAD, ON A REPRODUCIBLE MYLAR PRIOR TO FINAL INSPECTION OF WORK AND TEN (10) SETS OF THE "AS-BUILT" DRAWINGS MUST BE SIGNED AND SEALED BY A LICENSED SURVEYOR. THE AS-BUILT SURVEY MUST BE REVIEWED BY THE SURVEYOR AND CONTRACTOR FOR COMPLETENESS PRIOR TO SUBMITTING TO EAGLE CONSULTANTS, INC. IF ENGINEER'S IS REQUIRED TO REVIEW THE AS-BUILT SURVEY MORE THAN TWICE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGINEER'S FEES AND COSTS TO REVIEW THE REVISED SURVEY AFTER THE SECOND TIME.
25. CLASS B, BEDDING SHALL BE USED UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR BY THE ENGINEER OF RECORD OR SOILS ENGINEER.
26. ALL EXCESS SUITABLE AND UNSUITABLE DELETERIOUS MATERIAL FROM CLEARING, AND OTHER ACTIVITIES SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR.
27. TESTING ENGINEER IS TO SUPPLY THE ENGINEER WITH A PHOTOCOPY OF ALL BASE, SUB-BASE, ASPHALT AND CONCRETE COMPACTION AND THICKNESS TEST RESULTS. PLUS ALL UTILITY, TRENCH EMBANKMENT, BACKFILL COMPACTION TEST RESULTS AS WELL AS CONCRETE STRENGTH RESULTS. THE TESTING ENGINEER IS TO CERTIFY TO THE ENGINEER OF RECORD IN WRITING THAT ALL TESTING REQUIREMENTS REQUIRED BY THE LOCAL REGULATORY AGENCY, FLORIDA DEPARTMENT OF TRANSPORTATION OR THE TESTING SCHEDULE SHOWN ON THESE PLANS, WHICHEVER IS MORE STRINGENT FOR THE IMPROVEMENTS AS REQUIRED BY THE ENGINEERING CONSTRUCTION DRAWINGS HAVE BEEN SATISFIED.
28. ALL DRAINAGE STRUCTURE GRATES & COVERS, AND ALL SANITARY COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
29. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
30. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE OWNERS ENGINEER FOR APPROVAL.
31. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS AT NO COST TO THE OWNER.
32. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO SHALL BE OF LATEST REVISION.
33. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATORY AND ORDINANCES, OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK, AND ACCORDING TO MANUFACTURES RECOMMENDATION.
34. AT LEAST 14 (FOURTEEN) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND GOVERNMENTAL AGENCIES AND SUPPLY THEM WITH ALL THE CONTRACTORS NAMES, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. ANY WORK PERFORMED PRIOR TO NOTIFYING THE GOVERNMENTAL AGENCY AND ENGINEER OR WITHOUT AN AGENCY OR ENGINEERS INSPECTOR PRESENT WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.
35. SAFETY:
    - A. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THE PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
    - B. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
    - C. 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 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.
    - D. 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.
    - E. 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 CONTRACTORS INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
36. ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
37. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES.
38. PRIOR TO PLACING ANY FILL ON THE SITE, CONTRACTOR TO REMOVE ALL UNSUITABLE MATERIAL FROM THE SITE. IF THERE IS A QUESTION ON WHAT IS A UNSUITABLE MATERIAL THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
39. ALL STORM DRAINAGE STRUCTURES DEEPER THAN TEN (10) FEET HAVE LADDER BARS AS PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD.
40. WHEN NECESSARY CONTRACTOR TO USE A F.D.O.T. "J" OR "P" BOX FOR AN INLET BOTTOM TO ACCOMMODATE PROPOSED PIPE SIZES.
41. THE STORM DRAINAGE FACILITY IS SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL REGULATORY AGENCY ENGINEERING DEPARTMENT, BUILDING DEPARTMENT, AND THE ENGINEER OF RECORD. CONTRACTOR TO CONTACT THE ENGINEER OF RECORD TO LAMP THE STORM DRAINAGE SYSTEM PRIOR TO THE LAKES OR DETENTION PONDS FILLING WITH WATER. IF THE LAKES OR DETENTION PONDS FILL WITH WATER PRIOR TO LAMPING BY THE ENGINEER, CONTRACTOR TO PUMP DOWN THE LAKES OR DETENTION PONDS AT NO COST TO OWNER AND FILL THE LAKES AND DETENTION PONDS UPON COMPLETION OF THE INSPECTION AT NO COST TO THE OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY REQUIRED "ON-SITE PIPING PERMIT". THIS PERMIT MUST BE OBTAINED BY A LICENSED PLUMBING CONTRACTOR (OR CLASS A GENERAL CONTRACTOR) PRIOR TO START OF CONSTRUCTION. THESE PLANS AND SUBSEQUENT REVISIONS TO THESE PLANS THAT ARE ISSUED BY THE ENGINEER WILL BE SUBJECT TO THE APPROVAL CONDITIONS OF THIS PERMIT.
42. RAMPS, FLARES, PARKING SPACES, ACCESS AISLES WALKS, ETC. USED FOR HANDICAPPED ACCESSIBILITY ARE TO COMPLY WITH FLORIDA ACCESSIBILITY CODE LATEST EDITION.
43. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALLS SHALL BE "ALKYD" THERMO-PLASTICS 90 MILS IN THICKNESS. ALL STOP BARS, STOP PAVEMENT MARKINGS, ARROWS, PARKING STALLS ARE TO BE WHITE. ALL HANDICAP PARKING SPACES SHALL BE MARKED ACCORDING TO LOCAL REQUIREMENTS.
44. ALL HANDICAP RAMPS ARE TO BE EMBOSSED PER F.D.O.T. INDEX NO. 522-002. SAW CUTTING GROOVES IN RAMPS IS NOT ALLOWED.
45. IF DEWATERING IS NECESSARY, CONTRACTOR TO SUBMIT DE-WATERING PLAN TO S.W.F.W.M.D. FOR REVIEW AND APPROVAL PRIOR TO COMMENCING DE-WATERING. DE-WATERING PLAN MUST BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO SUBMITTING TO S.W.F.W.M.D.
46. ALL DRAINAGE CULVERTS SHALL BE WRAPPED AS PER F.D.O.T. INDEX NO. 430-001. IN ADDITION, CONTRACTOR TO WRAP JOINT AT PIPE AND INLET OR JUNCTION BOX OR OUTFALL STRUCTURE LOCATIONS. FILTER FABRIC TO EXTEND 2' ALONG PIPE AND STRUCTURE WALL.
47. WHERE NECESSARY, EXISTING TELEPHONE BOXES, POWER BOXES, CABLE BOXES, TELEPHONE VAULTS ALONG RIGHT-OF WAY WITHIN LANDSCAPE BUFFER ARE TO BE ADJUSTED BY UTILITY COMPANY IN ORDER TO ACCOMMODATE PROPOSED IMPROVEMENTS.
48. THE BEST MANAGEMENT PRACTICES (BMP) SHOWN ON THE CONSTRUCTION PLANS SHALL BE IMPLEMENTED DURING CONSTRUCTION. ADDITIONAL TEMPORARY EROSION CONTROLS SHALL BE LOCATED BY THE ENGINEER/CONTRACTOR, AS NECESSARY, IN ORDER TO PREVENT SILTATION OF EXISTING UTILITY AND STORM WATER DRAIN ENTRANCES, DRAINAGE DITCHES, WATERBODIES, WETLANDS, AND ADJACENT PROPERTY.

THE EFFECTIVENESS OF THE BMP PLAN AND THE TEMPORARY CONTROLS SHALL BE CHECKED DAILY BY THE CONTRACTOR/ENGINEER DURING CONSTRUCTION. IF TURBIDITY PROBLEMS OCCUR THAT NECESSITATE REPAIRS TO THE TEMPORARY EROSION CONTROLS, THOSE REPAIRS SHOULD BE MADE AS SOON AS POSSIBLE. TURBID RUNOFF CONDITIONS (I.E. IN EXCESS OF 29 NTUS ABOVE BOOKGROUND LEVEL) SHALL BE REPORTED WITHIN 24 HOURS.

49. IF OPEN BURNING IS ANTICIPATED DURING LAND CLEARING ACTIVITIES, A BURN PERMIT SHALL BE OBTAINED.
50. NOISE GENERATED AT THE CONSTRUCTION SITE SHALL COMPLY WITH THE LOCAL ORDINANCE.
51. MATERIAL AND PRODUCTS PROPOSED FOR THE PROJECT ARE TO BE INSTALLED ACCORDING TO THE MANUFACTURES RECOMMENDATIONS AND/OR INSTALLATION GUIDELINES.

CLEARING & SITE PREPARATION NOTES

1. PRIOR TO ANY SITE CLEARING ALL TREES SHOWN TO REMAIN ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE LOCAL TREE ORDINANCE AND THE DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. TREES SHOWN TO BE REMOVED SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER. NO FILL IS TO BE PLACED WITHIN THE DRIP LINE OF TREES TO BE SAVED.
2. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
3. ANY EXISTING STRUCTURES ARE TO BE REMOVED FROM THE SITE UNLESS OTHERWISE SHOWN ON THESE PLANS.
4. HE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR/SUBCONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR/SUB-CONTRACTOR IS RESPONSIBLE TO:

1. PROVIDE ALL BRACING, SHEETING OR SHORING NECESSARY TO CONSTRUCT AND PROTECT ANY EXCAVATION AGAINST COLLAPSING, ACCORDING TO OSHA SAFETY AND HEALTH STANDARDS. TRENCHES SHALL BE KEPT DRY WHILE PIPE IS LAID. DE-WATERING SHALL BE PROVIDED WHERE NECESSARY.
2. BECOME FAMILIAR WITH THE PERMITS AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, EXEMPTION NOTICES, AND UTILITY LICENSES, PRIOR TO CONSTRUCTION, AND SCHEDULE INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.
3. PROVIDE A THREE (3) FOOT STRIP OF SOD AROUND ALL PARKING AREAS, DRIVE AREAS AND INTERNAL ROADS (BEHIND CURBS), IN ADDITION TO THE DESIGNATED AREAS ARE SHOWN ON THE ENGINEERING DRAWINGS.
4. PLACE A 1" DEEP CONTRACTION JOINT EVERY 4' IN THE SIDEWALK.
5. LOCATE FORM, AND SLOPE THE SIDEWALKS IN ACCORDANCE WITH THE SITE GRADING PLAN. MINIMUM % AND MAXIMUM SIDEWALK CROSS SLOPE SHALL NOT BE GREATER THAN 2.0%
6. CONSTRUCT PAVEMENT IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTION DETAILS. THE FINISH PAVEMENT GRADES SHALL CONFORM TO THOSE SPECIFIED ON THE PAVING, GRADING AND DRAINAGE PLAN.
7. TAKE PRECAUTIONS AS NECESSARY TO PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. IF UTILITIES ARE DAMAGED AS A RESULT OF THE PROPOSED WORK, THE CONTRACTOR/SUBCONTRACTOR SHALL REPAIR THE UTILITIES AT NO ADDITIONAL EXPENSE TO THE OWNER.
8. MEET ALL REQUIREMENTS OF THE LOCAL REGULATORY AGENCY UTILITY DEPARTMENT AND THE LOCAL REGULATORY AGENCY. INCLUDING ADVANCE NOTIFICATION TO THE LOCAL REGULATORY AGENCIES AND ENGINEER OF RECORD SO THAT THEY CAN WITNESS ALL REQUIRED TESTS OF THE SANITARY SEWER SYSTEM. INFILTRATION TESTING OF THE SANITARY SEWER SYSTEM WILL BE REQUIRED TO BE PERFORMED BY THE CONTRACTOR/SUBCONTRACTOR. INFILTRATION SHALL NOT EXCEED 300 GALLONS PER DAY PER INCH OF DIAMETER PER MILE OF LENGTH. IN THE EVENT THAT GROUNDWATER IS NOT ENCOUNTERED DURING SANITARY SEWER CONSTRUCTION OR IF THE GROUNDWATER ENCOUNTERED IS NOT 24" ABOVE THE TOP OF THE PIPE, EX-FILTRATION TESTING OF THE SANITARY SEWER SYSTEM WILL BE NECESSARY. THE TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR/SUBCONTRACTOR AND SHALL OBTAIN ALL NECESSARY TESTS AND INSPECTIONS PRIOR TO FINAL INSPECTION BY THE OWNER & ENGINEER.
9. COORDINATE THE WORK WITHIN PUBLIC RIGHT-OF-WAYS WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC, CONSTRUCTION, AND REPAIR WORK. CONTRACTOR TO SUPPLY AND INSTALL ALL REQUIRED TRAFFIC CONTROL DEVICES AS REQUIRED BY THE GOVERNMENTAL AGENCY/AGENCIES.
10. TRIM, TACK, AND MATCH EXISTING PAVEMENT AT LOCATION WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
11. STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS, ANY DISTURBED AREAS WITHIN THREE (3) DAYS FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.
12. PROVIDE AND MAINTAIN EROSION CONTROL/SEDIMENTATION BARRIER (HAY) BALES TO PROTECT ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND AT SITE EXIT. IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES AT NO COST TO THE OWNER.
13. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS AT NO COST TO THE OWNER.
14. COORDINATING APPLICABLE TESTING WITH THE TESTING ENGINEER, UPON COMPLETION OF THE WORK, TESTING ENGINEER TO SUBMIT CERTIFICATIONS TO THE OWNER AND OWNERS ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MEET.
15. INSTALL ALL SIDEWALKS AS SHOWN ON SITE PLAN.
16. PROVIDE THE FOLLOWING LETTER TO THE OWNER AND ENGINEER PRIOR TO COMMENCING THE FINAL INSPECTION. THE BELOW LETTER MUST BE SIGNED BY THE PRESIDENT OF THE COMPANY AND MUST BE NOTORIZED.

HAVING FIRST BEEN DULY SWORN, DEPOSE AND SAY:
THAT ALL OF THE MATERIAL, INSTALLATION, TESTING AND QUALITY OF WORK USED IN THE CONSTRUCTION OF THE IMPROVEMENTS MEET THE REQUIREMENTS OF THE ENGINEERING PLANS.

BY:_____
(PRINT)
_____
TITLE: _____
COMPANY: _____
ADDRESS: _____
_____

STATE OF FLORIDA
COUNTY OF: _____

BEFORE ME PERSONALLY APPEARED _____, TO ME WELL KNOWN, AND KNOWN TO BE THE PERSON DESCRIBED IN AND WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO AND BEFORE ME THAT _____

EXECUTED SAID INSTRUMENT FOR THE PURPOSES THEREIN EXPRESSED.
WITNESS MY HAND AND OFFICIAL SEAL, THIS _____DAY OF _____A.D. 2018

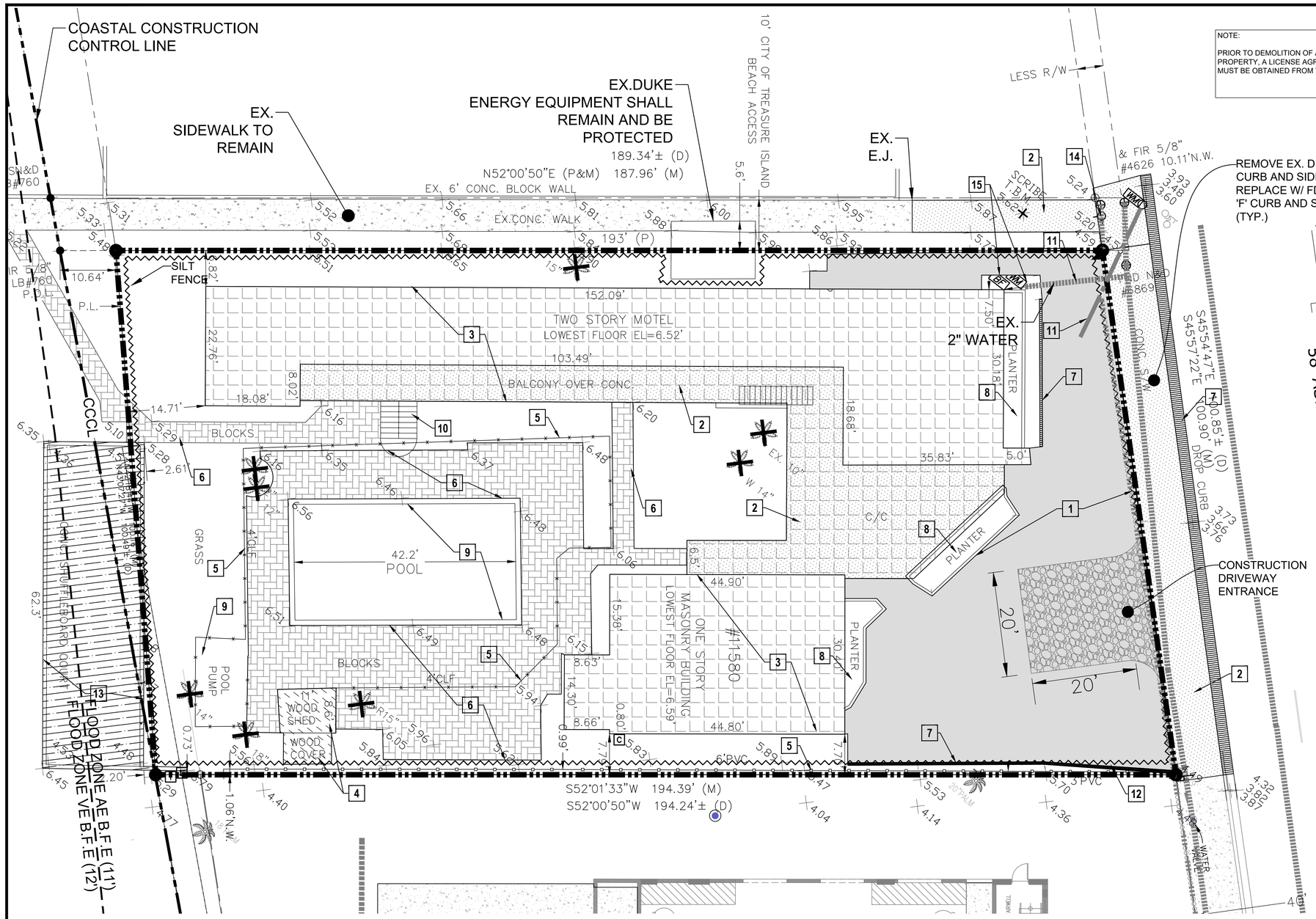
_____
NOTARY PUBLIC
STATE OF FLORIDA

MY COMMISION EXPIRES: _____

17. PROVIDE 3' DROP CURB AT ALL DRIVEWAY CONNECTIONS AS PER F.D.O.T. INDEX NO. 520-001.
18. COMPLY WITH MOST CURRENT SOILS REPORT FOR THIS PROJECT. CONTRACTOR TO OBTAIN A COPY OF REPORT AND INCLUDE ALL RECOMMENDATIONS AND ALL SITE WORK PREPARATIONS INTO SCOPE OF WORK. A COPY OF SOILS REPORT CAN BE OBTAINED BY CALLING OWNER OF PROJECT.
19. REMOVE ALL SILT, MUCK AND ANY UNSUITABLE MATERIAL PRIOR TO BACK FILLING WITH CLEAN FILL. COMPACTION OF CLEAN FILL TO BE AS PER TESTING SCHEDULE SHOWN ON THESE PLANS.
20. PROTECT EXCAVATIONS AGAINST COLLAPSE AND TO PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. TRENCHES SHALL BE KEPT DRY WHILE PIPE APPURTENANCES ARE BEING PLACED. DE-WATERING SHALL BE USED AS REQUIRED.
21. PROVIDE 3/8" EXPANSION MATERIAL WITH SEALER BETWEEN ANY STORM DRAINAGE STRUCTURE AND CONCRETE.
22. PROVIDE A 1/4" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE.
23. INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT ELEVATION AND THE TOP OF THE PIPE OR BELL IS LESS THAN TWELVE (12) INCHES. SEE "EXTRA BASE FOR CROSS CULVERTS UNDER FLEXIBLE PAVEMENT DETAIL" UNDER F.D.O.T. STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITIONS.
24. MAINTAIN THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNERS ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES.
25. PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING AND OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM. COPIES OF BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.
26. CALL FOR SITE INSPECTIONS BY THE ENGINEER OF RECORD OR HIS REPRESENTIVE FOR THE FOLLOWING ITEMS;
    - A. ALL PIPING PRIOR TO BURYING (INCLUDING WATER, SANITARY SEWER AND STORM)
    - B. SUB-BASE
    - C. BASE
    - D. ASPHALT
    - E. CONCRETE STRUCTURAL STEEL
    - F. ALL MATERIALS STORED ON SITE
    - G. EROSION CONTROL AFTER INSTALLATION
    - H. POND SLOPES AND BANKS PRIOR TO SODDING
    - I. POND UNDER DRAIN AND MATERIALS (BEFORE AND DURING INSTALLATION)

WATER SYSTEM NOTES

1. A VERTICAL DISTANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE INVERT AND CROWN OF SANITARY SEWER AND WATER MAIN OR STORM SEWER CROSSINGS. IF THE WATER MAIN CANNOT BE ADJUSTED TO OBTAIN 18 INCHES CLEARANCE, OR THE REQUIRED CLEARANCE CANNOT BE MAINTAINED, THEN THE CROSSING SHALL BE ARRANGED SO THAT THE SANITARY SEWER PIPE JOINTS AND WATER MAIN OR STORM SEWER JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET ON EACH SIDE OF CROSSING. ALTERNATIVELY, THE SANITARY SEWER MAY BE DIP, PLACED IN A SLEEVE OR ENCASED IN CONCRETE TO OBTAIN THE EQUIVALENT OF THE REQUIRED 10 FEET SEPARATION.
2. A LATERAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.
3. ALL WATER MAINS SHALL HAVE AN MINIMUM OF 36 INCHES OF COVER.
4. ALL WORK PERFORMED SHALL CONFORM WITH THE UTILITIES DEPARTMENT OF THE AGENCY HAVING JURISDICTION OVER THE WORK.
5. CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.
6. ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C-900. PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF DR 14 FOR 4" AND DR 18 FOR 6" THROUGH 12" PIPE.
7. ALL PVC WATER MAINS SMALLER THAN 4" SHALL BE CLASS 200 AND MEET THE REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D-2241.
8. ALL DUCTILE IRON PIPE SHALL BE CLASS 52 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C150) AND ANSI A 21.31 (AWWA C151). PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8, OR A 21.51 AND SHALL BE CEMENT MORTAR LINED, STANDARD THICKNESS AND BITUMINOUS SEALED IN ACCORDANCE WITH ANSI A 21.4 (AWWA C 104-71).
9. ALL FITTINGS LARGER THAN 2" SHALL BE DUCTILE IRON CLASS 53 IN ACCORDANCE WITH AWWA C-110 WITH A PRESSURE RATING OF 350 PSI. JOINTS SHALL BE MECHANICAL JOINTS IN ACCORDANCE WITH AWWA C-111. FITTINGS SHALL BE CEMENT MORTAR LINED AND COATED IN ACCORDANCE WITH AWWA C-104.
10. ALL FITTINGS 2" AND SMALLER SHAL



NOTE:

PRIOR TO DEMOLITION OF ANY WORK ON CITY PROPERTY, A LICENSE AGREEMENT DOCUMENT MUST BE OBTAINED FROM THE CITY.

NORTH

SCALE: 1"=10'

10 0 5 10 20

SITE PREPARATION NOTES

PREPARATION OF THE SITE INCLUDES THE REMOVAL/RELOCATION OF ALL EXISTING STRUCTURES WITHIN PROJECT AREA, PAVING AND BASE, UTILITY LINES (SANITARY SEWER, STORM PIPES, WATER LINES, POWER POLES, OVERHEAD AND UNDERGROUND POWER AND TELEPHONE CABLES, GAS LINES, TREES, SHRUBS, ETC.) AND IS NOT LIMITED TO WHAT IS SHOWN ON PLANS.

1. REMOVE EXISTING ASPHALT AND BASE
2. REMOVE EXISTING CONCRETE (REMOVE SIDEWALKS TO NEAREST EXPANSION JOINT
3. REMOVE EXISTING STRUCTURE AND FOUNDATION
4. REMOVE EXISTING WOOD COVERED/ WOOD RAMP
5. REMOVE EXISTING FENCE
6. REMOVE EXISTING PAVERS/BRICK
7. REMOVE EXISTING CURB
8. REMOVE EXISTING PLANTER
9. REMOVE EXISTING POOL, POOL PUMP. FILL CAVITY WITH APPROVING SOIL TO COMPACT PER GEOTECH SPECS.
10. REMOVE EXISTING STAIRS AND LANDING
11. REMOVE EXISTING ON- SITE WATER AND SEWER TO PROPERTY LINE AND CAP FOR RECCONECTION.
12. REMOVE EXISTING SIGN
13. REMOVE EXISTING CONC. SHUFFLEBOARD COURT
14. REMOVE EXISTING FH
15. REMOVE EXISTING BF AND WM

REMOVE EXISTING TREE ×

A. ALL CAVITY & EXCAVATION RESULTING FROM REMOVAL OF TREES, SHRUBS, PIPES, INLETS, GREASE TRAPS, SIGN, AND POLE BASE SHALL BE FILLED WITH APPROVED SUITABLE MATERIAL AND COMPACTED IN 12" LIFTS TO 95% OF MAX DENSITY.

B. OFF-SITE DISPOSAL OF STRUCTURES, UTILITIES AND CONSTRUCTION DEBRIS SHALL OCCUR IN SOLID WASTE DISPOSAL FACILITIES APPROVED BY F.D.E.P., AND LOCAL JURISDICTION'S STANDARDS AND SPECIFICATIONS.

LEGEND

PROPERTY LINE

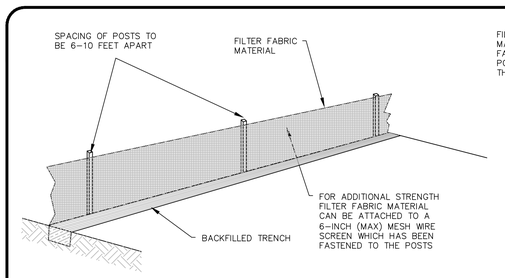
SILT FENCE

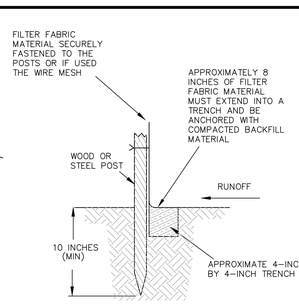
TEMPORARY ACCESS ROAD

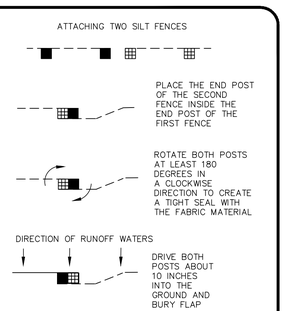
NOTES:

1. ALL DEMOLITION AND CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF TREASURE ISLAND'S STANDARDS AND SPECIFICATIONS.
2. COORDINATE EXTENT OF DEMOLITION WORK WITH NEW WORK.
3. ALL EXCESS MATERIAL SHALL BE LEGALLY DISPOSED OF OFFSITE BY THE CONTRACTOR.
4. ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL, AND WILL BE CLEANED OUT AND/OR REPAIRED AS NEEDED.
5. ALL APPLICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
6. CONTRACTOR TO BE RESPONSIBLE FOR THE CONTROL OF FUGITIVE DUST FOR THE DURATION OF CONSTRUCTION.
7. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION, AND SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION.
8. ALL DISTURBED AREAS IN F.D.O.T. RIGHT-OF-WAY SHALL BE RETURNED TO PRE-DEVELOPMENT CONDITION OR BETTER.
9. ALL SIDEWALK REMOVAL IS TO BE DONE TO THE NEAREST FULL PANEL.

1. CONTRACTOR SHALL REMOVE:
   A. ALL TREES, SHRUBS, VEGETATION
   B. ALL EXISTING STRUCTURES SUCH AS CONCRETE WALKS, CONCRETE SLABS, ASPHALT PAVEMENT, BUILDINGS, AND FENCING..
   C. ALL UTILITY FITTINGS SUCH AS PIPES, VALVES WITHIN PROJECT AREA.
2. CONTRACTOR SHALL REMOVE/RELOCATE LIGHT POLES, POWER POLES, OVERHEAD WIRES, GUY ANCHORS IF NECESSARY.

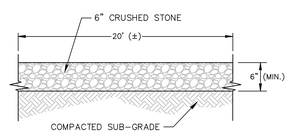






SILT FENCE
NTS

TEMPORARY CONSTRUCTION ROADWAY SHALL BE CONSTRUCTED AT NATURAL GRADE WITHIN FLOOD PLAIN AREA TO AVOID IMPACTS.



NOTES:
1. TEMPORARY ACCESS ROAD SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE POSSIBLE.
2. SLOPE SHOULD NOT EXCEED 10 PERCENT.
3. ROADBEDS SHALL BE AT LEAST 20 FEET WIDE FOR TWO WAY TRAFFIC.

TEMPORARY ACCESS ROAD
NTS

Northside Engineering, Inc.
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northsideengineering.com
Est. 1989

Civil · Land Planning · Traffic Studies · Landscape
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Construction Administration

Donald B. Fairbairn, P.E. #44971 Registry # 31306

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PROJECT #	2370
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2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
	/ /	
	/ /	
	/ /	

DRAWN BY : EH

SITE PREPARATION PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

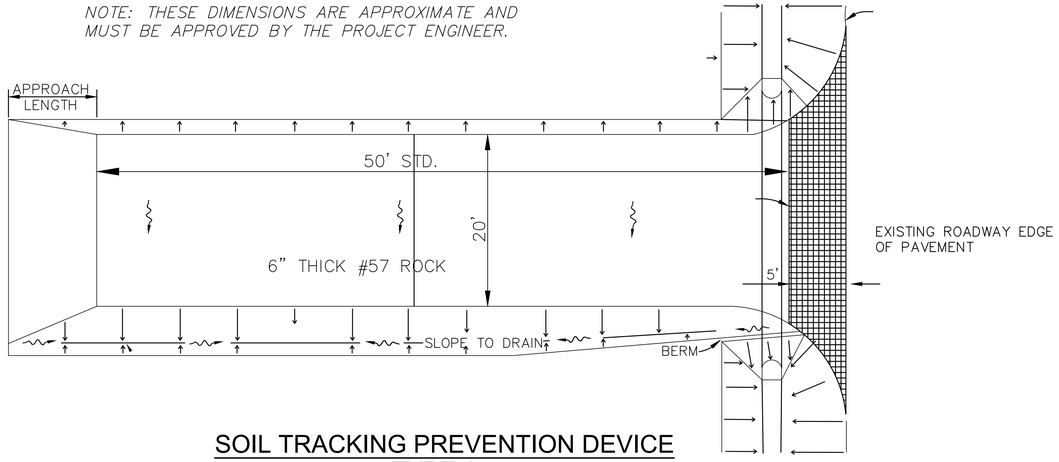
Northside Engineering, Inc.

C2.1

J:\2023 AutoCAD Projects\2370 - Avilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 11:2:37 PM, Tech3, DWG To PDF.pc3

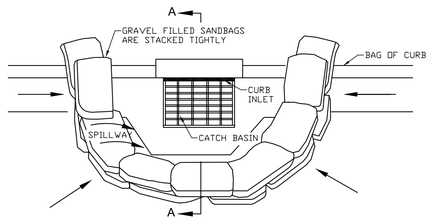
SOIL TRACKING PREVENTION DEVICE NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the Engineer for points of egress from unstabilized areas of the project to public roads where off site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed through a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The contractor may propose an alternative technique to minimize off site tracking of sediment. The alternative must be reviewed and approved by the Engineer (and City staff must approve any alternate techniques) prior to its use.
3. All materials spilled, dropped or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently or if directed by the City staff.
4. Aggregated shall be described in section 901 excluding 901-2.3. Aggregates shall be FDOT side #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are not suitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15'x50'=100 ft.³ 30'x50'=200 ft.³
   as an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.2% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the side drain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent offset tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward through the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD: including but not limited to excavation, grading, temporary pipe (including M.E.S. when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, L.F.
10. The nominal size of a standard STPD is 15'X50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.



SOIL TRACKING PREVENTION DEVICE
TYPE A
NTS

3

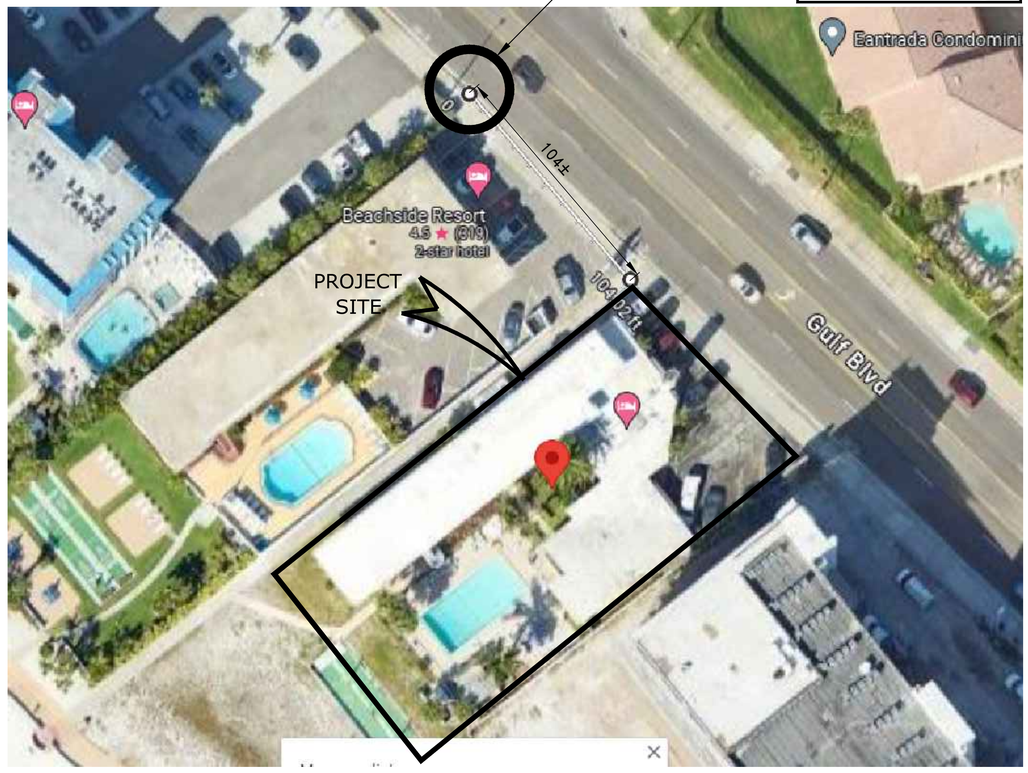


NOTE:
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF
2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW
4. INSPECT BARRIERS AND REMOVE SEDIMENT AS NECESSARY, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY

CURB INLET PROTECTION DETAIL
NTS

EX. CURB INLET TO BE PROTECTED (SEE DETAIL ON THIS SHEET)

SCALE: 1"=30'
0 15 30 60
NORTH



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SITE PREPARATION DETAILS

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TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.
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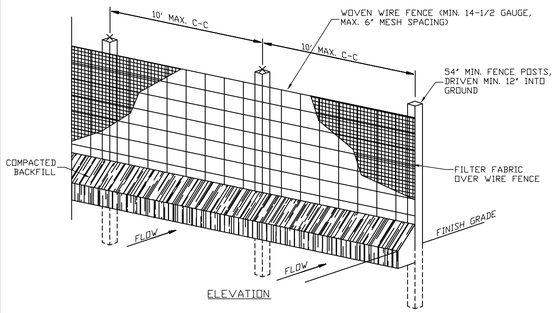
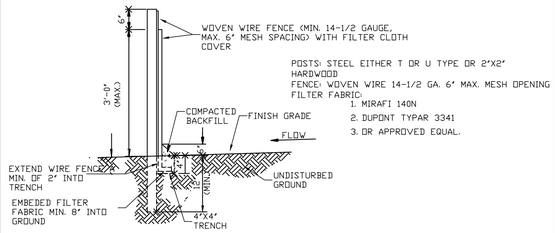


ELEVATION

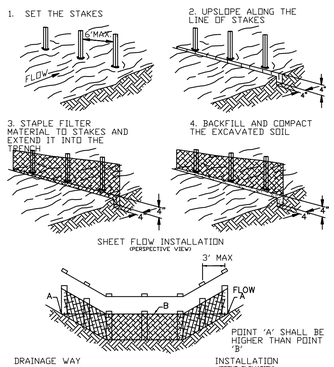


POSTS: STEEL EITHER T OR U TYPE OR 2"X2" HARDWOOD
FENCE: WOVEN WIRE 14-1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:
1. MIRAFI 140N
2. DUPONT TYPAR 3341
3. OR APPROVED EQUAL.

XCROSS-SECTION

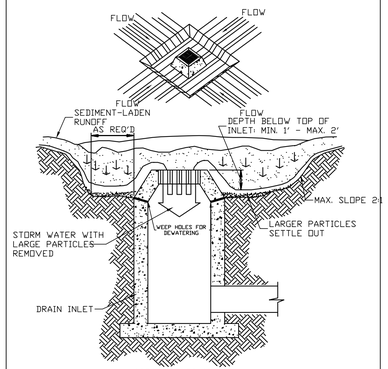
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO HALF THE HEIGHT OF THE SILT FENCE.

SEDIMENTATION SILT/FENCE W/ WIRE SUPPORT
NTS

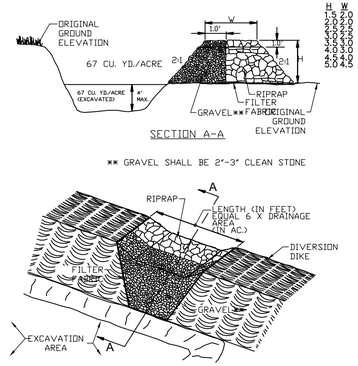


NOTE: INSTALL IN ACCORDANCE WITH SILT FENCE DETAIL, EXCEPT AS NOTED ABOVE.

SEDIMENTATION / SILT FENCE WITHOUT WIRE SUPORT
NTS

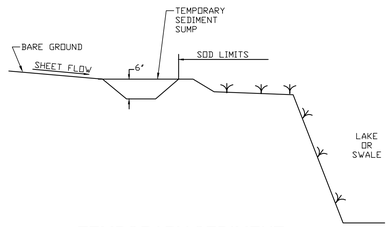


EXCAVATED INLET SEDIMENT TRAP
NTS

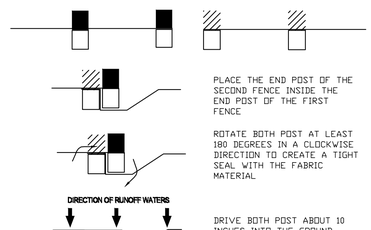


H W
1.5 2.0
2.0 2.0
2.5 2.5
3.0 2.5
3.5 3.0
4.0 3.0
4.5 4.0
5.0 4.5

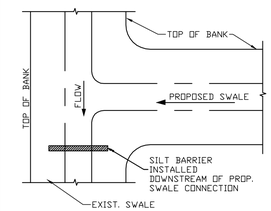
TEMPORARY SEDIMENT TRAP
NTS



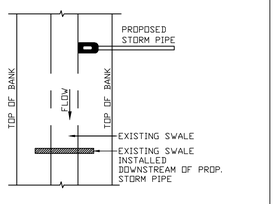
TEMPORARY SEDIMENT SUMP
NTS



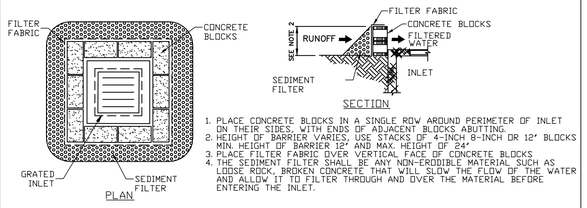
ATTACHING TWO SILT FENCES
NTS



SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
NTS



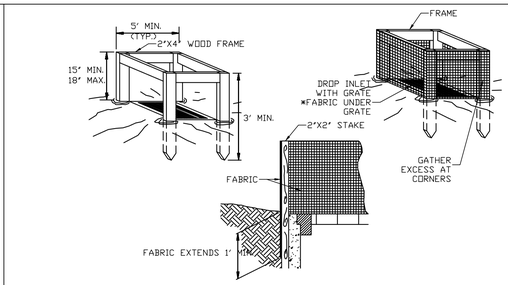
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
NTS



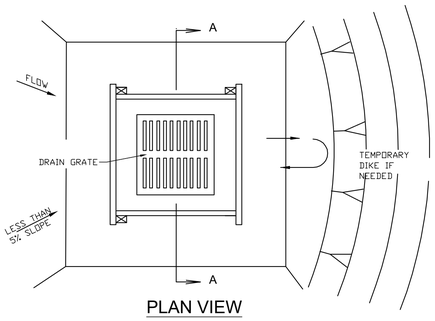
1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES, USE STACKS OF 4-INCH, 8-INCH OR 12" BLOCKS MIN. HEIGHT OF BARRIER 12" AND MAX. HEIGHT OF 24"
3. PLACE FILTER FABRIC OVER VERTICAL FACE OF CONCRETE BLOCKS
4. THE SEDIMENT FILTER SHALL BE ANY NON-ERODIBLE MATERIAL SUCH AS LOOSE ROCK, BROKEN CONCRETE THAT WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.

BLOCK AND AGGREGATE INLET SEDIMENT FILTER
NTS

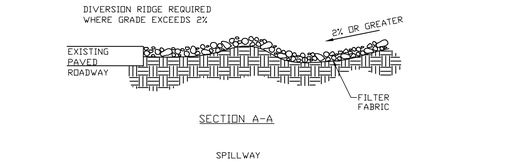
NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS, (LESS THAN 5%)
2. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

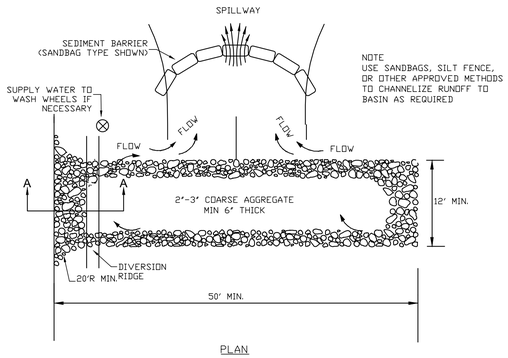


SILT FENCE INLET PROTECTION
NTS



PLAN VIEW





NOTE:
1. THE ENGINEER SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUTS OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN

TEMPORARY CONSTRUCTION ACCESS DETAIL
NTS

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NPDES DETAILS

BALBOA SHORES
11580 GULF BLVD
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Northside Engineering, Inc.
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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

GULF OF MEXICO PUBLIC BEACH

GULF BLVD. - S.R. 699

10' CITY OF TREASURE ISLAND BEACH ACCESS

EX. 6' CONC. BLOCK WALL

CONC. WALK

EX.CONC. WALK

SIR&D LB#760

SIR 5/8" LB#760 P.O.L.

10.64'

P.L.

CCCL

N43°09'27"W 100.49'± (M) N43°09'27"W 100.49'± (D)

FLOOD ZONE AE B.F.E (11') FLOOD ZONE VE B.F.E (12')

FIR T.B.M.

N52°00'50"E (P&M) 189.34'± (D) 187.96' (M)

193' (P)

EX. DUKE ENERGY BOX

6' x 12' x 4" THICK CONCRETE WITH BICYCLE RACKS FOR 6 BIKES

NEW 6' CONCRETE WALK @5% MAX SLOPE

LESS R/W

& FIR 5/8" #4626 10.11'N.W.

SCRIBE T.B.M.

EX. E.J

NEW CONC. PAD

FND N&D #6869

NEW TYPE 'F' CURB PER FDOT INDEX 522-001

PEDESTRIAN RAMP PER FDOT INDEX 522-002 "CR-G" (TYP OF 4)

S45°54'47"E 100.85'± (D) S45°57'22"E 100.99' (M)

NEW 2' DROP CURB FDOT INDEX 520-001

TO BE SAWCAT AT EDGE OF ROADWAY

CROOSWALK PER FDOT INDEX 711-001

TRUNCATED DOMES RED IN COLOR (TYP.)

BEGINNING NEW TYPE 'F' CURB FDOT INDEX 520-001

NEW 9' CONC. SIDEWALK CONNECT TO EXISTING

58' ROW

PAVT, 80 'W

HC SIGN

NEW 5' CONC. WALK @ 5% MAX

POOL PUMP

POOL

POOL DECK

HOT TUB

CABANA

CABANA

CABANA

CABANA

43.9'

5'

19'

34.7'

4" CONC. PARKING GARAGE

12' OVERHANG

6.7'

DOOR

24'

18'

9'

R35'

R25'

BRICK PAVERS

STOP SIGN & BAR

2 SPACE GARAGE

NEW 5' CONC. WALK

39.1'

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

WATER VALVE

40'

STAIRWELL

SCALE: 1"=10'

10 0 5 10 20

NOTES:

1. STRUCTURAL FILL WILL NOT BE USED FOR THIS SITE.
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.
3. INTERIOR AND EXTERIOR LIGHTING SHALL ADHERE TO SEC. 68-466 AND ARTICLE V- COASTAL LIGHTING STANDARDS. THIS ARTICLE IS INTENDED TO ENSURE LIGHTING FROM ALL PROPERTIES CANNOT BE SEEN FROM TREASURE ISLAND'S GULF BEACHES.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED 6" CONC.
- PROPOSED BRICK PAVERS

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CIVIL SITE PLAN

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Northside Engineering, Inc.

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

GULF OF MEXICO PUBLIC BEACH

GULF BL VD. - S.R. 699

58' ASPHALT, 80' R/W

10' CITY OF TREASURE ISLAND BEACH ACCESS

LESS R/W

2' BLOCK WALL

CONC. WALK

EX.CONC. WALK

EX. 6' CONC. BLOCK WALL

N52°00'50"E (P&M) 189.34'± (D) 187.96' (M)

193' (P)

SIR&D LB#760

SIR 5/8" LB#760 P.O.L.

10.64' P.L.

& FIR 5/8" #4626 10.11'N.W.

SCRIBE T.B.M. 5.62

FND NAIL #3869

S45°54'47"E 100.85'± (D) S45°57'22"E 100.90' (M)

CCCL

N43°07'27"W 100.49'± (D)

FLOOD ZONE AE B.F.E (11') FLOOD ZONE VE B.F.E (12')

DECO DRAIN TOP EL. 5.88

DECO DRAIN TOP EL. 5.92

POOL PUMP

CABANA

CABANA

CABANA

CABANA

POOL

HOT TUB

POOL DECK

2% MAX SLOPE (TYP.)

NEW 5' CONC. WALK @ 5% MAX

25 L.F. RETAIN WALL TOP.EL.5.7

SPREADER SWALE

27 L.F. RETAIN WALL TOP.EL.5.1

MEET EX. CONC. WALK

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

NEW RETAIN WALL1.9' HIGH MAX.

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

85' RETAIN WALL

NEW RETAIN WALL TOP EL. 5.7

WEIR LOCATION SEE DETAILON SHEET C4.2

EX. RETENTION SPREADER SWALE BOT.EL. 4.0

EX. BUILDING

SPA

POOL

STAIRWELL

DUMPSTER ROOM

SECTION 1 STA - 0+00

SECTION 2 STA - 0+100

NORTH

SCALE: 1"=10'

10 0 5 10 20

STORM STRUCTURE TABLE

#	STRUCTURE TYPE	RIM ELEV.	INV. ELEV.
1	NEW TYPE "F" INLET	5.6	3.6
2	OPENNING IN CURB WALL 3	–	3.5

STORM DRAIN TABLE

PIPE	LENGTH	DIAMETER	TYPE	SLOPE
1-2	30'	12"	PVC C-900	0.33%

LEGEND

- PROPERTY LINE
- EXIST. SAN. SEWER
- NEW SAN. SEWER
- EXIST. WATER SERVICE
- NEW WATER SERVICE
- NEW STORM SERVICE
- EXIST STORM SERVICE
- EXISTING RECLAIMED WATER
- NEW SWALE
- PROPOSED SAN. MH
- PROPOSED CLEAN-OUT
- NEW STORM INLET
- NEW MITERED END
- FLOW ARROW
- EX. ELEV. +XXX
- PROP. ELEV. +XXX

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Est. 1994 419

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Site Development Management - Utility Design
Construction Administration

Registry # 31306

Donald B. Fairbairn, P.E. #44971

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PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

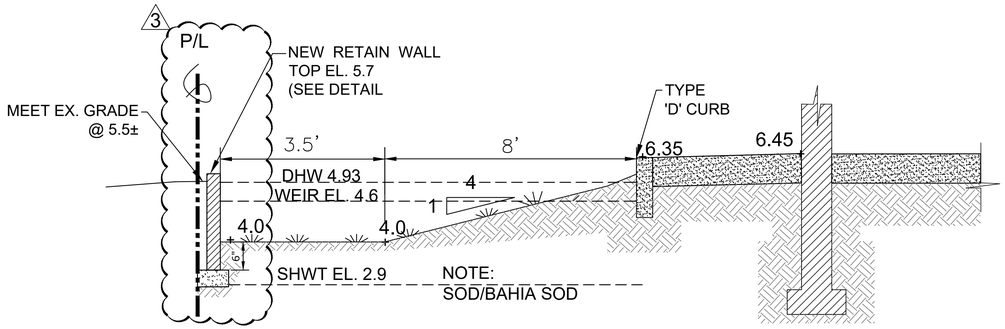
GRADING & DRAINAGE PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

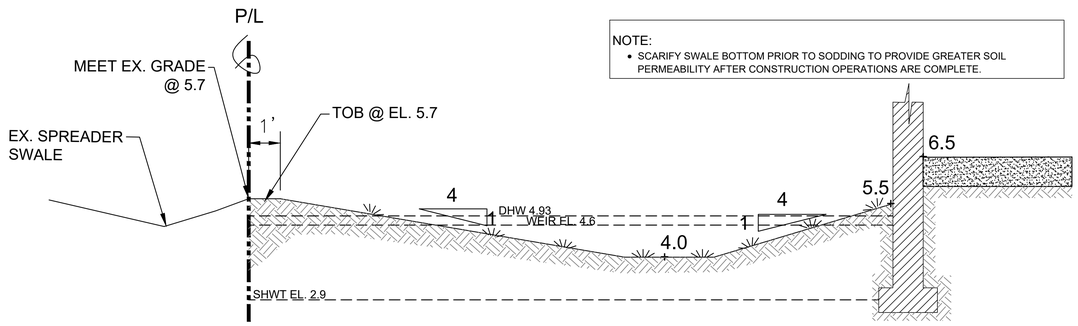
C4.1

C:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:16:53 PM, Tech3, DWG To PDF.pc3



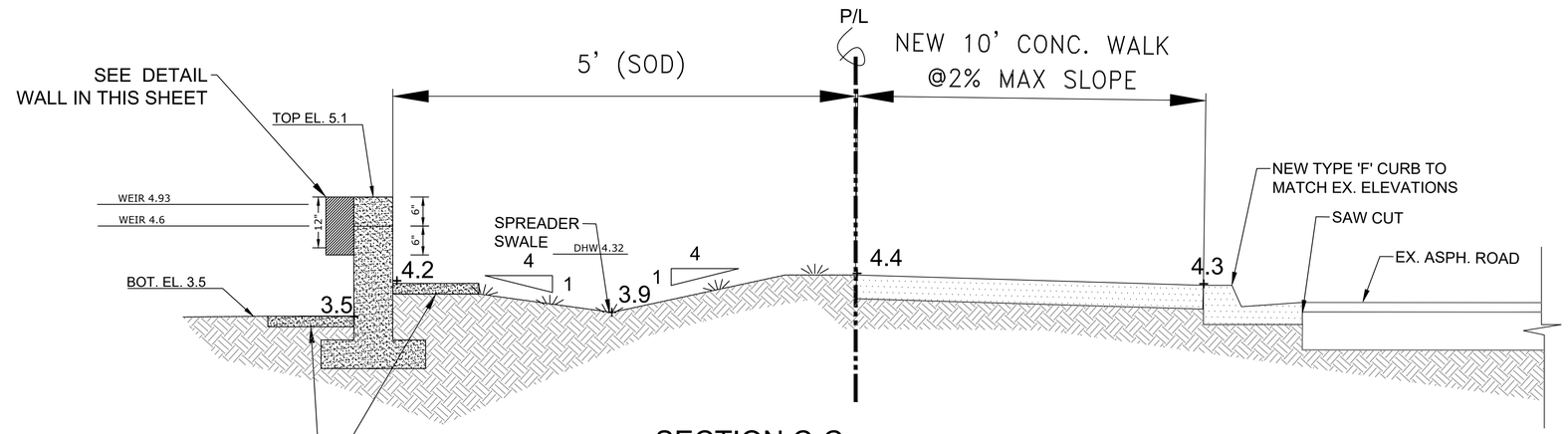
POND SECTION A-A

N.T.S.



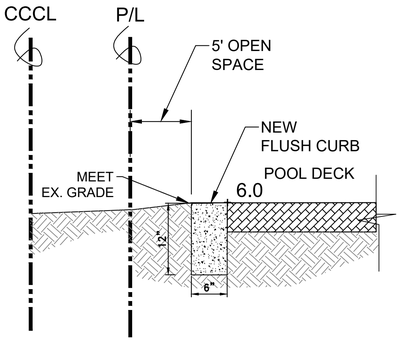
POND SECTION B-B

N.T.S.



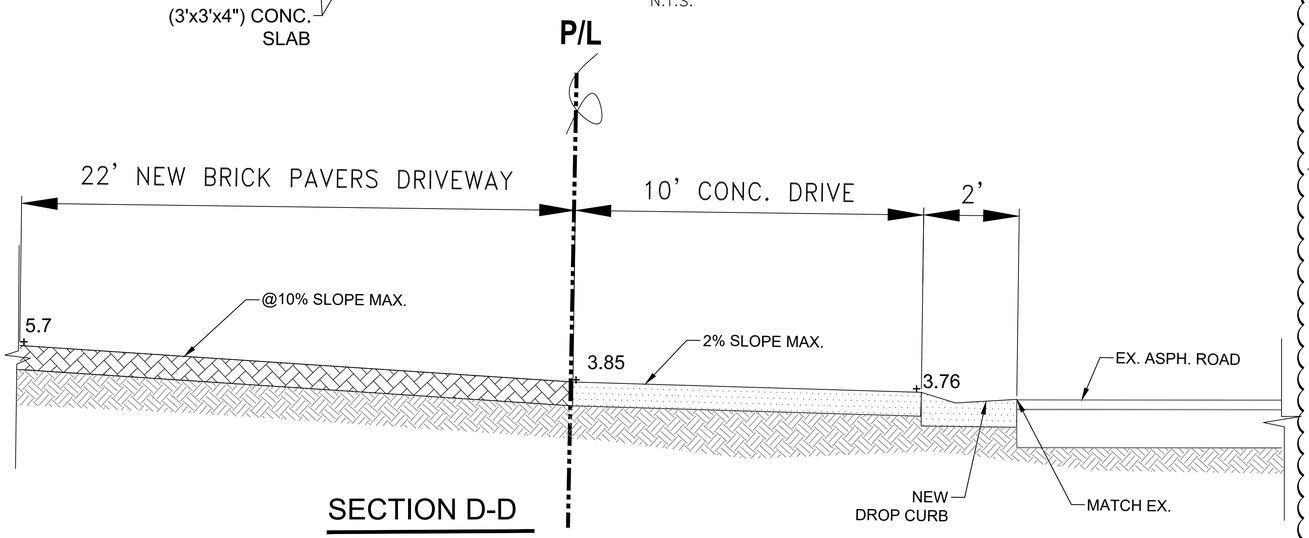
SECTION C-C

N.T.S.



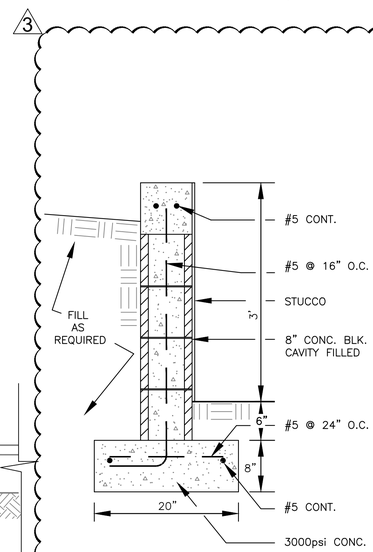
SECTION E-E

N.T.S.



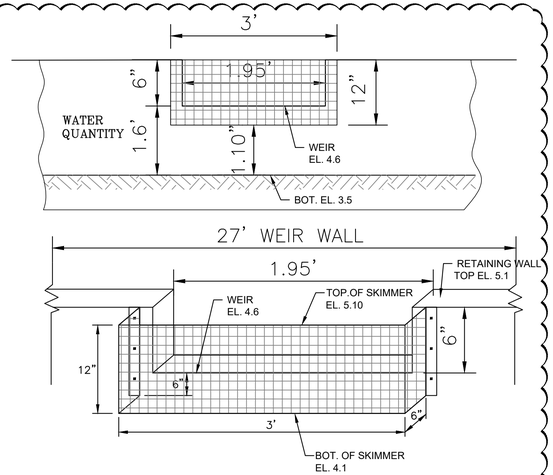
SECTION D-D

N.T.S.



SECTION F-F

N.T.S.



WEIR & GREASE SKIMMER DETAIL

N.T.S.

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3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

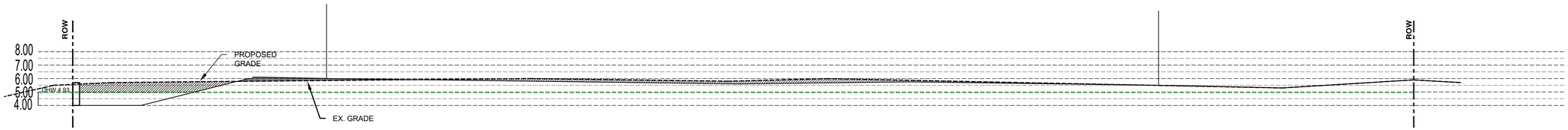
DRAWN BY : EH

CROSS SECTIONS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

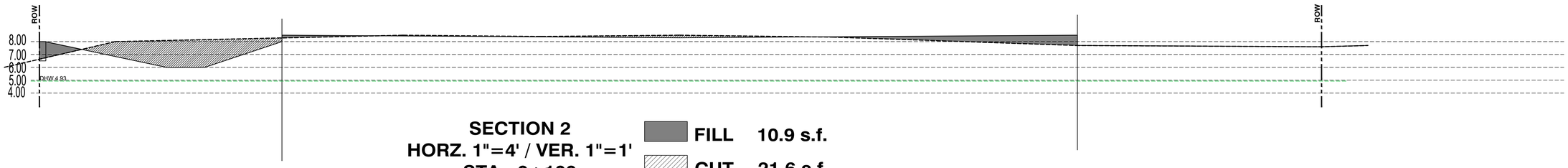
Northside Engineering, Inc.
C4.2

Z:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:22:05 PM, Tech3, DWG To PDF.pc3



SECTION 1
HORZ. 1"=4' / VER. 1"=1'
STA - 0+0

FILL 1.9 s.f.
CUT 7.8 s.f.



SECTION 2
HORZ. 1"=4' / VER. 1"=1'
STA - 0+100

FILL 10.9 s.f.
CUT 21.6 s.f.

FLOOD PLAIN VOLUME COMPENSATION

		FILL			CUT		
SECTION	STATION	sq. ft. FILL AREA	DISTANCE	cu. ft. FILL VOLUME	sq. ft. CUT AREA	DISTANCE	cu. ft. CUT VOLUME
1	0+00	1.8			7.8		
			100	635		100	1,470
2	0+100	10.9			21.6		
		TOTAL FILL VOLUME		635 cu.ft.	TOTAL CUT VOLUME		1,470 cu.ft.

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3	05/02/24	COMMENTS
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5	/ /	
6	/ /	

DRAWN BY : EH

CROSS SECTIONS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C4.3

Z:\2023 AutoCAD Projects\2370 - Arvilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:22:29 PM, Tech3, DWG To PDF.pc3

NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

GULF OF MEXICO PUBLIC BEACH

GULF BL VD. - S.R. 699

58' ASPHALT, 80' R/W

10' CITY OF TREASURE ISLAND BEACH ACCESS

2' BLOCK WALL

EX. 6' CONC. BLOCK WALL

CONC. WALK

EX.CONC. WALK

189.34'± (D)
N52°00'50"E (P&M) 187.96' (M)
193' (P)

SIR & LB#760

SIR 5/8" LB#760 P.O.L.

10.64'

P.L.

CCCL

FLOOD ZONE AE B.F.E (11')
FLOOD ZONE VE B.F.E (12')

POOL

POOL DECK

HOT TUB

POOL PUMP

CABANA

CABANA

CABANA

CABANA

NEW 6" FIRE DR 18

NEW 6" DCVA

NEW 2" WATER

CONNECT NEW SAN. TO EX.

SCRIBE T.B.M.

EX. GV

EX. 6" FIRE

EX. C.O

EX. 6" SAN. LATERAL

NEW 6" ELBOW

EX. 2" X 4" WATER TAP

NEW 4" FDC

NEW FHA

NEW 4" DR 14

NEW CO. TOP EL. 6.25 INV. EL. 2.72

NEW 6" SAN. @ 1% MIN 113 LF.

6" x 6" WYE

NEW CO. TOP EL. 5.75 INV. EL. 1.5

NEW CO. TOP EL. 4.0 INV. EL. 1.1

NEW 6" SAN @ 1% MIN 35 LF.

EX. 4" WATER

EX.16" WATER MAIN

EX RECLAIMED WATER MAIN

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

S45°54'47"E 100.85'± (D)
S45°57'22"E 100.90' (M)

LESS R/W

& FIR 5/8" #4626 10.11' N.W.

& FIR 5/8" #4869

SCALE: 1"=10'

10 0 5 10 20

WATER / FIRE CONNECTION DETAIL

N.T.S.

EX. 6" F
REMOVE EX. FH
EX.GV TO REMAIN
NEW FH
NEW. 6" GV
NEW 6"TEE.
NEW 6" F DR 18
NEW 6" DCVA
EX. 4" WATER
NEW 2" WATER
NEW 2" WM & BFP
NEW 6" TEE
EX. 2" X 4" WATER TAP
NEW. 4" F DR 14

LEGEND

- PROPERTY LINE
- EXIST. SAN. SEWER
- NEW SAN. SEWER
- EXIST. WATER SERVICE
- NEW WATER SERVICE
- NEW STORM SERVICE
- EXIST STORM SERVICE
- EXISTING RECLAIMED WATER
- NEW SWALE
- PROPOSED SAN. MH
- PROPOSED CLEAN-OUT
- NEW STORM INLET
- NEW MITERED END
- FLOW ARROW
- EX. ELEV. +XXX
- PROP. ELEV. ±XXX

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DRAWN BY : EH

UTILITY PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C5.1

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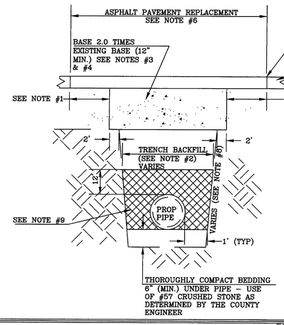
NOTES:
1. MILLING AND RESURFACING LIMITS: 3'-0" FOR RESIDENTIAL ROADWAYS; 25'-0" FOR ALL OTHER TYPES OF ROADWAYS. SHALL INCLUDE ENTIRE LANE WIDTH.
2. BACKFILL FOR TRENCH SHALL BE PLACED IN 6" COMPACTED LAYERS TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. (EXCAVATABLE FLOWABLE FILL OPTION IS SUBJECT TO COUNTY ENGINEER'S APPROVAL). TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY.
3. BASE MATERIAL SHALL BE LIME ROCK OR CRUSHED CONCRETE (MIN. LBR 100) AND SHALL BE PLACED IN 6" COMPACTED LAYERS TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 (MODIFIED) (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
4. AS AN ALTERNATIVE TO COMPACTED BASE AND IN WET AREAS, FULL-LIFT ASPHALTIC CONCRETE, FINE TRAFFIC LEVEL C TYPES SP9.5 OR 12.5, SHALL BE PLACED IN 2" COMPACTED LAYERS WITH A MINIMUM THICKNESS EQUAL TO THE EXISTING BASE (6" MIN.).
5. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE SAW-CUT AND ALL SURFACES TACK COATED.
6. ASPHALT SURFACE SHALL BE CONSISTENT WITH EXISTING GRADE. IN ACCORDANCE WITH PINELLAS COUNTY SPECIFICATIONS, THE FOLLOWING ROADWAY CLASSIFICATION TYPE/THICKNESS ARE REQUIRED: ARTERIAL-3" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; COLLECTOR-2" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; RESIDENTIAL-1½" MIN. TYPE SP-9.5 TRAFFIC LEVEL "C" (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
7. OVERLAY OF CONSTRUCTION SCARS TO PAVEMENT AND TRENCH SHALL BE REQUIRED AS DIRECTED BY THE COUNTY ENGINEER.
8. EXCAVATION SHALL COMPLY WITH THE TRENCH SAFETY ACT REQUIREMENTS.
9. INSTALL DRY COMPACTABLE MATERIAL AROUND THE PIPE.
10. ALL MATERIAL, WORK AND TESTING SHALL MEET PINELLAS COUNTY STANDARD SPECIFICATIONS.
11. CONTRACTOR SHALL RESTORE PAVEMENT TO MATCH THE GRADES THAT EXISTED PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY NECESSARY TO ENSURE THAT THIS REQUIREMENT IS MET SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

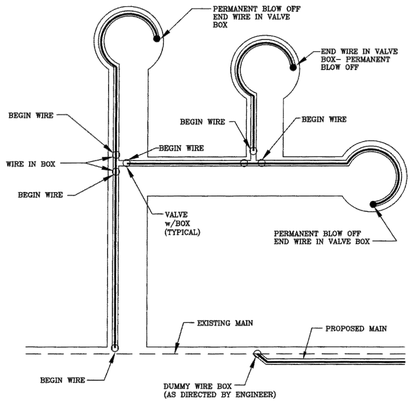


PINELLAS COUNTY

PAVEMENT CUTS, EXCAVATION AND RESTORATION

DETAIL INDEX I.D.: 1291
DATE: FEB/2016
IVAN J. FERNANDEZ, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF STREET IS A SHORT CUL-DE-SAC, LOCATOR WIRE IS TO RUN FROM MAIN VALVE TO BLOW-OFF VALVE BOX.

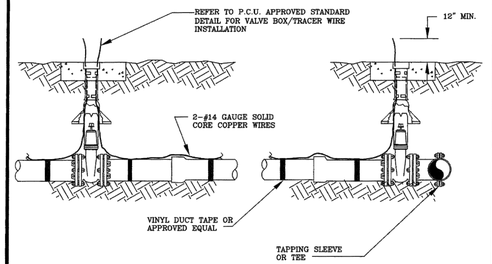


PINELLAS COUNTY

TRACER WIRE LAYOUT DETAIL

DETAIL INDEX I.D.: PCU GD 3
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. USE 2-#14 GAUGE (MINIMUM), SOLID CORE COPPER WIRE WITH COLOR CODED INSULATION PER SERVICE.
3. THERE SHALL BE SUFFICIENT SLACK IN TRACER WIRE TO EXTEND A MIN. OF 12" ABOVE VALVE BOX.
4. WIRE IS TO CONTINUE THROUGH TEES ON MAIN LINE WHERE NO VALVES EXIST.
5. ATTACH WIRE TO TOP CENTER LINE OF MAIN USING DUCT TAPE OR APPROVED EQUAL @ 5'- 0" INTERVALS.
6. DUMMY BOXES ARE TO CONSIST OF A TOP SECTION OF A VALVE BOX ASSEMBLY ENCASED IN A CONCRETE VALVE BOX COLLAR PER P.C.U. APPROVED STANDARD DETAIL.

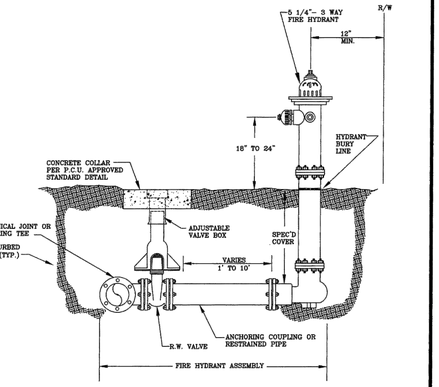


PINELLAS COUNTY

TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.: PCU GD 3a
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BOLTED FITTINGS SHALL BE POLYETHYLENE WRAPPED, COLOR CODED PER SERVICE.
3. VALVE BOX(ES) SHALL HAVE A CONCRETE COLLAR PER P.C.U. APPROVED STANDARD DETAIL.
4. IF FIRE HYDRANT IS INSTALLED WITHIN AN OFF-STREET VEHICULAR AREA, AND IS LOCATED WITHIN 10 FT. OR LESS OF A VEHICULAR USE AREA, GUARD POSTS (BOLLARDS) SHALL BE INSTALLED PER P.C.U. APPROVED STANDARD DETAIL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
5. IF DISTANCE BETWEEN VALVE AND HYDRANT IS 10 FT. OR GREATER, AN ADDITIONAL VALVE SHALL BE INSTALLED FOR CONTROL OF HYDRANT UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
6. HYDRANT SHALL BE INSTALLED PLUMB.
7. HYDRANT SHALL BE PAINTED UPON INSTALLATION PER P.C.U. APPROVED MATERIAL SPECIFICATIONS.
8. ALL CHAINS SHALL BE REMOVED AFTER INSTALLATION.

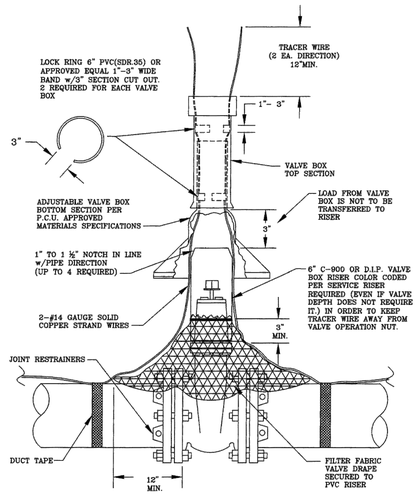


PINELLAS COUNTY

FIRE HYDRANT ASSEMBLY DETAIL

DETAIL INDEX I.D.: PCU WD 6
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER
   VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
   COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.

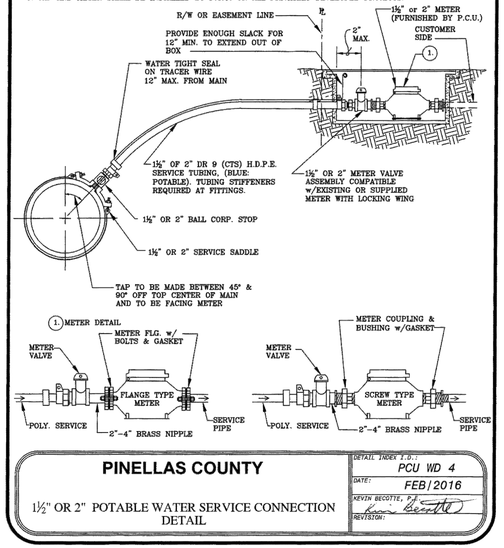


PINELLAS COUNTY

VALVE BOX/TRACER WIRE INSTALLION DETAIL

DETAIL INDEX I.D.: PCU GD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
9. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.

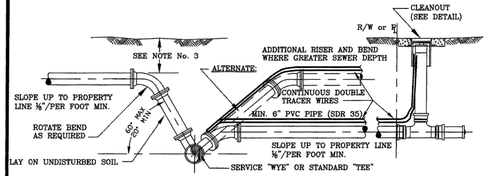


PINELLAS COUNTY

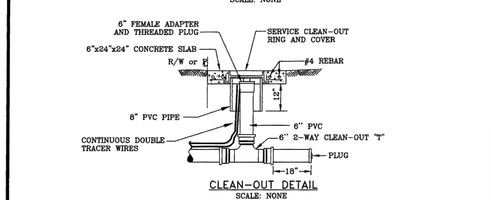
1½" OR 2" POTABLE WATER SERVICE CONNECTION DETAIL

DETAIL INDEX I.D.: PCU WD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTES:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
3. MINIMUM DEPTH UNDER ROADWAY 42" MINIMUM DEPTH AT PROPERTY LINE 36" (OR AS REQUIRED FOR SERVICE).
4. SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
5. NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
6. RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
7. RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
8. THE TRACER WIRE SHALL START AT THE CLEAN-OUT AND RUN ALONG THE SEWER SERVICE TO THE MAIN AND BACK TO THE CLEAN-OUT AS ONE CONTINUOUS WIRE.



SERVICE CONNECTION - DETAIL
SCALE: NONE



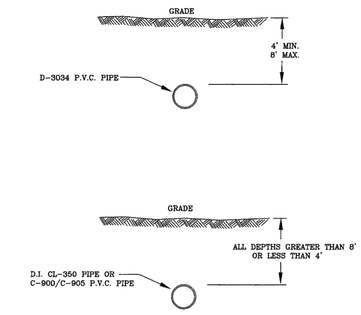
CLEAN-OUT DETAIL
SCALE: NONE

PINELLAS COUNTY

SEWER SERVICE CONNECTION AND CLEAN-OUT DETAIL

DETAIL INDEX I.D.: PCU SD 4
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.



PINELLAS COUNTY

DEPTH LIMITATIONS OF SANITARY SEWER PIPE DETAIL

DETAIL INDEX I.D.: PCU SD 5
DATE: FEB/2016
KEVIN BECOTTE, P.E.
REVISION:

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Civil · Land Planning · Traffic Studies · Landscape
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Site Development · Utility Design
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Donald B. Fairbairn, P.E. #44971
Registry # 31306

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PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	

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COUNTY DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C6.1

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GENERAL NOTES:

1. For curb, gutter and curb & gutter provide ¾" - ½" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement shall match the joints in the pavement. For pavement joints, with intermediate joints not to exceed 30' 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

TYPE A

TYPE E

TYPE F

SHOULDER GUTTER

TYPE A, TYPE E, TYPE F, AND SHOULDER GUTTER
(Other Types Similar)

CONCRETE BUMPER GUARD

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

TYPE A

NOTE: For use adjacent to concrete or flexible pavement, concrete shown (See Note 4).

TYPE B

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

TYPE D

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

NOTES:

1. For 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 roadways, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 6", unless otherwise shown on Plans.

3. For Type RA, rotate entire 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.

TYPE E

TYPE F

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

TYPE RA

DROP CURB

NOTE: See the toll site details for conduit requirements.

TOLL HEADER CURB

PLAN VIEW

SECTION A-A

SECTION B-B

SECTION C-C

VALLEY GUTTER

SHOULDER GUTTER

CONCRETE CURB AND GUTTER

LAST REVISION 11/01/18 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | CURB AND GUTTER | INDEX 520-001 | SHEET 2 of 3

TYPE A | TYPE B | TYPE D

CONTRACTION JOINTS IN CURB

TYPE E | TYPE F | SHOULDER GUTTER

NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINTS IN CURB & GUTTER

PLAN | ELEVATION

FLARED END | STRAIGHT END

CURB TYPE A

CURB AND GUTTER TYPE E AND TYPE F

NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS

CONCRETE BUMPER GUARD

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

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

NOTES:

1. Surface on Low Side of Pavement to be ½" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.

2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

CURB AND GUTTER TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

ASPHALTIC CONCRETE CURB

CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

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

GENERAL NOTES:

1. Construct sidewalks in accordance with Specification 522. Use 8" 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 522-001.

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)

OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:

A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and; driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).

B- ¾" Dummy Joints, Tooled

C- ¼" Formed Open Joints

D- ⅝" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers

E- ⅝" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers (joints) Required When Length Exceeds 30'

F- ½" Expansion Joint When Run Of 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

Back of Sidewalk Variations

See Index 522-002 For Joints

A (Signal Pole or Controller Base, Ex.)

A (Utility Pole, Ex.)

Curb or Curb And Gutter

Drainage Inlet

PLAN

SIDEWALK WITH UTILITY STRIP

LEGEND:

4" Thick Sidewalk

6" Thick Sidewalk

Utility Strip

Driveway or Side Road (Full Return Shown)

Driveway or Side Road (Partial Return Shown)

SIDEWALK WITHOUT UTILITY STRIP

Utility Strip Varies

Sidewalk Varies

0.02 Max.

SECTION A-A

SECTION B-B

Railing (See Index 515-052, 515-062, 515-070 or 515-080)

Clear Width

Varies Based on Railing Used

RAILING DETAIL

GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

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

OPEN JOINTS

SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:

A- ½" Expansion Joints (Preformed Joint Filler) between the sidewalk and driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).

B- ¾" Dummy Joints, Tooled

C- ¼" Formed Open Joints

D- ⅝" Saw Cut Joints, 1½" Deep (within 96 hours) Max. 5' Centers

E- ⅝" Saw Cut Joints, 1½" Deep (within 12 hours) Max. 30' Centers (joints) Required When Length Exceeds 30'

F- ½" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

SIDEWALK JOINTS

2' Detectable Warning Surface

Driveway

Border

Shoulder Line

Side Road

Edge of Travel Way

PLAN

CONTINUOUS SIDEWALK

DISCONTINUOUS SIDEWALK

SECTION C-C

CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | CONCRETE SIDEWALK | INDEX 522-001 | SHEET 2 of 2

ISOMETRIC VIEW

OPTION A

OPTION B

PLAN VIEW

CR-D | CR-E | CR-F | CR-G

SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX 522-002 | SHEET 4 of 7

MERGE | ONLY | LANE | TURN | LEFT | RIGHT

25 | MPH | SUN | PASS | STOP | BUS | EXPRESS

Route Shield For Limited Access Facilities (Interstate Route Shield Shown; U.S. and State Route Shield Similar)

Route Shield For Arterials (Alternate Route Shield Shown; U.S. and State Route Shield Similar)

In Pavement Warning Marking

Wrong-Way Arrow

Turn and Through Lane-Use Arrow

R1=2'-11"
R2=2'-3.563"
R3=2'-3.375"

U Turn Lane-Use Arrow

Through Lane-Use Arrow

Turn Lane-Use Arrow (Left Turn Shown - Right Turn Similar)

R1=2-3.375"
R2=2-3.563"

Roundabout Approach Arrow

Preferential Lane Symbol

PAVEMENT MESSAGES NOTES:

1. Place all pavement messages 25' back from the stop line.

2. Dimensions are within 1" ±.

3. All grids are 4" x 4".

4. All pavement messages must be white except Route Shields and In Pavement Warning Markings.

5. Increase width of route shield for routes with three digits.

PAVEMENT MESSAGE AND ARROW DETAILS

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 1 of 13

Crosswalk Width

4'-0" Min. (When Stop Line Present)

Edge Line

Lane line

12" White

24" White (Typ.)

STANDARD CROSSWALK DETAILS

SPECIAL EMPHASIS CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.

2. Dimensions are within 1" ±.

3. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.

4. Refer to Index 522-002 when Curb Ramps are present.

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 9 of 13

Face of Curb

Curb Ramp

Sidewalk

Sign FTP-21-06 And FTP-22-06

3-4" White Diagonal Equally Spaced Per Axis

6" White

TYPICAL

6" White (Typ.)

FORWARD-IN PARKING

REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
A & B	"a"	"b"	"c"	"d"	"e"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING

(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

NOTES:

1. Dimensions are to the centerline of markings.

2. An Access Aisle is required for each accessible space marked on a curb ramp or loading zone.

3. Criteria for pavement markings only, not public sidewalk curb ramp locations. For ramp locations refer to plans.

4. Mount FTP-22-06 sign below the FTP-21-06 sign.

5. Use of the pavement symbol in accessible parking spaces is optional. When the symbol is used, the symbol is either 3'-0" or 3'-6" high and white in color.

LAST REVISION 11/01/21 | DESCRIPTION: | FDOT FY 2023-24 STANDARD PLANS | PAVEMENT MARKINGS | INDEX 711-001 | SHEET 11 of 13

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PROJECT # 2370
ISSUE DATE: 11/29/23

REVISIONS:

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2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
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	/ /	

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FDOT DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

C6.2

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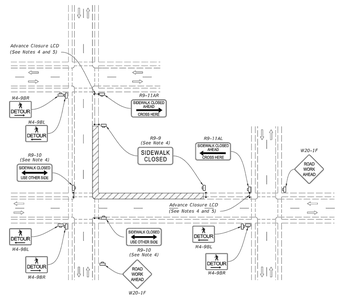
NOTES:

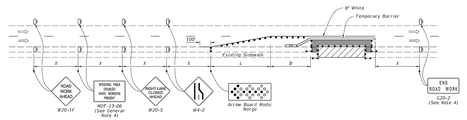
1. Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
2. Place pedestrian LCDs across the full width of the closed sidewalk.
3. For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
4. "Sidewalk Closed" signs (R9-9X) may be mounted on pedestrian LCDs in accordance with the manufacturer's instructions.
5. Omit the Advance Closure LCD if it blocks access to other pedestrian facilities (e.g., transit stops, residences, or business entrances).

SYMBOLS:

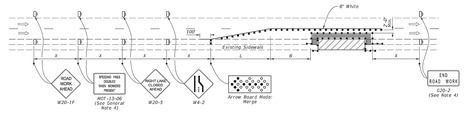
- Work Area
- Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Lane Identification and Direction of Traffic



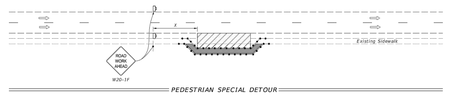
PEDESTRIAN DETOUR



PEDESTRIAN DIVERSION - OPTION 1
(Temporary Barrier Shown, Low Profile Barrier Similar)



PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)



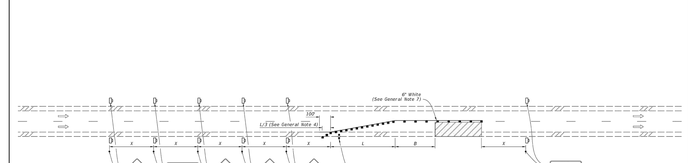
PEDESTRIAN SPECIAL DETOUR

NOTES:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", channelizing device spacing values.
2. Provide a 3' wide temporary pedestrian way with a maximum cross-slope of 5.0%, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary pedestrian ways less than 5' in width at intervals not to exceed 200'.
3. When temporary pedestrian ways require curb ramps, meet the requirements of Index 522-002. Detectable warnings are not required for curb ramps diverting pedestrian traffic into a closed lane.
4. The "Speeding Fines Doubled When Workers Present" signs (M3T-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less.
5. Pedestrian Diversion Option 2 may only be used when called for in the Plans or as approved by an Engineer.

SYMBOLS:

- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic



SINGLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic

GENERAL NOTE:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.
2. On undivided highways the median signs as shown are to be omitted.
3. On limited access facilities, omit "Right Shoulder Closed" signs (W21-5a) and associated work zone sign spacing distances.
4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.
5. The "Speeding Fines Doubled When Workers Present" signs (M3T-13-06) and "End Road Work" signs (G20-2) and "Right Shoulder Closed" (W21-5a), along with associated work zone sign spacing distances, may be omitted when the work operation will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS		INDEX	SHEET
11/01/21				SIDEWALK CLOSURE	102-660	1 of 2
11/01/21				SIDEWALK CLOSURE	102-660	2 of 2
11/01/21				MULTILANE ROADWAY, LANE CLOSURES	102-613	1 of 5

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4	/ /	
5	/ /	
6	/ /	

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MOT DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

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NEW 5-STORY CONDO HOTEL ABOVE PARKING

COASTAL CONSTRUCTION CONTROL LINE

CLEAR SIGHT TRIANGLE PER SECTION 212.11 OF FDOT DESIGN MANUAL

10'X10' DRIVEWAY VISIBILITY TRIANGLE PER SECTION 68-454, CODE OF ORDINANCES OF THE CITY OF TREASURE ISLAND.

10' CITY OF TREASURE ISLAND BEACH ACCESS

189.34'± (D)
N52°00'50"E (P&M) 187.96' (M)

LOCK WALL
CONC. WALK
EX. 6' CONC. BLOCK WALL
EX.CONC. WALK
193' (P)

SW&D LB#760
SIR 5/8" LB#760 P.O.L.
10.64'
P.L.

GULF OF MEXICO PUBLIC BEACH

CCCL

FLOOD ZONE AE B.F.E (11')
FLOOD ZONE VE B.F.E (12')

FIR T.B.M.

POOL
HOT TUB
POOL DECK
POOL PUMP
CABANA
CABANA
CABANA
CABANA

NEW RETENTION POND
TOP EL. 5.9
BOT. EL. 4.0

S52°01'33"W 194.39' (M)
S52°00'50"W 194.24'± (D)

NEW RETAIN WALL1.9' HIGH MAX.

NEW RETAIN WALL TOP EL. 5.7

20' PALM

STAIRWELL

LESS R/W

SCRIBE T.B.M.

FIR & FIR 5/8" #4626 10.11'N.W.

FND N&D #8869

S45°54'47"E 100.85'± (D)
S45°57'22"E 100.90' (M)

GULF BLVD. - S.R. 699
58' ASPHALT, 80' R/W

130.00

WATER VALVE

40'

PLANT SCHEDULE

TREES	CODE	QTY	COMMON	BOTANICAL	NATIVE	CONT	CAL	SIZE	GR.
	SP	3	Slash Pine	Pinus Elliottii	YES	45 gal	2" Cal	10' ht	Grade #1
	WM	2	Wax Myrtle	Myrica Cenfera	YES	30 gal	1.5" Cal	8` ht	Grade #1
	CP	3	Sabal Palmetto	Cabbage Palm	YES	Staggered Heights 12' C.T.			Grade #1

SHRUBS	CODE	QTY	COMMON	BOTANICAL	NATIVE	CONT	HT.	O.C.	GR.
	IH	123	India Hawthorn	Raphiolepsis Indica	NO	3 gal	24" ht	30" oc	#1

NORTH

SCALE: 1"=10'

10 0 5 10 20

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LANDSCAPE PLAN

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.

L1.1

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XERISCAPING

1. ORGANIC MULCHES AND/OR DROUGHT TOLERANT GROUNDCOVERS WITHIN PROPOSED LANDSCAPE PLANTER BEDS.

2. DROUGHT AND COLD TOLERANT PLANT MATERIAL.

3. GROUPING OR ZONING PLANT MATERIAL BASE ON SIMILAR WATER REQUIREMENTS AND THE LOCATION OF PROPOSED IRRIGATION WATERING SYSTEMS.

4. THE USE OF SOIL TESTING TO IDENTIFY SOIL CONDITIONS NECESSARY FOR THE CONTINUED SURVIVAL OF PROPOSED LANDSCAPING.

5. ORGANIC SOIL AMENDMENTS (SUCH AS TOP SOILS, MANURE'S, PEAT AND COMPOSTED MATERIALS) MIXED EXISTING SOILS WITHIN LANDSCAPING PLANTER BEDS TO DEPTHS CONSISTENT WITH THE ROOT DEPTH OF PROPOSED PLANTED MATERIAL (USE ONLY IF EXISTING SOIL CONDITIONS WARRANT THESE AMENDMENTS).

6. THE PRESERVATION AND INCORPORATION OF EXISTING PLANT COMMUNITIES ON SITE INTO THE LANDSCAPE PLAN.

7. THE MINIMAL USE OF TURF GRASSES WHICH REQUIRE FREQUENT IRRIGATION.

8. LOW-MAINTENANCE DESIGN.

TREE & SHRUB PLANTING DETAILS

1. THE ROOT MASS FORM OF EACH TREE PROPOSED FOR INSTALLATION SHALL BE BALLED OR BURLAPPED, BARE ROOT TREES ARE NOT ACCEPTABLE. ALL NONBIODEGRADABLE WRAPPINGS WILL BE REMOVED AND BURLAP WILL BE FOLDED DOWN TO ENHANCE WATER ABSORPTION. IF WIRE BASKETS ARE USED IN CONJUNCTION WITH BALLED AND BURLAPPED TREES. THE FIRST FEW ROWS OF EACH BASKET WILL BE REMOVED AT THE TIME OF INSTALLATION.

2. SUPPORTING APPARATUS SHALL BE REMOVED AFTER 1 COMPLETE GROWING SEASON. ALSO THE FLEXIBLE ATTACHMENTS SHALL BE USED WHERE SUPPORT WIRES ARE WRAPPED AROUND TREE TRUNKS/STEMS TO PREVENT CAMBIAL DAMAGE.

3. PLANTING HOLES ASSOCIATED WITH PROPOSED TREES MUST SLOPE (NOT COMPACTED) AND A MINIMUM OF 18-24 INCHES WIDER THAN THE DIAMETER OF THE ROOT BALL. TREES SHALL BE INSTALLED SUCH THAT THE TOP OF THE ROOT MASS IS LEVEL WITH THE SURFACE OF THE PLANTING HOLE. TREES SHOULD BE INSTALLED 3 - 5 INCHES ABOVE GRADE ON SITES CONTAINING CLAY. A 3 INCH LAYER OF ORGANIC MULCH MUST ALSO BE PLACED OVER THE ENTIRE SURFACE OF EACH PLANTING HOLE. TO PREVENT FUNGAL INFECTION MULCH SHOULD BE PULLED BACK A FEW INCHES FROM THE BASE OF EACH TREE.

4. IF ON SITE SOIL CONDITIONS ARE SUCH THAT SOIL AMENDMENTS WILL BE NECESSARY, THE PLANTING MUST INCLUDE SOIL MIXTURE THROUGHOUT THE ENTIRE SECTION OF EACH PLANTER AREA TO A DEPTH CONSISTENT WITH THE ROOT DEVELOPMENT OF PROPOSED PLANT MATERIAL.

5. PLANTERS ADJACENT TO OR WITHIN VEHICULAR USE AREAS MUST BE CONSTRUCTED SUCH THAT LIMEROCK, ASPHALT, CONCRETE OR ANY OTHER OBSTRUCTIONS DO NOT EXTEND UNDER THE SURFACE INTO THE PLANTING AREAS.

6. THE PRACTICE OF TREE TRUNK WRAPPING AND THE APPLICATION OF PAINTS/TAR ONTO PRUNED TREE BRANCHES IS NOT RECOMMENDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURAL.

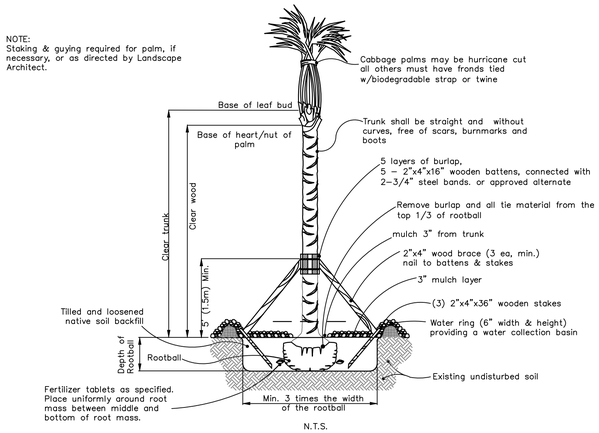
HABITAT MANAGEMENT AND LANDSCAPING PERMITS:

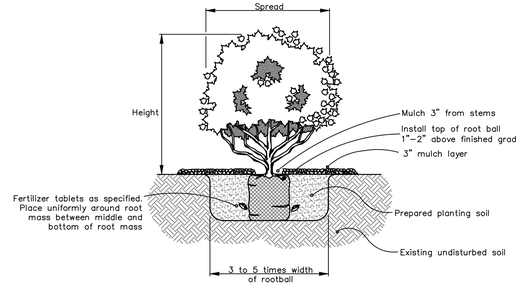
1. A HABITAT MANAGEMENT AND LANDSCAPING PERMIT IS REQUIRED FOR THE DEVELOPMENT OF THIS PROJECT. APPLICATION SHOULD NOT BE MADE UNTIL FINAL ADMINISTRATIVE APPROVAL HAS BEEN GRANTED.

a. AN APPLICATION AND AN EXTRA COPY OF THE APPROVED FINAL APPLICATION PLAN MUST BE SUBMITTED TO THIS DEPARTMENT IN ORDER TO PROCESS THE PERMIT.

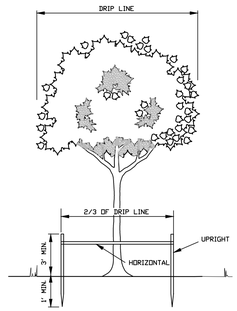
b. ALL EXOTIC SPECIES, I.E., BRAZILIAN PEPPER (SCHINUS TEREBINTHIFOLIUS), PUNK TREES (MELALEUCA QUINQUENERVIA), AND CHINESE TALLOW (SAPIUM SEBIFERUM) MUST BE REMOVED AS A CONDITION OF SITE DEVELOPMENT. WHERE NECESSARY DUE TO THEIR PROXIMITY TO PROTECTED PLANT MATERIAL, HAND REMOVAL WILL BE REQUIRED. SHOULD THIS REMOVAL BE TO A DEGREE THAT A POTENTIAL FOR EROSION IS CREATED, THE AREA MUST BE RESTABILIZED WITH SUITABLE MATERIAL.

c. ONCE FINAL ADMINISTRATIVE APPROVAL (FAA) HAS BEEN GRANTED, A BARRICADE INSPECTION CAN BE SCHEDULED. WHEN THE BARRICADES HAVE BEEN APPROVED THE PERMIT CAN BE TYPED AND RELEASED.





HARDWOODS

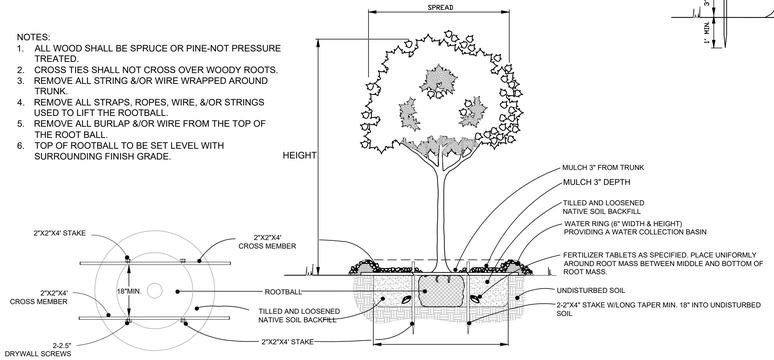


SPECIFICATIONS - WOOD BARRIER

1. MINIMUM RADIUS TO BE PROTECTED:
   A. HARDWOODS - 2/3 DRIPLINE
   B. CONIFERS & SABAL PALMS - ENTIRE DRIPLINE.
2. UPRIGHTS - NO LESS THAN 2" X 2" LUMBER.
3. HORIZONTALS - NO LESS THAN 1" X 4" LUMBER.
4. BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED TREES AND PALMS, AND INSPECTED BY CITY REPRESENTATIVE BEFORE CONSTRUCTION BEGINS.
5. UPRIGHT POSTS ARE TO BE AT LEAST 4 FEET IN LENGTH WITH A MINIMUM OF 1 FOOT ANCHORED IN GROUND AND 3 FEET ABOVE GROUND.
6. BARRIERS TO REMAIN IN PLACE UNTIL ALL PAVING, CONSTRUCTION AND HEAVY EQUIPMENT IS OUT OF AREA.

FURTHER INFORMATION MAY BE OBTAINED FROM THE LAND RESOURCE SPECIALIST AT 562-4741.

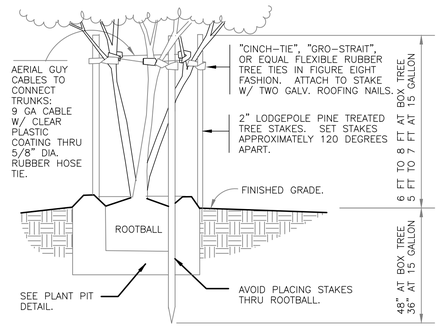
NOTES:
1. ALL WOOD SHALL BE SPRUCE OR PINE-NOT PRESSURE TREATED.
2. CROSS TIES SHALL NOT CROSS OVER WOODY ROOTS.
3. REMOVE ALL STRING &/OR WIRE WRAPPED AROUND TRUNK.
4. REMOVE ALL STRAPS, ROPES, WIRE, &/OR STRINGS USED TO LIFT THE ROOTBALL.
5. REMOVE ALL BURLAP &/OR WIRE FROM THE TOP OF THE ROOT BALL.
6. TOP OF ROOTBALL TO BE SET LEVEL WITH SURROUNDING FINISH GRADE.



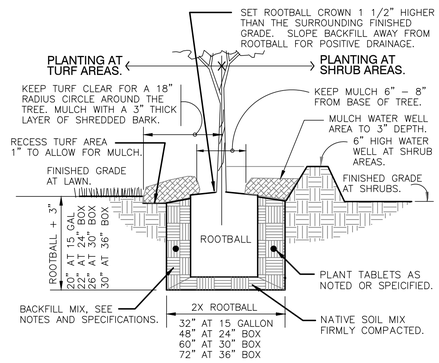
TREE PLANTING DETAIL

IRRIGATION NOTES

1. A LOW VOLUME IRRIGATION SYSTEM, THAT PROVIDES 100% COVERAGE TO ALL PROPOSED PLANTINGS, WILL BE DESIGNED AND INSTALLED BY THE CONTRACTOR.
2. THE PROPOSED IRRIGATION SYSTEM MUST MEET OR EXCEED ALL APPLICABLE CITY CODE REQUIREMENTS. (I.E., BACK FLOW PREVENTION, AUTOMATIC RAIN SHUTOFF DEVICE, ETC...)
3. IRRIGATION SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE CITY PRIOR TO THE COMMENCEMENT OF WORK.
4. IRRIGATION SYSTEM MUST BE INSPECTED AND ACCEPTED BY CITY PROJECT MANAGER PRIOR TO INSTALLATION OF MULCH.
5. IRRIGATION AS-BUILT DRAWINGS, WHICH ACCURATELY AND CLEARLY IDENTIFY ALL MODIFICATION &/OR SUBSTITUTIONS, MUST BE SUBMITTED PRIOR TO FINAL INSPECTION AND ACCEPTANCE.
6. THE EXISTING 5/8" WATER METER WILL BE UTILIZED FOR THIS IRRIGATION SYSTEM.
7. THE LANDSCAPE CONTRACTOR MUST COORDINATE THE PLACEMENT AND POWER SUPPLY FOR THE IRRIGATION CONTROL TIMER WITH THE CITY AND THE GENERAL CONTRACTOR.
8. THE FOLLOWING IRRIGATION SYSTEM COMPONENTS WILL BE UTILIZED, PER EACH MANUFACTURERS' SPECIFICATIONS.
   TORO-NETAFIM TECHLINE SELF CLEANING, PRESSURE-COMPENSATING EMITTER LINE
   HARDIE - RAINDIAL 6 STATION OUTDOOR CONTROL TIMER
   RICHDALE - 214APR 1" ELECTRIC VALVE
   AMTEC - 10" ROUND VALVE BOX.



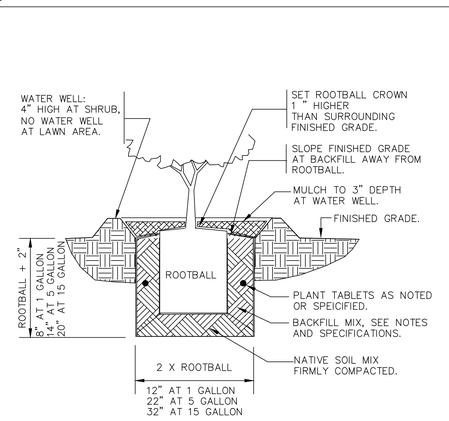
STAKING DETAIL



PLANT PIT DETAIL

1 TREE PLANTING MULTI-STAKE

1" = 1'–0" 32 9343.23–03



00 SHRUB PLANTING

1" = 1'–0" DETAIL–FILE

GENERAL LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL GRADE PLANTING BEDS, AS REQUIRED, TO PROVIDE POSITIVE DRAINAGE AND PROMOTE OPTIMUM PLANT GROWTH.
2. ALL RECOMMENDED TREES AND PLANT MATERIALS WILL BE GRADED AS NURSERY GRADE NO. 1 OR BETTER AS OUTLINED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF PLANT INDUSTRY "GRADES AND STANDARDS FOR NURSERY PLANTS", 7TH EDITION, 1998 AS REVISED FROM TIME TO TIME.
3. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE FLORIDA NURSERYMEN'S AND GROWER'S ASSOCIATIONS APPROVED PRACTICES.
4. ALL PLANTS SHALL BE FERTILIZED WITH AGRIFORM 20-10-5 TABLETS AS PER THE MANUFACTURERS SPECIFICATIONS IN CONJUNCTION WITH NOTE # 5.
5. THE PLANTING SOIL SHALL BE THE APPROXIMATE PROPORTIONS AS FOLLOWS: 50% SAND AND 50% ORGANIC MATERIAL CONSISTING OF NATIVE PEAT, WELL-DECOMPOSED SAWDUST, LEAF MOLD AND TOP SOIL. IT SHALL PROVIDE A GOOD PLIABLE AND THOROUGHLY MIXED MEDIUM WITH ADEQUATE AERATION, DRAINAGE AND WATER-HOLDING CAPACITY. IT SHALL ALSO BE FREE OF ALL EXTRANEOUS DEBRIS, SUCH AS ROOTS, STONES, WEEDS, ETC.
6. ALL PLANTING AREAS SHALL RECEIVE A 3" LAYER OF RECYCLED HARDWOOD LOG MULCH, WHICH IS TO BE WATERED-IN AFTER INSTALLATION.
7. THE PLANT MATERIAL SCHEDULE IS PRESENTED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT KEY, THE PLAN SHALL PREVAIL.
8. PLANTS SHALL MEET SIZE, CONTAINER, AND SPACING SPECIFICATIONS. ANY MATERIAL NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
9. ALL TREE AND SHRUB LOCATIONS ARE SUBJECT TO CHANGE. ALL LOCATIONS SHALL BE APPROVED BY THE CITY PROJECT MANAGER PRIOR TO PLANTING.
10. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING FULLY BOTH THE SITE AND THE BID DOCUMENTS. DISCREPANCIES IN THE DOCUMENTS OR THE ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE CITY PROJECT MANAGER IN WRITING AT THE TIME OF BIDDING OR DISCOVERY. NO ACCOUNT SHALL BE MADE AFTER CONTRACT COMPLETION FOR FAILURE TO REPORT SUCH CONDITION, OR FOR ERRORS ON THE PART OF THE LANDSCAPE CONTRACTOR AT THE TIME OF BIDDING.
11. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY APPLICABLE PERMITS AND LICENSES TO PERFORM THE WORK SET FORTH IN THIS PLAN SET AND THE SPECIFICATIONS.
12. PLANT MATERIAL SHALL BE BID AS SPECIFIED UNLESS UNAVAILABLE, AT WHICH TIME THE CITY PROJECT MANAGER WILL BE NOTIFIED BY TELEPHONE AND IN WRITING OF INTENDED CHANGES.
13. ANY AND ALL QUESTIONS CONCERNING THE PLAN SET AND/OR SPECIFICATIONS SHALL BE DIRECTED TO THE CITY PROJECT MANAGER AT (727) 562-4737.
14. THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTIONS WITHOUT THE WRITTEN APPROVAL OF THE CITY PROJECT MANAGER.
15. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE, IN WRITING, PLANT SURVIVABILITY FOR A PERIOD OF TWELVE (12) MONTHS FROM FINAL ACCEPTANCE BY THE CITY PROJECT MANAGER.
16. ALL DIMENSIONS TO BE FIELD-CHECKED BY THE LANDSCAPE CONTRACTOR PRIOR TO LANDSCAPE MATERIAL INSTALLATION. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE CITY PROJECT MANAGER.
17. ALL MATERIALS MUST BE AS SPECIFIED ON THE LANDSCAPE PLAN. IF MATERIALS OR LABOR DO NOT ADHERE TO SPECIFICATIONS, THEY WILL BE REJECTED BY THE CITY PROJECT MANAGER WITH PROPER INSTALLATION CARRIED OUT BY LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST.
18. ALL PERMITS NECESSARY ARE TO BE PROVIDED BY THE INSTALLING CONTRACTOR UNLESS OTHERWISE SPECIFICALLY STATED IN THE SPECIFICATIONS.
19. NO CONTRACTOR IDENTIFICATION SIGNS SHALL BE PERMITTED ON THE PROJECT, EXCEPT FOR THE PROJECT INFORMATION SIGNS.
20. EXISTING SOD SHALL BE REMOVED AS NECESSARY TO ACCOMODATE NEW PLANTINGS.
21. ANY EXISTING SOD AREAS THAT ARE UNNECESSARILY DISTURBED DURING THE LANDSCAPE INSTALLATION SHALL BE RESODDED TO MATCH EXISTING.
22. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THIS PROJECT.

FERTILIZATION NOTES

SHRUBS AND TREES

ALL TREES AND SHRUBS SHALL BE FERTILIZED WITH "AGRIFORM" 20-15-5 PLANTING TABLETS AT TIME OF INSTALLATION AND PRIOR TO COMPLETION OF PIT BACKFILLING. TABLETS SHALL BE PLACED UNIFORMLY AROUND THE ROOT MASS AT A DEPTH THAT IS BETWEEN THE MIDDLE AND BOTTOM OF THE ROOT MASS.

APPLICATION RATE:

1 GALLON CAN:	1 - 21 GRAM TABLET
3 GALLON CAN:	2 - 21 GRAM TABLETS
5 GALLON CAN:	3 - 21 GRAM TABLETS
7 GALLON CAN:	4 - 21 GRAM TABLETS
TREES:	3 - 21 GRAM TABLETS EACH 1/2" OF CALIPER
PALMS:	7 - 21 GRAM TABLETS

GROUNDCOVER AREAS

ALL GROUNDCOVER AREAS SHALL RECEIVE FERTILIZATION WITH "OZMOCOTE" TIME RELEASE FERTILIZER AS PER MANUFACTURER'S SPECIFICATIONS.

TREE PROTECTION AND PRESERVATION:

TREE BARRICADES AND EROSION CONTROL MEASURE REQUIREMENTS:
1. TREE BARRICADES AND/OR SILT SCREENS OR HAYBALES SHALL BE REQUIRED ALONG THE EDGES OF VEGETATED AREAS TO BE PROTECTED PRIOR TO THE ISSUANCE OF HABITAT MANAGEMENT AND LANDSCAPE PERMITS. THE LOCATION FOR EROSION CONTROL MEASURES ARE SHOWN ON THE CONSTRUCTION DRAWINGS.

2. ALL DESIRABLE TREES MUST BE RETAINED WHEREVER POSSIBLE. IT WILL BE REQUIRED THAT PROPOSED IMPROVEMENTS (i.e. BUILDINGS, WALKWAYS, DRIVEWAYS, POND BANKS, DRAINAGE SYSTEMS, ETC.) BE ADJUSTED TO RETAIN DESIRABLE TREES. GRADE CHANGES MUST BE SENSITIVE TO TREES REMAINING. IN GENERAL, NO GRADE CHANGES SHOULD OCCUR WITHIN THE CANOPY DRIP LINE OF PINE TREES AND 2/3 THE CANOPY DRIP LINE OF HARDWOOD TREES TO BE SAVED.

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Civil - Land Planning - Traffic Studies - Landscape
Due Diligence Reports - Land Use - Re-Zoning
Site Development - Utility Design
Construction Administration

Donald B. Fairbairn, P.E. #44971 Registry # 31306

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY Donald B. Fairbairn, 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.

PROJECT #	2370
ISSUE DATE:	11/29/23

REVISIONS:

No.	Date	Description
1	02/13/24	COMMENTS
2	03/19/24	COMMENTS
3	05/02/24	COMMENTS
4	/ /	
5	/ /	
6	/ /	

DRAWN BY : EH

LANDSCAPE NOTES & DETAILS

BALBOA SHORES
11580 GULF BLVD
TREASURE ISLAND FLORIDA 33706-4646

Northside Engineering, Inc.
L1.2

Z:\2023 AutoCAD Projects\2370 - Avilla - Balboa Shores 11580 Gulf Boulevard\Drawings\Design Drawings\Site plan 5.3.2024.dwg, 5/8/2024 1:25:04 PM, Tech3, DWG To PDF.pc3

AREHNA | Engineering, Inc.

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May 9, 2019

Mr. Anthony Saravanos, CCIM, CDP
Greenleaf Capital
15300 West Cypress Street, Suite 165
Tampa, FL 33605

asaravanos@greenleafcapital.com

Subject: Report of Geotechnical Exploration
Gators Beachside Parking Lot at John's Pass
Treasure Island, Florida
AREHNA Project B-19-026

Dear Mr. Saravanos,

AREHNA Engineering, Inc. is pleased to submit this report of our geotechnical exploration for the proposed project. Services were conducted in general accordance with AREHNA Proposal B.Prop-19-040 dated March 18, 2019. The purpose of our geotechnical study was to obtain information on the general subsurface soil conditions at the site for the design of a proposed parking area, and stormwater pond.

PROJECT INFORMATION

The project site is located west of Gulf Boulevard and north of 126th Avenue in Treasure Island, Florida. Based on email communication it is our understanding that a proposed parking area and a stormwater retention pond are anticipated at the site.

SCOPE OF SERVICES

The purpose of our geotechnical exploration was to obtain information on the general subsurface soil conditions within the project area. The subsurface materials encountered were evaluated with respect to the available project characteristics. The following services were performed to achieve the above-outlined objective:

- Performed one Double Ring Infiltration (DRI) test at a depth of 2.0 feet within the proposed location of the stormwater pond.
- Performed ten hand auger borings to depths of between 1.5 and 6 feet. Soil samples were collected and groundwater levels recorded, if encountered.
- Performed one Standard Penetration Test (SPT) boring to a depth of 20 feet below the existing ground surface. Standard Penetration Test resistances were measured at approximate intervals of two feet in the top ten feet and at approximate intervals of five feet thereafter. The upper four feet were manually augered to avoid possible conflicts with existing underground utilities. The boreholes were backfilled following drilling operations.

- Visually classified and stratified the soils samples in the laboratory using the Unified Soil Classification System (USCS).
- The results of the DRI test, SPT boring, and hand auger borings are presented in this written report signed and sealed by a professional engineer specializing in geotechnical engineering.

FIELD EXPLORATION

Our scope included performing one DRI test at a depth of 2 feet, ten hand auger borings to depths between 1.5 and 6 feet, and one SPT boring to a depth of 20 feet.

The DRI test was performed by installing a 12-inch diameter steel ring and a 24-inch diameter steel ring concentrically into the ground to the desired test depth. Water was then added to a desired level in both rings and held constant. The volume of water added to the inner ring versus time was then recorded. This procedure was repeated every 15 minutes for the first hour, and every 30 minutes for ensuing hours, for a total of 4 hours or until a stabilized infiltration rate was achieved. The DRI test was performed in general accordance with ASTM D-3385, entitled "Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer."

The hand auger borings were performed by manually advancing a 3-inch diameter, 6-inch long sampler into the soil until the sampler was full. The sampler was then retrieved and the soils in the sampler were removed and visually classified. The soil sampling was performed in general accordance with ASTM Test Designation D-1452, entitled "Soil Investigation and Sampling by Auger Borings." The boreholes were backfilled after the borings were completed. Representative portions of the samples collected were sealed in glass jars, labeled, and transferred for appropriate classification.

The SPT boring was performed with the use of a Power Drill Rig using Bentonite "Mud" drilling procedures. Samples were collected and Standard Penetration Test resistances were measured at approximate intervals of two feet for the top ten feet and at approximate intervals of five feet thereafter. The soil sampling was performed in general accordance with ASTM Test Designation D-1586, entitled "Penetration Test and Split-Barrel Sampling of Soils."

The DRI test, hand auger boring, and SPT boring locations are indicated on the **Boring Location Plan, Sheet 1** in the **Appendix.** The DRI test, hand auger borings, and SPT borings were located in the field using GPS coordinates.

USGS TOPOGRAPHIC DATA

The topographic survey map published by the United States Geological Survey was reviewed for ground surface features at the proposed project location, as shown in **Sheet 2** in **Appendix**. Based on this review, natural ground surface elevations at the project site are approximately +5 feet.

USDA NATURAL RESOURCES CONSERVATION SERVICE DATA

A review of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey for Hillsborough County, as shown in **Sheet 2** in **Appendix**, indicates that the soils at the project site consist of the following soil units:

Soil Unit Number	Soil Name	Approximate Depth to Seasonal High Water Table (feet)
19	Palm Beach fine sand, 0 to 8 percent slopes	> 6.0

The soil survey also indicates that the average annual precipitation is 42 to 56 inches. The water table depths shown occur in naturally drained areas.

SUBSURFACE SOIL CONDITIONS

A pictorial representation of the subsurface conditions encountered in the borings is shown on the Soil Profiles, **Sheet 3** in the **Appendix**. The Soil Boring Records should be consulted for a detailed description of the subsurface conditions encountered at each boring location. When reviewing the boring records and the subsurface profiles, it should be understood that soil conditions may vary between, and away from, boring locations.

The SPT boring generally encountered fine sand (SP) to a depth of 13 feet underlain by silty fine sand (SM) to the termination depth of 20 feet. Standard Penetration Test Resistances (N-Values) varied between 2 and 23 blows per foot, indicating very loose to medium dense relative densities.

The hand auger borings generally encountered fine sands (SP) from the ground surface to the termination depths of 1.5 to 6 feet.

DOUBLE RING INFILTRATION (DRI) TEST RESULTS

The following table summarizes the DRI test results:

Test Location	Depth Below Ground Surface, feet	Measured Vertical Infiltration Rate, inch/hr	Estimated Horizontal Infiltration Rate, inch/hr
DRI-1	2.0	1.0	1.5

The vertical infiltration rate is the actual rate, as measured in the field. No factor of safety has been applied. The horizontal infiltration rate was then estimated based on the vertical infiltration rate and soil types encountered. A summary of the DRI test is attached in the **Appendix.**

GROUNDWATER CONDITIONS

The groundwater level was encountered at depths between 4.5 and 6 feet in the borings performed at the site. Fluctuation in groundwater levels should be expected due to seasonal climatic changes, construction activity, rainfall variations, surface water runoff, and other site-specific factors. Since groundwater level variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.

ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

Based on the soil mapping provided by the USDA Soil Survey and our experience in the area, we estimate that the seasonal high groundwater level will be encountered at a depth of approximately 3.5 to 4 feet below the existing ground surface.

GENERAL PAVEMENT RECOMMENDATIONS

The existing sandy existing soils should be acceptable for construction and support of a flexible (limerock or crushed concrete base) pavement section after proper proofrolling and subsurface preparation.

Our recommended flexible pavement sections for standard and heavy duty applications are presented in the following table:

Pavement Section	Component	Recommended Thickness (in.)
Standard Duty Flexible Pavement Section	Asphalt	1.5
	Base (LBR ≥ 100)	6.0
	Stabilized Subgrade (LBR ≥ 40)	6.0
Heavy Duty Flexible Pavement Section	Asphalt	2.0
	Base (LBR ≥ 100)	8.0
	Stabilized Subgrade (LBR ≥ 40)	12.0

Base: We recommend that either limerock or crushed concrete be used for the base. Limerock base material should meet FDOT requirements, including compaction to 98 percent of its maximum dry density, as determined by the Modified Proctor Test (ASTM D-1557), and a minimum Limerock Bearing Ratio (LBR) of 100. Crushed concrete should have an LBR value of 150 and be graded in accordance with Florida Department of Transportation (FDOT) Standard Specification Section 204.

Asphaltic Concrete: The asphaltic concrete structural course should consist of Type SP–12.5 asphaltic concrete material. The asphaltic concrete should meet standard FDOT material requirements, and placement procedures, as outlined in the 2010 Edition of the FDOT Standard Specifications for Road and Bridge Construction.

Portland Cement Concrete: If rigid pavement is used, we suggest that concrete with an unconfined compressive strength of at least 4,000 lbs/in^2 be placed over properly compacted subgrade soils. The key to a successful rigid pavement is properly spaced control joints, a good concrete mix, and proper



workmanship. Rigid pavement is recommended in the vicinity of dumpster pads and in areas with the potential for excessive water runoff.

Pavements should be sloped sufficiently to minimize ponding of surface water.

GENERAL SITE PREPARATION

The initial step in site preparation should be the complete removal of all topsoil, roots, and other deleterious materials from beneath and to a minimum of five feet beyond the development perimeter. The depth to which stripping will be required will vary to some degree but should be less than 6 inches. Also, prior to construction, the location of any existing underground irrigation, septic tanks, drainage, or other utility lines within the construction area should be established. In this regard it should be noted that underground pipes, if not properly removed or plugged, may serve as conduits for subsurface erosion which subsequently may result in excessive settlements. The pavement area should then be inspected and thoroughly proofrolled as directed by a Geotechnical Engineer. Our recommendations listed in this section should be used as a guideline for the project general specifications prepared by the Design Engineer:

- The exposed subgrade within the proposed construction area should be proofrolled using a vibratory roller with a static weight of at least 8 tons and a drum diameter of at least 4 feet. Regardless of the degree of compaction achieved, a minimum of 10 complete coverages (5 in each perpendicular direction) should be performed.

- Careful observations should be made during proofrolling to help identify any areas of soft-yielding soils that may require over excavation and replacement.

- Any planned fill can be placed following satisfactory completion of proofrolling. Fill should generally consist of fine sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum of 98 percent of the Modified Proctor maximum dry density. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

- Prior to beginning compaction, soil moisture contents may need to be controlled in order to facilitate efficient compaction. A moisture content within 3 percentage points of the optimum indicated by the modified Proctor Test (ASTM D-1557) is recommended prior to compaction of the natural ground and fill.

ON-SITE SOIL SUITABILITY

The borings indicate that the upper 6 to 13 feet of sandy soils present at the site are generally suitable for use as fill or backfill. Suitable structural fill materials should consist of fine to medium sand with less than 12 percent passing the No. 200 sieve and be free of rubble, organics, clay, debris and other unsuitable material. Any off-site materials used as fill should be approved by AREHNA prior to acquisition.

CLOSING

AREHNA appreciates the opportunity to have assisted you on this project. Should you have any questions with regards to this report, or if we can be of any further assistance, please contact this office.

Respectfully Submitted,

AREHNA ENGINEERING, INC.
FLORIDA BOARD OF PROFESSIONAL ENGINEERS CERTIFICATE OF AUTHORIZATION NO. 28410

This item has been digitally signed and sealed by:

Digitally signed by Kristina S LaCava
Date: 2019.05.09 14:43:42 -04'00'

KRISTINA S. LACAVA LICENSE No 77594 STATE OF FLORIDA PROFESSIONAL ENGINEER

Kristina LaCava, P.E.
Geotechnical Engineer
Florida Registration 77594
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.

Annabella De Souza Cecchettini, E.I.
Staff Geotechnical Engineer

APPENDIX

Boring Location Plan – Sheet 1
USDA & USGS Vicinity Maps – Sheet 2
Soil Profiles – Sheet 3
Double Ring Infiltration Test Result
Field Procedures

APPENDIX

Boring Location Plan – Sheet 1
USDA & USGS Vicinity Maps – Sheet 2
Soil Profiles – Sheet 3
Summary of DRI Test Result
Field Procedures



N

0 50'

APPROXIMATE PLAN SCALE

LEGEND

- APPROXIMATE LOCATION OF SPT BORING
- APPROXIMATE LOCATION OF AUGER BORING
- APPROXIMATE LOCATION OF DOUBLE RING INFILTRATION TEST

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

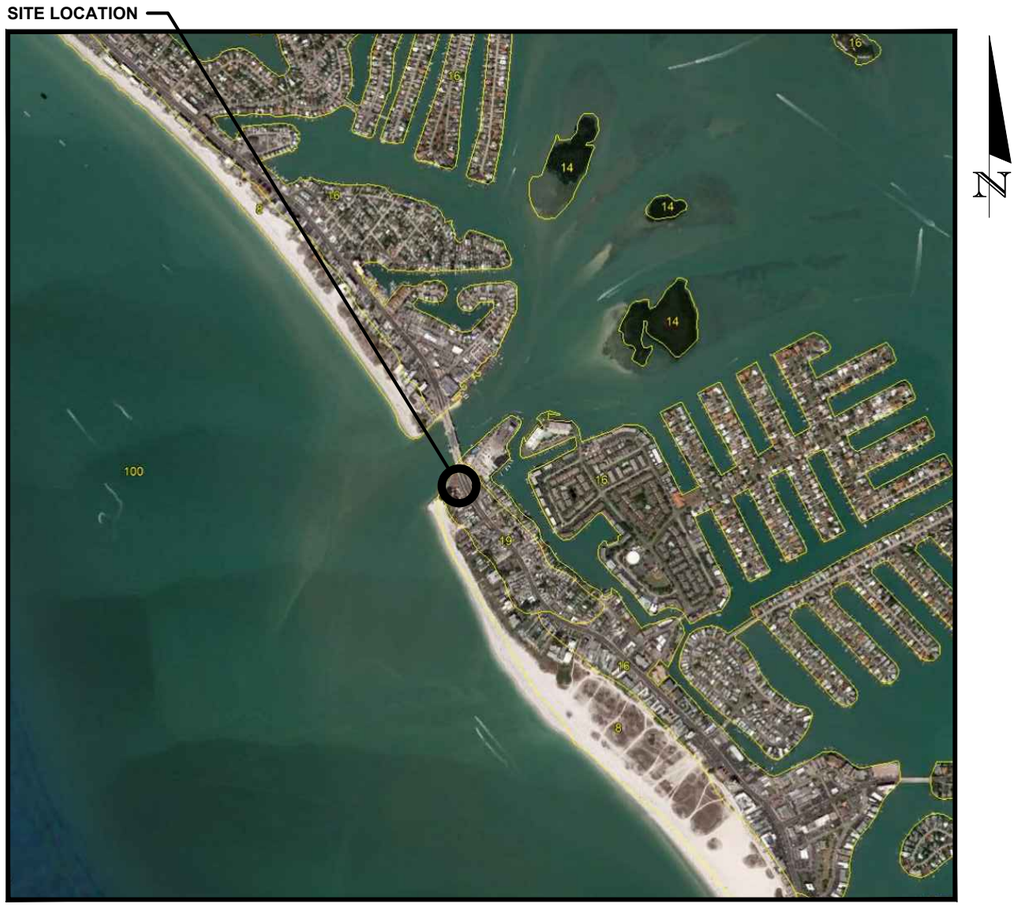
Boring Location Plan

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	1

E:\1-Arehna\Projects\B-19-026 - Gators Beach Side Parking Lot At John's Pass\B-19-026.dwg (BLP) 613767 May 01, 2019 - 10:32am

USDA SOIL SURVEY MAP

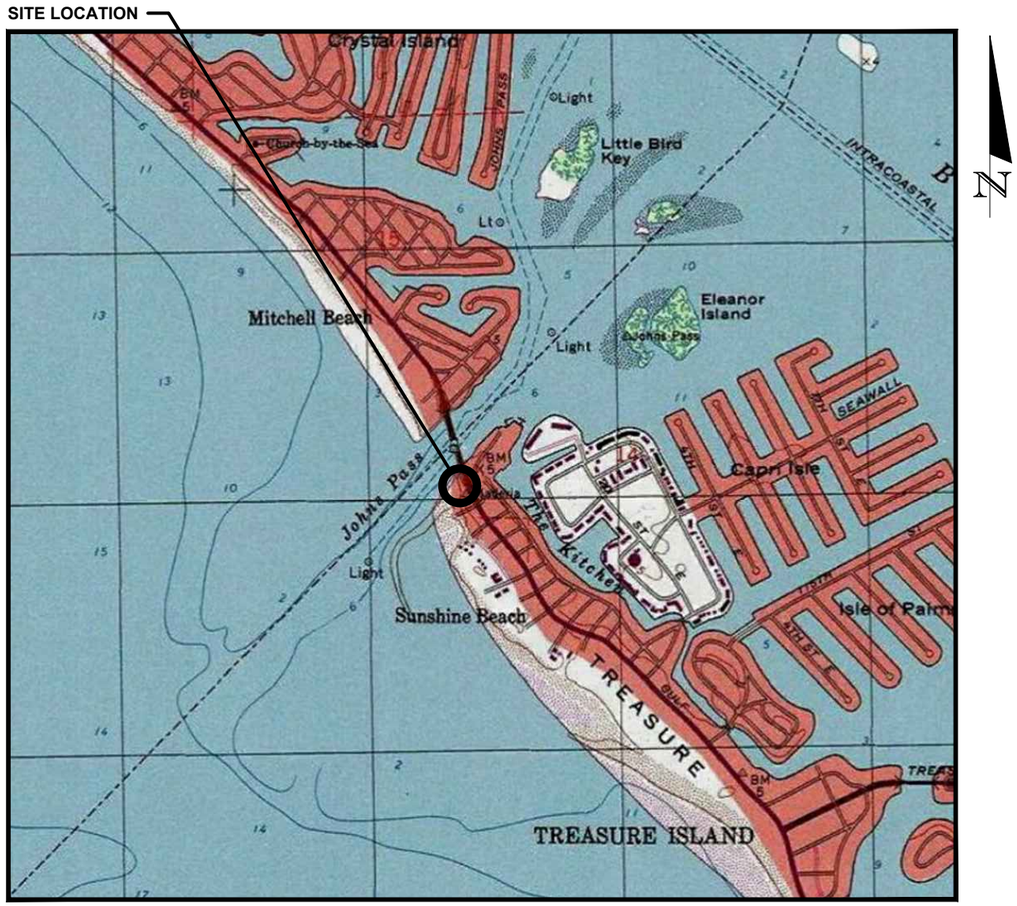


REFERENCE: USDA SOIL SURVEY OF PINELLAS COUNTY, FLORIDA

0 500 2000
Feet

TOWNSHIP: 31 S
RANGE: 15 E
SECTION: 15

USGS TOPOGRAPHIC MAP



REFERENCE: "SEMINOLE, FLORIDA" USGS QUADRANGLE MAP

0 500 2000
Feet

TOWNSHIP: 31 S
RANGE: 15 E
SECTION: 15

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:
AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

USDA & USGS Vicinity Maps

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	2

E:\1-Arehna\Projects\B-19-026 - Gators Beach Side Parking Lot At John's Pass\B-19-026.dwg (TOPO) 613767 May 03, 2019 - 2:58pm

LEGEND

SAND (SP)

SILTY SAND (SM)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING

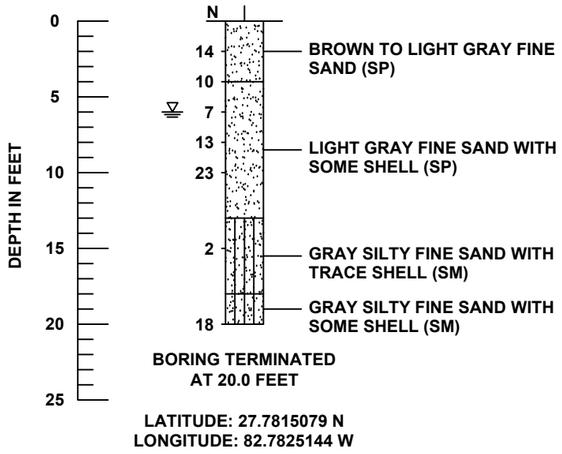
GROUNDWATER TABLE AT THE TIME OF DRILLING

GNE GROUNDWATER TABLE NOT ENCOUNTERED

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION UTILIZING SAFETY HAMMER

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT)	SPT (BLOWS/FT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

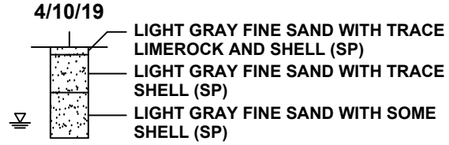
SPT-01
4/18/19



BORING TERMINATED AT 20.0 FEET

LATITUDE: 27.7815079 N
LONGITUDE: 82.7825144 W

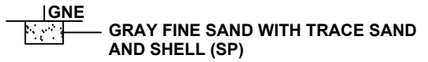
HA-01
4/10/19



BORING TERMINATED AT 6.0 FEET

LATITUDE: 27.7816923 N
LONGITUDE: 82.7824697 W

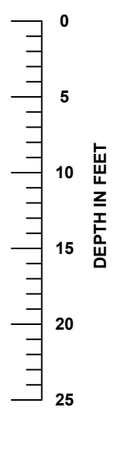
HA-02
4/10/19



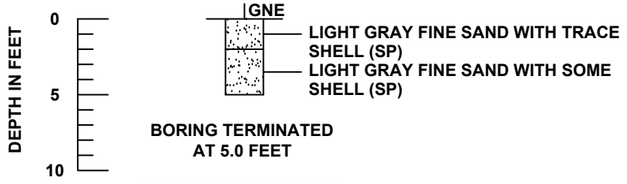
BORING TERMINATED AT 1.5 FEET

LATITUDE: 27.7815842 N
LONGITUDE: 82.7823383 W

REFUSAL AT 1.5' ON LARGE ROCKS



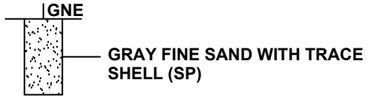
HA-03
4/12/19



BORING TERMINATED AT 5.0 FEET

LATITUDE: 27.7814335 N
LONGITUDE: 82.7823922 W

HA-04
4/10/19



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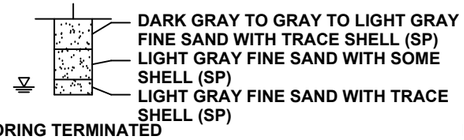
LONGITUDE: 82.7822699 W

HA-05
4/12/19



BORING TERMINATED AT 5.0 FEET

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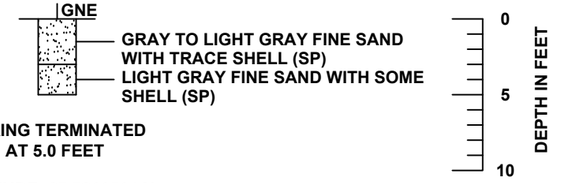
LONGITUDE: 82.7822629 W

HA-06
4/12/19



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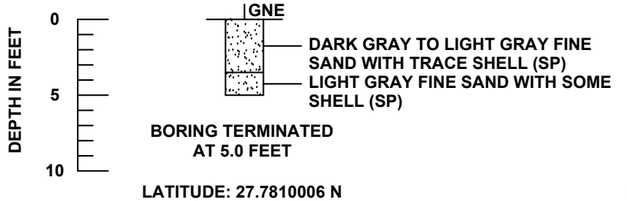
LONGITUDE: 82.7822130 W

HA-07
4/12/19



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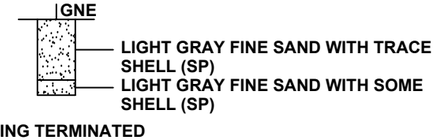
LONGITUDE: 82.7821626 W

HA-08
4/12/19



BORING TERMINATED AT 5.0 FEET

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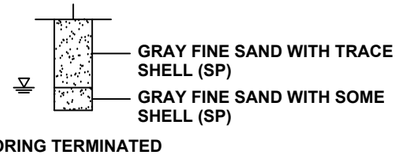
LONGITUDE: 82.7820239 W

HA-09
4/10/19



BORING TERMINATED AT 6.0 FEET

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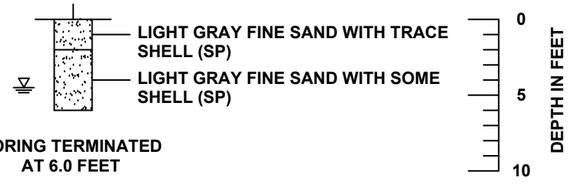
LONGITUDE: 82.7825367 W

HA-10
4/10/19



BORING TERMINATED AT 6.0 FEET

LATITUDE: 27.7812437 N
LONGITUDE: 82.7823623 W

REVISIONS			
NO.	DATE	DESCRIPTIONS	APPROVED

PREPARED BY:

AREHNA | Engineering, Inc.
5012 West Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959
Certificate of Authorization No. 28410

Soil Profiles

	NAME	DATE
DESIGNED BY:	KL	4/2019
DRAWN BY:	DG	4/2019
CHECKED BY:	KL	4/2019
SUPERVISED BY:	Kristina S. Lacava, P.E.	

PROJECT NAME	PROJECT NO.	SHEET NO.
Gators Beachside Parking Lot at John's Pass Treasure Island, Florida	B-19-026	3

Z:\Projects\B - Geotechnical\2019\B-19-026 - Gators Beachside Parking - Greenleaf\10 - CADD \B-19-026.dwg (SOIL) Larry May 06, 2019 - 9:05am

SUMMARY OF DOUBLE RING INFILTRATION TEST RESULTS

GATORS BEACHSIDE PARKING LOT AT JOHN'S PASS
TREASURE ISLAND, FLORIDA

AREHNA Project No.: B-19-026

Test:	DRI - 1	Date of Test:	April 12, 2019
Test Depth:	2 feet below ground surface		
Outer Ring Diameter:	24 inches	Test Procedure:	ASTM D-3385
Inner Ring Diameter:	12 inches		
Test Duration:	4 hours		
Soil Description:	SAND		
Groundwater Level:	GNE		

Time Increments (minutes)	Inner Ring	
	Reading (mL)	Flow (in^3)
15	426	26
15	426	26
15	426	26
15	426	26
30	852	52
30	852	52
30	852	52
30	852	52
30	852	52
30	852	52

Infiltration Rate: 1 in/hr

Standard Penetration Test (SPT) Borings

The SPT borings are performed in general accordance with ASTM D-1586, "Penetration Test and Split-Barrel Sampling of Soils." A rotary drilling process is used and bentonite drilling fluid is circulated in the boreholes to stabilize the sides and flush the cuttings. At regular intervals, the drilling tools are removed and soil samples are obtained with a standard 2-feet long, 2-inch diameter split-tube sampler. The sampler is first seated 6 inches and then driven an additional foot with blows of a 140-pound hammer falling under its own weight a distance of 30 inches. The number of hammer blows required to drive the sampler the final foot is designated the "Penetration Resistance." The penetration resistance, when properly interpreted, is an index to the soil strength and density.

Auger Boring

The auger borings are performed in general accordance with ASTM D-1452, “Standard Practice for Soil Investigation and Sampling by Auger Borings”. Auger borings are advanced manually using a bucket-type hand auger. The soils encountered are identified, in the field, from cuttings brought to the surface by the augering process. Representative soil samples from the auger borings are placed in glass jars and transported to our laboratory where they are examined by an engineer for classification.

Double Ring Infiltration (DRI) Testing

The DRI tests are performed in general accordance with ASTM D3385 “Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer”. The 24-inch diameter outer ring is set on the prepared and roughened surface and is driven into the soil to a depth of 6-inches. Care is taken not to disturb the soil adjacent to ring walls. The ring is then checked visually for levelness. The 12-inch diameter inner ring is then set concentrically within the outer ring and pushed and/or driven into the soil using methods described in the above paragraph to set the inner ring into the soil. The inner ring is then checked visually for level and location within the outer ring. Water is poured into both rings using a splash guard to reduce scouring of the soil surface during the testing. The inner ring and annular space is then simultaneously filled with water to a depth of 12 inches. Water is added during the testing to maintain the 12-inch depth and volume that is added during specific intervals is recorded. This water volume represents the volume infiltrated into the soils, and is converted to an infiltration velocity.

PARKING LOT AT JOHN'S PASS

12765 SUNSHINE LANE
TREASURE ISLAND, PINELLAS COUNTY, FLORIDA 33706

FLOOD ZONE INFORMATION
PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), THE SITE IS LOCATED WITHIN ZONE "AE" (BFE 10' & 11') AND "VE" (BFE 12'), FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER: 12101C0193H (REVISED 8/24/2021)

BOUNDARY AND TOPOGRAPHIC SURVEY
SURVEY INFORMATION PROVIDED BY: GEODATA SERVICES, INC. L.B. # 7466
SIGNED AND SEALED BY: DENNIS J. EYRE, P.S.M # 2865
DATED: 06/03/2019

GEOTECHNICAL INVESTIGATION
GEOTECHNICAL INFORMATION PROVIDED BY: AREHNA ENGINEERING, INC.
SIGNED AND SEALED BY: KRISTINA LACAVA, P.E. # 77594
DATED: 05/09/2019

UTILITIES PROVIDERS

ELECTRICITY
DUKE ENERGY FLORIDA
100 CENTRAL AVENUE
ST, PETERSBURG, FLORIDA 33701
TEL: (877) 372-8477

WATER AND SEWER
PINELLAS COUNTY UTILITIES
14 S. FORT HARRISON AVENUE
CLEARWATER, FLORIDA 33756
TEL: (813) 235-6189

CABLE
SPECTRUM
700 CARILLON PARKWAY, SUITE 6
ST. PETERSBURG, FLORIDA 33716
TEL: (877) 897-7333

TELEPHONE
FRONTIER
1280 EAST CLEVELAND STREET
CLEARWATER, FLORIDA 33755
TEL: (800) 483-4000

GAS
TECO PEOPLES GAS
1920 9TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33713
TEL: (727) 826-3333

FIRE
TREASURE ISLAND FIRE DEPARTMENT
180 108TH AVENUE
TREASURE ISLAND, FLORIDA 33706
TEL: (727)-547-4590

CONTRACTOR SHALL CALL
"SUNSHINE STATE ONE CALL" OF FLORIDA AT 1-800-432-4770
A MINIMUM OF 2 AND A MAXIMUM OF 5 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION.

OWNER:
JP BEACH HOLDINGS, LLC
5300 W. CYPRESS, SUITE 100
TAMPA, FL 33607
TEL: (888) 515-1564
EMAIL: ASARAVANOS@GREENLEAFCAPITAL.COM

DEVELOPER:
GREENLEAF CAPITAL, LLC
5300 W. CYPRESS STREET, SUITE 165
TAMPA, FLORIDA 33607
TEL: (888) 515-1564
EMAIL: ASARAVANOS@GREENLEAFCAPITAL.COM

ENGINEER:
HIGH POINT ENGINEERING, INC.
5300 W. CYPRESS STREET, SUITE 282
TAMPA, FLORIDA 33607
TEL: (813) 644-8333
FAX: (813) 644-7000
EMAIL: BGRAJALES@HPE-FL.COM

ARCHITECT:
N/A

SURVEYOR:
GEODATA SERVICES, INC
1166 KAPP DRIVE
CLEARWATER, FLORIDA 33765
TEL: (727) 447-1763

CONTRACTOR:
T.B.D.

LANDSCAPE:
CJM DESIGNS, LLC
3333 SAN PEDRO STREET
CLEARWATER, FLORIDA 33759
TEL: (727) 430-5038
EMAIL: CMORAHAN@VERIZON.NET



SITE AERIAL PHOTOGRAPH
N.T.S.



SITE LOCATION MAP
N.T.S.

SITE DATA TABLE

SECTION 15, TOWNSHIP 31 S, RANGE 15 E
TREASURE ISLAND, PINELLAS COUNTY, FLORIDA
PARCEL ID # 15-31-15-76240-000-0000

DESCRIPTION		EXISTING	PROPOSED	CODE REQUIREMENTS
ZONING:		RFH - 50 - RESORT FACILITIES HIGH P - PRESERVATION	RFH - 50 - RESORT FACILITIES HIGH P - PRESERVATION	-----
FUTURE LAND USE:		RFH - RESORT FACILITIES HIGH P - PRESERVATION	RFH - RESORT FACILITIES HIGH P - PRESERVATION	-----
USAGE:		VACANT	PARKING LOT, OFF-STREET	-----
SITE AREA:		RFH - 50 : 39,861 SF (0.915 AC) P : 21,875 SF (0.502 AC)	RFH - 50 : 39,861 SF (0.915 AC) P : 21,875 SF (0.502 AC)	15,000 S.F. (MIN)
BUILDING FOOTPRINT AREA: PERCENTAGE OF SITE AREA:		3,221 S.F. 8.1%	0 S.F. 0.0%	50.0% (MAX)
GROSS FLOOR AREA (G.F.A.): FLOOR AREA RATIO (F.A.R.):		5,090 S.F. 0.127	0 S.F. 0.000	0.6 (MAX)
BUILDING SETBACKS	GULF BOULEVARD (EAST):	75.7 LF	----	25.0 FT. (MIN)
	SIDE (NORTH):	194.5 LF	----	0 FT. (MIN)
	SIDE (SOUTH):	12.4 LF	----	0 FT. (MIN)
	REAR (WEST):	26.3 LF	----	25.0 FT. (MIN)
BUILDING HEIGHT:		25.0 F.T	----	-----
VEHICULAR USE AREA (V.U.A.): PERCENTAGE OF SITE AREA:		4,281 S.F. 10.7%	20,173 S.F. 50.6%	-----
SIDEWALK, CURB & DUMPSTER AREA: PERCENTAGE OF SITE AREA:		2,115 S.F. 5.3%	619 S.F. 1.6%	-----
TOTAL IMPERVIOUS AREA: IMPERVIOUS SURFACE RATIO (I.S.R.):		9,617 S.F. 0.241	20,792 S.F. 0.522	-----
TOTAL PERVIOUS AREA: PERCENTAGE OF SITE AREA:		30,244 S.F. 75.9%	19,069 S.F. 47.8%	-----
TOTAL POND AREA: PERCENTAGE OF SITE AREA:		0 S.F. 0%	3,089 S.F. 7.7%	-----
TOTAL WETLAND AREA: PERCENTAGE OF SITE AREA:		0 S.F. 0.0%	0 S.F. 0.0%	-----
INTERIOR LANDSCAPE AREA FOR V.U.A.: PERCENTAGE OF V.U.A.:		450 S.F. 10.5%	2,656 S.F. 13.2%	10.0% (MIN)
OFF-STREET PARKING:		0 SPACES	46 SPACES	-----
MINIMUM OFF-STREET PARKING CALCULATION:				

INDEX OF DRAWINGS

SHEET No.	CONTENT
C-1	SITE DEVELOPMENT DATA
C-2.1	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
C-2.2	SITE CONSTRUCTION NOTES & SPECIFICATIONS
C-2.3	BOUNDARY & TOPOGRAPHIC SURVEY
C-3.0	DEMOLITION & TREE PROTECTION PLAN
C-3.1	ROW DEMOLITION & TREE PROTECTION PLAN
C-4.0	SITE LAYOUT & PARKING PLAN AERIAL
C-4.1	SITE LAYOUT PARKING PLAN
C-4.2	SITE LAYOUT PARKING NOTES
C-4.3	SIGNING & MARKING PLAN
C-4.4	FIRE TRUCK TRACKING PLAN
C-4.5	ROW SIGNING & MARKING PLAN
C-5.1	PAVING, GRADING & DRAINAGE PLAN
C-5.2	PAVING, GRADING & DRAINAGE NOTES & SCHEDULES
C-5.3	STORMWATER POLLUTION PREVENTION PLAN
C-5.4	STORMWATER POLLUTION PREVENTION CERTIFICATION
C-5.5	CROSS SECTIONS
C-5.6	CROSS SECTIONS
C-5.7	ROW PAVING, GRADING & DRAINAGE PLAN
C-7.1	SITE CONSTRUCTION DETAILS
C-7.2	SITE CONSTRUCTION DETAILS
C-7.3	SITE CONSTRUCTION DETAILS
C-7.4	MAINTENANCE OF TRAFFIC DETALS

SUMMARY OF PARKING SUPPLY:
REGULAR PARKING = 44 SPACES
COMPACT PARKING = 0 SPACES
HANDICAP PARKING = 2 SPACE
TOTAL PARKING = 46 SPACES

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

Digitally signed by Braulio Grajales
DN: c=US, o=HIGH POINT ENGINEERING INC, dnQualifier=A01410C00000179A4A75F5A0000CD60, cn=Braulio Grajales
Date: 2024.05.10 14:44:14 -04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	1-11-24	PER FDOT
4	ED	10-20-23	PER FDOT
3	ED	2-6-23	PER FDOT
2	ED	2-6-23	PER CITY OF TREASURE ISLAND
1	ED	9-23-22	PER FDOT

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE DEVELOPMENT DATA

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-1

GENERAL CONSTRUCTION NOTES

1. THESE DRAWINGS SHALL NOT BE UTILIZED FOR CONSTRUCTION PRIOR TO OBTAIN THE PERMITS FROM THE CITY/COUNTY AND OTHER GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. THE CONTRACTOR SHALL ASSURE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED DRAWINGS.

2. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AND REGULATORY AGENCIES, THE ENGINEER, AND THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.

3. UNLESS OTHERWISE SPECIFIED, ALL WORK PERFORMED SHALL COMPLY WITH THE ORDINANCES AND REGULATIONS OF THE GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. ALL CONSTRUCTION MATERIALS, MEANS, METHODS, PROCEDURES AND TECHNIQUES SHALL CONFORM TO CITY/COUNTY CONSTRUCTION STANDARDS, FDOT "STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" AND FDOT "SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

4. THE INFORMATION PROVIDED IN THESE CONSTRUCTION DOCUMENTS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING AND EVALUATING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY OR ALL INVESTIGATIONS AS DEEMED NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM A SITE RECONNAISSANCE PRIOR TO BIDDING THE WORK AND CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN ON THE CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

6. IMMEDIATELY UPON MOBILIZING TO THE SITE, THE CONTRACTOR (ACCOMPANIED BY THE OWNER AND ARCHITECT) SHALL PERFORM A SURVEY OF THE ENTIRE PROJECT AREA. THE CONTRACTOR SHALL SURVEY IN DETAIL USING WRITTEN AND PHOTOGRAPHIC MEANS, BUILDING(S) AND SITE AREAS THAT ARE NOT IN A FIRST CLASS CONDITION (SURFACES THAT ARE UNBROKEN, NON-CRACKED, NON-RUSTING, WITHOUT CHIPS, WITHOUT SPLINTERS, OF TEXTURE MATCHING ITS SURROUNDING, WITH NEW APPEARING FINISHES, AND OPERATING AS ORIGINALLY DESIGNED OR INTENDED TO OPERATE) SPECIALLY THOSE THAT WILL REMAIN IN THEIR EXISITNG CONDITION AT THE END OF PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TO THE OWNER A COMPLETE PROJECT IN FIRST CLASS CONDITION, MEETING INDUSTRY WIDE STANDARDS IN QUALITY AND PERFORMANCE (REGARDLESS OF WHETHER AN AREA IS SPECIFICALLY IDENTIFIED WITHIN THE DRAWINGS AND SPECIFICATIONS OR NOT) UNLESS A PARTICULAR AREA HAS BEEN DESCRIBED IN THE WRITTEN AND PHOTOGRAPHIC DETAILS. SHOULD DURING THE COURSE OF THE WORK, ANY AREA OF THE BUILDING(S) AND/OR UTILITIES AND/OR THE SITE BECOME DAMAGED AND THAT AREA WAS NOT SPECIFICALLY CALLED OUT TO BE A PART OF THE CONSTRUCTION, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE DAMAGED AREA TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO ADDITIONAL COST.

7. WHEN NECESSARY, THE CONTRACTOR SHALL COORDINATE AND SCHEDULE CONSTRUCTION ACTIVITIES WITH OTHER CONTRACTORS AND UTILITY COMPANIES (E.G., POWER, TELEPHONE, CABLE, GAS, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE REQUIRED PERMITS TO PERFORM WORK WITHIN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ENSURE THAT ALL PERMITS ARE APPROVED PRIOR TO CONSTRUCTION.

8. THE CONTRACTOR SHALL USE THE BENCHMARK ELEVATION NOTED IN THE BOUNDARY AND TOPOGRAPHIC SURVEY TO REFERENCE ALL TEMPORARY BENCHMARKS, BASE LINES, GRADE POINTS AND PROPERTY MONUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REESTABLISH, IN THEIR ORIGINAL STATE, THE PROPERTY MONUMENTS DISTURBED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE TO VERIFY AND CORRELATE IN THE FIELD ALL BASE LINES, ELEVATIONS, AND DIMENSIONS SHOWN IN THESE PLANS, AND REPORT TO THE ENGINEER IN WRITING ANY ERROR, OMISSION, OR DISCREPANCY BEFORE PERFORMING ANY WORK.

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAKE ADJUSTMENTS OF ANY CONFLICT SHOWN OR NOT SHOWN IN THESE PLANS WITH OTHER EXISTING SITE IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT SUCH AS BASE LINES, GRADES, SLOPES, UTILITY RELOCATIONS, OR ANY OTHER STAKE-OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN IN THESE PLANS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

11. TOPOGRAPHIC SURVEY AND LEGAL DESCRIPTIONS WERE PREPARED BY OTHERS AND ARE SHOWN HEREIN FOR INFORMATION PURPOSES ONLY. THE ENGINEER ASSUME NO RESPONSIBILITY FOR THEIR PREPARATION, COMPLETENESS NOR ACCURACY AND THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING SAID INFORMATION. PROPOSED LOCATIONS, ELEVATIONS, AND DIMENSIONS OF STRUCTURES AND OTHER SITE FEATURES ARE SHOWN IN ACCORDANCE TO THE SURVEY INFORMATION PROVIDED TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

12. GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS WERE PREPARED BY OTHERS AND ARE USED SOLELY TO ASSIST CONTRACTORS IN ASSESSING THE NATURE AND EXTENT OF TESTING AND STUDIES REQUIRED TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. NO REPRESENTATION IS MADE OR GIVEN CONCERNING THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK AND CONTRACTORS ARE FULLY RESPONSIBLE WHEN USING SAID INFORMATION. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY OR ALL INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

13. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND NOT FIELD VERIFIED. THE CONTRACTOR MUST USE SAID INFORMATION ONLY AS A GUIDE TO THE SUGGESTED LOCATION OF UNDERGROUND UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO: POTABLE WATER LINES, SANITARY SEWER, STORM SEWER, GAS LINES, ELECTRICAL POWER, RECLAIMED WATER LINES, IRRIGATION LINES, TELEVISION CABLES, FIBER OPTIC CABLES, TELEPHONE CABLES, ALARM SYSTEM CABLES, SECURITY WIRING, SITE UNDERGROUND MECHANICAL, CONTROL SYSTEMS WIRING, SYSTEMS INCLUDING INSULATION, ETC. THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF THE EXISTING UNDERGROUND UTILITY LINES NOR THAT ALL ARE SHOWN HEREON. THE CONTRACTOR SHALL DETERMINE THE SPECIFIC LOCATION AND CAREFULLY EXPOSE ALL UNDERGROUND UTILITY LINES IN COORDINATION WITH OWNER(S) TO THEIR SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR, PER SPECIFICATIONS, ANY AND ALL DAMAGED UNDERGROUND UTILITY SERVICES AS LISTED ABOVE AT NO ADDITIONAL COST.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, REPAIRING AND/OR REINSTALLING DAMAGED OR DISTURBED EXISTING IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, SIDEWALKS, DUMPSTER PADS, FENCES, HAND RAILS, GATE VALVES, CLEANOUTS, FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS, ELECTRICAL, CABLE AND TELEPHONE BOXES, ELEVATED POWER AND TELEPHONE LINES, WATER, SANITARY, GAS AND STORMWATER PIPELINES, UNDERGROUND POWER, TELEPHONE AND CABLE LINES, IRRIGATION SYSTEMS AND CONTROLS, ETC.

15. THE CONTRACTOR SHALL LOCATE PROPERTY LINES AS REQUIRED TO AVOID ENCROACHMENT INTO ADJACENT PROPERTY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, PHASES, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.

16. THE CONTRACTOR SHALL RESTORE TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS, ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THE WORK. ADDITIONAL COSTS ARE INCIDENTAL AND NO EXTRA COMPENSATION IS TO BE ALLOWED.

17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER FOR APPROVAL ON ALL PRECAST AND MANUFACTURED ITEMS FOR THIS PROJECT. FAILURE TO OBTAIN APPROVAL BEFORE MANUFACTURE AND INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

18. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A FLORIDA REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER TO PERFORM ALL SITE CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL TESTING, AND THIS COST SHALL BE INCLUDED AS PART OF THE CONTRACT PRICE. IN LOCATIONS WHERE THE CONSTRUCTION TAKES PLACE WITHIN PUBLIC RIGHT-OF-WAY, ALL SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH FDOT AND LOCAL AGENCY REQUIREMENTS.

19. THE CONTRACTOR SHALL FORWARD TO THE OWNER A COPY OF ALL COMPACTION AND ASPHALT MIX TEST RESULTS. THE TEST RESULTS SHALL BE CERTIFIED BY A MATERIAL/GEOTECHNICAL ENGINEER, IN WRITING, THAT ALL TESTING REQUIREMENTS, REQUIRED BY CITY/COUNTY AND/OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AS WELL AS BY THE APPROVED CONSTRUCTION PLANS, ARE SATISFIED.

20. DEVIATIONS TO THESE PLANS AND SPECIFICATIONS WITHOUT CONSENT OF THE ENGINEER OR THE OWNER MAY BE A CAUSE FOR THE WORK TO BE UNACCEPTABLE. VALUE ENGINEERING SHALL RECEIVE WRITTEN APPROVAL FROM THE ENGINEER AND THE OWNER.

21. THE CONTRACTOR SHALL PROVIDE CERTIFIED AS-BUILT DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE AS-BUILT DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, ACCURATE HORIZONTAL AND VERTICAL LOCATION OF DETENTION / RETENTION BASIN(S) INCLUDING TOP OF BANK, TOE OF SLOPE, BOTTOM OF POND AND SIDE SLOPES, CONTROL STRUCTURE(S), DIMENSION AND INVERT ELEVATION OF WEIR, ORIFICE AND SKIMMER, INLET AND MANHOLE SIZES AND STORM PIPE INVERT ELEVATIONS, SIZE AND LOCATIONS OF ALL UTILITIES INCLUDING SANITARY SEWER AND WATER PIPES AND FITTINGS, STORM AND SANITARY SEWER SLOPES, CONCRETE PADS, SIDEWALKS, FINISHED FLOOR ELEVATION(S), GRADE BREAKS, ETC. THE CONTRACTOR SHALL PROVIDE FIVE COPIES OF THE CERTIFIED AS-BUILT DRAWINGS TO THE ENGINEER. THE AS-BUILT DRAWING SHALL BE SUFFICIENT IN DETAIL TO BE ACCEPTABLE BY GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION ON THE PROJECT.

22. SIGN MONUMENTS, WALLS AND FENCES REQUIRE SEPARATE PERMIT APPLICATION(S). ANY DEVIATIONS SHALL RECEIVE WRITTEN APPROVAL FROM THE OWNER.

23. WHEN NECESSARY, CONTRACTOR SHALL BE RESPONSIBLE FOR AN EASEMENT INSPECTION BY CITY/COUNTY ENGINEERING DEPARTMENT PRIOR TO CONCRETE POUR OF FOOTER/SLAB. CONTRACTOR SHALL STAKE ALL PROPERTY CORNERS AND EASEMENT LINES PRIOR TO EASEMENT INSPECTION.

24. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLANS AND PERMITS AT THE CONSTRUCTION SITE AT ALL TIMES.

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) NOTES

1. TO MINIMIZE CARBON FOOTPRINT, THE OWNER AND CONTRACTOR SHALL SELECT LOCAL MATERIALS FROM SUPPLIERS AND MANUFACTURES WITHIN 500 MILES OF THE PROJECT SITE.

2. TO REDUCE ENVIRONMENTAL IMPACT, THE OWNER AND CONTRACTOR SHALL USE SUSTAINABLE OR RECYCLED MATERIALS SUCH AS CRUSHED CONCRETE, RECYCLED AGGREGATE, RECLAIMED WOOD, ETC.

3. TO MITIGATE ENVIRONMENTAL IMPACT, THE OWNER AND CONTRACTOR SHALL SEND ANY CONSTRUCTION DEBRIS PRODUCED DURING DEMOLITION ACTIVITIES TO RECYCLING FACILITIES RATHER THAN LANDFILLS.

4. TO MINIMIZE POTABLE WATER USAGE AND CONSERVE GROUNDWATER, THE OWNER AND CONTRACTOR SHOULD INSTALL WHEN POSSIBLE, UNDERGROUND CISTERNS TO HARVEST RAINWATER TO BE USED AS SUPPLEMENTAL WATER FOR NEEDS OTHER THAN HUMAN CONSUMPTION.

5. TO REDUCE POLLUTED STORMWATER LEAVING THE SITE AND TO MAXIMIZE ON-SITE STORMWATER RETENTION, THE OWNER AND CONTRACTOR SHOULD USE WHEN POSSIBLE, PERMEABLE OR PERVIOUS PAVEMENT DESIGNED USING THE MIX-PROCESS METHOD DEVELOPED IN FLORIDA.

GENERAL SAFETY NOTES

1. THESE CONSTRUCTION PLANS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY IN ACCORDANCE WITH U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR MEANS, METHODS, PROCEDURES AND TECHNIQUES OF CONSTRUCTION SAFETY.

2. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET BY THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

3. DURING CONSTRUCTION, ALL SAFETY CONTROLS AND REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PEDESTRIANS AND WORKERS.

4. THE MINIMUM STANDARDS IN "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PEDESTRIANS AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED AND APPROVED BY APPLICABLE AGENCIES PRIOR TO START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT THEY COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS.

7. THE CONTRACTOR PERFORMING TRENCH EXCAVATION, IN EXCESS OF 5' FEET IN DEPTH, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR EXCAVATIONS SAFETY STANDARDS, 29 C.F.R., S.1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

8. TO COMPLY WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES, AFFILIATED OR NOT AFFILIATED TO THE "SUNSHINE STATE ONE CALL" OF FLORIDA CORPORATION, PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS AND/OR CLEARANCE OF EXISTING UNDERGROUND UTILITIES.

⚠3 WORK IN FDOT RIGHT-OF-WAY NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A RIGHT-OF-WAY USE PERMIT FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OFFICE FOR ANY WORK WITHIN THE RIGHT-OF-WAY. THE CONTRACTOR SHALL INCLUDE IN THE PERMIT APPLICATION A MAINTENANCE OF TRAFFIC PLAN AND PROOF OF LIABILITY INSURANCE.
THE CONTRACTOR SHALL NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OFFICE (48) HOURS PRIOR TO START OF CONSTRUCTION.
ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL CONFORM TO:

(1) FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

(2) FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR ROADWAY AND BRIDGE CONSTRUCTION", LATEST EDITION.

(3) FLORIDA DEPARTMENT OF TRANSPORTATION "FDOT DESIGN MANUAL", LATEST EDITION.

1. PERMANENT EROSION CONTROL AND SHOULDER SODDING AND TURF ON EXISTING FACILITIES SHALL CONFORM TO FDOT STANDARD PLANS INDEX 570-001 AND 570-010.
2. CURBS, CURB AND GUTTERS AND SIDEWALKS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 520-001, 522-001 AND 522-002.
3. INLETS, MANHOLES AND JUNCTION BOXES SHALL CONFORM TO FDOT STANDARD PLANS INDEXES 425-001 TO 425-090.
4. TRAFFIC CONTROL THROUGH WORK ZONES SHALL CONFORM TO FDOT STANDARD PLANS INDEX 102-600.
5. SINGLE COLUMN GROUND SIGNS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 700-010 AND SHALL BE PLACED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 700-101.
6. STRIPING SHALL CONFORM TO FDOT STANDARD PLANS INDEX 711-001.
7. REFLECTIVE PAVEMENT MARKERS SHALL CONFORM TO FDOT STANDARD PLANS INDEX 706-001.
8. SIGNING AND STRIPING SHALL BE IN ACCORDANCE WITH THE FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
9. ALL DISTURBED AREAS IN FDOT RIGHT-OF-WAY SHALL BE SODDED.

⚠3 FDOT CONSTRUCTION NOTES FOR ACCESS

1. ANY NEW PROPOSED PLAN SHALL INCLUDE CROSS SECTIONS OF THE STATE ROAD ADEQUATELY REFLECTING ALL RIGHT OF WAY FEATURES INCLUDING EXISTING UTILITIES, STORM DRAIN STRUCTURES AND ANY ABOVE OR BELOW GROUND APPURTENANCES WHERE APPLICABLE.
2. NO PEDESTRIAN PATHWAY IS TO BE REMOVED, BLOCKED, OR DISTURBED WITHOUT HAVING A SUFFICIENT DESIGNATED TEMPORARY PEDESTRIAN PATHWAY WITH ALL APPROPRIATE PEDESTRIAN MAINTENANCE OF TRAFFIC SIGNS (STANDARD PLAN 102-660) IN PLACE PRIOR TO PATHWAY BEING AFFECTED.
3. ALL TEMPORARY PEDESTRIAN PATHWAYS MUST BE FIRM AND UNYIELDING.
4. ANY SIDEWALK FRONTING THE PROPERTY THAT IS CRACKED, DAMAGED OR UNSTABLE AND IS CREATING AN ADA TRIP HAZARD MUST BE REPLACED BY SECTION, USING STANDARD #520-001, #522-002, AND #522-001 FOR THE CONSTRUCTION OF SIDEWALK AND MEET CURRENT ADA STANDARDS. ALL CONCRETE PLACED IN THE RIGHT OF WAY SHALL BE A MINIMUM OF 6" THICK, FDOT CERTIFIED CLASS 1 NON-STRUCTURAL, 3,000 PSI CONCRETE WITH FIBER MESH MATERIAL FROM A FDOT APPROVED PLANT.
5. VERIFY AND ENSURE THAT THE EXISTING SIDEWALK IN THE ROW BEING RETAINED MEETS ADA REQUIREMENTS. ANY SIDEWALK FOUND DURING SUBSEQUENT SITE INSPECTIONS NOT MEETING CURRENT ADA AND FDOT DESIGN STANDARDS WILL BE REQUIRED TO BE REMOVED AND REPLACED.
6. THE DETECTIBLE WARNING SURFACE MATERIALS MUST BE ON THE STATE'S APPROVED PRODUCTS LIST. (NON-PROPRIETARY).
7. ANY SIDEWALK DAMAGED AS A RESULT OF WORK BEING PERFORMED IN ASSOCIATION WITH THE PERMITTEE AND CONTRACTOR SHALL BE REMOVED AND REPLACED PER FDOT SPECIFICATIONS.
8. ANY SIDEWALK DISTURBED WILL BE REPLACED BY SECTION WITHIN 72 HOURS, TO FDOT SPECIFICATIONS.
9. PIPE CULVERTS SHOWN ON THE PERMIT MUST MEET FDOT SPECIFICATIONS, TYPE, SIZE, AND LENGTH AS DESCRIBED ON THE PERMIT. EACH JOINT OR LENGTH OF PIPE SHALL HAVE FDOT STAMPS AFFIXED VERIFYING THIS APPROVAL. ALL CONCRETE PIPE JOINTS OTHER THAN 1" RING JOINTS MUST BE DIAPHERED. ALL CULVERTS TO BE INSPECTED BY FDOT PRIOR TO PLACEMENT OF FILL.
10. THE FDOT RETAINS THE RIGHT TO MAKE ALTERATIONS TO THE PERMIT, ATTACHED SKETCH OR CHARACTER OF WORK AS MAY BE CONSIDERED NECESSARY OR DESIRABLE DURING THE PROGRESS OF THE WORK FOR SATISFACTORY COMPLETION OF THE PROPOSED CONSTRUCTION.
11. THE PERMITTEE SHALL NOTIFY THE FDOT OF DATE OF COMPLETION, REQUEST A FINAL INSPECTION AND A NOTICE OF FINAL ACCEPTANCE.
12. ALL CONSTRUCTION AND/OR MAINTENANCE ON THE FDOT RIGHT OF WAY SHALL CONFORM TO THE FEDERAL MANUAL ON UNIFORM TRAFFIC DEVICES (MUTCD). THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, PLANS PREPARATION MANUAL AND DRAINAGE MANUAL.
13. NO LANE CLOSURES OF ANY STATE ROADWAY ARE ALLOWED WITHOUT 48-HOUR ADVANCE NOTICE AND APPROVAL FROM FDOT.
14. LANE CLOSURES MUST BE LIMITED TO SUNDAY THROUGH THURSDAY 8:00 PM TO 5:30 AM UNLESS OTHERWISE APPROVED BY THE FDOT.
15. LANE CLOSURE NEEDS TO ACCOMMODATE FOR A BIKE LANE IF THE ROADWAY CONSISTS OF ONE.
16. NO WORK SHALL BE PERFORMED DURING THE WEEKS OF ANY STATE OR FEDERAL HOLIDAYS UNLESS OTHERWISE APPROVED IN WRITING BY THE FDOT.
17. NO WORK REQUIRING LANE OR SIDEWALK CLOSURE SHALL BE PERFORMED DURING SPRING BREAK ON SR 699 (GULF BOULEVARD). SPRING BREAK IS IDENTIFIED AS MARCH 1 THRU THE FIRST MONDAY FOLLOWING EASTER. DURING THIS TIME, LANE AND SIDEWALK CLOSURES ON ALL STATE ROADWAYS THAT LEAD TO SR 699 (GULF BOULEVARD) WILL BE RESTRICTED TO NIGHT WORK, SUNDAY THRU THURSDAY, 8:30 PM TO 5:30 AM.
18. OPEN CUTTING OF ANY ROADWAY, DRIVEWAY, OR SIDEWALK OUTSIDE THOSE LIMITS IDENTIFIED WITHIN THE PERMIT ARE NOT ALLOWED WITHOUT PRIOR APPROVAL BY THE FDOT.
19. PRIOR TO THE REMOVAL OF ANY MATERIALS THE AREA MUST BE SAW-CUT TO PREVENT ANY DAMAGE TO THE ROADWAY.
20. THE CONTRACTOR SHALL HAVE AN AUTHORIZED PERSON AVAILABLE AT/OR NEAR THE WORK SITE ON A 24-HOUR BASIS, 7 DAYS A WEEK IN ORDER TO ADDRESS EMERGENCY ISSUES ASSOCIATED WITH THE PROJECT.
21. NO STOCK PILING, STORING, OR SEMI-PERMANENT USE OF THE RIGHT OF WAY IS AUTHORIZED UNLESS SPECIFICALLY IDENTIFIED WITHIN THE PERMIT.
22. THE PERMITTED WORK SCHEDULE IS DEFINED AS MONDAY THROUGH FRIDAY 7:00 AM TO 5:30 PM UNLESS OTHERWISE NOTED WITHIN THE PERMIT. ANY WORK DESIRED OUTSIDE OF THIS PERIOD MUST BE REQUESTED IN ADVANCE AND APPROVED BEFORE WORKING THE ALTERNATE SCHEDULE.
23. THE DEPARTMENT OF TRANSPORTATION RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO ANY PERMITTED METHOD OF INSTALLATION, SCOPE, RESTORATION THAT MAY BE REQUIRED TO POSITIVELY SUPPORT LIFE, SAFETY AND ENVIRONMENTAL WELL-BEING OF ALL USERS OF THE TRANSPORTATION SYSTEM.
24. ROADWAY RESTORATION SHALL UTILIZE 100 PSI EXCAVATABLE FLOWABLE FILL MATERIAL AND ASPHALT PLACED WITHIN THE STATE RIGHT-OF-WAY SHALL BE PLACED FULL-DEPTH, TWO 2.5-INCH LIFTS OF SP 12.5, TWO 1.5-INCH LIFTS OF SP 9.5. TYPICAL SECTIONS WILL NEED TO BE PROVIDED WITHIN THE PLANS FOR THE PAVEMENT PLACEMENT. A STAIR STEP METHOD SHOULD BE INCORPORATED, PRIOR TO PLACING ASPHALT, TO AVOID VERTICAL JOINTS. MILLING OF THE PATCH MAY BE REQUIRED BASED ON THE PATCHED SURFACE PERFORMANCE. THE MILLING SHALL BE UTILIZED FOR SURFACE LEVELING TO A THICKNESS EQUAL TO OR GREATER THAN THE EXISTING FRICTION COARSE MATERIAL. THE MILLING LIMITS ARE 50-FOOT OF THE PATCH ALONG THE LONGITUDINAL PATH OF THE LANE, FULL LANE WIDTH AND TO INCLUDE ANY ADJACENT BIKE LANES, SHARED PATH OR URBAN SHOULDER SECTIONS.
25. ANY DISRUPTIONS TO ANY PERMEABLE PEDESTRIAN WAY AND BIKE LANE ARE TO BE RESTORED AS WORK CONTINUES. ALL PATCHES SHALL BE FULL WIDTH FROM OUTSIDE EDGE OF PEDESTRIAN PATH TO WHITE LINE EDGE OF TRAVEL LANE WITH STAIR STEP (STAGGERED) JOINTS. RESTORATION TO INCLUDE BACKFILL WITH EXISTING SUB-GRADE MATERIAL AND #57 STONE AS BASE MATERIAL (COMPACT IN 6-INCH LIFTS) TO BOTTOM OF EXISTING PERVIOUS ASPHALT BASE, FOLLOWED BY PERMEABLE DESIGN MIX (IF AVAILABLE) OR FC-5 (FRICTION COURSE) MIX WITH A MINIMUM OF TWO 2-INCH AND A MAXIMUM OF TWO 3-INCH LIFTS. MAINTAIN INGRESS/EGRESS ON ALL DRIVES AND SIDE STREETS DURING CONSTRUCTION.
26. THE DEPARTMENT WILL REVIEW THE REVISIONS TO THE PLANS AND IF NEEDED CHANGES ARE NECESSARY THE DEPARTMENT WILL ADDRESS IT AT THAT TIME.
27. ANY LOCAL GOVERNMENT DETAILS NEED TO BE REMOVED FROM THE STATE PERMIT PLANS OR A NOTE NEEDS TO BE ADDED THAT THE LOCAL GOVERNMENT DETAILS ARE TO BE UTILIZED ONLY WITHIN THE PROPERTY.

STANDARD SYMBOLS

EXISTING	DESCRIPTION	PROPOSED
EX. WM	WATER METER	WM
EX. RM	RECLAIMED METER	RM
EX. WM & BFP	METER AND BACK FLOW PREVENTOR	WM & BFP
EX. DDCVA	DOUBLE DETECTOR CHECK VALVE ASSEMBLY	DDCVA
EX.FHA	FIRE HYDRANT ASSEMBLY	FHA
EX. FDC	FIRE DEPARTMENT CONNECTION	FDC
EX. G.V.	GATE VALVE	G.V.
	BLOW-OFF VALVE	
S	SANITARY SEWER MANHOLE	
EX. C.O.	CLEANOUT	C.O.
	GREASE TRAP / OIL SEPARATOR	
	SURFACE FLOW ARROW	
	GRATE INLET	
	CURB INLET	
D	STORM SEWER MANHOLE	
	MITERED END SECTION	
	FLARED END SECTION	
EX. LP	LIGHT POLE	LP
	CONCRETE UTILITY POLE	
	WOOD UTILITY POLE	
	GUIDE WIRE	
	BOLLARD	
	SIGNAGE	
	WHEEL STOP	
	HANDICAP SPACE	
	TRAFFIC MARKINGS	

LINETYPES

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	CENTER LINE	
	EDGE OF PAVEMENT	
	WALL	
	WOOD FENCE	
	CHAIN LINK FENCE	
N/A	BARB WIRE FENCE	
	SILT FENCE	
	LOT LINE	
XX.XX'	POND TOP OF BANK	XX.XX'
	RIGHT OF WAY LINE	
	SECTION LINE	
EX. ST	STORM SEWER LINE	ST
EX. CATV	CABLE TV LINE	CATV
EX. F

TESTING SCHEDULE

ITEM	TEST	TEST FREQUENCY
BUILDING PAD	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	ONE PER 2,500 SF HORIZONTALLY IN 12 INCH LIFTS
	GRADATION AS DETERMINED BY AASHTO T27-06 (ASTM D136-06)	EACH LIFT (SEE NOTE 3)
EMBANKMENT	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	ONE PER 5,000 SF HORIZONTALLY IN 12 INCH LIFTS
	GRADATION AS DETERMINED BY AASHTO T27-06 (ASTM D136-06)	EACH LIFT (SEE NOTE 3)
UTILITY TRENCH BACKFILL OVER PIPELINES AND AROUND STRUCTURES FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE AND IN STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTES 1 AND 2)
UTILITY TRENCH BACKFILL OVER PIPELINES OUTSIDE THE RIGHT-OF-WAY AND IN NON-STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOIL TYPE
	95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTES 1 AND 2)
STABILIZED SUB GRADE	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER MATERIAL TYPE
	MINIMUM LBR 40	PER MATERIAL TYPE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70), NO TOLERANCE	(SEE NOTE 3)
BASE (OTHER THAN SOIL CEMENT OR CRUSHED CONCRETE)	OPTIMUM MOISTURE / MAXIMUM DENSITY	PER SOURCE
	MINIMUM LBR 100	PER SOURCE
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) - NO TOLERANCE	EACH LIFT (SEE NOTE 3)
	GRADATION, ATTERBERG LIMITS	PER SOURCE
CRUSHED CONCRETE BASE	MINIMUM LBR 150	PER MATERIAL TYPE
	ABRASION TEST BY USING LOS ANGELES MACHINE AS DETERMINED BY FM-1T096	PER MATERIAL TYPE
	100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	(SEE NOTE 3)
SOIL CEMENT BASE (NO IN PLACE MIXING ALLOWED)	DESIGN MIX AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS	ONE PER MATERIAL TYPE
	OPTIMUM MOISTURE / MAXIMUM DENSITY	ONE PER MATERIAL TYPE DAILY
	PROCTOR AS DETERMINED BY AASHTO T180	ONE PER MATERIAL TYPE
	COMPRESSIVE STRENGTH SPECIMENS AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS (300 PSI AT 7 DAYS), (SEE NOTE 4)	ONE SET OF 3 SAMPLES PER MATERIAL TYPE PER ONE-HALF DAY
	TEST CORES AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS (300 PSI AT 21 DAYS), (SEE NOTE 4)	(SEE NOTE 3)
	98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T134 - NO TOLERANCE	(SEE NOTE 3)
CONCRETE (SEE NOTE 5)	SLUMP TEST	ONE PER SET OF CYLINDERS
	COMPRESSIVE STRENGTH CYLINDERS (MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 3,000 PSI), NO TOLERANCE	ONE SET OF THREE (3) CYLINDERS FOR 100 CY OR FRACTION THEREOF
	AIR CONTENT	ONE PER SET OF CYLINDERS
ASPHALTIC CONCRETE	AGGREGATE ANALYSIS	ONE PER DESIGN
	DESIGN MIX	ONE PER F.D.O.T. APPROVED TYPE
	BITUMEN CONTENT	ONE PER DAY UNLESS TONNAGE > 1,000 TON
	GRADATION STABILITY FLOW	ONE PER DAY
	PROPERTIES OF IN-PLACE MATERIALS (MARSHALL TEST)	ONE PER DAY
	THICKNESS	(SEE NOTE 3)
	MAXIMUM SPECIFIC GRAVITY	ONE PER DAY
	95% OF LAB DENSITY	(SEE NOTE 3)

NOTES:

1. TESTS SHALL BE LOCATED NO MORE THAN 200 FEET APART. TESTS SHALL BE PERFORMED ON EACH LIFT. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SERVICE LATERALS. THERE SHALL BE A MINIMUM OF ONE (1) TEST SERIES FOR EACH 6 INCHES OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALED IN 6 INCH LIFTS. TESTS AROUND BOX CULVERTS SHALL DONE ON BOTH SIDES EVERY LIFT.

2. FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER F.D.O.T. SUPPLEMENTAL SPECIFICATIONS SUB ARTICLE 125-8.3.2 AS MODIFIED.

3. TESTS SHALL BE LOCATED NO MORE THAN 500 FEET APART. THERE SHALL BE NO LESS THAN ONE (1) TEST PER 5,000 SF.

4. MAXIMUM STRENGTH LIMITS, AS ESTABLISHED BY SOILS TESTING COMPANY, SHALL NOT BE EXCEEDED.

5. APPLIES TO SITE CONCRETE SUCH AS CURBS, DRIVEWAYS, PADS AND SIDEWALKS.

CLEARING AND GRUBBING NOTES

1. PRIOR TO SITE CLEARING AND GRUBBING, ALL TREES SHOWN TO REMAIN ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE CITY / COUNTY TREE ORDINANCE AND DETAILS CONTAINED IN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THESE TREES IN GOOD CONDITION. NO TREES SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER.

2. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE PRIOR TO CONSTRUCTION IN ACCORDANCE, WITH THE GEOTECHNICAL INVESTIGATION REPORT. COPIES OF THE GEOTECHNICAL INVESTIGATION REPORT ARE AVAILABLE THROUGH THE OWNER. ANY QUESTION REGARDING SITE PREPARATION REQUIREMENTS DESCRIBED IN THE GEOTECHNICAL INVESTIGATION REPORT ARE TO BE DIRECTED TO THE GEOTECHNICAL ENGINEERING COMPANY THAT PREPARE THE REPORT.

3. THE CONTRACTOR SHALL CLEAR AND GRUB, ONLY THOSE AREAS OF THE SITE NEEDED FOR CONSTRUCTION. DISTURBED AREAS SHALL BE SEEDED, MULCHED, OR PLANTED WITH APPROVED LANDSCAPE MATERIAL IMMEDIATELY AFTER CONSTRUCTION.

4. UNLESS OTHERWISE DIRECTED, THE TOP 4" TO 6" OF SOIL REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER TO BE USED FOR LANDSCAPING PURPOSED.

5. ONLY GRADING BY HAND IS PERMITTED WITHIN THE CANOPY / DRIP LINE OF TREES TO REMAIN.

PAVING AND GRADING NOTES

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) SHALL BE EXCAVATED IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS OR AS DIRECTED BY THE OWNER, OR THE GEOTECHNICAL ENGINEER. DELETERIOUS MATERIAL SHALL BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS SHALL BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

3. ALL NECESSARY FILL AND EMBANKMENT MATERIAL THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE CONSTRUCTION DOCUMENTS OR THE REFERENCED GEOTECHNICAL INVESTIGATION REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES, WHICH INCLUDE BUT ARE NOT LIMITED TO EARTHWORK ACTIVITIES, SUB GRADE PREPARATION, ETC. CONFORM WITH THE GEOTECHNICAL INVESTIGATION REPORT.

4. PROPOSED PAD GRADES SHOWN ARE MINIMUM GRADES. ELEVATIONS OF ADJOINING LOTS, EXISTING TREES, AND OTHER FIELD CONDITIONS MAY WARRANT LEAVING LOTS WHICH ARE HIGHER IN THEIR NATURAL STATE. THE CONTRACTOR SHALL CONSULT WITH THE OWNER AND THE ENGINEER IN WRITING PRIOR TO GRADING ACTIVITIES WHEN THESE CONDITIONS EXIST.

5. PROPOSED ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON THESE CONSTRUCTION DOCUMENTS.

6. ALL SLOPES STEEPER THAN 5:1 SHALL BE SODDED; ALL SLOPES STEEPER THAN 4:1 SHALL BE REINFORCED WITH STAKED SOD.

7. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

8. CURBING SHALL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THESE CONSTRUCTION DOCUMENTS.

9. REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC STANDARD PLANS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE CONSTRUCTION DOCUMENTS.

10. CONTRACTOR SHALL PROVIDE A 1/2" BITUMINOUS EXPANSION JOINT WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE. EXPANSION JOINT FILLER SHALL CONFORM TO THE SPECIFICATIONS OF ASTM D1751.

11. CONTRACTOR SHALL PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR SHALL REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES.

12. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

13. THE CONTRACTOR SHALL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS AS REQUIRED ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND MATERIAL TESTING AND SUBMITTING TEST RESULTS TO OWNER'S ENGINEER ON A WEEKLY BASIS. SOIL TESTS ARE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS SITE. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATIONS SIGNED BY THE MATERIAL / GEOTECHNICAL ENGINEER STATING THAT ALL SOIL AND MATERIAL REQUIREMENTS HAVE BEEN MET.

15. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE CONSTRUCTION DOCUMENTS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THIS SITE. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF SAID RETESTING.

16. MIXING IN PLACE OF SOIL CEMENT SHALL NOT BE ALLOWED.

17. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER F.D.O.T. INDEX NO. 522-002. THE CONTRACTOR SHALL FINISH ALL EXPOSED BACK OF CURB.

18. PRIOR TO CONSTRUCTION OF CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE ENGINEER FOR APPROVAL.

19. ALL PAVEMENT MARKINGS IN THE RIGHT-OF-WAY SHALL BE MADE WITH PERMANENT THERMOPLASTIC AND SHALL CONFORM TO F.D.O.T STANDARD INDEX NO. 711-001, SHEETS 1-7. PARKING STALL STRIPING SHALL BE 4" WIDE STRIPES PAINTED IN WHITE COLOR. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

20. THE CONTRACTOR SHALL INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT SURFACE AND THE TOP OF THE PIPE OR BELL IS LESS THAN TWELVE (12) INCHES.

21. ON-SITE PAVEMENT SHALL CONSIST OF 2" ASPHALT (TYPE SP-9.5) ON 6" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

22. CITY / COUNTY RIGHT-OF-WAY PAVEMENT SHALL CONSIST OF 3" ASPHALT (TYPE SP-12.5) ON 11" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 100% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180, UNLESS OTHERWISE SPECIFIED.

DRAINAGE NOTES

1. STANDARD INDEXES REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC STANDARD PLANS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE INLETS AND OTHER DRAINAGE STRUCTURES CALLED FOR IN THESE CONSTRUCTION DOCUMENTS.

2. ALL STORM SEWER PIPES SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76, ASTM C-507) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC STANDARD PLANS UNLESS OTHERWISE NOTED ON PLANS. SUBSTITUTION OF RCP WITH OTHER MATERIAL (PVC, HDPE, ADS, ETC.) SHALL NOT BE PERMITTED.

3. PVC STORM PIPE, 12" AND SMALLER SHALL CONFORM TO AWWA C-900, CLASS 150 STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

4. REINFORCED CONCRETE STORM SEWER PIPE JOINTS SHALL BE ROUND RUBBER GASKET (ASTM C-361) UNLESS OTHERWISE NOTED ON PLANS. ELLIPTICAL REINFORCED PIPE SHALL BE COLD ADHESIVE PERFORMED PLASTIC GASKET IN ACCORDANCE WITH F.D.O.T. STANDARD 942-2. ALL STORMWATER PIPE JOINTS WILL BE WRAPPED PER F.D.O.T. INDEX NO. 430-001.

5. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED END SECTIONS (MES) AND FLARED END SECTIONS (FES) WHICH ARE NOT INCLUDED IN LENGTHS. CONTRACTOR SHALL VERIFY ALL QUANTITIES IN SUBMITTAL OF BID, AND INFORM THE ENGINEER OF ANY DISCREPANCIES.

6. ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER PRIOR TO THE PLACEMENT OF BACK FILL. CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPLICABLE AGENCIES 72 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.

7. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.

8. ALL INLETS WITHIN PAVEMENT AREAS ARE TO BE MODIFIED FOR TRAFFIC BEARING WITH HOT DIPPED GALVANIZED STEEL GRATES AND FRAMES IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS. ALL DRAINAGE STRUCTURE GRATES AND COVERS TO BE TRAFFIC RATED FOR HS-20 AASHTO TRUCK LOADINGS.

9. ALL MITERED END SECTIONS ON SIDE DRAIN PIPES AT DRIVEWAY ENTRANCES TO CITY/COUNTY/F.D.O.T. ROADWAYS MUST BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 430-022.

10. FOR INLETS NOT IMMEDIATELY ADJACENT TO LOW POINT (C/L) OF ROADWAY CONTRACTOR TO ADJUST CROSS SLOPE IN THESE AREAS IN ACCORDANCE WITH ENGINEER'S DIRECTION.

11. STORMWATER RUNOFF FROM THE ROOF(S) SHALL BE ROUTED THROUGH THE PROPOSED STORMWATER SYSTEM AND DIRECTED TOWARD DETENTION POND.

EARTHWORK NOTES

1. IF EVIDENCE OF THE EXISTENCE OF HISTORIC RESOURCES IS DISCOVERED OR OBSERVED AT THE SITE OR DURING DEVELOPMENT ACTIVITIES AFTER FINAL APPROVAL, ALL WORK SHALL CEASE. THE DEVELOPER, OWNER, OR AGENT THEREOF SHALL NOTIFY THE DEPARTMENT OF HISTORICAL RESOURCES WITHIN 24 HOURS. EXAMPLES OF EVIDENCE OF HISTORIC RESOURCES INCLUDE WHOLE OR FRAGMENTARY STONE TOOLS, SHELL TOOLS, ABORIGINAL OR HISTORIC POTTERY, HISTORIC GLASS, HISTORIC BOTTLES, BONE TOOLS, HISTORIC BUILDING FOUNDATIONS, SHELL MOUNDS, SHELL MIDDENS, OR SAND MOUNDS. THE DIRECTOR OF HISTORIC RESOURCES SHALL ASSESS THE SIGNIFICANCE OF THE FINDS AND MITIGATE ANY ADVERSE EFFECTS AS SOON AS POSSIBLE, BUT NO LATER THAN THREE (3) WORKING DAYS OF NOTIFICATION. WORK ACTIVITIES CAN BE NORMALLY RESUMED EXCEPT IN THE AREA OF EFFECT AS DETERMINED BY THE DIRECTOR OF HISTORIC RESOURCES.

2. TOP SOIL, ORGANIC SILTY SOILS WITH ROOTS AND ORGANIC MUCK MATERIALS SHALL BE REMOVED WHEN ENCOUNTERED AT THE GROUND SURFACE AND IF NOT REMOVED DURING NORMAL CLEARING AND GRUBBING OPERATIONS. OTHER ISOLATED AREAS OF ORGANIC MATERIAL OR DELETERIOUS MATERIAL MAY EXIST WITHIN THE PROJECT SITE. IF ADDITIONAL UNSUITABLE MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE REMOVED AND REPLACED WITH CLEAN, SLIGHTLY SILTY OR SILTY FINE SAND (A-3, A-2-4).

3. EMBANKMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE F.D.O.T. STANDARD SPECIFICATIONS. SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE F.D.O.T. STANDARD INDEXES NO. 120-001 AND 120-002. EMBANKMENT FILL, WHERE REQUIRED, SHALL CONTAIN NO MUCK, STUMPS, ROOTS, OR OTHER DELETERIOUS MATERIAL AND SHALL BE PLACED IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX 120-001. THE BACKFILL SHALL BE SHAPED AND ADDRESSED TO CONFORM TO THE CROSS SECTIONS AND GRADES INDICATED ON THESE CONSTRUCTION DOCUMENTS WITHIN THE TOLERANCES STATED IN THE F.D.O.T. STANDARD SPECIFICATIONS.

4. PIPE BEDDING MATERIAL IN TRENCHES SHALL CONSIST OF CLEAN OR SLIGHTLY SILTY FINE SAND (A-3) WITH LESS THAN 10 PERCENT PASSING THE US STANDARD NO 200 SIEVE. THE MATERIAL SHALL BE FREE OF STONES, GRAVEL, ORGANICS, VEGETATION AND OTHER DELETERIOUS MATERIAL, PLACED IN UNIFORM LIFTS NOT EXCEEDING SIX (6) INCHES THICK AND COMPACTED TO AT LEAST 95 PERCENT OF ITS MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180 (MODIFIED PROCTOR TEST). TRENCH BACK FILL MATERIAL SHALL CONSIST OF CLEAN, SLIGHTLY SILTY OR SILTY FINE SAND (A-3, A-2-4) WITH LESS THAN 35 PERCENT PASSING THE U.S. STANDARD NO. 200 SIEVE. ALL BACKFILL SHALL CONTAIN NO MORE THAN FIVE PERCENT ORGANICS AS DETERMINED BY ASTMD-2974.

5. PIPE BEDDING MATERIAL SHALL BE SOLIDLY TAMPED AROUND PIPES IN SIX (6) INCH ES THICK LAYERS UP TO A LEVEL OF AT LEAST ONE (1) FOOT ABOVE THE TOP OF THE PIPE. IN AREAS TO BE PAVED, PIPE BEDDING MATERIAL SHALL BE COMPACTED TO 98% MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180 (MODIFIED PROCTOR TEST).

6. BACKFILL MATERIAL OVER ANY PIPE (STORM SEWER, SANITARY SEWER, OR WATER MAINS) INSTALLED UNDER ROADWAYS OR WITHIN THE EMBANKMENT OF THE ROADWAY SHALL BE COMPACTED IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, SECTION 125-8, LATEST EDITION.

7. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF THE PRESENCE OF STATE OR FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES IS DISCOVERED, CITY / COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE PLANT AND/OR ANIMAL SPECIES FOUND ON THE SITE. ALL WORK IN THE AFFECTED AREA SHALL COME TO AN IMMEDIATE STOP UNTIL ALL PERTINENT PERMITS HAVE BEEN OBTAINED, AGENCY WRITTEN AUTHORIZATION TO COMMENCE ACTIVITIES HAS BEEN GIVEN, OR UNLESS COMPLIANCE WITH STATE AND FEDERAL GUIDELINES CAN BE DEMONSTRATED.

8. IF DURING CONSTRUCTION ACTIVITIES ANY EVIDENCE OF HISTORIC RESOURCES, INCLUDING BUT NOT LIMITED TO ABORIGINAL OR HISTORIC POTTERY, PREHISTORIC STONE TOOLS, BONE OR SHELL TOOLS, HISTORIC TRASH PITS, OR HISTORIC BUILDING FOUNDATION, ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE FLORIDA DEPARTMENT OF HISTORIC RESOURCES (STATE HISTORIC PRESERVATION OFFICER) AND CITY / COUNTY AND APPLICABLE AGENCIES SHALL BE NOTIFIED WITHIN TWO WORKING DAYS OF THE RESOURCES FOUND ON THE SITE.

OPERATION AND MAINTENANCE OF STORMWATER SYSTEM

AFTER COMPLETION OF THE PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER FACILITIES. OPERATION AND MAINTENANCE OF THE STORMWATER SYTEM INCLUDES:

1. THE DETENTION AREA, UNDER NO CIRCUMSTANCES, SHALL BE FILLED WITH ANY OTHER SUBSTANCE THAN STORMWATER. THE OWNER OR AGENT SHALL MAKE SURE, TO THE BEST OF HIS ABILITY, THAT NOTHING ENTERS THE SYSTEM AND COULD DETERIORATE THE FUNCTIONING CAPABILITIES OF THE DETENTION AREA, (I.E. GASOLINE, OIL, GREASE, CHEMICALS, ETC.).

2. ALL SODDED AREAS SHALL BE MOWED AND MAINTAINED PROPERLY.

3. SWALES SHALL BE KEPT CLEAN AND FREE OF ANY OBSTRUCTIONS.

4. CONTROL STRUCTURE(S) SHALL BE CHECKED MONTHLY FOR DAMAGE OR BLOCKAGE. ANYDAMAGED SKIMER(S) SHALL BE REPLACED OR REPAIRED. ANY DEBRIS BLOCKING FULL FLOW THROUGH THE WEIR(S) AND/OR ORIFFICE(S) SHALL BE REMOVED.

5. INLET GRATE(S) SHALL BE CHECKED MONTHLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED GRATE(S) SHALL BE REPLACED OR REPAIRED. ANY DEBRIS BLOCKING FULL FLOW THROUGH THE GRATE(S) SHALL BE REMOVED.

6. PIPE(S) AND INLET(S) SHALL BE INSPECTED TWICE A YEARLY FOR DAMAGE OR BLOCKAGE. ANY DAMAGED PIPE(S) OR INLET(S) SHALL BE REPAIRED OR REPLACED. ANY TRASH, DEBRIS OR SAND DEPOSITS SHALL BE REMOVED. THE PIPE CONVEYANCE SYSTEM SHALL BE FLUSHED, AS DEEMED NECESSARY NO LESS THAN TWICE A YEAR. ALL MATERIAL SHALL BE COLLECTED DOWNSTREAM AND REMOVED.

7. ALL POND SIDE SLOPES AND MAINTENANCE BERMS WILL BE PERIODICALLY MOWED AND CLEANED. DURING THE MOWING OPERATION THE PONDS SHALL BE INSPECTED FOR BARE SPOTS AND EROSION DAMAGE. ANY BARE SPOTS GREATER THAN ONE SQUARE FOOT IN AREA WILL BE SEEDED OR SODDED TO REPLACE THE GRASS COVER. IN CASE OF EROSION OR DAMAGE WHERE UNDERLYING SOIL IS MISSING, THE MISSING SOIL WILL BE REPLACED AND THE AREA BROUGHT BACK TO GRADE WITH SEEDING OR SODDING AS REQUIRED. THE BOTTOM AND SIDE SLOPES OF THE POND SHALL BE INSPECTED REGULARLY TO ASSURE THAT EXCESS SILTATION OR EROSION HAS NOT OCCURRED. SILTATION AND EROSION IN THE POND SHALL BE CONTROLLED TO ASSURE THAT THE STORAGE VOLUME IS NOT AFFECTED.

8. IN THE EVENT THAT STORMWATER STAND IN THE POND MORE THAN 48 HOURS, RAKING AND/OR SCARIFICATION OF THE POND BOTTOM / SIDE SLOPES SHALL BE REQUIRED AS DEEMED NECESSARY TO RESTORE THE PERCOLATION CHARACTERISTICS OF THE POND.

9. CATTAILS, BULRUSHES, AND OTHER NUISANCE VEGETATION WILL BE CUT BACK FROM INLET OR OUTFALL STRUCTURES, TO THE EXTENT NEEDED TO MAINTAIN DESIGN DISCHARGES. IN ADDITION, THE AREA IMMEDIATELY IN FRONT OF THE CONTROL STRUCTURE SHOULD BE CLEARED OF AQUATIC GROWTH AND DEBRIS.

10. GRASS CLIPPING AND OTHER VEGETATIVE DEBRIS SHALL BE REMOVED FROM THE AREA SURROUNDING THE POND AND LIMIT FERTILIZER USE AROUND THE POND AREA TO PREVENT NUTRIENT LOADING OF THE FACILITY.

SITE PREPARATION AND GRADING BY AREHNA ENGINEERING, INC

GENERAL

THE INITIAL STEP IN SITE PREPARATION SHOULD BE THE COMPLETE REMOVAL OF ALL TOPSOIL, ROOTS, AND OTHER DELETERIOUS MATERIALS FROM BENEATH AND TO A MINIMUM OF FIVE FEET BEYOND THE DEVELOPMENT PERIMETER. THE DEPTH TO WHICH STRIPPING WILL BE REQUIRED WILL VARY TO SOME DEGREE BUT SHOULD BE LESS THAN 6 INCHES. ALSO, PRIOR TO CONSTRUCTION, THE LOCATION OF ANY EXISTING UNDERGROUND IRRIGATION, SEPTIC TANKS, DRAINAGE, OR OTHER UTILITY LINES WITHIN THE CONSTRUCTION AREA SHOULD BE ESTABLISHED. IN THIS REGARD IT SHOULD BE NOTED THAT UNDERGROUND PIPES, IF NOT PROPERLY REMOVED OR PLUGGED, MAY SERVE AS CONDUITS FOR SUBSURFACE EROSION WHICH SUBSEQUENTLY MAY RESULT IN EXCESSIVE SETTLEMENTS. THE PAVEMENT AREA SHOULD THEN BE INSPECTED AND THOROUGHLY PROOFROLLED AS DIRECTED BY A GEOTECHNICAL ENGINEER. OUR RECOMMENDATIONS LISTED IN THIS SECTION SHOULD BE USED AS A GUIDELINE FOR THE PROJECT GENERAL SPECIFICATIONS PREPARED BY THE DESIGN ENGINEER:

A. THE EXPOSED SUBGRADE WITHIN THE PROPOSED CONSTRUCTION AREA SHOULD BE PROOFROLLED USING A VIBRATORY ROLLER WITH A STATIC WEIGHT OF AT LEAST 8 TONS AND A DRUM DIAMETER OF AT LEAST 4 FEET, REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF 10 COMPLETE COVERAGES (5 IN EACH PERPENDICULAR DIRECTION) SHOULD BE PERFORMED.

B. CAREFUL OBSERVATIONS SHOULD BE MADE DURING PROOFROLLING TO HELP IDENTIFY ANY AREAS OF SOFT-YIELDING SOILS THAT MAY REQUIRE OVER EXCAVATION AND REPLACEMENT.

C. ANY PLANNED FILL CAN BE PLACED FOLLOWING SATISFACTORY COMPLETION OF PROOFROLLING. FILL SHOULD GENERALLY CONSIST OF FINE SAND WITH LESS THAN 12 PERCENT PASSING THE NO. 200 SIEVE AND BE FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS AND OTHER UNSUITABLE MATERIAL. FILL SHOULD BE TESTED AND APPROVED PRIOR TO ACQUISITION. APPROVED SAND FILL SHOULD BE PLACED IN LOOSE LIFTS NOT EXCEEDING 12 INCHES IN THICKNESS AND SHOULD BE COMPACTED TO A MINIMUM OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. DENSITY TESTS TO CONFIRM COMPACTION SHOULD BE PERFORMED IN EACH FILL LIFT BEFORE THE NEXT LIFT IS PLACED.

D. PRIOR TO BEGINNING COMPACTION, SOIL MOISTURE CONTENTS MAY NEED TO BE CONTROLLED IN ORDER TO FACILITATE EFFICIENT COMPACTION. A MOISTURE CONTENT WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM INDICATED BY THE MODIFIED PROCTOR TEST (ASTM D-1557) IS RECOMMENDED PRIOR TO COMPACTION OF THE NATURAL GROUND AND FILL.

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION NOTES & SPECIFICATIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HPE HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Su

"BE IT KNOWN" THAT THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION

W.O. 5770

TOPOGRAPHIC SURVEY

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

LEGAL DESCRIPTION:

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

All of ROCK HOUSE REPLAT, according to the map or plat thereof recorded in Plat Book 98, Page 41, Public Records of Pinellas County, Florida.

TOGETHER WITH that portion of the East 1/2 of Sunshine Lane which was vacated by the Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida, and which abuts said plat of ROCK HOUSE REPLAT.

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 5, Block 2, and that part of Lot 30, Block 2, CONEY ISLAND, according to the plat thereof recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, described as follows: From the Southeast corner of said Lot 30, run thence S. 72°50' W., 73.19 feet along the Southerly boundary thereof for a POINT OF BEGINNING; run thence N. 09°44'36" W., 28.84 feet; thence S. 80°07'05" W., 30.56 feet to the Westerly boundary of said Lot 30; thence Southerly along said Westerly boundary to the Southwest corner of said Lot 30; thence Easterly along said lot's Southerly boundary to the Point of Beginning.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 6, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, less the following portion: Beginning at the Northwest corner of said Lot 6 run North 88°47'02" East, 62.51 feet along the Northerly line of said Lot 6; thence South 01°13'40" West., 7.51 feet; thence run North 88°07'20" West, 61.87 feet to an intersection with the Westerly boundary line of said Lot 6; thence run Northerly along said Westerly boundary of said Lot 6, 4.17 feet to the Point of Beginning.
Also the following portion of said Lot 7, Block 2, of said CONEY ISLAND SUBDIVISION: From a Point of Beginning at the Southeast corner of Lot 7, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, run North 00°07'50" West, 6.6 feet along the East boundary of said Lot 7; thence run South 85°16'40" West, 39.5 feet; thence South 01°13'40" West, 4.19 feet to an intersection with the Southerly line of said Lot 7; thence North 88°47'02" East, along said Southerly boundary of said Lot 7, 39.49 feet to the Point of Beginning.

TOGETHER WITH that portion of vacated Sunshine Lane adjoining said portion of Lot 7 that attaches by operation of law pursuant to Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida.

ALSO TOGETHER with that tract of land lying Westerly of Lots 4 and 5, Block 2, of aforesaid CONEY ISLAND SUBDIVISION, to the waters of the Gulf of Mexico, between, the Northwesterly line of said Lot 5 and the Southeasterly line of said Lot 4, extended Westerly to the said waters of the Gulf of Mexico.

SCALE: 1" = 20'

CURVE TABLE (D&M)					
CURVE	LENGTH	RADIUS	DELTA	CH DIRECTION	CH LENGTH
C1	141.73	1971.86	4°07'06"	S20°22'45"E	141.70
C2	10.38	1981.86	0°18'00"	S22°35'18"E	10.38
C3	113.87	1971.86	3°18'32"	S24°31'34"E	113.86
C4	42.36	1959.86	1°14'18"	S26°45'03"E	42.35
C5	39.98	611.35	3°44'50"	S10°35'59"E	39.98
C6	35.87	611.35	3°21'41"	S03°31'49"E	35.86

LINE TABLE (D&M)		
LINE	LENGTH	BEARING
L1	10.00	S87°33'42"W
L2	10.00	N67°15'43"E
L3	12.35	N77°30'00"E
L4	90.76	S72°50'00"W
L5	96.91	S10°16'00"E
L6	7.50	S89°52'00"W
L7	0.66	S00°08'00"E
L8	7.53	S84°48'00"W
L9	66.42	S10°16'00"E
L10	108.17	S81°15'00"W
L11	165.31	S77°33'00"W
L12	104.30	N08°56'23"E
L13	133.60	N85°01'00"E
L14	41.58	N88°07'22"W
L15	45.94	N02°10'12"E
L16	13.22	N81°33'16"W
L17	195.00	N20°02'00"E
L18	14.60	N36°37'36"E
L19	19.48	S74°25'39"E
L20	51.55	S68°44'00"E

SYMBOL LEGEND

- BFP = Backflow Preventor
- C = Cable Box
- ℄ = Centerline
- ⊙ = Cleanout
- ☼ = Decorative Light
- DMH = Drainage Manhole
- ⊡ = Grease Trap
- ⊡ = Grease Trap
- ⚓ = Guy Anchor
- ♿ = Handicap
- ☼ = Lightpole
- M = Meter
- P = Power Box
- ⊙ = Sanitary Manhole
- ⊙ = Sign
- ⊕ = Spot Elevation
- T = Telephone Box
- ✱ = Utility Pole
- ⊙ = Water Meter
- ⊙ = Water Valve
- ⊙ = Well

TREE LEGEND

- PALM

ABBREVIATION LEGEND

(C)	= Calculated Data	FFE	= Finished Floor Elevation	PRC	= Point of Reverse Curvature
(D)	= Data per Description	FIP	= Found Iron Pipe	PRM	= Permanent Reference Monument
(F)	= Field Measured	FIR	= Found Iron Rod No Cap	PT	= Point
(M)	= Measured Data	FND	= Found Nail & Disk	RGE	= Range
(P)	= Data per Plat	FPP	= Found Pinched Pipe	R/W	= Right-of-way
(R)	= Radial Bearing	GV	= Gas Valve	SCM	= Set Concrete Monument
A/C	= Air Conditioner	GV	= Gate Valve	SCM	= Set Concrete Monument PLS #2865
BWF	= Barbwire Fence	HYD	= Fire Hydrant	SCIR	= Set Iron Rod & Cap 5/8" PLS #2865
BFE	= Base Flood Elevation	I.E.	= Invert Elevation	SNAD	= Set Nail & Disc PLS #2865
BFP	= Backflow Preventor	LB	= Corporate Certificate Number	SMH	= Sanitary Manhole
BRG	= Bearing Basis	LP	= Light Pole	TBM	= Temporary Benchmark
CH	= Chord	LVE	= Lowest Floor Elevation	TOB	= Top of Bank
C.A.B.	= Condominium Plat Book	LMWA	= Limit of Moderate Wave Action Line	TOS	= Top of Slope
C/L	= Centerline of Road	M.E.	= Match Existing	TOW	= Top of Wall
C/S	= Concrete Slab	MES	= Mitered End Section	UB	= Utility Box
CSW	= Concrete Sidewalk	N&D	= Nail & Disk	UP	= Utility Pole
CCCL	= Coastal Construction Control Line	NFND	= Not Found and Not Set	VIF	= Vinyl Fence
CL	= Centerline	NS	= Not Included in Survey	WM	= Water Meter
CLF	= Chain Link Fence	OCS	= Overhead Control Structure	WM	= Wood Fence
COV	= Covered	OHW	= Overhead Wire	W.O.	= Work Order
CLP	= Concrete Light Pole	O.R.	= Official Records Book	WV	= Water Valve
CMP	= Corrugated Metal Pipe	PB	= Plat Book		
CONC	= Concrete	PCP	= Permanent Control Point		
Δ	= Delta Angle	PG(S)	= Page(s)		
D.B.	= Deed Book	PLS	= Professional Land Surveyor		
DW	= Driveway	POB	= Point of Beginning		
DMH	= Drainage Manhole	POC	= Point of Commencement		
EIP	= Edge of Pavement				
ECL	= Erosion Control Line				
EL	= Elevation				
EOW	= Edge of Water				
FCIR	= Found Iron Rod & Cap				
FCM	= Found Concrete Monument				
FDOT	= Florida Department of Transportation				

SURVEY NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, AND IS SUBJECT TO EASEMENTS, RIGHT-OF-WAY, AND OTHER MATTERS OF RECORD THAT A TITLE SEARCH MIGHT DISCLOSE.

2. PLANIMETRIC FEATURES SHOWN HEREON WERE DETERMINED BY STANDARD FIELD SURVEYING METHODS.

3. BEARING BASIS IS THE SOUTH BOUNDARY LINE OF PARCEL M BEING S72°50'00"W, ASSUMED.

4. ALL INSTRUMENTS SHOWN HEREON ARE OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, UNLESS OTHERWISE SPECIFIED.

5. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SURFACE MARKINGS AND OR STRUCTURES. NO EXCAVATION WAS PERFORMED FOR THE LOCATION OF SUCH UTILITIES.

6. ADDITIONS OR DELETIONS TO THIS SURVEY MAP AND/OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

7. THIS PARCEL APPEARS TO BE IN FLOOD ZONE "VE (EL 12 FEET)", "AE (EL 11 FEET)" AND "AE (EL 10 FEET)" ACCORDING TO THE FLOOD INSURANCE RATE MAP, MAP NUMBER: 12103C0193H, MAP EFFECTIVE DATE: 08/24/2021, AS PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THIS PARCEL, OR A PORTION THEREOF, APPEARS TO BE IN A COASTAL "A" ZONE.
THIS MAP'S NOTES STATE THAT THE BASE FLOOD ELEVATIONS SHOWN REPRESENT ROUNDED WHOLE-FOOT ELEVATIONS AND THEREFORE MAY NOT EXACTLY REFLECT THE FLOOD ELEVATION DATA PRESENTED IN THE FLOOD INSURANCE STUDY (FIS) REPORT. THE FIS REPORT WAS NOT CONSULTED FOR THIS SURVEY.
FLOOD ZONE LINES AND/OR LWMA LINE SHOWN HEREON WERE TRANSFERRED BY GRAPHIC METHODS FROM THE FLOOD ZONE MAP, AND ARE SUBJECT TO THE INHERENT INACCURACIES OF SUCH TRANSFERS. THIS FLOOD ZONE NOTE IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, ANY PROPOSED FINISH FLOOR ELEVATIONS ARE TO BE DETERMINED BY THE PERMITTING AGENCY HAVING JURISDICTION.

8. LOCATIONS OF TREES SHOWN HEREON WERE LIMITED TO TREES 4" DIAMETER AT BREAST HEIGHT (DBH) OR LARGER.
GEODATA SERVICES INC. CAN ACCEPT NO RESPONSIBILITY FOR THE IDENTIFICATION OF THE TREE SPECIES SHOWN HEREON. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PROPERLY IDENTIFY THE TREES SHOWN HEREON, TREE IDENTIFICATION IS OUTSIDE THE EXPERTISE OF A PROFESSIONAL LAND SURVEYOR. THE TREE TYPES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE USED AFTER CONFIRMATION BY A CERTIFIED ARBORIST OR OTHER SUCH PROFESSIONAL.

9. VERTICAL DATA SHOWN HEREON ARE IN NAVD 88 DATUM, HOLDING FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK BM 15-12-E03 AND A PUBLISHED ELEVATION OF 5.28 FEET UTILIZED TO SET A SITE TBM. BENCHMARK DESIGNATIONS AND INFORMATION SHOWN HERE ARE FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK SHEETS.

10. STATE PLANE COORDINATES SHOWN HEREON ARE THE RESULT OF A CONTROL SURVEY PERFORMED BY GLOBAL POSITIONING SYSTEM (GPS) METHODS. THIS GPS SURVEY WAS PERFORMED BY A CREW FROM GEODATA SERVICES, INC., CLEARWATER, FLORIDA AND WAS ESTABLISHED BY GPS OBSERVATION AND USING A SPECTUM PRECISION EPOCH 50 RTK RECEIVER WITH CORRECTIONS PROVIDED BY TRIMBLE POSITIONING SERVICES VIA INTERNET MODEM.
BASIS: FLORIDA WEST ZONE, NORTH AMERICAN DATUM (NAD) 83 (2009 ADJUSTMENT)

SURVEYOR'S CERTIFICATION:

I, DENNIS J. EYRE, THE SURVEYOR IN RESPONSIBLE CHARGE, HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON AND THAT SAID ABOVE GROUND SURVEY AND SKETCH ARE ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF; SURVEY NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, OR ELECTRONIC DIGITAL SIGNATURE IN ACCORDANCE WITH STATE OF FLORIDA ADMINISTRATIVE CODE RULE 5J-17.062.

Dennis J Eyre PLS 2865
Digitally signed by Dennis J Eyre PLS 2865
Date: 2022.09.16 12:16:48 -04'00'

DENNIS J. EYRE, P.L.S. FLA. REG. No. 2865
DATE: SEPTEMBER 16, 2022

AN UNSIGNED SURVEY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY

W.O. # 5770	FIELD DATE: MARCH 16, 2016
DRAWN BY: EJ./HW	FIELD DATE: APRIL 9, 2019 - ADDED ADDITIONAL TOPO
CHECKED BY: DJE.	FIELD DATE: MAY 16, 2019 - ADDED ADDITIONAL TOPO
SCALE: 1"= 20'	UDATED FLOOD ZONE DATE: SEPTEMBER 15, 2022
FIELD BOOK / PAGE(S): 1-16/22, 1-18/29	
SHEET 1 OF 1	

GEODATA SERVICES INC.
1166 KAPP DRIVE
CLEARWATER, FL 33765
PHONE: (727) 447-1763
LB 7466

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FOR INFORMATION PURPOSE ONLY
N.T.S.

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-30-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: BOUNDARY & TOPOGRAPHIC SURVEY

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-2.3

NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PREPARED. THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

DEMOLITION NOTES TO CONTRACTOR

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AS REQUIRED BY CITY / COUNTY, STATE AND FEDERAL LAW PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

2. THE CONTRACTOR SHALL MEET ALL SAFETY REGULATIONS REQUIRED BY FEDERAL, STATE AND LOCAL GOVERNMENT.

3. THE CONTRACTOR SHALL COMPLY WITH DEMOLITION REQUIRMENTS ESTABLISHED IN THE FLORIDA BUILDING CODE SECTION 3303.

4. THE CONTRACTOR SHALL INSPECT BUILDINGS FOR ASBESTOS AND SITE FOR HAZARDOUS WASTE PRIOR TO DEMOLITION WORK.

5. THE CONTRACTOR PERFORMING DEMOLITION, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR DEMOLITION SAFETY STANDARDS, 29 C.F.R., S.1926., SUBPART T, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT WILL NOT BE INCORPORATED WITH THE NEW IMPROVEMENTS.

7. THE CONTRACTOR SHALL DEMOLISH AND REMOVE IMPROVEMENTS WITHIN LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

8. THE CONTRACTOR SHALL ESTABLISH AND PROPERLY FLAG PROPERTY CORNERS AND PROPERTY LINES PRIOR TO DEMOLITION WORK.

9. THE CONTRACTOR SHALL DISPOSE ALL DEMOLITION MATERIALS AND DEBRIS IN ACCORDANCE WITH THE CITY / COUNTY REQUIREMENTS IN A SOLID WASTE DISPOSAL FACILITY APPROVED BY F.D.E.P. AND THE CITY / COUNTY.

10. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH NEIGHBORS THAT ARE AFECTED BY THE DEMOLITION WORK.

11. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AND TREE BARRICADES PRIOR TO DEMOLITION AND MAINTAIN DURING DEMOLITION. THE CONTRACTOR SHALL ERECT SILT FENCE AS SHOWN IN SITE CONSTRUCTION DETAILS SHEET. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE EROSION CONTROL MEASURES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-4 AND 40D-40 F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED $10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.

12. THE CONTRACTOR SHALL FENCE OR BARRICADE THE SITE, INSTALL GATES FOR TRUCK ROUTING AND CONTROL TRAFFIC PER FDOT TRAFFIC CONTROL STANDARDS.

13. THE CONTRACTOR SHALL SAW-CUT EXISTING PAVEMENT WHERE NEW PAVEMENT IS TO BE ADDED OR EXISTING PAVEMENT TO BE ELIMINATED.

14. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND IS RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.

15. EXISTING IMPROVEMENTS ABOVE GROUND (E.G., PAVEMENT, CURBING, BUILDINGS, CONCRETE PADS, RETAINING WALLS, SIDEWALKS, POLES, SIGNAGE, ETC.) AND BELOW GROUND (E.G., SANITARY, STORM, WATER, GAS, CABLE, ELECTRIC, PHONE, ETC.) SHALL REMAIN UNLESS OTHERWISE NOTED.

16. ALL CAVITIES RESULTING FROM REMOVAL OF BUILDING FOUNDATIONS, TREES, UTILITIES, SIGNS, ETC. SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO 95% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

17. THE CONTRACTOR SHALL DISPOSE ALL LOOSE DEBRIS AND GARBAGE WITHIN THE PROJECT BOUNDARIES. ADJACENT PROPERTIES SHALL NOT BE ADVERSELY AFFECTED (E.G., SOIL EROSION, UTILITIES DISCONNECTION, TRAFFIC FLOW IMPEDANCE, NOISE, DUST, GARBAGE, ETC.) AND RIGHT-OF-WAY SHALL BE RESTORED WITH NEW SIDEWALK AND SOD AS REQUIRED.

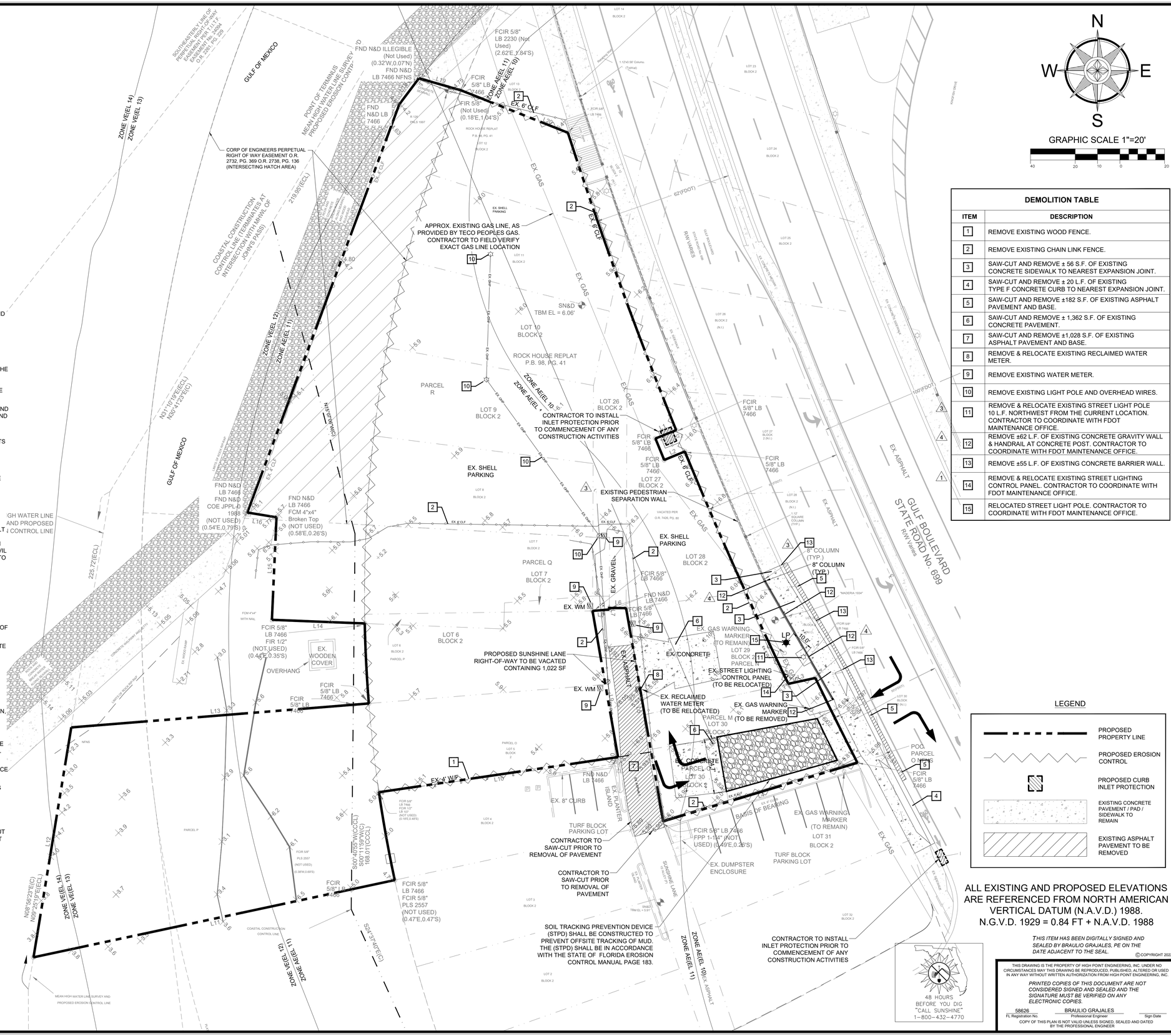
18. NO CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO CLEARING, GRUBBING, FILLING, GRADING, DIGGING, DITCHING, TRENCHING AND EXCAVATION, SHALL OCCUR WITHIN THE WETLAND UPLAND BUFFER DEPICTED ON THE APPROVED PROJECT CONSTRUCTION PLANS. ALL CONSTRUCTION ACTIVITIES MUST OCCUR UPSLOPE OF THE UPLAND BUFFER.

19. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY USE PERMIT AND PREPARE A MAINTENANCE OF TRAFFIC PLAN FOR ANY WORK IN THE RIGHT-OF-WAY.

20. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO DISCONNECT THEIR FACILITIES PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

21. THE CONTRACTOR SHALL COORDINATE THE REMOVAL / RELOCATION OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. UTILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.

22. UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE NON-SHRINK GROUT MIX OR AS OTHERWISE APPROVED BY ENGINEER. PRESSURE MAINS SHOULD BE PROPERLY CUT AND CAPPED AT TERMINATION POINTS AND RESTRAINED WITH A REVERSE DEADMAN OR RESTRAINERS OR AS OTHERWISE APPROVED BY ENGINEER.



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GRAPHIC SCALE 1"=20'

40 20 10 0 20

DEMOLITION TABLE

ITEM	DESCRIPTION
1	REMOVE EXISTING WOOD FENCE.
2	REMOVE EXISTING CHAIN LINK FENCE.
3	SAW-CUT AND REMOVE ± 56 S.F. OF EXISTING CONCRETE SIDEWALK TO NEAREST EXPANSION JOINT.
4	SAW-CUT AND REMOVE ± 20 L.F. OF EXISTING TYPE F CONCRETE CURB TO NEAREST EXPANSION JOINT.
5	SAW-CUT AND REMOVE ±182 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
6	SAW-CUT AND REMOVE ± 1,362 S.F. OF EXISTING CONCRETE PAVEMENT.
7	SAW-CUT AND REMOVE ±1,028 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
8	REMOVE & RELOCATE EXISTING RECLAIMED WATER METER.
9	REMOVE EXISTING WATER METER.
10	REMOVE EXISTING LIGHT POLE AND OVERHEAD WIRES.
11	REMOVE & RELOCATE EXISTING STREET LIGHT POLE 10 L.F. NORTHWEST FROM THE CURRENT LOCATION. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
12	REMOVE ±62 L.F. OF EXISTING CONCRETE GRAVITY WALL & HANDRAIL AT CONCRETE POST. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
13	REMOVE ±55 L.F. OF EXISTING CONCRETE BARRIER WALL.
14	REMOVE & RELOCATE EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
15	RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.

LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED EROSION CONTROL
- PROPOSED CURB INLET PROTECTION
- EXISTING CONCRETE PAVEMENT / PAD / SIDEWALK TO REMAIN
- EXISTING ASPHALT PAVEMENT TO BE REMOVED

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.84 FT + N.A.V.D. 1988

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	DESCRIPTION
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	10-20-23	PER FDOT
4	ED	2-6-23	PER FDOT
3	ED	9-23-22	PER FDOT
2	ED	8/10/2022	REVISIONS

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: DEMOLITION & TREE PROTECTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
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LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-3.0

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

DEMOLITION NOTES TO CONTRACTOR

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AS REQUIRED BY CITY / COUNTY, STATE AND FEDERAL LAW PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

2. THE CONTRACTOR SHALL MEET ALL SAFETY REGULATIONS REQUIRED BY FEDERAL, STATE AND LOCAL GOVERNMENT.

3. THE CONTRACTOR SHALL COMPLY WITH DEMOLITION REQUIRMENTS ESTABLISHED IN THE FLORIDA BUILDING CODE SECTION 3303.

4. THE CONTRACTOR SHALL INSPECT BUILDINGS FOR ASBESTOS AND SITE FOR HAZARDOUS WASTE PRIOR TO DEMOLITION WORK.

5. THE CONTRACTOR PERFORMING DEMOLITION, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR DEMOLITION SAFETY STANDARDS, 29 C.F.R., S.1926., SUBPART T, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT WILL NOT BE INCORPORATED WITH THE NEW IMPROVEMENTS.

7. THE CONTRACTOR SHALL DEMOLISH AND REMOVE IMPROVEMENTS WITHIN LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

8. THE CONTRACTOR SHALL ESTABLISH AND PROPERLY FLAG PROPERTY CORNERS AND PROPERTY LINES PRIOR TO DEMOLITION WORK.

9. THE CONTRACTOR SHALL DISPOSE ALL DEMOLITION MATERIALS AND DEBRIS IN ACCORDANCE WITH THE CITY / COUNTY REQUIREMENTS IN A SOLID WASTE DISPOSAL FACILITY APPROVED BY F.D.E.P. AND THE CITY / COUNTY.

10. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH NEIGHBORS THAT ARE AFECTED BY THE DEMOLITION WORK.

11. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AND TREE BARRICADES PRIOR TO DEMOLITION AND MAINTAIN DURING DEMOLITION. THE CONTRACTOR SHALL ERECT SILT FENCE AS SHOWN IN SITE CONSTRUCTION DETAILS SHEET. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE EROSION CONTROL MEASURES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-4 AND 40D-40 F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED $10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.

12. THE CONTRACTOR SHALL FENCE OR BARRICADE THE SITE, INSTALL GATES FOR TRUCK ROUTING AND CONTROL TRAFFIC PER FDOT TRAFFIC CONTROL STANDARDS.

13. THE CONTRACTOR SHALL SAW-CUT EXISTING PAVEMENT WHERE NEW PAVEMENT IS TO BE ADDED OR EXISTING PAVEMENT TO BE ELIMINATED.

14. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND IS RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.

15. EXISTING IMPROVEMENTS ABOVE GROUND (E.G., PAVEMENT, CURBING, BUILDINGS, CONCRETE PADS, RETAINING WALLS, SIDEWALKS, POLES, SIGNAGE, ETC.) AND BELOW GROUND (E.G., SANITARY, STORM, WATER, GAS, CABLE, ELECTRIC, PHONE, ETC.) SHALL REMAIN UNLESS OTHERWISE NOTED.

16. ALL CAVITIES RESULTING FROM REMOVAL OF BUILDING FOUNDATIONS, TREES, UTILITIES, SIGNS, ETC. SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO 95% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

17. THE CONTRACTOR SHALL DISPOSE ALL LOOSE DEBRIS AND GARBAGE WITHIN THE PROJECT BOUNDARIES. ADJACENT PROPERTIES SHALL NOT BE ADVERSELY AFFECTED (E.G., SOIL EROSION, UTILITIES DISCONNECTION, TRAFFIC FLOW IMPEDANCE, NOISE, DUST, GARBAGE, ETC.) AND RIGHT-OF-WAY SHALL BE RESTORED WITH NEW SIDEWALK AND SOD AS REQUIRED.

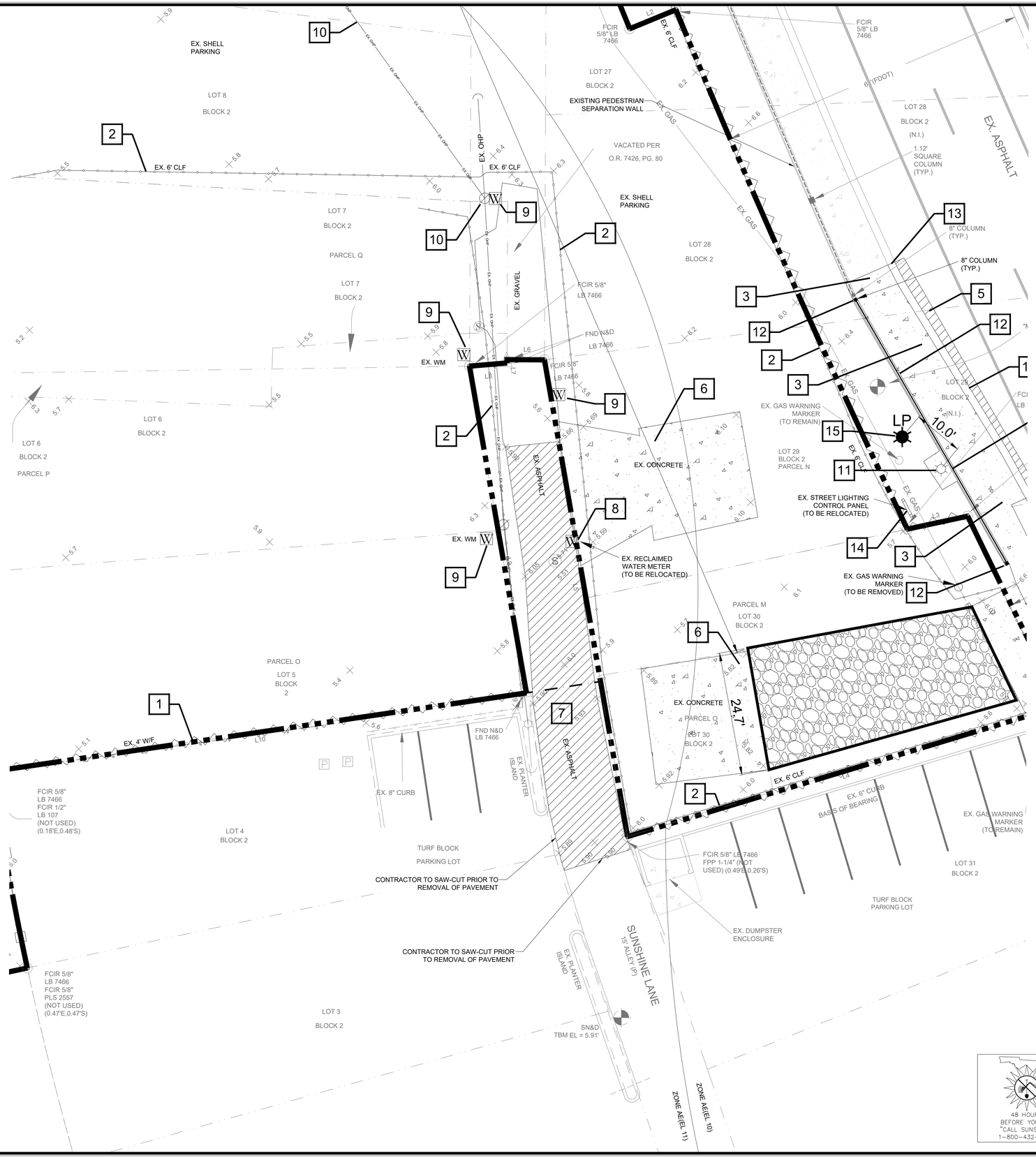
18. NO CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO CLEARING, GRUBBING, FILLING, GRADING, DIGGING, DITCHING, TRENCHING AND EXCAVATION, SHALL OCCUR WITHIN THE WETLAND UPLAND BUFFER DEPICTED ON THE APPROVED PROJECT CONSTRUCTION PLANS. ALL CONSTRUCTION ACTIVITIES MUST OCCUR UPSLOPE OF THE UPLAND BUFFER.

19. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY USE PERMIT AND PREPARE A MAINTENANCE OF TRAFFIC PLAN FOR ANY WORK IN THE RIGHT-OF-WAY.

20. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO DISCONNECT THEIR FACILITIES PRIOR TO COMMENCE OF DEMOLITION ACTIVITIES.

21. THE CONTRACTOR SHALL COORDINATE THE REMOVAL / RELOCATION OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. UTILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.

22. UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE NON-SHRINK GROUT MIX OR AS OTHERWISE APPROVED BY ENGINEER. PRESSURE MAINS SHOULD BE PROPERLY CUT AND CAPPED AT TERMINATION POINTS AND RESTRAINED WITH A REVERSE DEADMAN OR RESTRAINERS OR AS OTHERWISE APPROVED BY ENGINEER.



N

W E

S

GRAPHIC SCALE 1"=10'

20 10 5 0 10

DEMOLITION TABLE

ITEM	DESCRIPTION
1	REMOVE EXISTING WOOD FENCE.
2	REMOVE EXISTING CHAIN LINK FENCE.
3	SAW-CUT AND REMOVE ± 56 S.F. OF EXISTING CONCRETE SIDEWALK TO NEAREST EXPANSION JOINT.
4	SAW-CUT AND REMOVE ± 20 L.F. OF EXISTING TYPE F CONCRETE CURB TO NEAREST EXPANSION JOINT.
5	SAW-CUT AND REMOVE ±182 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
6	SAW-CUT AND REMOVE ± 1,362 S.F. OF EXISTING CONCRETE PAVEMENT.
7	SAW-CUT AND REMOVE ±1,028 S.F. OF EXISTING ASPHALT PAVEMENT AND BASE.
8	REMOVE & RELOCATE EXISTING RECLAIMED WATER METER.
9	REMOVE EXISTING WATER METER.
10	REMOVE EXISTING LIGHT POLE AND OVERHEAD WIRES.
11	REMOVE & RELOCATE EXISTING STREET LIGHT POLE 10 L.F. NORTHWEST FROM THE CURRENT LOCATION. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
12	REMOVE ±62 L.F. OF EXISTING CONCRETE GRAVITY WALL & HANDRAIL AT CONCRETE POST. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
13	REMOVE ±55 L.F. OF EXISTING CONCRETE BARRIER WALL.
14	REMOVE & RELOCATE EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
15	RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.

LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED EROSION CONTROL
- PROPOSED CURB INLET PROTECTION
- EXISTING CONCRETE PAVEMENT / PAD / SIDEWALK TO REMAIN
- EXISTING ASPHALT PAVEMENT TO BE REMOVED

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.84 FT + N.A.V.D. 1988

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 FL Registration No. | BRAULIO GRAJALES Professional Engineer | Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 2240BHCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW DEMOLITION & TREE PROTECTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
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LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-3.1



SHEET: C-4.0

HPE HIGH POINT ENGINEERING
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LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

CONTENT:
SITE LAYOUT & PARKING PLAN AERIAL

PROJECT:
PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

PROJECT No:	22-009-HCI
ISSUE DATE:	8/10/2022
DESIGNED BY:	ED
DRAWN BY:	ED
CHECKED BY:	BG
APPROVED BY:	BG

No.	BY	DATE	DESCRIPTION

REVISIONS

LEGAL DESCRIPTION

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 5, BLOCK 2, AND THAT PART OF LOT 30, BLOCK 2, CONEY ISLAND, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: FROM THE SOUTHEAST CORNER OF SAID LOT 30, RUN THENCE S. 72°Q50' W., 73.19 FEET ALONG THE SOUTHERLY BOUNDARY THEREOF FOR A POINT OF BEGINNING; RUN THENCE N. 09°44'36" W., 28.84 FEET; THENCE S. 80°07'05" W., 30.56 FEET TO THE WESTERLY BOUNDARY OF SAID LOT 30; THENCE SOUTHERLY ALONG SAID WESTERLY BOUNDARY TO THE SOUTHWEST CORNER OF SAID LOT 30; THENCE EASTERLY ALONG SAID LOT'S SOUTHERLY BOUNDARY TO THE POINT OF BEGINNING.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

LOT 6, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, LESS THE FOLLOWING PORTION: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 6 RUN NORTH 88°47'02" EAST, 62.51 FEET ALONG THE NORTHERLY LINE OF SAID LOT 6; THENCE SOUTH 01°13'40" WEST., 7.51 FEET; THENCE RUN NORTH 88°07'20" WEST, 61.87 FEET TO AN INTERSECTION WITH THE WESTERLY BOUNDARY LINE OF SAID LOT 6; THENCE RUN NORTHERLY ALONG SAID WESTERLY BOUNDARY OF SAID LOT 6, 4.17 FEET TO THE POINT OF BEGINNING.

ALSO, THE FOLLOWING PORTION OF SAID LOT 7, BLOCK 2, OF SAID CONEY ISLAND SUBDIVISION: FROM A POINT OF BEGINNING AT THE SOUTHEAST CORNER OF LOT 7, BLOCK 2, CONEY ISLAND SUBDIVISION, AS RECORDED IN PLAT BOOK 5, PAGES 34 AND 35, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, RUN NORTH 00°07'50" WEST, 6.6 FEET ALONG THE EAST BOUNDARY OF SAID LOT 7; THENCE RUN SOUTH 85°16'40" WEST, 39.5 FEET; THENCE SOUTH 01°13'40" WEST, 4.19 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF SAID LOT 7; THENCE NORTH 88°47'02" EAST, ALONG SAID SOUTHERLY BOUNDARY OF SAID LOT 7, 39.49 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH THAT PORTION OF VACATED SUNSHINE LANE ADJOINING SAID PORTION OF LOT 7 THAT ATTACHES BY OPERATION OF LAW PURSUANT TO RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

ALSO TOGETHER WITH THAT TRACT OF LAND LYING WESTERLY OF LOTS 4 AND 5, BLOCK 2, OF AFORESAID CONEY ISLAND SUBDIVISION, TO THE WATERS OF THE GULF OF MEXICO, BETWEEN, THE NORTHWESTERLY LINE OF SAID LOT 5 AND THE SOUTHEASTERLY LINE OF SAID LOT 4, EXTENDED WESTERLY TO THE SAID WATERS OF THE GULF OF MEXICO.

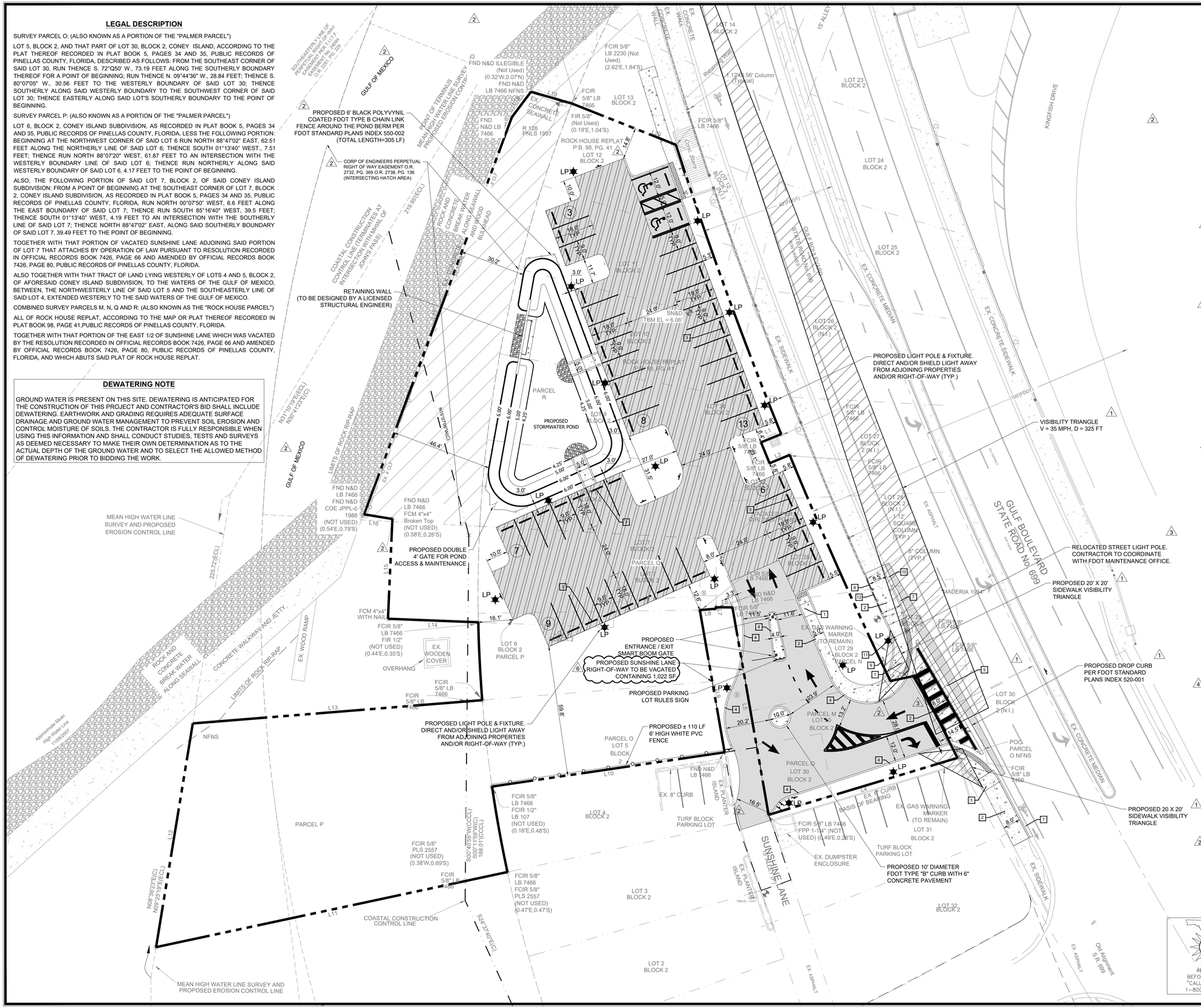
COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

ALL OF ROCK HOUSE REPLAT, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN PLAT BOOK 98, PAGE 41,PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA.

TOGETHER WITH THAT PORTION OF THE EAST 1/2 OF SUNSHINE LANE WHICH WAS VACATED BY THE RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 7426, PAGE 66 AND AMENDED BY OFFICIAL RECORDS BOOK 7426, PAGE 80, PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, AND WHICH ABUTS SAID PLAT OF ROCK HOUSE REPLAT.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.


GULF OF MEXICO
PROPOSED 6' BLACK POLYVYNIL COATED FDOT TYPE B CHAIN LINK FENCE AROUND THE POND BERM PER FDOT STANDARD PLANS INDEX 550-002 (TOTAL LENGTH=305 LF)
CORP OF ENGINEERS PERPETUAL RIGHT OF WAY EASEMENT O.R. 2732, PG. 369 O.R. 2738, PG. 136 (INTERSECTING HATCH AREA)
RETAINING WALL (TO BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER)
PROPOSED DOUBLE 4' GATE FOR POND ACCESS & MAINTENANCE
PROPOSED ENTRANCE / EXIT SMART BOOM GATE
PROPOSED SUNSHINE LANE RIGHT-OF-WAY TO BE VACATED CONTAINING 1,022 SF
PROPOSED PARKING LOT RULES SIGN
PROPOSED LIGHT POLE & FIXTURE. DIRECT AND/OR SHIELD LIGHT AWAY FROM ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY (TYP.)
PROPOSED ± 110 LF 6' HIGH WHITE PVC FENCE
PROPOSED STORMWATER POND
PROPOSED LIGHT POLE & FIXTURE. DIRECT AND/OR SHIELD LIGHT AWAY FROM ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY (TYP.)
VISIBILITY TRIANGLE V = 35 MPH, D = 325 FT
RELOCATED STREET LIGHT POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED 20' X 20' SIDEWALK VISIBILITY TRIANGLE
PROPOSED DROP CURB PER FDOT STANDARD PLANS INDEX 520-001
PROPOSED 20 X 20' SIDEWALK VISIBILITY TRIANGLE
PROPOSED 10' DIAMETER FDOT TYPE "B" CURB WITH 6" CONCRETE PAVEMENT
PROPOSED CURB RAMP PER FDOT INDEX 522-002. RUNNING SLOPE 1:12 (MAX). CROSS SLOPE 1:50 (MAX).
SIDEWALK & CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX). CROSS SLOPE 1:50 (MAX).
WHEEL STOP (TYPICAL)
PROPOSED TYPE "D" CURB PER FDOT INDEX 520-001
PROPOSED DROP CURB PER FDOT INDEX 520-001
PROPOSED TYPE "B" CURB PER FDOT INDEX 520-001
PROPOSED ±16.0 FT TYPE "F" CURB PER FDOT INDEX 520-001
PROPOSED ±16.0 FT CONCRETE GRAVITY WALL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
RELOCATED EXISTING STREET LIGHTING CONTROL PANEL. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT DESIGN STANDARD INDEX 410 FY 2012 / 2013.
RELOCATED EXISTING STREET LIGHTING POLE. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE.
PROPOSED ±16.0 FT HANDRAIL TO MATCH EXISTING HANDRAIL. STEEL COATING TO MATCH EXISTING. CONTRACTOR TO COORDINATE WITH FDOT MAINTENANCE OFFICE AS WELL AS PREPARE AND SUBMIT SIGNED AND SEALED HANDRAIL PLANS / SHOP DRAWINGS TO FDOT FOR APPROVAL.
GULF BOULEVARD STATE ROAD No. 699
KINGFISH DRIVE
15' ALLEY
EX. CONCRETE MEDIAN
EX. SIDEWALK
SUNSHINE LANE
MEAN HIGH WATER LINE SURVEY AND PROPOSED EROSION CONTROL LINE
COASTAL CONSTRUCTION CONTROL LINE
LIMITS OF ROCK RIP-RAP
CONCRETE WALKWAY AND JETTY
EX. WOOD RAMP
EX. WOODEN COVER
OVERHANG
EX. 8" CURB
EX. PLANTER ISLAND
TURF BLOCK PARKING LOT
EX. DUMPSTER ENCLOSURE
EX. GAS WARNING MARKER (TO REMAIN)
EX. CONCRETE SEAWALL
EX. CONCRETE WALL
EX. ROCK AND CONCRETE BREAK WATER ALONG SEAWALL AND WOOD BULKHEAD
ROCK HOUSE REPLAT P.B. 98, PG. 41
PARCEL R
PARCEL O
PARCEL P
PARCEL M
PARCEL N
LOT 1 BLOCK 2
LOT 2 BLOCK 2
LOT 3 BLOCK 2
LOT 4 BLOCK 2
LOT 5 BLOCK 2
LOT 6 BLOCK 2
LOT 7 BLOCK 2
LOT 8 BLOCK 2
LOT 9 BLOCK 2
LOT 10 BLOCK 2
LOT 11 BLOCK 2
LOT 12 BLOCK 2
LOT 13 BLOCK 2
LOT 14 BLOCK 2
LOT 23 BLOCK 2
LOT 24 BLOCK 2
LOT 25 BLOCK 2
LOT 26 BLOCK 2 (N.I.)
LOT 27 BLOCK 2 (N.I.)
LOT 28 BLOCK 2 (N.I.)
LOT 29 BLOCK 2 (N.I.)
LOT 30 BLOCK 2 (N.I.)
LOT 31 BLOCK 2
LOT 32 BLOCK 2
MADERIA 1924
SNAD TBM EL = 6.06'
TBM EL = 5.91'
FND N&D ILLEGIBLE (Not Used) (0.32'W,0.07'N)
FND N&D LB 7466 NFNS
FCIR 5/8" LB 2230 (Not Used) (2.62'E,1.84'S)
FIR 5/8" (Not Used) (0.18'E,1.04'S)
FCIR 5/8" LB 7466
FND N&D LB 7466
FCM 4"x4" WITH NAIL
FCIR 5/8" LB 7466 FIR 1/2" (NOT USED) (0.44'E,0.35'S)
FCIR 5/8" LB 7466 FCM 4"x4" Broken Top (NOT USED) (0.58'E,0.26'S)
FCIR 5/8" LB 7466 FCIR 5/8" PLS 2557 (NOT USED) (0.38'W,0.69'S)
FCIR 5/8" LB 7466 FCIR 1/2" LB 107 (NOT USED) (0.18'E,0.48'S)
FCIR 5/8" LB 7466 FCIR 5/8" PLS 2557 (NOT USED) (0.47'E,0.47'S)
FCIR 5/8" LB 7466 FPP 1-1/4" (NOT USED) (0.49'E,0.26'S)
FND N&D LB 7466 FCIR 5/8" LB 7466
FCIR 5/8"

SITE PLAN NOTES

1. ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS IN THE CITY OF TREASURE ISLAND LAND DEVELOPMENT, ZONING AND/OR RELATED ORDINANCES.

2. ALL PEDESTRIAN ROUTES, SIDEWALKS AND ACCESSIBILITY RAMPS, HANDICAPPED PARKING SPACES, ACCESSIBILITY SIGNS AND SYMBOLS SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) AND THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION (FACBC), LATEST EDITIONS.

3. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

4. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

5. ALL PROPOSED PAVED PARKING/DRIVE AREAS TO BE CURBED WITH FDOT TYPE 'D' CURB, UNLESS SPECIFIED OTHERWISE. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER FDOT INDEX NO. 522-002.

6. MINIMUM CURB RADII IS THREE (3) FEET, UNLESS OTHERWISE NOTED. EXACT RADII DIMENSIONS ARE SPECIFIED IN PLAN SHEET C-4.3.

7. ALL DIMENSIONS SHOWN ON PLAN ARE TO EDGE OF PAVEMENT, FACE OF CURB OR CENTERLINE OF STRUCTURE, UNLESS OTHERWISE NOTED.

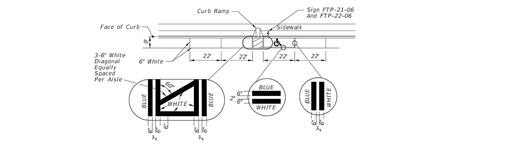
8. PROPOSED SITE LIGHTING SHALL BE AUTOMATICALLY CONTROLLED TO TURN-OFF WHEN PARKING LOT IS CLOSED.

9. REFER TO SHEET C-5.5 FOR CROSS SECTIONS.

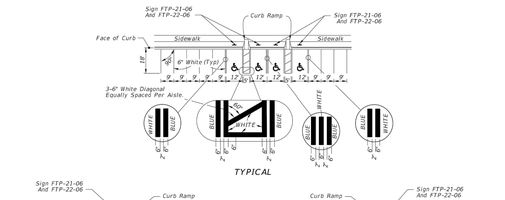
10. ALL DISTURBED AREAS ARE TO RECEIVE FOUR (4) INCHES OF TOP SOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.

11. ALL BOUNDARY AND TOPOGRAPHICAL INFORMATION SHOWN WAS TAKEN FROM TOPOGRAPHIC SURVEY BY GEODATA SERVICES, INC DATED 06/03/2019.

12. ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM OF 1988.



TYPICAL



FORWARD-IN PARKING

REVERSE-IN PARKING

*FOR ACCESSIBLE MARKINGS - SEE ABOVE

DIMENSIONS					
∠ θ	"A"	"B"	"C"	"D"	"E"
45°	17'-0"	12'-9"	7'-0"	24'-0"	17'-0"

PAVEMENT MARKING FOR PARKING





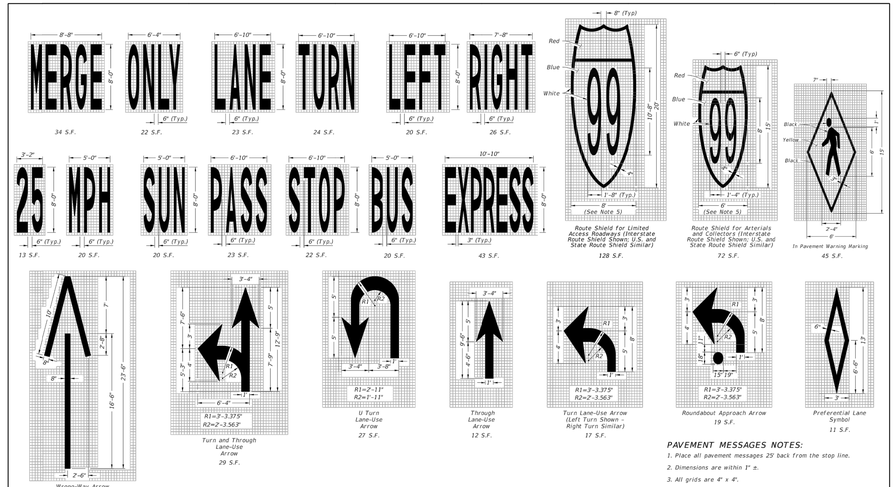
(See Note 5)

UNIVERSAL SYMBOL OF ACCESSIBILITY

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. Mount FTP-22-06 sign below the FTP-21-06 sign.
5. Use of the pavement symbol in accessible parking spaces is optional. When pavement symbol is used, the symbol is either 3'-0" or 5'-0" high and white in color.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	11 of 13



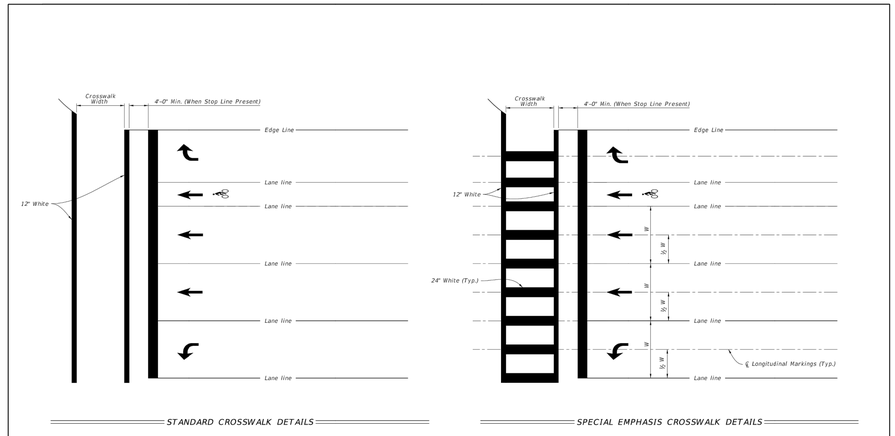
34 S.F. 22 S.F. 23 S.F. 24 S.F. 20 S.F. 26 S.F. 128 S.F. 72 S.F. 45 S.F. 13 S.F. 20 S.F. 20 S.F. 23 S.F. 22 S.F. 20 S.F. 43 S.F. 24 S.F. 29 S.F. 27 S.F. 12 S.F. 17 S.F. 19 S.F. 11 S.F.

PAVEMENT MESSAGE AND ARROW DETAILS

PAVEMENT MESSAGES NOTES:

1. Place all pavement messages 25' back from the stop line.
2. Dimensions are within 1" ±.
3. All grids are 4" x 4".
4. All pavement messages must be white except Route Shields and In Pavement Warning Markings.
5. Increase width of route shield for routes with three digits.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	1 of 13



STANDARD CROSSWALK DETAILS

SPECIAL EMPHASIS CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.
2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.
3. Refer to Index 522-002 when Curb Ramps are present.

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	PAVEMENT MARKINGS	INDEX	SHEET
11/01/21					711-001	9 of 13

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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No.	BY	DATE	REVISIONS DESCRIPTION

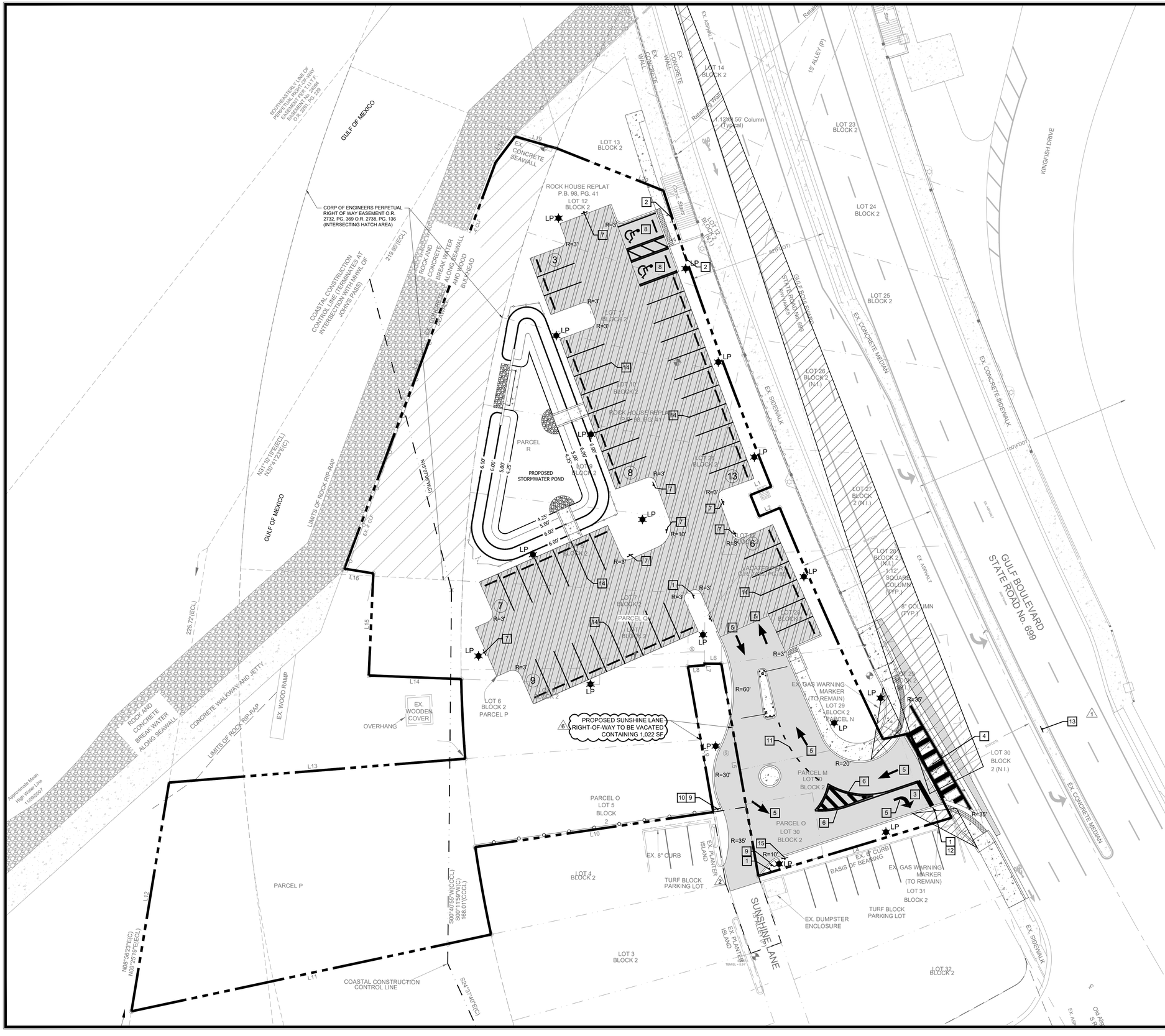
PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

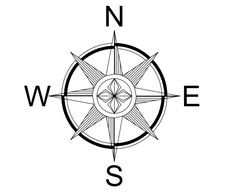
CONTENT: SITE LAYOUT PARKING NOTES

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.2

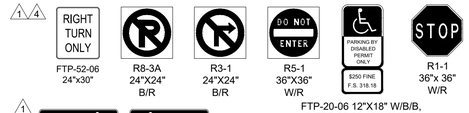




GRAPHIC SCALE 1"=20'

40 20 10 0 20

POST SIGNS



FTP-52-06 24"x30" | R8-3A 24"X24" B/R | R3-1 24"X24" B/R | R5-1 36"X36" W/R | FTP-20-06 12"X18" W/B/B, & FTP-22-06 12"X6" W/B | R1-1 36"x 36" W/R

R6-1R 36"X12" | R6-1L 36"X12"

PROPOSED SIGN QUANTITIES /6

QUANITY	NAME
3	STOP (R1-1), 36"x36"
2	PARKING BY DISABLED PERMIT (FTP-20-06 & FTP-22-06)
2	DO NO ENTER (R5-1)
1	NO RIGHT TURN (R3-1), 24" X 24"
7	NO PARKING (R8-3A), 24" X 24"
1	RIGHT TURN ONLY (FTP-52-06)
1	ONE WAY RIGHT ARROW (R6-1R)
1	ONE WAY LEFT ARROW (R6-1L)

TAG LEGEND

ITEM	DESCRIPTION
1	STOP SIGN, R1-1, 36"X36".
2	PARKING BY DISABLED PERMIT ONLY & $250 FINE F.S. 318.18 SIGNS.
3	24" WHITE STOP BAR PER FDOT STANDARD PLANS INDEX 711-001.
4	24" WHITE SPECIAL EMPHASIS CROSSWALK MARKING AND 12" LONGITUDINAL STRIPING WITH BLACK BORDER CONTRAST PER FDOT INDEX 711-001 (THERMOPLASTIC)
5	WHITE THROUGH & RIGHT TURN ARROW PER FDOT STANDARD PLANS INDEX 711-001.
6	MEDIAN GORE OUTER STRIPING TO BE 6" DOUBLE YELLOW AND INNER GORE STRIPING TO BE 18" YELLOW.
7	NO PARKING SIGN, R8-3A, 24"X24".
8	STRIPING FOR ACCESSIBLE PARKING SPACE(S) INCLUDING 6" WHITE & BLUE LINES ON EACH SIDE, ACCESS AISLE STRIPED 6" WHITE DIAGONALLY AT 45°, EQUALLY SPACED AND WHITE UNIVERSAL SYMBOL OF ACCESSIBILITY. (REFER TO FDOT STANDARD PLANS INDEX NO. 711-001).
9	DO NOT ENTER SIGN, R5-1, 36"X36".
10	NO RIGHT TURN SIGN, R3-1, 24"X24".
11	6" 2'-4' YELLOW DOTTED GUIDE LINE, PER FDOT STANDARD PLANS INDEX 711-001.
12	RIGHT TURN ONLY SIGN, FTP-52-06, 24"X30".
13	ONE WAY RIGHT ARROW SIGN, R6-1R, 36"X12".
14	4" SOLID WHITE LINE STRIPING FOR REGULAR PARKING.
15	ONE WAY LEFT ARROW SIGN, R6-1L, 36"X12".

MARKING NOTES

1. 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 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR DESIGN, CONSTRUCTION MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM".

2. PARKING STALL STRIPING TO BE 6" WIDE PAINTED STRIPES. THE STRIPING FOR ALL REGULAR PARKING SPACES SHALL BE MADE IN WHITE COLOR UNLESS INDICTAED OTHERWISE. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

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No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	10-20-23	PER FDOT
4	ED	2-6-23	PER FDOT
3	ED	2-6-23	PER CITY OF TREASURE ISLAND
2	ED	9-23-22	PER FDOT
1	ED	DATE	DESCRIPTION

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SIGNING & MARKING PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.3



No.	BY	DATE	DESCRIPTION
6	ED	5-1-24	PER CITY OF TREASURE ISLAND

REVISIONS

PROJECT No: 22-009-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT:
FIRE TRUCK TRACKING PLAN

PROJECT:
PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HPE HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
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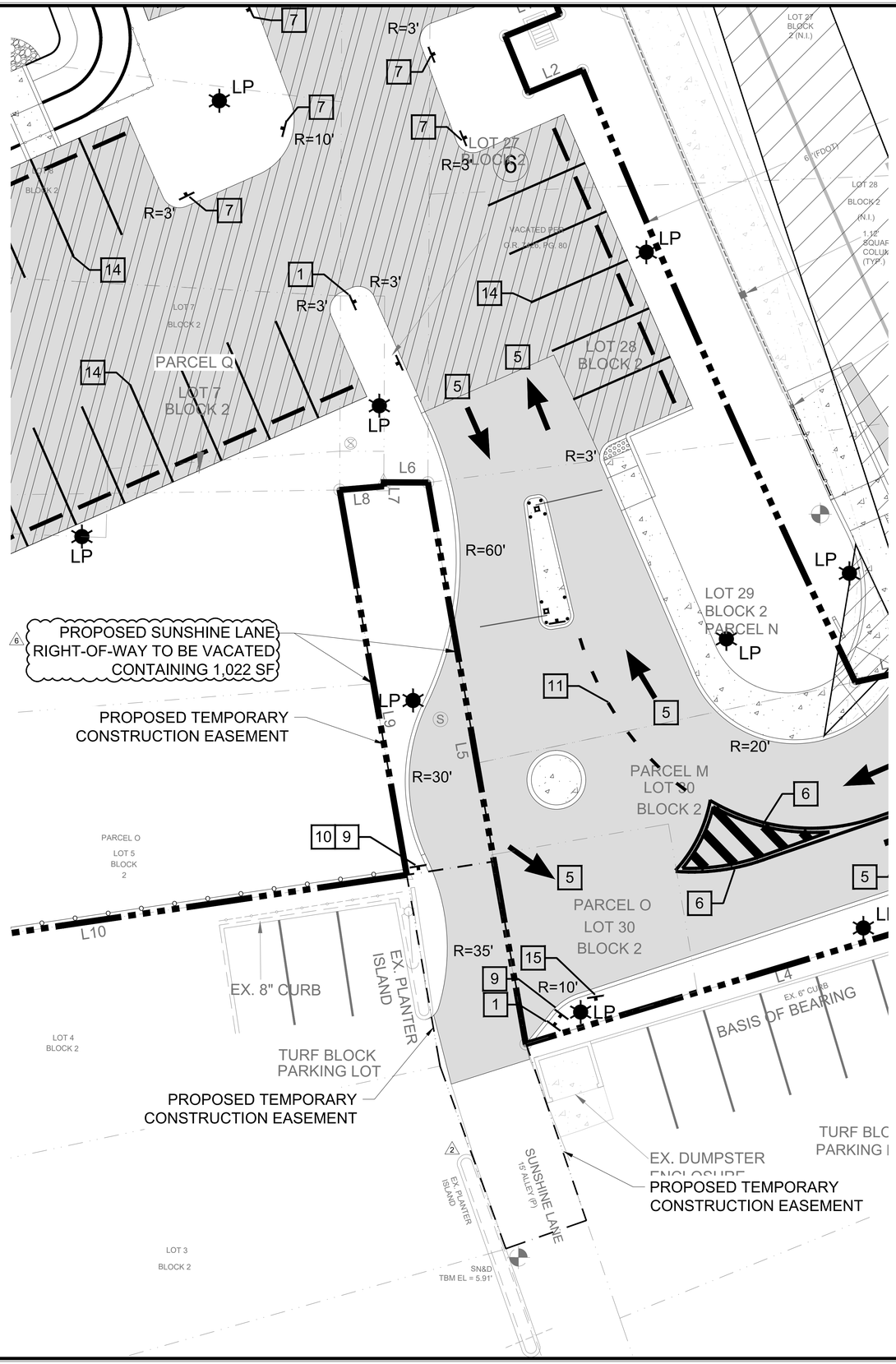
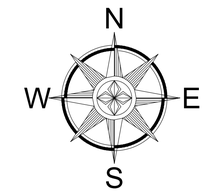
SHEET:
C-4.4

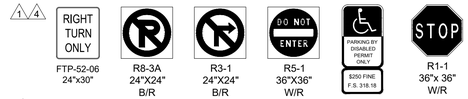




GRAPHIC SCALE 1"=10'

20 10 5 0 10

POST SIGNS



FTP-52-06 24"x30" | R8-3A 24"X24" B/R | R3-1 24"X24" B/R | R5-1 36"X36" W/R | FTP-20-06 12"X18" W/B/B, & FTP-22-06 12"X6" W/B | R1-1 36"x 36" W/R

R6-1R 36"X12" | R6-1L 36"X12"

PROPOSED SIGN QUANTITIES 6	
QUANITY	NAME
3	STOP (R1-1), 36"x36"
2	PARKING BY DISABLED PERMIT (FTP-20-06 & FTP-22-06)
2	DO NO ENTER (R5-1)
1	NO RIGHT TURN (R3-1), 24" X 24"
7	NO PARKING (R8-3A), 24" X 24"
1	RIGHT TURN ONLY (FTP-52-06)
1	ONE WAY RIGHT ARROW (R6-1R)
1	ONE WAY LEFT ARROW (R6-1L)

TAG LEGEND	
ITEM	DESCRIPTION
1	STOP SIGN, R1-1, 36"X36".
2	PARKING BY DISABLED PERMIT ONLY & $250 FINE F.S. 318.18 SIGNS.
3	24" WHITE STOP BAR PER FDOT STANDARD PLANS INDEX 711-001.
4	24" WHITE SPECIAL EMPHASIS CROSSWALK MARKING AND 12" LONGITUDINAL STRIPING WITH BLACK BORDER CONTRAST PER FDOT INDEX 711-001 (THERMOPLASTIC)
5	WHITE THROUGH & RIGHT TURN ARROW PER FDOT STANDARD PLANS INDEX 711-001.
6	MEDIAN GORE OUTER STRIPING TO BE 6" DOUBLE YELLOW AND INNER GORE STRIPING TO BE 18" YELLOW.
7	NO PARKING SIGN, R8-3A, 24"X24".
8	STRIPING FOR ACCESSIBLE PARKING SPACE(S) INCLUDING 6" WHITE & BLUE LINES ON EACH SIDE, ACCESS AISLE STRIPED 6" WHITE DIAGONALLY AT 45°, EQUALLY SPACED AND WHITE UNIVERSAL SYMBOL OF ACCESSIBILITY. (REFER TO FDOT STANDARD PLANS INDEX NO. 711-001).
9	DO NOT ENTER SIGN, R5-1, 36"X36".
10	NO RIGHT TURN SIGN, R3-1, 24"X24".
11	6" 2'-4' YELLOW DOTTED GUIDE LINE, PER FDOT STANDARD PLANS INDEX 711-001.
12	RIGHT TURN ONLY SIGN, FTP-52-06, 24"X30".
13	ONE WAY RIGHT ARROW SIGN, R6-1R, 36"X12".
14	4" SOLID WHITE LINE STRIPING FOR REGULAR PARKING.
15	ONE WAY LEFT ARROW SIGN, R6-1L, 36"X12".

MARKING NOTES

1. 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 AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR DESIGN, CONSTRUCTION MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM".

2. PARKING STALL STRIPING TO BE 6" WIDE PAINTED STRIPES. THE STRIPING FOR ALL REGULAR PARKING SPACES SHALL BE MADE IN WHITE COLOR UNLESS INDICTAED OTHERWISE. YELLOW PAINT SHALL BE USED FOR NO PASSING, NO PARKING OR TO DESIGNATE A FIRE LANE.

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No.	DATE	REVISIONS
6	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	DESCRIPTION
4	BT	

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW SIGNING & MARKING PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-4.5

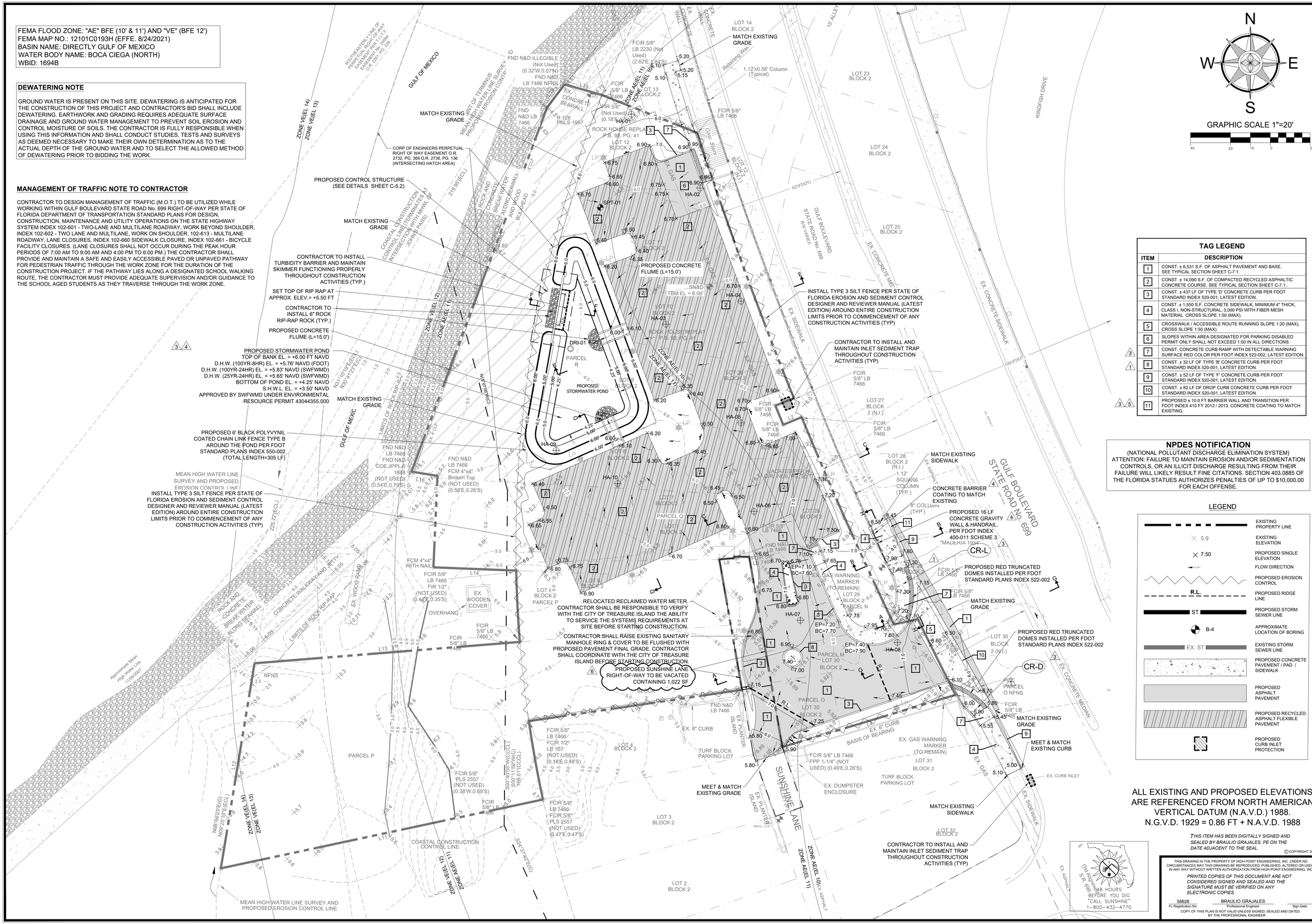
FEMA FLOOD ZONE: "AE" BFE (10' & 11') AND "VE" (BFE 12')
FEMA MAP NO.: 12101C0193H (EFFE. 8/24/2021)
BASIN NAME: DIRECTLY GULF OF MEXICO
WATER BODY NAME: BOCA CIEGA (NORTH)
WBID: 1694B

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.



TAG LEGEND

ITEM	DESCRIPTION
1	CONST. ± 6,531 S.F. OF ASPHALT PAVEMENT AND BASE. SEE TYPICAL SECTION SHEET C-7.1.
2	CONST. ± 14,090 S.F. OF COMPACTED RECYCLED ASPHALTIC CONCRETE COURSE. SEE TYPICAL SECTION SHEET C-7.1..
3	CONST. ± 437 LF OF TYPE 'D' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
4	CONST. ± 1,550 S.F. CONCRETE SIDEWALK, MINIMUM 4" THICK, CLASS I, NON-STRUCTURAL, 3,000 PSI WITH FIBER MESH MATERIAL. CROSS SLOPE 1:50 (MAX).
5	CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX), CROSS SLOPE 1:50 (MAX).
6	SLOPES WITHIN AREA DESIGNATED FOR PARKING DISABLED PERMIT ONLY SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS.
7	CONST. CONCRETE CURB RAMP WITH DETECTABLE WARNING SURFACE RED COLOR PER FDOT INDEX 522-002, LATEST EDITION.
8	CONST. ± 32 LF OF TYPE 'B' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
9	CONST. ± 52 LF OF TYPE 'F' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
10	CONST. ± 82 LF OF DROP CURB CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
11	PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT INDEX 410 FY 2012 / 2013. CONCRETE COATING TO MATCH EXISTING.

NPDES NOTIFICATION

(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)
ATTENTION: FAILURE TO MAINTAIN EROSION AND/OR SEDIMENTATION CONTROLS, OR AN ILLICIT DISCHARGE RESULTING FROM THEIR FAILURE WILL LIKELY RESULT FINE CITATIONS. SECTION 403.0885 OF THE FLORIDA STATUES AUTHORIZES PENALTIES OF UP TO $10,000.00 FOR EACH OFFENSE.

LEGEND

EXISTING PROPERTY LINE
5.9 EXISTING ELEVATION
7.50 PROPOSED SINGLE ELEVATION
FLOW DIRECTION
PROPOSED EROSION CONTROL
R.L. PROPOSED RIDGE LINE
ST PROPOSED STORM SEWER LINE
B-4 APPROXIMATE LOCATION OF BORING
EX. ST EXISTING STORM SEWER LINE
PROPOSED CONCRETE PAVEMENT / PAD / SIDEWALK
PROPOSED ASPHALT PAVEMENT
PROPOSED RECYCLED ASPHALT FLEXIBLE PAVEMENT
PROPOSED CURB INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988. N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

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No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND
5	ED	1-11-24	PER FDOT
4	ED	10-20-23	PER FDOT
3	ED	2-6-23	PER FDOT
2	ED	9-23-22	PER FDOT
1	BG	8/1/2022	

PROJECT No: 2208HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: PAVING, GRADING & DRAINAGE PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
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LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.1

FOUNDATION AND SOILS NOTES

1. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1806, THE MAXIMUM ALLOWABLE FOUNDATION PRESSURE, LATERAL PRESSURE OR LATERAL SLIDING-RESISTANCE VALUES FOR SUPPORTING SOILS NEAR THE SURFACE SHALL NOT EXCEED THE VALUES SPECIFIED IN THE FLORIDA BUILDING CODE TABLE 1806.2 UNLESS DATA TO SUBSTANTIATE THE USE OF A HIGHER VALUE ARE SUBMITTED AND APPROVED. PRESUMPTIVE LOAD-BEARING VALUES SHALL APPLY TO MATERIALS WITH SIMILAR PHYSICAL CHARACTERISTICS AND DISPOSITIONS. MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT OR UNPREPARED FILL SHALL NOT BE ASSUMED TO HAVE A PRESUMPTIVE LOAD-BEARING CAPACITY UNLESS DATA TO SUBSTANTIATE THE USE OF SUCH A VALUE ARE SUBMITTED. A PRESUMPTIVE LOAD-BEARING CAPACITY IS PERMITTED TO BE USED WHERE THE BUILDING OFFICIAL DEEMS THE LOAD-BEARING CAPACITY OF MUD, ORGANIC SILT OR UNPREPARED FILL IS ADEQUATE FOR THE SUPPORT OF LIGHTWEIGHT AND TEMPORARY STRUCTURES.

2. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1808 AND 1809, FOOTINGS AND SHALLOW FOUNDATIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTIONS 1808.2 THROUGH 1808.9 AND 1809.2 THROUGH 1809.13. FOOTINGS AND SHALLOW FOUNDATIONS SHALL BE BUILT ON UNDISTURBED SOIL, COMPACTED FILL MATERIAL OR CONTROLLED LOW-STRENGTH MATERIAL (CLSM). COMPACTED FILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTION 1804.6. CLSM SHALL BE PLACED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SECTION 1804.7. THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. THE BOTTOM SURFACE OF FOOTINGS IS PERMITTED TO HAVE A SLOPE NOT EXCEEDING ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). FOOTINGS SHALL BE STEPPED WHERE IT IS NECESSARY TO CHANGE THE ELEVATION OF THE TOP SURFACE OF THE FOOTING OR WHERE THE SURFACE OF THE GROUND SLOPES MORE THAN ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). THE MINIMUM DEPTH OF FOOTINGS BELOW THE UNDISTURBED GROUND SURFACE SHALL BE 12 INCHES. WHERE APPLICABLE, THE DEPTH OF FOOTINGS SHALL ALSO CONFORM TO THE FLORIDA BUILDING CODE SECTIONS 1809.5.

EXCAVATION, GRADING AND FILL NOTES

1. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, EXCAVATION AND FILL FOR BUILDINGS AND STRUCTURES SHALL BE CONSTRUCTED OR PROTECTED SO AS NOT TO ENDANGER LIFE OR PROPERTY. STUMPS AND ROOTS SHALL BE REMOVED FROM THE SOIL TO A DEPTH OF AT LEAST 12 INCHES BELOW THE SURFACE OF THE GROUND IN THE AREA TO BE OCCUPIED BY THE BUILDING. WOOD FORMS WHICH HAVE BEEN USED IN PLACING CONCRETE, IF WITHIN THE GROUND OR BETWEEN FOUNDATION SILLS AND THE GROUND, SHALL BE REMOVED BEFORE A BUILDING IS OCCUPIED OR USED FOR ANY PURPOSE. BEFORE COMPLETION, LOOSE OR CASUAL WOOD SHALL BE REMOVED FROM DIRECT CONTACT WITH THE GROUND UNDER THE BUILDING.

2. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, SLOPES FOR PERMANENT FILL SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT SLOPE). CUT SLOPES FOR PERMANENT EXCAVATIONS SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT SLOPE). DEVIATION FROM THE FOREGOING LIMITATIONS FOR CUT SLOPES SHALL BE PERMITTED ONLY UPON THE PRESENTATION OF A SOIL INVESTIGATION REPORT ACCEPTABLE TO THE BUILDING OFFICIAL.

3. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 3304, NO FILL OR OTHER SURCHARGE LOADS SHALL BE PLACED ADJACENT TO ANY BUILDING OR STRUCTURE UNLESS SUCH BUILDING OR STRUCTURE IS CAPABLE OF WITHSTANDING THE ADDITIONAL LOADS CAUSED BY THE FILL OR SURCHARGE. EXISTING FOOTINGS OR FOUNDATIONS WHICH CAN BE AFFECTED BY ANY EXCAVATION SHALL BE UNDERPINNED ADEQUATELY OR OTHERWISE PROTECTED AGAINST SETTLEMENT AND SHALL BE PROTECTED AGAINST LATER MOVEMENT.

4. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.1, EXCAVATIONS FOR ANY PURPOSE SHALL NOT REMOVE LATERAL SUPPORT FROM ANY FOOTING OR FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOOTING OR FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION.

5. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.3, THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS OR A CONTROLLED LOW-STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED, IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL.

6. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1804.4, THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5-PERCENT SLOPE) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IF PHYSICAL OBSTRUCTIONS OR LOT LINES PROHIBIT 10 FEET OF HORIZONTAL DISTANCE, A 5-PERCENT SLOPE SHALL BE PROVIDED TO AN APPROVED ALTERNATIVE METHOD OF DIVERTING WATER AWAY FROM THE FOUNDATION. SWALES USED FOR THIS PURPOSE SHALL BE SLOPED A MINIMUM OF 2 PERCENT WHERE LOCATED WITHIN 10 FEET OF THE BUILDING FOUNDATION. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING. WHERE CLIMATIC OR SOIL CONDITIONS WARRANT, THE SLOPE OF THE GROUND AWAY FROM THE BUILDING FOUNDATION IS PERMITTED TO BE REDUCED TO NOT LESS THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2-PERCENT SLOPE).

7. ACCORDING TO THE FLORIDA BUILDING CODE SECTION 1803.5.8, WHERE FOOTINGS WILL BEAR ON COMPACTED FILL MATERIAL MORE THAN 12 INCHES IN DEPTH, THE COMPACTED FILL SHALL COMPLY WITH THE PROVISIONS OF AN APPROVED GEOTECHNICAL INVESTIGATION REPORT, WHICH SHALL CONTAIN THE FOLLOWING: (1) SPECIFICATIONS FOR THE PREPARATION OF THE SITE PRIOR TO PLACEMENT OF COMPACTED FILL MATERIAL, (2) SPECIFICATIONS FOR MATERIAL TO BE USED AS COMPACTED FILL, (3) TEST METHOD TO BE USED TO DETERMINE THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT OF THE MATERIAL TO BE USED AS COMPACTED FILL, (4) MAXIMUM ALLOWABLE THICKNESS OF EACH LIFT OF COMPACTED FILL MATERIAL, (5) FIELD TEST METHOD FOR DETERMINING THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL, (6) MINIMUM ACCEPTABLE IN-PLACE DRY DENSITY EXPRESSED AS A PERCENTAGE OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ITEM 3, (7) NUMBER AND FREQUENCY OF FIELD TESTS REQUIRED TO DETERMINE COMPLIANCE WITH ITEM 6. COMPACTED FILL MATERIAL LESS THAN 12 INCHES IN DEPTH NEED NOT COMPLY WITH AN APPROVED REPORT, PROVIDED IT HAS BEEN COMPACTED TO A MINIMUM OF 90 PERCENT MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557.

IMPORTANT NOTES TO CONTRACTOR

1. ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

2. MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

3. ON-SITE FILL IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL PERFORM THEIR OWN CALCULATION OF FILL MATERIAL NEEDED AND CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL VOLUME OF FILL MATERIAL NEEDED PRIOR TO BIDDING THE WORK.

4. DEWATERING IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER PRIOR TO BIDDING THE WORK.

5. ON-SITE BURNING IS NOT ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT.

6. THE SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL THE SITE IS PERMANENTLY STABILIZED.

7. ALL SODDED SLOPES OVER 4 TO 1, SHALL BE INSTALLED WITH SOD PEGS.

8. THE SITE IS IN EVACUATION ZONE "NONE".

9. ANY OFF SITE DISTURBANCE SHALL BE RESTORED TO THE PRE OR BETTER CONDITION.

10. THE OWNER/DEVELOPER WILL PROVIDE COPIES OF THE REQUIRED PERMITS FROM THE RESPECTIVE GOVERNING AGENCIES, PRIOR TO ISSUANCE OF THE SITE DEVELOPMENT PERMIT.

11. ALL WORK WITHIN THE RIGHT-OF-WAY WILL REQUIRE A RIGHT-OF-WAY USE PERMIT.

PAVING AND GRADING NOTES

1. PROPOSED ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON THESE CONSTRUCTION DOCUMENTS.

2. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

3. CURBING SHALL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THESE CONSTRUCTION DOCUMENTS.

4. CONTRACTOR SHALL PROVIDE A 1/2" BITUMINOUS EXPANSION JOINT WITH SEALER AT ABUTMENT OF CONCRETE AND ANY STRUCTURE. EXPANSION JOINT FILLER SHALL CONFORM TO THE SPECIFICATIONS OF ASTM D1751.

5. CONTRACTOR SHALL PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR SHALL REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND MATERIAL TESTING AND SUBMITTING TEST RESULTS TO OWNER'S ENGINEER ON A WEEKLY BASIS. SOIL TESTS ARE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS SITE. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATIONS SIGNED BY THE MATERIAL / GEOTECHNICAL ENGINEER STATING THAT ALL SOIL AND MATERIAL REQUIREMENTS HAVE BEEN MET.

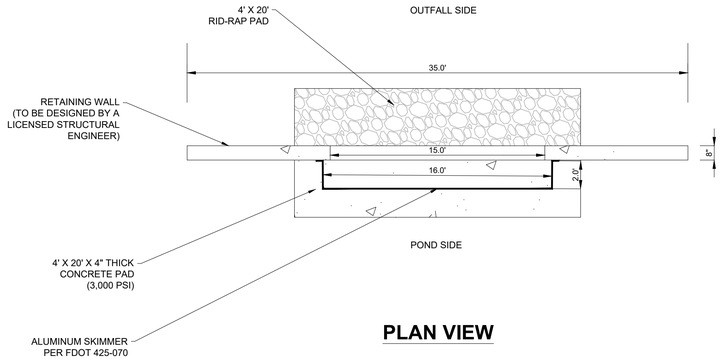
7. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE CONSTRUCTION DOCUMENTS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THIS SITE. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF SAID RETESTING.

8. ALL CURB RAMPS SHALL BE CONSTRUCTED AND TEXTURED PER FDOT INDEX NO. 522-002. THE CONTRACTOR SHALL FINISH ALL EXPOSED BACK OF CURB.

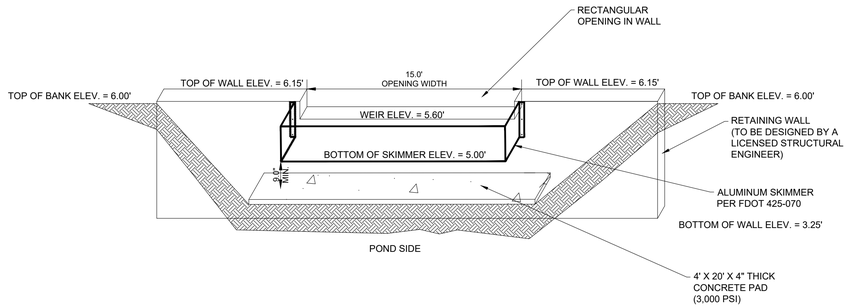
9. PRIOR TO CONSTRUCTION OF CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINTING PATTERN TO THE ENGINEER FOR APPROVAL.

10. ON-SITE PAVEMENT SHALL CONSIST OF 2" ASPHALT (TYPE SP-9.5) ON 6" LIMEROCK BASE OR CRUSHED PORTLAND CEMENT CONCRETE COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

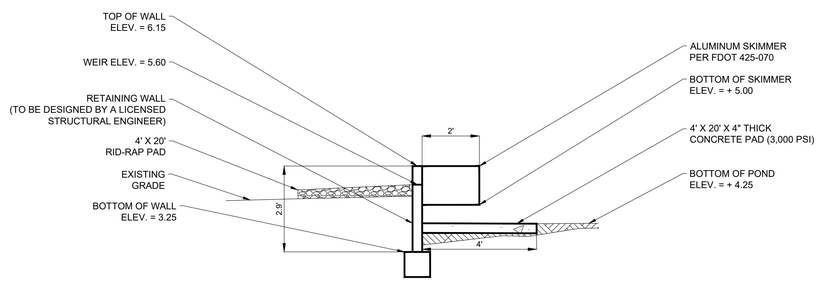
CONTROL STRUCTURE DETAILS



PLAN VIEW



OUTFALL WEIR DETAIL



PROFILE VIEW "F"

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"CALL SUNSHINE"
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THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-08-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: PAVING, GRADING & DRAINAGE NOTES & SCHEDULES

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
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LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.2

NOTES TO CONTRACTOR

1. ASSURE COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DURING CONSTRUCTION.

2. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE EROSION CONTROL MEASURES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AS PROVIDED BY CHAPTERS 40D-4 AND 40D-40 F.A.C. INITIATION OF CIVIL PENALTY PROCEDURES PURSUANT TO SECTION 373.129, F.A.C. CAN RESULT IN A PENALTY NOT TO EXCEED $10,000 PER OFFENSE WITH EACH DATE DURING WHICH SUCH VIOLATION OCCURS CONSTITUTING A SEPARATE OFFENSE.

3. NOTIFY THE OWNER IN WRITING IF OTHER SOURCES OF POLLUTION ARE BEING STORED, OR OTHERWISE USED DURING CONSTRUCTION OF THE PROJECT (E.G; OILS, FUELS, FERTILIZERS, PESTICIDES, OTHER CHEMICALS, ETC). THIS NOTIFICATION SHALL BE ACCOMPANIED WITH THE CONTRACTOR'S DESIGN INCLUDING MEANS AND METHODS TO BE USED TO PREVENT POLLUTION FROM THESE SOURCES.

4. IF RELEASES OF REPORTABLE QUANTITIES OF OIL, COMBUSTIBLES OR HAZARDOUS MATERIAL OCCUR NOTIFY NATIONAL RESPONSE CENTER (800) 424-8802 IMMEDIATELY, NOTIFY PERMITTING AUTHORITY IN WRITING WITHIN 14 DAYS AND MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE DATE OF RELEASE, CIRCUNSTANCES LEADING TO THE RELEASE AND STEPS TAKEN TO PREVENT REOCCURRENCE OF THE RELEASE.

5. INSPECT ALL EROSION CONTROL MEASURES REGULARLY DURING CONSTRUCTION (WEEKLY) AND AFTER EACH RAINFALL AND REPAIR AND/OR REPLACE AS NECESSARY TO MAINTAIN ADEQUATE CONTROL OF EROSION AND SEDIMENTATION FOR THE DURATION OF THE PROJECT.

6. TAKE ALL REASONABLE MEASURES TO ASSURE THAT SEDIMENTED AND/OR POLLUTED STORMWATER IS NOT DISCHARGED FROM THE SITE.

7. USE DETENTION PONDS AS SEDIMENTATION BASINS OR CREATE SEDIMENTATION BASINS AS NEEDED.

8. PREPARE INSPECTION REPORTS SUMMARIZING NAME OF INSPECTOR(S), QUALIFICATIONS OF INSPECTOR(S), MEASURES/AREAS INSPECTED, OBSERVED CONDITIONS AND CHANGES NECESSARY TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

9. NOTIFY THE ENGINEER IN WRITING IF STORMWATER POLLUTION PREVENTION MEASURES ARE INEFFECTIVE AND IF REVISION TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ARE NEEDED.

10.MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY CEASE ON A PORTION OF THE SITE, DATES WHEN CONSTRUCTION ACTIVITIES PERMANENTLY CEASE ON A PORTION OF THE SITE AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ON THE SITE.

11. INITIATE SITE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.

12. MAINTAIN A COPY OF THE CONSTRUCTION PLANS WHICH INCLUDE THE CONSTRUCTION SURFACE WATER MANAGEMENT PLAN (CSWMP) ON SITE.

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP) IN ADDITION TO THOSE PRESENTED ON THESE CONSTRUCTION DOCUMENTS SHALL BE IMPLEMENTED PRIOR TO START OF CONSTRUCTION AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETE TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTY, ROADWAYS AND STREETS, AND SILTATION OF STORM SEWERS, WATERWAYS AND WETLANDS.

2. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.

3. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORM WATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.

4. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SCHEDULED AND PERFORMED SO THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.

5. PERMANENT DETENTION AREA(S) AND/OR TEMPORARY SEDIMENTATION BASIN(S) SHALL BE CONSTRUCTED AS A FIRST STEP IN THE LAND ALTERATION ACTIVITIES AS PART OF THE CONSTRUCTION SURFACE WATER MANAGEMENT PLAN. THE CONTRACTOR SHALL CREATE POSITIVE DRAINAGE FOR DIRECTING ANTICIPATED RUNOFF TO THE SEDIMENTATION BASIN AREA(S). WHEN REQUIRED, DEWATERING SHALL INCLUDE PROVISIONS TO RETAIN AS MUCH WATER ON-SITE AS POSSIBLE.

6. SEDIMENT BASINS, PERIMETER SWALES, SILT FENCES, BERMS, SEDIMENT TRAPS, VEGETATIVE BUFFERS AND OTHER MEASURES INTENDED TO DETAIN SEDIMENT AND/OR PREVENT THE MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING WATER BODIES, SHALL BE INSTALLED, CONSTRUCTED OR, IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION ACTIVITIES. SILTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED AS REQUIRED BY THE ENGINEER TO ENSURE SURFACE WATER QUALITY CONDITIONS ARE IN COMPLIANCE WITH STATE WATER QUALITY STANDARDS.

7. ALL STORMWATER INLETS, ON-SITE AND ADJACENT TO THE PROJECT, SHALL BE PROTECTED USING SEDIMENT TRAPS (I.E. STAKED HAY BALES) AND FILTER FABRIC SHALL BE PLACED BENEATH GRATES WHICH SHALL BE MAINTAINED AND REPLACED DURUNG CONSTRUCTION AS REQUIRED.

8. ALL EXTERIOR SWALES, DITCHES AND CHANNELS SHALL BE SODDED WITHIN (3) DAYS OF EXCAVATION. ALL OTHER INTERIOR SWALES, DITCHES AND CHANNELS INCLUDING DETENTION PONDS WILL BE SODDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

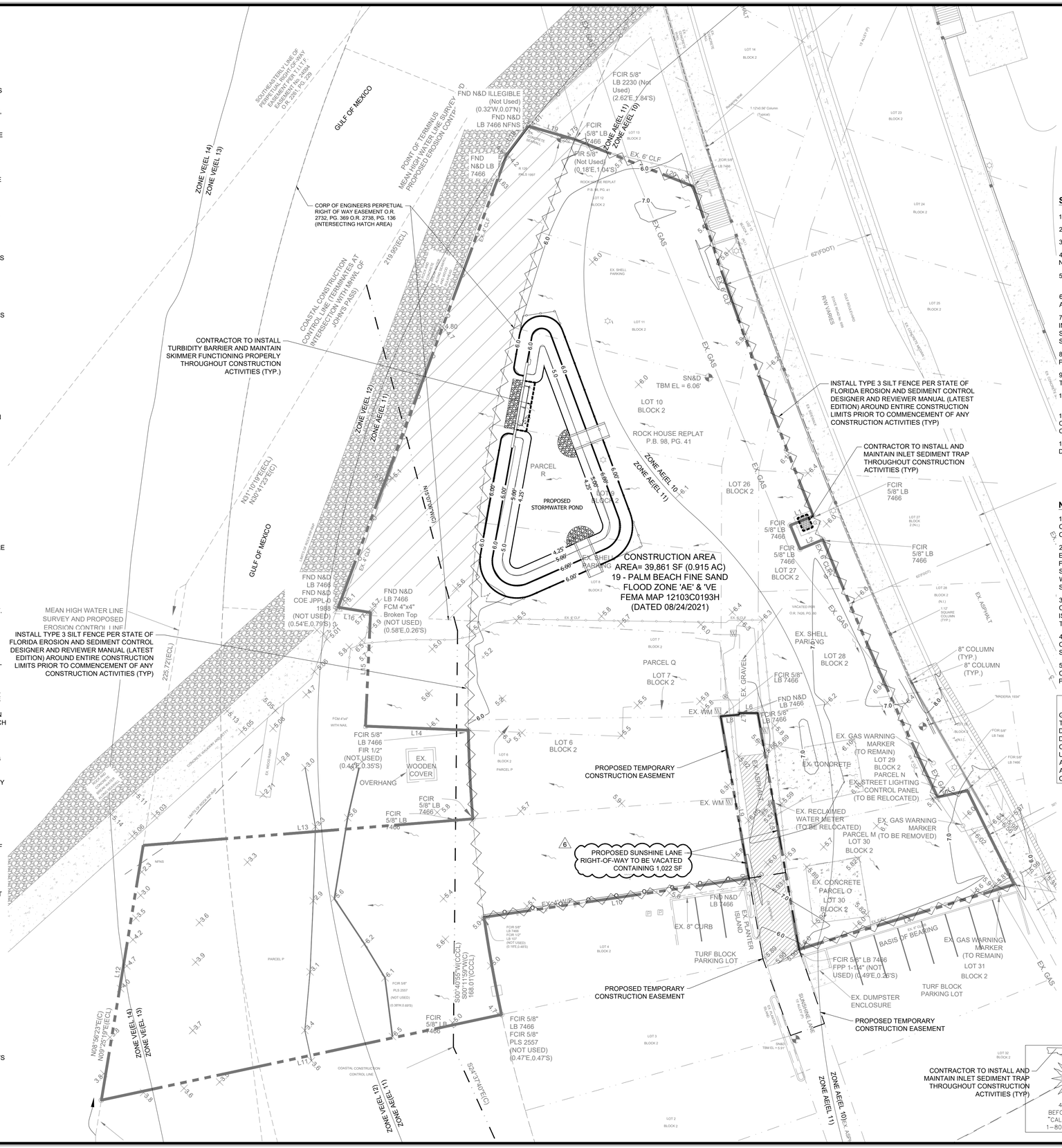
9. FILL MATERIAL STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILED MATERIAL, MAY BE REQUIRED, DEPENDING UPON THEIR LOCATION AND THE LENGTH OF TIME THE STOCKPILES WILL BE KEPT. IN NO CASE SHALL UNSTABILIZED STOCKPILE REMAIN MORE THAN THIRTY (30) DAYS.

10. ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED WEEKLY, ESPECIALLY AFTER EACH RAINFALL AND WILL BE REPAIRED AND/OR REPLACED AS REQUIRED.

11. TEMPORARY SEEDING AND MULCHING MAY BE APPLIED TO COVER BARE SOIL AND TO PREVENT WIND EROSION. SOLID BOARD FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND BLOWN DUST. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING WIND CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION. IRRIGATION WITH WATER UNTIL THE SURFACE IS WET AND REPEATED AS NECESSARY CAN BE USED TO PREVENT WIND EROSION AND CONTROL BLOWN DUST. IF THIS METHOD IS TO BE EMPLOYED, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY GRAVEL ROCK ENTRANCE OR A SOIL TRACKING PREVENTION DEVICE (STPD) TO PREVENT OFFSITE TRACKING OF MUD ONTO LOCAL STREETS.

12. THE CONTRACTOR SHALL REPORT ALL OFF-SITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTUS ABOVE BACKGROUND LEVEL TO AIR AND WATER QUALITY PROTECTION WITHIN 24 HOURS AFTER OCCURRENCE AS PER THE REQUIREMENTS OF THE NPDES PERMIT. NOTIFICATION SHALL INCLUDE CAUSE OF THE PROBLEM, CORRECTIVE ACTIONS TAKEN, AND INSTALLATION OF ADDITIONAL EROSION/SEDIMENT CONTROLS NOT SHOWN ON THE APPROVED CONSTRUCTION PLAN DRAWINGS.

13. WHEN CONSTRUCTION IS COMPLETE, THE PERMANENT DETENTION BASIN SHALL BE REGRADED AND RE-SODDED IN ACCORDANCE TO THE CONSTRUCTION PLANS. ANY SOD PLACED ON SLOPES EXCEEDING 3:1 TO BE ANCHORED BY STAKES, AND/OR ENGINEER'S APPROVED METHOD. PERMANENT DETENTION AREAS SHALL BE TOTALLY CLEANED OUT AND OPERATE PROPERLY AT FINAL INSPECTION AND AT THE END OF THE WARRANTY PERIOD.



GRAPHIC SCALE 1"=20'

40 20 10 0 20

SITE SPECIFIC NOTES

1. EXISTING SOILS: PALM BEACH FINE SAND.

2. ESTIMATED SEASONAL HIGH WATER ELEVATION = 2.5 FT NAVD.

3. STORMWATER BASIN: GULF OF MEXICO.

4. RECEIVING WATER BODY OR STORMWATER COLLECTION SYSTEM: BOCA CIEGA BAY NORTH, WBID: 1694B

5. FLOOD ZONE INFORMATION: ZONE "AE" & "VE". (FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER: 12101C0193H (EFFE. 8/24/2021)

6. APPROXIMATE CONSTRUCTION START DATE: 2/2024.
APPROXIMATE CONSTRUCTION COMPLETION DATE: 5/2024.

7. CONSTRUCTION SEQUENCE IS AS FOLLOWS: COMPLETE EROSION CONTROL INSTALLATION, CLEARING AND GRUBBING, EARTHWORK ACTIVITIES, STORMWATER SYSTEM CONSTRUCTION, BASE AND PAVEMENT CONSTRUCTION, FINAL STABILIZATION.

8. PERMANENT DRAINAGE FOR THE SITE IS PROVIDED IN THE DRY DETENTION POND.

9. CONSTRUCTION AREA: 30,060 SF (0.69 AC)
TOTAL SITE AREA: 61,736 SF (1.417 AC)

10. RUN-OFF CURVE NUMBERS ('CN' AVERAGE):
POST-DEVELOPMENT CONDITION: CN = 85.3

10. THE STORMWATER MANAGEMENT SYSTEM, FOLLOWING COMPLETION OF CONSTRUCTION AND APPROPRIATE AS-BUILT SUBMITTALS AND ENGINEERING CERTIFICATIONS, WILL BE OPERATED AND MAINTAINED BY GREENLEAF CAPITAL, LLC.

11. THE POTENTIAL SOURCE OF POLLUTION FROM THIS PROJECT IS SOIL EROSION DURING CONSTRUCTION ACTIVITIES.

NOTES TO OWNER

1. ASSURE THAT ALL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND BE MAINTAINED THROUGH CONSTRUCTION.

2. PRIOR TO CONSTRUCTION SIGN AND SUBMIT A NOTICE OF INTENT FORM TO THE ENVIRONMENTAL PROTECTION AGENCY AS PERMITTEE AND OPERATOR OF THIS FACILITY, ALONG WITH A NARRATIVE STATEMENT CERTIFYING THAT THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PROVIDES COMPLIANCE WITH APPROVED STATE OF FLORIDA ISSUED PERMITS, EROSION AND SEDIMENTATION CONTROL PLANS AND STORMWATER MANAGEMENT PLANS.

3. SUBMIT TO THE ENVIRONMENTAL PROTECTION AGENCY, ALONG WITH THE ABOVE CERTIFICATION, A COPY OF THE COVER PAGE OF THE STATE OF FLORIDA PERMIT ISSUED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION AND/OR THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD).

4. SUBMIT TO THE ENVIRONMENTAL PROTECTION AGENCY A COPY OF THE NOTICE OF INTENT TO THE APPLICABLE OPERATOR OF THE MUNICIPAL SEPARATE STORMWATER SYSTEM.

5. SIGN AND SUBMIT A NOTICE OF TERMINATION FORM UPON COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION OF THE SITE TO THE ENVIRONMENTAL PROTECTION AGENCY AND ALL APPLICABLE GOVERNMENTAL ENTITIES.

DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED EROSION CONTROL
- ST — PROPOSED STORM SEWER LINE
- EX. ST — EXISTING STORM SEWER LINE
- PROPOSED GRATE INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.
N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

No.	BY	DATE	REVISIONS
6	ED	5-1-24	PER CITY OF TREASURE ISLAND

PROJECT No: 22-008-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: STORMWATER POLLUTION PREVENTION PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
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Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.3

NOTES TO CONTRACTOR

1. FEDERAL LAW PROHIBITS THE POINT SOURCE DISCHARGE OF POLLUTANTS, INCLUDING THE DISCHARGE OF STORMWATER ASSOCIATED WITH LARGE OR SMALL CONSTRUCTION ACTIVITIES TO WATER OF THE UNITED STATES WITHOUT A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. UNDER THE STATE OF FLORIDA'S AUTHORITY TO ADMINISTER THE NPDS STORMWATER PROGRAM, OPERATORS THAT HAVE STORMWATER DISCHARGE ASSOCIATED WITH LARGE OR SMALL CONSTRUCTION ACTIVITIES TO SURFACE WATERS OF THE STATE, INCLUDING THROUGH A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4), MUST OBTAIN COVERAGE EITHER UNDER THE GENERIC PERMIT OR AN INDIVIDUAL PERMIT.
2. THERE A SPECIFIC ELIGIBILITY CRITERIA AND LIMITATIONS ON COVERAGE THAT CAN BE REVIEWED IN THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES DATED MAY 2003 (HENCEFORTH REFERRED TO AS "THE GENERIC PERMIT"). ACTIVITIES SPECIFICALLY DESCRIBED IN THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ARE COVERED. ANY ACTIVITY NOT SPECIFICALLY DISCUSSED IN THIS SWPPP MAY NOT BE COVERED AND SHOULD IMMEDIATELY BE INDENTIFY TO THE TO THE SIGNATURE AUTHORITY (OWNER AND GENERAL CONTRACTOR) ON THE POSTED NOTICE OF INTENT (NOI).
3. OPERATOR SEEKING COVERAGE UNDER THIS GENERIC PERMIT TO AUTHORIZE STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR NEW LARGE OR SMALL CONSTRUCTION ACTIVITIES SHALL FILE AN NOI FOR COVERAGE UNDER THIS PERMIT AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION. SHOULD THE OPERATOR CHANGE DURING CONSTRUCTION, THE NEW OPERATOR SHALL FILE AN NOI FOR COVERAGE UNDER THIS PERMIT AT LEAST TWO (2) DAYS BEFORE ASSUMING CONTROL OF THE PROJECT AND THE PREVIOUS OPERATOR SHALL FILE A NOTICE OF TERMINATION (NOT) TO TERMINATE PERMIT COVERAGE.
4. A COPY OF THE NOI CONFIRMING COVERAGE UNDER THIS GENERIC PERMIT SHALL BE POSTED AT THE CONSTRUCTION SITE IN A PROMINENT PLACE FOR PUBLIC VIEWING.
5. THE PERIOD OF COVERAGE UNDER THIS GENERIC PERMIT IS EFFECTIVE TWO (2) DAYS AFTER THE DATE OF SUBMITTAL OF THE COMPLETE NOI TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). COVERAGE UNDER THIS GENERIC PERMIT IS LIMITED TO A TERM NOT TO EXCEED FIVE (5) YEARS FROM THE EFFECTIVE DATE OF COVERAGE.
6. EXCEPT AS NOTED IN THE GENERIC PERMIT, ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY AND DISCHARGES OF MATERIAL OTHER THAN STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IN COMPLIANCE WITH AN FDEP PERMIT (OTHER THAN THIS PERMIT) ISSUED FOR THE DISCHARGE OR BE EXEMPT FROM PERMITTING.
7. THE FOLLOWING NON-STORMWATER DISCHARGES MAY BE AUTHORIZED BY THIS PERMIT PROVIDED THE NON-STORMWATER COMPONENT OF THE DISCHARGE IS IN COMPLIANCE WITH THE GENERIC PERMIT AND THE DISCHARGE ACTIVITIES ARE LISTED AND DESCRIBED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PROVIDED BELOW: DISCHARGES FORM FIRE FIGHTING ACTIVITIES, FIRE HYDRANT FLUSHING, WATERS USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES (WASHWATERS FORM A MORE THOROUGH CLEANING, INCLUDING THE USE OF DETERGENTS OR OTHER CLEANERS, IS NOT AUTHORIZED BY THIS PERMIT) OR CONTROL DUST, POTABLE WATER SORCES INCLUDING WATERLINE FLUSHING, IRRIGATION DRAINAGE. ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT US DETERGENTS, PAVEMENT WASTEWATER WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED, AIR CONDITIONING CONDENSATE, SPRINGS, AND FOUNDATIONS OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
8. DISCHARGES RESULTING FROM GROUND WATER DEWATERING ACTIVITIES AT CONSTRUCTION SITES ARE NOT COVERED BY THIS PERMIT. APPLICANTS FOR THESE DISCHARGES MUST OBTAIN COVERAGE UNDER FDPE'S GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY.
9. THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL IN THE STORMWATER DISCHARGE(S) FROM A FACILITY OR ACTIVITY SHALL BE PREVENTED OR MINIMIZED IN ACCORDANCE WITH THE APLICABLE STORMWATER POLLUTION PREVENTION PLAN FOR THE FACILITY OR ACTIVITY. THIS PERMIT DOES NOT RELIEVE THE OPERATOR OF THE REPORTING REQUIREMENTS OF 40 CFR PART 117 AND 40 CFR PART 302. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302, OCCURS DURING A 24 HOUR PERIOD:
   A. THE OPERATOR IS REQUIRED TO NOTIFY THE STATE WARNING POINT AT (800) 320-0519 OR (850) 413-9911 AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE;
   B. THE OPERATOR SHALL SUBMIT WITHIN 14 CALENDAR DAYS OF KNOWLEDGE OF THE RELEASE A WRITTEN DESCRIPTION OF: THE RELEASE INCLUDING THE TYPE AND ESTIMATE OF THE AMOUNT OF MATERIAL RELEASED), THE DATE THAT SUCH RELEASE OCURRED, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND REMEDIAL STEPS TO BE TAKEN, TO FDEP, NPDES STORMWATER SECTION, MAIL STATION 2500, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400.
   C. THE SWPPP BELOW MUST BE MODIFIED WITHIN 14 CALENDAR DAYS OF THE KNOWLEDGE OF THE RELEASE TO: PROVIDE A DESCRIPTION OF THE RELEASE, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF THE RELEASE. IN ADDITION, THE PLAN MUST BE REVIEWED TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES, AND THE PLAN MUST BE MODIFIED WHERE APPROPRIATE.
9. THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ON-SITE SPILL.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

1. A STORMWATER POLLUTION PREVENTION PLAN SHALL BE DEVELOPED AND IMPLEMENTED FOR EACH CONSTRUCTION SITE COVERED BY THIS PERMIT. THE PLAN SHALL IDENTIFY POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY. IN ADDITION, THE PLAN SHALL DESCRIBE AND ENSURE THE IMPLEMENTATION OF BEST MANAGEMENT PRACTICES WHICH WILL BE USED TO REDUCE THE POLLUTANTS IN STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY AND TO ASSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. FACILITIES MUST IMPLEMENT THE PROVISIONS OF THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED UNDER THIS PART AS A CONDITION OF THIS PERMIT. FAILURE TO DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THIS PART SHALL BE DEEMED A VIOLATION OF THIS PERMIT AND MAY RESULT IN ENFORCEMENT ACTION.
2. THE PERMITTEE SHALL AMEND THE PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OF THE STATE OR AN MS4, INCLUDING THE ADDITION OF OR CHANGE IN LOCATION OF STORMWATER DISCHARGE POINTS, AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN. THE PERMITTEE ALSO SHALL AMEND THE PLAN IF IT PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM SOURCES IDENTIFIED IN THE GENERIC PERMIT OR IN OTHERWISE ACHIEVING THE GENERAL OBJETIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY. IN ADDITION, THE PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW CONTRACTOR AND/OR SUBCONTRACTOR THAT WILL IMPLEMENT A MEASURE OF THIS SWPPP.AMENDMENTS TO THE PLAN SHALL BE PREPARED, SIGNED, DATED, AND KEPT AS ATTACHMENTS TO THE ORIGINAL PLAN. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN WILL ENSURE COMPLIANCE WITH ALL PROCEDURES OUTLINED IN THIS PLAN.

STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM

INSPECTION MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVEN THAT IS 0.50 INCHES OR GREATER

PROJECT NAME _____ FDEP NPDES STORMWATER IDENTIFICATION NUMBER: _____

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED / MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION / OTHER REMARKS

CONDITION CODE:
G = GOOD
C = NEEDS TO BE CLEANED
M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON
O = OTHER
P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT

LOCATION			
1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVERSION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
7. SUBSURFACE DRAIN	16. CURB AND GUTTER	25. HAY BALES	34. OTHER
8. PIPE SLOPE DRAIN	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OULET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME _____ QUALIFICATION _____ DATE _____

THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED UPON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING.

_____ _____
NAME (RESPONSIBLE AUTHORITY) DATE

SEQUENCE OF MAJOR ACTIVITY	RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR	START DATE
A. INSTALL TEMPORALY PERIMETER EROSION AND SEDIMENT CONTROL - SILT FENCE		
B. INSTALL STABILIZED CONSTRUCTION ENTRANCE		
C. SELECTIVELY CLEAR & GRUB SITE WITHIN SILT FENCE		
D. PILE AND REMOVE EXCESS TOP SOIL		
E. EXCAVATE STORMWATER MANAGEMENT POND		
F. STABILIZE DENUDED AREAS AND STOCKPILES WITH 14 CALENDAR DAYS OF LAST CONSTRUCTION ACTIVITY IN A SPECIFIC AREA		
G. INSTALL STORMWATER MANAGEMENT SYSTEM ALONG WITH TEMPORARY DRAIN SEDIMENT CONTROL		
H. ADD FILL, GRADE AND STABILIZE AREA UNDER BUILDING FOOTPRINTS AND PAVEMENT.		
I. CONSTRUCT BUILDINGS		
J. INSTALL UTILITIES		
K. INSTALL CURBING AND GUTTERS		
L. INSTALL IRRIGATION SYSTEM		
M. COMPLETE FINAL GRADING AND INSTALL LAST OF SOD AND PLANTINGS		
N. COMPLETE PAVING (IF APPLICABLE)		
O. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL, RE-GRADE AND RE-SOD ANY AREAS DISTURBED BY REMOVAL ACTIVITIES		

CONTROLS

EROSION AND SEDIMENT CONTROLS - STABILIZATION

1. TEMPORARY STABILIZATION - SOIL AND BASE MATERIALS STAGED, STOCKPILED, OR STORED ON-SITE ALONG WITH ANY DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH TEMPORARY SEED AND STRAW MULCH NOT LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED SHALL BE APPLIED AT A RATE TO ENSURE APPROPRIATE COVERAGE TO PREVENT EROSION. FERTILIZATION WILL BE PROVIDED PRIOR TO SEEDING. AFTER SEEDING, STRAW MULCH OR MATTING MATERIAL WILL BE APPLIED IN ORDER TO PREVENT EROSION AND HOLD THE SEED UNTIL IT GERMINATES AND IS ESTABLISHED. APPLICATION RATES AND THE CHOICES OF STRAW OR MATTING IS SLOPE DEPENDENT, SUB-BASE AND BASE MATERIALS WILL BE APPLIED TO PAVED AREAS AND COMPACTED TO TEMPORARILY STABILIZE THEM UNTIL PAVEMENT IS APPLIED. TEMPORARY STABILIZATION STRUCTURES AND MATERIALS WILL BE MAINTAINED UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE.
2. PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH SOD OR OTHER GROUND COVER AS DESCRIBED IN THE LANDSCAPE PLANS NOT LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY THE SOD AND OTHER PLANTINGS SHALL BE MAINTAINED IN A MANNER TO PRESERVE AND MAINTAIN HEALTHY GROWTH.

STRUCTURAL PRACTICES

1. THE SILT FENCE SURROUNDING THE CONSTRUCTION SITE WILL BE THE PRIMARY METHOD TO CONTROL THE QUALITY OF RUNOFF UNTIL THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS INSTALLED AND OPERATIONAL. TEMPORARY SILT BARRIERS USING EITHER HAY BALES OR SUPPLIER SPECIFIC ATTACHMENTS MAY BE INSTALLED TO PROTECT THE NEWLY INSTALLED STORMWATER MANAGEMENT SYSTEM UNTIL THE DRAINAGE AREAS ARE STABILIZED. THE CONTRACTOR WILL PROTECT ALL STORMWATER INLETS WITHIN AFFECTED AREAS TO PREVENT SILT OR SEDIMENT FROM ENTERING THE PUBLIC STORWATER MANAGEMENT SYSTEM. THIS CAN BE ACCOMPLISHED THROUGH SEVERAL COMMONLY ACCEPTED PRACTICES SUCH AS SAND BAGS, INFILTRATION PIPE WRAPPED IN GEOTEXTILE, ETC.

2. SEDIMENT BASINS ARE NOT REQUIRED FOR SITES UNDER 10 ACRES BUT ARE RECOMMENDED DEPENDING UPON THE EXPECTED PRECIPITATION DURING THE CONSTRUCTION PERIOD. SEDIMENT BASINS OR TRAPS SHOULD NOT BE CONSTRUCTED IN THE STORMWATER MANAGEMENT POND AREAS UNLESS ACCUMULATED SEDIMENT AND SILT ARE REMOVED FROM THE SITE ONCE CONSTRUCTION IS COMPLETE AND AS LONG AS THE CONSTRUCTION EQUIPMENT REMOVING THE ACCUMULATED SEDIMENT AND SILT WILL NOT EXCESSIVELY COMPACT THE AREA WITHIN THE POND HINDERING INFILTRATION OF THE SOILS.

CONTROLS FOR OTHER POTENTIAL POLLUTANTS

1. WASTE MATERIALS - ALL WASTE MATERIALS WILL BE COLLECTED AND STORED SECURELY IN DUMPSTERS. SEPARATE DUMPSTERS WILL BE MAINTAINED FOR COMMON TRASH AND CONSTRUCTION DEBRIS IN THAT THESE ARE DISPOSED OF AT DIFFERENT LOCATIONS. COMMON TRASH WILL BE CONNECTED AND STORED IN A LIDDED DUMPSTER TO PREVENT WIND BLOWN DISTRIBUTION AND ACCESS BY VECTORS OR ANIMALS. THE DUMPSTERS WILL MEET LOCAL GOVERNING AGENCY'S SOLID WASTE REGULATIONS AND WILL BE DUMPED A MINIMUN OF ONCE A WEEK OR MORE OFTEN AS REQUIRED. NO WASTE MATERIALS WILL BE BURIED ON- SITE. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER WASTE HANDLING AND DISPOSAL PROCEDURES.
2. HAZARDOUS WASTE - ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY THE LOCAL GOVERNING AGENCY, THE STATE OF FLORIDA, FEDERAL GOVERMENT, OR BY THE MANUFACTURER, SITE PERSONNEL WILL BE INSTRUCTED IN THE PRACTICES.
3. SANITARY WASTE - ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS A MINIMUN OF THREE TIMES PER WEEK BY _____COMPANY, LICENSED IN GOVERNING JURISDICTION AS A SANITARY WASTE MANAGEMENT CONTRACTOR.

OFF-SITE VEHICLE TRACKING AND DUST CONTROL

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED AND MAINTAINED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ALL STREETS WITH CONSTRUCTION ENTRANCES WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN. BASED UPON SITE CONDITIONS, WATER WILL BE SPRAYED BY MECHANICAL MEANS TO CONTROL FUGITIVE DUST EMISSIONS PREVENTING THEM FROM LEAVING THE CONSTRUCTION SITE.

MAINTENANCE / INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES.
THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS OF THE END OF ANY STORM EVENT OF 0.5 INCHES OR GREATER AS FOLLOWS: DISTURBED AREA AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE STORMWATER SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS OR POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT MEASURES ARE EFFECTIVE IN PREVENTING OR MINIMIZING THE DISCHARGE OF POLLUTANTS INCLUDING RETAINING SEDIMENT ON-SITE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF THE REPORT AND SHALL BE COMPLETE WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.
3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
4. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
5. THE SEDIMENT BASIN WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
6. ANY DIVERSION DIKE WILL BE INSPECTED AND BREACHES PROMPTLY REPAIRED.
7. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
8. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTION IS SHOWN ON THIS SHEET.
9. THE GENERAL CONTRACTOR'S ON-SITE FOREMAN WILL SELECT THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
10. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING THROUGH THE GENERAL CONTRACTOR. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON-SITE IN GOOD WORKING ORDER.
11. A QUALIFIED INSPECTOR IS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS A PERSON THAS HAS SUCCESSFULLY COMPLETED AND MET ALL REQUIREMENTS NECESSARY TO BE FULLY CERTIFIED THROUGH THE FDEP STORMWATER, EROSION, AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM; HAS SUCCESFULLY COMPLETED AN EQUIVALENT FORMAL TRAINING OR PRACTICAL EXPERIENCE IN THE FILED OF STORMWATER POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL.

RETENTION OF RECORDS

1. THE PERMITTEE OWNER SHALLL RETAIN COPIES OF THE STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.
2. THE PERMITTEE GENERAL CONTRACTOR SHALL RETAIN A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN AND ALL REPORTS, RECORDS AND DOCUMENTS REQUIRED BY THIS PERMIT AT THE CONSTRUCTION SITE, OR AN APPROPRIATE ALTERNATIVE LOCATION AS SPECIFIED IN THE NOI, FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION. ALL OF THESE RECORDS, DOCUMENTS, ETC. WILL BE PRESENTED TO THE OWNER TO BE RETAINED FOR THE PERIOD SPECIFIED ABOVE.

NON-STORMWATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD. AL NON-STORMWATER DISCHARGES WILL BE DIRECTED INTO A SEDIMENT BASIN PRIOR TO DISCHARGE IF THE DISCHARGE IS NOT CAPTURED BY THE SILT FENCE PRIOR TO CONSTRUCTION OF THE ON-SITE STORMWATER MANAGEMENT SYSTEM OR ENTERS THE ON-SITE STORMWATER MANAGEMENT SYSTEM.

1. WATER FORM WATER LINE FLUSHING.
2. PAVEMENT WASH WATERS WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCURRED.
3. UNCONTAMINATED GROUNDWATER FROM DE-WATERING EXCAVATION.
4. WATER FROM HIRE FIGHTING ACTIVITIES.

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

HOUSEKEEPING PRACTICES

THE FOLLOWING HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON-SITE DURING THE CONSTRUCTION PROJECT:

1. AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
2. ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND , IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
4. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
5. WHENEVER POSSIBLE, ALL OF PRODUCT WILL BE USED BEFORE DISPOSING OF THE CONTAINER.
6. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
7. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

HAZARDOUS PRODUCTS

THESE SERVICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:

1. PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY CANNOT BE RESEALED.
2. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
3. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL/STATE/FEDERAL RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

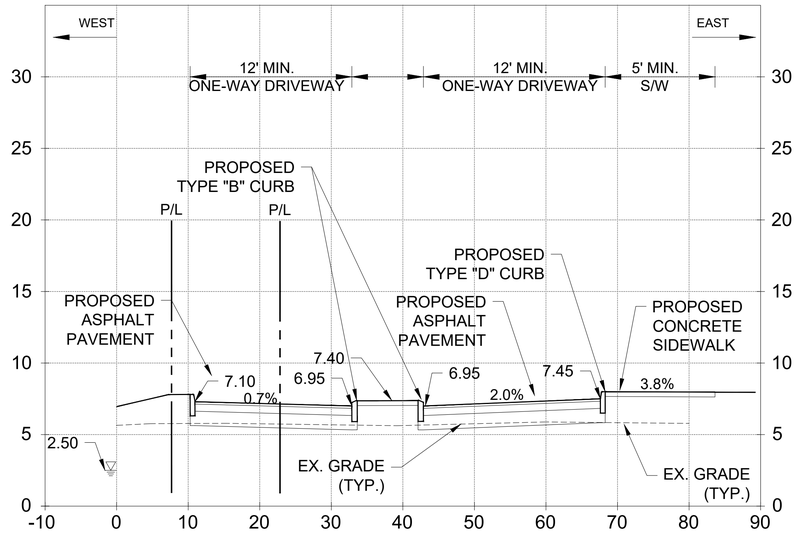
PETROLEUM PRODUCTS - ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE WILL BE APPLIED TO THE MANUFACTURER'S RECOMMENDATIONS.
FERTILIZE - FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
PAINTS - ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORE WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO ON-SITE OR COUNTY STORMWATER MANAGEMENT SYTEMS, BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR LOCAL, STATE, FEDERAL REGULATIONS.
CONCRETE TRUCKS - CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISPOSE OF SURPLUS CONCRETE OR DRUM WASH WATER ON THIS SITE.

SPILL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION CLEANUP:

1. MANUFACTURE'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, SHOVELS, RAGS, GLOVES, KITTY LITTER,SAND,SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
3. ALL SPILLS WILL BE CLEANED UP AFTER DISCOVERY.
4. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
5. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE STATE WARNING POINT AS EARLIER DESCRIBED REGARDLESS OF SIZE.
6. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
7. THE GENERAL CONTRACTOR'S ON-SITE PROJECT FOREMAN RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE PROJECT FOREMAN WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF THE RESPONSIBLE SPIL

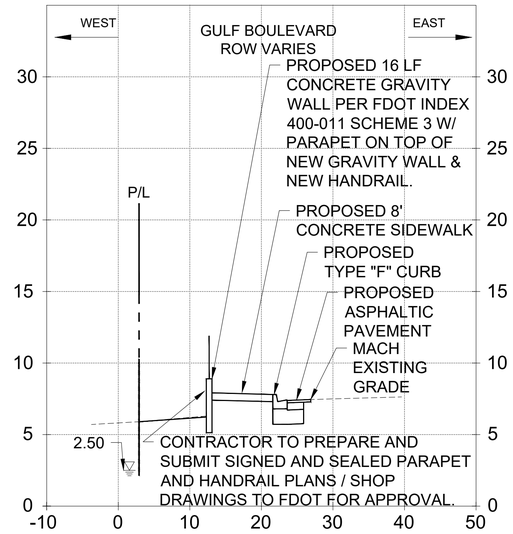
SECTION A-A



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

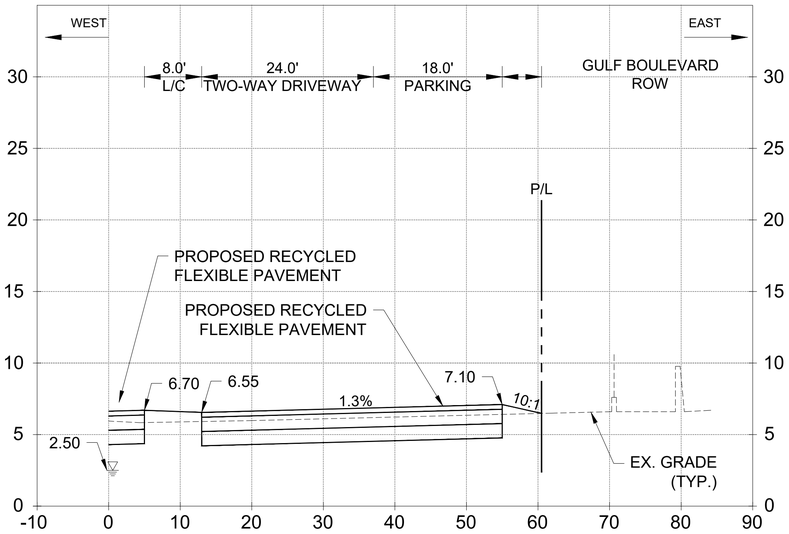
3 4 5

SECTION B-B



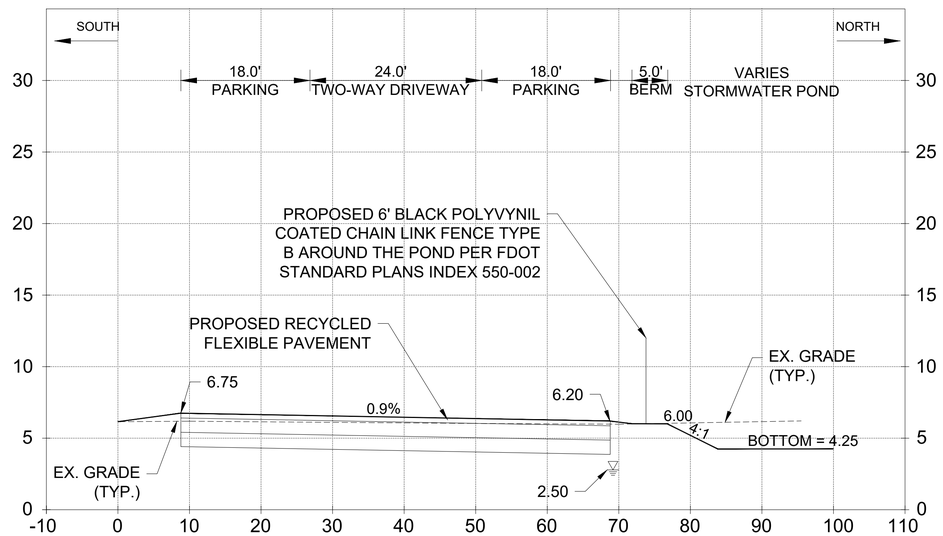
HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION C-C



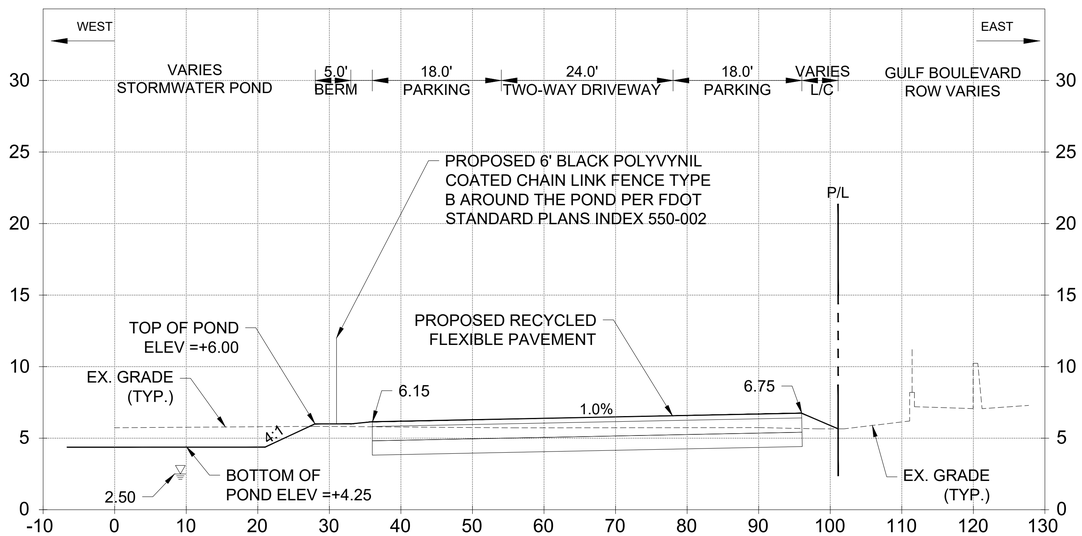
HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION D-D



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

SECTION E-E



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING & DRAINAGE PLAN SHEET C-5.1)

48 HOURS BEFORE YOU DIG "CALL SUNSHINE" 1-800-432-4770

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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No.	BY	DATE	DESCRIPTION
5	ED	1-11-24	PER FDOT
4	ED	10-20-23	PER FDOT
3	ED	2-6-23	PER FDOT

REVISIONS

PROJECT No: 22-008-HDI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

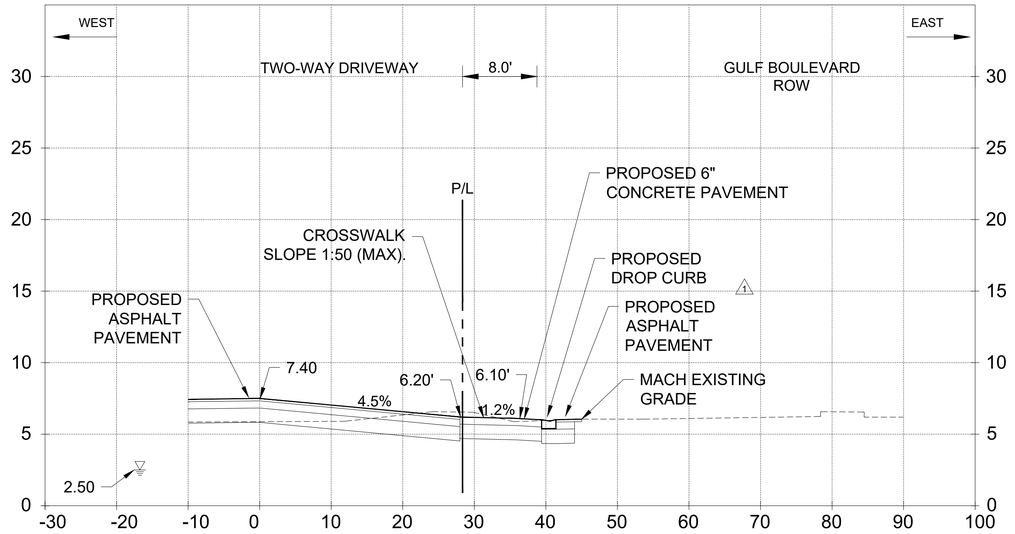
CONTENT: CROSS SECTIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

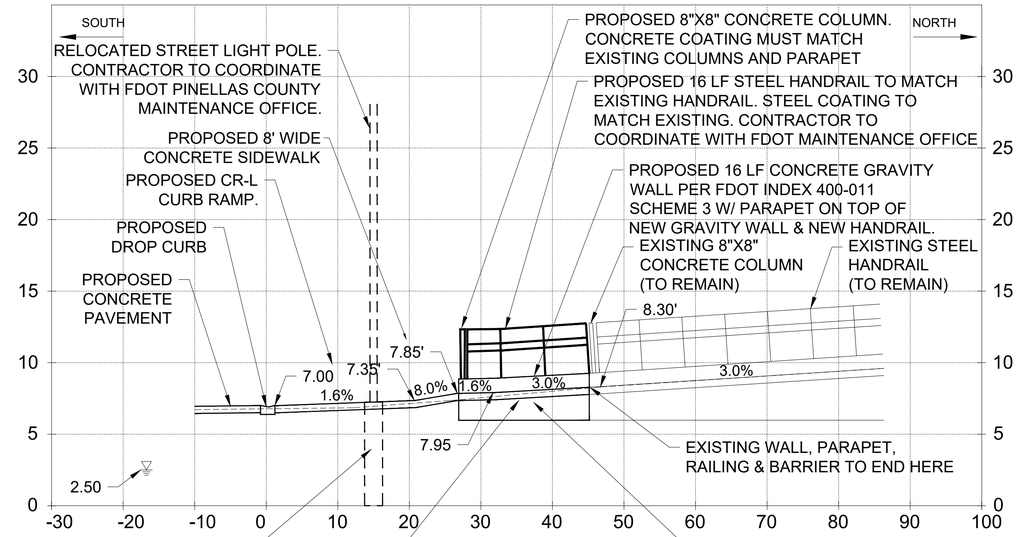
SHEET: C-5.5

SECTION G-G



HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING
& DRAINAGE PLAN SHEET C-5.1)

SECTION H-H



PROPOSED 2'-6" Ø CONCRETE
FOUNDATION & POLE BASE.
REFER TO FDOT STANDARD
PLANS INDEX 715-002 (4).

CONTRACTOR TO PREPARE AND
SUBMIT SIGNED AND SEALED PARAPET
AND HANDRAIL PLANS / SHOP
DRAWINGS TO FDOT FOR APPROVAL.

HORIZONTAL SCALE 1" = 10'
VERTICAL SCALE 1" = 5'
(REFER TO MASTER PAVING, GRADING
& DRAINAGE PLAN SHEET C-5.1)

CONCRETE COATING MUST MATCH
EXISTING BARRIER. CONTRACTOR TO
COORDINATE WITH FDOT PINELLAS
COUNTY MAINTENANCE OFFICE

No.	DATE	DESCRIPTION
6	ED	1-11-24	PER FDOT
5	ED	10-20-23	PER FDOT
4	ED	2-6-23	PER FDOT
3	ED	9-23-22	PER FDOT
2	ED	8/1/2022	REVISIONS

PROJECT No: 22-008-HSI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: CROSS SECTIONS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
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5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.6

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1-800-432-4770

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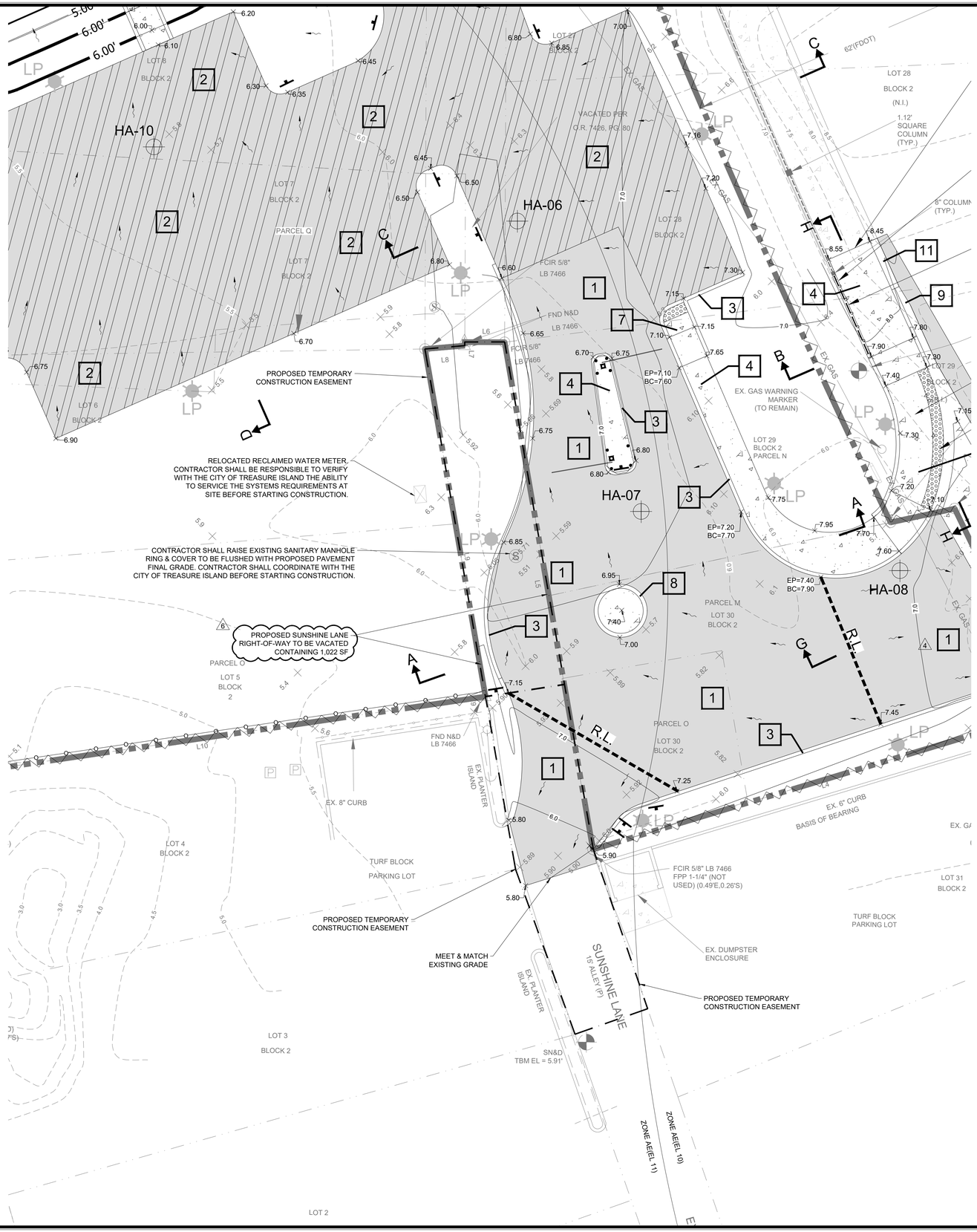
FEMA FLOOD ZONE: "AE" BFE (10' & 11') AND "VE" (BFE 12')
FEMA MAP NO.: 12101C0193H (EFFE. 8/24/2021)
BASIN NAME: DIRECTLY GULF OF MEXICO
WATER BODY NAME: BOCA CIEGA (NORTH)
WBID: 1694B

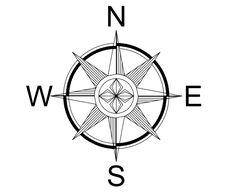
DEWATERING NOTE

GROUND WATER IS PRESENT ON THIS SITE. DEWATERING IS ANTICIPATED FOR THE CONSTRUCTION OF THIS PROJECT AND CONTRACTOR'S BID SHALL INCLUDE DEWATERING. EARTHWORK AND GRADING REQUIRES ADEQUATE SURFACE DRAINAGE AND GROUND WATER MANAGEMENT TO PREVENT SOIL EROSION AND CONTROL MOISTURE OF SOILS. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THIS INFORMATION AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL DEPTH OF THE GROUND WATER AND TO SELECT THE ALLOWED METHOD OF DEWATERING PRIOR TO BIDDING THE WORK.

MANAGEMENT OF TRAFFIC NOTE TO CONTRACTOR

CONTRACTOR TO DESIGN MANAGEMENT OF TRAFFIC (M.O.T.) TO BE UTILIZED WHILE WORKING WITHIN GULF BOULEVARD STATE ROAD No. 699 RIGHT-OF-WAY PER STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM INDEX 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND SHOULDER, INDEX 102-602 - TWO LANE AND MULTILANE, WORK ON SHOULDER, 102-613 - MULTILANE ROADWAY, LANE CLOSURES, INDEX 102-660 SIDEWALK CLOSURE, INDEX 102-661 - BICYCLE FACILITY CLOSURES. (LANE CLOSURES SHALL NOT OCCUR DURING THE PEAK HOUR PERIODS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM.) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND EASILY ACCESSIBLE PAVED OR UNPAVED PATHWAY FOR PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE FOR THE DURATION OF THE CONSTRUCTION PROJECT. IF THE PATHWAY LIES ALONG A DESIGNATED SCHOOL WALKING ROUTE, THE CONTRACTOR MUST PROVIDE ADEQUATE SUPERVISION AND/OR GUIDANCE TO THE SCHOOL AGED STUDENTS AS THEY TRAVERSE THROUGH THE WORK ZONE.





TAG LEGEND	
ITEM	DESCRIPTION
1	CONST. ± 6,531 S.F. OF ASPHALT PAVEMENT AND BASE. SEE TYPICAL SECTION SHEET C-7.1.
2	CONST. ± 14,090 S.F. OF COMPACTED RECYCLED ASPHALTIC CONCRETE COURSE. SEE TYPICAL SECTION SHEET C-7.1..
3	CONST. ± 437 LF OF TYPE 'D' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
4	CONST. ± 1,550 S.F. CONCRETE SIDEWALK, MINIMUM 4" THICK, CLASS I, NON-STRUCTURAL, 3,000 PSI WITH FIBER MESH MATERIAL. CROSS SLOPE 1:50 (MAX).
5	CROSSWALK / ACCESSIBLE ROUTE RUNNING SLOPE 1:20 (MAX), CROSS SLOPE 1:50 (MAX).
6	SLOPES WITHIN AREA DESIGNATED FOR PARKING DISABLED PERMIT ONLY SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS.
7	CONST. CONCRETE CURB RAMP WITH DETECTABLE WARNING SURFACE RED COLOR PER FDOT INDEX 522-002, LATEST EDITION.
8	CONST. ± 32 LF OF TYPE 'B' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
9	CONST. ± 52 LF OF TYPE 'F' CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
10	CONST. ± 82 LF OF DROP CURB CONCRETE CURB PER FDOT STANDARD INDEX 520-001, LATEST EDITION.
11	PROPOSED ± 10.0 FT BARRIER WALL AND TRANSITION PER FDOT INDEX 521-001. CONCRETE COATING TO MATCH EXISTING.

NPDES NOTIFICATION

(NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)
ATTENTION: FAILURE TO MAINTAIN EROSION AND/OR SEDIMENTATION CONTROLS, OR AN ILLICIT DISCHARGE RESULTING FROM THEIR FAILURE WILL LIKELY RESULT FINE CITATIONS. SECTION 403.0885 OF THE FLORIDA STATUES AUTHORIZES PENALTIES OF UP TO $10,000.00 FOR EACH OFFENSE.

LEGEND

- EXISTING PROPERTY LINE
- 5.9 EXISTING ELEVATION
- 7.50 PROPOSED SINGLE ELEVATION
- FLOW DIRECTION
- PROPOSED EROSION CONTROL
- R.L. PROPOSED RIDGE LINE
- ST PROPOSED STORM SEWER LINE
- B-4 APPROXIMATE LOCATION OF BORING
- EX. ST EXISTING STORM SEWER LINE
- PROPOSED CONCRETE PAVEMENT / PAD / SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED RECYCLED ASPHALT FLEXIBLE PAVEMENT
- PROPOSED CURB INLET PROTECTION

ALL EXISTING AND PROPOSED ELEVATIONS ARE REFERENCED FROM NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.
N.G.V.D. 1929 = 0.86 FT + N.A.V.D. 1988

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58626 FL Registration No. | BRAULIO GRAJALES Professional Engineer | Sign Date

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No.	BY	DATE	DESCRIPTION
6	ED	5-1-24	PER CITY OF TRASURE ISLAND

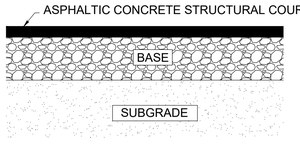
PROJECT No: 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: ROW PAVING, GRADING & DRAINAGE PLAN

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-5.7

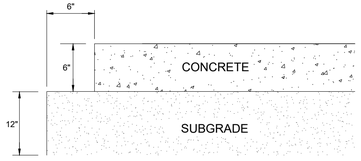


NOTES:

ASPHALT	2" TYPE SP-9.5 ASPHALTIC CONCRETE STRUCTURAL COURSE FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD
BASE	6" LIMEROCK (LBR 100) OR CRUSHED PORTLAND CEMENT CONCRETE (LBR 150) BASE FROM FDOT APPROVED SOURCES AND MEETING ALL THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS SECTION 204 COMPACTED TO 100% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

ON-SITE FLEXIBLE PAVEMENT SECTION

N.T.S.



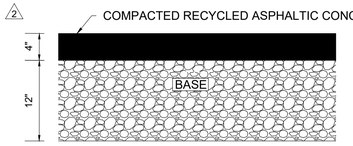
NOTES:

CONCRETE	6" THICK PORTLAND CEMENT CONCRETE SURFACE COURSE (F'c=4,000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS) W 6X6/10X10 WELDED WIRE MESH REINFORCEMENT
	MAXIMUM SPACING BETWEEN JOINTS SHALL BE 12 FEET
	MINIMUM CONTRACTION JOINT DEPTH SHALL BE ONE-FORTH (1/4) OF THE PAVEMENT THICKNESS
	CONCRETE SHALL BE PLACED BY AN ACI CERTIFIED CONTRACTOR
SUBGRADE	12" STABILIZED SUBGRADE (LBR 40) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

RIGID PAVEMENT SECTION

N.T.S.

2



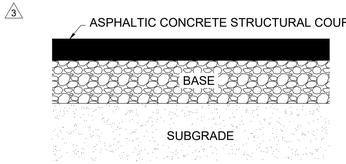
NOTES:

ASPHALT	4" RECYCLED CRUSHED ASPHALT MILLINGS FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC (gmm) METHOD
BASE	12" RECYCLED CRUSHED CONCRETE AGGREGATE BASE (LBR 150) FROM FDOT APPROVED SOURCES AND MEETING ALL THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS SECTION 204 COMPACTED TO 100% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180
SUBGRADE	SUBGRADE (LBR 20) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

ON-SITE RECYCLED ASPHALT FLEXIBLE PAVEMENT SECTION

N.T.S.

3

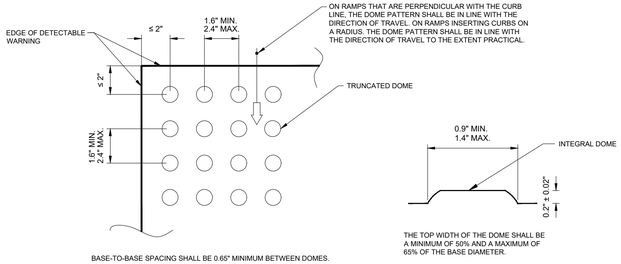


NOTES:

ASPHALT	1-1/2" TYPE FC-12.5 (TRAFFIC C) ASPHALTIC FRICTION COURSE (160 LBS/SY) (PG 76-2) FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD
	1-1/2" TYPE SP-12.5 FINE MIX ASPHALTIC CONCRETE STRUCTURAL COURSE (160 LBS/SY) FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD
BASE	15" TYPE B-12.5 COARSE MIX ASPHALTIC CONCRETE BASE FROM FDOT APPROVED SOURCES FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (GMM) METHOD
SUBGRADE	FLOWABLE FILL OVER SUBGRADE COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

FDOT FLEXIBLE PAVEMENT SECTION

N.T.S.



BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

PLAN VIEW

THE TOP WIDTH OF THE DOME SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER.

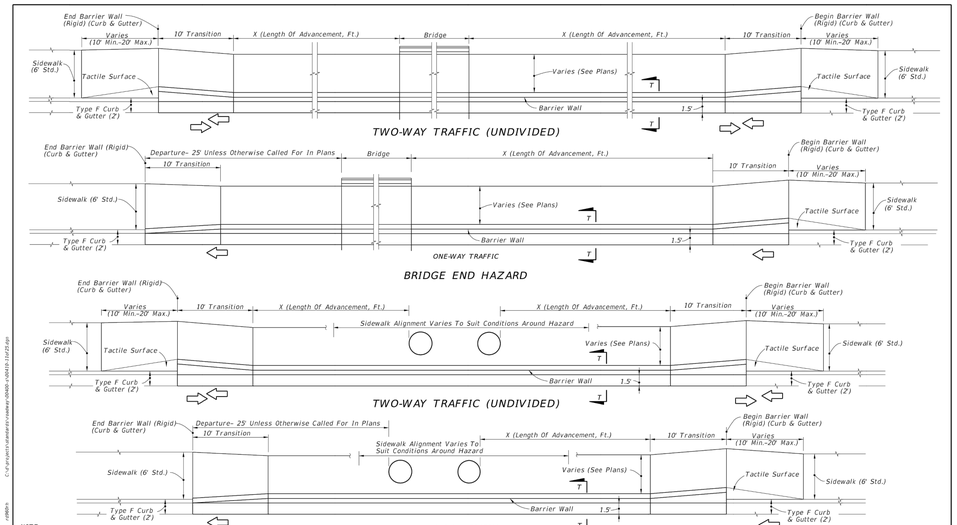
TRUNCATED DOME

ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES (610 MM) FROM THE BACK OF CURB.

CURB RAMP DETECTABLE WARNING DETAIL

N.T.S.

5

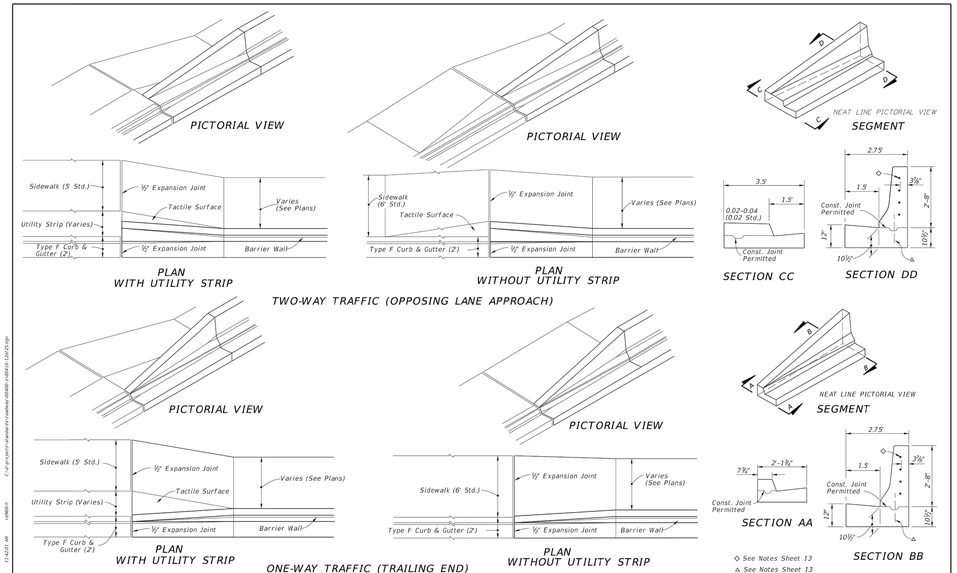


CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER)

CURB AND GUTTER WITHOUT UTILITY STRIP AND WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/07		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	11

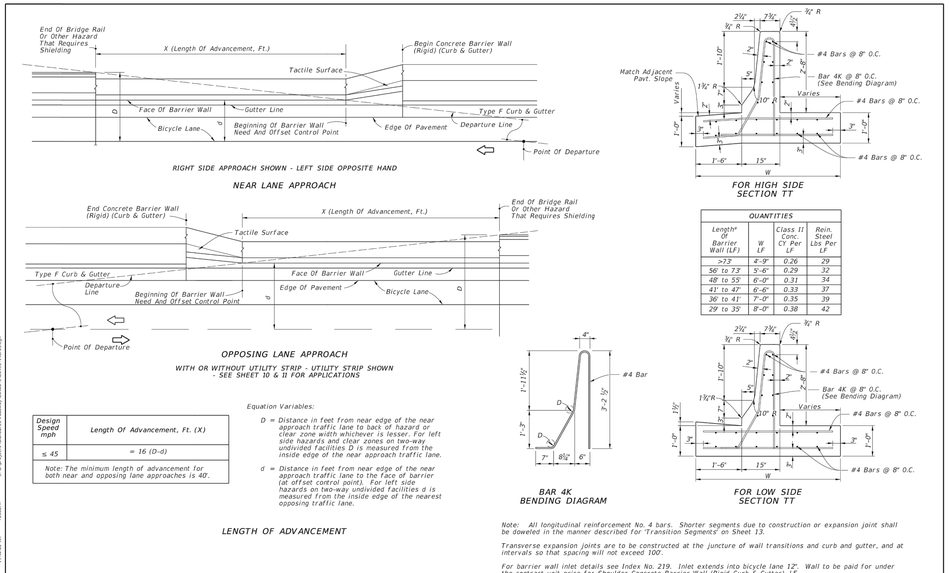
3



CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER) • TRANSITION SEGMENTS • WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/07		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	12

5



Design Speed mph	Length Of Advancement, Ft. (X)
≤ 45	= 16 (D-d)
Note: The minimum length of advancement for both near and opposing lane approaches is 40'.	

QUANTITIES			
Length* Of Barrier Wall (LF)	W LF	Class II Conc. CY Per LF	Rein. Steel Lbs Per LF
>73'	4'-9"	0.26	29
56' to 73'	5'-6"	0.29	32
48' to 55'	6'-0"	0.31	34
41' to 47'	6'-6"	0.33	37
36' to 41'	7'-0"	0.35	39
29' to 35'	8'-0"	0.38	42

Note: All longitudinal reinforcement No. 4 bars. Shorter segments due to construction or expansion joint shall be doweled in the manner described for 'Transition Segments' on Sheet 13.

Transverse expansion joints are to be constructed at the juncture of wall transitions and curb and gutter, and at intervals so that spacing will not exceed 100'.

For barrier wall inlet details see Index No. 219. Inlet extends into bicycle lane 12". Wall to be paid for under the contract unit price for Shoulder Concrete Barrier Wall (Rigid-Curb & Gutter), LF.

CONCRETE BARRIER WALL (RIGID) (CURB & GUTTER) WITH ADJACENT BICYCLE LANE

LAST REVISION	DESCRIPTION:		INDEX NO.	SHEET NO.
07/01/09		FDOT DESIGN STANDARDS FY 2012/2013 — CONCRETE BARRIER WALL	410	14

NO.	DATE	REVISIONS
5	ED	
4	1-11-24	PER FDOT
3	10-20-23	PER FDOT
2	2-6-23	PER FDOT
1	2-6-23	PER CITY OF TREASURE ISLAND

PROJECT No: 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS

12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY BRAULIO GRAJALES, PE ON THE DATE ADJACENT TO THE SEAL.

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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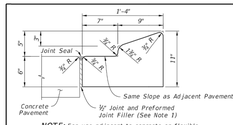
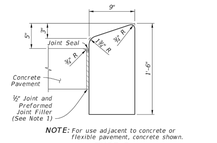
SHEET: C-7.1



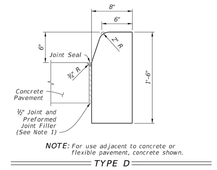
NOTE: For use adjacent to concrete or flexible pavement, concrete shown (See Note 4).

TYPE A



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

TYPE B

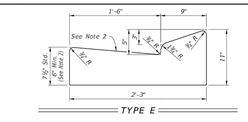


NOTE: For use adjacent to concrete or flexible pavement, concrete shown.

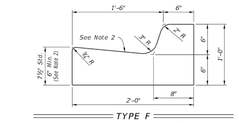
TYPE D

NOTES:

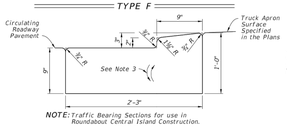
1. For Type A, Type B, and Type D Curb: Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 3.
2. For Type E, Type F, Drop Curb, and Valley Gutter: When used on high side of roadways, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 6", unless otherwise shown on Plans.
3. For Type RA, rotate entire 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.



TYPE E

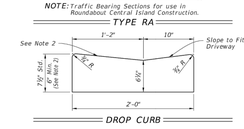


TYPE F

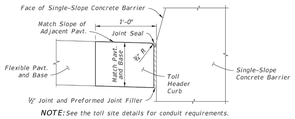


NOTE: Traffic Bearing Sections for use in Roundabout Central Island Construction.

TYPE RA

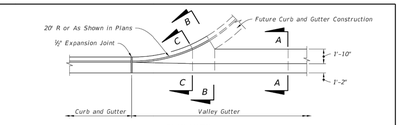


DROP CURB

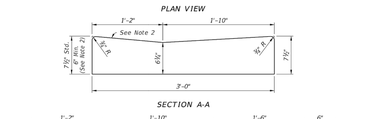


NOTE: See the toll site details for conduit requirements.

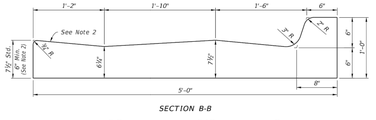
TOLL HEADER CURB



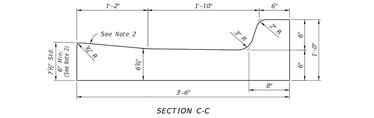
PLAN VIEW



SECTION A-A

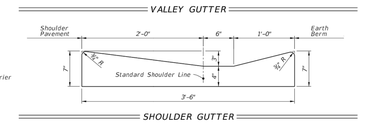


SECTION B-B



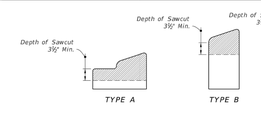
SECTION C-C

VALLEY GUTTER

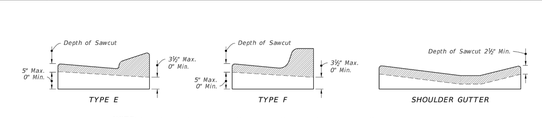


SHOULDER GUTTER

CONCRETE CURB AND GUTTER

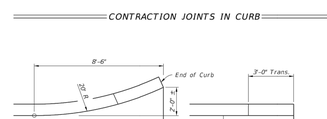


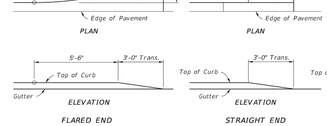
CONTRACTION JOINTS IN CURB



NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINTS IN CURB & GUTTER



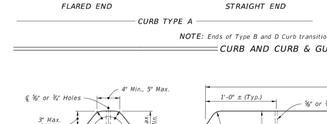


CURB TYPE A

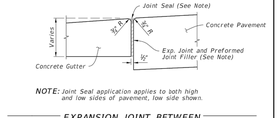
CURB AND GUTTER TYPE E AND TYPE F

NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS

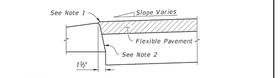


CONCRETE BUMPER GUARD



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

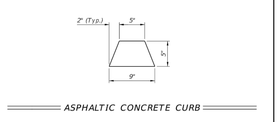
EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT



NOTES:

1. Surface on Low Side of Pavement to be ½" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

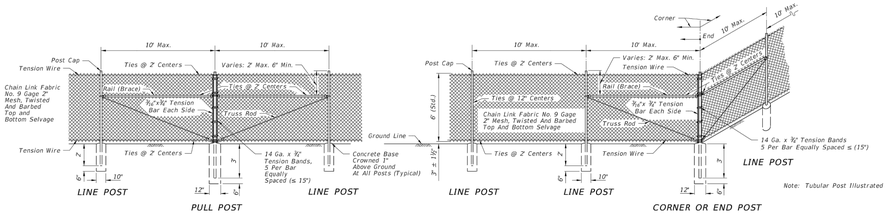
CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT



ASPHALTIC CONCRETE CURB

CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

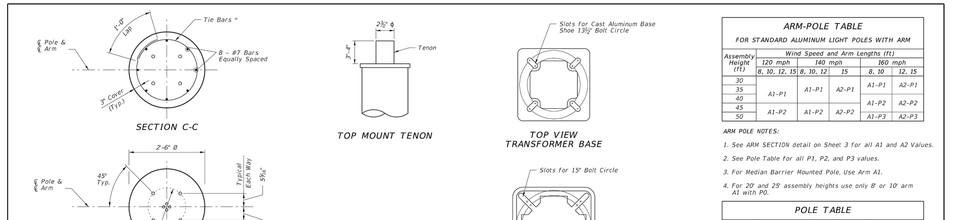
2



GENERAL NOTES

1. This fence to be used generally in urban areas.
2. For supplemental information refer to Specification 550.
3. Chain link fabric, post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous fittings and hardware shall meet the requirements of AASHTO and ASTM signify current reference.
4. Fence Component Options:
   A. Line post options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B); Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Steel H-Beam- 1¾"x 1¾": Zinc Galv. 1.8 oz./ft².; AASHTO M111 and Detail.
      (5) Aluminum alloy H-Beam- 1¾"x 1¾" Detail.
      (6) Steel C- 1¾"x 1¾"; Galv.- 1.8 oz/ft. zinc: AASHTO M111; OR -, 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.
      (7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or unpripited stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   B. Corner, end, and pull post options:
      (1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063.T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or unpripited stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   C. Rail options:
      (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².; ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables Schedule 40; 1½" nominal dia., 1.660" OD; coated at the rate 0.40 oz./ft².; AASHTO M111.
      (3) Aluminum alloy pipe- 1½" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 1⅝" OD, 1½" NPS, 1.660" dec. equiv., 0.111" min. wall thick. and min. wt. 1.836 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.
   D. Chain link fabric options (2" mesh with twisted and barbed selvage top and bottom for all options except as described in Note 10):
      (1) AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft², modified to 1.8 oz./ft².).
      (2) AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².
      (3) AASHTO M181 Type III –Polyvinyl Chloride (PVC) Coated Steel, No. 9 gage (coated core wire diameter), core wire-zinc coated steel. PVC coating: M181 Class A (either extruded or extruded and bonded) or Class B (bonded). See table right, *unless the plans call for M181 standard color, medium green, dark green or black the coating color shall be soft gray matching that of No. 36622 of Federal Standard 595a.*
   E. Tension wire options:
      (1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².; AASHTO M181.
      (2) Aluminum alloy wire with a diameter of 0.187"S or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No7 gage coated at the rate of 0.040 oz./ft².; AASHTO M181.
   F. Tie wire and hog ring options:
      (1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².
      (2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

2



ARM-POLE TABLE

FOR STANDARD ALUMINUM LIGHT POLES WITH ARM

Assembly Height (ft)	Wind Speed and Arm Lengths (ft)					
	120 mph		140 mph		160 mph	
	8, 10, 12, 15	8, 10, 12	15	8, 10	12, 15	
30	A1-P1	A1-P1	A2-P1	A1-P1	A2-P1	
35						
40				A1-P2	A2-P2	
45	A1-P2	A1-P2	A2-P2			
50				A1-P3	A2-P3	

ARM POLE NOTES:

1. See ARM SECTION detail on Sheet 3 for all A1 and A2 Values.
2. See Pole Table for all P1, P2, and P3 values.
3. For Median Barrier Mounted Pole, Use Arm A1.
4. For 20' and 25' assembly heights use only 8' or 10' arm A1 with P0.

POLE TABLE

Pole	Pole Wall Thickness	Top of Base Shoe Weld	Inside of Base Shoe Weld
P0	0.156	5/16"	5/16"
P1	0.156	5/16"	5/16"
P2	0.250	1/2"	1/2"
P3	0.313	5/16"	5/16"

POLE NOTES:

1. Pole wall thicknesses shown are nominal and must be within the Aluminum Association tolerances.
2. Thicker walls are permitted and tapered walls may be used in accordance with the minimum Aluminum Association thicknesses.

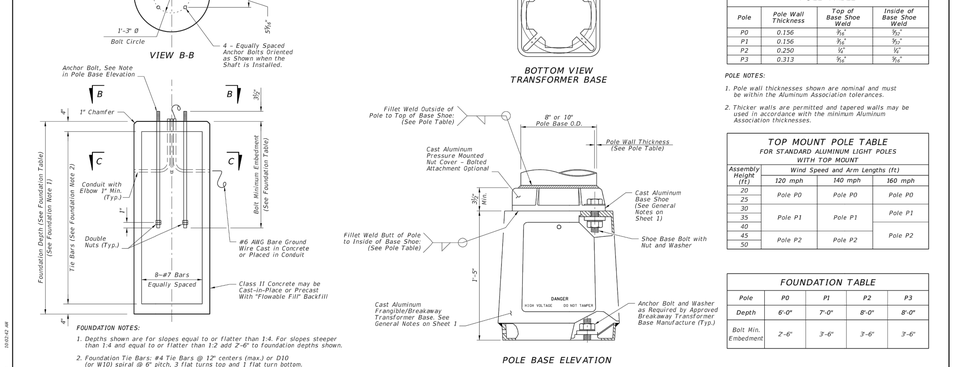
TOP MOUNT POLE TABLE

FOR STANDARD ALUMINUM LIGHT POLES WITH TOP MOUNT

Assembly Height (ft)	Wind Speed and Arm Lengths (ft)		
	120 mph	140 mph	160 mph
20	Pole P0	Pole P0	Pole P0
25			
30	Pole P1	Pole P1	Pole P1
35			
40	Pole P2	Pole P2	Pole P2
45			
50			

FOUNDATION TABLE

Pole	P0	P1	P2	P3
Depth	6'-0"	7'-0"	8'-0"	8'-0"
Bolt Min. Embedment	2'-6"	3'-6"	3'-6"	3'-6"



POLE AND BASE DETAILS FOR ROADWAY ALUMINUM LIGHT POLE

				2	ED 2-6-23 PER CITY OF TREASURE ISLAND
				No.	BY DATE DESCRIPTION
				REVISIONS	

PROJECT No. 2408HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: SITE CONSTRUCTION DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
Tel. (813) 644-8333
Tel. (813) 644-7000
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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SHEET: C-7.2

STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

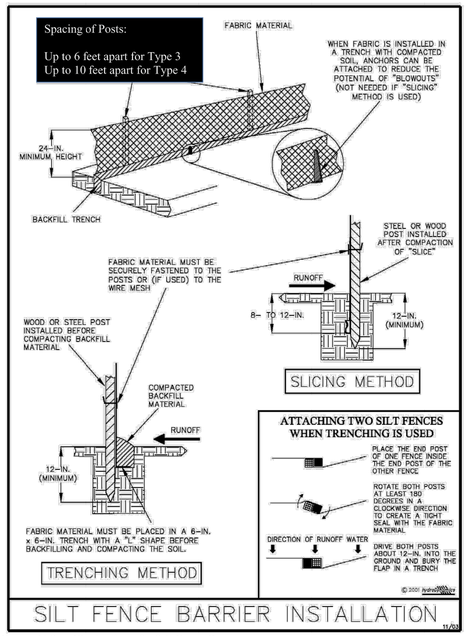

Figure V-2: Illustration of a Silt Fence Barrier

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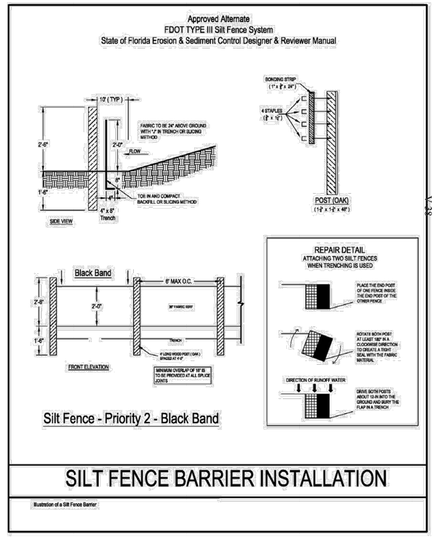

Figure V-3: Illustration of Silt Fence Priority 2 – Black Band

STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

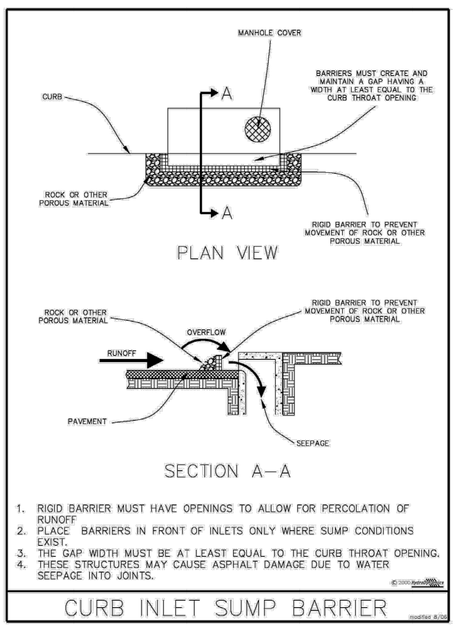

Figure V-15: Illustration of a Curb Inlet "Sump" Barrier

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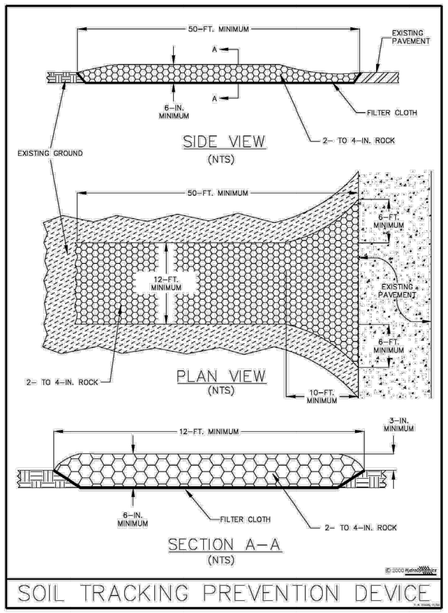

Figure V-19: Illustration of a Soil Tracking Prevention Device

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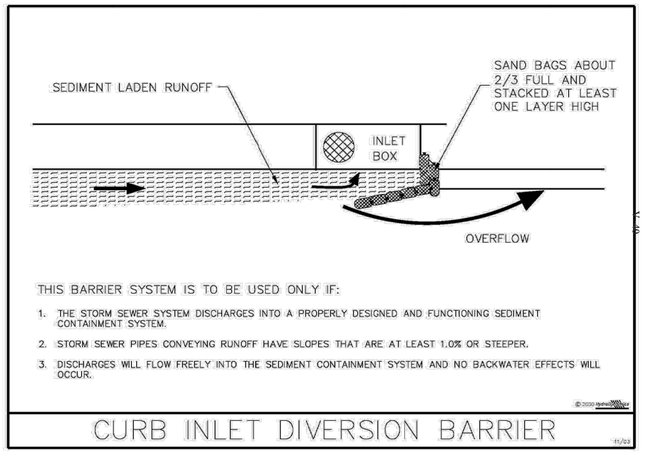

Figure V-16: Illustration of a Curb Inlet Diversion Berm

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STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

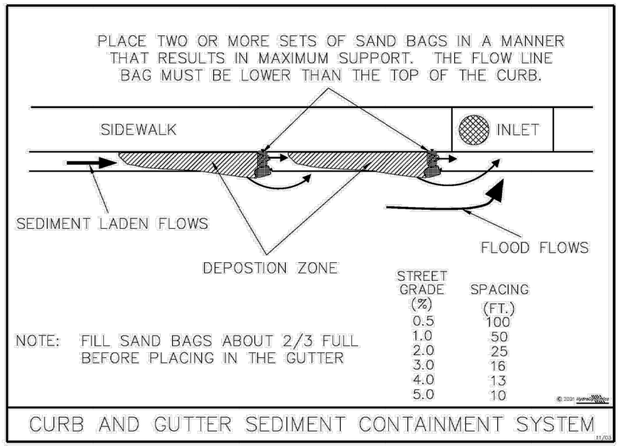

Figure V-19: Illustration of a Curb and Gutter Sediment Containment System

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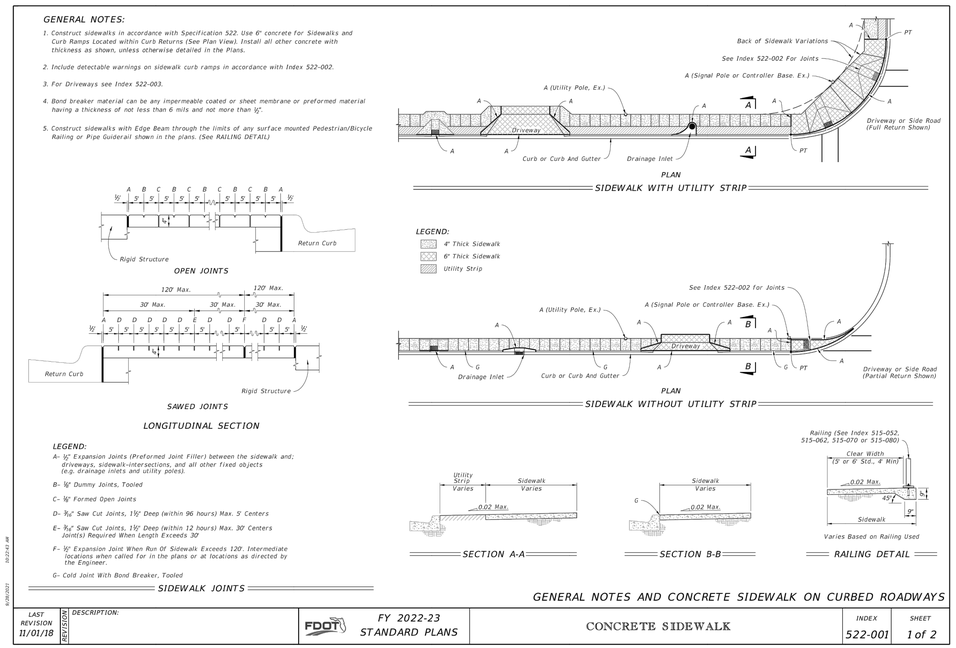

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58626 FL Registration No.
BRAULIO GRAJALES Professional Engineer
Sign Date
COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER

CONTENT: SITE CONSTRUCTION DETAILS

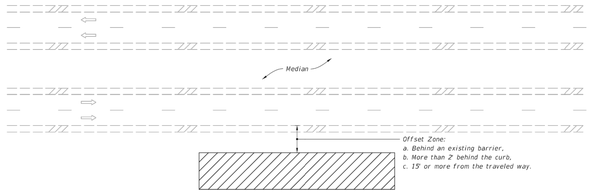
PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

No.	BY	DATE	DESCRIPTION
			REVISIONS

PROJECT No: 22-009-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel: (813) 644-8333
Tel: (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

SHEET: C-7.3



MULTILANE ROADWAY SHOWN, TWO-LANE ROADWAY SIMILAR

NOTES:

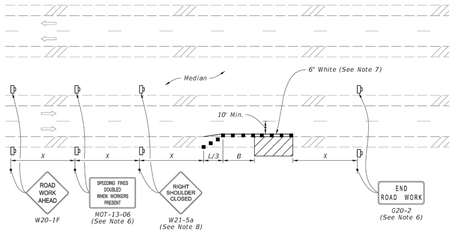
1. This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work beyond the shoulder.
2. Use Index 102-602 when the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the Offset Zone in any one hour period.
3. Use Index 102-660 when Work Area encroaches a Sidewalk.

SYMBOLS:

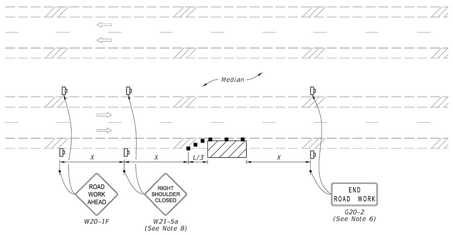
- Work Area
- Lane Identification and Direction of Traffic

8/26/2021 10:15:09 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER	INDEX	SHEET
11/01/20	REVISION				102-601	1 of 1



MULTILANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY WITH WORK ZONE SPEED OF 45 MPH OR LESS



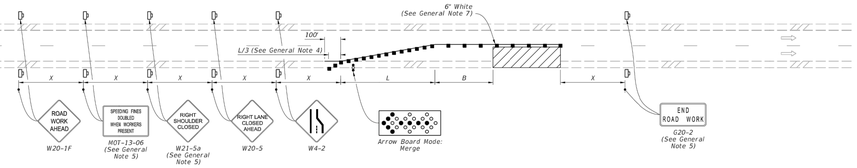
MULTILANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic

8/26/2021 10:15:57 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX	SHEET
11/01/20	REVISION				102-602	2 of 2



SINGLE LANE CLOSURE

SYMBOLS:

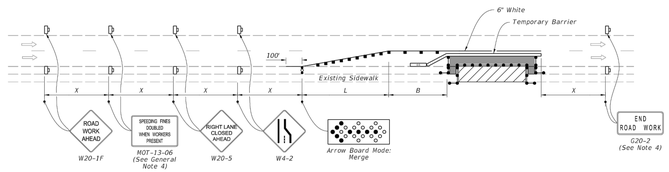
- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic

GENERAL NOTE:

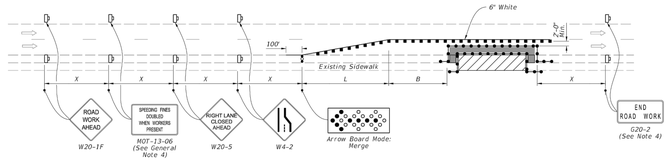
1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.
2. On undivided highways the median signs as shown are to be omitted.
3. On limited access facilities, omit "Right Shoulder Closed" signs (W21-5a) and associated work zone sign spacing distances.
4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.
5. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2) and "Right Shoulder Closed" (W21-5a), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work operation will be in place for 60 minutes or less and the speed limit is 45 mph or less.
6. Use inverted plan of the illustrations for work on left side of roadways.
7. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.

12/16/2021 3:13:18 AM

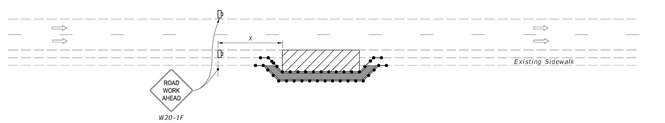
LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX	SHEET
11/01/21	REVISION				102-613	1 of 5



PEDESTRIAN DIVERSION - OPTION 1
(Temporary Barrier Shown, Low Profile Barrier Similar)



PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)



PEDESTRIAN SPECIAL DETOUR

SYMBOLS:

- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic

8/26/2021 10:17:44 AM

LAST REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	SIDEWALK CLOSURE	INDEX	SHEET
11/01/21	REVISION				102-660	2 of 2

No.	BY	DATE	REVISIONS DESCRIPTION

PROJECT No: 22-008-HCI
ISSUE DATE: 8/10/2022
DESIGNED BY: ED
DRAWN BY: ED
CHECKED BY: BG
APPROVED BY: BG

CONTENT: MAINTENANCE OF TRAFFIC DETAILS

PROJECT: PARKING LOT AT JOHN'S PASS
12765 SUNSHINE LANE
TREASURE ISLAND, FLORIDA 33706

HIGH POINT ENGINEERING
Certificate of Authorization No. 30275
Tel. (813) 644-8333
Tel. (813) 644-7000
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607
LAND PLANNING - CIVIL ENGINEERING - LANDSCAPE ARCHITECTURE

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58626 — FL Registration No.
BRAULIO GRAJALES — Professional Engineer
Sign Date

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SHEET: C-7.4

NOTE THAT THIS DRAWING MAY HAVE BEEN ALTERED IN SCALE BY REPRODUCTION

W.O. 5770

TOPOGRAPHIC SURVEY

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

LEGAL DESCRIPTION:

COMBINED SURVEY PARCELS M, N, Q AND R: (ALSO KNOWN AS THE "ROCK HOUSE PARCEL")

All of ROCK HOUSE REPLAT, according to the map or plat thereof recorded in Plat Book 98, Page 41, Public Records of Pinellas County, Florida.

TOGETHER WITH that portion of the East 1/2 of Sunshine Lane which was vacated by the Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida, and which abuts said plat of ROCK HOUSE REPLAT.

SURVEY PARCEL O: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 5, Block 2, and that part of Lot 30, Block 2, CONEY ISLAND, according to the plat thereof recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, described as follows: From the Southeast corner of said Lot 30, run thence S. 72°50' W., 73.19 feet along the Southerly boundary thereof for a POINT OF BEGINNING; run thence N. 09°44'36" W., 28.84 feet; thence S. 80°07'05" W., 30.56 feet to the Westerly boundary of said Lot 30; thence Southerly along said Westerly boundary to the Southwest corner of said Lot 30; thence Easterly along said lot's Southerly boundary to the Point of Beginning.

SURVEY PARCEL P: (ALSO KNOWN AS A PORTION OF THE "PALMER PARCEL")

Lot 6, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, less the following portion: Beginning at the Northwest corner of said Lot 6 run North 88°47'02" East, 62.51 feet along the Northerly line of said Lot 6; thence South 01°13'40" West., 7.51 feet; thence run North 88°07'20" West, 61.87 feet to an intersection with the Westerly boundary line of said Lot 6; thence run Northerly along said Westerly boundary of said Lot 6, 4.17 feet to the Point of Beginning.
Also the following portion of said Lot 7, Block 2, of said CONEY ISLAND SUBDIVISION: From a Point of Beginning at the Southeast corner of Lot 7, Block 2, CONEY ISLAND SUBDIVISION, as recorded in Plat Book 5, Pages 34 and 35, Public Records of Pinellas County, Florida, run North 00°07'50" West, 6.6 feet along the East boundary of said Lot 7; thence run South 85°16'40" West, 39.5 feet; thence South 01°13'40" West, 4.19 feet to an intersection with the Southerly line of said Lot 7; thence North 88°47'02" East, along said Southerly boundary of said Lot 7, 39.49 feet to the Point of Beginning.

TOGETHER WITH that portion of vacated Sunshine Lane adjoining said portion of Lot 7 that attaches by operation of law pursuant to Resolution recorded in Official Records Book 7426, page 66 and amended by Official Records Book 7426, page 80, Public Records of Pinellas County, Florida.

ALSO TOGETHER with that tract of land lying Westerly of Lots 4 and 5, Block 2, of aforesaid CONEY ISLAND SUBDIVISION, to the waters of the Gulf of Mexico, between, the Northwesterly line of said Lot 5 and the Southeasterly line of said Lot 4, extended Westerly to the said waters of the Gulf of Mexico.

SCALE: 1" = 20'

CURVE TABLE (D&M)					
CURVE	LENGTH	RADIUS	DELTA	CH DIRECTION	CH LENGTH
C1	141.73	1971.86	4°07'06"	S20°22'45"E	141.70
C2	10.38	1981.86	0°18'00"	S22°35'18"E	10.38
C3	113.87	1971.86	3°18'32"	S24°23'34"E	113.86
C4	42.36	1959.86	1°14'18"	S26°45'03"E	42.35
C5	39.98	611.35	3°44'50"	S10°35'59"E	39.98
C6	35.87	611.35	3°21'41"	S03°17'49"E	35.86

LINE TABLE (D&M)		
LINE	LENGTH	BEARING
L1	10.00	S67°33'42"W
L2	10.00	N67°15'42"E
L3	12.35	N77°30'00"E
L4	90.76	S72°50'00"W
L5	96.91	S10°16'00"E
L6	7.50	S89°52'00"W
L7	0.66	S00°08'00"E
L8	7.53	S84°48'00"W
L9	66.42	S10°16'00"E
L10	108.17	S81°15'00"W
L11	165.31	S77°33'00"W
L12	104.30	N08°56'23"E
L13	133.60	N85°01'00"E
L14	41.58	N88°07'22"W
L15	45.94	N02°10'12"E
L16	13.22	N81°03'16"W
L17	195.00	N20°02'00"E
L18	14.60	N36°37'36"E
L19	19.48	S74°25'39"E
L20	51.55	S68°44'00"E

SURVEY NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, AND IS SUBJECT TO EASEMENTS, RIGHT-OF-WAY, AND OTHER MATTERS OF RECORD THAT A TITLE SEARCH MIGHT DISCLOSE.

2. PLANIMETRIC FEATURES SHOWN HEREON WERE DETERMINED BY STANDARD FIELD SURVEYING METHODS.

3. BEARING BASIS IS THE SOUTH BOUNDARY LINE OF PARCEL M BEING S72°50'00"W, ASSUMED.

4. ALL INSTRUMENTS SHOWN HEREON ARE OF THE PUBLIC RECORDS OF PINELLAS COUNTY, FLORIDA, UNLESS OTHERWISE SPECIFIED.

5. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SURFACE MARKINGS AND OR STRUCTURES. NO EXCAVATION WAS PERFORMED FOR THE LOCATION OF SUCH UTILITIES.

6. ADDITIONS OR DELETIONS TO THIS SURVEY MAP AND/OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

7. THIS PARCEL APPEARS TO BE IN FLOOD ZONE "VE (EL 12 FEET)", "AE (EL 11 FEET)" AND "AE (EL 10 FEET)" ACCORDING TO THE FLOOD INSURANCE RATE MAP, MAP NUMBER: 12103C0193H, MAP EFFECTIVE DATE: 08/24/2021. AS PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THIS PARCEL, OR A PORTION THEREOF, APPEARS TO BE IN A COASTAL "A" ZONE.
THIS MAP'S NOTES STATE THAT THE BASE FLOOD ELEVATIONS SHOWN REPRESENT ROUNDED WHOLE-FOOT ELEVATIONS AND THEREFORE MAY NOT EXACTLY REFLECT THE FLOOD ELEVATION DATA PRESENTED IN THE FLOOD INSURANCE STUDY (FIS) REPORT. THE FIS REPORT WAS NOT CONSULTED FOR THIS SURVEY.
FLOOD ZONE LINES AND/OR LMWA LINE SHOWN HEREON WERE TRANSFERRED BY GRAPHIC METHODS FROM THE FLOOD ZONE MAP, AND ARE SUBJECT TO THE INHERENT INACCURACIES OF SUCH TRANSFERS. THIS FLOOD ZONE NOTE IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, AND ANY PROPOSED FINISHED FLOOR ELEVATIONS ARE TO BE DETERMINED BY THE PERMITTING AGENCY HAVING JURISDICTION.

8. LOCATIONS OF TREES SHOWN HEREON WERE LIMITED TO TREES 4" DIAMETER AT BREAST HEIGHT (DBH) OR LARGER.
GEODATA SERVICES INC. CAN ACCEPT NO RESPONSIBILITY FOR THE IDENTIFICATION OF THE TREE SPECIES SHOWN HEREON. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO PROPERLY IDENTIFY THE TREES SHOWN HEREON, TREE IDENTIFICATION IS OUTSIDE THE EXPERTISE OF A PROFESSIONAL LAND SURVEYOR. THE TREE TYPES SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD BE USED AFTER CONFIRMATION BY A CERTIFIED ARBORIST OR OTHER SUCH PROFESSIONAL.

9. VERTICAL DATA SHOWN HEREON ARE IN NAVD 88 DATUM, HOLDING FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK BM 15-12-E03 AND A PUBLISHED ELEVATION OF 5.28 FEET UTILIZED TO SET A SITE TBM, BENCHMARK DESIGNATIONS AND INFORMATION SHOWN HERE ARE FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK SHEETS.

10. STATE PLANE COORDINATES SHOWN HEREON ARE THE RESULT OF A CONTROL SURVEY PERFORMED BY GLOBAL POSITIONING SYSTEM (GPS) METHODS. THIS GPS SURVEY WAS PERFORMED BY A CREW FROM GEODATA SERVICES, INC., CLEARWATER, FLORIDA AND WAS ESTABLISHED BY GPS OBSERVATION AND USING A SPECTUM PRECISION EPOCH 50 RTK RECEIVER WITH CORRECTIONS PROVIDED BY TRIMBLE POSITIONING SERVICES VIA INTERNET MODEM.
BASIS: FLORIDA WEST ZONE, NORTH AMERICAN DATUM (NAD) 83 (2009 ADJUSTMENT)

SYMBOL LEGEND

- BFP = Backflow Preventor
- CB = Cable Box
- CL = Centerline
- CO = Cleanout
- DL = Decorative Light
- DMH = Drainage Manhole
- FH = Fire Hydrant
- GT = Grease Trap
- HA = Handicap Anchor
- HH = Handhole
- LP = Lightpole
- MB = Mailbox
- PB = Power Box
- SMH = Sanitary Manhole
- SN = Sign
- SE = Spot Elevation
- TB = Telephone Box
- UP = Utility Pole
- WM = Water Meter
- WV = Water Valve
- WL = Wall

TREE LEGEND

- PALM

ABBREVIATION LEGEND

- (C) = Calculated Data
- (D) = Data per Description
- (F) = Field Determined
- (M) = Measured Data
- (P) = Data per Plat
- (R) = Data per Record
- A/C = Air Conditioner
- BW/F = Barbwire Fence
- BFE = Base Flood Elevation
- BFP = Backflow Preventor
- CB = Chord Bearing
- CH = Chord
- C.A.B. = Condominium Plat Book
- C/C = Covered Concrete
- C/S = Concrete Slab
- C/SW = Concrete Sidewalk
- CCCL = Coastal Construction Control Line
- C/L = Centerline
- CLF = Chainlink Fence
- COV. = Covered
- CLP = Concrete Light Pole
- CMP = Corrugated Metal Pipe
- CONC. = Concrete
- Δ = Delta Angle
- D.B. = Deed Book
- DH = Drillhole
- DMH = Drainage Manhole
- E/P = Edge of Pavement
- ECL = Erosion Control Line
- EL = Elevation
- EOW = Edge of Water
- FCIR = Found Iron Rod & Cap
- FCM = Found Concrete Monument
- FDOT = Florida Department of Transportation
- FFE = Finished Floor Elevation
- FIP = Found Iron Pipe
- FIR = Found Iron Rod No Cap
- FND = Found Nail & Disk
- FPP = Found Pinched Pipe
- FW = Fence Wall
- GV = Gate Valve
- HYD = Fire Hydrant
- I.E. = Invert Elevation
- LB = Corporate Certificate Number
- LP = Light Pole
- LFE = Lowest Floor Elevation
- LMWA = Limit of Moderate Wave Action Line
- M.O.L. = More or Less
- MES = Mitered End Section
- N&D = Nail & Disk
- NFNS = Not Found and Not Set
- N.I. = Not Included
- OCS = Outfall Control Structure
- OHW = Overhead Wire
- O.R. = Official Records Book
- P.B. = Plat Book
- PCP = Permanent Control Point
- PG(S) = Page(s)
- PLS = Professional Land Surveyor
- POB = Point of Beginning
- POC = Point of Commencement
- PRC = Point of Reverse Curvature
- PRM = Permanent Reference Monument
- R = Radius
- RGE = Range
- R/W = Right-of-way
- SCM = Set Concrete Monument
- SCM = Set Concrete Monument PLS #2865
- SCIR = Set Iron Rod & Cap 5/8" PLS #2865
- SN&D = Set Nail & Disc PLS #2865
- SMH = Sanitary Manhole
- TBM = Temporary Benchmark
- TOB = Top of Bank
- TOS = Toe of Slope
- TWP = Township
- UB = Utility Box
- UP = Utility Pole
- V/F = Vinyl Fence
- W/F = Wood Fence
- WM = Water Meter
- W.O. = Work Order
- WV = Water Valve

SURVEYOR'S CERTIFICATION:

I, DENNIS J. EYRE, THE SURVEYOR IN RESPONSIBLE CHARGE, HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON AND THAT SAID ABOVE GROUND SURVEY AND SKETCH ARE ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. SURVEY NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, OR ELECTRONIC DIGITAL SIGNATURE IN ACCORDANCE WITH STATE OF FLORIDA ADMINISTRATIVE CODE RULE 5J-17.062.

Dennis J Eyre PLS 2865
Digitally signed by Dennis J Eyre PLS 2865
Date: 2022.09.16 12:16:48 -04'00'

DENNIS J. EYRE, P.L.S. FLA. REG. No. 2865
DATE: SEPTEMBER 16, 2022

AN UNSIGNED SURVEY DRAWING IS FOR INFORMATIONAL PURPOSES ONLY

W.O. # 5770	FIELD DATE: MARCH 19, 2019
DRAWN BY: EJ/HW	FIELD DATE: APRIL 9, 2019 - ADDED ADDITIONAL TOPO
CHECKED BY: DJE	FIELD DATE: MAY 16, 2019 - ADDED ADDITIONAL TOPO
SCALE: 1" = 20'	UDATED FLOOD ZONE DATE: SEPTEMBER 15, 2022
FIELD BOOK / PAGE(S): 1-19/22, 1-19/29	
SHEET 1 OF 1	

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