City of Daytona Beach Shores

"Life is Better Here"
"A Premier, Friendly Place to Be"

AGENDA
PLANNING & ZONING BOARD MEETING
JANUARY 8, 2024
8:30 AM, Shores Community Center, 3000 Bellemead Drive
Daytona Beach Shores, FL 32118

Notice is hereby given to all interested parties that if any person should decide to appeal any decision made at the aforementioned meeting of the P&Z Board, such person will need a recording of the proceedings conducted at such meeting, and for such purpose he or she may need to ensure that a verbatim record of the proceedings was made; such record to include testimony and evidence upon which any appeal shall be based. Individuals covered by the Americans with Disabilities Act of 1990 in need of accommodations for this public meeting should contact the City Clerk, City of Daytona Beach Shores, at least five working days prior to the meeting.

1. OPENING REMARKS

2. MINUTES

A. Planning & Zoing Minutes December 11, 2023

3. QUASI-JUDICIAL HEARING

A. Regular Site Plan RSP120230538: LIV Multi-Family Residential Condominium, 3635-3637 S. Atlantic Avenue

4. ACTION ITEMS

5. OTHER

6. BOARD COMMENTS

7. ADJOURNMENT

MINUTES
PLANNING & ZONING BOARD MEETING
December 11, 2023
3000 Bellemead Drive Daytona Beach Shores, FL 32118

1. OPENING REMARKS

Present: Member Chuck Horion, Member James Lilly, Member Rose ann Tornatore, Jeni Groot-Begnaud, Member Guy Desai, Member Chris Pollard. Member Excused: Rick DeLange.
Staff: City Clerk Cheri Schwab, City Attorney Paul Waters, Community Services Director Stewart Cruz and City Planner Noel Eaton.

2. MINUTES

A. Planning & Zoning Board Minutes Oct. 10, 2023

MEMBER CHUCK HORION moved, seconded by MEMBER ROSE ANN TORNATORE to Approve the Planning & Zoning Board of Minutes Oct. 10, 2023.
Vote: Motion carried by unanimous roll call vote (**summary**: Yes = 5 No = 0).
Yes: Member Chuck Horion, Member James Lilly, Member Rose ann Tornatore, Jeni Groot-Begnaud, Member Guy Desai

3. QUASI-JUDICIAL HEARING

4. ACTION ITEMS

A. Ordinance 2023-15: Daytona Beach Shores, LLC Development Agreement - 3411 S. Atlantic Avenue-Serena by the Shores.

City Planner Noel Eaton provided the background for Ordinance 2023-15, a Development Agreement, for 3411 S. Atlantic Avenue - Serena by the Shores. A proposed 18-story condominium with 86 units that would include retail shops and a restaurant would be constructed. The DA would allow 3-years to obtain the building permits and 7-years to obtain the Certificate of Occupancy. There are 11 deviations requested from the Land Development Code. They consist of: only one loading zone, less of a breezeway corridor, increased north/south building coverage, increased maximum lot coverage, decreased green space, change in side yard setbacks, reduced north/south setbacks, reduced parking spaces, reduced landscape buffer on the north side, reduced landscape buffer on the east side, exclusion of required public walkway. Ms. Eaton stated that staff felt all the requirements for the Development Agreement had been met along with all due public notice.
Various representatives working on the project spoke to the board members. Existing buildings that were designed by the architect and developer were shown. Attorney Rob Merrill

with Cobb & Cole spoke as well. He explained that he had been working with staff for more than a year on this concept plan and reiterated that it met all the requirements for a DA. All questions by the board were answered.

MEMBER ROSE ANN TORNATORE moved, seconded by MEMBER CHUCK HORION to recommend approval of Ordinance 2023-15 to the City Commission.
Vote: Motion carried by unanimous roll call vote (**summary**: Yes = 4 No = 1).
Yes: Member Chuck Horion, Member Rose ann Tornatore, Jeni Groot-Begnaud, Member Guy Desai **No:** James Lilly

5. OTHER

6. BOARD COMMENTS

Community Services Director Stewart Cruz invited the board for an appreciation breakfast after the new year.

7. ADJOURNMENT

The meeting ended at 9:39 am.

Cheri Schwab, Recording Secretary

Rick DeLange, Chairman

City of Daytona Beach Shores

Building & Codes Division
Department of Community Services
Telephone: (386) 763-5377
Fax (386) 763-5370

SPR#:_____
FEE
Amt:_____
Reviewed By:
_____
Date:_____

SITE PLAN REVIEW APPLICATION

Project Name: LIV CONDOS, a Condominium

Project Location (Address): 3635 S. Atlantic Avenue

Parcel #/#'s: 63-02-05-04-0030 and 63-02-05-04-0060

Property Owner's Name: SA 2011, LLC
(If Applicant is not owner, attach authorization affidavit)

Applicant/Developer Name: Shipra Sea Shore Development, LLC

Mailing Address: 3102 County Road 89, Pearland, TX 77584

Phone: 832.404.7814 Fax: 281.412.5430

Project Coordinator: James R. Mack and Roger W. Strcula, PE, Upham, Inc. (Engineer of Record)

Mailing Address: 517 Fox Hunt Circle, Longwood, FL 32750

Phone: 407.415.6000 Fax: 407.878.0800

APPLICATION TYPE:

[ ] Conceptual Plan Review
[ ] Administrative Site Plan Review (**Projects must be 5000 sq. ft. GFA or Less**)
[X] Regular Site Plan Review (**Projects must be greater than 5000 sq. ft. GFA**)
[ ] Follow up review of previously submitted site plan/ and or amendments to site plan
[ ] Site Plan Extension

Proposed Use: Residential multi-family

Property Size (Acres & Square Footage): 1.26 acres / 54,843 square feet

Proposed GFA (Gross Floor Area) of project: 36,776 GSF footprint (157,000 GSF all floors)

Submitted By: James R. Mack **Date:** Nov. 9, 2023

No applications, drawings, etc. will be accepted until all application fees are paid.

EXHIBITS REQUIRED
SITE PLAN/AMENDMENT REVIEW
(Projects greater than 5,000 sq. ft.)

The site plan shall be prepared by a civil engineer or architect registered in the State of Florida. Please submit five (5) signed and sealed complete folded sets of the following. The following exhibits are required at the time of application: TBP = To Be Provided Separately

1. Site plan application, with required fee. Included with $2,322 fee
2. Sewer development fee, if project includes the addition of six (6) or more ELU's. TBP
3. Statement of ownership and control of the proposed development, stating the intended use of the development in detail and certification of authorization, if applicable. Sheet C000 and cover letter
4. General location map showing the relation of the site to major streets, shopping, schools, existing utilities and important physical features in and adjoining the property. Sheet C000
5. Name of the project, along with the name(s) of the project planner and developer, date, north arrow and graphic scale. Sheet C000
6. Recent certified survey. Sheets SU-1 to SU-4
7. Project and/or amendment description. Sheet C000 and letter from James R. Mack
8. Tree survey identifying existing trees by size and type. Diameter should be measured at the DBH (diameter at breast height, 4 ½ feet). Sheets SU-2 and L100
9. Boundaries of the project, any existing streets, buildings, water courses, easements and section lines. Sheets C200, C400 and SU-1
10. Total area of site. Sheets C400 and SU-1
11. Exact location of all buildings and structures showing compliance with all setbacks. Sheet C400
12. Off-street parking and off-street loading areas. Sheets C400 and C401
13. Refuse collection areas, dumpster enclosures, etc. Sheets C400 and C401
14. Access to utilities and points of utility hook-ups. Sheet C600

15. Landscaping plan complying with Section 14-46.6, including an irrigation plan. Sheets L100 to L300

16. All screens and landscaped buffers. Sheet L100

17. Plans for signs, if any. Sheet C401

18. Certificate from the City of Port Orange or City of Daytona Beach, as appropriate, confirming availability of an adequate potable water supply. Received verbal, awaiting letter

19. Certificate from the City of Port Orange confirming adequate treatment capacity for sewer. Same as 18

20. Common facility liability guarantee. See letter from James R. Mack

21. Drainage plan that complies with Chapter 9, Stormwater Management and Conservation. Sheet C500
See Stormwater Calculations Report

22. Completed stormwater application and fee. Included

23. Copies of permit applications for outside agencies, such as St. Johns River Water Management District, Florida Department of Transportation, Department of Environmental Protection, or Volusia County, if applicable. County Use Permit and FDEP CCCL applications included, FDOT and SJRWMD not applicable

24. Map showing ingress, egress and traffic flow and how vehicular traffic will be separated from pedestrian and other types of traffic. Sheet C401

25. Demolition plan and letter from the Department of Archives for all demolished buildings. Sheet C200
Existing buildings do not apply as historical

26. Sanitary sewer plans. Sheet C600

27. A site specific traffic analysis for the project and its' impact on the surrounding neighborhood. This must be performed by a professional engineer, qualified to make traffic analyses.
See Trip Generation Analysis Report by Walsh Traffic Engineering

28. Renderings (elevations) from north, south, east and west perspectives. Sheets A-16 and A-17

29. Cross sections, including the structure from the front property line to the rear property line and side lot line to side lot line, showing driveways, slopes, gradients and ramps.
Sheets C501, A-1 and A-10 to A-12

30. Building heights and density calculations. Sheets C100 and C501

31. Concurrency application fee and required exhibits. Included

32. Letter from the developer, stating location of construction parking for the duration of the project.
See letter from James R. Mack

33. Additional information, as required in the Land Development Code, or by City staff.
See Geotechnical Engineering Report and Asbestos Report by ECS Florida, LLC

NOTARIZED AUTHORIZATION OF OWNER

I, Akshay Kumar, as Manager of SA 2011, LLC, a Texas limited liability company, the owner of Parcel Nos. 6302-05-04-0030 and 6302-05-04-0060 (the "Property"), hereby authorize STORCH LAW FIRM and JAMES R. MACK, as agents for owner, and SHIPRA SEA SHORE DEVELOPMENT, LLC, a Florida limited liability company, the developer of the Property, to represent me in local government applications and permitting for condominium site approval, and all other actions necessary to necessary to accomplish same, and to act as applicant, representing me in City of Daytona Beach Shores public hearings regarding same.

Akshay Kumar

STATE OF Texas
COUNTY OF Brazoria

The foregoing instrument was acknowledged before me, by means of [ ] physical presence or [ ] online notarization, this 5th day of October 2023, by Akshay Kumar, as Manager of SA 2011, LLC, on behalf of the company, who is [X] personally known to me or [ ] who has produced _____ as identification and who did not take an oath.

DALJIT SINGH AHLAWAT
Notary Public, State of Texas
Comm. Expires 04-06-2025
Notary ID 11516406

NOTARY PUBLIC

Type or print name: Daljit Singh Ahlawat
Commission No.: 11516406

Gmail

Jim Mack <jrmack816@gmail.com>

LIV CONDOS Fees

1 message

Jim Mack <jrmack816@gmail.com>
To: Jim Mack <jrmack816@gmail.com>

Thu, Nov 9, 2023 at 7:45 AM

Below are the base City fees plus costs. Will need check to City for the total.

Site Plan	$1,639.
Fire	$100.
Concurrency	$220.
Stormwater	$363.
Total	$2,322.

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APPENDIX A

STORMWATER APLICATION

City of Daytona Beach Shores

Permit No. _____ Project No. _____ Fee $ 363.00

APPLICATION FOR STORMWATER: Permit Waiver Management Permit

I. SITE INFORMATION

A. Address of Property 3635 S. Atlantic Avenue

B. Legal See boundary survey by Upham, Inc.

C. Description of Proposed Improvement Redevelopment of 6 existing residential rental units and pavement surfaces for a new residential 74 unit condominium with site improvements of a maximum of 70% impervious area.

II. OWNER'S INFORMATION

A. Name of Owner(s) SA 2011, LLC

B. Address 4701 San Jacinto Street, Houston, TX 77004

C. Phone No. (Home) _____ (Business) 832.404.7814

The undersigned owner(s) of the above described property, being fully aware of the provisions of Ordinance 9.5.2 LDC hereby certify the intent to comply with its provisions and agree(s) to the following conditions of this application:

A. The construction of the permitted facilities will be completed as set forth in the approved plans or amended plans which may be approved by the City Engineer.
B. The construction on the site referred to in this application shall not commence unless and until all applicable ordinances and laws are complied with and all applicable permits are obtained from the City of Daytona Beach Shores and other governmental agencies.
C. That should field conditions or other factors making it impractical to construct the facility as approved, to immediately notify the Chief Building Official and suspend further work on the facilities until an amended plan has been submitted and approved by the Chief Building Official.
D. Authorized agents and/or employees of the City of Daytona Beach Shores are granted the right to enter upon the subject property for the purpose of inspection and enforcement activities.
E. If I/we fail to properly construct or maintain the permitted facilities, the City of Daytona Beach Shores has the right to take corrective action as may be necessary to insure the proper functioning of said facilities and to place a lien against the subject property for any and all cost resulting from such action(s).
F. The City of Daytona Beach Shores and its authorized agents and/or employees are released and saved harmless from any and all claims of damage of every king and nature whatsoever to said property, or contiguous properties, arising from or in any manner growing out of the above described operations and improvements.
G. To retain the undersigned Engineer, Architect or General Contractor throughout the construction of the permitted facilities or in lieu thereof notify the Chief Building Official of the name, address, and phone number of an alternate responsible party.
H. That the provisions stipulated herein shall accrue to future successors and assigns.

Dated: _____

WITNESSES:

_____

_____

OWNER(S):

Akshay Kumar, Manager

_____

2990 South Atlantic Avenue Daytona Beach Shores, Florida 32118

III.

ENGINEER'S, ARCHITECT'S OR GENERAL CONTRACTOR'S INFORMATION

A. Name Roger W. Strcula, PE, CPESC

B. Name of Company Upham, Inc.

C. Address 265 Kenilworth Ave, Ormond Beach, FL 32174

D. Phone No. 386.672.9515

E. License No. LB 3612 / PE 52784

Certification:

I hereby certify that this stormwater management system has been prepared by me in accordance with the performance standards contained in Ordinance No. 9.5.2 LDC, "The Stormwater Management Ordinance of Daytona Beach Shores."

Signature: Roger W Strcula SEAL:

ROGER W. STRCULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER

Approved Disapproved

Chief Building Official

NOV 7, 2023

Date

City of Daytona Beach Shores

Building and Codes Division
Department of Community Services
Telephone: (386) 763-5377
Fax (386) 763-5370

CONCURRENCY APPLICATION

NOTICE: The applicant is responsible for supplying all information necessary to determine the demands of the proposed development on City infrastructure. Additional information may be requested in order to process your application. If concurrency findings reveal that the capacity of public facilities is equal to or greater than that required to maintain the adopted level of service for said facilities, the concurrency manager shall reserve, upon development approval, capacity necessary for the proposed development for a period of one year. Should a request for extension be made to the approved site development plan, a new review for concurrency shall be made for each site development extension.

1. Owner's Name: SA 2011, LLC
(If Applicant is not owner, attach authorization affidavit)

Applicant's Name: Akshay Kumar, Manager

Address: 4701 San Jacinto Street, Houston, TX 77004

Telephone Number: 832.404.7814

2. Project Name: LIV CONDOS, a Condominium

Property Location (Address): 3635 S. Atlantic Avenue

Legal Description: See boundary survey by Upham, Inc.
(Attach site location map showing site boundary and ingress and egress).
Parcel #:
63-02-05-04.0030 and 63-02-05-04.0060

3. Development Order Requested: (Check One):

__X__ Site Plan
_____ Planned Unit Development
_____ Renewals
_____ Other (Explain) _____

4. Proposed Use(s): Residential multi-family

Proposed Size: 1.26 acres / 74 units / 157,000 GSF (16 stories)
(Acres, Units, Square Footage, etc.)

5. What is Sites current usage? Six single unit residential rental villas

6. Are all required exhibits attached? Yes __X__ No _____

If no, what is missing? (Explain) _____

City of Daytona Beach Shores

"Life is Better Here"

ACKNOWLEDGEMENT OF VOLUSIA COUNTY BEACHES AND DUNES REQUIREMENTS

The Volusia County Council adopted Ordinance 2004-17, entitled "Minimum Standards for Environmental Protection of Dunes and Beaches," on October 21, 2004 to ensure compliance with the current Florida Department of Environmental Protection regulations and Standards regarding the protection of Dunes and Beaches. Subsequently, the City of Daytona Beach Shores adopted Ordinance 2005-17, which amended Chapter 11 of the City's Land Development Code, entitled "Beaches and Dunes". The County of Volusia, however, still maintains the standards associated with sand and dune replacement/enhancement on the beach. Consequently, this form acknowledges notice to an applicant for a development permit within the City of Daytona Beach Shores to contact the Volusia County Department of Environmental Management to review and approve all sand and dune replacement and/or enhancement on the beach.

Contact:

Volusia County Environmental Management Department
440 S. Beach St.
Daytona Beach, FL 32114
Tel. (386)238-4668

Address and/or legal description of development permit location:
3635 & 3637 S. Atlantic Ave, Daytona Beach Shores, FL 32118

Proposed 74 Unit, 16 Story Condominium

APPLICANT

James R. Mack

DATE

10/25/23

Mailed to Volusia County Department of Environmental Management

ADDRESS

517 Fox Hunt Circle, Longwood, FL 32750

STAFF PERSON

DATE

10/25/2023

PHONE NUMBER: 407-415-6000

FAX NUMBER: 407-878-0800

City of Daytona Beach Shores

"Life is Better Here"

ACKNOWLEDGEMENT OF VOLUSIA COUNTY SEA TURTLE LIGHTING REQUIREMENTS

The Volusia County Council adopted Ordinance 99-12, also known as the Sea Turtle Lighting Ordinance on June 17, 1999. This ordinance expands the full lighting regulations to existing developments as well as new developments in all coastal municipalities and unincorporated areas.

This form acknowledges notice to an applicant for a development permit within the City of Daytona Beach Shores to contact the Volusia County Department of Environmental Management to review and approve all lighting plans.

Contact:

County Environmental Code Enforcement Officer
Department of Environmental Management
440 S. Beach St.
Daytona Beach, FL 32114
Tel. (386)238-4668

Address and/or legal description of development permit location:

3635 & 3637 S. Atlantic Avenue, Daytona Beach Shores, FL 32118

Proposed 74 Unit, 16 Story Condominium

APPLICANT

James R, Mack

DATE

10/25/23

Mailed to Volusia County Department of Environmental Management

ADDRESS

517 Fox Hunt Circle, Longwood, FL 32750

STAFF PERSON **DATE**

James Rule 10/25/23

PHONE NUMBER: 407-415-6000

FAX NUMBER: 407-878-0800

Shipra Sea Shore Development, LLC
3102 County Road 89
Pearland, TX 77584

11/15/23

Ms. Noel Eaton
City Planner
City of Daytona Beach Shores
Department of Community Services

RE: **LIV Condos, Project Description**
3635 & 3637 S. Atlantic Avenue, Daytona Beach Shores, FL 32118

Dear Noel,

We are looking to develop a 16 story, 74-unit luxury condominium on the property located at 3635 and 3637 S. Atlantic Avenue, Daytona Beach Shores, Fl 32118.

The first floor will be common area and amenities. Floors 2 through 15 will have 5 units per floor. Four units to have 4 bedrooms, 3 bath and one unit in the center of each floor to be 3 bedrooms, 2 bath. Floor 16 has 2 penthouses and two 4 bedrooms, 3 bath units.

Sincerely,

James R. Mack
As Agent for Shipra Sea Shore Development, LLC
LIV Condos
Cell #407.415.6000

#20

Shipra Sea Shore Development, LLC
3102 County Road 89
Pearland, TX 77584

11/15/23

Ms. Noel Eaton
City Planner
City of Daytona Beach Shores
Department of Community Services

RE: **LIV Condos Site Plan Review Application**

Dear Noel,

On Site Plan Review Application page 3, line item 20 it Asks for Common facility liability guarantee. It will be stated in our Condominium Documents that will be submitted to the State the following:

MAINTENANCE, REPAIRS AND REPLACEMENTS
COMMON ELEMENTS
It shall be the obligation of the Condominium Association to maintain, repair, replace and keep in clean and orderly condition the Common Elements, including, without limitation, any improvements and/or structures (except public utilities) situated thereon. The Condominium Association may, in the discretion of the Board of Directors, assume additional maintenance responsibilities upon all or any portion of the Condominium Property or any property adjacent thereto. Such assumption will be governed by agreement with the applicable association, Owner and/or neighbor. Any and all costs incurred by the Condominium Association in performing any such maintenance, repair or replacement work shall be paid by the Owners in the form of Assessments.

Any common area of liability is under the HOA for responsibility.

Condominium docs will go to state after city approval of project. If you need any further information, please feel free to contact me.

Sincerely,

James B Mack

James R. Mack
As Agent for Shipra Sea Shore Development, LLC
LIV Condos
Cell #407.415.6000

Shipra Sea Shore Development, LLC
3102 County Road 89
Pearland, TX 77584

11/15/23

Ms. Noel Eaton
City Planner
City of Daytona Beach Shores
Department of Community Services

RE: **LIV Condos Site Plan Review Application**

Dear Noel,

On Site Plan Review Application page 3, line item 32:
Letter from the Developer representative stating location of construction parking for the duration of the project.

The property across the street with the following parcel numbers will be used as staging and construction parking.

S. Atlantic Ave and Dahlia #630205090010
Cardinal Boulevard and Dahlia #630205090020
Owned by SA 2011 LLC

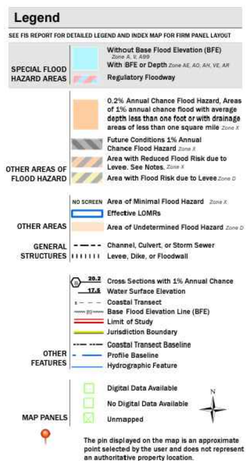
Designs for this property will be forthcoming.

Sincerely,

James R. Mack
As Agent for Shipra Sea Shore Development, LLC
LIV Condos
Cell #407.415.6000

INDEX OF SHEETS

SHEET #	DESCRIPTION	REVISIONS
C000	COVER SHEET	
C100	SITE DEVELOPMENT INFORMATION	
C200	EXISTING SITE CONDITIONS & CLEARING PLAN	
C201	FDOT TCP INDICES	
C300	EROSION & SEDIMENT CONTROL PLAN	
C301	EROSION CONTROL DETAILS & NOTES	
C302	STORMWATER POLLUTION PREVENTION PLAN	
C400	SITE GEOMETRY & LAYOUT PLAN	
C401	PAVEMENT MARKING & SIGNAGE PLAN	
C402	GARAGE LAYOUT PLAN	
C403	MISCELLANEOUS DETAILS & NOTES	
C404	VEHICULAR MANEUVER PLAN	
C500	SITE GRADING & DRAINAGE PLAN	
C501	SECTIONS, DETAILS & NOTES	
C600	SITE UTILITY PLAN	
C700	MISCELLANEOUS UTILITY DETAILS AND NOTES	
C701	CITY OF PORT ORANGE STANDARD DETAILS & NOTES	
C702	CITY OF PORT ORANGE STANDARD DETAILS & NOTES	
L100	LANDSCAPE PLAN	
L200	IRRIGATION PLAN	
L300	LANDSCAPE - IRRIGATION DETAILS AND NOTES	
SU-1	BOUNDARY & TOPOGRAPHIC SURVEY (1 OF 4)	
SU-2	BOUNDARY & TOPOGRAPHIC SURVEY (2 OF 4)	
SU-3	BOUNDARY & TOPOGRAPHIC SURVEY (3 OF 4)	
SU-4	BOUNDARY & TOPOGRAPHIC SURVEY (4 OF 4)	
A-1	OVERALL FIRST FLOOR PLAN	
A-2	GARAGE PLAN	
A-3	FIRST FLOOR PLAN	
A-4	SECOND TYPICAL FLOOR PLAN	
A-10	WEST ELEVATION	
A-11	SOUTH ELEVATION	
A-12	NORTH ELEVATION	
A-13	EAST ELEVATION	
A-16	PERSPECTIVE RENDERINGS	
A-17	FRONT AND REAR RENDERINGS	



FLOOD ZONE:

NOT TO SCALE

CONSTRUCTION DRAWINGS FOR

LIV CONDOMINIUM

MULTI-FAMILY RESIDENTIAL DEVELOPMENT
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA 32118
SECTION 2, TOWNSHIP 16 SOUTH, RANGE 33 EAST

NOVEMBER 07, 2023
REVISED DECEMBER 13, 2023

AERIAL PHOTO & LOCATION MAP

500 250 0 500

GRAPHIC SCALE: 1" = 500'

JURISDICTIONAL AGENCIES / PERMIT No.

CITY OF DAYTONA BEACH SHORES (DEVELOPMENT ORDER)	12023053
VOLUSIA COUNTY (USE PERMIT)	2023-P-USE-0379
VOLUSIA COUNTY (TURTLE LIGHTING)	-
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (CCCL)	-
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (10-2)	-

BEACH AND DUNE ASSESSMENT STATEMENT:

THERE IS NO EXISTING DUNE OR VEGETATED MATERIAL SYSTEM ADJACENT TO OR NEAR THE SITE LOCATION. THE MATERIAL SYSTEM WAS DESTROYED DUE TO THE 2022 HURRICANE EVENTS. THE EXISTING SEAWALLS ALONG THE SITE LOCATION WERE UNDERMINED AND DESTROYED. NEW SEAWALLS ARE BEING CONSTRUCTED BY THE LANDOWNERS TO PREVENT FUTURE FAILURES AND WAVE SCOUR. THE PROPOSED CONDOMINIUM AND POOL WILL BE CONSTRUCTED ON DEEP PILINGS FOR STRUCTURAL INTEGRITY.

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

THE GENERAL CONTRACTOR SHALL ENSURE THAT ANY SUBCONTRACTOR HAS A COMPLETE SET OF CONSTRUCTION DRAWINGS FOR ITS RESPECTIVE WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR SUBCONTRACTORS ONLY UTILIZING INDIVIDUAL DRAWINGS FOR ITS WORK WHERE ADDITIONAL INFORMATION MAY BE CONTAINED ON OTHER DRAWINGS WITHIN THE SET.

PROJECT DESCRIPTION:

REDEVELOPMENT OF AN EXISTING SIX RESIDENTIAL UNIT RENTAL COMMUNITY FOR A PROPOSED MULTI-FAMILY DEVELOPMENT CONSISTING OF A 16-STORY, 74 UNIT CONDOMINIUM WITH AT GRADE AND UNDERGROUND PARKING, POOL DECK AND RECREATIONAL AREAS WITHIN A 1.26 ACRE PARCEL.

TRAFFIC STATEMENT:

A TRIP GENERATION ANALYSIS WAS PERFORMED BY WALSH TRAFFIC ENGINEERING, REVISED DATE DECEMBER 6, 2023, FOR THE PROPOSED CONDOMINIUM, ITE CODE 222. THE DAILY TRIP NEW NET INCREASE IS 255 TRIPS. THE NEW NET AM AND PM PEAK HOUR TRIPS ARE 15 AND 18 TRIPS RESPECTIVELY.

LEGAL DESCRIPTION:

ALL OF LOTS 3, 4, 5 AND 6, BLOCK 4, OF OCEAN VIEW SECTION OF HALIFAX ESTATES, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGE 100, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF LOT 1, BLOCK 4, OF OCEAN VIEW SECTION OF HALIFAX ESTATES, ALSO BEING A POINT ON THE EASTERLY RIGHT-OF-WAY LINE FOR ATLANTIC AVENUE, AN 80.00 FOOT RIGHT-OF-WAY IN WIDTH, THENCE ALONG SAID EASTERLY RIGHT-OF-WAY, S25°33'36"E FOR A DISTANCE OF 100.00 FEET TO THE NORTHWEST CORNER OF LOT 3, OF SAID BLOCK 4 AND THE POINT OF BEGINNING; THENCE N63°51'45"E FOR A DISTANCE OF 273.02 FEET; THENCE S26°15'09"E FOR A DISTANCE OF 199.99 FEET; THENCE S63°51'45"E FOR A DISTANCE OF 275.44 FEET TO THE SOUTHWEST CORNER OF LOT 6, OF SAID BLOCK 4 AND A POINT ON THE SAID EASTERLY RIGHT-OF-WAY LINE FOR ATLANTIC AVENUE; THENCE ALONG SAID EASTERLY RIGHT-OF-WAY LINE, N25°33'36"W FOR A DISTANCE OF 200.00 FEET TO THE POINT OF BEGINNING.

THE ABOVE PARCEL CONTAINS 1.26 ACRES, MORE OR LESS.

TAX PARCEL NOS. 63-02-05-04-0030 AND 63-02-05-04-0060

DEVELOPMENT CONTACTS:

LANDOWNER:
SA2011, LLC
4701 SAN JACINTO STREET
HOUSTON, TX 77004

DEVELOPER:
SHIPRA SEA SHORE DEVELOPMENT, LLC
3102 COUNTY ROAD 89
PEARLAND, TX 77584

ENGINEER / LANDSCAPE / SURVEYOR:
UPHAM, INC.
265 KENILWORTH AVENUE
ORMOND BEACH, FL 32174
ROGER W. STRCULA, PE, CPESC
PHONE: 386.672.9515

ARCHITECT:
LARRY W. ROBINSON, ARCHITECT
414 NORTH HALIFAX AVENUE
DAYTONA BEACH, FL 32118
PHONE: 386.252.0429

GEOTECHNICAL / ENVIRONMENTAL:
ECS FLORIDA, LLC
2330 S. NOVA ROAD, SUITE A
SOUTH DAYTONA 32119
PHONE: 386.232.9489

UTILITY SERVICE PROVIDERS:

SEWER:
CITY OF DAYTONA BEACH SHORES UTILITY DEPT.
1990 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FL 32118
PHONE: 386.763.7578

WATER:
CITY OF PORT ORANGE PUBLIC UTILITY
1395 DUNLAWTON AVE
PORT ORANGE, FL 32129
PHONE: 386.506.5750

ELECTRIC:
FLORIDA POWER & LIGHT
3000 SPRUCE CREEK RD
PORT ORANGE, FL 32119
PHONE: 386.322.3425

TELEPHONE:
AT&T
1500 HERBERT ST
PORT ORANGE, FL 32129
PHONE: 386.679.8087

GAS:
TECO
1722 RIDGEWOOD AVE
HOLLY HILL, FL 32117
352.671.4564

NOTE: CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE CITY OF DAYTONA BEACH SHORES AND CITY OF PORT ARANGE UTILITY DEPARTMENTS, 2 WEEKS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO ANY MATERIALS BEING DELIVERED ON-SITE.

Sunshine 811
Always call 811 before you dig

VOLUSIA COUNTY TRAFFIC ENGINEERING IS NOT A MEMBER OF SUNSHINE ONE CALL. ALL TRAFFIC SIGNAL LOCATES SHALL BE REQUESTED FROM TRAFFIC ENGINEERING AT (386) 736-5926.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRCULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

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UPHAM INC
CIVIL ENGINEERING•SURVEYING•LANDSCAPE ARCHITECTURE
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Voice: 386.672.9515 • Fax: 386.673.6554 • uphaminc.com
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COVER SHEET

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:

C000

GENERAL CONSTRUCTION NOTES:

1. GOVERNING SPECIFICATIONS: CITY OF DAYTONA BEACH SHORES LAND DEVELOPMENT CODE, CITY OF PORT ORANGE STANDARD UTILITY CONSTRUCTION DETAILS AND SPECIFICATIONS, VOLUSIA COUNTY PUBLIC SERVICES, FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN AND CONSTRUCTION STANDARDS, LATEST EDITION, AND STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, LATEST EDITION, AND SUPPLEMENTS THERETO IF NOTED IN THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. ALL UTILITY MATERIAL, CONSTRUCTION AND TESTING COVERED BY THESE DRAWINGS SHALL COMPLY WITH THE CITY OF DAYTONA BEACH SHORES CONSTRUCTION DETAILS AND SPECIFICATIONS, LATEST EDITION.
3. THE CONTRACTOR SHALL PAY FOR AND OBTAIN A BUILDING PERMIT. THE ENGINEER WILL SCHEDULE THE PRECONSTRUCTION CONFERENCE BEFORE THE CONTRACTOR'S START OF WORK. THE CONTRACTOR SHALL CONTACT THE BUILDING DEPARTMENT AT tbd FOR INFORMATION ON ISSUANCE OF CITY PERMITS AND / OR OTHER REQUIREMENTS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR DISCREPANCIES AMONG THE DIVISIONS OF THE DRAWING AND SPECIFICATIONS PRIOR TO THE BID DATE. NEITHER THE OWNER OR ENGINEER WILL BE RESPONSIBLE FOR ANY DEFICIENCIES OR DISCREPANCIES RAISED AFTER THE BID OPENING. ACCORDINGLY, IN LIGHT OF THESE OBLIGATIONS, THE ENGINEER IS OBLIGATED TO INTERPRET THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT WILL PROVIDE THE OWNER WITH A COMPLETE, FUNCTIONING FACILITY FOR THE BID PRICE.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY EXAMINE THE CONSTRUCTION DRAWINGS AND ENSURE THAT EACH TRADE OR SUBCONTRACTOR IS MAKING THE ALLOWANCES NECESSARY TO PROVIDE THE OWNER A COMPLETE FACILITY, OPERATIONAL IN ALL RESPECTS, UNLESS OTHERWISE SPECIFICALLY STATED IN THE CONSTRUCTION DRAWINGS.
6. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INSTRUCTING THE CONTRACTOR IN THE METHODS OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE METHOD TO CONSTRUCT THE IMPROVEMENTS AS SHOWN ON THE PLANS.
7. MEASURES SHALL BE IMPLEMENTED AT THE CONTRACTOR'S DISCRETION TO VISIBLY BARRICADE THE WORK AREA AND PROVIDE SAFE MEANS OF INGRESS AND EGRESS AROUND THE CONSTRUCTION SITE.
8. LITTER CONTROL MEASURES TO PREVENT WIND-DRIVEN DEBRIS SHALL BE IMPLEMENTED THROUGHOUT THE DURATION OF CONSTRUCTION, ALL DEBRIS SHALL BE REMOVED AND THE PROJECT SITE CLEANED IMMEDIATELY AT THE COMPLETION OF CONSTRUCTION ACTIVITIES AND BE INSPECTED BY THE ENGINEER FOR ITS APPROVAL.
9. AT NO TIME SHALL EXCAVATIONS BE LEFT UNCOVERED AFTER WORKING HOURS. CONTRACTOR SHALL SECURE THE WORK AREA AT THE END OF EACH DAY'S WORK.
10. AT ALL TIMES, THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT UNDERGROUND UTILITIES, STRUCTURES AND OTHER ASSOCIATED FACILITIES FROM DAMAGE DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEASURES OF PROTECTION. ANY DAMAGED FACILITIES SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE COUNTY OR ENGINEER AT THE CONTRACTORS EXPENSE.
11. THERE SHALL BE NO DEVIATIONS FROM THESE DRAWINGS UNLESS APPROVED IN WRITING BY THE ENGINEER AND THE OWNER.
12. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
13. CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COST.
14. FILL MATERIAL SHALL BE CLASSIFIED AS A-1, A-3 OR A-1-4 IN ACCORDANCE WITH AASHTO M-145 AND SHALL BE FREE FROM VEGETATION AND ORGANIC MATERIAL. NOT MORE THAN 12% BY WEIGHT OF FILL MATERIAL SHALL PASS THE NO. 200 SIEVE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED MATERIAL TEST RESULTS TO THE ENGINEER OF THE RECORD PRIOR TO THE RELEASE OF FINAL CERTIFICATION BY THE ENGINEER, TEST RESULTS MUST INCLUDE, BUT MAY NOT BE LIMITED TO, DENSITIES FOR SUBGRADE AND BASE DENSITIES AT UTILITY CROSSINGS, MANHOLES, INLETS, STRUCTURES. TEST SHALL INCLUDE ASPHALT GRADATION REPORTS, CONCRETE CYLINDERS, ETC.
16. WHERE NEW ASPHALT MEETS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.
17. PRIOR TO REMOVING CURB OR GUTTER, THE ADJACENT ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.
18. ALL PROPOSED ELEVATIONS REFER TO FINISHED GRADES.
19. CORE TESTS SHALL BE TAKEN TO VERIFY THICKNESS AND SUBSURFACE COMPACTION. PROVIDE FOR THREE SAMPLES, RANDOMLY LOCATED. TEST FOR EXTRACTION, GRADATION, LABORATORY DENSITY, AND MARSHALL'S STABILITY. PROVIDE A CERTIFICATE FROM THE TESTING AGENCY THAT MATERIALS AND INSTALLATION COMPLY WITH SPECIFICATIONS, SIGNED BY THE ASPHALTIC CONCRETE PRODUCER AND CONTRACTOR. ALL COSTS OF TESTS SHALL BE PAID BY THE CONTRACTOR. IF TESTS SHOW THE INSTALLATION DOES NOT MEET SPECIFICATIONS, THE PAVING SHALL BE REMOVED, REPLACED, AND RETESTED.
20. IF ANY CLAY-LIKE MATERIAL IS DISCOVERED, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH APPROPRIATE FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
21. THE CONTRACTOR SHALL ADHERE TO THE RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT FOR THE SITE AND BUILDING PREPARATIONS.
22. NO BURYING OF ANY ORGANIC OR CLAYEY MATERIALS ALLOWED WITHIN THE SITE BOUNDARY. THE CONTRACTOR SHALL EMPLOY A GEOTECHNICAL FIRM TO INSPECT AND MONITOR THE EARTHWORK AND MATERIALS TESTING.
23. THE CONTRACTOR SHALL ONLY UTILIZE A CITY OF DAYTONA BEACH SHORES APPROVED ROLL OFF DUMPSTER FROM ITS APPROVED LIST FOR CONSTRUCTION DEBRIS.

ABBREVIATIONS:

A/C	AIR CONDITIONING	FH	FIRE HYDRANT	No.	NUMBER
AC	ACRES	FL	FLORIDA	NSPS	NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
ALTA	AMERICAN LAND TITLE ASSOCIATION	FM	FORCE MAIN	ORB	OFFICIAL RECORD BOOK
ADA	AMERICAN DISABILITY ACT	FOC	FIBER-OPTIC CABLE	(P)	REFERS TO PLAT OF RECORD
AWWA	AMERICAN WATER WORKS ASSOCIATION	FPD	FEET PER DAY	PC	POINT OF CURVE
BLDG	BUILDING	FP&L	FLORIDA POWER & LIGHT	PCC	POINT OF COMPOUND CURVE
BTM	BOTTOM	FWS	FLUSH WITH SIDEWALK	PCP	PERMANENT CONTROL POINT
(C)	CALCULATED	GNSS	GLOBAL NAVIGATION SATELLITE SYSTEM	PG(S)	PAGE(S)
CA	CENTRAL ANGLE	GW	GROUND WATER	POC	POINT ON CURVE
CH	CHORD LENGTH	HDPE	HIGH DENSITY POLYETHYLENE PIPE	PRC	POINT OF REVERSE CURVE
CHB	CHORD BEARING	ID	IDENTIFICATION	PRM	PERMANENT REFERENCE MONUMENT
CMP	CORRUGATED METAL PIPE	INV	INVERT ELEVATION	PSI	POUNDS PER SQUARE INCH
CPP	CORRUGATED PLASTIC PIPE	K_H	HORIZONTAL PERMEABILITY	PSM	PROFESSIONAL SURVEYOR AND MAPPER
CONC	CONCRETE	K_V	VERTICAL PERMEABILITY	PT	POINT OF TANGENCY
CR	COUNTY ROAD	KO	KNOCK OUT	PVC	POLYVINYL CHLORIDE
(D)	DESCRIPTION OR DEED	L	LENGTH	R	RADIUS
DIP	DUCTILE IRON PIPE	LB	LICENSED BUSINESS	RCP	REINFORCED CONCRETE PIPE
FD	FOUND	LC	LICENSED CORPORATION	RLS	REGISTERED LAND SURVEYOR
EL	ELEVATION	LF	LINEAL FEET	R/W	RIGHT-OF-WAY
EOP	EDGE OF PAVEMENT	LLC	LIMITED LIABILITY COMPANY	SF	SQUARE FEET
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	LS	LICENSED SURVEYOR	SHW	SEASONAL HIGH WATER
ESMT	EASEMENT	(M)	FIELD MEASURED	SR	STATE ROAD
FAC	FLORIDA ADMINISTRATIVE CODE	MB	MAP BOOK	STY	STORY
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	MES	MITERED-END SECTION	SP	STATE PLANE
FDNR	FLORIDA DEPARTMENT OF NATURAL RESOURCES	MJ	MECHANICAL JOINT	SJRWMD	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	MPH	MILES PER HOUR	TELECOM	TELECOMMUNICATIONS
FFE	FINISH FLOOR ELEVATION	N/A	NOT APPLICABLE	TOP	TOP OF PIPE
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	NIC	NOT IN CONTRACT	TYP	TYPICAL
FIRM	FLOOD INSURANCE RATE MAP	NAD83	NORTH AMERICAN DATUM OF 1983	US	UNITED STATES
		NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988	USACOE	UNITED STATES ARMY CORP OF ENGINEERS
		NGVD29	NATIONAL GEODETIC VERTICAL DATUM OF 1929	VCP	VITRIFIED CLAY PIPE

SITE DEVELOPMENT NOTES:

1. THE PROJECT IS ZONED IS "RMF-1" AND THE MAXIMUM DENSITY IS 60 DWELLING UNITS PER ACRE.
2. THE PROJECT SITE CONSISTS AN EXISTING EXISTING SIX RESIDENTIAL UNIT RENTAL COMMUNITY.
4. FLOOD PLAIN CERTIFICATION ACCORDING TO THE FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) F.I.R.M (FEDERAL INSURANCE RATE MAP), MAP NUMBER 12127C0389J, COMMUNITY: CITY OF DAYTONA BEACH SHORES, DATED: SEPTEMBER 29, 2017. THE PROPERTY IS IN FLOOD ZONE "X" AND ZONE "VE" WITH A BASED FLOOD ELEVATION OF 10.0 FEET
3. DEVELOPMENT INFORMATION:

SITE COVERAGE	(SF)	PROPOSED (AC)	(%)
BUILDING (AT 1ST FLOOR)	6,798	0.15	12.3
GARAGE DECK	29,978	0.69	54.8
PAVEMENT	701	0.02	1.2
CONCRETE CURB & MISC.	4,056	0.09	7.4
OPEN SPACE	13,310*	0.31	24.3
PROJECT AREA	54,843	1.26	100.0
TOTAL IMPERVIOUS AREA	41,533	0.95	75.7

MULTI-FAMILY DENSITY = 74 DWELLING UNITS (DU) / 1.26 ACRES (AC) = 58.7 DU/AC

*OPEN SPACE INCLUDES A MAXIMUM OF 3,500 SF ALLOWED FOR POOL, POOL DECK AND LANDSCAPE PLANTERS, SEE TABLE ON SHEET C400

5. PROPOSED BUILDING DATA

AVG. ELEV. AT GARAGE DECK	= 22.00 FT
GARAGE ELEV.	= 12.00 FT
TOP OF BUILDING	= 174.06 FT
BUILDING HEIGHT	= 152.06 FT

6. PARKING TABULATION

PARKING REQUIRED:
74 UNITS x 1.5 SPC / UNIT = 111 (107 STANDARD & 4 ADA)

LOADING REQUIRED:
(2) 12' X 40' LOADING SPACES

BICYCLE REQUIRED
5 RACKS

PARKING SPACES PROVIDED:
ABOVE GROUND = 34 (32 STANDARD & 2 ADA)
BELOW GROUND = 78 (74 STANDARD & 4 ADA)
TOTAL = 112 (107 STANDARD & 5 ADA)

LOADING SPACES PROVIDED:
(2) 12' X 40' LOADING SPACES

BICYCLE PROVIDED
5 RACKS

7. BUILDING SETBACKS

	REQUIRED BUILDING	REQUIRED GARAGE	REQUIRED BUFFER	PROVIDED BUILDING	PROVIDED GARAGE	PROVIDED BUFFER
FRONT (S. ATLANTIC AVE)	50 FEET	15 FEET	15 FEET	58.39 FEET	15.00 FEET	15 FEET
SIDE (NORTH)	56.6 FEET	10 FEET	10 FEET	57.12 FEET	10.00 FEET	10 FEET
SIDE (SOUTH)	56.6 FEET	10 FEET	10 FEET	56.54 FEET	10.10 FEET	10 FEET
REAR (ATLANTIC OCEAN)	50 FEET	50 FEET	N/A	53.80 FEET	53.80 FEET	N/A

8. THE POTABLE WATER AND WASTEWATER UTILITY SERVICE WILL BE PROVIDED BY THE CITY OF PORT ORANGE.
9. RECLAIM WATER IS NOT AVAILABLE. IRRIGATION WILL BE PROVIDED BY 2 INCH DOMESTIC SERVICE CONNECTION.
10. EXISTING SITE INFORMATION PER BOUNDARY & TOPOGRAPHIC SURVEY PERFORMED BY UPHAM, INC., PROJECT No. 230606, DATED OCTOBER 10, 2023, NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
11. SOLID WASTE AND RECYCLABLE MATERIAL WILL BE CONTAINED WITHIN SOLID WASTE COMPACTOR ON SITE AND COLLECTED BY WASTE PRO. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN A DUMPSTER AND PAY PICK-UP CHARGES DURING CONSTRUCTION.
12. A PHASE 1 ESA WAS PERFORMED BY ECS FLORIDA, LLC., PROJECT NO. 55:6163, DATED OCTOBER 31, 2023 IN ACCORDANCE WITH ASTM E 1527-21. ONE MATERIAL WAS FOUND TO CONTAIN ASBESTOS IN BLACK MASTIC. REFER TO REPORT FOR RECOMMENDATION FOR REMOVAL AND DISPOSAL OF THE MATERIAL.
13. A GEOTECHNICAL INVESTIGATION WAS PERFORMED BY ECS FLORIDA, LLC., PROJECT NO. 56:1792, DATED NOVEMBER 2, 2023. THE REPORT SHALL BE INCLUDED AS PART OF THE CONSTRUCTION DOCUMENTS FOR RECOMMENDATIONS OF CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY A GEOTECHNICAL FIRM FOR TESTING DURING CONSTRUCTION.
13. A PREDEMOLITION ASBESTOS AND LEAD PAINT SCREENING INVESTIGATION WAS PERFORMED BY ECS FLORIDA, LLC., PROJECT NO. 55:6136A, DATED NOVEMBER 11, 2023. REFER TO REPORT FOR RECOMMENDATION FOR REMOVAL AND DISPOSAL OF THE MATERIAL

LEGEND:

NOTE: NOT ALL SYMBOLS SHOWN HERE MAY BE APPLICABLE TO THESE DRAWINGS, ALSO THERE MAY BE ADDITIONAL SYMBOLS WITHIN PLANS NOT SHOWN HERE, SEE INDIVIDUAL DRAWING LEGEND WHERE APPLICABLE.

- EXISTING ELEVATION (SOFT)
- EXISTING ELEVATION (HARD)
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING FLOW DIRECTION
- PROPOSED FLOW DIRECTION
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GUY WIRE & ANCHOR PIN
- EXISTING MAIL BOX
- EXISTING MANHOLE (UNKNOWN)
- PROPOSED MANHOLE
- EXISTING SANITARY SEWER CLEANOUT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING ROAD SIGNS AND POSTS
- PROPOSED SIGN AND POST
- EXISTING TEE
- EXISTING UTILITY POLE
- EXISTING VALVE IRRIGATION
- EXISTING VALVE WATER
- PROPOSED WATER VALVE
- EXISTING WATER METER
- EXISTING STORM SEWER WITH INLET
- PROPOSED STORM SEWER WITH INLET
- PROPOSED SITE LIGHT POLES AND FIXTURES
- PROPOSED BACTERIOLOGICAL TEST POINT
- FOUND IRON ROD AND CAP (AS NOTED)
- FOUND CONCRETE MONUMENT (AS NOTED)
- EXISTING CAP OR PLUG
- EXISTING CLEAN OUT
- EXISTING CONDUIT RISER/ MARKER
- EXISTING ELECTRIC METER
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC CABLE
- EXISTING UNDERGROUND ELECTRIC CONDUIT/CABLE
- EXISTING UNDERGROUND FIBER OPTIC CABLE
- EXISTING FORCE MAIN (# INDICATES SIZE)
- EXISTING GAS MAIN (# INDICATES SIZE)
- EXISTING RECLAIM WATER MAIN (# INDICATES SIZE)
- EXISTING SANITARY SEWER (# INDICATES SIZE)
- EXISTING WATER MAIN (# INDICATES SIZE)
- EXISTING UNDERGROUND TELEPHONE CABLE
- EXISTING UNDERGROUND TELEVISION CABLE
- EXISTING OVERHEAD TRAFFIC SIGNAL CABLE
- PROPOSED SANITARY SEWER (# INDICATES SIZE)
- PROPOSED WATER MAIN (# INDICATES SIZE)
- EXISTING TOP OF DITCH BANK
- EXISTING BOTTOM OF DITCH BANK
- EXISTING WOOD FENCE
- EXISTING WIRE OR CHAIN LINK FENCE
- PROPOSED WIRE OR CHAIN LINK FENCE
- PROPOSED SEDIMENT FENCE
- PROPOSED VISI-BARRIER
- EXISTING CONTOUR
- PROPOSED CONTOUR (SOFT)
- PROPOSED CONTOUR (HARD)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS - 2023 AND QUALIFIED PRODUCTS LIST

INDEX NO.	DESCRIPTION	INDEX NO.	DESCRIPTION
570-001	PERMANENT EROSION CONTROL	102-600	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES
425-021	CURB INLET TOPS - TYPE 5 AND 6	102-613	MULTI-LANE, WORK WITHIN THE TRAVEL WAY - MEDIAN OR OUTSIDE LANE
425-052	DITCH BOTTOM INLET TYPES C, D, E AND H	102-660	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS
520-001	CURB AND GUTTER	700-101	TYPICAL SECTIONS FOR PLACEMENT OF SINGLE & MULTIPLE-COLUMN SIGNS
522-022	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	711-001	PAVEMENT MARKINGS
350-001	CONCRETE PAVEMENT JOINTS		
522-001	CONCRETE SIDEWALK		

VOLUSIA COUNTY UTILITY AND COMMERCIAL USE PERMITS NOTES (ONLY APPLICABLE TO S. ATLANTIC AVENUE)

1. CALL VOLUSIA COUNTY DEVELOPMENT ENGINEERING OFFICE AT (386) 736-5926 ONE BUSINESS DAY PRIOR TO BEGINNING ALL PERMITTED WORK OR REQUESTS FOR INSPECTIONS.
2. ALL ROAD CLOSURES, LANE CLOSURES, AND SIDEWALK CLOSURES REQUIRE MOT PLAN REVIEW AND APPROVAL WITH 7 DAY ADVANCE NOTICE FROM VOLUSIA COUNTY TRAFFIC OPERATIONS AT (386) 239-6535 PRIOR TO ANY CLOSURES. MOT IS REQUIRED ON ALL JOBS.
3. ALL TRAFFIC AND PEDESTRIAN SIGNALS AND SURROUNDING AREAS "ARE NOT" A MEMBER OF SUNSHINE ONE CALL. LOCATES MUST BE REQUESTED AND LOCATED FROM VOLUSIA COUNTY TRAFFIC ENGINEERING AT (386) 736-5968.
4. NO DRIVING / STAGING OF ANY VEHICLE IS ALLOWED ON ANY SIDEWALKS. ANY DAMAGE TO SIDEWALKS SHALL BE REPAIRED / REPLACED WITH 6 INCH CONCRETE BY THE CONTRACTOR, SLOPE PER ADA STANDARDS.
5. NO TRENCH / EXCAVATIONS SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT WITHIN THE RIGHT OF WAY.
6. THE CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT-OF-WAYS.
7. CONTRACTOR IS RESPONSIBLE FOR PRE/POST CONSTRUCTION VIDEO/PHOTOS OF EXISTING SITE, ADJACENT LOTS AND RIGHT OF WAYS TO INCLUDE BUILDINGS, ROADWAYS, DRIVEWAYS, SIDEWALKS, DITCH SWALES, CULVERTS, AND ABOVE GROUND UTILITIES.
8. ALL SIDEWALK TRUNCATED DOMES MUST BE BRICK RED IN COLOR AND PLACED AS SHOWN ON THE LATEST FDOT INDEX 522-002.
9. ALL PAVEMENT STRIPING / MARKINGS SHALL BE THERMOPLASTIC AND SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH THE LATEST FDOT STANDARD INDEX.
10. REFLECTIVE PAVEMENT MARKERS (RPM'S) SHALL BE INSTALLED WITHIN THE LIMITS OF NEW PAVING AND INSTALLED IN ACCORDANCE TO THE LATEST FDOT STANDARD INDEX.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

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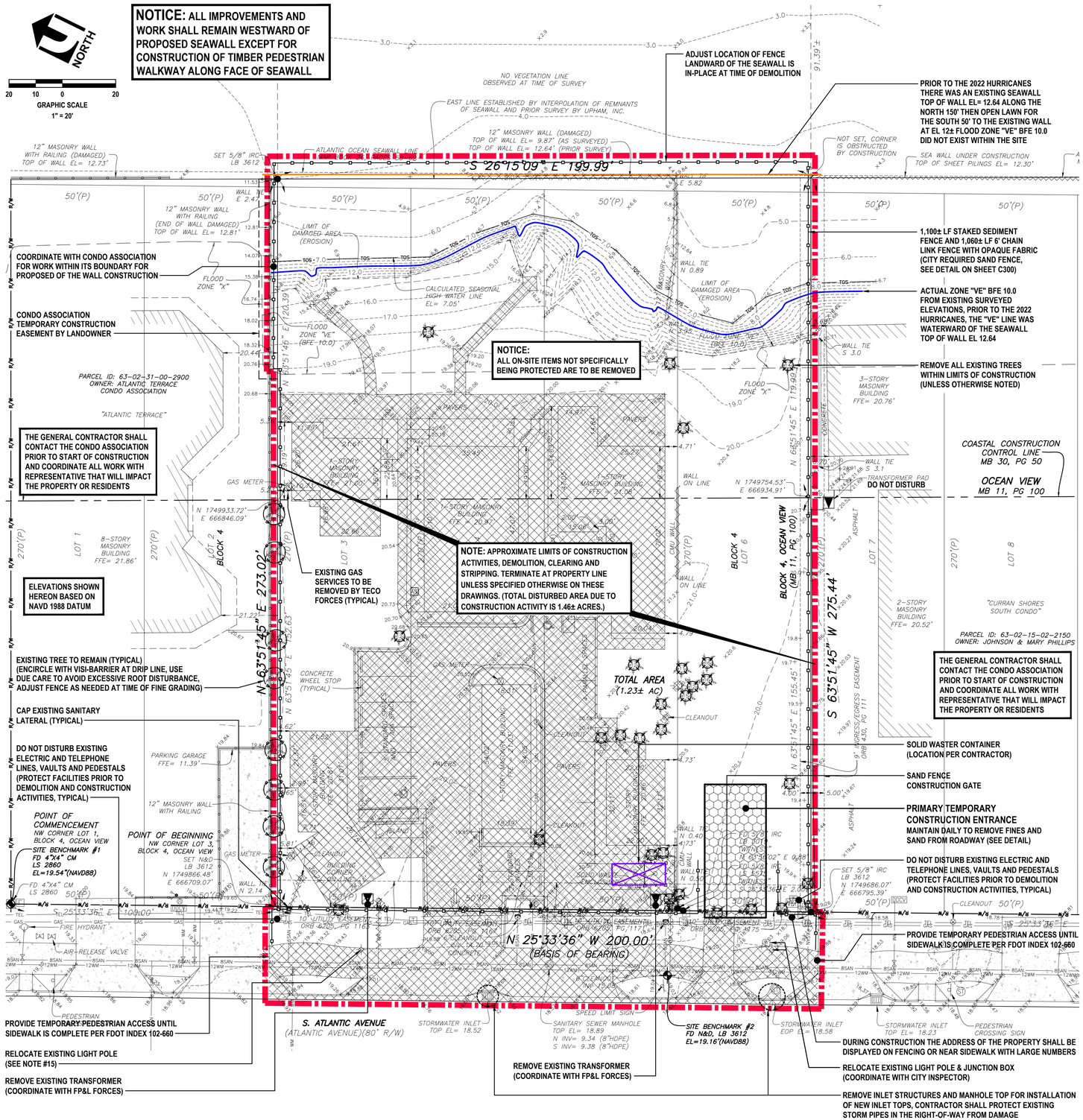
SITE DEVELOPMENT NOTES

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C100

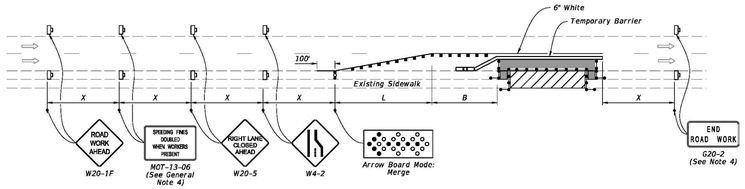

NOTICE: ALL IMPROVEMENTS AND WORK SHALL REMAIN WESTWARD OF PROPOSED SEAWALL EXCEPT FOR CONSTRUCTION OF TIMBER PEDESTRIAN WALKWAY ALONG FACE OF SEAWALL
NORTH
GRAPHIC SCALE 1" = 20'
ADJUST LOCATION OF FENCE LANDWARD OF THE SEAWALL IS IN-PLACE AT TIME OF DEMOLITION
PRIOR TO THE 2022 HURRICANES THERE WAS AN EXISTING SEAWALL TOP OF WALL EL= 12.64 ALONG THE NORTH 150' THEN OPEN LAWN FOR THE SOUTH 50' TO THE EXISTING WALL AT EL 12± FLOOD ZONE "VE" BFE 10.0 DID NOT EXIST WITHIN THE SITE
1,100± LF STAKED SEDIMENT FENCE AND 1,060± LF 6' CHAIN LINK FENCE WITH OPAQUE FABRIC (CITY REQUIRED SAND FENCE, SEE DETAIL ON SHEET C300)
ACTUAL ZONE "VE" BFE 10.0 FROM EXISTING SURVEYED ELEVATIONS, PRIOR TO THE 2022 HURRICANES, THE "VE" LINE WAS WATERWARD OF THE SEAWALL TOP OF WALL EL 12.64
REMOVE ALL EXISTING TREES WITHIN LIMITS OF CONSTRUCTION (UNLESS OTHERWISE NOTED)
NOTICE: ALL ON-SITE ITEMS NOT SPECIFICALLY BEING PROTECTED ARE TO BE REMOVED
NOTE: APPROXIMATE LIMITS OF CONSTRUCTION ACTIVITIES, DEMOLITION, CLEARING AND STRIPPING. TERMINATE AT PROPERTY LINE UNLESS SPECIFIED OTHERWISE ON THESE DRAWINGS. (TOTAL DISTURBED AREA DUE TO CONSTRUCTION ACTIVITY IS 1.46± ACRES.)
COORDINATE WITH CONDO ASSOCIATION FOR WORK WITHIN ITS BOUNDARY FOR PROPOSED OF THE WALL CONSTRUCTION
CONDO ASSOCIATION TEMPORARY CONSTRUCTION EASEMENT BY LANDOWNER
THE GENERAL CONTRACTOR SHALL CONTACT THE CONDO ASSOCIATION PRIOR TO START OF CONSTRUCTION AND COORDINATE ALL WORK WITH REPRESENTATIVE THAT WILL IMPACT THE PROPERTY OR RESIDENTS
ELEVATIONS SHOWN HEREON BASED ON NAVD 1988 DATUM
EXISTING GAS SERVICES TO BE REMOVED BY TECO FORCES (TYPICAL)
EXISTING TREE TO REMAIN (TYPICAL) (ENCIRCLE WITH VISI-BARRIER AT DRIP LINE, USE DUE CARE TO AVOID EXCESSIVE ROOT DISTURBANCE, ADJUST FENCE AS NEEDED AT TIME OF FINE GRADING)
CAP EXISTING SANITARY LATERAL (TYPICAL)
DO NOT DISTURB EXISTING ELECTRIC AND TELEPHONE LINES, VAULTS AND PEDESTALS (PROTECT FACILITIES PRIOR TO DEMOLITION AND CONSTRUCTION ACTIVITIES, TYPICAL)
PROVIDE TEMPORARY PEDESTRIAN ACCESS UNTIL SIDEWALK IS COMPLETE PER FDOT INDEX 102-660
RELOCATE EXISTING LIGHT POLE (SEE NOTE #15)
REMOVE EXISTING TRANSFORMER (COORDINATE WITH FP&L FORCES)
NOTICE: THE CONTRACTOR SHALL DETERMINE FINAL LOCATIONS OF THE CONSTRUCTION STAGING ITEMS, INCLUDING THE TRAILER, STOCKPILE AREAS, LAYDOWN, AND CONSTRUCTION PARKING WITH THE EROSION CONTROL INSPECTOR. LOCATIONS SHOWN HEREON ARE FOR INFORMATIONAL ONLY.
SOLID WASTER CONTAINER (LOCATION PER CONTRACTOR)
SAND FENCE CONSTRUCTION GATE
PRIMARY TEMPORARY CONSTRUCTION ENTRANCE
MAINTAIN DAILY TO REMOVE FINES AND SAND FROM ROADWAY (SEE DETAIL)
DO NOT DISTURB EXISTING ELECTRIC AND TELEPHONE LINES, VAULTS AND PEDESTALS (PROTECT FACILITIES PRIOR TO DEMOLITION AND CONSTRUCTION ACTIVITIES, TYPICAL)
PROVIDE TEMPORARY PEDESTRIAN ACCESS UNTIL SIDEWALK IS COMPLETE PER FDOT INDEX 102-660
DURING CONSTRUCTION THE ADDRESS OF THE PROPERTY SHALL BE DISPLAYED ON FENCING OR NEAR SIDEWALK WITH LARGE NUMBERS
RELOCATE EXISTING LIGHT POLE & JUNCTION BOX (COORDINATE WITH CITY INSPECTOR)
REMOVE INLET STRUCTURES AND MANHOLE TOP FOR INSTALLATION OF NEW INLET TOPS, CONTRACTOR SHALL PROTECT EXISTING STORM PIPES IN THE RIGHT-OF-WAY FROM DAMAGE
THE GENERAL CONTRACTOR SHALL CONTACT THE CONDO ASSOCIATION PRIOR TO START OF CONSTRUCTION AND COORDINATE ALL WORK WITH REPRESENTATIVE THAT WILL IMPACT THE PROPERTY OR RESIDENTS
S 26°15'09" E 199.99'
N 63°51'45" E 273.02'
S 63°51'45" W 275.44'
N 25°33'36" W 200.00' (BASIS OF BEARING)
TOTAL AREA (1.23± AC)
S. ATLANTIC AVENUE (ATLANTIC AVENUE)(80' R/W)
ATLANTIC OCEAN SEAWALL LINE
NO VEGETATION LINE OBSERVED AT TIME OF SURVEY
EAST LINE ESTABLISHED BY INTERPOLATION OF REMNANTS OF SEAWALL AND PRIOR SURVEY BY UPHAM, INC.
12" MASONRY WALL (DAMAGED) TOP OF WALL EL= 9.87' (AS SURVEYED) TOP OF WALL EL= 12.64' (PRIOR SURVEY)
12" MASONRY WALL WITH RAILING (DAMAGED) TOP OF WALL EL= 12.73'
12" MASONRY WALL WITH RAILING (END OF WALL DAMAGED) TOP OF WALL EL= 12.81'
SET 5/8" IRC LB 3612
NOT SET, CORNER IS OBSTRUCTED BY CONSTRUCTION
SEA WALL UNDER CONSTRUCTION TOP OF SHEET PILINGS EL= 12.30'
LIMIT OF DAMAGED AREA (EROSION)
CALCULATED SEASONAL HIGH WATER LINE EL= 7.05'
FLOOD ZONE "VE" (BFE 10.0)
FLOOD ZONE "X"
PARCEL ID: 63-02-31-00-2900 OWNER: ATLANTIC TERRACE CONDO ASSOCIATION
"ATLANTIC TERRACE"
8-STORY MASONRY BUILDING FFE= 21.86'
4-STORY MASONRY BUILDING FFE= 21.00'
3-STORY MASONRY BUILDING FFE= 20.76'
3-STORY MASONRY BUILDING FFE= 20.32'
2-STORY MASONRY BUILDING FFE= 20.52'
PARKING GARAGE FFE= 11.39'
COASTAL CONSTRUCTION CONTROL LINE MB 30, PG 50
OCEAN VIEW MB 11, PG 100
TRANSFORMER PAD DO NOT DISTURB
BLOCK 4, OCEAN VIEW (MB 11, PG 100)
"CURRAN SHORES SOUTH CONDO"
PARCEL ID: 63-02-15-02-2150 OWNER: JOHNSON & MARY PHILLIPS
POINT OF COMMENCEMENT NW CORNER LOT 1, BLOCK 4, OCEAN VIEW
SITE BENCHMARK #1 FD 4"X4" CM LS 2860 EL=19.54'(NAVD88)
POINT OF BEGINNING NW CORNER LOT 3, BLOCK 4, OCEAN VIEW SET N&D LB 3612 N 1749866.48' E 666709.07'
SITE BENCHMARK #2 FD N&D, LB 3612 EL=19.16'(NAVD88)
10' UTILITY EASEMENT ORB 6205, PG 1161
ORB 6205, PG 1161
ORB 6205, PG 1161

NOTES:

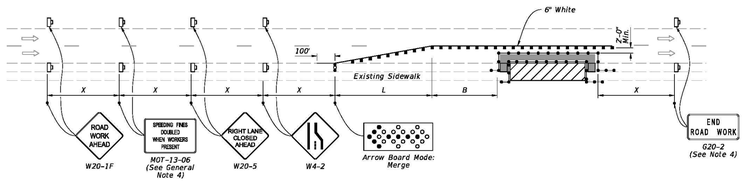
1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", channelizing device spacing values.
2. Provide a 5' wide temporary pedestrian way with a maximum cross-slope of 0.02, except where space restrictions warrant a minimum width of 4'. Provide 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 (MOT-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:

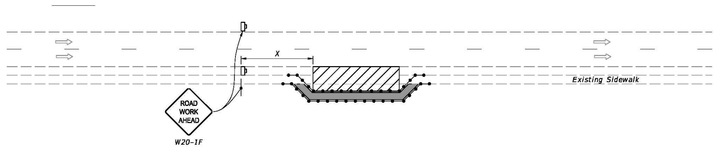
- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic



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

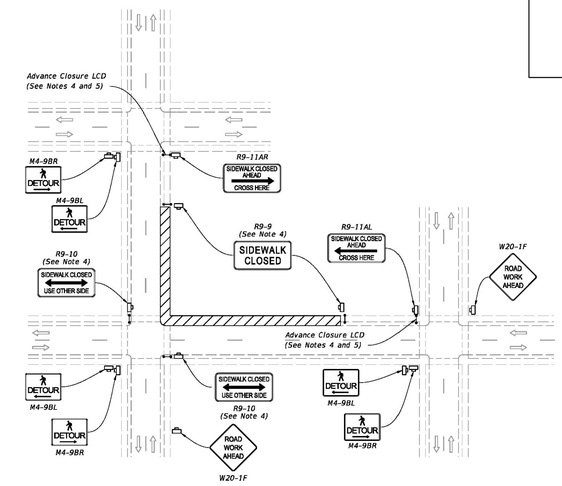
LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	SIDEWALK CLOSURE	INDEX 102-660	SHEET 2 of 2

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-XX) 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).

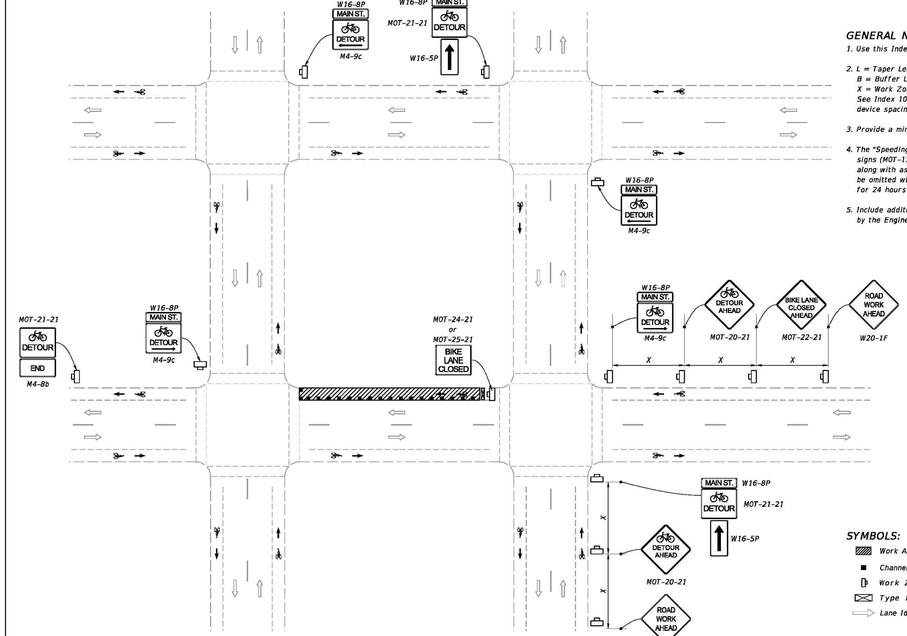
SYMBOLS:

- Work Area
- Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Lane Identification and Direction of Traffic



PEDESTRIAN DETOUR

LAST REVISION 11/01/20	REVISION	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	SIDEWALK CLOSURE	INDEX 102-660	SHEET 1 of 2



BICYCLE DETOUR

GENERAL NOTES:

1. Use this Index only when called for in the Plans.
2. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", channelizing device spacing values.
3. Provide a minimum 5'-0" wide bicycle path.
4. The "Speeding Fines Doubled When Workers Present" signs (MOT-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. Include additional signage at intersections as required by the Engineer or shown in the Plans.

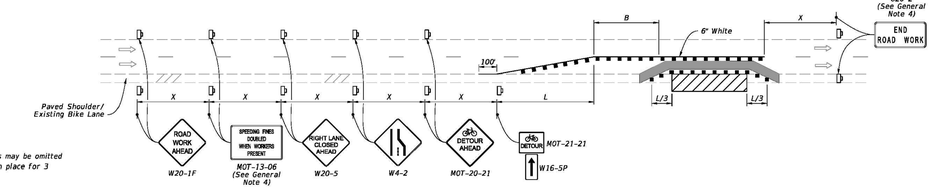
SYMBOLS:

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

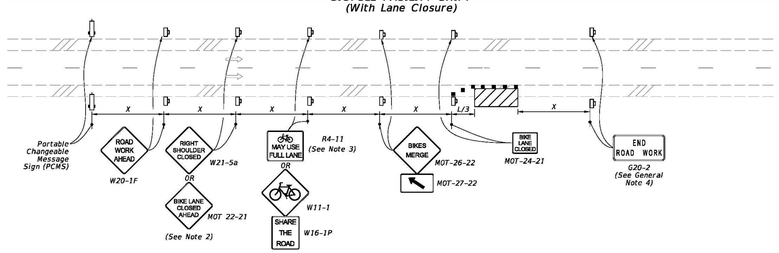
LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	BICYCLE FACILITY CLOSURES	INDEX 102-661	SHEET 1 of 2

NOTES:

1. Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
2. If the Closed Bicycle Facility is a marked bicycle lane, use sign MOT 22-21 instead of sign W21-5a.
3. If the travel lane is less than 14' wide, use sign R4-11.



BICYCLE FACILITY SHIFT
(With Lane Closure)



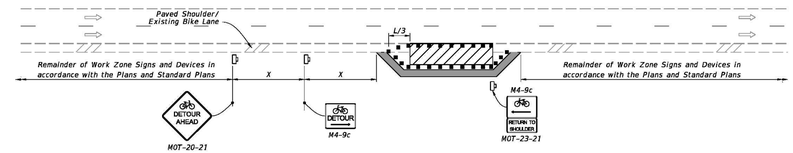
SYMBOLS:

- Work Area
- Temporary Bicycle Way
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Arrow Board
- Lane Identification and Direction of Traffic
- (1) PCMS=Portable Changeable (Variable) Message Sign

TYPICAL PCMS DISPLAY:

Message 1: BIKE FACILITY CLOSED
Message 2: BICYCLES ON ROAD

BICYCLE FACILITY SHIFT
(Work Zone Speed of 35 mph or Less)



BICYCLE SPECIAL DETOUR

LAST REVISION 11/01/21	REVISION	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	BICYCLE FACILITY CLOSURES	INDEX 102-661	SHEET 2 of 2

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

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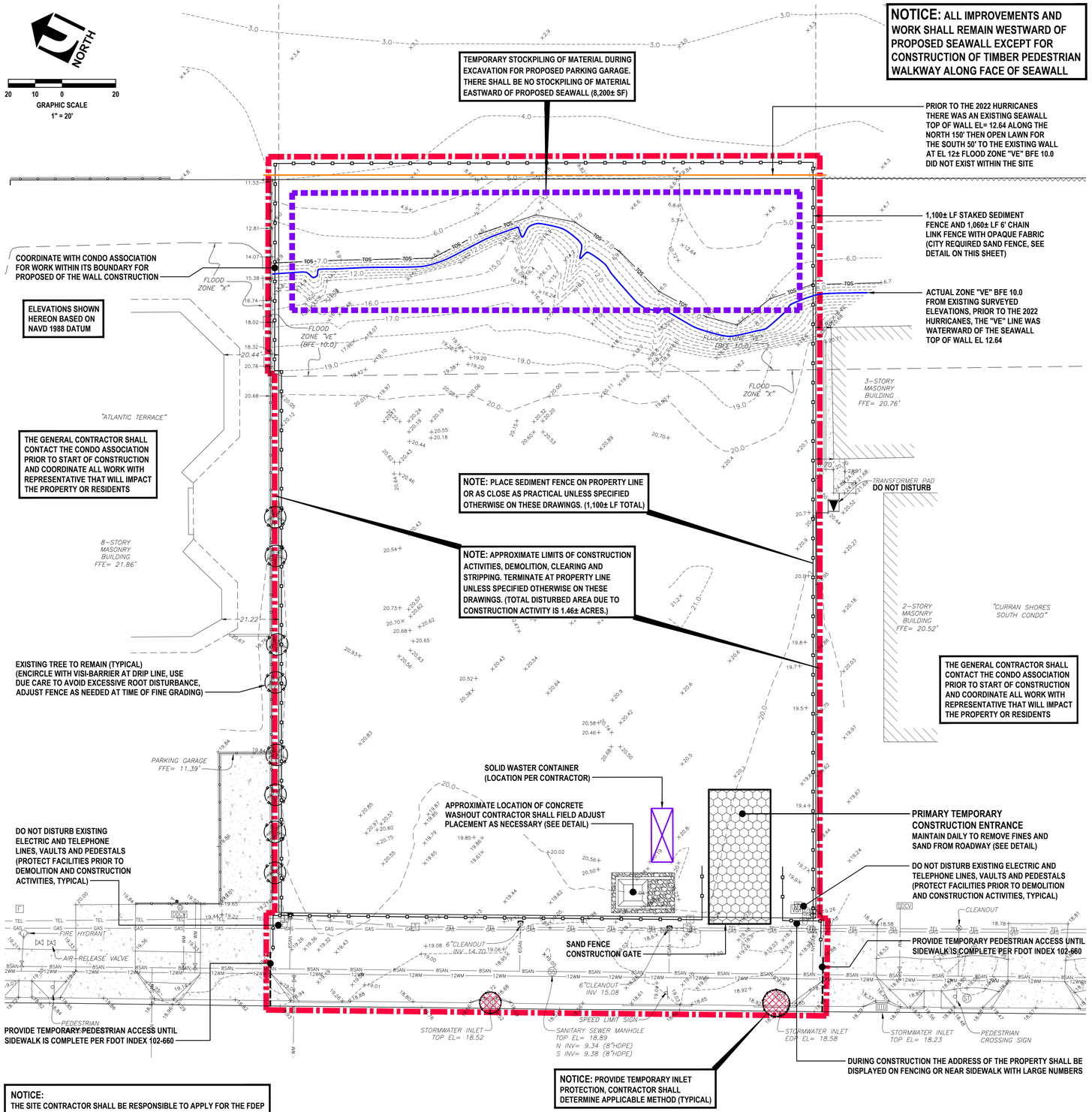
FDOT TCP INDICES

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C201



NOTICE:
THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO APPLY FOR THE FDEP NPDES "NOT" A MINIMUM OF 72 HOURS PRIOR TO ANY LAND DISTURBANCE AND FILE THE "NOT" WITHIN 14 DAYS OF SUBSTANTIAL COMPLETION

NOTE: THE CONTRACTOR SHALL DETERMINE FINAL LOCATIONS OF THE CONSTRUCTION STAGING ITEMS, INCLUDING THE TRAILER, STOCKPILE AREAS, LAYDOWN, AND CONSTRUCTION PARKING WITH THE EROSION CONTROL INSPECTOR. LOCATIONS SHOWN HEREON ARE FOR INFORMATIONAL ONLY.

NOTE: INLET PROTECTION DEVICES SHALL REMAIN IN-PLACE UNTIL AUTHORIZATION TO BE REMOVED IS OBTAINED FROM THE ENGINEER.

Sunshine 811
Always call 811 before you dig

WARNING!! CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH BURIED GAS MAINS, OVERHEAD POWER LINES AND UNDERGROUND UTILITIES.

LEGEND:

- STORMWATER MANHOLE
- STORM INLET / CATCH BASIN
- ELECTRIC BOX
- CLEANOUT
- SANITARY SEWER MANHOLE
- SANITARY SEWER VALVE
- BACKFLOW PREVENTER
- WATER VALVE
- DENOTES TREE REMOVAL
- B-20 / 5.00 BORING ID NUMBER / BORING ELEVATION
- LIMITS OF CONSTRUCTION
- PROPOSED SAWCUT
- HATCH DENOTES REMOVE OF EXISTED IMPROVEMENTS
- PROPOSED TEMPORARY INLET SILT PROTECTION (SEE APPLICABLE DETAIL)
- 60 MAJOR CONTOUR LINE
- 59 MINOR CONTOUR LINE
- TP TREE PROTECTION FENCE
- STM STORM PIPE (# DENOTES SIZE)
- TOS TOE OF SLOPE
- TOB TOP OF BANK
- OHE OVERHEAD WIRE
- UGP UNDERGROUND POWER
- FM FORCE MAIN (# DENOTES SIZE)
- SAN SEWER LINE (# DENOTES SIZE)
- TEL TELECOM LINE
- FOC FIBER OPTIC CABLE
- WM WATER MAIN (# DENOTES SIZE)
- GAS GAS MAIN
- SEDIMENT FENCE SAND FENCE

NOTE: ALL PIPES AND INLETS SHALL BE FLUSHED AND CLEANED OF DEBRIS AND SEDIMENTS UPON COMPLETION OF FINAL STAGE OF WORK, WHEN LANDSCAPE WORK IS COMPLETE. CAPTURE DEBRIS IN DOWNSTREAM INLETS. DO NOT DISCHARGE INTO POND. REMOVE FINES OFF-SITE.

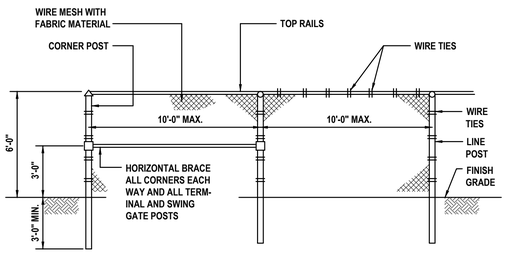
NOTE: REMOVE ALL CONSTRUCTION DEBRIS. ALL DISTURBED AREAS SHALL BE PROPERLY REGRADED AND SEEDED UNLESS SPECIFIED OTHERWISE. THE CONTRACTOR SHALL INSPECT THE SITE TO ENSURE ALL SPECIFICATIONS PER THE SWPPP HAVE BEEN COMPLETED.

EROSION AND SEDIMENT CONTROL NOTES:

1. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
2. THE SITE CONTRACTOR SHALL STRICTLY ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DURING CONSTRUCTION OPERATIONS.
3. NO CONSTRUCTION ACTIVITIES SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
4. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 7 DAYS (OR SHORTER DURATION IF REQUIRED BY GOVERNING NPDES PERMIT) OF FINAL GRADING.
5. SHOULD CONSTRUCTION STOP FOR LONGER THAN 7 DAYS (OR SHORTER DURATION IF REQUIRED BY GOVERNING NPDES PERMIT), THE SITE SHALL BE SEEDED AS SPECIFIED.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF 0.5 INCHES RAINFALL OR GREATER DURING A 24-HOUR PERIOD. ALL MAINTENANCE REQUIRED BY INSPECTION SHALL COMMENCE WITHIN 24 HOURS AND BE COMPLETED WITHIN 48 HOURS OF REPORT.
7. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
8. THE SITE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
9. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED AS DEEMED NECESSARY BY SITE INSPECTIONS.
10. THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY DAMAGED EXISTING IMPROVEMENTS TO THE SATISFACTION OF THE ENGINEER. ALL AREAS SHALL BE CLEANED OF ALL DEBRIS AND MATERIAL FROM CONTRACTOR'S ACTIVITIES, REGRADED IF NECESSARY, SEDIMENT FENCE REMOVED, SIDEWALK AND PAVEMENT SWEPT CLEAN AND ANY DISTURBED AREAS SODDED OR SEEDED TO MATCH EXISTING GROUND COVER.
12. THE SITE CONTRACTOR IS MADE AWARE OF EXISTING COMMERCIAL AND RESIDENTIAL PROPERTIES TO THE NORTH. KEEP NOISE, DUST AND BLOWING SAND FROM AFFECTING THESE PROPERTIES BY WHATEVER MEANS ARE NECESSARY.
13. NO CONSTRUCTION ACTIVITIES SHALL BEGIN UNTIL ALL PROJECT PROTECTIVE TREE BARRIERS HAVE BEEN INSTALLED IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
14. ALL CONSTRUCTION PARKING, PROJECT TRAILER AND MATERIAL STORAGE AND STAGING SHALL BE LOCATED AT THE LANDOWNER'S 0.47± ACRE PARCEL LOCATED ACROSS S.ATLANTIC AVENUE ON THE SOUTH SIDE OF DAHLIA AVENUE. EROSION, SEDIMENT AND SAND DEVICES AND FENCES SHALL BE INSTALLED AND MAINTAINED DURING CONSTRUCTION.

SAND FENCE DETAIL

NOT TO SCALE



NOTES:
1. FENCE POSTS SPACING CANNOT EXCEED EIGHT (8) FEET ON CENTER WITH A MINIMUM EMBEDMENT OF THREE (3) FEET
2. FABRIC (SCREEN) MATERIAL SHALL BE SIX (6) FEET HIGH (OR THE SAME AS THE FENCE)
3. FABRIC WEIGHT SHALL MEET OR EXCEED FIVE AND THREE-TENTHS (5.3) OUNCES PER SQUARE YARD
4. FABRIC SHALL HAVE A THREE-PLY REINFORCED HEM ON TOP AND BOTTOM WITH BRASS GROMMETS EVERY TWELVE (12) INCHES
5. FABRIC SHALL BE ANCHORED IN EACH GROMMET WITH APPROPRIATE ALUMINUM TIES
6. GATES MUST BE CONSTRUCTED WITH THE SAME DESIGN CHARACTERISTICS AS THE SAND FENCE
7. GATES MUST SWING INTO THE CONSTRUCTION SITE. GATES SHALL NOT OPEN TOWARDS THE ADJACENT ROAD
8. GATES MUST REMAIN IN GOOD WORKING ORDER AND MUST BE CLOSED AND SECURED DURING NONWORKING HOURS

NOTICE:
FENCING SHALL NOT BE CONSTRUCTED OF PLYWOOD SHEETS. PLASTIC FABRIC MATERIAL OR SNOW FENCING IS PROHIBITED. APPROVED FENCE MATERIALS MAY INCLUDE SOLID CONCRETE BLOCK WALLS OR OTHER CONFIGURATION ACCEPTABLE TO THE BUILDING OFFICIAL. METHOD OF COMPLIANCE SHALL BE DEMONSTRATED TO THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. UPON COMPETENT, SATISFACTORY PROOF FROM ENGINEERING AND GEOLOGICAL DATA, THE BUILDING OFFICIAL MAY ALLOW ALTERNATIVE METHODS OF CONSTRUCTION FOR SITE SAND AND SOIL RETENTION.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

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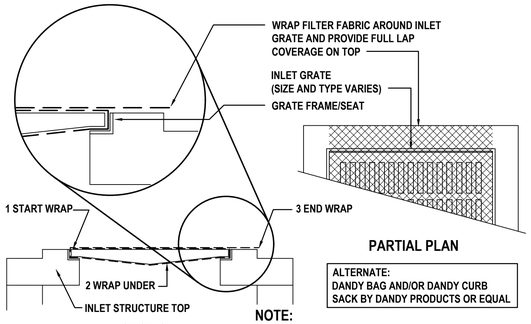
EROSION & SEDIMENT CONTROL PLAN

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT NO:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C300



NOTE:
CONTRACTOR SHALL AT A MINIMUM OF ONCE PER WEEK REMOVE ANY ACCUMULATION OF DEBRIS FROM THE FILTER FABRIC AND PROPERLY DISPOSE OF MATERIAL.

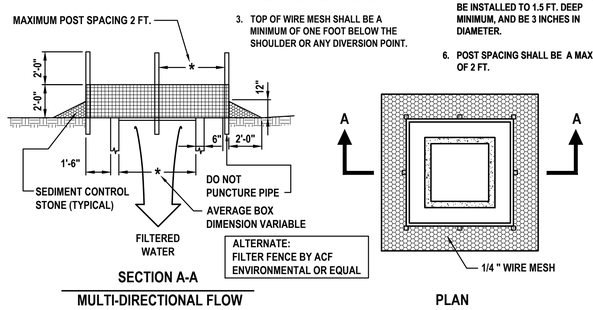
INLET SILT PROTECTION DETAIL

UTILIZE WHEN TOP AND GRADE ARE INSTALLED WITH STRUCTURE

NOT TO SCALE

NOTES:

1. SEDIMENT CONTROL STONE SHALL BE 3/4" WASHED STONE.
2. WIRE MESH SHALL BE HARDWARE CLOTH 23 GAUGE MIN. AND SHALL HAVE 1/4 INCH MESH OPENINGS.
3. TOP OF WIRE MESH SHALL BE A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
4. STEEL POST SHALL BE 5 FT. IN HEIGHT, BE INSTALLED 1.5 FT. DEEP MINIMUM, AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
5. WOOD POST SHALL BE 6 FT. IN HEIGHT, BE INSTALLED TO 1.5 FT. DEEP MINIMUM, AND BE 3 INCHES IN DIAMETER.
6. POST SPACING SHALL BE A MAXIMUM OF 2 FT.



INLET PROTECTION

UTILIZE WHEN TOP AND GRADE ARE NOT INSTALLED WITH STRUCTURE

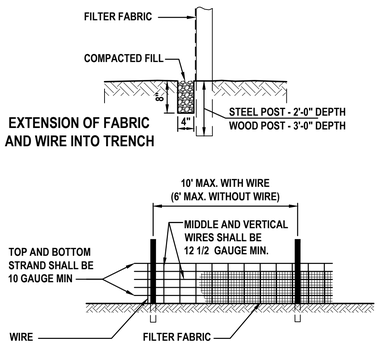
NOT TO SCALE

GENERAL CONSTRUCTION NOTES:

1. MEASURES SHALL BE IMPLEMENTED AT THE CONTRACTOR'S DISCRETION TO VISIBLY BARRICADE THE WORK AREA AND PROVIDE SAFE MEANS OF INGRESS AND EGRESS AROUND THE CONSTRUCTION SITE.
2. THE ENGINEER DOES NOT WARRANT THE CONTRACTOR'S MEANS OR METHODS FOR ITS INTERPRETATION OF THE REPAIR WORK. THE CONTRACTOR SHALL UTILIZE IT'S DISCRETION TO DETERMINE ITS BEST METHOD TO PERFORM THE WORK TO CORRECT THE DRAINAGE PONDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES AND SHALL RESTORE ALL AREAS DAMAGED DUE TO CONSTRUCTION ACTIVITIES
4. PAVEMENT EDGES SHALL BE NEAT AND FREE OF DAMAGE OR BROKEN EDGES AT TIME OF PLACEMENT OF NEW ASPHALTIC PAVEMENT.
5. UPON COMPLETION OF ALL WORK, THE AREA SHALL BE SWEPT CLEAN OF ALL SAND AND DEBRIS.
6. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR ITS FINAL INSPECTION AND ACCEPTANCE.
7. REMOVAL OF ALL CONSTRUCTION DEBRIS, LIMEROCK, EXCESS OF BUILDERS SAND, CONCRETE AND MORTAR DEBRIS, EXISTING WEEDS AND GRASSES, AND ALL FOREIGN MATERIALS IN THE PLANTING BED AND SOD AREAS SHALL BE REMOVED PRIOR TO ANY INSTALLATION OF PLANTS OR TREES.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR DISCREPANCIES AMONG THE DIVISIONS OF THE DRAWING AND SPECIFICATIONS PRIOR TO THE BID DATE. NEITHER THE OWNER OR ENGINEER WILL BE RESPONSIBLE FOR ANY DEFICIENCIES OR DISCREPANCIES RAISED AFTER THE BID OPENING. ACCORDINGLY, IN LIGHT OF THESE OBLIGATIONS, THE ENGINEER IS OBLIGATED TO INTERPRET THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT WILL PROVIDE THE OWNER WITH A COMPLETE, FUNCTIONING FACILITY FOR THE BID PRICE.
9. THESE DRAWINGS AND THE PROJECT MANUAL ARE COMPLEMENTARY, AND ANY REQUIREMENT OF ONE SHALL BE A REQUIREMENT OF THE OTHER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS AND TO COMPARE THE REQUIREMENTS OF EACH DIVISION AND ENSURE THAT EACH TRADE OR SUBCONTRACTOR IS MAKING THE ALLOWANCES NECESSARY TO PROVIDE THE OWNER A COMPLETE FACILITY, OPERATIONAL IN ALL RESPECTS, UNLESS OTHERWISE SPECIFICALLY STATED IN THE DRAWINGS.
10. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INSTRUCTING THE CONTRACTOR IN THE METHODS OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE METHOD TO CONSTRUCT THE IMPROVEMENTS AS SHOWN ON THE PLANS.
11. LITTER CONTROL MEASURES TO PREVENT WIND-DRIVEN DEBRIS SHALL BE IMPLEMENTED THROUGHOUT THE DURATION OF CONSTRUCTION. ALL DEBRIS SHALL BE REMOVED AND THE PROJECT SITE CLEANED WITHIN 5 DAYS OF COMPLETION OF CONSTRUCTION.
12. AT NO TIME SHALL EXCAVATIONS BE LEFT UNCOVERED AFTER WORKING HOURS. CONTRACTOR SHALL SECURE THE WORK AREA AT THE END OF EACH DAY'S WORK.
13. AT ALL TIMES, THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT UNDERGROUND UTILITIES, STRUCTURES AND OTHER ASSOCIATED FACILITIES FROM DAMAGE DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MEASURES OF PROTECTION. ANY DAMAGED FACILITIES SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION OR ENGINEER AT THE CONTRACTORS EXPENSE.
14. THERE SHALL BE NO DEVIATIONS FROM THESE DRAWINGS UNLESS APPROVED IN WRITING BY THE ENGINEER AND THE OWNER.
15. THE CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.
16. CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COST.
17. WHERE NEW ASPHALT MEETS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.
18. PRIOR TO REMOVING CURB OR GUTTER, THE ADJACENT ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.

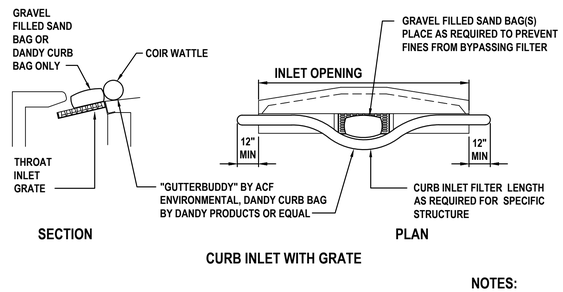
NOTES:

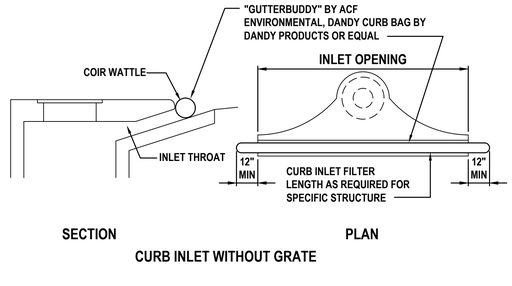
1. WWM MINIMUM OF 32" WIDTH WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. FILTER FABRIC SHALL BE 36" WIDE AND SHALL BE FASTENED ADEQUATELY TO THE WIRE.
3. STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WOOD POST SHALL BE 5'-0" IN HEIGHT AND 2" IN DIAMETER.
5. SUPPORT POST SHALL BE INSTALLED ON THE DOWNHILL SIDE OF THE SEDIMENT FENCE (DOWNSTREAM FROM EXPECTED FLOWS)
6. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN 25% THE HEIGHT OF FENCE.
7. MAXIMUM DRAINAGE AREA 10,000 SF PER 100' OF FENCE.



SEDIMENT FENCE DETAIL

NOT TO SCALE





NOTES:

1. INSTALL FILTER PRIOR TO BEGINNING CONSTRUCTION.
2. INSPECT ONCE EACH WEEK AND AFTER ANY RAIN EVENT. REMOVE ANY FINES AND DEBRIS THAT MAY HAVE ACCUMULATED AND DISPOSE OF PROPERLY.

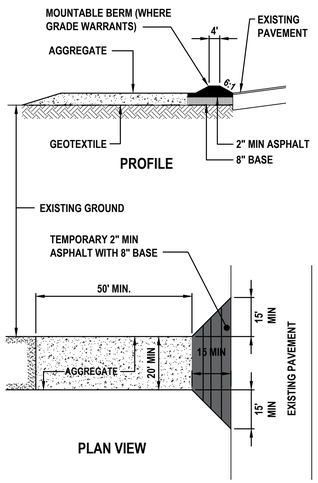
CURB INLET SEDIMENT PREVENTION DETAIL

NOT TO SCALE

NOTE:
THE CONTRACTOR HAS THE DISCRETION TO UTILIZE THIRD PARTY PROPRIETARY EROSION AND SEDIMENTATION CONTROL PRODUCTS AND DEVICES AND IS NOT LIMITED TO THE DETAILS ON THIS SHEET.

NOTES:

1. STONE SIZE - #2 COARSE AGGREGATE, OR RECLAIMED/RECYCLED CONCRETE.
2. LENGTH - AS EFFECTIVE BUT NOT LESS THAN 50'
3. DEPTH - 8" MINIMUM (COMPACTED)
4. WIDTH - 25' MINIMUM
5. GEOTEXTILE - 100% POLYPROPYLENE, 4 OZ/SY OVER THE ENTIRE AREA PRIOR TO PLACEMENT OF AGGREGATE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 6:1 SLOPES IS ACCEPTABLE.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. MAINTAIN PERIODIC TOP DRESSING OF ADDITIONAL AGGREGATE AS CONDITIONS REQUIRE AND REPAIR AND/OR CLEANOUT ANY AREAS USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, WASHING SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT POND OR SWALE.
9. INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN OR WEEKLY AT A MINIMUM.



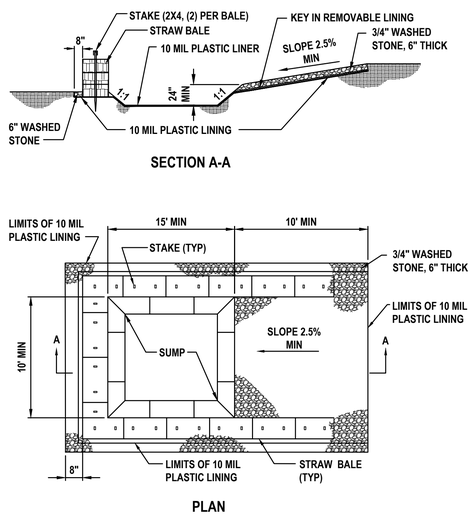
CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

NOTES:

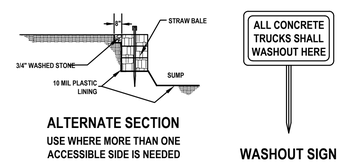
1. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
2. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, WASHING SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT POND OR SWALE.
3. INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN OR WEEKLY AT A MINIMUM.

CONSTRUCTION ENTRANCE DETAIL (RUMBLE TRACK OR EQUAL)



CONCRETE WASHOUT AREA

NOT TO SCALE



NOTES:

1. PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
2. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
3. FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
4. FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
5. SAW CUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT & GRINDING TO BE DISPOSED OF IN THE PIT.
6. CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, & SURFACE WATERS.
7. MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.
8. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
9. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
10. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRCULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY ROGER W. STRCULA, PE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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EROSION CONTROL DETAILS AND NOTES

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT NO:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:

C301

PROJECT SITE INFORMATION:

PROJECT NAME: LIV CONDOMINIUM

DEVELOPER: SA2011, LLC
4701 SAN JACINTO STREET
HOUSTON, TX 77004

PROJECT LOCATION: 3635 S. ATLANTIC AVENUE

LATITUDE: LAT: N 29°08'50"
LONGITUDE: LON: W 80°57'59"

AHJ: CITY OF DAYTONA BEACH SHORES

WMD JURISDICTION: FDEP

PROJECT AREA: 1.26 ACRES

DISTURBED AREA: 1.46 ACRES

FLUCCS CODE: 130
-
-

ULTIMATE RECEIVING WATER BODY: ATLANTIC OCEAN
CLASS: -
OFW: -
WBID #: -
TMDLs: -

SOILS / GEOTECH DATA:
(PER USDA NRCS WEB SOIL SURVEY)

SOIL NUMBER	SOIL NAME	HSG
9	BEACHES	A
40	PALM BEACH URBAN	A
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

CONSTRUCTION INFORMATION:

A) DESCRIPTION OF ACTIVITIES

CONSTRUCTION ACTIVITIES INCLUDE: DEMOLITION, MASS EARTHWORK GRADING AND EXCAVATION / FILL, VARIOUS UTILITIES INSTALLATION, CONCRETE PAVEMENT, GARAGE, BUILDING, POOL DECK, WALLS, PLANTINGS AND GRASS AND FINAL STABILIZATION AND RESTORATION.

SOIL DISTURBING ACTIVITIES INCLUDE: INSTALLING STABILIZED CONSTRUCTION ENTRANCES, INSTALLATION OF EROSION AND SEDIMENT CONTROLS, STRIPPING EXISTING GROUND COVER AND MASS EARTHWORK GRADING.

B) SEQUENCE OF MAJOR ACTIVITIES AND CONTROL MEASURES:

1. THE CONTRACTOR SHALL SCHEDULE AND ATTEND THE PRECONSTRUCTION MEETING WITH APPROPRIATE JURISDICTIONAL AGENCIES AS SPECIFIED PRIOR TO START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL PROVIDE EMERGENCY TELEPHONE NUMBERS TO THE CITY AND/OR COUNTY AND ENGINEER OF AT LEAST TWO INDIVIDUALS THAT ARE CAPABLE OF CORRECTING ANY DRAINAGE PROBLEMS THAT MAY OCCUR AFTER WORK HOURS.
3. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, COUNTY AND CITY A MOT PLAN AT PRECONSTRUCTION MEETING. TRAFFIC SHALL BE ALLOWED TO CONTINUE DURING WORK. PROVIDE MEASURES TO DETOUR TRAFFIC AROUND CONSTRUCTION ACTIVITIES WITH ADEQUATE BARRICADES, SIGNAGE AND FLAGPERSON TO DIRECT TRAFFIC. EMERGENCY SERVICES SHALL BE NOTIFIED 48 HOUR IN ADVANCE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY DEPARTMENT, FLORIDA SUNSHINE AND EMERGENCY SERVICES FOR RESPECTIVE UTILITY LOCATIONS AND "NOTICE" OF CONSTRUCTION ACTIVITY.
5. ALL EROSION CONTROL DEVICES AND VISIBLE BARRICADES SHALL BE INSTALLED AND APPROVED BY THE ENGINEER PRIOR TO THE START OF CLEARING AND GRUBBING.
6. ALL EROSION CONTROL DEVICES SHALL BE PLACED PRIOR TO THE START OF WORK AND REMAIN IN PLACE UNTIL ALL WORK IS COMPLETE. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
7. A 20' WIDE 6" MINIMUM COMPACTED STONE DRIVE LANE TO THE CONSTRUCTION ENTRANCE THAT SHALL BE PLACED PRIOR TO THE CLEARING AND GRUBBING. THE APPROXIMATE LOCATION IS INDICATED ON THE DRAWING. THE ELEVATION SHALL BE APPROXIMATELY PER THE GRADING PLAN. PROVIDE ACCESS ACROSS DRIVE LANE FOR EMERGENCY VEHICLES, COORDINATE WITH FIRE CHIEF.
8. THE SITE SHALL BE CLEARED AND GRUBBED OF ALL VEGETATION AND DEBRIS WITHIN THE APPROXIMATE LIMITS OF CLEARING AS INDICATED ON THE DRAWING.
9. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION, BLOWING SAND AND THE IMPACT TO NEIGHBORING PROPERTIES.
10. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS WILL BE STABILIZED WITH A TEMPORARY GRASS AND MULCH WITHIN 5 DAYS OF THE LAST DISTURBANCE.
11. ALL REMOVED MATERIAL SHALL BE HAULED OFF-SITE TO AN APPROVED LANDFILL. TREES MAY BE LOGGED OR MULCHED FOR OFF-SITE DISPOSAL AT THE CONTRACTOR'S DISCRETION.
12. ALL OFF-SITE AREAS DISTURBED DURING CONSTRUCTION ACTIVITY SHALL BE IMMEDIATELY RESTORED TO PRIOR CONDITION UPON COMPLETION OF WORK.
13. THE SITE CONTRACTOR SHALL ONLY BE PERMITTED TO REMOVE ALL EROSION PROTECTION DEVICES WITHIN EACH CONTRIBUTING AREA FOLLOWING REMOVAL OF SEDIMENT AND DEBRIS AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS.

SEDIMENT, EROSION AND POLLUTANT CONTROL MEASURES:

1. BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH PART 5 OF FDEP DOCUMENT NO. 62-621.300(4)(a) SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORMWATER RUNOFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. CONTRACTOR SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAWS.
2. STORMWATER MANAGEMENT STORMWATER COLLECTION SHALL BE PROVIDED BY CATCH BASINS. THE SITE WILL DISCHARGE TO THE EXISTING MASTER STORMWATER POND FOR TREATMENT.
3. STABILIZATION PRACTICES
   WIND EROSION STABILIZATION: THE CONTRACTOR SHALL DENUDE ONLY ARES WHERE IT IS EXPECTED TO BE GRADED OR ALTERED WITHIN A 2 WEEK TIME-FRAME. FINAL GRADES SHALL BE PERFORMED AND TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE APPLIED. AREAS WHERE CONSTRUCTION OPERATIONS WILL BE CONTINUOUS, FUGITIVE DUST SHALL BE MANAGED BY APPLYING A WATER SPRAY TO SATURATE THE SURFACE SOILS ON A DAILY BASIS, OR AS NEEDED TO MAINTAIN MINIMAL DUST TRANSPORT. FUGITIVE DUST SHALL MONITORED CONTINUOUSLY AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO CONTROL OFF-SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST.

   TEMPORARY STABILIZATION: TOP OF SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR 21 DAYS WILL BE STABILIZED WITH TEMPORARY GRASS AND MULCH NO LATER THAN 5 DAYS FROM THE LAST CONSTRUCTION ACTIVITY. GRASS SEED SHALL BE MIXTURE OF 20 PARTS OF BERMUDA SEED AND 80 PARTS OF PENSACOLA BAHIA. THE SEPARATE TYPES OF SEED USED SHALL BE THOROUGHLY DRY MIXED IMMEDIATELY BEFORE SOWING. SEED WHICH HAS BECOME WET SHALL NOT BE USED, THE MULCH MATERIAL USED SHALL NORMALLY BE DRY MULCH. DRY MULCH SHALL BE STRAW OR HAY, CONSISTING OF OAT, RYE OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. ONLY UNDETERIORATED MULCH WHICH CAN BE READILY CUT INTO THE SOIL SHALL BE USED. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE.

   PERMANENT STABILIZATION: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 5 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.
4. STRUCTURAL PRACTICES
   STAKED SILT FENCES: THE STAKED SILT FENCES WILL BE CONSTRUCTED ALONG THE PERIMETER AS SPECIFIED IN THE DRAWINGS. STAKED FENCE SHALL BE CLEARED OF SEDIMENT WHEN IF REACHES ONE-THIRD HEIGHT OF THE FENCE.

   EARTH DIKE: IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

   SEDIMENT BASIN: A EXISTING STORMWATER POND TO BE USED. BEST MANAGEMENT PRACTICES SUCH AS REMOVAL OF SEDIMENT FROM INLET PROTECTION DEVICES, PROPER WASTE DISPOSAL AND SWEEPING TO REDUCE AMOUNT OF SEDIMENT DISCHARGED INTO POND SHALL BE CONTINUOUSLY IMPLEMENTED.
5. WASTE DISPOSAL
   WASTE MATERIALS: ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

   HAZARDOUS WASTE: HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

   SANITARY WASTE: SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH LOCAL UTILITY FOR COLLECTION OF SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.
6. DUST CONTROL
   TO PREVENT OFF-SITE VEHICULAR TRACKING OF SEDIMENTS AND DUST GENERATION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED BY THE SITE CONTRACTOR. SEE DRAWINGS FOR DETAILS AND LOCATION(S).
7. NON-STORMWATER DISCHARGES
   IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

   WATER FROM FIRE FIGHTING ACTIVITIES, FIRE HYDRANT FLUSHING, WATER LINE FLUSHING, WATER USED TO SPRAY OFF LOOSE SOILS FROM VEHICLES, DUST CONTROL, PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). ALL NON-STORMWATER DISCHARGES WILL BE DIRECTED TO THE EXISTING STORMWATER POND.

   DISCHARGE OF UNCONTAMINATED GROUNDWATER FROM CONSTRUCTION-RELATED DEWATERING OPERATIONS IS PERMITTED IN ACCORDANCE WITH PART 3.4 OF THE FDEP DOCUMENT NO. 62-621.300(4)(a)

ITEMS REQUIRING POLLUTION PREVENTION
THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED, BUT NOT LIMITED, TO BE PRESENT ON-SITE DURING CONSTRUCTION:

CONCRETE	WOOD	ROOFING SHINGLES	ASPHALT
GLASS	SAND / DIRT	METAL STUDS	LIMEROCK
STONE	CLEANING SOLVENTS	MASONRY BLOCK	PRECAST STRUCTURES
PAINT	PETROLEUM / FUELS	FERTILIZERS	PIPES

STORMWATER POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THESE CONSTRUCTION PLANS, THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM, AS SHOWN ON THESE CONSTRUCTION PLANS, DESIGNED TO ASSURE THAT APPROPRIATE POLLUTION PREVENTION MEASURES ARE IMPLEMENTED DURING CONSTRUCTION AND TO ASSURE THAT THE QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THE 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 VIOLATIONS.

OWNER:

SIGNATURE: _____

NAME / TITLE: _____

COMPANY: _____

ADDRESS: _____

MAINTENANCE AND INSPECTION PROCEDURES:

1. INSPECTOR QUALIFICATIONS
   INSPECTIONS MUST BE CONDUCTED BY A "QUALIFIED" INSPECTOR. "QUALIFIED" IS DEFINED AS A PERSON THAT A). HAS SUCCESSFULLY COMPLETED AND MET ALL REQUIREMENTS NECESSARY TO BE FULLY CERTIFIED THROUGH THE FDEP STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM; B). HAS SUCCESSFULLY COMPLETED AN EQUIVALENT FORMAL TRAINING PROGRAM; OR C). THAT IS QUALIFIED BY OTHER TRAINING OR PRACTICAL EXPERIENCE IN THE FIELD OF STORMWATER POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL.
2. DISTURBED AREAS
   ALL DISTURBED AREAS AND AREAS USED FOR MATERIAL STORAGE SHALL BE INSPECTED FOR POLLUTANTS ENTERING THE STORMWATER SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE INSPECTED REGULARLY TO ENSURE THEY ARE OPERATING CORRECTLY. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
3. MONITORING INSPECTIONS
   ARE REQUIRED TO BE PERFORMED BY A QUALIFIED INSPECTOR AT LEAST EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS FOLLOWING A RAINFALL EVENT OF ONE-HALF (1/2) OF AN INCH OF RAINFALL OR GREATER AND SHALL CONTINUE UNTIL THE SITE COMPLIES WITH FINAL STABILIZATION (NOTICE OF TERMINATION).
4. REPORTING
   EACH INSPECTION MUST BE FOLLOWED UP BY A REPORT DOCUMENTING THE INSPECTOR'S FINDINGS AND REQUEST THE REQUIRED MAINTENANCE AND/OR REPAIR FOR THE EROSION AND SEDIMENTATION CONTROL MEASURES. THESE RECORDS ARE USED TO PROVE THAT THE REQUIRED INSPECTION AND MAINTENANCE WERE PERFORMED AND SHALL BE PLACED IN THE SWPPP LEDGER.
5. RECORD KEEPING
   IN ADDITION TO INSPECTION AND MAINTENANCE REPORTS, RECORDS SHOULD BE KEPT OF CONSTRUCTION ACTIVITIES THAT OCCUR ON THE SITE. THE CONTRACTOR SHALL RETAIN COPIES OF THE SWPPP, ALL REPORTS AND DATA FOR A MINIMUM OF FIVE (5) YEARS AFTER THE PROJECT IS COMPLETE IN PAPER AND CD FORMAT.

SPILL PREVENTION PRACTICES AND CONTROL MEASURES:

1. GOOD HOUSEKEEPING
   - SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.
   - STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.
   - ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.
   - ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.
   - PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.
   - ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. HAZARDOUS PRODUCTS
   - MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.
   - PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.
3. PRODUCT SPECIFIC PRACTICES
   - PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.
   - THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO SOIL IN ORDER TO LIMIT EXPOSURE TO STORMWATER. FERTILIZERS SHALL BE STORED IN COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO SEALABLE PLASTIC BIN TO AVOID SPILLS.
   - PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN APPROVED MANNER.
   - CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.
4. SPILL CONTROL AND CLEANUP RESPONSIBILITIES
   - SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.
   - THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.
   - ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.
   - WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.
   - TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.
   - AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.
   - THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

NOTICE OF INTENT (NOI) / NOTICE OF TERMINATION (NOT)

1. NOI: THE NOTICE OF INTENT (NOI), DEP FORM 62-621.300(4)(b), IS TO BE COMPLETED AND SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) BEFORE USE OF THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES PROVIDED IN SUBSECTION 62-621.300(4), F.A.C.
2. NOT: WHERE A SITE HAS BEEN FINALLY STABILIZED AND ALL STORMWATER DISCHARGES AUTHORIZED BY THIS PERMIT ARE ELIMINATED, THE PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION, DEP FORM 62-621.300(6), SIGNED IN ACCORDANCE WITH PART 7.C OF FDEP DOCUMENT NO. 62-621.300(4)(a), WITHIN 14 DAYS OF FINAL STABILIZATION OF THE SITE TO TERMINATE COVERAGE UNDER THIS PERMIT.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUIT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE	COMPANY INFO	RESPONSIBLE FOR:
	COMPANY: _____ NAME: _____ TITLE: _____ DATE: _____	
	COMPANY: _____ NAME: _____ TITLE: _____ DATE: _____	
	COMPANY: _____ NAME: _____ TITLE: _____ DATE: _____	

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRCULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

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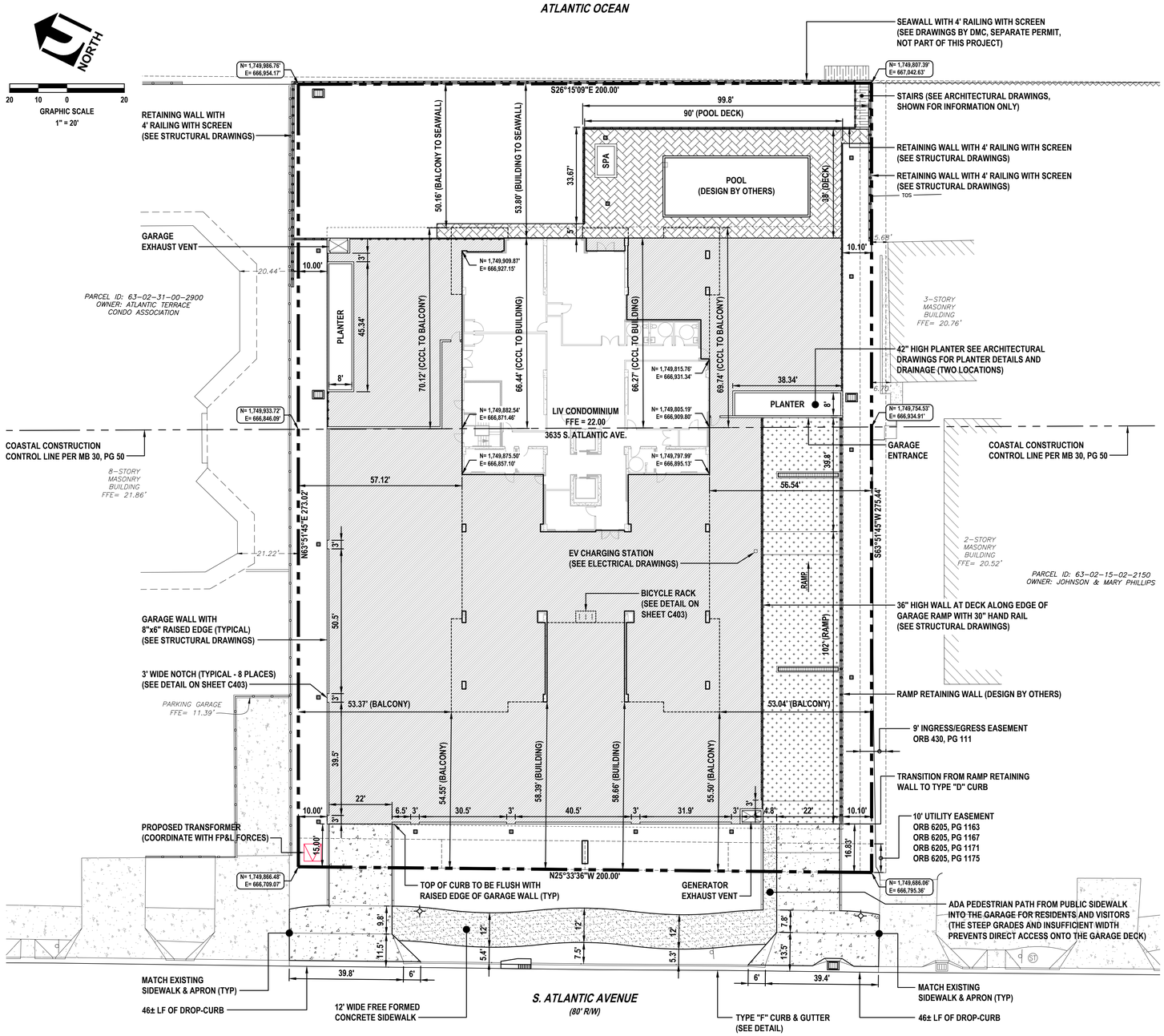
STORMWATER POLLUTION PREVENTION PLAN

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C302



CURB CONSTRUCTION NOTES:

1. ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 3,000 P.S.I. CONCRETE.
2. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 100', VERTICAL SAWCUT JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM).
3. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. EXPANSION JOINT MATERIAL MUST COVER ENTIRE CROSS SECTION OF CURB.
5. IN NO INSTANCE SHALL EXTRUDED CURBS (DEFINED AS HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT) BE PERMITTED.
6. SAW CUT JOINTS SHALL BE CUT WHILE CONCRETE IS STILL GREEN, IF JOINTS ARE CUT AFTER CONCRETE HAS CURED AND SHRINKAGE HAVE OCCURRED THROUGH THE THICKNESS OF THE CURB, THEN THE CONTRACTOR SHALL REPLACE THE CURB TO THE NEAREST JOINT OR 4' MINIMUM LENGTH.
7. CONTRACTOR SHALL BROOM FINISH CONCRETE VERTICALLY.

SYMBOL LEGEND:

- TYPE 'F' CURB (SEE DETAIL)
- TYPE 'D' CURB (SEE DETAIL)
- R5' — 5' MINIMUM CURB RADIUS UNLESS DENOTED OTHERWISE
- SITE LIGHT POLES (SEE PHOTOMETRIC PLAN)

SEE SHEETS C403 FOR REFERENCED DETAILS NOT SHOWN HEREON.

THE LOCATION OF THE LIGHT POLES SHALL ONLY BE INSTALLED PER THE DIGITAL COORDINATES TO AVOID CONFLICTS WITH UTILITIES (TYPICAL)

PAVING LEGEND:

CONCRETE PAVEMENT	5"	6" THICK CONCRETE (4,000 PSI AT 28 DAYS) 12" STABILIZED SUBGRADE MIN OF 98% MOD. PROCTOR MAX DRY DENSITY PER ASTM D1557, AASHTO T-180 (2 LIFTS) MAX CONTROL JOINT SPACING 12'x12' MIN SAW CUT DEPTH 2"
CONCRETE SIDEWALK	4"	4" THICK CONCRETE (4,000 PSI AT 28 DAYS) CLASS I CONCRETE CONTROL JOINT SPACING PER FDOT INDEX No. 350-001 ON COMPACTED SUBGRADE (SEE DETAIL ON SHEET C403)
PARKING DECK		SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS (SEE STRUCTURAL CERTIFICATION FOR VEHICLE LOAD LIMIT)
CONCRETE RAMP		SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS
CONCRETE PAVERS		COLOR, MATERIAL AND PATTERN BY DEVELOPER (DESIGN BY OTHERS)

GENERAL NOTES:

1. ALL DIMENSIONS AND TIES ARE TO THE EDGE OF PAVEMENT AND OUTSIDE FACE OF BUILDING.
2. THE CONTRACTOR AT ITS OWN DISCRETION SHALL SECURE THE CONSTRUCTION SITE FROM TRESPASS.
3. A WAIVER FROM SECTION 14-18.4 OF THE LAND DEVELOPMENT CODE FOR THE REQUIRED 7' PUBLIC WALKWAY TO THE BEACH IS WARRANTED BECAUSE THERE IS NOT SUFFICIENT WIDTH OR OPEN SPACE TO CONSTRUCT THE WALKWAY ON SITE. THERE IS AN EXISTING PUBLIC WALKWAY APPROXIMATELY 100' FROM THE NORTH BOUNDARY. THE LANDOWNER WILL PROVIDE A COST ESTIMATE TO CONSTRUCT AN EQUIPMENT ACCESSIBLE WALKWAY FROM THE RIGHT-OF-WAY TO THE BEACH.
4. THE GENERAL CONTRACTOR SHALL PROVIDE DRAINAGE AND UTILITY SHOP DRAWINGS OF MATERIAL AND STRUCTURES TO THE ENGINEER FOR APPROVAL. FAILURE TO INSTALL NON-APPROVED MATERIAL OR STRUCTURE MAY RESULT IN REMOVAL AT THE GENERAL CONTRACTOR'S EXPENSE.
5. THE ENGINEER SHALL BE INFORMED IF ANY QUESTIONS ARISE DURING CONSTRUCTION EITHER BY EMAIL OR CONSTRUCTION MANAGEMENT SOFTWARE LIKE PROCORE OR EQUAL, PHONE CALLS WILL NOT BE ACCEPTED.
6. REFER TO THE STRUCTURAL DRAWINGS FOR GRADING OF GARAGE DECK, ELEVATIONS SHOWN ON SHEET C500 ARE FOR INFORMATION ONLY. ALL ADA SPACES ON THE GARAGE DECK SHALL NOT EXCEED 2.0% IN ANY DIRECTION, NO EXCEPTIONS THESE SPACES MUST BE ACCURATELY GRADED WITH THE GARAGE DECK.

NOTE:
ALL WALKWAYS SHALL COMPLY WITH FLORIDA ADA GUIDELINES, LATEST EDITION, FOR SLOPES AND DIMENSIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ADA GUIDELINES ARE MET

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

NOTE:
ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION BY MEANS OF DIGITAL COORDINATES BY SURVEYOR UTILIZING GEODETIC TOTAL STATION. SCALING OF DRAWINGS FOR PURPOSES OF STAKING OR THE UTILIZATION OF THE GLOBAL POSITIONING SYSTEM (GPS) ARE AT THE SURVEYOR'S OWN RISK.

OPEN SPACE CALC.

COVERAGES	SF	%
PROJECT LIMITS	54,843	100.0
REQ. OPEN SPACE	16,453	30.0
PRO. OPEN SPACE	13,310	24.3
POOL DECK	3,420	6.3
PLANTERS	648	1.1
NEW OPEN SPACE	17,378	31.7

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SITE GEOMETRY & LAYOUT PLAN

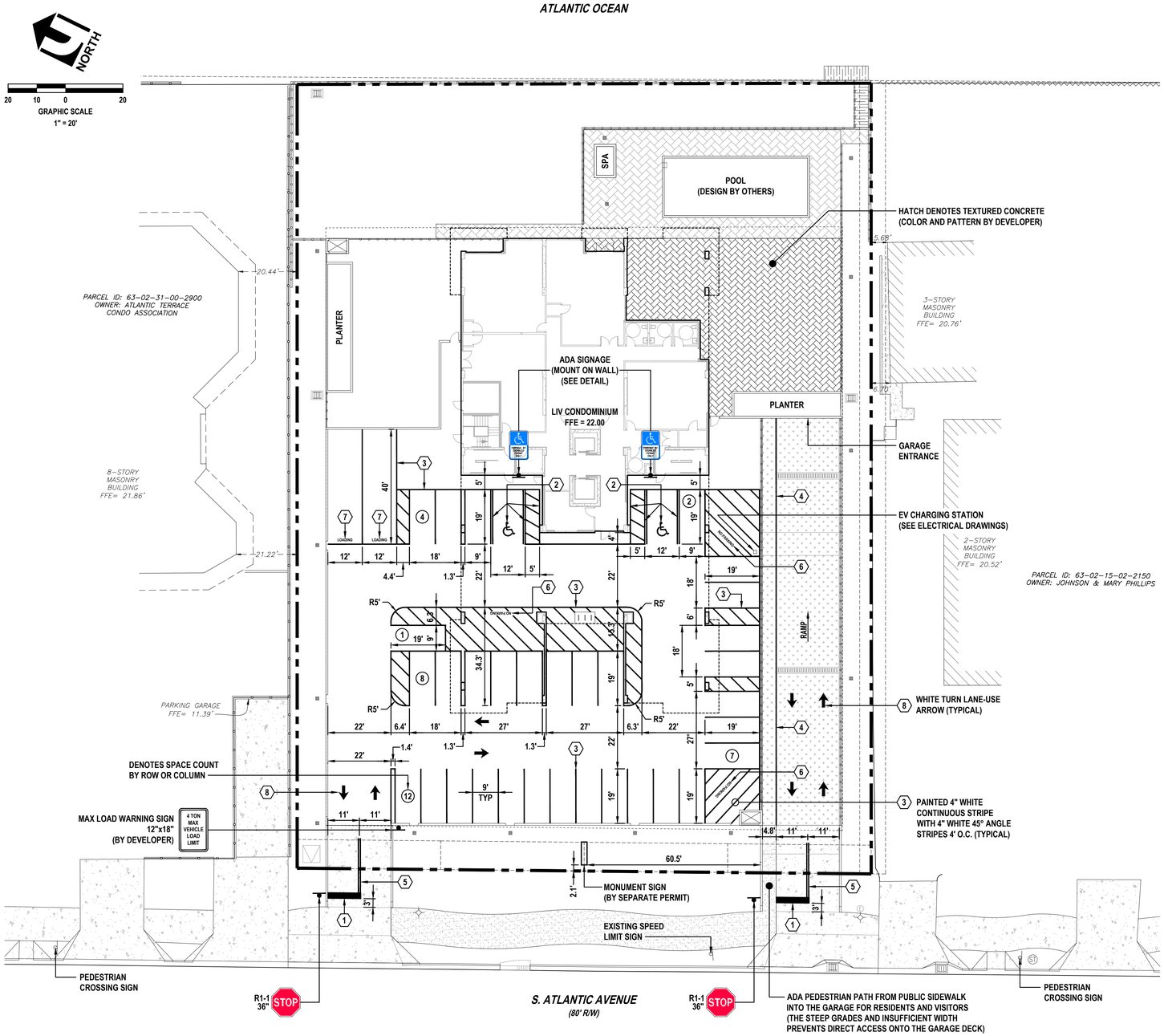
THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:

C400



PAVEMENT MARKING & SIGNAGE NOTES:

1. ALL MARKINGS SHALL COMPLY WITH F.D.O.T. STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION INDEX No. 711-001.
2. PAVEMENT MARKINGS SHALL BE APPLIED AFTER PAVEMENT SURFACE HAS CURED. SURFACE SHALL BE FREE OF FINE SAND AND DEBRIS PRIOR TO APPLICATIONS.
3. ALL SITE PAVEMENT MARKINGS SHALL BE PAINTED COLOR AS INDICTED. PAINT SHALL BE SHERWIN WILLIAMS LOW-VOC ACRYLIC PRO PARK PAINT OR EQUAL, APPLY PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DRAWINGS FOR LOCATIONS OF SPECIFIC COLORS. ALL LINE PAVEMENT MARKINGS SHALL BE 6" MINIMUM WIDTH.
4. LOCATION OF SIGNS SHOWN HEREON ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH INDEX NO. 700-101 AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS". FOR ADDITIONAL DETAILS SEE INDEX NO. 700-010, 700-101 AND 711-001.
5. ALL TRAFFIC CONTROL SIGNALS OR DEVICES MUST COMPLY WITH THE FLORIDA STATE STATUTES REGARDING THE INSTALLATION. ALL TRAFFIC CONTROL SIGNALS OR DEVICES MUST CONFORM TO THE MANUAL AND SPECIFICATIONS PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION, TO INCLUDE BUT NOT LIMITED TO SIGNS SIZE AND HEIGHT.
6. ALL TRAFFIC CONTROL SIGNS SHALL BE FABRICATED USING 3M BRAND "SCOTCHLITE" SHEETING (ENGINEER GRADE) ON MINIMUM .08 GA ALUMINUM BLANKS.

GENERAL S. ATLANTIC AVEUNE NOTES:

A. ALL TRAFFIC STRIPING AND MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC.

B. REMOVAL OF EXISTING PAVEMENT MARKING SHALL BE ACCOMPLISHED USING THE "HYDRO-BLAST" METHOD. IF THIS PROCESS DAMAGES/SCARS PAVEMENT, THEN THE PAVEMENT SHALL BE MILLED AND RESURFACED PER FDOT STANDARDS.

C. ALL DIRECTIONAL ARROWS SHALL BE PLACED AS ONE SEGMENT.

D. ALIGNMENT OF PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING PAVEMENT MARKINGS AT PAVEMENT MARKING LIMITS OF CONSTRUCTION.

E. ALL CURB AND GUTTER AND SIDEWALK WILL BE REMOVED AND REPLACED JOINT TO JOINT.

F. ALL DISTURBED AREA WITH THE RIGHT-OF-WAY WILL RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED WITH BAHIA SOD.

G. ALL LANES MUST BE OPENED FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT

SYMBOL LEGEND:

- PROPOSED SIGN (SEE DETAIL)
- PROPOSED DBL. SIDED SIGN
- ADA PARKING SPACE SYMBOL
- (10) DENOTES PARKING COUNT PER ROW OR COLUMN

SEE SHEETS C403 FOR REFERENCED DETAILS NOT SHOWN HEREON.

KEY NOTES

NO.	DESCRIPTION
1	24" STOP BAR (WHITE)
2	A.D.A. PARKING SPACE AND AISLE (SEE SHEET C403)
3	4" (WHITE) CONTINUOUS STRIPE (TYPICAL)
4	4" (YELLOW) CONTINUOUS STRIPE (TYPICAL)
5	20 LF 6" DBL. (YELLOW) CONTINUOUS STRIPE (TYPICAL)
6	24" PAINTED (WHITE) "NO PARKING" (TYPICAL)
7	24" PAINTED (WHITE) "LOADING" (TYPICAL)
8	PAINTED (WHITE) DIRECTIONAL ARROW

NOTICE:
THE SITE SIGNAGE SHOWN HEREON REPRESENTS THE ENGINEER'S RECOMMENDED CONFIGURATION. AT THE SOLE DISCRETION OF THE DEVELOPER AND SUBJECT TO CITY OF WILDWOOD APPROVAL, THE CONTRACTOR MAY FORGO INSTALLATION OF SOME SITE SIGNAGE.

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

NOTE:
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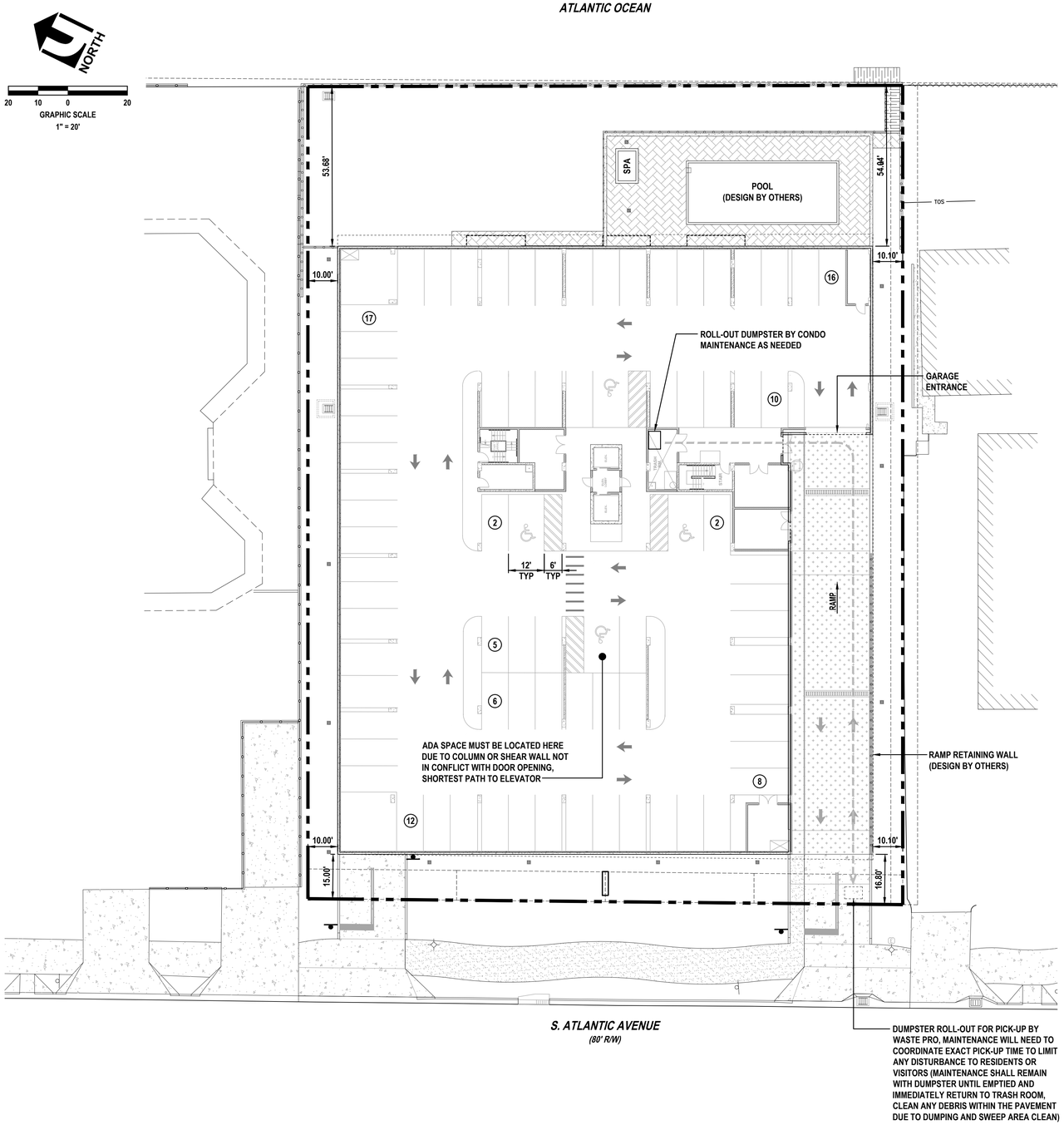
PAVEMENT MARKING & SIGNAGE PLAN

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C401



SYMBOL LEGEND:

- PROPOSED SIGN (SEE DETAIL)
- PROPOSED DBL. SIDED SIGN
- ADA PARKING SPACE SYMBOL
- (10) DENOTES PARKING COUNT PER ROW OR COLUMN

NOTE:
GARAGE LAYOUT PROVIDED HEREON IS FOR INFORMATION PURPOSES ONLY AND IS NOT THE THE RESPONSIBILITY OF THE ENGINEER. SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR CONTROLLING SPECIFICATIONS.

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

NOTE:
THIS SHEET FOR INFORMATION ONLY FOR PURPOSES OF PROVIDED PARKING SPACES DIMENSIONS, DUMPSTER, PAVEMENT MARKINGS AND GARAGE SETBACKS, SEE ARCHITECTURAL DRAWINGS SHEET A-2 FOR SPECIFIC INFORMATION OF GARAGE

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GARAGE LAYOUT PLAN

THE LIV CONDOMINIUM

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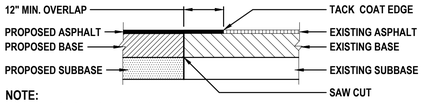
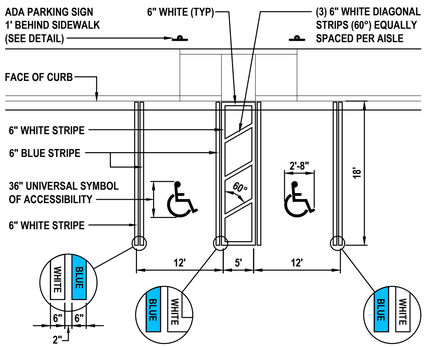
C402



NOTE:
THE WIDTH OF SAW CUT AT EXISTING ASPHALT PAVEMENT AT TACK COAT EDGE IS 1' MINIMUM.

PAVEMENT BUTT JOINT DETAIL

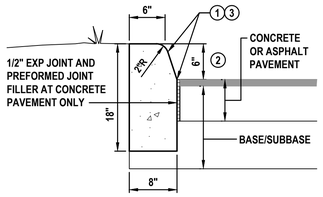
NOT TO SCALE



ADA PARKING STRIPING

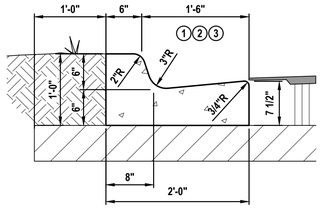
(ADA SPACES SHALL COMPLY WITH FBC, ACCESSIBILITY 2017)

NOT TO SCALE



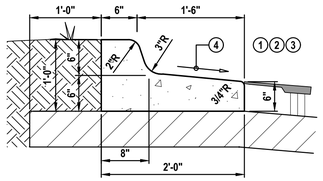
TYPE "D" CURB DETAIL

NOT TO SCALE



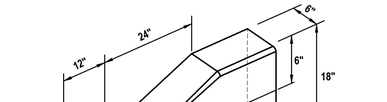
TYPE "F" CURB (CATCH) DETAIL

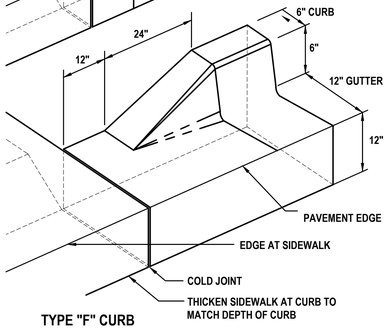
NOT TO SCALE



TYPE "F" CURB (SPILL) DETAIL

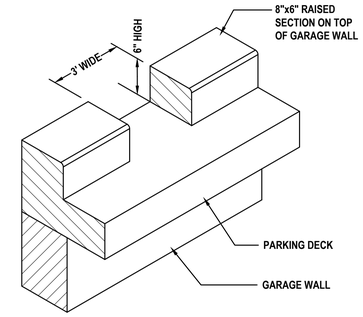
NOT TO SCALE





CURB TRANSITION DETAIL

NOT TO SCALE

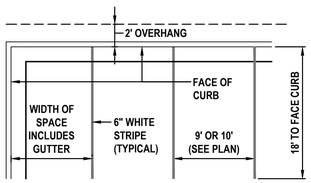


PARKING DECK / CURB NOTCH DETAIL

NOT TO SCALE

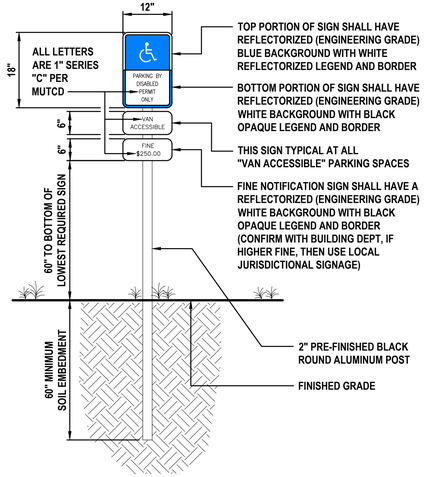
BUBBLE NOTES FOR CURB DETAILS:

1. PROVIDE CONTRACTION JOINTS @ 10' O.C. AND EXPANSION JOINTS @ 100' O.C. ALL JOINTS SEALED PER SPECIFICATIONS
2. 6" HEIGHT SHALL BE UNIFORM, IF HEIGHT VARIES ± 1/2" THEN CURB WILL BE REPLACED AT THE DISCRETION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3. FACE OF CURB SHALL BE CLEAN OF SCUFF MARKS AND INTERFACE OF CURB AND PAVEMENT SHALL BE NEAT AND CLEAN OF CONCRETE OVERSPILL. CONTRACTOR SHALL REPLACE OR REPAIR AT ITS EXPENSE ANY LOCATIONS NOT ACCEPTABLE TO DEVELOPER. (BROOM FINISH VERTICALLY)
4. 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.



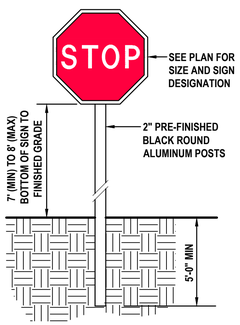
TYPICAL PARKING SPACE

NOT TO SCALE



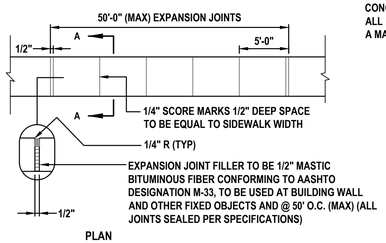
ADA PARKING SIGN

NOT TO SCALE

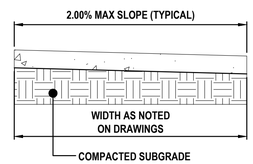


TYPICAL SIGN DETAIL

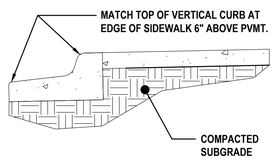
NOT TO SCALE



CONCRETE WALKS SHALL BE 4 INCHES THICK HAVING A 3,000 PSI STRENGTH, POURED OVER PROPERLY PREPARED SUBGRADE. ALL CONCRETE SIDEWALKS SHALL BE 6 INCHES THICK ACROSS DRIVEWAYS. 1/2 INCH EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM OF 50'-0". CRACK CONTROL JOINTS SHALL BE 5' ON CENTERS.



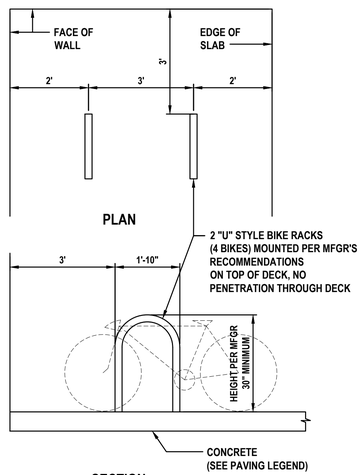
SECTION A-A



SIDEWALK AT BACK OF CURB

SIDEWALK DETAILS

NOT TO SCALE



BIKE RACK DETAIL

NOT TO SCALE

REVISIONS	
DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

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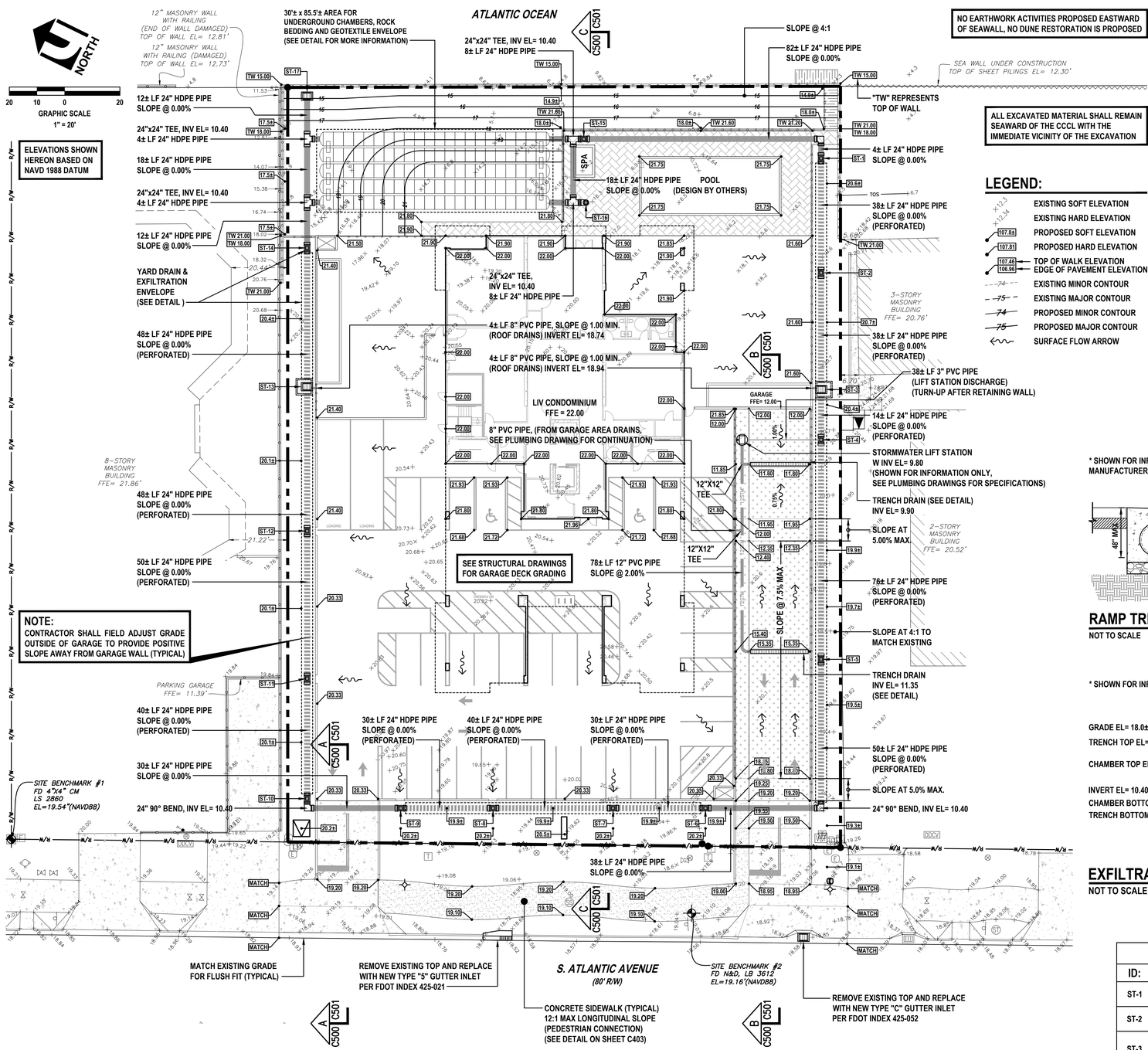
MISCELLANEOUS DETAILS & NOTES

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:

C403



NO EARTHWORK ACTIVITIES PROPOSED EASTWARD OF SEAWALL, NO DUNE RESTORATION IS PROPOSED

ALL EXCAVATED MATERIAL SHALL REMAIN SEAWARD OF THE CCCL WITH THE IMMEDIATE VICINITY OF THE EXCAVATION

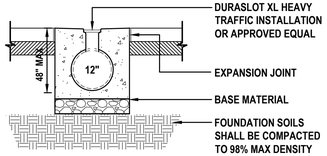
LEGEND:

- EXISTING SOFT ELEVATION
- EXISTING HARD ELEVATION
- PROPOSED SOFT ELEVATION
- PROPOSED HARD ELEVATION
- TOP OF WALK ELEVATION / EDGE OF PAVEMENT ELEVATION
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- SURFACE FLOW ARROW

GENERAL DRAINAGE NOTES:

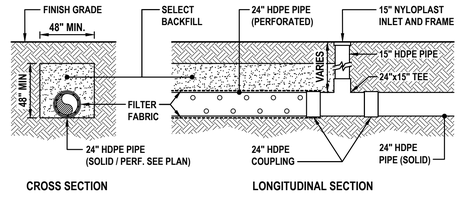
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO DRAINAGE SYSTEM AND SHALL RESTORE ANY DAMAGED STRUCTURES OR PIPES.
2. ALL "ROUND" STORM PIPE SHALL BE CONSTRUCTED OF REINFORCED CONCRETE CLASS III WITH BUTYL MASTIC SEALANT, PVC OR HDPE (SICE) PIPE WITH CERTIFIED WATERTIGHT JOINTS BY THE MANUFACTURER WHERE SPECIFICALLY INDICATED ON THE DRAWING. RCP JOINTS SHALL BE WRAPPED WHERE APPLICABLE PER FDOT SPECIFICATIONS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MATERIAL AND STRUCTURES TO THE ENGINEER (UPHAM, INC.) FOR APPROVAL PRIOR TO THE PRECONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE AT ITS OWN RISK AND COST IF PRECAST STRUCTURES OR MATERIALS ARE ORDERED OR DELIVERED TO THE SITE PRIOR TO THE ENGINEER'S APPROVAL AND FOUND NOT TO BE ACCEPTABLE.
4. ALL DRAINAGE STRUCTURES SHALL BE PRECAST PER FDOT SPECIFICATIONS.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY PER FDOT STANDARD SPECIFICATIONS AND MANUFACTURER'S SPECIFICATIONS RESPECTIVELY.
6. ALL DRAINAGE STRUCTURES AND PIPES SHALL BE CLEANED OF SAND AT THE LAST STAGE OF CONSTRUCTION PRIOR TO THE FINAL INSPECTION.
7. THE CONTRACTOR SHALL FIRST VERIFY THE INVERT(S) OF THE EXISTING STUBOUTS, MANHOLE(S) AND/OR INLETS FOR CONNECTION PRIOR TO INSTALLING ANY PIPES TO CONFIRM ELEVATION(S). IF ANY SUBSTANTIAL DIFFERENCES ARE DISCOVERED IN THE EXISTING INVERT(S), THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND COUNTY INSPECTOR.
8. MINIMUM PIPE COVER SHALL BE EIGHTEEN (18) INCHES MEASURED FROM THE OUTSIDE TOP OF PIPE TO THE BOTTOM OF THE ROADWAY BASE.
9. ALL ROOF DRAINS TO BUILDINGS SHALL END 5' OUTSIDE THE BUILDING LIMITS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END UNTIL BUILDING CONTRACTOR MAKES CONNECTION TO ROOF DRAINS.
10. AS AN OPTION TO FITTINGS, CONTRACTOR MAY INSTALL "INSERTA-TEE" FITTINGS FOR STORM PIPING CONNECTIONS. MANUFACTURER'S SPECIFICATIONS FOR MATERIAL AND INSTALLATION MUST BE STRICTLY FOLLOWED TO VALIDATE WARRANTY.
11. ALL YARD DRAIN PIPING AND ROOF DRAIN CONNECTIONS SHALL BE PVC SDR 26.
12. BUILDING DOWNSPOUTS SHALL CONNECT TO STORM PIPE WHERE AVAILABLE AT YARD DRAINS OR LAWN GRADED FROM DOWNSPOUT SPLASH PADS TO YARD DRAINS. BUILDING RUNOFF SHALL NOT DISCHARGE OFF-SITE.
13. YARD DRAIN TOP MAY BE FIELD ADJUSTED TO LOWER TOP TO ACCEPT RUNOFF.

* SHOWN FOR INFORMATION ONLY, CONTRACTOR SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION



RAMP TRENCH DRAIN DETAIL

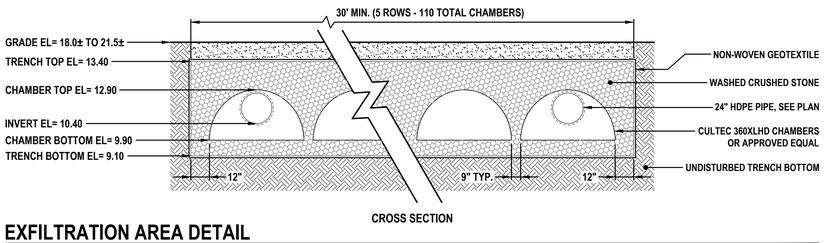
NOT TO SCALE



YARD DRAIN & EXFILTRATION ENVELOPE DETAIL

NOT TO SCALE

* SHOWN FOR INFORMATION ONLY, CONTRACTOR SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION



EXFILTRATION AREA DETAIL

NOT TO SCALE

STORM STRUCTURE TABLE

ID:	DESCRIPTION:	RIM EL:	INVERT:	ID:	DESCRIPTION:	RIM EL:	INVERT:
ST-1	15" C.I. NYLOPLAST INLET	20.40	E INV= 10.40 (24") W INV= 10.40 (24")	ST-10	15" C.I. NYLOPLAST INLET	20.00	E INV= 10.40 (24") W INV= 10.40 (24")
ST-2	15" C.I. NYLOPLAST INLET	20.40	E INV= 10.40 (24") W INV= 10.40 (24")	ST-11	15" C.I. NYLOPLAST INLET	20.00	E INV= 10.40 (24") W INV= 10.40 (24")
ST-3	TYPE "C" INLET, 5FT "J" BTM	20.40	N INV= 18.90 (8") E INV= 10.40 (24") W INV= 10.40 (24")	ST-12	15" C.I. NYLOPLAST INLET	20.00	E INV= 10.40 (24") W INV= 10.40 (24")
ST-4	15" C.I. NYLOPLAST INLET	19.90	N INV= 18.40 (3") E INV= 10.40 (24") W INV= 10.40 (24")	ST-13	TYPE "C" INLET, 5FT "J" BTM	20.00	S INV= 18.70 (8") E INV= 10.40 (24") W INV= 10.40 (24")
ST-5	15" C.I. NYLOPLAST INLET	19.60	E INV= 10.40 (24") W INV= 10.40 (24")	ST-14	15" C.I. NYLOPLAST INLET	20.40	E INV= 10.40 (24") W INV= 10.40 (24")
ST-6	15" C.I. NYLOPLAST INLET	19.50	N INV= 10.40 (24") S INV= 10.40 (24")	ST-15	15" C.I. NYLOPLAST INLET	21.60	N INV= 10.40 (24")
ST-7	15" C.I. NYLOPLAST INLET	19.50	N INV= 10.40 (24") S INV= 10.40 (24")	ST-16	15" C.I. NYLOPLAST INLET	21.50	N INV= 10.40 (24") S INV= 10.40 (24")
ST-8	15" C.I. NYLOPLAST INLET	19.50	N INV= 10.40 (24") S INV= 10.40 (24")	ST-17	TYPE "C" INLET	15.00	W INV= 10.40 (24")
ST-9	15" C.I. NYLOPLAST INLET	19.50	N INV= 10.40 (24") S INV= 10.40 (24")				

GENERAL EARTHWORK NOTES:

1. IF ANY MUCK OR MUCK-LIKE MATERIAL IS DISCOVERED, IT WILL BE REQUIRED TO BE REMOVED, BACKFILLED WITH APPROPRIATE FILL, COMPACTED, AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
2. ALL FILLING IS TO BE PERFORMED IN ONE-FOOT LIFTS. THE COMPACTION REQUIREMENT IS 98% FOR PAVED AREAS AND 95% FOR UNPAVED AREAS PER AASHTO T-180 MODIFIED PROCTOR TEST.
3. TEMPORARY FILL STOCKPILING IS NOT PERMITTED IN LIFTS GREATER THAN SIX FEET.
4. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION, THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES.

NOTE:
ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION BY MEANS OF DIGITAL COORDINATES BY SURVEYOR UTILIZING GEODETIC TOTAL STATION. SCALING OF DRAWINGS FOR PURPOSES OF STAKING OR THE UTILIZATION OF THE GLOBAL POSITIONING SYSTEM (GPS) ARE AT THE SURVEYOR'S OWN RISK.

MAINTENANCE RESPONSIBILITY:
THE STORMWATER SYSTEM SHALL BE INSPECTED, AS A MINIMUM, QUARTERLY BY THE CONDOMINIUM ASSOCIATION. THE INLETS SHALL BE INSPECTED FOR DEBRIS AND SILTS AND REMOVED IF DISCOVERED. AS A MINIMUM, THE EXFILTRATION PIPES SHALL BE FLUSHED TO REMOVE ANY DEBRIS, SILTS OR SOIL. SEE CITY REQUIRED "STORMWATER SYSTEM MAINTENANCE AGREEMENT" WITH THE LANDOWNER.

NOTE:
ALL WALKWAYS SHALL COMPLY WITH FLORIDA ADA GUIDELINES, LATEST EDITION, FOR SLOPES AND DIMENSIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT ADA GUIDELINES ARE MET

NOTICE:
PARKING DECK GRADES ARE FOR INFORMATION PURPOSES ONLY, NOT THE RESPONSIBILITY OF THE CIVIL ENGINEER, SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS

NOTICE:
THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING OF EXCAVATION WORK IN ORDER TO PROVIDE FOR THE SAFETY OF EXISTING STRUCTURES AND WORKMEN.

REVISIONS

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SITE GRADING PLAN

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT NO:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:

C500

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

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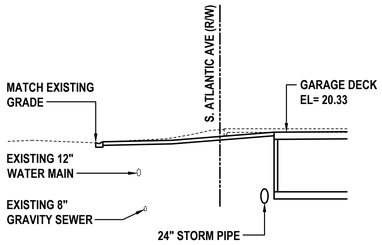
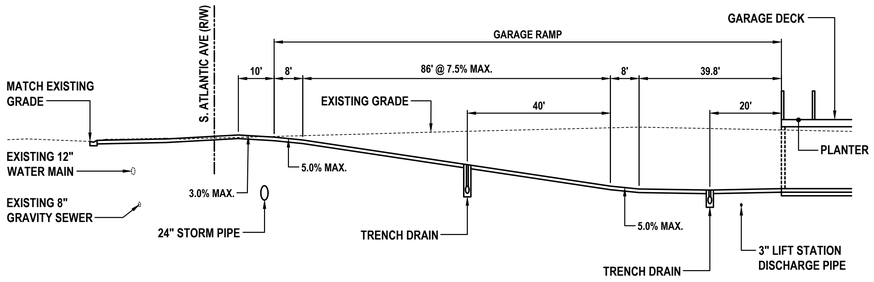


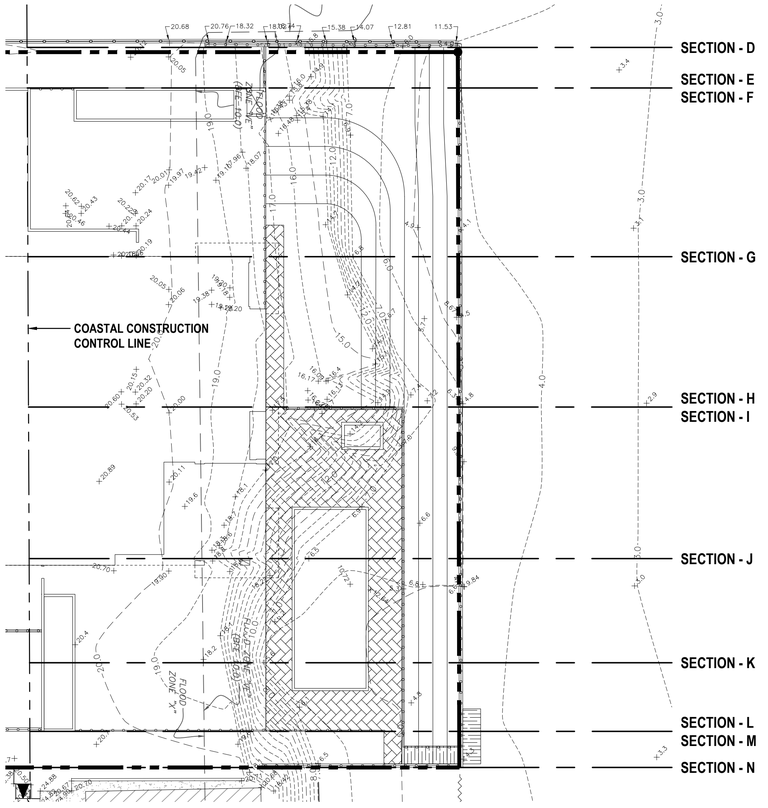
SECTION - A

H. SCALE: 1" = 20'
V. SCALE: 1" = 10'



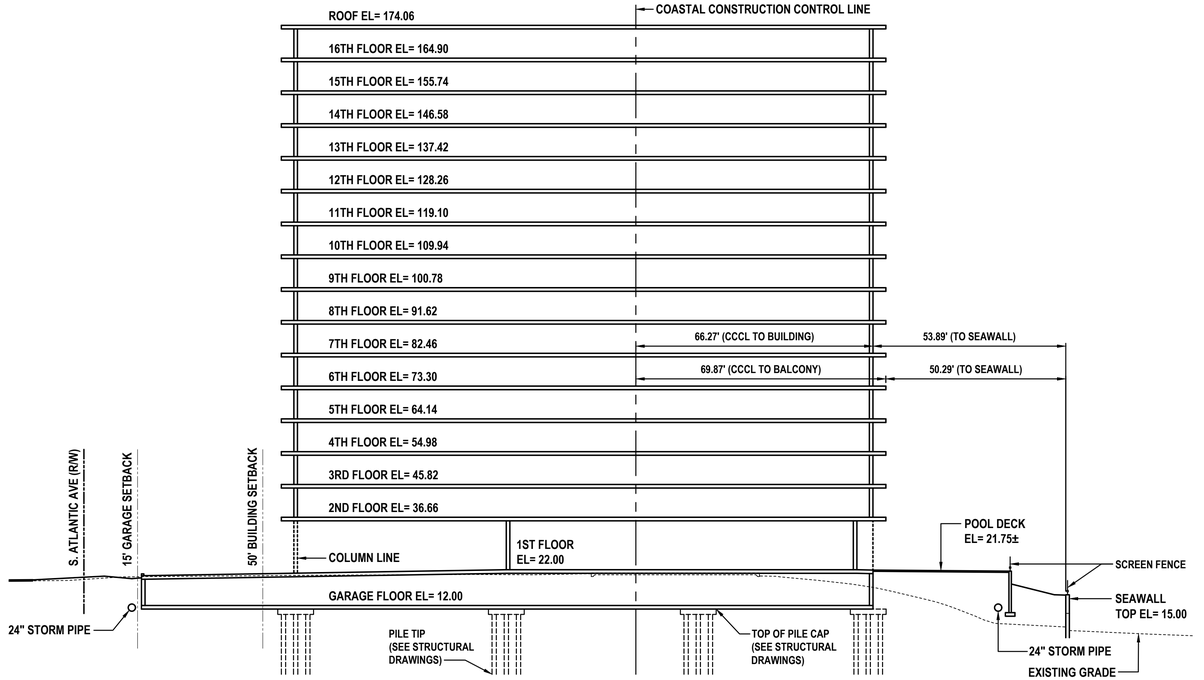
SECTION - C

H. SCALE: 1" = 20'
V. SCALE: 1" = 10'



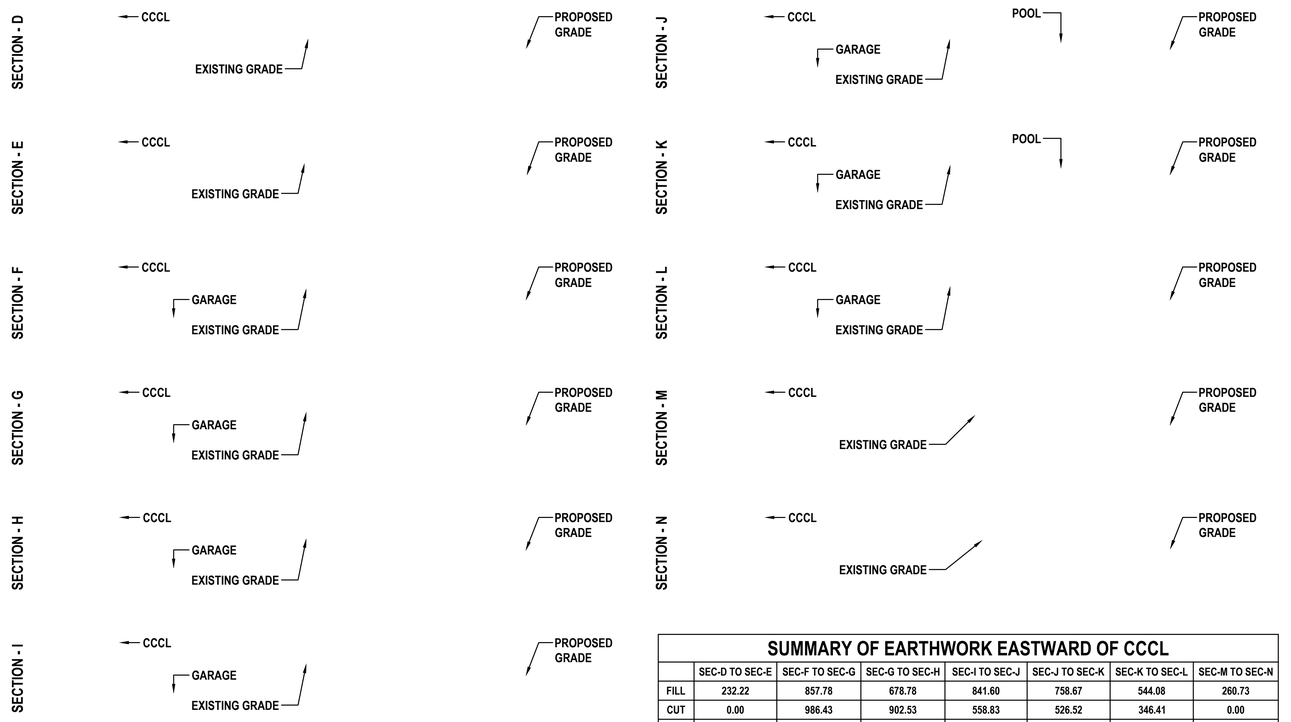
EAST OF CCCL SECTIONS:

H. SCALE: 1" = 20'



SECTION - B

SCALE: 1" = 20'



SUMMARY OF EARTHWORK EASTWARD OF CCCL

	SEC-D TO SEC-E	SEC-F TO SEC-G	SEC-G TO SEC-H	SEC-I TO SEC-J	SEC-J TO SEC-K	SEC-K TO SEC-L	SEC-M TO SEC-N
FILL	232.22	857.78	678.78	841.60	758.67	544.08	260.73
CUT	0.00	986.43	902.53	558.83	526.52	346.41	0.00
NET	232.22	-128.65	-223.75	282.77	232.15	197.67	260.73
						TOTAL NET FILL (CUYD)	853.14

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SECTIONS, DETAILS & NOTES

THE LIV CONDOMINIUM

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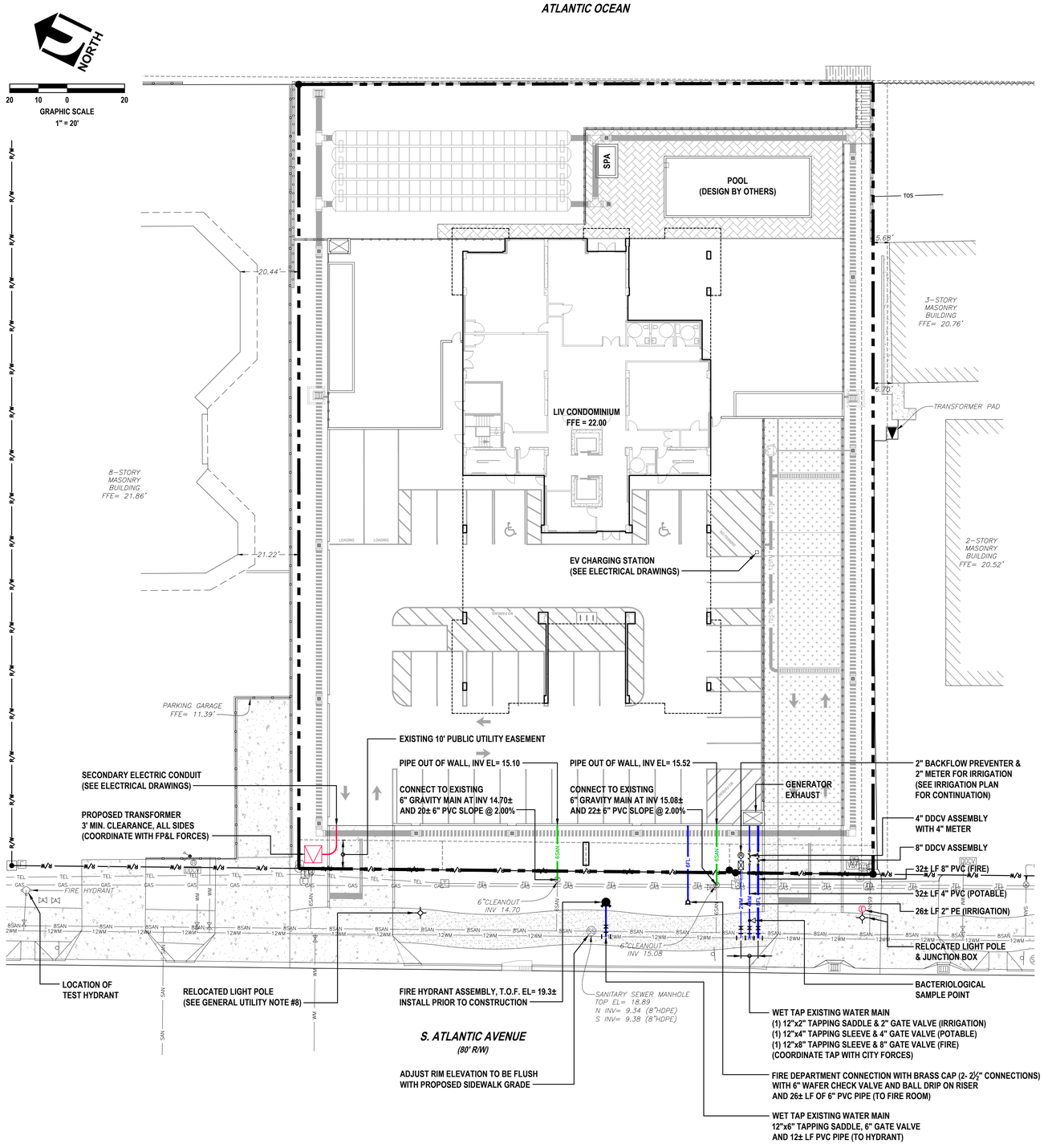

MAINTAIN 3' BUFFER OF CLEARED LANDSCAPING AROUND ALL METERS, BACKFLOW PREVENTERS, CLEANOUTS AND MANHOLES

ELEVATIONS SHOWN HEREON BASED ON NAVD 1988 DATUM

NOTE:
TERMINATE UTILITY SERVICES WITHIN 2' OF GARAGE FOUNDATION, FIRE RISER TO BE STUBBED UP IN RISER ROOMS MINIMUM 12" ABOVE F.F.E. (SEE ELECTRICAL AND PLUMBING PLANS FOR CONTINUATION INTO BUILDING)

NOTE:
VARIOUS UTILITY CONFLICTS MUST CONFORM THE CITY OF PORT ORANGE'S STANDARD CONSTRUCTION DETAILS ST-1.2 AND ST-1.3 FOR VERTICAL AND HORIZONTAL SEPARATION DISTANCES RESPECTIVELY. (SEE SHEETS C-7.0 THROUGH C-7.4 FOR DETAILS)

UTILITIES LEGEND:

- PROPOSED BACKFLOW PREVENTER
- PROPOSED DDCV ASSEMBLY
- PROPOSED FDC
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- BACTERIOLOGICAL SAMPLE POINT
- PROPOSED WATER METER

PIPE LEGEND:

(36" MIN COVER, ALL UTILITIES)

- 2WM — 2" PE PIPE (IRRIGATION)
- 4WM — 4" PVC C-900 DR-14 PIPE
- 6FL — 6" PVC C-900 DR-14 PIPE (FIRE)
- 8FL — 8" PVC C-900 DR-14 PIPE (FIRE)
- 6SAN — 6" PVC SDR-26 PIPE

NOTE:
THE SITE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF CONDUITS WITH THE BUILDING ELECTRICAL CONTRACTOR.

GENERAL UTILITY NOTES:

1. THE GENERAL CONTRACTOR WILL SCHEDULE A PRECONSTRUCTION MEETING WITH THE CITY OF DAYTONA BEACH SHORES AND CITY OF PORT ORANGE UTILITY DEPARTMENTS A MINIMUM OF 2 WEEKS PRIOR TO THE GENERAL CONTRACTOR'S START OF CONSTRUCTION AND PRIOR TO APPROVAL OF THE SHOP DRAWINGS AND DELIVERY OF ANY UTILITY MATERIAL. THE GENERAL CONTRACTOR AND UTILITY SUBCONTRACTOR IS REQUIRED TO ATTEND THIS MEETING.
2. ALL UTILITIES MATERIAL, TESTING AND CONSTRUCTION SHALL BE IN STRICT COMPLIANCE WITH THE CITY OF DAYTONA BEACH SHORES CONSTRUCTION SPECIFICATIONS FOR WATER THE AND CITY OF PORT ORANGE CONSTRUCTION SPECIFICATIONS FOR WASTEWATER, LATEST REVISION RESPECTIVELY; INCLUDING THE APPLICABLE FDEP REQUIREMENTS.
3. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE UTILITIES ARE INSTALLED IN THE LOCATIONS INDICATED AND WITHIN ANY APPLICABLE EASEMENTS.
4. ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION FROM DIGITAL COORDINATES BY A SURVEYOR UTILIZING AS A MINIMUM A GEODETIC TOTAL STATION. SCALING OF DRAWINGS FOR PURPOSES OF STAKING ARE SOLELY AT THE SURVEYOR'S RISK.
5. SEE ARCHITECTURAL DRAWINGS FOR CONTINUATION OF ELECTRICAL, WATER / FIRE SERVICES AND SANITARY LATERAL INTO BUILDING.
6. CONDUITS FOR ELECTRIC AND TELEPHONE SHALL HAVE A PULL CABLE CAPABLE OF 200 LB MIN WEIGHT FOR FRANCHISE UTILITIES TO UTILIZE.
7. ALL CLEANOUTS SHALL BE PVC RISER AND CAP WITHIN LAWN AREAS. ALL CLEANOUTS SHALL BE CAST IRON RISER AND CAP WITHIN PAVEMENT AREAS.
8. COORDINATE UTILITY WORK WITHIN THE RIGHT-OF-WAY WITH CITY OF DAYTONA BEACH SHORES DEPUTY DIRECTOR OF PUBLIC WORKS TOM BROWN AT 386.763.7578 PRIOR TO THE START OF ANY UTILITY WORK.LIGHT POLE REMOVAL AND RELOCATION/INSTALLATION SHALL BE THE RESPONSIBILITY OF AND AT THE COST OF THE DEVELOPER. PRIOR TO BOTH REMOVAL AND RELOCATION/INSTALLATION, COORDINATION SHALL BE MADE WITH THE CITY'S DEPUTY PUBLIC WORKS DIRECTOR, TOM BROWN AT TBROWN@CITYOFDBS.ORG OR TEL. 386-763-7578.

GENERAL FIRE PROTECTION NOTES:

1. LICENSED UNDERGROUND FIRE CONTRACTOR MUST SUBMIT PLANS FOR APPROVAL TO OBTAIN A PERMIT FOR THE INSTALLATION OF THE UNDERGROUND FIRE SERVICE MAIN AND APPURTENANCES (FFPC 1:13.1.1.1)
2. LICENSED FIRE SPRINKLER CONTRACTOR MUST SUBMIT PLANS FOR APPROVAL TO OBTAIN A PERMIT FOR THE INSTALLATION OF THE AUTOMATIC FIRE SPRINKLER SYSTEM (FFPC 1:13.1.1.1)
3. LICENSED FIRE ALARM CONTRACTOR MUST SUBMIT PLANS FOR APPROVAL TO OBTAIN A PERMIT FOR THE INSTALLATION OF THE FIRE ALARM SYSTEM (FFPC 1:13.1.1.1)
4. BUILDING PERMIT WILL NOT BE RELEASED FOR CONSTRUCTION UNTIL FIRE PERMITS HAVE BEEN APPLIED FOR IN COMPLIANCE WITH FFPC 1:1.7.12.10.
5. EACH FDC AND PIV SHALL HAVE A PERMANENT HIGHLY VISIBLE METAL TAG AFFIXED TO THE DEVICE TO INDICATE THE BUILDING NUMBER OR ADDRESS.
6. THE FLORIDA FIRE PROTECTION CODE, 7TH EDITION APPLIES TO THIS PROJECT.
7. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE CONTRACTOR TO ENSURE A 3' MINIMUM CLEARANCE IS OBTAINED FROM ANY PLANTINGS TO THE FDC AND PIV DEVICES. NO TREE SHALL BE PLANTED WITHIN 7' OF THE DEVICES, REFER TO THE LANDSCAPE DRAWINGS. ANY ADJUSTMENT OF PLANTINGS SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
8. A KNOX BOX WILL BE PROVIDED BY OWNER AND INSTALLATION LOCATION.
9. APPROVED BY THE FIRE MARSHALL'S OFFICE.
10. TEMPORARY STANDPIPE TO BE INSTALLED AT 3RD FLOOR POUR AND TO BE CONTINUOUS 1 FLOOR BELOW DURING CONSTRUCTION.
11. APPROVED STAIRS SHALL BE IN PLACE DURING CONSTRUCTION.
12. LARGE CONSTRUCTION ADDRESS NUMBERS TO BE ON FRONT NORTH AND SOUTH SIDES OF FENCING DURING CONSTRUCTION.

FIRE HYDRANT FLOW TEST RESULTS:

mastercraft
PLUMBING, HEATING, MECHANICAL AIR CONDITIONING & FIRE PROTECTION

887 BRENTWOOD DR.
DAYTONA BEACH FL., 32117
PHONE 386-252-7047
FAX 386-98-0322
MasterCraftFl.com
194487-0001-2010

Customer: Keystone Investment Properties — Date 11/9/2023
HYDRANT & LOCATION: Flowed: Hydrant #994
3635 S. Atlantic Ave. — Stat taken: hydrant #321
TEST BY: Master Craft — Day or Week: Thursday — TIME OF DAY: 2:00 PM — MIN. OF FLOW: 2
WATER SUPPLIED BY: Daytona Beach Shores — Eli Johnston FP\17-000053
PURPOSE OF TEST: Design Hydrant Flow

DATA

FLOW HYDRANT(S)	A1	A2	A3
SIZE OPENING:	2.5	2.5	2.5
COEFFICIENT:	0.90	0.9	0.9
PITOT READING:	47		
GPM:	1150	0	0

TOTAL FLOW DURING TEST: 1150 GPM

STATIC READING: 62 PSI — RESIDUAL: 54 PSI

RESULTS: AT 20 PSI RESIDUAL 2816.5 GPM — AT 0 PSI 3476 GPM

ESTIMATED CONSUMPTION: 2301 GAL. — 12.90 % difference

REMARKS: Calibrated equipment used during testing. residual pressure did not drop 20% — Graph projection less accurate if Stat and Res. <20% different

PROJECTED UTILITIES USAGE

SERVICES	USAGE (GALLONS PER DAY)
DOMESTIC WATER	110 @ 3.5 PER UNIT @ 74 UNITS = 28,490 GPD
WASTER WATER	100 @ 3.5 PER UNIT @ 74 UNITS = 25,900 GPD

FIRE DEMAND

NEEDED	AVAILABLE
1,500 GPM	2,816 GPM

WARNING!! CONTRACTOR SHALL TAKE ALL PRECAUTIONS DURING CONSTRUCTION TO AVOID CONTACT WITH BURIED GAS MAINS, OVERHEAD POWER LINES AND UNDERGROUND UTILITIES.

Sunshine 811
Always call 811 before you dig

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

NOTE:
ALL IMPROVEMENTS SHALL BE STAKED FOR CONSTRUCTION BY MEANS OF DIGITAL COORDINATES BY SURVEYOR UTILIZING GEODETIC TOTAL STATION. SCALING OF DRAWINGS FOR PURPOSES OF STAKING OR THE UTILIZATION OF THE GLOBAL POSITIONING SYSTEM (GPS) ARE AT THE SURVEYOR'S OWN RISK.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRCULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

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SITE UTILITY PLAN

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C600

FDEP WATER NOTES:

1. 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.

2. 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.

3. ALL PROPOSED WATER MAINS SHALL BE FLUSHED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-651 AND THE FDEP PROTECTION REQUIREMENTS.

4. POTABLE WATER PIPES SHALL BE HYDROSTATICALLY TESTED FOR PRESSURE AND LEAKAGE IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE IRON PIPES AND C605 FOR PVC PIPES, RESPECTIVELY.

5. 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.

6. 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.)

7. POTABLE WATER PIPES MUST BE MANUFACTURED IN ACCORDANCE WITH THE FOLLOWING AWWA SPECIFICATIONS:
   - A. DUCTILE IRON PIPE (3 INCHES TO 54 INCHES) - AWWA C150 AND AWWA C151;
   - B. PVC PIPE
     - (1) AWWA C900/ASTM 1784 (1 INCH TO 12 INCHES) WITH CL200 MINIMUM:
     - (2) AWWA C905 (14 INCHES TO 48 INCHES);

8. ALL FIRE HYDRANTS THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL HAVE UNPLUGGED, UNDERGROUND DRAINS WILL BE LOCATED AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER OR VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-10, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM."

9. 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.

10. 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.

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

12. 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.

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

14. 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; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE INSTALLED AS INDICATED IN SCHEDULE FOR F.A.C. RULE 62-555.314 THIS DRAWING.

15. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

16. IF CONNECTION OF THE PROPOSED ACTIVITY TO THE WATER MAIN WILL RESULT IN A DEPRESSURIZATION OF THE EXISTING SYSTEM BELOW 20 POUNDS PER SQUARE INCH, ONE OF THE FOLLOWING MUST OCCUR;
   - A. PRECAUTIONARY BOIL WATER NOTICES MUST BE ISSUED IN CASES OF PLANNED DISTRIBUTION INTERRUPTIONS, WHICH ARE DEEMED AN IMMINENT PUBLIC HEALTH THREAT BY THE DEP CENTRAL DISTRICT OR WILL AFFECT THE BACTERIOLOGICAL QUALITY OF THE DRINKING WATER UNLESS THE PUBLIC WATER SYSTEM CAN DEMONSTRATE, BY SOUND ENGINEERING JUDGMENT, THAT THE INTEGRITY OF THE WATER SYSTEM HAS BEEN MAINTAINED; OR
   - B. IN CASE OF BRIEF INTERRUPTION IN SERVICE, ADVISORIES (NOT BOIL WATER NOTICES) SHOULD BE ISSUED IF TEMPORARY CHANGES IN WATER QUALITY ARE EXPECTED TO OCCUR AND NOT DEEMED AN IMMINENT PUBLIC HEALTH RISK.

FDEP WASTEWATER NOTES:

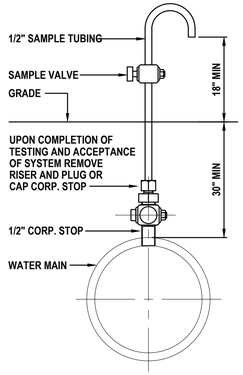
1. APPROPRIATE DEFLECTION TEST ARE SPECIFIED FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY: 1) NO PIPE SHALL EXCEED A DEFLECTION OF 5%; 2) USING RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATIONS, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURE; AND 3) PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.

2. LEAKAGE TEST ARE SPECIFIED REQUIRING THAT: 1) THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM; 2) EXFILTRATION OR INFILTRATION TEST BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET; AND 3) AIR TEST, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND OTHER MATERIAL APPROPRIATE TEST PROCEDURES.

3. MANHOLE INSPECTION AND TESTING FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE ARE REQUIRED. AIR TESTING SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.

4. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS.

5. CONCRETE MANHOLES SHALL HAVE THE FOLLOWING: 1) MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SEALED WITH NON-SHRINK MORTAR OR OTHER APPROPRIATE MATERIAL; 2) INLET AND OUTLET PIPES BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATERTIGHT CONNECTION OR ANOTHER WATERTIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL; 3) WATERTIGHT MANHOLE COVERS BE USED WHEREVER THE TOPS MAY BE FLOODED BY STREET RUNOFF OR HIGH WATER.



BACTERIOLOGICAL SAMPLE POINT DETAIL:

NOT TO SCALE

GENERAL WATER NOTES:

1. THE CITY OF PORT ORANGE WATER UTILITY DEPARTMENT SHALL BE NOTIFIED PRIOR TO BEGINNING ANY WATER SYSTEM CONSTRUCTION.

2. ALL WATER DISTRIBUTION CONSTRUCTION SHALL BE IN ACCORDANCE WITH FDEP REGULATIONS AND THE CITY OF PORT ORANGE UTILITY DETAILS AND SPECIFICATIONS (LATEST EDITION).

3. CONTRACTOR IS TO VERIFY THE LOCATION (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER.

4. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ANY EXISTING PAVEMENT, SIDEWALK, CURBING, UTILITIES AND DRAINAGE SYSTEMS DAMAGED DURING CONSTRUCTION. ALL DAMAGED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.

5. LOCATION OF TELEPHONE, T.V. CABLE AND ELECTRICAL SERVICE CONNECTIONS TO BE DETERMINED BY APPROPRIATE UTILITIES PERSONNEL IN COOPERATION WITH CONTRACTOR.

6. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.

7. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO MINIMUM COMPACTION OF 98% WITHIN PAVED AND 95% WITHIN UNPAVED AREAS OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST.

8. WATER SERVICES FROM 3/4" TO 2" POLYETHYLENE (ENDOT ENDOPURE) WITH 30" MINIMUM COVER.

9. WATER MAIN FROM 4" TO 12" SHALL BE PVC CLASS 150 (DR 18) WITH 36" MINIMUM COVER.

10. ALL WATER AND FIRE SERVICES ARE REQUIRED TO HAVE A HARD BODY GATE VALVE OFF THE MAIN LINE.

11. ALL VALVES SHALL BE BOLTED TO TEES.

12. ALL POTABLE WATER PIPE SHALL HAVE "NSF POTABLE WATER" IMPRINTED ON THE PIPE.

13. A TAPPING CONTRACTOR ACCEPTABLE TO THE CITY OF PORT ORANGE WILL BE REQUIRED FOR TAPS.

14. THE CONTRACTOR SHALL MAKE ALL ATTEMPTS TO LOCATE BURIED UTILITIES AND NOTIFY THE UTILITY COMPANIES 48 HR. PRIOR TO CONSTRUCTION.

15. UTILITY TRENCH CONSTRUCTION SHALL CONFORM TO CITY OF PORT ORANGE AND OSHA REQUIREMENTS.

16. IN THE CASE WHERE SOLVENT CONTAMINATION IS FOUND IN THE TRENCH, WORK WILL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH THE APPROVAL OF THE CITY OF PORT ORANGE UTILITY DEPARTMENT, DUCTILE IRON PIPE, FITTINGS AND APPROVED SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE WILL EXTEND AT LEAST 100 FEET BEYOND ANY DISCOVERED SOLVENT.

GENERAL SEWER NOTES:

1. CITY OF PORT ORANGE SHALL BE NOTIFIED PRIOR TO ANY SEWER CONSTRUCTION.

2. ALL SEWER CONSTRUCTION MUST COMPLY WITH FDEP REGULATIONS AND THE CITY OF PORT ORANGE UTILITY DETAILS AND SPECIFICATIONS (LATEST EDITION).

3. WATER LINES, RECLAIMED LINES AND STORM DRAINAGE CROSSINGS SHALL FOLLOW THE C-900 OR CONCRETE ENCASEMENT REQUIREMENT PER THE CITY OF PORT ORANGE DETAILS AND FDEP REQUIREMENTS.

4. SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY CITY OF PORT ORANGE.

5. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING, DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.

6. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES WILL NOT BE ACCEPTED. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY OF PORT ORANGE.

7. SANITARY SEWER PIPE (GRAVITY AND FORCE MAIN) SHALL BE PVC SDR 26.

8. EXCAVATION AND BACKFILL: THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING OF EXCAVATION WORK IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY OF PORT ORANGE, THE DESIGN ENGINEER, AND THE DEVELOPER.

9. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO MINIMUM COMPACTION OF 98% WITHIN PAVED AND 95% WITHIN UNPAVED AREAS OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST.

10. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR.

11. GRAVITY MAINS MUST HAVE A TELEVISED INSPECTION. A VIDEO INSPECTION FORM MUST BE FAXED TO THE CITY OF PORT ORANGE WASTEWATER COLLECTION DEPARTMENT 48 HOURS PRIOR TO VIDEO INSPECTION. A CITY INSPECTOR MUST BE PRESENT.

12. SEWER CLEANOUT LOCATED ON PAVEMENT AND SIDEWALK AREA SHALL BE TRAFFIC BEARING FLAT TOP BRASS CAP.

13. FORCE MAIN SHALL BE PRESSURE TESTED PER CITY REQUIREMENTS.

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314 SCHEDULE:

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING AT CROSSINGS (FULL JOINT CENTERED)
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	WATER MAIN 3 FT MINIMUM	WATER MAIN 12 INCHES IS THE MINIMUM EXCEPT FOR STORM SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 3 FT MINIMUM WATER MAIN
VACUUM SANITARY SEWER	WATER MAIN 10 FT PREFERRED 3 FT MINIMUM	WATER MAIN 12 INCHES PREFERRED 6 INCHES MINIMUM	ALTERNATE 3 FT MINIMUM WATER MAIN
GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	WATER MAIN 10 FT PREFERRED 6 FT MINIMUM (3)	WATER MAIN 12 INCHES IS THE MINIMUM EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 6 FT MINIMUM WATER MAIN
ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM	10 FT MINIMUM (3)	———	———

(1) WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
(2) RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
(3) 3 FT FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
(4) RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

TABLE 1: CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

ASTM D 2321 MATERIAL CLASS	ASTM D 2487 USCS SOIL GROUP	MATERIAL TYPE	% PASSING			ATTERBERG LIMITS	
			1 1/2 IN.	NO. 4	NO. 200	LL	PI
IA	NONE	MANUFACTURED OPEN GRADED AGGREGATES	100%	≤10%	<5%	NON PLASTIC	
IB	NONE	MANUFACTURED DENSE GRADED AGGREGATES	100%	≤50%	<5%	NON PLASTIC	
II	GW	COARSE-GRAINED SOILS, CLEAN	100%	<50% OF "COARSE FRACTION"	<5%	NON PLASTIC	
	GP						
	SW			>50% OF "COARSE FRACTION"			
	SP						
III	GM	COARSE-GRAINED SOILS W/ FINES	100%	<50% OF "COARSE FRACTION"	12% TO 50%		<4 OR <"A" LINE
	GC						<7 OR >"A" LINE
	SM			>50% OF "COARSE FRACTION"			>4 OR <"A" LINE
	SC						>7 OR >"A" LINE
IV-A	ML	FINE-GRAINED SOILS	100%	100%	>50%	<50	<4 OR <"A" LINE
	CL						>7 OR >"A" LINE

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRCULA LICENSED NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

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MISCELLANEOUS UTILITY DETAILS AND NOTES

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C700

THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 48 HOURS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION.

CONSTRUCTION:

1. ALL WORK PERFORMED ON SANITARY SEWER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY CONTRACTOR, OR FLORIDA LICENSED GENERAL CONTRACTOR REGISTERED WITH THE CITY.
2. THE PLANS SHALL DIMENSION THE LOCATION, OF ALL MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURBING EXISTS. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PROPOSED AND EXISTING PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE.
3. PROFILE VIEWS SHALL BE PROVIDED FOR ALL SEWER MAINS. PROFILE VIEWS SHALL BE ON THE SAME SHEET AS THE ASSOCIATED PLAN VIEW AND SHALL INCLUDE THE FOLLOWING INFORMATION:
   A. SIZE, SLOPE, LENGTH AND CLASS OF PIPE
   B. MANHOLE RIM AND INVERT ELEVATIONS
   C. UTILITY CROSSINGS WITH VERTICAL SEPARATION
   D. SHOW PROPOSED SEWER AND EXISTING UTILITY
   E. EXISTING GROUND PROFILE
   F. MATCH LINE
   G. VICINITY MAP
   H. PROFILE VIEW STATIONS TO COINCIDE WITH PLAN VIEW STATIONS
4. GREASE INTERCEPTORS ARE REQUIRED FOR ALL COMMERCIAL BUILDINGS HAVING KITCHEN, FOOD PREPARATION OR SERVING FACILITIES AND / OR MISCELLANEOUS USES. GREASE INTERCEPTORS CONSTRUCTED EXTERNAL TO BUILDINGS SHALL BE SIZED IN ACCORDANCE WITH FAC 64-E-6. CALCULATIONS TO DETERMINE SIZING REQUIREMENTS SHALL BE SUBMITTED AS PART OF BUILDING PERMITTING. AN INSPECTION MANHOLE MAY BE REQUIRED IMMEDIATELY DOWN STREAM OF THE GREASE INTERCEPTOR FOR INSPECTION PURPOSES, AS DEEMED APPROPRIATE BY THE CITY.
5. ON ALL EXCAVATION AND BACKFILLING, THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING IN ACCORDANCE TO OSHA GUIDELINE IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELL AS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER.
6. ALL PVC. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR DEFORMATION. ANY PIPE DEEMED TO BE MISSHAPED IN ANY WAY FOR ANY REASON SHALL BE REJECTED.
7. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY SERVICE AREA.
8. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING OPERATIONS DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH.
9. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES IS NOT ACCEPTABLE. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE.
10. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE.

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1

11. THE CITY MAY REQUIRE ALL NEW SANITARY SEWER GRAVITY SYSTEMS TO BE SMOKE TESTED PRIOR TO FINAL ACCEPTANCE. ALL TESTING MUST BE DONE IN THE PRESENCE OF THE CITY'S DESIGNATED SITE INSPECTOR.
12. THE CITY OF PORT ORANGE RESERVES THE RIGHT TO REQUIRE THE DEVELOPER TO PERFORM VACUUM TESTING OF ALL SANITARY MANHOLES, AIR TEST SEWER MAINS, AND REQUIRES THAT ALL SANITARY SEWER MAIN LINES BE TELEVISED PRIOR TO FINAL ACCEPTANCE. LATERALS SHALL BE TELEVISED UPON DEMAND BY THE CITY PRIOR TO FINAL ACCEPTANCE WHEN IT IS SUSPECTED THAT A PROBLEM EXISTS.
13. ALL TAPPING OF PRESSURE MAINS AND CORING OF MANHOLES SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 48 HOURS NOTIFICATION DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY ESTABLISHED BY CITY. WITH RESPECT TO TIE-IN CONNECTIONS AND CORING OPERATIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. CONTRACTORS HAVING EXPERIENCE AND PROPER EQUIPMENT MAY BE GRANTED PERMISSION TO CORE MANHOLE BY PUBLIC UTILITIES DEPARTMENT.
14. NEW OR RELOCATED, UNDERGROUND MAINS SHALL BE LAID TO PROVIDE THE FOLLOWING MINIMUM HORIZONTAL SEPARATIONS (OUTSIDE TO OUTSIDE):

	WATER	STORM GRAVITY	STORM FORCE	RECLAIM	SANITARY GRAVITY	SANITARY FORCE
WATER		3'	3'	3'	6', PREFERRED 10'	6', PREFERRED 10'
STORM GRAVITY	3'		3'	3'	6', PREFERRED 10'	6', PREFERRED 10'
STORM FORCE	3'	3'		3'	6', PREFERRED 10'	6', PREFERRED 10'
RECLAIM	3'	3'	3'		6', PREFERRED 10'	6', PREFERRED 10'
SANITARY GRAVITY	6', PREFERRED 10'	6', PREFERRED 10'	6', PREFERRED 10'	6', PREFERRED 10'		6', PREFERRED 10'
SANITARY FORCE	6', PREFERRED 10'	6', PREFERRED 10'	6', PREFERRED 10'	6', PREFERRED 10'	6', PREFERRED 10'	

15. A 3' MINIMUM HORIZONTAL SEPARATION BETWEEN THE SANITARY GRAVITY AND WATER MAINS SHALL BE ALLOWED WHEN THE WATER MAIN IS INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 6" ABOVE THE SANITARY GRAVITY MAIN. ALTERNATIVELY, THE 3' MINIMUM HORIZONTAL SEPARATION SHALL BE ALLOWED WHEN THE SEWER MAIN IS ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE OR UPGRADED TO PRESSURE RATED PVC PIPE (MEETING AWWA C-900 OR C-905 SPECIFICATION AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING).

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES (CONTINUED) REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1.1

16. NEW OR RELOCATED, UNDERGROUND MAINS SHALL BE LAID TO PROVIDE THE FOLLOWING MINIMUM CROSSING/VERTICAL SEPARATIONS (OUTSIDE TO OUTSIDE):

	WATER	STORM GRAVITY	STORM FORCE	RECLAIM	SANITARY GRAVITY	SANITARY FORCE
WATER		OVER STORM GRAVITY 6", PREFERRED 12" UNDER STORM GRAVITY 12"	OVER STORM FORCE 12" UNDER STORM FORCE 12"	OVER RECLAIM 12" UNDER RECLAIM 12"	OVER SANITARY GRAVITY 6", PREFERRED 12" UNDER SANITARY GRAVITY 12"	OVER SANITARY FORCE 12" UNDER SANITARY FORCE 12"
STORM GRAVITY	OVER WATER 12" UNDER WATER 6", PREFERRED 12"		OVER STORM FORCE 6" UNDER STORM FORCE 6"	OVER RECLAIM 6", PREFERRED 12" UNDER RECLAIM 12"	OVER SANITARY GRAVITY 6", PREFERRED 12" UNDER SANITARY GRAVITY 12"	OVER SANITARY FORCE 6", PREFERRED 12" UNDER SANITARY FORCE 12"
STORM FORCE	OVER WATER 12" UNDER WATER 12"	OVER STORM GRAVITY 12" UNDER STORM GRAVITY 6"		OVER RECLAIM 6" UNDER RECLAIM 12"	OVER SANITARY GRAVITY 12" UNDER SANITARY GRAVITY 12"	OVER SANITARY FORCE 12" UNDER SANITARY FORCE 12"
RECLAIM	OVER WATER 12" UNDER WATER 12"	OVER STORM GRAVITY 12" UNDER STORM GRAVITY 6", PREFERRED 12"	OVER STORM FORCE 12" UNDER STORM FORCE 12"		OVER SANITARY GRAVITY 12" UNDER SANITARY GRAVITY 12"	OVER SANITARY FORCE 12" UNDER SANITARY FORCE 12"
SANITARY GRAVITY	OVER WATER 12" UNDER WATER 6", PREFERRED 12"	OVER STORM GRAVITY 12" UNDER STORM GRAVITY 6", PREFERRED 12"	OVER STORM FORCE 12" UNDER STORM FORCE 12"	OVER RECLAIM 12" UNDER RECLAIM 12"	6", PREFERRED 12" UNDER SANITARY GRAVITY 12"	OVER SANITARY FORCE 12" UNDER SANITARY FORCE 12"
SANITARY FORCE	OVER WATER 12" UNDER WATER 12"	OVER STORM GRAVITY 12" UNDER STORM GRAVITY 6", PREFERRED 12"	OVER STORM FORCE 12" UNDER STORM FORCE 12"	OVER RECLAIM 12" UNDER RECLAIM 12"	OVER SANITARY GRAVITY 12" UNDER SANITARY GRAVITY 12"	6", PREFERRED 12"

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES (CONTINUED) REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1.2

17. SEWER LATERAL LOCATIONS SHALL BE MARKED ALONG THE OUTSIDE OF THE CURB WITH A SAW CUT "V", OR BY A METAL TAB SET INTO THE PAVEMENT.
18. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATOR TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC SEWAGE FORCE MAINS. THIS PIPE LOCATOR AID SHALL BE INSTALLED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER. TAPE SHALL BE COLOR CODED GREEN FOR SANITARY SEWER AND FORCE MAIN. A CONTINUOUS NO. 10 COPPER HEAD WIRE SHALL BE INSTALLED WITH WIRE BROUGHT UP AT ALL VALVES.

FORCE MAIN SANITARY SEWER:

1. PVC SANITARY SEWER FORCE MAINS, INCLUDING FITTINGS, SHALL BE GREEN PVC AWWA C-900, OR C-905, UNLESS SPECIFICALLY NOTED OTHERWISE. PRESSURE FITTINGS SHALL BE PRESSURE CLASS 150 OR C-907.
2. HDPE SANITARY SEWER FORCE MAINS SHALL BE SDR11 (OR THICKER) UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC TO WHICH IT IS ATTACHED. PRESSURE FITTINGS SHALL BE PRESSURE CLASS 150 OR C-907.
3. ALL SANITARY SEWER FORCE MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION GUIDELINES MODIFIED TO ACCOMMODATE PVC PIPE BY FOLLOWING THE RECOMMENDED INCREASE IN RESTRAINT LENGTH CORRESPONDING TO THE INSTALLATION OF POLYETHYLENE WRAP. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.
4. ALL IN-LINE SANITARY SEWER FORCE MAIN VALVES SHALL BE AWWA C-509 OR C-515 COMPLIANT RESILIENT SEAT VALVES FEATURING AN EPOXY LINED DUCTILE IRON BODY.
5. FORCE MAIN SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
6. FORCE MAINS SHALL BE FLUSHED, PRESSURE TESTED, PIGGED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER OR WASTEWATER TREATMENT PLANT (AS APPROPRIATE) AT LEAST 48 HOURS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING (SUBJECT TO AVAILABILITY).
7. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL FORCE MAINS AND PRIMARY TRANSMISSION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PORT ORANGE REPRESENTATIVE.

GRAVITY SANITARY SEWER:

1. ALL GRAVITY SANITARY SEWER LINES IN PUBLIC RIGHTS-OF-WAY SHALL BE GREEN PVC SDR26, ASTM D-3034. SEWER LINES CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY, WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF GREEN AWWA C-900 PVC SDR25. USE OF PLASTIC STYRENE FITTINGS SHALL NOT BE ALLOWED.
2. IN PLACES WHERE A MINIMUM COVER OF 36" CANNOT BE MAINTAINED, AWWA C-900 GREEN PVC SDR25 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS.
3. GRAVITY SANITARY SEWER PIPE SIZES SHALL BE:
   MAINS - 8" DIAMETER MINIMUM
   COMMERCIAL SERVICE LATERALS WITH MULTIPLE CONNECTIONS - 6" DIAMETER MINIMUM
   SINGLE FAMILY RESIDENTIAL SERVICE LATERALS - 4" DIAMETER
   MULTI-FAMILY RESIDENTIAL SERVICE LATERALS - 6" DIAMETER MINIMUM

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES (CONTINUED) REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1.3

4. SINGLE FAMILY RESIDENTIAL SERVICE LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 48" ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS.
5. GRAVITY SANITARY SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY THE CITY.
6. MINIMUM GRAVITY SANITARY SEWER SLOPES ARE AS FOLLOWS:
   8" PIPE - 0.40 %
   10" PIPE - 0.30 %
   12" PIPE - 0.22 %
7. GRAVITY SANITARY SEWER LINES SHALL BE INSTALLED WHENEVER POSSIBLE UNDER PAVED AREAS WITHIN PUBLIC RIGHTS-OF-WAY. UTILITY EASEMENTS SHALL BE PROVIDED WHENEVER PUBLICLY-OWNED SEWER LINES ARE CONSTRUCTED OUTSIDE OF A PUBLIC RIGHT-OF-WAY.
8. AS A GENERAL RULE, THE NUMBER OF JOINTS SHALL BE LIMITED WHENEVER POSSIBLE. IN SPECIAL CASES WHERE A POINT REPAIR TO AN 8" TO 12" PVC SEWER MAIN IS REQUIRED, THE PROPER RIGID WRAP AROUND SLEEVE SUCH AS A JCM-210 OVERSIZED DUCTILE IRON COUPLING OR AN APPROVED EQUAL MAY BE ALLOWED BY SPECIAL APPROVAL BY THE CITY.
9. SEWER MAINS SHALL BE FLUSHED, PRESSURE TESTED, PIGGED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER OR WASTEWATER TREATMENT PLANT (AS APPROPRIATE) AT LEAST 48 HOURS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING (SUBJECT TO AVAILABILITY).
10. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL MAINS AND PRIMARY TRANSMISSION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PORT ORANGE REPRESENTATIVE.

SANITARY MANHOLES:

1. STANDARD MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 350'. SHOP DRAWINGS FOR ALL STRUCTURES SHALL BE SUBMITTED TO AND APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION WITH TWO COPIES FORWARDED BY THE DESIGN ENGINEER TO THE CITY.
2. MAXIMUM DEPTH OF SANITARY MANHOLES SHALL BE 15'.
3. LOCAL COLLECTION SANITARY SEWER MANHOLES SHALL BE PRECAST WITH A MINIMUM INSIDE DIAMETER OF 48".
4. THICKER MANHOLE WALLS AND BASES MAY BE REQUIRED TO PREVENT FLOATATION BASED ON HIGH GROUND WATER TABLE ELEVATIONS AS DETERMINED USING ACCEPTED ENGINEERING PRACTICES AND/OR PUBLIC UTILITIES DEPARTMENT.
5. ALL SANITARY SEWER MANHOLES SHALL HAVE ALL INTERIOR SURFACES COATED WITH THREE (3) COATS OF WHITE/GRAY DIVER RED OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 12 MILS THICKNESS OR BLACK COAL-TAR EPOXY WITH A TOTAL OF 16 MILS THICKNESS. OUTSIDE SURFACE TO BE COATED WITH TWO (2) COATS OF BLACK OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 8 MILS AND ONE (1) COAT OF BLACK COAL-TAR EPOXY WITH A TOTAL OF 8 MILS. ALL COATS SHALL BE APPLIED AT THE FACTORY EXCEPT MINOR FIELD TOUCH UP AT JOINTS AND AT MANHOLE NECK.
6. ALL MANHOLES CONSTRUCTED IN SIDE YARDS, BACKYARDS, AND EASEMENTS OUTSIDE OF THE RIGHT-OF-WAY SHALL BE OUTFITTED WITH FIBERGLASS OR EPOXY LINERS IN COMPLIANCE WITH ASTM-3753 OR OTHER TYPES OF LINERS APPROVED BY THE CITY. IN ADDITION, THE CITY MAY REQUIRE LINERS TO BE INSTALLED IN OTHER AREAS WHERE THE PUBLIC UTILITIES DEPARTMENT BELIEVES THE NEED IS JUSTIFIED SUCH AS IMMEDIATELY UPSTREAM OF FORCE MAINS CONNECTING TO GRAVITY MAINS.

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES (CONTINUED) REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1.4

7. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED AREAS AND A MINIMUM OF 0.2' AND MAXIMUM OF 0.5' ABOVE GRADE ELEVATION IN UNPAVED AREAS.
8. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE THE WORDS "PORT ORANGE FLORIDA SANITARY SEWER" CAST INTO THEM.
9. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE.
10. NO BUG HOLES OR HONEYCOMB WILL BE ACCEPTED.
11. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES. THE SERVICE CONNECTION WILL BE BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY.
12. RUBBER BOOTS WITH 316 STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF THE SEWER MAIN TO THE MANHOLES. COMPLETELY COVER RUBBER BOOTS AT OUTSIDE CONNECTION AND SEAL INSIDE PROTRUSION WITH HYDRAULIC CEMENT.
13. EZ-WRAP PLASTIC, AS MANUFACTURED BY PRESS SEAL GASKET CORPORATION, SHALL BE USED ON THE OUTSIDE OF ALL MANHOLE AND WET WELL JOINTS. APPLY ONE LAYER OF 9" WRAP CENTERED ON EACH JOINT. A CITY INSPECTOR SHALL PERSONALLY INSPECT ALL JOINT SEALS PRIOR TO BACKFILLING OPERATIONS.

TESTING:

1. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER. THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING LABORATORY AT HIS OWN EXPENSE.
2. TO ENSURE THAT COMPACTION OF ALL FILL MATERIAL IS COMPLETED PROPERLY, TESTS SHALL BE DONE 12" ABOVE THE PIPE AND THEN AT 12" VERTICAL INTERVALS UNTIL FINAL GRADE IS REACHED.
3. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO MINIMUM 95% IN UNPAVED AREAS AND 98% IN PAVED AREAS OF THE MAXIMUM DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
4. TEST RESULTS SHALL BE SUBMITTED TO THE CITY AT A MINIMUM FREQUENCY OF ONE SET OF TESTS BETWEEN EACH MANHOLE AND ONE ADDITIONAL SET OF TESTS AT EVERY MANHOLE. IDENTIFICATION OF TEST LOCATIONS SHALL BE CLEARLY INDICATED ON TEST REPORTS. TEST RESULTS SHALL BE FORWARDED PROMPTLY TO THE CITY'S DESIGNATED SITE INSPECTOR.

CLOSE-OUT:

1. ALL SEWER MAINS, PRIOR TO FINAL ACCEPTANCE BY THE CITY AND PRIOR TO ANY FINAL PAVING OPERATIONS, SHALL BE TELEVISED AND SUBMITTED TO THE CITY USING A "PAN AND TILT CAMERA" WITH DEPTH GAUGE IN FRONT OF THE CAMERA BY A CITY APPROVED CONTRACTOR. THE CAMERA SHALL RUN FROM DOWN STREAM MANHOLE TO UP STREAM MANHOLE. CITY INSPECTOR SHALL BE NOTIFIED IN ADVANCE AND BE PRESENT DURING THE TELEVISING OF THE SEWER SYSTEM. THE VIDEO SHALL BE NON-STOP WITH AUDIO DESCRIBING WHAT IS BEING REVIEWED. WRITTEN VIDEO LOGS DESCRIBING THE CONDITION OF THE LINES SHALL ACCOMPANY THE VIDEO SUBMISSION TO THE CITY 48 HOURS PRIOR TO COMMENCING ANY INSTALLATION OF ASPHALT OR CONCRETE PAVEMENT. THE CITY MAY REQUIRE ADDITIONAL VIDEO TAPING, VIDEO TAPING OF LATERALS, AND/OR INFILTRATION/EXFILTRATION TESTS IF DEFECTS ARE APPARENT OR WORKMANSHIP IS QUESTIONABLE.
2. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY USE OF THE SYSTEM.

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER NOTES (CONTINUED) REV. 12/18	FILE NAME S1.DOC DETAIL REF: S-1.5

AIR RELEASE VALVES

MANUFACTURER	MODEL #
ARI	D-025P (Plastic)

GATE VALVES AND TAPPING VALVES – RESILIENT SEATED (AWWA C509 AND C515) 24" OR SMALLER

MANUFACTURER	SERIES OR MODEL #
American AVK Co.	3, 18, 25, 45, 55, & 66
Clow	2638 and 2639
Mueller	A-2360, A-2361, T-2360, T-2361
American Flow Control	2500

JOINTS RESTRAINED – PVC ONLY

MANUFACTURER	MODEL #
EBBA Iron Inc	Series 1500/1600/2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200/4000
Sigma	One-Lock SLC, PV-Lok for PVC
Smith-Blair	Cam-Lock (111 & 120), Bell-Lock (115 & 165)

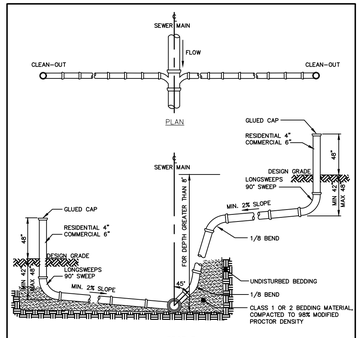
FORCE MAIN FITTINGS – PVC AND DIP CLASS 350 (WITH PROTECTO 401 CERAMIC EPOXY), C-900, C-905 OR C-907

MANUFACTURER	
Harco, Multi-Fittings, Plastic Trends, Head, Tyler/Union	

MANHOLE AND LIFT STATION WET WELL REHABILITATION LINER

MANUFACTURER	
Raven 405, ½" minimum thick fiberglass liner (cylinder)	

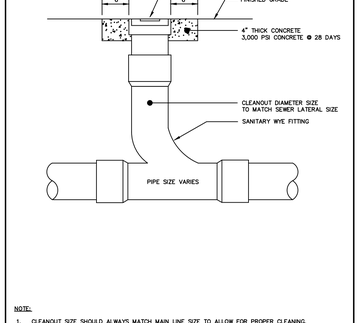
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER AND FORCE MAIN APPROVED PRODUCTS REV. 12/18	FILE NAME S3.DOC DETAIL REF: S-3



NOTES:

1. USE OF STYRENE MATERIAL WILL NOT BE PERMITTED.
2. ALL JOINTS TO BE RUBBER GASKET - NO GLUED FITTINGS.
3. USE ALL HARCO SDR26 FITTINGS OR CITY APPROVED EQUAL.
4. APPROVED EQUAL IS MULTI FITTINGS 8" X 6" OR 8" X 4" T- Y-WE AND 6" X 6" OR 8" X 4" WYE WITH A DATE STAMP.

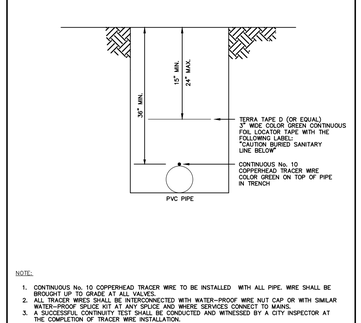
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER SERVICE LATERALS REV. 12/18	FILE NAME: S11.DWG DETAIL REF: S-11



NOTE:

1. CLEANOUT SIZE SHOULD ALWAYS MATCH MAIN LINE SIZE TO ALLOW FOR PROPER CLEANING.

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER SERVICE CLEANOUT REV. 12/18	FILE NAME: S12.DWG DETAIL REF: S-12



NOTE:

1. CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES.
2. ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER-PROOF WIRE NUT CAP OR WITH SIMILAR WATER-PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3. A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

	STANDARD CONSTRUCTION DETAIL SANITARY SEWER LOCATOR TAPE/ TRACER WIRE INSTALLATION REV. 12/18	FILE NAME: S14.DWG DETAIL REF: S-14

1. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S LATEST FIRE/WATER FLOW CODE. ALL DEDICATED FIRE LINES SHALL BE INDEPENDENT OF ALL OTHER DOMESTIC WATER SERVICES.
2. ALL SINGLE AND DOUBLE RESIDENTIAL WATER SERVICES SHALL BE ENDOT ENDOPURE 1". COMMERCIAL SERVICES SHALL BE 1" OR 2". NO 1-1/2" SERVICES ARE ALLOWED. POLYETHYLENE TUBING SHALL BE USED, IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
   A. POLYETHYLENE TUBING SHALL BE CTS 340B HIGH DENSITY TUBING, BLUE IN COLOR, AND RATED FOR A MINIMUM OF 200 PSI WITH SDR OF 9 (CTS)
   B. THE TUBING SHALL COME WITH A LIFETIME WARRANTY
   C. THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER'S SHALL FURNISH A CERTIFICATE OF PURITY
   D. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF ASTM D1248, D3350, D2239, D2737, NSF 14 AND AWWA C901
3. WATER SERVICES SHALL BE NORMALLY DOUBLE 1" SERVICES LOCATED AT SIDE LOT LINES. AT LOCATIONS WHERE SERVICES NEED TO BE OFFSET, SUCH AS AT FIRE HYDRANTS, PI, TRANSFORMERS, ETC., 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2' FROM SIDE LOT LINES.
4. APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
   - RESIL

23. WHEN THE PUBLIC UTILITIES OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE, THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (i.e. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE(S) INDICATE THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC UTILITIES OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST.
24. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.
25. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL, AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
26. ALL FIRE HYDRANTS SHALL BE LOCATED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHALL ALWAYS FACE THE STREET. 5 FEET MINIMUM RADIUS CLEAR AREA AROUND THE FIRE HYDRANT SHALL BE MAINTAINED.
27. ALL WATER SERVICES SHALL BE MARKED WITH AN "/\" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT.
28. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "\ /" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER CONSTRUCTION NOTES
(CONTINUED)
REV. 12/18

FILE NAME W2.DOC
DETAIL REF: W-2.2

FIRE HYDRANT (5 ¼" BARREL)

MANUFACTURER	MODEL #
AMERICAN AVK CO.	SERIES #2780
AMERICAN DARLING	5 ¼" B-84-85
CLOW	MEDALLION #F-2545 5S
EJ GROUP, INC.	WATERMASTER 5 ¼" #5CD250
KENNEDY	GUARDIAN K81-D
MUELLER	A423 SUPER CENTURION 250

AIR RELEASE VALVES

MANUFACTURER	MODEL #
VENT-O-MAT	RBX 2521

GATE VALVES AND TAPPING VALVES – RESILIENT SEATED (AWWA C509 AND C515) 24" OR SMALLER (VALVE WEDGE TO BE COMPLETE ENCLOSED WITH EPDM RUBBER)

MANUFACTURER	MODEL #
AMERICAN AVK CO.	SERIES 3, 18, 25, 45, 55, & 66
AMERICAN FLOW CONTROL	SERIES 2500
CLOW	MODEL 2638 AND 2639
KENNEDY	C509, C515
MUELLER	A-2360, A-2361, T-2360 & T-2361

STANDARD CONSTRUCTION DETAIL
POTABLE WATER APPROVED
PRODUCTS
REV. 12/18

FILE NAME W3.DOC
DETAIL REF: W-3

WATER SERVICE MATERIALS

	DUCTILE IRON
MATERIAL	ASTM A536 MINIMUM GRADE 70-50-5 IN ACCORDANCE WITH AWWA C153 (ANSI A21.53)
PRESSURE	CLASS 350 IN ACCORDANCE WITH AWWA C153 (ANSI A21.53) 350 PSI WATER WORKING PRESSURE
TESTING	IN ACCORDANCE WITH AWWA C153 (ANSI A21.53) THREE TIMES WATER WORKING PRESSURE (350 PSI) BODY CAPABLE OF WITHSTANDING HYDROSTATIC TEST OF 1050 PSI
FLOW	IE EQUAL TO ID OF CLASS 50/51 DUCTILE IRON PIPE, THUS ALLOWING THE FULL FLOW FEATURE
LAYING LENGTH	SHORT BODY (COMPACT)
CEMENT LINING	IN ACCORDANCE WITH AWWA C104 (ANSI A21.4)
MECHANICAL JOINTS	IN ACCORDANCE WITH AWWA C111 (ANSI A21.11)
GASKETS	SBR IN ACCORDANCE WITH AWWA C111 (ANSI A21.11)
TEE HEAD BOLTS	COR-TEN IN ACCORDANCE WITH AWWA C111 (ANSI A21.11)
ACCEPTABLE MANUFACTURERS	TYLER, CLOW, GRIFFIN, U.S. PIPE, UNION FOUNDRY, AMERICAN CAST IRON, OR APPROVED EQUALS

POLYETHYLENE TUBING – (BLUE WITH UV PROTECTION (SDR-9) 1" & 2" ONLY)

MANUFACTURER	MODEL #
ENDOT ENDOPURE	ENDOTRACE W/#10 COPPERHEAD TRACER WIRE

STANDARD CONSTRUCTION DETAIL
POTABLE WATER APPROVED
PRODUCTS
REV. 12/18

FILE NAME W3.DOC
DETAIL REF: W-3.1

CORPORATION STOP 1"

MANUFACTURER	MODEL #
FORD	F-1100-4

CURB STOP – STRAIGHT BALL METER VALVE W/ BARREL LOCKS

MANUFACTURER	MODEL #
FORD	B-94-324W (SINGLE SERVICE) B-91-223W (DOUBLE SERVICE)

"U" BRANCH (1" X ¾")

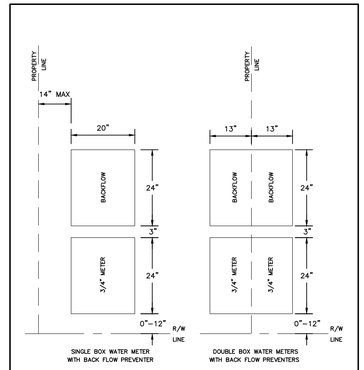
MANUFACTURER	MODEL #
FORD	U-48-43-6.5

JOINTS RESTRAINED – PVC AND DIP

MANUFACTURER	MODEL #
EBBA IRON INC.	SERIES 1100/1500/1600 2000/2500/2800
SIGMA	ONE-LOCK SLD; ONE-LOCK SLC; PV-LOK FOR PVC
SMITH-BLAIR	CAM-LOCK (111 & 120) ; BELL-LOCK (115 & 165)
STAR PIPE	STARGRIP SERIES 1000/1100/1200 3000/ 4000

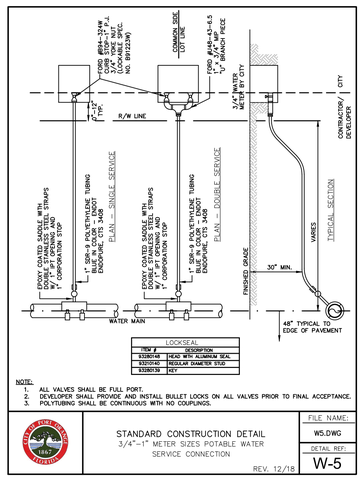
STANDARD CONSTRUCTION DETAIL
POTABLE WATER APPROVED
PRODUCTS
REV. 12/18

FILE NAME W3.DOC
DETAIL REF: W-3.2



STANDARD CONSTRUCTION DETAIL
POTABLE WATER METER BOX LAYOUT
REV. 12/18

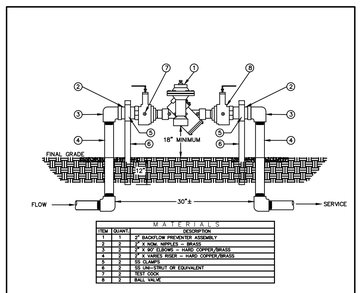
FILE NAME: W4.DWG
DETAIL REF: W-4



NOTE:
1. ALL VALVES SHALL BE FULL PORT.
2. DEVELOPER SHALL PROVIDE AND INSTALL BULLET LOCKS ON ALL VALVES PRIOR TO FINAL ACCEPTANCE.
3. POLYTUBING SHALL BE CONTINUOUS WITH NO COUPLINGS.

STANDARD CONSTRUCTION DETAIL
3/4"–1" METER SIZES POTABLE WATER
SERVICE CONNECTION
REV. 12/18

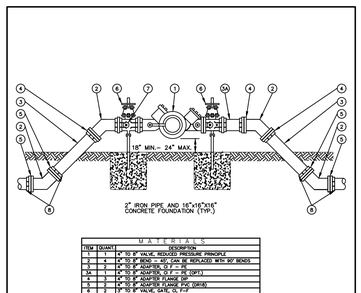
FILE NAME: W5.DWG
DETAIL REF: W-5



NOTES:
1. ALL 2" AND SMALLER BACKFLOW PREVENTER MUST BE STABILIZED WITH CHANNEL OR NON–CORROSIVE UNI–STRUT OR EQUIVALENT AND APPROPRIATE CLAMPS.
2. DOUBLE CHECK VALVES MAY BE INSTALLED IN UNDERGROUND VAULTS.
3. ALL COMMERCIAL PROPERTIES ARE REQUIRED BY ORDINANCE TO HAVE A BACKFLOW DEVICE INSTALLED AND ANNUALLY TESTED WITH PASSING RESULTS FORWARDED TO THE CITY PUBLIC UTILITIES DEPARTMENT.
4. FOR FURTHER INFORMATION CONCERNING BACKFLOW PREVENTERS SEE CITY OF PORT ORANGE "MANUAL OF CROSS–CONNECTION CONTROL".
5. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62–555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS–CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.

STANDARD CONSTRUCTION DETAIL
2" BACKFLOW PREVENTER
DOUBLE CHECK OR REDUCED PRESSURE
REV. 12/18

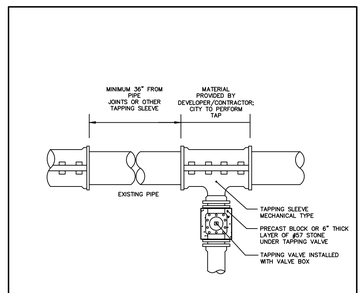
FILE NAME: W12.DWG
DETAIL REF: W-12



NOTES:
1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
2. DO NOT INTERCHANGE ITEMS 4 AND 5.
3. ALL COMMERCIAL PROPERTIES ARE REQUIRED BY ORDINANCE TO HAVE A BACKFLOW DEVICE INSTALLED AND ANNUALLY TESTED WITH PASSING RESULTS FORWARDED TO THE CITY PUBLIC UTILITIES DEPARTMENT.
4. FOR FURTHER INFORMATION CONCERNING BACKFLOW PREVENTERS SEE CITY OF PORT ORANGE "MANUAL OF CROSS–CONNECTION CONTROL".
5. ALL DEVICES SHALL BE PAINTED TO COMPLY WITH FLORIDA ADMINISTRATIVE CODE CHAPTER 62–555 AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CROSS–CONNECTION CONTROL PROGRAM. BLUE FOR DOMESTIC WATER, PURPLE FOR RECLAIMED WATER AND RED FOR FIRE LINE.

STANDARD CONSTRUCTION DETAIL
4"–8" BACKFLOW PREVENTER
REDUCED PRESSURE
REV. 12/18

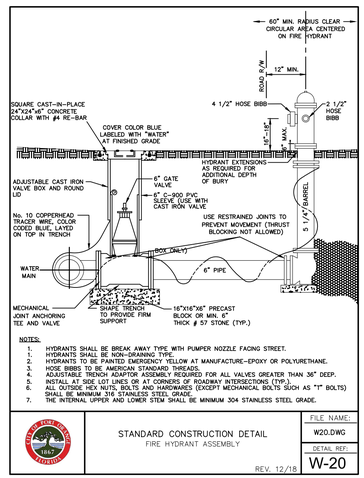
FILE NAME: W13.DWG
DETAIL REF: W-13



NOTES:
1. TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. ALL MATERIALS TO BE PROVIDED BY DEVELOPER/CONTRACTOR.
2. EXCAVATIONS FOR TAPPING WORK TO BE SAFE, SECURE AND DRY, WITH 6" THICK (MIN.) LAYER OF #57 STONE AT BOTTOM.
3. CITY ALLOWS ONLY 1", 2", 4", 6", 8", 10" AND 12" TAPS.
4. REQUIRED RESTRAINED JOINTS TO BE INSTALLED – THRUST BLOCKS ARE NOT PERMITTED.
5. EPOXY COATED STEEL, STAINLESS STEEL SLEEVES WITH 316 STAINLESS STEEL BOLTS ARE PERMITTED FOR ALL TYPES OF PIPE MATERIALS.
6. ALL VALVES 2" OR GREATER SHALL BE GATE VALVES. CORPORATION STOPS ALLOWED ON BLOW–OFFS ONLY.

STANDARD CONSTRUCTION DETAIL
TAPPING VALVE AND SLEEVE
REV. 12/18

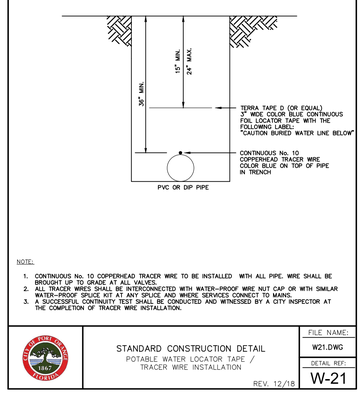
FILE NAME: W15.DWG
DETAIL REF: W-15



NOTES:
1. HYDRANTS SHALL BE BREAK AWAY TYPE WITH PUMPER NOZZLE FACING STREET.
2. HYDRANTS SHALL BE NON–DRAINING TYPE.
3. HOSE BIBBS TO BE AMERICAN STANDARD THREADS.
4. ADJUSTABLE TRENCH ADAPTOR ASSEMBLY REQUIRED FOR ALL VALVES GREATER THAN 36" DEEP.
5. INSTALL AT SIDE LOT LINES OR AT CORNERS OF ROADWAY INTERSECTIONS (TYP.).
6. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARES (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MINIMUM 316 STAINLESS STEEL GRADE
7. THE INTERNAL UPPER AND LOWER STEM SHALL BE MINIMUM 304 STAINLESS STEEL GRADE.

STANDARD CONSTRUCTION DETAIL
FIRE HYDRANT ASSEMBLY
REV. 12/18

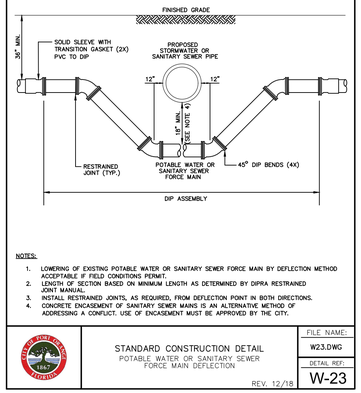
FILE NAME: W20.DWG
DETAIL REF: W-20



NOTE:
1. CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES.
2. ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER–PROOF WIRE NUT CAP OR WITH SIMILAR WATER–PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3. A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER LOCATOR TAPE /
TRACER WIRE INSTALLATION
REV. 12/18

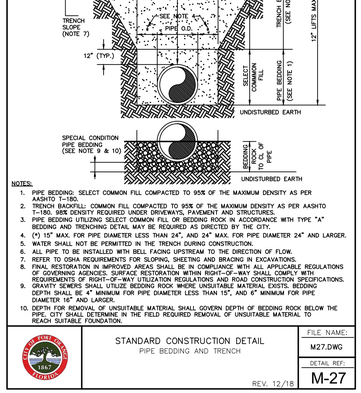
FILE NAME: W21.DWG
DETAIL REF: W-21



NOTES:
1. LOWERING OF EXISTING POTABLE WATER OR SANITARY SEWER FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF FIELD CONDITIONS PERMIT.
2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.
4. CONCRETE ENCASEMENT OF SANITARY SEWER MAINS IS AN ALTERNATIVE METHOD OF ADDRESSING A CONFLICT. USE OF ENCASEMENT MUST BE APPROVED BY THE CITY.

STANDARD CONSTRUCTION DETAIL
POTABLE WATER OR SANITARY SEWER
FORCE MAIN DEFLECTION
REV. 12/18

FILE NAME: W23.DWG
DETAIL REF: W-23



NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T–180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T–180, 98% DENSITY REQUIRED UNDER DRIVEWAYS, PAVEMENT AND STRUCTURES.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*) 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO OSHA REQUIREMENTS FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN RIGHT–OF–WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT–OF–WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
9. GRAVITY SEWERS SHALL UTILIZE BEDDING ROCK WHERE UNSUITABLE MATERIAL EXISTS. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15", AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
10. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. CITY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

STANDARD CONSTRUCTION DETAIL
PIPE BEDDING AND TRENCH
REV. 12/18

FILE NAME: M27.DWG
DETAIL REF: M-27

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL AS-BUILT DRAWINGS:

1. INDIVIDUAL PLAN AND PROFILE SHEETS FOR ALL ROADS AND SANITARY SEWER LINES, SHOWING MANHOLES, INLETS, AND PIPE CROSSINGS. PLAN AND PROFILE SHEETS SHALL SHOW SANITARY LINES AND ALL OTHER BURIED UTILITIES THAT CROSS SEWER LINES, AND ANY THAT ARE PARALLEL AND WITHIN TEN FEET OF SANITARY SEWER LINES. PLAN VIEWS SHALL BE DRAWN AT A SCALE OF ONE (1) INCH EQUAL TO FORTY (40) FEET HORIZONTAL. PROFILES SHALL BE DRAWN AT ONE (1) INCH EQUAL TO FOUR (4) FEET VERTICAL AND ALIGNED VERTICALLY WITH IMPROVEMENTS SHOWN ON THE PLAN VIEW.
2. DESIGN ELEMENTS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
3. PAVEMENT AND C/LRB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK FOR SUBDIVISIONS AND AS APPROPRIATE TO CONFIRM PAVING LIMITS FOR SITE PLANS.
4. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED, DIMENSIONED AND CLEARLY INDICATED ON THE AS-BUILT.
5. ROADWAY ELEVATIONS AT CENTERLINE AND CURB INVERT SHALL BE RECORDED AT ALL GRADE CHANGES, 100' INTERVALS FOR LONG ROADWAYS, AND OTHER INTERVALS AS NEEDED. FOR SUBDIVISIONS, THE AS-BUILT CENTERLINE GRADE LINES OF ALL STREETS SHALL BE SHOWN ON THE PLAN AND PROFILE ALONG WITH THE DESIGN PROFILE GRADE LINES. IN THE EVENT THAT THE AS-BUILT CENTERLINE LONGITUDINAL GRADE DOES NOT MEET THE CITY MINIMUM STANDARDS, ADDITIONAL LONGITUDINAL GRADES OF THE ADJACENT CURBING AND SIMILAR ROADWAY CROSS-SECTIONS SHALL BE REQUIRED TO VERIFY THAT THE SYSTEM WILL FUNCTION AS ORIGINALLY DESIGNED.
6. FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN.
7. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND DIMENSIONED FROM STREET/ROADWAY CENTERLINES OR LOT LINES AS APPROPRIATE. STORM DRAINAGE PIPE SHALL BE LOCATED AND DIMENSIONED FROM THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT.
8. STORM DRAINAGE STRUCTURE RIMS, PIPE INVERT AND INLET BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE RECORDED AND CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
9. ALL APPLICABLE TOPOGRAPHIC INFORMATION PERTINENT TO THE ON-SITE DRAINAGE SYSTEM, SUCH AS DITCHES, SWALES, LAKES, CANALS, ETC. THAT ARE DEEMED NECESSARY BY THE CITY TO VERIFY THE FUNCTIONAL PERFORMANCE OF THE STORMWATER SYSTEM, SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100' AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
10. RETENTION AREAS SHALL HAVE THEIR TOP AND BOTTOM OF BANK ELEVATIONS RECORDED. ACTUAL DIMENSIONS OF THE SIZE OF ALL RETENTION AREAS ARE TO BE RECORDED AS MEASURED FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED.
11. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE AS-BUILT.
12. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE AND TOPS OF BANKS SHALL BE RECORDED EVERY 100 FEET. SIDE SLOPES SHALL ALSO BE INDICATED.

STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS
REV. 12/18

FILE NAME M5.DOC
DETAIL REF: M-5

13. SANITARY SEWER STRUCTURES SHALL BE LOCATED AND DIMENSIONED FROM STREET/ROADWAY CENTERLINES OR LOT LINES, AS APPROPRIATE. SANITARY SEWER STRUCTURE RIMS, PIPE INVERTS AND BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY NOTED AS AS-BUILT INFORMATION.
14. SANITARY SEWER PIPE SHALL BE LOCATED AND DIMENSIONED FROM THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. SANITARY SEWER PIPE MATERIAL, LENGTH, AND SIZE SHALL BE RECORDED AND CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
15. SEWER LATERALS SHALL BE RECORDED AT THEIR CLEAN-OUT LOCATIONS, STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARD UPSTREAM MANHOLES.
16. LIFT STATIONS SHALL BE LOCATED AND DIMENSIONED FROM STREET/ROADWAY CENTERLINES OR LOT LINES, AS APPROPRIATE. LIFT STATION DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED FOR CONSTRUCTION PLANS SHALL BE VERIFIED AND AS-BUILT INFORMATION INDICATED. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED, AND LABELED. FORCE MAIN PIPE INVERT ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS AS-BUILT INFORMATION.
17. FORCE MAIN PIPE SHALL BE LOCATED AND DIMENSIONED FROM THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. FORCE MAIN PIPE MATERIAL, LENGTH, AND SIZE SHALL BE RECORDED AND CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
18. TIE-IN DIMENSIONS TO THREE (3) PERMANENT ABOVE GRADE FEATURES SHALL BE SHOWN ON THE AS-BUILTS FOR ALL VALVES, TEES, BENDS, CROSSES, SERVICE CONNECTION TEES, FIRE HYDRANTS AND APPLICABLE FIXTURES AT THE POTABLE WATER, RECLAIMED WATER AND FORCE MAIN SERVICES.
19. A TABLE SHALL BE SHOWN ON THE AS-BUILTS LISTING THE NORTHING, EASTING, TOP ELEVATION, SIZE, MATERIAL, TYPE AND MODEL INFORMATION FOR ALL POTABLE WATER, RECLAIMED WATER AND FORCE MAIN VALVES, TEES, BENDS, CROSSES, SERVICE CONNECTION TEES, FIRE HYDRANTS AND APPLICABLE FIXTURES.
20. FOR PERPENDICULAR CROSSINGS OF STORMWATER, POTABLE WATER, RECLAIMED WATER, OR FORCE MAIN SERVICES, THE AS-BUILT PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES.
21. ANY SPECIAL FEATURES SUCH AS, CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHALL ALSO BE LOCATED AND DIMENSIONED.
22. IF AN APPROVED SUBDIVISION PLAT OR SITE PLAN SHOWS A CONSERVATION EASEMENT, THE PROJECT SURVEYOR SHALL PROVIDE THE EXACT LOCATION OF THE SPECIMEN TREE(S) FROM THE RIGHT-OF-WAY OR PROPERTY LINES AND PROPOSED EASEMENT BOUNDARIES ON THE AS-BUILT DRAWING. THE AS-BUILT LOCATION OF THESE TREES WILL HELP VERIFY THE SUFFICIENCY OF THE CONSERVATION EASEMENT PRIOR TO PLAT RECORDING OR CERTIFICATE OF OCCUPANCY.
23. WHEN STORMWATER, POTABLE WATER, RECLAIMED WATER OR SANITARY SEWER IMPROVEMENTS ARE LOCATED WITHIN AN EASEMENT, THE AS-BUILT DRAWING SHALL ACCURATELY DEPICT THE LOCATION OF THE IMPROVEMENTS AND THE EASEMENT. SUCH DOCUMENTATION AND THE ASSOCIATED PROPOSED EASEMENT DOCUMENT WITH LEGAL DESCRIPTION SHALL BE SUBMITTED FOR CITY REVIEW AND APPROVAL PRIOR TO RECORDING OF SAID EASEMENT. UPON CITY APPROVAL, THE EASEMENT SHALL BE RECORDED VIA A SEPARATE LEGAL INSTRUMENT.

STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS
(CONTINUED)
REV. 12/18

FILE NAME M5.DOC
DETAIL REF: M-5.1

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

ROGER W. STRICULA LICENSE NO. 52784 STATE OF FLORIDA PROFESSIONAL ENGINEER
NOT VALID UNLESS SIGNED AND DATED

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY ROGER W. STRICULA, PE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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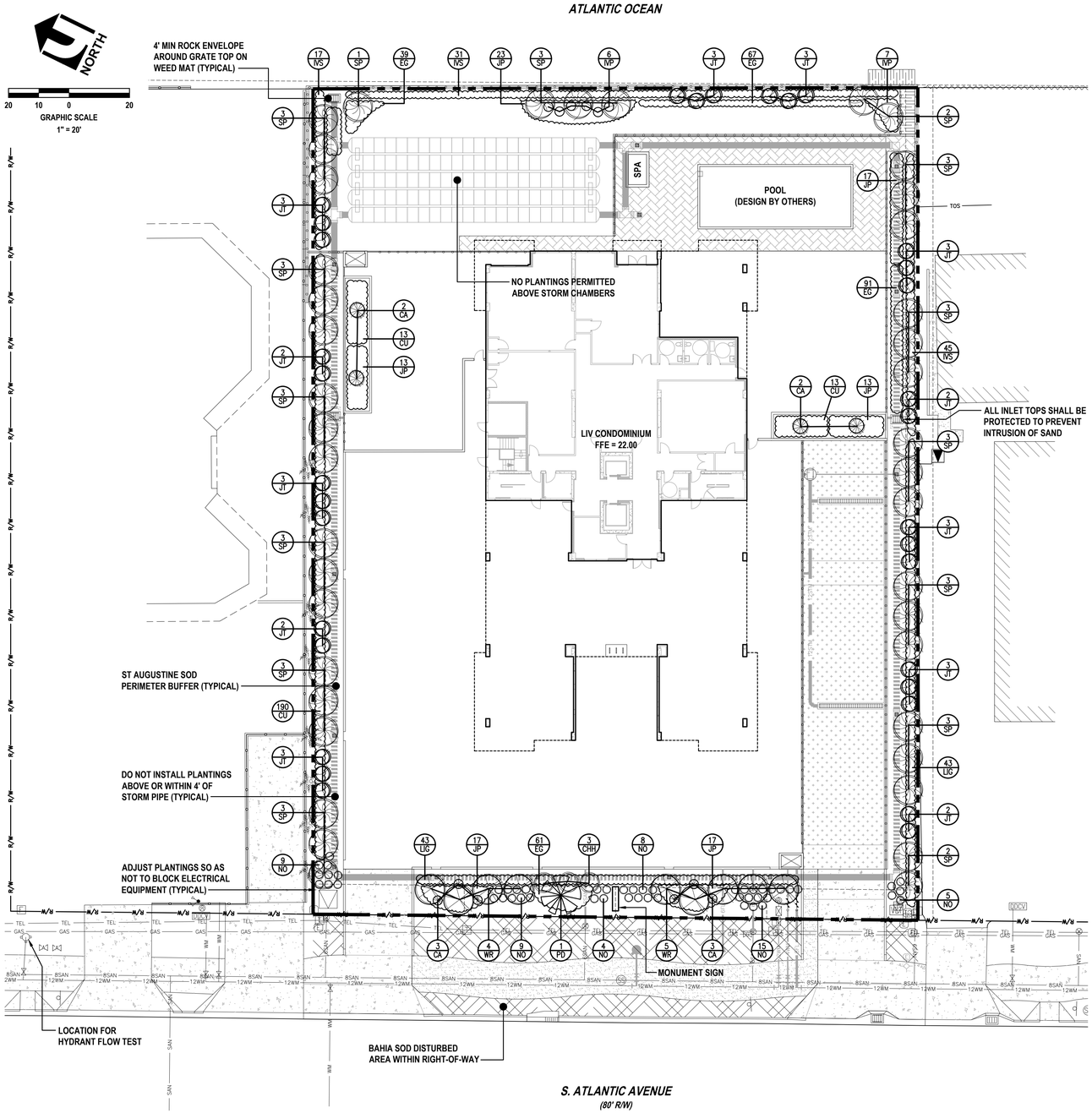
CITY OF PORT ORANGE STANDARD DETAILS & NOTES

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RWS
DRAWN BY:	JMB
CHECKED BY:	RWS
SCALE:	1" = 20'

SHEET NUMBER:
C702



NOTE:
PRIOR TO COMMENCING ANY IRRIGATION OR LANDSCAPE WORK THE CONTRACTOR SHALL SCHEDULE A MEETING WITH THE LANDSCAPE ARCHITECT AND INSPECTOR. THIS MEETING IS TO HELP AVOID ANY MISINTERPRETATION OF THE INTENT OF THE DRAWINGS.

NOTE:
ALL PAVEMENT SURFACES AND GUTTERS SHALL BE SWEPT CLEAN AND DEBRIS REMOVED AFTER INSTALLATION OF PLANTINGS, SOD AND MULCH

MAINTAIN 3' BUFFER OF CLEARED LANDSCAPING AROUND ALL METERS, BACKFLOW PREVENTERS, CLEANOUTS AND MANHOLES

WARNINGS:
1. THE LANDSCAPE AND IRRIGATION CONTRACTOR(S) SHALL REFER TO SITE GRADING PLANS WITH CONTOURS AND ELEVATIONS PRIOR TO BID SUBMITTAL.
2. DO NOT START THE LANDSCAPE PLANTING UNTIL THE IRRIGATION SYSTEM HAS BEEN INSTALLED, PRESSURE CHECKED, CLEARED FOR USE AND IS CAPABLE OF PROVIDING WATER TO ALL NEW PLANT MATERIAL.
3. THE IRRIGATION SYSTEM SHALL RUN FOR FOUR CONSECUTIVE DAYS TO BUILD UP THE MOISTURE LEVEL IN THE GROUND PRIOR TO STARTING PLANT MATERIAL INSTALLATION.
4. THE LANDSCAPE CONTRACTOR IS ADVISED THERE ARE UNDERGROUND STORM PIPES AND UTILITY LINES WITHIN THE PLANTING AREAS. DUE CARE MUST BE USED WHEN PLACING LANDSCAPE MATERIAL.
5. LANDSCAPE CONTRACTOR SHALL TAKE PROTECTIVE MEASURES DURING INSTALLATION OF PLANTINGS TO PREVENT RUNOFF CONTAINING SAND FROM ENTERING STORM INLETS.

PLANT SCHEDULE

CODE	QNTY	SPECIFIC NAME	COMMON NAME	SPECIFICATIONS	NATIVE
			- CANOPY TREES -		
PD	1	PHOENIX DACTYLIFERA	MEDJOOL PALM	10-12' HGT, CT, FULL	NO
SP	41	SABAL PALMETTO	SABAL PALM	12-18' HGT, OA, MIXED	YES
WR	9	WASHINGTONIA ROBUSTA	WASHINGTONIA PALM	12-14' HGT, CT, FULL	NO
TOTAL	51				
			- UNDERSTORY TREES -		
CHH	3	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM	8' HGT, 3-5 STEMS @ 1-1/2 CAL	NO
JT	32	JUNIPERUS TORULOSA	HOLLYWOOD JUNIPER	8' HGT, FULL @ 1-1/2 CAL	NO
IVP	13	ILEX VOMITORIA PENDULA	WEEPING YAUPON	8-9' HGT, FULL @ 1-1/2 CAL	YES
TOTAL	48				
			- SHRUBS -		
CA	10	CRINUM SSP	CRINUM LILLY	10 GAL, 5' HGT, FULL, 3' OC	NO
CU	190	COCCOLOBA UVIFERA	SEAGRAPE	3 GAL, 20" HGT, FULL, 3' OC	YES
IVS	93	ILEX VOMITORIA NANA	DWARF YOUPON	3 GAL, 16" HGT, FULL, 3' OC	YES
JP	167	JUNIPERUS CHINENSIS	PARSONI JUNIPER	3 GAL, 20" SPR, FULL 3' OC	NO
LIG	86	LIGUSTRUM SSP	GREEN LIGUSTRUM	3 GAL, 20" HGT, FULL, 3' OC	NO
NO	50	NERIUM OLEANDER	OLEANDER (RED)	3 GAL, 20" HGT, FULL, 3' OC	NO
SA	131	SCHEFFLERA ARBORICOLA	GOLD CAPELLA	3 GAL, 18" HGT, FULL 3' OC	NO
TOTAL	727				
			- GROUND COVER -		
EG	258	EVOLVULUS GLOMERATUS	BLUE DAZE	1 GAL, 12" SPR, FULL	NO
TOTAL	258				

LEGEND:

35 RI — QUANTITY OF PLANTS / PLANT CODE (SEE SCHEDULE)

ST. AUGUSTINE SOD

BAHIA SOD

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY PLANT QUANTITIES

PLANTING TABLE:

PAVED AREA = 30,679 SQ FT
GREEN AREA = 13,958 SQ FT
% OF GREEN AREA (13,958 / 30,679) = 45.5%

FRONT 15' BUFFER IS PLANTED WITH FLOWERING SHRUBS, HEDGES AND PALMS

TOTAL NUMBER PARKING = 112 SPACES (ABOVE & BELOW GRADE)
112 PARKING SPACES AT 1 TREE PER 9 SPACES = 13 TREES REQUIRED
13 TREES ADDED TO PERIMETER BUFFERS

CALCULATION FOR SITE LANDSCAPE
TOTAL SITE AREA = 54,843 SF / 2,500 SF = 22 TREES + 13 TREES (PARKING)
TOTAL REQUIRED TREES = 35 TREES

SABAL PALMS AND WASHINGTONIA = 50 / 3 = 17 TREES
MEDJOOL = 1 TREE
UNDERSTORY TREES = 48 TREES

TOTAL PROVIDED TREES = 66 TREES
PROVIDED 66 TREES - REQUIRED 35 TREES = 31 TREES OVER REQUIRED

NOTE:
SEE ARCHITECTURAL / STRUCTURAL DRAWINGS FOR SPECIFIC BUILDING ELEMENTS. ITEMS ARE SHOWN HEREON FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY THE GENERAL CONTRACTOR.

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

REGISTERED LANDSCAPE ARCHITECT RICHARD L. POORE LA533 STATE OF FLORIDA
NOT VALID UNLESS SIGNED AND DATED

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LANDSCAPE PLAN

THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RLP
DRAWN BY:	JMB
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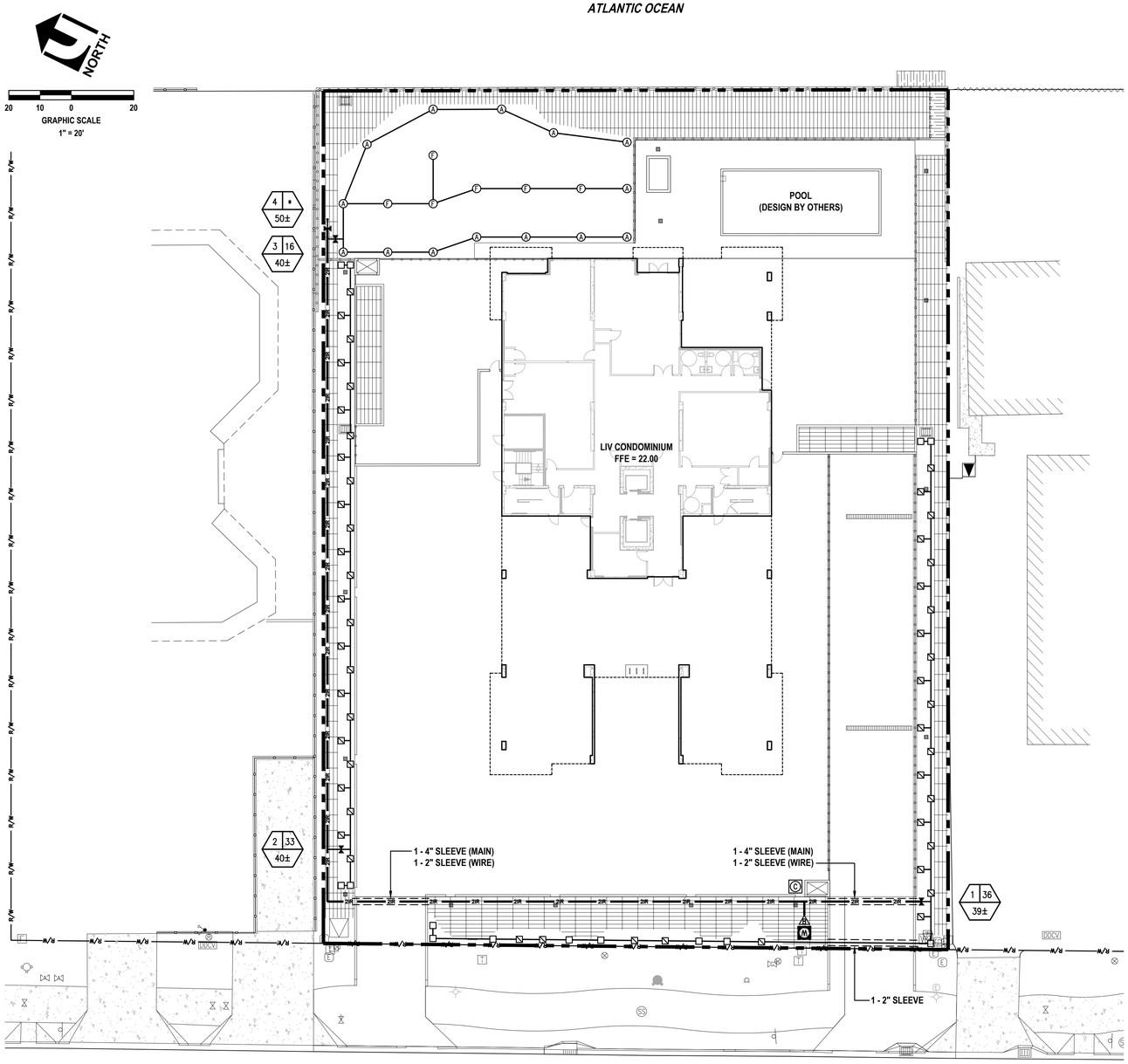
SCALE:	1" = 20'

SHEET NUMBER:
L100



IRRIGATION LEGEND:

(USE THE FOLLOWING IRRIGATION EQUIPMENT OR EQUAL)

□	15' EST (RAIN BIRD 15' END STRIP)	0.61 GPM
⧅	15' SST (RAIN BIRD)	1.21 GPM
⊠	9' SST (RAIN BIRD)	1.73 GPM
A	ADJUSTABLE 15' RADIUS	VARIES
Q	QUARTER 15' RADIUS	0.92 GPM
H	HALF 15' RADIUS	1.85 GPM
T	THREE QUARTER 15' RADIUS	2.78 GPM
F	FULL 15' RADIUS	3.70 GPM
18	RAIN BIRD 18 SERIES VAN	1.33 GPM
H	RAIN BIRD 18 SERIES VAN	2.66 GPM
T	RAIN BIRD 18 SERIES VAN	3.99 GPM
A	RAIN BIRD 18 SERIES VAN	1.33 - 5.32 GPM
6	HUNTER GEAR DRIVE	2.7 GPM
7	HUNTER GEAR DRIVE	3.4 GPM
8	HUNTER GEAR DRIVE	3.9 GPM
▲	BUBBLER	1.5 GPM

- 2" VALVE (PRESSURE REDUCING)
- 2" BACKFLOW PREVENTER
- C — RAIN BIRD ESPLXM: 8 STATION OUTDOOR MOUNT
- R — RAIN SENSOR SHUTOFF (MOUNT ON TOP OF BUILDING)
- M — 2" WATER METER
- NETAFIM SHALL BE LOCATED AT SHRUBS AND GROUND COVER AREA
- ZONE NUMBER
- 2 | 18 / 38± — NUMBER OF HEADS (N) DENOTES NETAFIM; APPROX. GALLONS PER MINUTE
- IR — IR — 2" LOOPED MAIN (MUST BE SCH40 PIPE - SIZE AS NOTED)
- SLEEVE UNDER PAVEMENT FOR WIRE (4" MINIMUM)
- SLEEVE UNDER PAVEMENT FOR PIPE (SEE SCHEDULE FOR SIZE REQUIREMENTS)
- BACK OF CURB — 12" MIN.

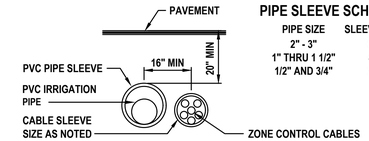
NOTES:

- ALL SPRAY HEADS ARE TO BE RAIN BIRD 6" POPUP FOR TURF AREA AND ALL OTHER SPRAY HEADS ARE TO BE ON POPUP AND/OR RISER TO ASSURE 100% COVERAGE. ALL RISERS ARE TO BE STAKED AND PAINTED GREEN OR BLACK.
- ALL ZONES TO HAVE PRESSURE REDUCING VALVES OR PRESSURE REDUCING HEADS.
- VERIFY DEPTH OF OTHER UTILITIES TO AVOID CONFLICT WITH INSTALLATION OF IRRIGATION PIPING, VALVES AND SPRAY HEADS.

PIPE SIZING INFORMATION:

GALLONS PER MINUTE (GPM)	PIPE SIZE
0-4	1/2"
4-8	3/4"
9-12	1"
13-22	1 1/4"
23-30	1 1/2"
31-50	2"
51-70	2 1/2"
71-110	3"

NOTE: AT THE DISCRETION AND SOLE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR, THE DIAMETER OF THE SLEEVE PIPE MAY BE REDUCED.



PIPE SLEEVE SCHEDULE

PIPE SIZE	SLEEVE SIZE
2" - 3"	6"
1" THRU 1 1/2"	4"
1/2" AND 3/4"	3"

NOTE: WHEN INSTALLING IRRIGATION PIPING IN ISLAND AND OTHER NARROW PLANTING AREAS RUN PIPING CLOSE TO CURB AND NOT DOWN THE MIDDLE OF THE PLANTING AREA. (BEFORE DOING IRRIGATION, GET A COPY OF THE LANDSCAPE PLAN AND KEEP IRRIGATION LINES OUT OF PLANTING AREAS WHERE POSSIBLE.)

NOTE: IRRIGATION LINES ARE SHOWN DIAGRAMMATICALLY AND ARE INTENDED TO SHOW DISTRIBUTION ZONES ONLY. ALL VALVES SHALL BE LOCATED WITHIN PLANTING AREAS (NOT WITHIN PAVEMENT). LINES LOCATED UNDER PAVEMENT SHALL BE KEPT TO A MINIMUM AND ALL PIPING UNDER PAVED AREAS SHALL BE SLEEVED.

NOTE: NO SIGNIFICANT IRRIGATION OVERTHROW SHALL BE ALLOWED ONTO IMPERVIOUS SURFACES.

NOTE: ALL IRRIGATION ZONES ARE PROVIDING COVERAGE FOR MEDIUM (M) TO LOW (L) WATER REQUIREMENTS

REVISIONS

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IRRIGATION PLAN

THE LIV CONDOMINIUM

3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT No:	230610
DATE:	NOVEMBER 07, 2023
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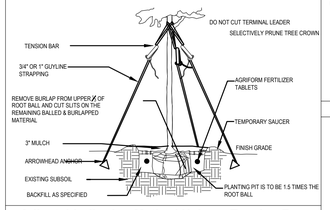
SCALE:	1" = 20'

SHEET NUMBER:

L200

Tree Frog Environmental Products® (formerly Arborguy®) PRO20/PRO40/PRO60/PRO80STAKING DETAIL



Adjustable Guying Method Using a Tension Bar

The anchors for each kit are best installed using the Integrated Tool Assembly (ITA) from the manufacturer.

1. Once the arrowhead anchor has been driven into the ground and set (secured), the guyline should be passed through Hole #1 on the tension bar, then wrapped around the tree trunk just above the lowest established branch. Then, the guyline should be passed through Hole #2 in the tension bar just below the first established branch. After pulling taut any slack, a stop knot is established immediately below Hole #2 in the guyline. (See Figure 1)

2. The tension bar is then pulled downward until the tree is straight and the guyline is SNUG (NOT TIGHT). (See Figure 2)

3. The tension bar is locked into place by tying the loose end of the guyline itself just above Hole #2. (See Figure 3)

This tensioning method allows the guylines to be readjusted, if necessary, in order to keep the guylines snug until the tree root system is established and the staking material is removed.

✻Specify Anchor
1. Biodegradable (soft or hard soil)
2. Nylon (soft soil)
3. Heavy Duty (hard soil)

Tree Frog® PRO20 SYSTEM

PRO20:
For up to 2" Caliper Trees
(3) ARBORGUY™ Guylines 3/4" x 12' = 600 lb test Black or Green, UV resistant, polypropylene strapping
(3) "Tool-Free" Tension Bars™
(3) Arrowhead ✻Anchors (4" x 3-3/4")

Tree Frog® PRO40 SYSTEM

PRO40:
For up to 4" Caliper Trees
(3) ARBORGUY™ Guylines 1" x 12' = 600 lb test Black or Green, UV resistant, polypropylene strapping
(3) "Tool-Free" Tension Bars™
(3) Arrowhead ✻Anchors (4 ¾ " x 4 ½")

Tree Frog® PRO60 SYSTEM

PRO60:
For up to 6" Caliper Trees
(3) ARBORGUY™ Guylines 1" x 15' = 2400 lb break strength polyester black strapping
(3) "Tool-Free" Tension Bars™
(3) Arrowhead ✻Anchors (4 ¾" x 4 ½")

Tree Frog® PRO80 SYSTEM

PRO80:
For up to 8" Caliper Trees
(4) ARBORGUY™ Guylines 1" x 15' = 2400 lb break strength black polyester strapping
(4) Steel Cable leaders attached to anchors (optional)
(4) "Tool-Free" Tension Bars™
(4) Arrowhead ✻Anchors (4 ¾" x 4 ½")

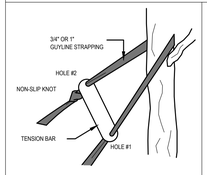


FIGURE 1

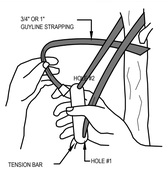


FIGURE 2

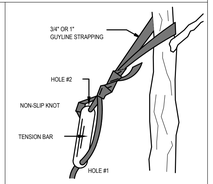
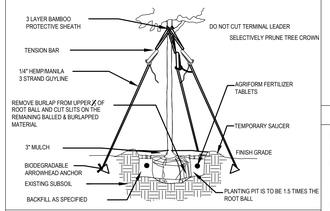


FIGURE 3

Tree Frog Environmental Products® (formerly Arborguy®) BIODEGRADABLE TREE GUYING DETAIL



Biodegradable Adjustable Guying Method Using a Tension Bar

The anchors for each kit are best installed using the Integrated Tool Assembly (ITA) from the manufacturer.

1. Once the Biodegradable arrowhead anchor has been driven into the ground and set (secured), the guyline should be passed through Hole #1 on the tension bar, then wrapped around the tree trunk just above the lowest established branch. Then, the guyline should be passed through Hole #2 in the tension bar just below the first established branch. After pulling taut any slack, a stop knot is established immediately below Hole #2 in the guyline. (See Figure 1)

2. The tension bar is then pulled downward until the tree is straight and the guyline is SNUG (NOT TIGHT). (See Figure 2)

3. The tension bar is locked into place by tying the loose end of the guyline itself just above Hole #2. (See Figure 3)

This tensioning method allows the guylines to be readjusted, if necessary, in order to keep the guylines snug until the tree root system is established and the staking material is removed.

Tree Frog® BIO20 SYSTEM

BIO20:
For up to 2" Caliper Trees
(3) FROG ANCHOR™ Guyline 1/4" x 12' = 560 lb tensile Hemp/Manila rope
(3) "Tool-Free" Tension Bars™
(3) Biodegradable Arrowhead Anchors (4 ¾" x 4 ½")

Tree Frog® BIO40 SYSTEM

BIO40:
For up to 4" Caliper Trees
(4) FROG ANCHOR™ Guyline 1/4" x 12' = 560 lb tensile Hemp/Manila rope
(4) "Tool-Free" Tension Bars™
(4) Biodegradable Arrowhead Anchors (4 ¾" x 4 ½")

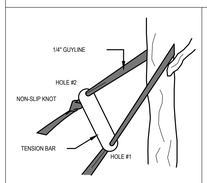


FIGURE 1

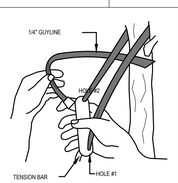


FIGURE 2

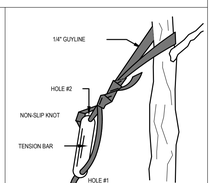
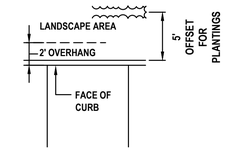


FIGURE 3

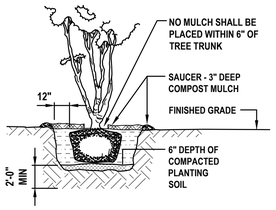
NOTE: TREE STAKING IS ONLY FOR MEDIUM AND LARGE TREES

PHONE: (352) 735-7411 EMAIL: info.treefrogep@gmail.com



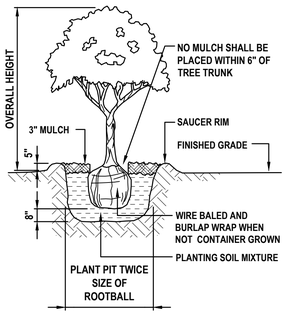
TYPICAL OVERHANG SPACE WITH HEDGE DETAIL

NOT TO SCALE



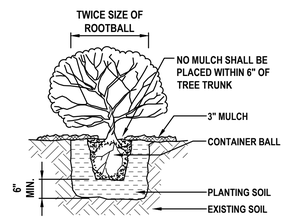
MULTI-TRUNK PLANTING DETAIL

NOT TO SCALE



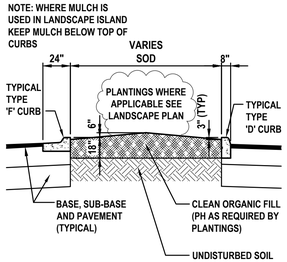
TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

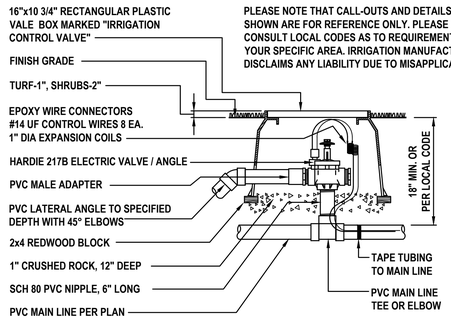


ISLAND PLANTING DETAIL

NOT TO SCALE

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR FLORIDA #1 OR BETTER AS DESCRIBED IN THE CURRENT "GRADES AND STANDARDS FOR NURSERY PLANTS", STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, TALLAHASSEE, OR THEIR EQUAL AS DETERMINED BY THE LANDSCAPE ARCHITECT.
2. MULCH SHALL BE PINE BARK, INSTALLED A MINIMUM OF 3" THICK AFTER SETTLEMENT, IN ALL PLANTING AREAS.
3. SOD SPECIFIED AS ST. AUGUSTINE SHALL BE 95% WEED-FREE. SOD SPECIFIED AS BAHIA SHALL BE 75% WEED-FREE. ALL SOD SHALL BE INSTALLED WITH TIGHT JOINTS, ROLLED AND FERTILIZED.
4. SEED, IF ANY, TO MEET SOUTHERN SEED CERTIFICATION ASSOCIATION.
5. ALL DIMENSIONS SHALL BE FIELD-CHECKED BY THE LANDSCAPE CONTRACTOR PRIOR TO CONSTRUCTION, WITH ANY DISCREPANCIES REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
6. *THE PLANT MATERIALS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR; SHOULD THERE BE ANY DISCREPANCY BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN WILL PREVAIL.*
7. ALL MATERIALS MUST BE AS SPECIFIED ON THE LANDSCAPE PLAN. IF MATERIALS OR LABOR DO NOT ADHERE TO THE SPECIFICATIONS, THEY WILL BE REJECTED AT NO ADDITIONAL COST TO THE OWNER.
8. ALL PLANTING BEDS SHALL BE TREATED WITH HERBICIDE. USE AS DIRECTED BY MANUFACTURERS.
9. NO SUBSTITUTIONS OR CHANGES OF ANY KIND WILL BE ALLOWED AT THE TIME OF BIDDING SO AS TO PROVIDE FOR FAIR COMPARISON.
10. 100% AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED ACCORDING TO THE IRRIGATION PLAN AND SPECIFICATIONS.
11. THE CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND CONDITIONS PRIOR TO HIS COMMENCEMENT OF THE ANY WORK.
12. ALL BUILDING MATERIALS AND LABOR SHALL CONFORM TO THE SOUTHERN BUILDING CODE AND ALSO TO ALL LOCAL CODES THAT HAVE JURISDICTION.
13. ALL PERMIT AND VARIANCE APPLICATIONS SHALL BE MADE BY THE CONTRACTOR.
14. PRIOR TO CONSTRUCTION OF PLANTING BEDS, ALL AREAS ARE TO HAVE SOIL TESTS CONDUCTED TO DETERMINE pH AND SOIL FERTILITY. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO AMEND THE SOIL TO MEET ADEQUATE FERTILITY AND pH FOR CORRESPONDING PLANT MATERIAL. ALL TEST RESULTS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT.
15. EQUIPMENT SHALL BE OPERATED IN A MANNER AS NOT TO INJURE OR DESTROY ANY TREES SHOWN TO REMAIN. CONTRACTOR SHALL NOT CAUSE OR ALLOW THE CLEANING OF EQUIPMENT OR MATERIAL WITHIN THE DRIP LINE OF ANY TREE OR GROUPS OF TREES TO BE RETAINED OR THOSE PROPOSED. NOR SHALL THE CONTRACTOR ALLOW THE DISPOSAL OF WASTE MATERIAL, SUCH AS PAINT, OIL SOLVENTS, ASPHALT, CONCRETE, MORTAR OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY TREE OR GROUP OF TREES. NO ATTACHMENT, WIRES (OTHER THAN PROTECTIVE GUY WIRES), SIGNS, OR PERMITS MAY BE FASTENED TO A TREE.
16. ALL QUESTIONS CONCERNING THE PLAN AND/OR SPECIFICATIONS SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT (386) 672-9515.
17. ALL SHADE TREES AND SINGLE TRUNK UNDERSTORY TREES SHALL BE STAKED USING TREE FROG STAKING SYSTEM FOR SINGLE STEM TREE AND ALL MULTI-TRUNK UNDERSTORY TREES SHALL BE STAKED WITH ARBORGUY MULTI-TRUNK SYSTEM.
18. ANY CHANGE IN STAKING SYSTEM MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT BEFORE BEING INSTALLED.
19. ALL UNIMPROVED AREA NOT OTHERWISE PLANTED OR MULCHED SHALL BE SODDED WITH BAHIA UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLAN.
20. PLANT MATERIAL SHALL BE CLEARLY IDENTIFIED AS FLORIDA #1 OR BETTER ON EITHER LABELS OR INVOICES.
21. ALL PLANT MATERIAL SHALL BE GUARANTEED ONE YEAR AFTER ACCEPTANCE BY OWNER.
22. ALL TREES IN SOD TO BE IN A (4) FOOT MINIMUM DIAMETER MULCHED RING UNLESS NOTED OTHERWISE ON THE DRAWINGS.
23. TREES SHALL BE PLANTED SO THAT THE TRUNK FLARE IS EXPOSED AND TOPMOST ROOT IN THE ROOTBALL ORIGINATING FROM THE TRUNK IS AT SOIL SURFACE OR WITHIN THE TOP INCH OF SOIL ON THE ROOTBALL.
24. ALL SPECIFICATIONS MUST BE AS SPECIFIED OR GREATER.
25. PLANT TREE SO THAT ROOTBALL IS 1"-2" ABOVE FINISH GRADE.
26. REMOVAL OF ALL CONSTRUCTION DEBRIS, LIMEROCK, EXCESS OF BUILDERS SAND, CONCRETE AND MORTAR DEBRIS, EXISTING WEEDS AND GRASS, AND ALL FOREIGN MATERIALS IN THE PLANTING BED AND SOD AREAS SHALL BE REMOVED AND A MINIMUM OF 3' OF CLEAN SAND WITH A PH 5.5-6.5 SHALL BE INSTALLED PRIOR TO ANY INSTALLATION OF PLANTS OR TREES.
27. BALLED AND BURLAPPED STRAPPING WIRE, AND ANY SYNTHETIC MATERIAL SHALL BE REMOVED PRIOR TO FINAL INSPECTION. WIRE BASKETS SHOULD BE CUT AWAY FROM TOP ONE-THIRD OF ROOT BALL.
28. NON-CANOPY TREES SHALL NOT BE PLANTED CLOSER THAN 10 FEET FROM OTHER TREES AND CANOPY TREES NO CLOSER THAN 20-30 FEET, DEPENDING ON SPECIES.
29. A MULCH RING FOR ALL NEWLY PLANTED TREES SHALL BE PROVIDED AT LEAST FIVE (5) FEET IN DIAMETER AND NOT CLOSER THAN SIX (6) INCHES FROM THE TREE TRUNK.
30. TREES SHALL HAVE A MINIMUM HEIGHT OF EIGHT (8) TO TEN (10) FEET AND TWO (2) INCHES OF DBH.
31. SHRUB LINES ARE TO BE PLANTED AT THE REQUIRED MINIMUM HEIGHT, NOT BY CONTAINER SIZE.
32. THE IRRIGATION CONTRACTOR SHALL PROVIDE A DESIGN-BUILD OF ITS IRRIGATION PIPING AND HEADS TO PROVIDE A LOOPED SYSTEM WITH A 2" MINIMUM SIZE. AN IRRIGATION PLAN SHALL BE PREPARED AND PROVIDED TO CITY STAFF.
33. CONTRACTOR SHALL ENSURE ANY/ALL CRITICAL ROOT ZONES MUST HAVE ROOT PRUNING PRIOR TO PERMANENT IRRIGATION INSTALLATION.



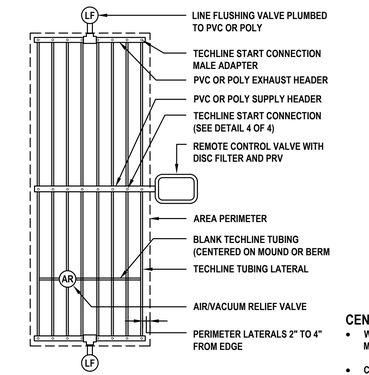
PLEASE NOTE THAT CALL-OUTS AND DETAILS SHOWN ARE FOR REFERENCE ONLY. PLEASE CONSULT LOCAL CODES AS TO REQUIREMENTS FOR YOUR SPECIFIC AREA. IRRIGATION MANUFACTURER DISCLAIMS ANY LIABILITY DUE TO MISAPPLICATION

VALVE AND BOX DETAIL

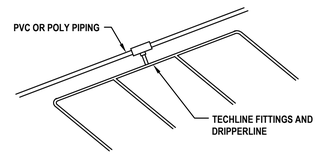
NOT TO SCALE

IRRIGATION NOTES:

1. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL EXISTING UTILITIES AND CONDITIONS PRIOR TO ITS COMMENCEMENT OF THE IRRIGATION WORK.
2. THE PLAN IS SCHEMATIC ONLY. THE CONTRACTOR SHALL INSTALL PIPING IN A MINIMUM NUMBER OF TRENCHES AND SHALL INSTALL PIPE IN A MINIMUM LENGTH.
3. QUANTITIES FOR IRRIGATION MATERIALS ARE NOT GIVEN. THE CONTRACTOR SHALL DETERMINE THIS FROM THE PLAN.
4. INSTALL SLEEVE PIPING WHERE SHOWN ON THE DRAWINGS AT THE PROPER DEPTH.
5. ALL SLEEVE PIPE SHALL BE SCHEDULE 40 PVC PIPE INSTALLED A MINIMUM OF 20" BELOW FINISHED PAVING GRADES.
6. ALL SLEEVES WHEN PLACED IN FIELD ARE TO BE LOCATED BY A METAL PIPE AT EACH END AND LOCATED FROM TWO STATIONARY POINTS BY TAPE MEASUREMENTS.
7. ALL PIPE SHALL BE INSTALLED A MINIMUM OF 20" BELOW GRADE.
8. ALL TRENCHING SHALL BE KEPT OUT OF THE DRIP LINE AREA OF ALL EXISTING TREES. USE RADIAL LINES OR TUNNELING WHEN NECESSARY TO ENCROACH INTO THE DRIP LINE AREA OF TREES.
9. LOCATE ALL VALVES AND OTHER IRRIGATION EQUIPMENT IN PLANT BED AREAS WITHIN THE PROJECT LIMITS FOR CONCEALMENT PURPOSES.
10. RISERS ARE TO BE HIDDEN COMPLETELY IN SHRUBBERY OR PAINTED BLACK AND IN NO CASE BE HIGHER THAN THE SHRUBBERY INSTALLED.
11. ALL PIPE EXPOSED ABOVE GRADE AND TO VIEW SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE OF THE NOTED SIZE.
12. ALL VALVES SHALL BE INSTALLED IN METER TYPE SIZE BOXES EQUAL TO AMETEK POLY-IRON.
13. IRRIGATION SHALL MEET ALL APPLICABLE CURRENT MUNICIPAL, COUNTY, STATE OR FEDERAL CODES, ORDINANCES AND REGULATIONS THAT HAVE JURISDICTION.
14. ALL PIPE 1/2" TO 2 1/2" IN SIZE SHALL BE PRESSURE RATED 160 PVC (EXCEPT MAIN) AND SHALL.
15. ALL FITTINGS SHALL BE SCHEDULE 40 PVC.
16. ALL SPRAY HEADS ARE TO BE A MINIMUM OF 6" POP-UP AND ALL HEADS IN PLANTING AREAS TO BE 12" POP-UP OR RISERS.
17. ELECTRICAL TO CONTROLLER SHALL BE SUPPLIED BY ELECTRICAL CONTRACTOR (NOT IRRIGATION CONTRACTOR)



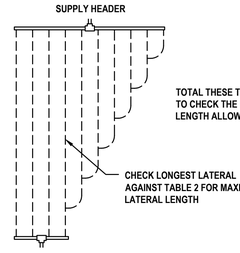
TECHLINE CENTER FEED LAYOUT



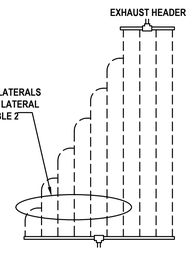
CREATING SUB-HEADERS TO REDUCE GLUE/SADDLE JOINTS

NETAFIM DETAIL

NOT TO SCALE



JOINING TECHLINE TUBING



BRANCHING OUT TECHLINE TUBING

CENTER FEED LAYOUTS:

- WHERE LAYOUT FLEXIBILITY EXISTS, IT IS RECOMMENDED THAT CENTER FEED LAYOUTS BE USED. THIS ALLOWS FOR THE MOST EVEN FLOW OF WATER THROUGH OUT THE ZONE.
- CENTER FEED LAYOUTS ALSO ALLOW YOU TO MAXIMIZE THE LENGTHS OF TECHLINE THAT CAN BE RUN.

OTHER PIPING LAYOUTS:

- WHEN BRANCHING OUT, OR JOINING TECHLINE, ONE OF TWO RULES APPLY. RULE 1 - WHEN BRANCHING OUT TECHLINE FROM THE SUPPLY HEADER, TOTAL ALL "BRANCHED OUT" DRIPPERLINE AND CHECK THE SUM AGAINST THE MAXIMUM LATERAL LENGTH IN TABLE 2. RULE 2 - WHEN JOINING DRIPPERLINE LATERALS FROM THE SUPPLY HEADER, CHECK ONLY THE LONGEST LATERAL AGAINST THE MAXIMUM ALLOWABLE IN TABLE 2.
- TO REDUCE THE NUMBER OF GLUE JOINTS, SADDLES OR INSERT FITTINGS IN A HEADER, TRANSITION TO TECHLINE AND TECHLINE FITTINGS TO MAKE UP SUB-HEADERS, MAKING SURE TO FOLLOW THE GUIDELINE OF A MAXIMUM OF 0.5 GPM IN THE "SUB-HEADER" ZONE.

ZONE WATER REQUIREMENTS:

ONCE YOU HAVE LAID OUT THE TECHLINE, YOU NEED TO IDENTIFY HOW MANY DRIPPERS THERE ARE, AND THEIR TOTAL OUTPUT. THIS WILL HELP YOU DETERMINE MAINLINE, SUBMAIN AND SUPPLY/EXHAUST HEADER SIZING. VALVE, FILTER, AND REGULATOR SELECTION.,

TABLE 2: MAXIMUM LENGTH OF A SINGLE LATERAL (FEET)

EMITTER SPACING		12"				18"				24"	
EMITTER FLOW (GPH)		0.26	0.4	0.6	0.9	0.26	0.4	0.6	0.9	0.6	0.9
INLET PRESSURE	20 psi	444	326	256	194	631	463	365	277	465	353
	25 psi	496	364	287	217	706	518	409	310	519	395
	35 psi	578	423	333	253	821	604	476	361	605	461
	45 psi	641	470	370	281	913	670	529	401	673	513

REVISIONS

DATE	DESCRIPTION
12/13/23	REV PER 12/4 DBS
	COMMENTS

REGISTERED LANDSCAPE ARCHITECT RICHARD L. POORE LA533 STATE OF FLORIDA
NOT VALID UNLESS SIGNED AND DATED

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RICHARD L. POORE, RLA 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.

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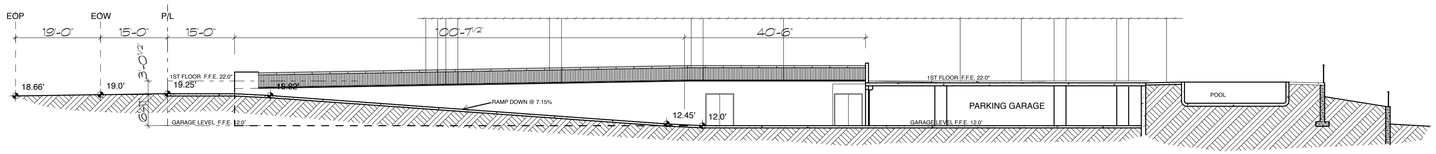
LANDSCAPE - IRRIGATION DETAILS AND NOTES

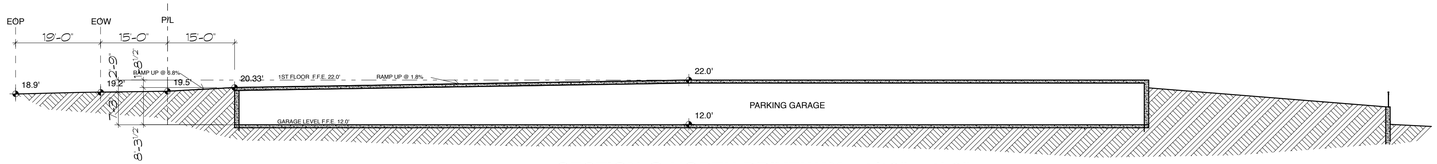
THE LIV CONDOMINIUM
3635 S. ATLANTIC AVENUE
DAYTONA BEACH SHORES, FLORIDA

PROJECT NO:	230610
DATE:	NOVEMBER 07, 2023
DESIGN BY:	RLP
DRAWN BY:	JMB
CHECKED BY:	RLP
SCALE:	1" = 20'

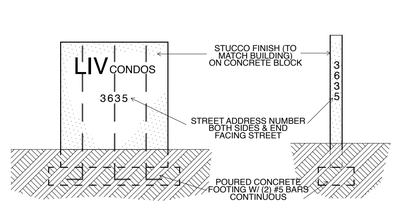
SHEET NUMBER: L300



SECTION @ RAMP TO GARAGE 1/16" = 1'-0"

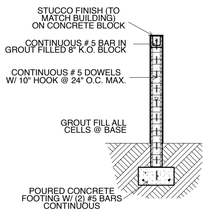


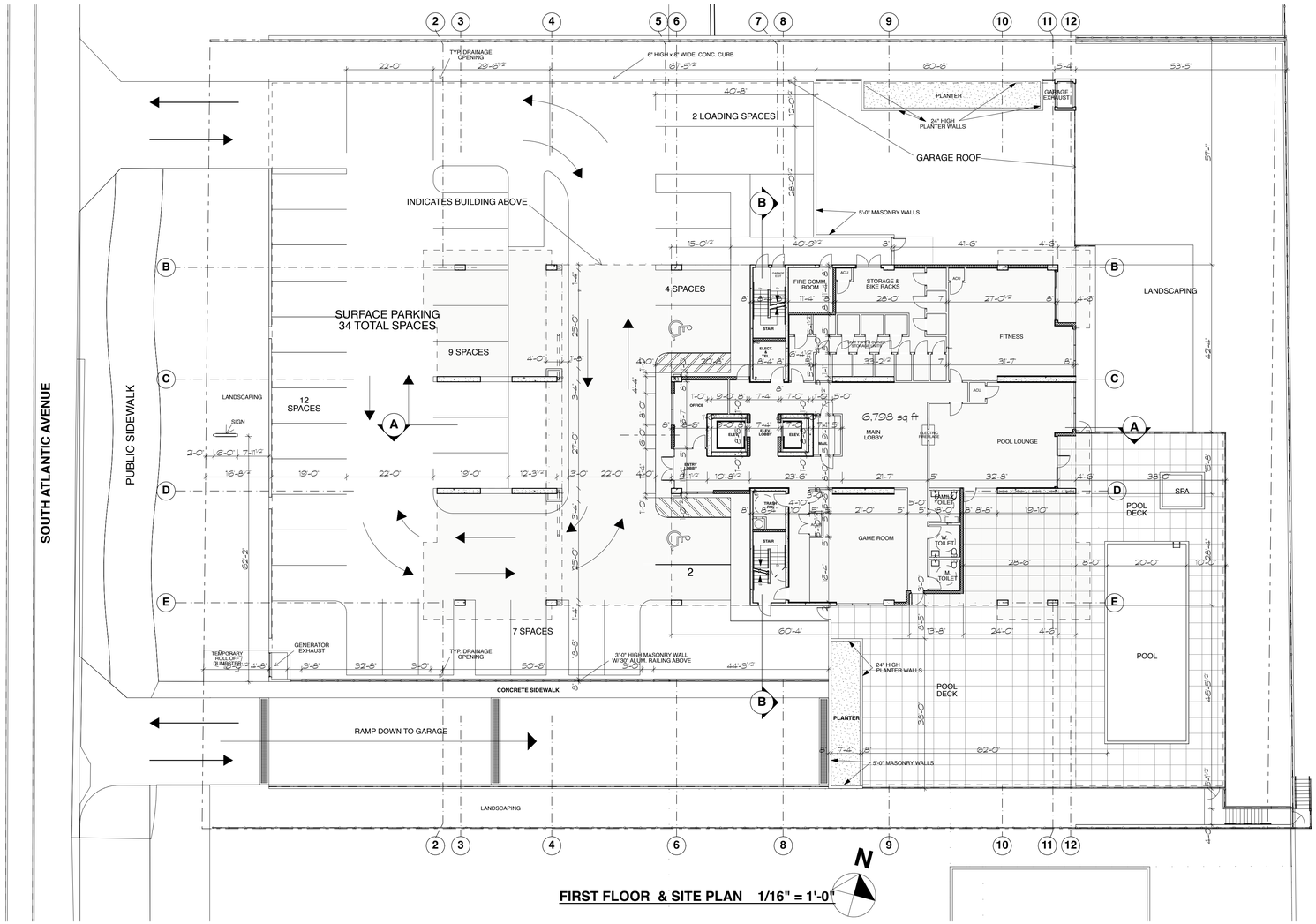
SECTION @ NORTH DRIVEWAY 1/16" = 1'-0"



SIGN FRONT ELEVATION
1/4" = 1'-0"

SIGN END ELEVATION
1/4" = 1'-0"





FIRST FLOOR & SITE PLAN 1/16" = 1'-0"

REVISIONS

DATE	DESCRIPTION

FLORIDA REGISTRATION NO. AR0004664

STATE OF FLORIDA
LARRY W. ROBINSON
AR0004664
REGISTERED ARCHITECT

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LIV CONDOS
PROPOSED 74 UNIT CONDOMINIUM
for Shipra Sea Shore Development, LLC
3635 S. Atlantic Ave., Daytona Beach Shores, Fl.

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DATE 12/11/23

COMM. NO.

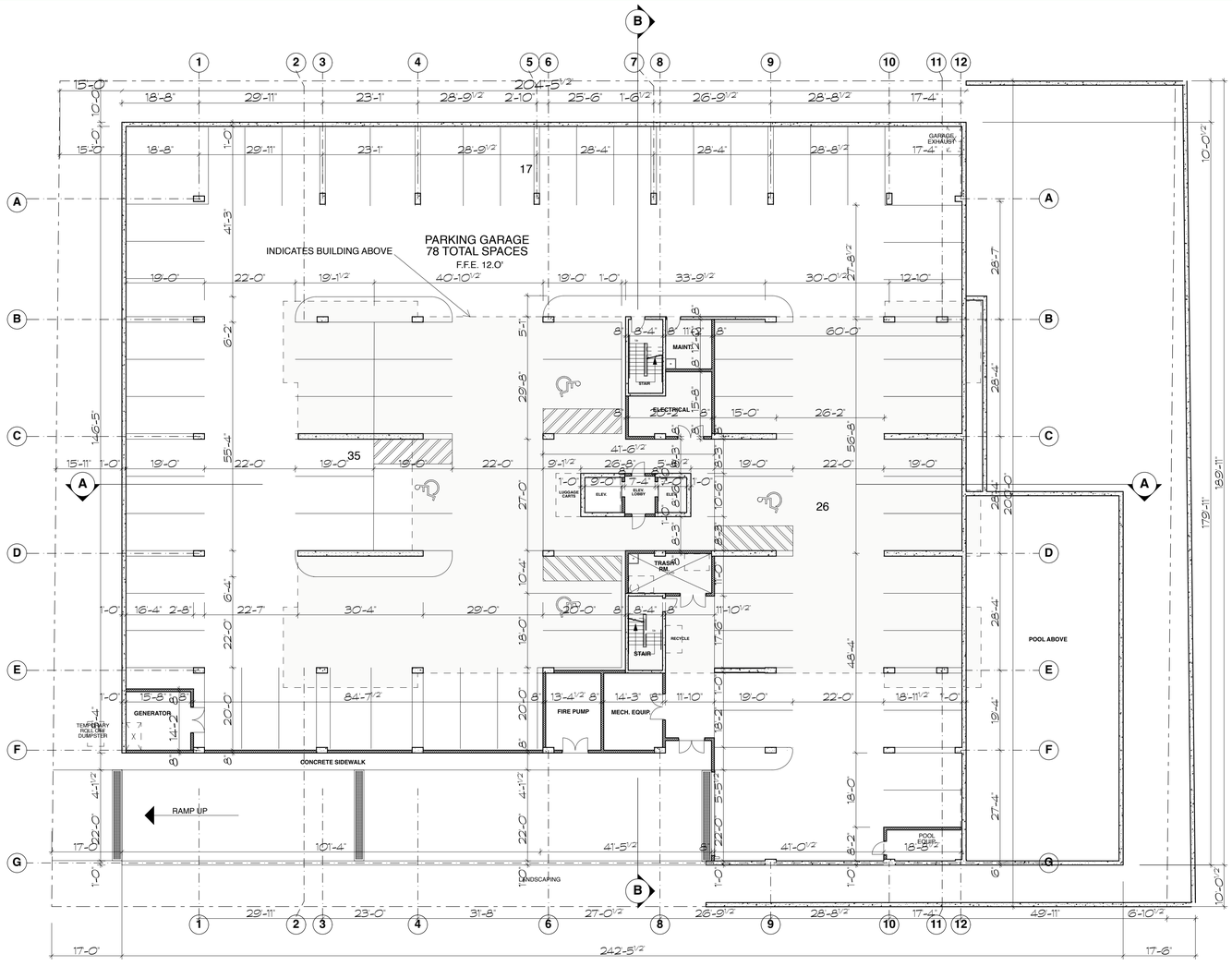
DRAWN BY

SHEET

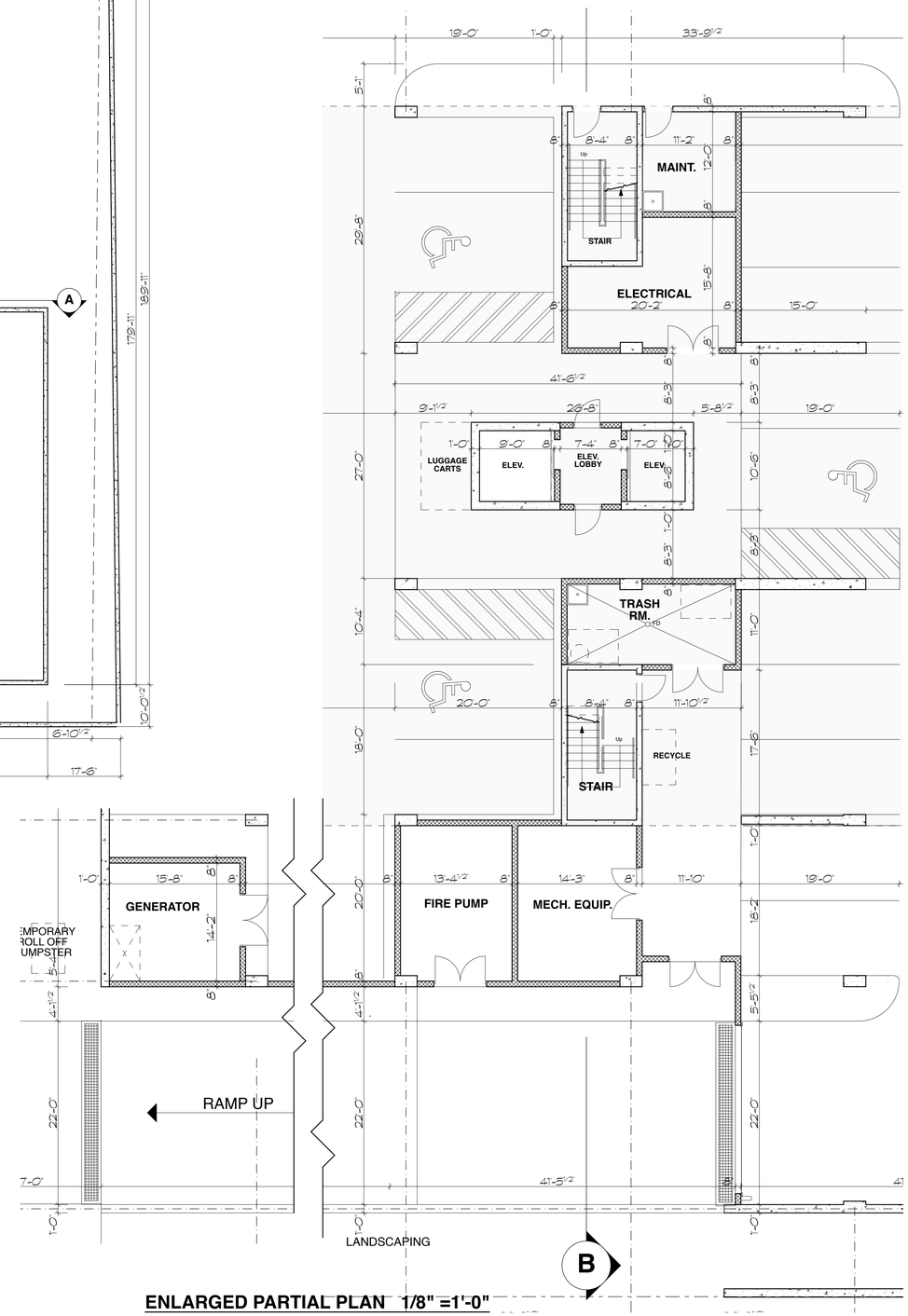
OVERALL 1st FLOOR & SITE PLAN

A-1

OF



GARAGE FLOOR PLAN 1/16" = 1'-0"



ENLARGED PARTIAL PLAN 1/8" =1'-0"

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SHEET

GARAGE PLAN

A-2

OF

INDICATES BUILDING ABOVE

SURFACE PARKING
34 TOTAL SPACES

9 SPACES

4 SPACES

7 SPACES

2

5'-0" MASONRY WALLS

GARAGE EXIT

FIRE COMM. ROOM

ACU

STORAGE & BIKE RACKS

ACU

LANDSCAPING

STAIR

ELECT. & TEL.

UNIT TYPE B OWNER STORAGE UNITS

FITNESS

OFFICE

ELEV.

ELEV. LOBBY

ELEV.

MAIL

6,798 sq ft

MAIN LOBBY

ELECTRIC FIREPLACE

ACU

POOL LOUNGE

ENTRY LOBBY

TRASH RM.

ACU'S

GAME ROOM

FAMILY TOILET

W. TOILET

M. TOILET

POOL DECK

SPA

POOL

TYP. DRAINAGE OPENING

3'-0" HIGH MASONRY WALL W/ 30" ALUM. RAILING ABOVE

24" HIGH PLANTER WALLS

CONCRETE SIDEWALK

POOL DECK

PLANTER

RAMP DOWN TO GARAGE

5'-0" MASONRY WALLS

LANDSCAPING

2 3 4 6 8 9 10 11 12

FIRST FLOOR PLAN 1/4" - 1'-0"

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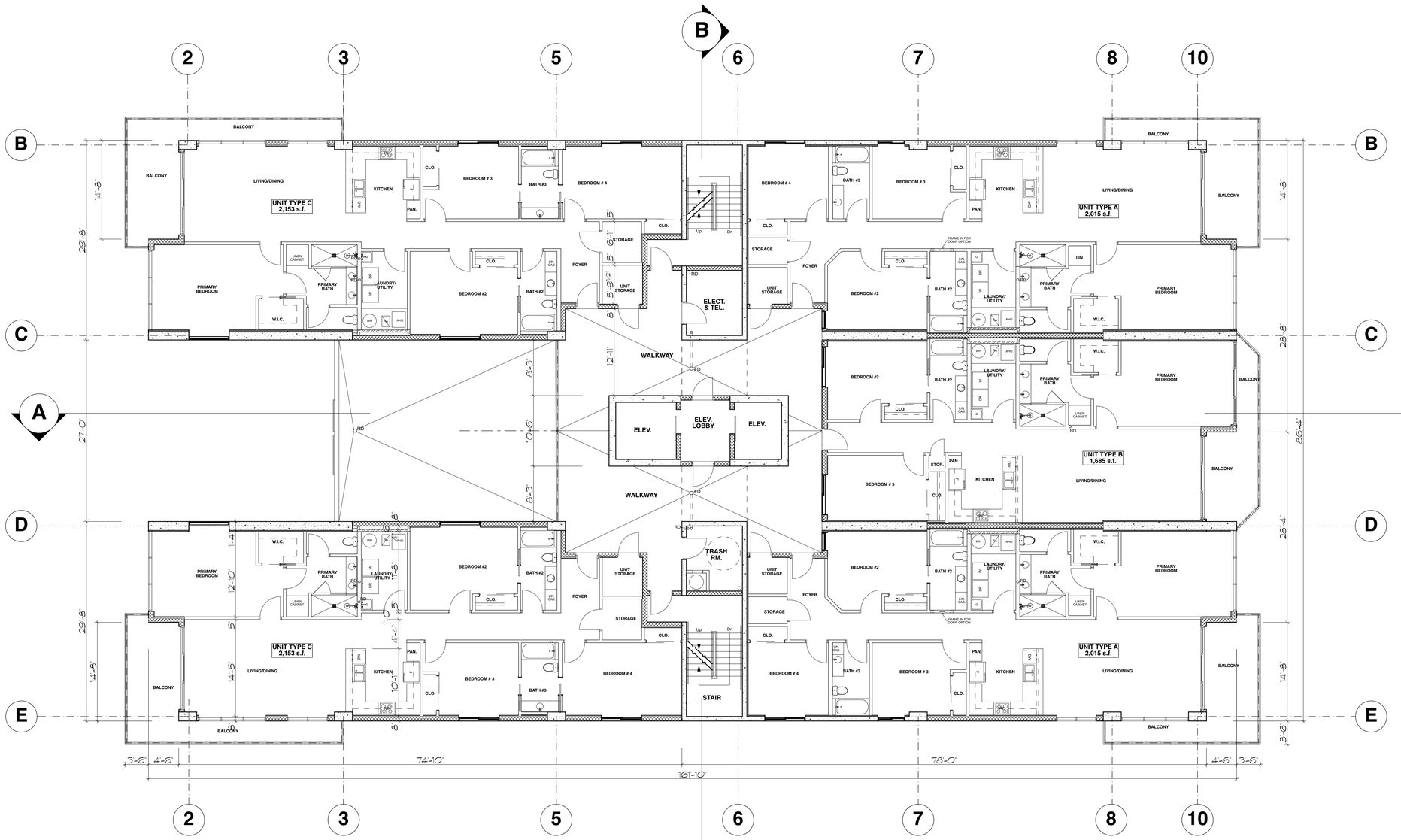
SHEET
1st FLOOR PLAN

A-3

OF



2nd FLOOR PLAN 1/8" = 1'-0"

N

TOTAL CONDITIONED FLOOR AREA- 9,831 sq. ft.
TOTAL OVERALL SLAB AREA, INCLUDING BALCONIES- 13,110 sq. ft.

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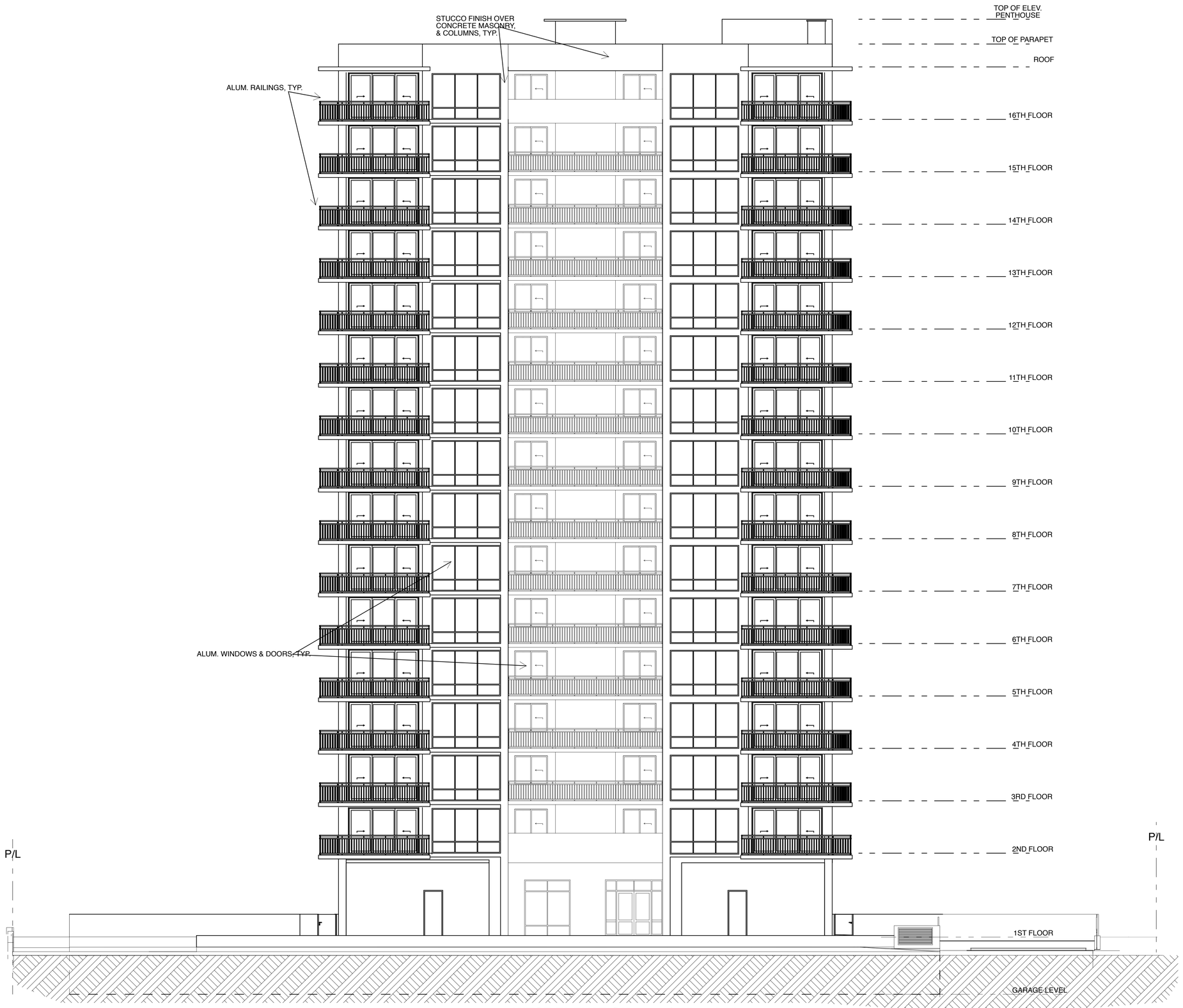
DRAWN BY

SHEET
2nd FLOOR PLAN

A-4

OF



WEST ELEVATION 1/16" = 1'-0"

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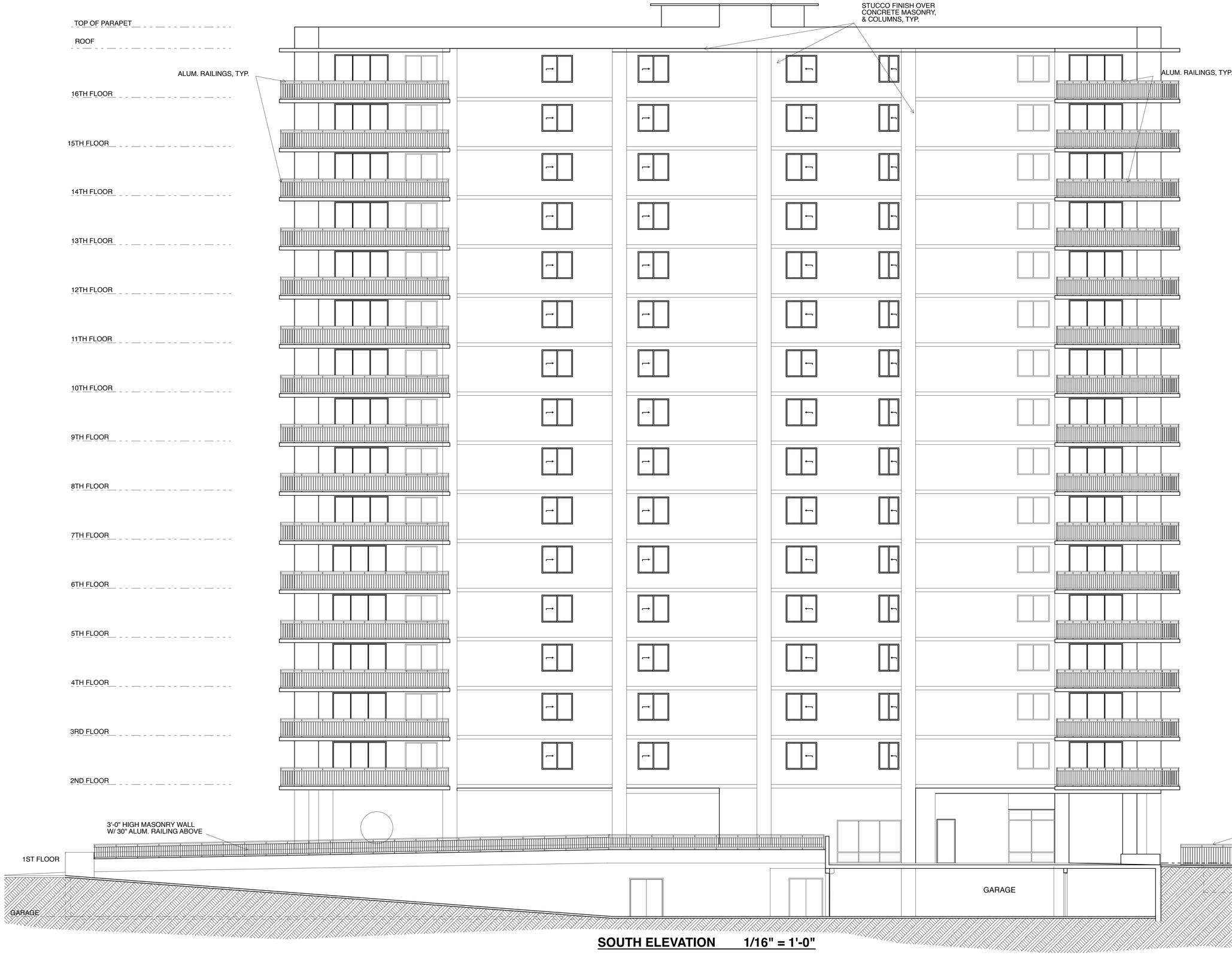
ELEVATIONS

A-10

OF



SOUTH ELEVATION 1/16" = 1'-0"

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for Shipra Sea Shore Development, LLC
3635 S. Atlantic Ave., Daytona Beach Shores, Fl.

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SHEET

ELEVATIONS

A-11

OF

NORTH ELEVATION 1/16" = 1'-0"

REVISIONS

DATE	DESCRIPTION

FLORIDA REGISTRATION NO. AR0004664

STATE OF FLORIDA
LARRY W. ROBINSON
AR0004664
REGISTERED ARCHITECT

NOT VALID UNLESS SIGNED AND DATED

LARRY W. ROBINSON
a r c h i t e c t
414 north halifax avenue
daytona beach, florida 32118
telephone: 386 - 252 - 0429
e mail: lwrarchitect79@gmail.com

LIV CONDOS
PROPOSED 74 UNIT CONDOMINIUM
for Shipra Sea Shore Development, LLC
3635 S. Atlantic Ave., Daytona Beach Shores, Fl.

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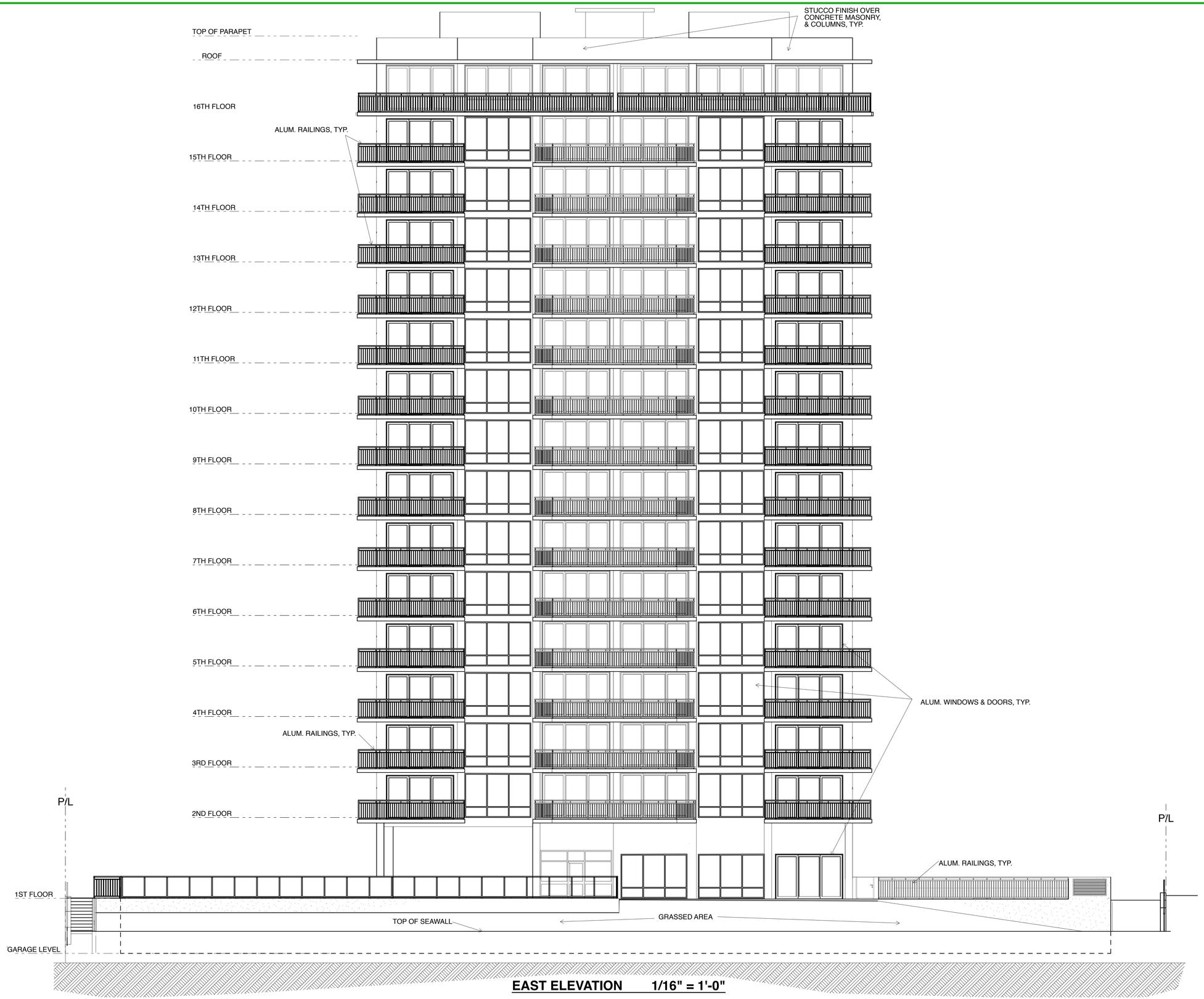
ELEVATIONS

A-12

OF



EAST ELEVATION 1/16" = 1'-0"

REVISIONS

DATE	DESCRIPTION

FLORIDA REGISTRATION NO. AR0004664

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ELEVATIONS

A-13

OF

FROM NW

FROM SW

FROM SE

FROM NE

REVISIONS

DATE	DESCRIPTION

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RENDERINGS

A-16

OF

AT ENTRANCE

POOL DECK

REVISIONS

DATE	DESCRIPTION

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RENDERINGS

A-17

OF

	PLANNING ANALYSIS
APPLICATION NO:	Regular Site Plan RSP12023053
PROJECT NAME:	LIV CONDOS, a Multifamily Residential Condominium
PROJECT LOCATION:	3635 - 3637 South Atlantic Avenue
PARCEL ID:	6302-05-04-0030 & 6302-05-04-0060
OWNER:	SA 2011, LLC
PROJECT COORDINATOR:	James R. Mack and Roger Strcula, PE, Upham, Inc.
STAFF CONTACT:	Stewart Cruz, AICP – Community Services Director
REQUEST:	*Approval of site plan application, RSP12023053, which would allow the construction of a 74-unit multi-family residential development.*

A. EXISTING ZONING AND LAND USE

Table 1 below provides a description of the zoning district designation and current land use (i.e., existing development) for the subject and abutting properties.

Table 1: Zoning and Land Use Area Description

Location	Zoning	Current Land Use
Subject Property	T-RMF-1	RMF- Tuscany Villas & Vacant Parcel
North	T-RMF-1	Atlantic Terrace Timeshare
South	T-RMF-1	Curran Shores South COA
East	NA	Atlantic Ocean
West	GC-2	Mad Dog Surf Shop-Retail

Notes: GC-2 = Retail/Service Commercial District; T-RMF-1 = Hotel/Motel-Residential Multifamily (High Density) District.

As seen in **Table 1** above and **Exhibit A**, the subject property has a zoning designation of T-RMF-1 District. Pursuant to Sec. 14-18 of the Daytona Beach Shores Land Development Code (LDC), multifamily residential uses are permitted in the T-RMF-1 District. Pursuant to Sec. 2-2, LDC, a multifamily residential use contains three or more dwelling units. The proposed project contains 74 residential units and therefore qualifies as multifamily development.

B. COMPREHENSIVE PLAN (2030)

According to the City's Adopted Comprehensive Plan (2030) Future Land Use Map, the future land use (FLU) classification of the subject property is *High Intensity*. Comprehensive Plan **Policy 1-1.1.2(1)e, Policy 1-1.1.2(2)** and **Policy 1-1.4.3** regarding the *High Intensity* FLU

permits multifamily residential uses with a density between 35.1 and 60 units per gross acre. In addition, **Objective 1-1.4** of the plan states that land uses that are inconsistent with the character and overall Future Land Use Plan of the City shall be discouraged and shall take the form of not allowing any objectionable uses (industrial, warehousing, etc.). Considering the aforementioned and considering the proposed development would have a multifamily residential density of 58.7 units per acre, the proposed site plan is consistent with the City's Adopted Comprehensive Plan (2030) and existing FLU classification.

C. REVIEW AND COMMENTS

PLANNING: Stewart Cruz, AICP – Director Community Services Department

1. General Description

The development site is located at 3635 S. Atlantic Avenue (**Exhibit B**). The site has an acreage of 1.26 acres and street frontage of 200 feet along S. Atlantic Avenue. The proposed LIV Condo site plan proposes the construction of a 16-story, 74-unit multi-family residential condominium structure. Unit sizes vary from 1,685 to 2,153 square feet.

The northerly 150' portion of the site is currently occupied with 12 multi-family/rental units contained within six (6) structures. The southerly 50' of the site is a vacant vegetated parcel.

2. Stormwater

The site will have an underground exfiltration stormwater system. All substantial stormwater runoff from impervious areas, i.e., buildings and pavements, will be directed into the underground exfiltration system design to meet the City's LDC stormwater standards.

3. Access

The development plan shows vehicular and pedestrian access via two (2) driveway connections to S. Atlantic Avenue on the northwest and southwest ends of the property. The Fire Division has reviewed both access points and have no objection to their location.

4. Parking & Transportation

One hundred and eleven (111) parking spaces are required for the development while 112 spaces are shown on the plan, inclusive of five (5) ADA spaces. According to the traffic analysis (**Exhibit C**) provided by the project transportation engineer, AM (7am-9am) and PM (4pm-6pm) net peak hour vehicular trips generated are 15 and 18, respectively. In addition, net average daily trips generated from the development should not exceed 255. These trips will not adversely impact the S. Atlantic Avenue transportation corridor which is currently operating at acceptable levels of service.

5. Public Facilities

All public facilities have adequate capacity to accommodate the proposed development at the City's adopted levels of services (**Exhibit D**).

6. Landscaping

The development proposes a total landscaped area of 45.5 percent of the site although only 30 percent is required. Twenty-two (22) trees are required however a total of 66 trees are proposed on site, which includes six different species. Adequate perimeter and interior landscaping are provided as required. Considering the aforementioned, the landscape plan meets, and in most cases, exceeds the City's landscape design requirements (**Exhibit E**).

7. Development Plan

As seen in the attached site development plan review checklist (**Exhibit F**), the proposed plan meets the requisite requirements of the City's Land Development Code.

COMMUNITY SERVICES: Stewart Cruz, AICP - Director Community Services Department

See above.

PUBLIC WORKS: Tom Brown - Public Works/Sewer Deputy Director

The Deputy Director has reviewed the site plan, including the landscaping and irrigation plans, and his comments have been addressed.

PUBLIC SAFETY: Lt. Medders - Fire Division

The Fire Division has reviewed the site plan and comments have been addressed.

ENGINEERING: Michelle Widick, P.E. – Zev Cohen

The City's civil engineering consultant has reviewed the site plan and her comments have been addressed.

E. STAFF RECOMMENDATION

Staff recommends approval of the LIV Condo Site Plan RSP12023053 as presented.

EXHIBIT A

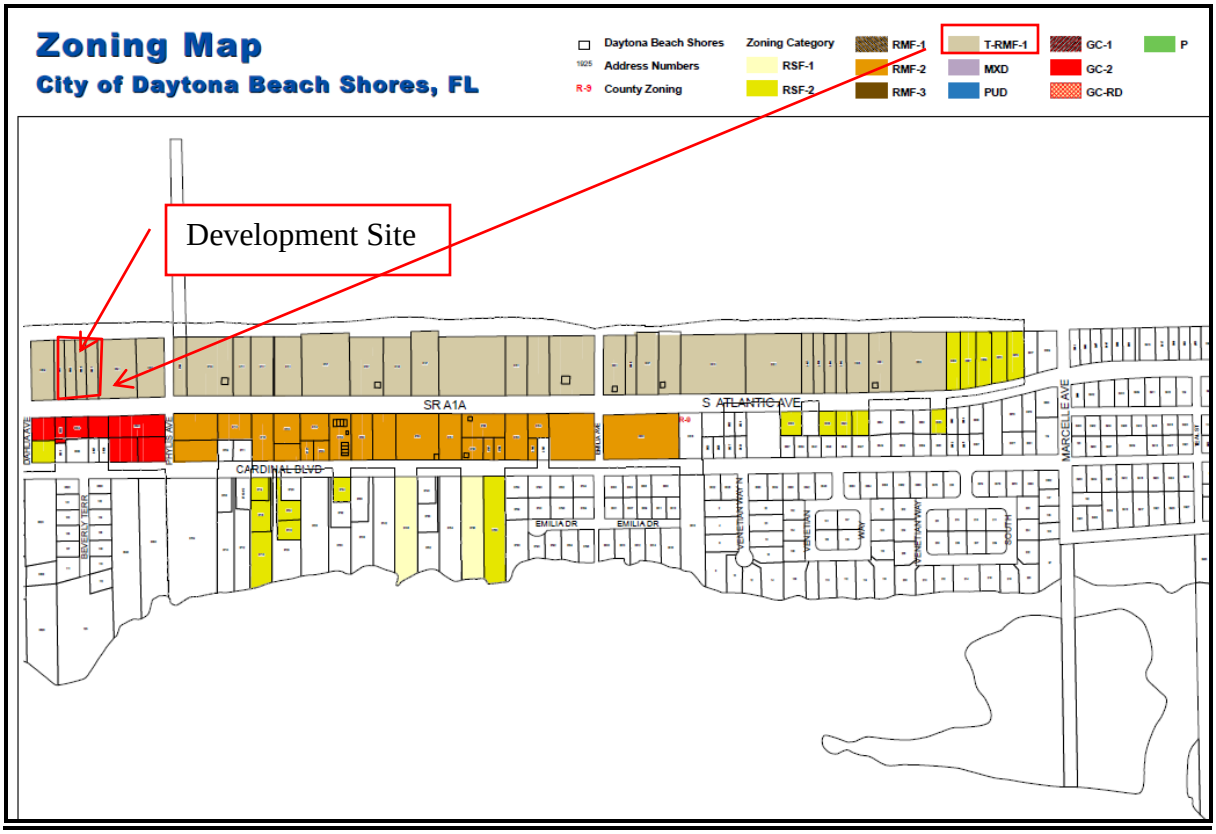
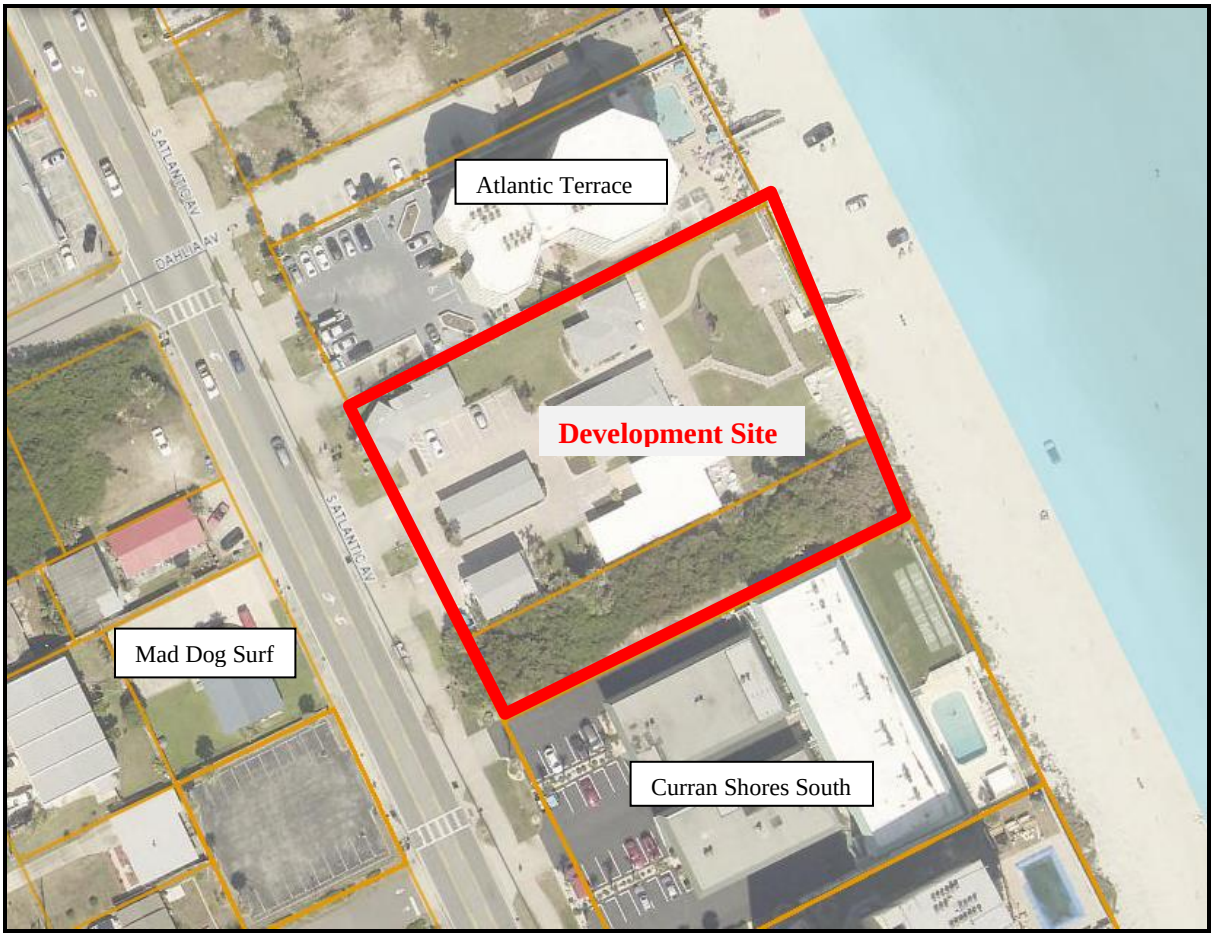

Zoning Map
City of Daytona Beach Shores, FL
Daytona Beach Shores
Address Numbers
County Zoning
Zoning Category
RSF-1
RSF-2
RMF-1
RMF-2
RMF-3
T-RMF-1
MXD
PUD
GC-1
GC-2
GC-RD
P
Development Site
SR A1A
S ATLANTIC AVE
CARDINAL BLVD
EMILIA DR
MARCELLE AVE

EXHIBIT B

Aerial View: 3635 - 3637 S. Atlantic Avenue



Source: Volusia County Property Appraiser, 2023

EXHIBIT C

Transporation Impact Analysis

Provided Under Separate Cover

EXHIBIT D

Public Facilities Concurrency Findings

PART A

Table 1: Concurrency/Capacity Analysis (Theoretical Max.)

Development Variable	Current Use	Proposed Use	System Impact	Capacity Available
Residential Units	12	74	62	
Population[1]	18.84	116.18	97.34	
AM / PM Peak Hour Trips[2]	5/6	20/24	15/18	Yes
Sanitary Sewer (gallons/day)[3]	3,000	18,500	15,500	Yes
Solid Waste (lbs./day)[4]	188.4	440	251.6	Yes
Stormwater Drainage[5]	n/a	Onsite retention	n/a	Yes
Potable Water (gallons/day)[6]	2,072.4	12,779.8	10,707.4	Yes
Recreation	Negligible	Negligible	Negligible	Yes
Public School Student(s)[7]	1.64	10	8.36	Yes

Notes:

1. Population: 1.57 persons per dwelling unit in DBS
2. Transportation: Trip Generation/Traffic Analysis by Chris J. Walsh, P.E. Walsh Traffic
3. Sanitary Sewer: 250 gallons per dwelling unit per day
4. Potable Water: 110 gallons per capita per day
5. Solid Waste: 10 pounds per capita per day
6. Stormwater Drainage: LOS standard = 25-year, 24-hour event. If property is redeveloped, drainage system will be designed to meet the requirements of the Land Development Code.
7. Public School: Generation rates = 0.137 per multi-family unit.

PART B: FINIDINGS OF CONCURRENCY

Per Part A above, the City finds the following:

1. The existing public facilities have the abilty to accommodate the proposed development at the adopted level-of-service standards.

2. No public facility deficiency is required to be corrected prior to the completion of the proposed development.

EXHIBIT E

Landscape Review Checklist

LANDSCAPING AND IRRIGATION REVIEW

Date January 3, 2024 Planning and Zoning Board: January 8, 2024

Name Of Project LIV Multifamily Residential Condominium
Address & Parcel ID 3635-3637 South Atlantic Avenue, Daytona Beach Shores, FL
PID: 6302-05-04-0030 & 6302-05-04-0060
Owner: SA 2011, LLC
Applicant: Shipra Sea Shore Development, LLC
Project Coordinator: James R. Mack and Roger Strcula, PE, Upham, Inc.

	Status	Date
Drawings Show Site Location & North Arrow	OK	01/03/24
Lot Size Irregular, Appx 200' x 274'	OK	01/03/24
Land Area 54,843 s.f. or 1.26 acres	OK	01/03/24
Green Area – Min Req 30 %, Shown 45.5 %	OK	01/03/24
Trees – Min Req 22, # Shown 66	OK	01/03/24
Tree Mixture – Min Req 3 # Shown 6	OK	01/03/24
Specimen Trees – No X Yes__ Protected___	OK	01/03/24
Parking Area Landscaping: Sec. 14.46-5(6)		
Alternative Landscaping: Option 1	OK	01/03/24
Min Req sf, Shown sf	NA	01/03/24
Terminal/Interior Islands	NA	01/03/24
Lot Perimeter Landscaping	OK	01/03/24
Plants – Salt Tolerance Rating		
High X Moderate X Slight___	OK	01/03/24
Provisions For Irrigation	OK	01/03/24
Drawings Meet/Exceed City's Tree Ordinance	OK	01/03/24

Remarks:

LANDSCAPING/IRRIGATION PLAN REVIEWED BY:

Stewart Cruz, AICP
Community Services Director

LANDSCAPING/IRRIGATION PLAN APPROVED BY PLANNING & ZONING BOARD:

With Modifications Indicated _____ Without Modifications _____

_____ _____
Planning & Zoning Board Chairman Date

EXHIBIT F

Development Review Checklist

Provided Under Separate Cover

MEMORANDUM

To: Mr. Stewart Cruz – Community Services Director, Daytona Beach Shores

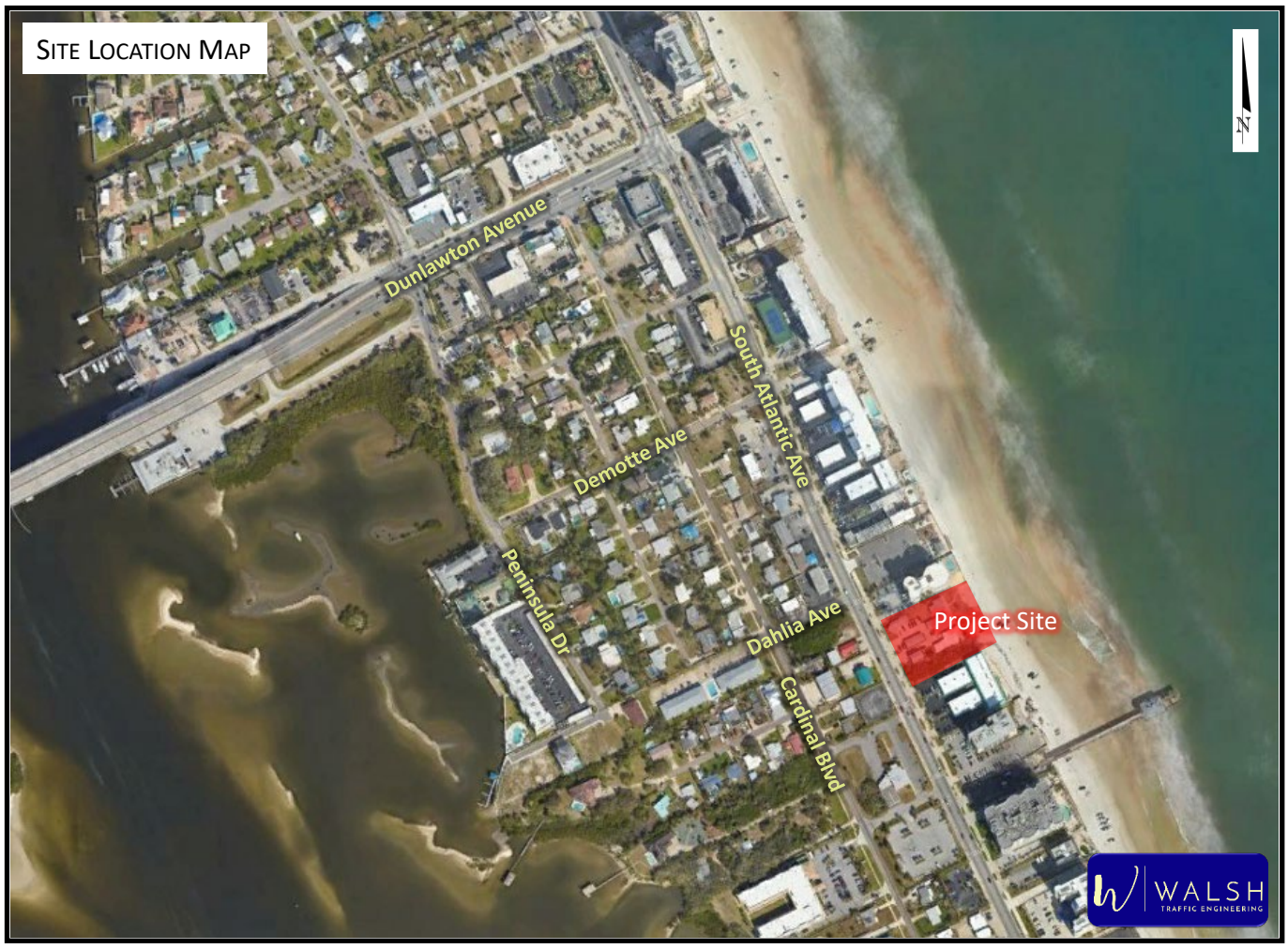
From: Mr. Chris J. Walsh, P.E.

Date: December 6, 2023

Subject: Daytona Beach Shores LIV Condos Trip Generation/Traffic Analysis (revised)

Daytona Beach Shores, Florida

Walsh Traffic Engineering, LLC (Walsh Traffic) has been retained to conduct a trip generation analysis relative to the proposed redevelopment of property located at 3635 and 3637 South Atlantic Avenue in Daytona Beach Shores, Florida (see **Site Location Map** below). The 3635 property currently has 12 multi-family units while the 3637 property is undeveloped. It is proposed to develop a 16-story high-rise oceanfront condominium with 74 dwelling units. The purpose of this memorandum is to show the trip differential between the existing and proposed developments and demonstrate that the resulting trip increase is below the City's/TPO's trip thresholds for requiring a formal traffic impact analysis.



Trip Generation

A trip generation analysis was conducted using trip generation rates and equations from ITE's *Trip Generation Manual, 11th Edition*. As summarized on the following page, the existing development (12 dwelling units) generates 81 total daily trips, 5 total AM peak-hour trips (1 in, 4 out) and 6 total PM peak-hour trips (4 in, 2 out). The proposed 74-unit high-rise condominium is projected to generate 336 total daily trips, 20 total AM peak-hour trips (5 in, 15 out) and 24 total PM peak-hour trips (15 in, 9 out). Therefore, from a total trip perspective, it can be seen that the proposed development will increase the trip potential by 255 daily trips, 15 AM peak-hour trips, and 18 PM peak-hour trips.

Per the Section 3-4.1 (Traffic Analysis Required) of the City's Land Development Code:

> *All new developments which are anticipated to generate five hundred (500) or more trips during the peak hour of the use shall be required to submit a traffic analysis which identifies the development's impact on the city's transportation system.*

Further, per the River-to-Sea TPO's TIA Guidelines:

> *A TIA will be required as determined by local ordinance or if not specified by local ordinance for developments generating:*
>
> - *1,000 or more two-way daily external trips on a weekday; or,*
> - *100 or more peak hour two-way external trips.*

The resulting increase in peak-hour trips (15 AM trips and 18 PM trips) for the proposed development as summarized on the following page are below the City's 500-trip threshold and the TPO's 100-trip threshold. Additionally, the resulting increase in daily trips (255 daily trips) for the proposed development is below the TPO's 1,000-trip threshold. Therefore, a formal Traffic Impact Analysis is not required for the proposed development.

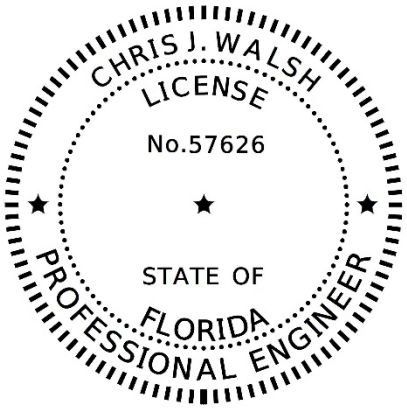
Roadway Segment Analysis

At the request of the City, the level of service on South Atlantic Avenue immediately adjacent to the proposed development was evaluated. Based on Volusia County traffic counts, the daily traffic volume on South Atlantic Avenue from Phyllis Avenue to Dunlawton Avenue was 11,730 vehicles per day (vpd). The latest volume provided by Volusia County is from 2021. In reviewing the historical data, the volumes on this roadway section have declined. To provide a conservative level of growth, the 2021 daily volume was factored to year 2024 based on an annual growth rate of two percent (2%). Thus, the 2024 daily volume is projected to be 12,434 vpd (11,730 x [2% x 3 years]). The proposed development will generate 255 additional daily trips. Therefore, at buildout South Atlantic Avenue is projected to carry 12,689 vpd assuming a worst-case scenario where 100% of the project trips travel to/from one direction. The capacity for South Atlantic Avenue as provided by Volusia County is 14,740 vpd. Thus, South Atlantic Avenue immediately adjacent to the site is projected to operate acceptably on a daily basis with a volume-to-capacity (v/c) ratio of 0.86 (12,689/14,740).

An analysis was also conducted for the PM peak hour. Based on Volusia County traffic counts, the PM peak-hour traffic volume on South Atlantic Avenue from Phyllis Avenue to Dunlawton Avenue was 950 vehicles per hour (vph). To provide a conservative level of growth, the 2021 peak-hour volume was factored to year 2024 based on an annual growth rate of two percent (2%). Thus, the 2024 PM peak-hour volume is projected to be 1,007 vph (950 x [2% x 3 years]). The proposed development will generate 18 additional PM peak-hour trips. Therefore, at buildout South Atlantic Avenue is projected to carry 1,025 vph assuming a worst-case scenario where 100% of the project trips travel to/from one direction. The capacity

for South Atlantic Avenue as provided by Volusia County is 1,330 vph. Thus, South Atlantic Avenue immediately adjacent to the site is projected to operate acceptably during the PM peak hour with a volume-to-capacity (v/c) ratio of 0.77 (1,025/1,330).

You may contact us at (386) 801-5682 should you have any questions.



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Chris J Walsh Date: 2023.12.06 12:06:47 -05'00'

ON THE DATE ADJACENT TO THE SEAL
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Table 1 – Trip Generation Comparison

Land Use	ITE Land Use Code	Intensity	Daily Total Trips		
			In	Out	Total
Existing: Multifamily Housing (Low-Rise)	220	12 DU	40	41	81
Proposed: Multifamily Housing (High-Rise)	222	74 DU	168	168	336
Net Increase in Trips			128	127	255

Land Use	ITE Land Use Code	Intensity	AM Peak Hour Total Trips		
			In	Out	Total
Existing: Multifamily Housing (Low-Rise)	220	12 DU	1	4	5
Proposed: Multifamily Housing (High-Rise)	222	74 DU	5	15	20
Net Increase in Trips			4	11	15

Land Use	ITE Land Use Code	Intensity	PM Peak Hour Total Trips		
			In	Out	Total
Existing: Multifamily Housing (Low-Rise)	220	12 DU	4	2	6
Proposed: Multifamily Housing (High-Rise)	222	74 DU	15	9	24
Net Increase in Trips			11	7	18

Road Name	Limits (From - To)	Distance (in miles)	Posted Speed	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	2021 AADT	VC 2021 Allowable LOS	DAILY 2021 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2021 LOS	2021 AM Peak	2021 PM Peak	PEAK 2Way 2021 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Distance	SPD2013	AADT_11	AADT_12	AADT_13	AADT_14	AADT_15	AADT_16	AADT_17	AADT_18	AADT_19	AADT_20	AADT_21	VCA_LOS_21	Cap_21	VCRatio_21	LOS_21	AMPKHR_21	PMPKHR_21	2W_Cap_21	Lanes_20
Atlantic Ave. (DBS)	Phillis Ave. to SR A1A/Dunlawton Ave	0.40	35	9,170	13,680	13,050	12,920	14,770	15,190	13,540	12,970	15,730	11,290	11,730	E	14,740	0.80	D	730	950	1,330	4