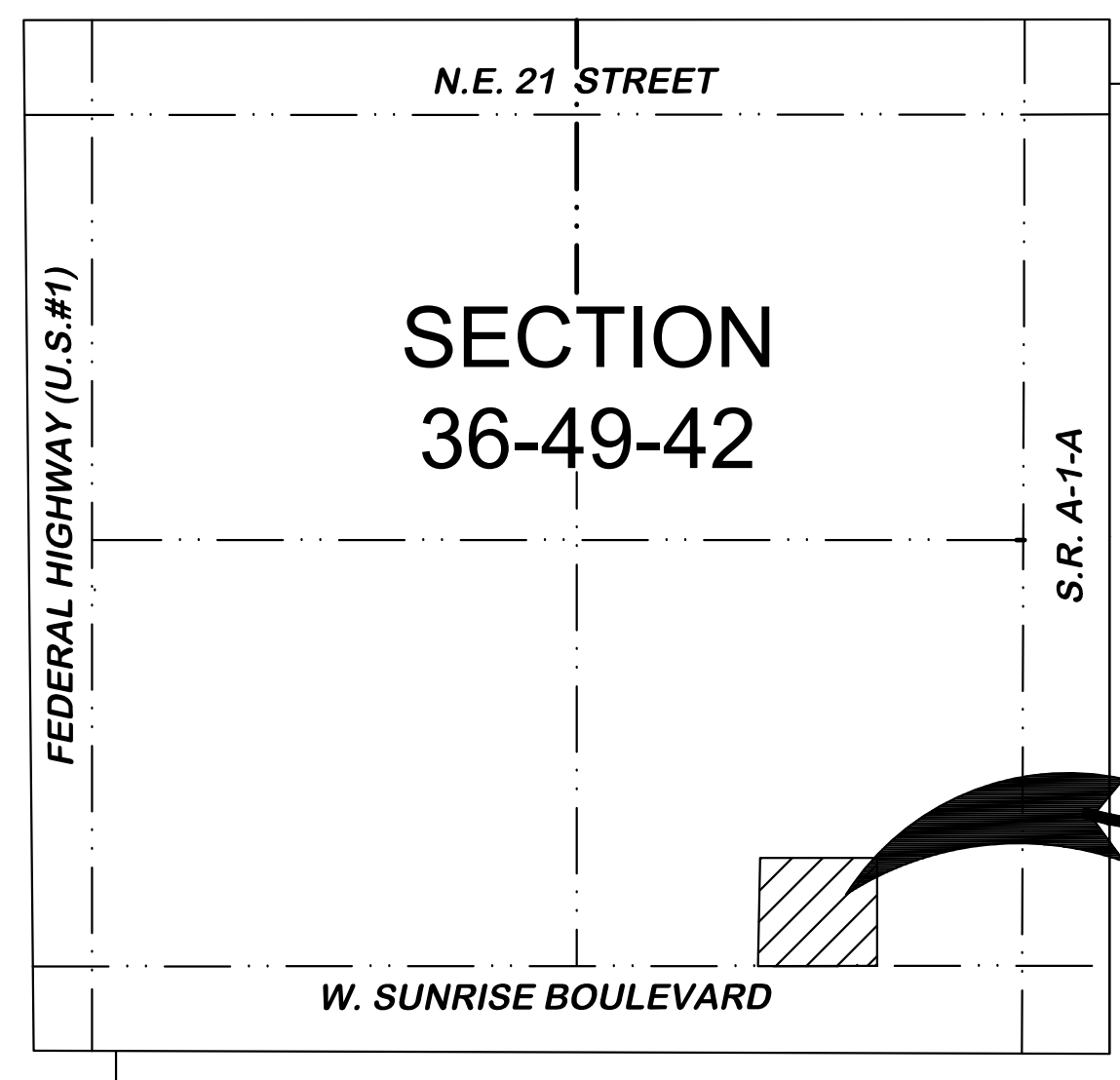


FIRE STATION No. 13

CITY OF FORT LAUDERDALE

DEVELOPMENT SERVICES - URBAN DESIGN & PLANNING
 SUBMITTAL FOR
DEVELOPMENT REVIEW COMMITTEE (DRC)
 PLAT APPLICATION PL-00-23



LOCATION MAP

SECTION 3, TOWNSHIP 50 S, RANGE 42E

NOT TO SCALE

HUGH TAYLOR BIRCH STATE PARK
 3109 E SUNRISE BLVD, FT LAUDERDALE, FL 33305
 BCPA FOLIO# 494236000010

PROJECT CONSULTANTS

**PRIME CONSULTANT,
 ARCHITECT OF RECORD**

ACAI ARCHITECTURE & ENGINEERING
 2937 WEST CYPRESS CREEK RD, STE 200
 FORT LAUDERDALE, FL 33309
 ADOLFO J. COTILLA, JR., AIA
 PHONE: 954-484-4000

LEAD CONSULTANT

SPINNAKER GROUP
 1409 GEORGIA AVEUNE
 WEST PALM BEACH, FL 33401
 PHONE: 561-801-7576

**LAND PLANNING,
 CIVIL ENGINEERING,
 LANDSCAPE ARCHITECTURE**

CRAVEN THOMPSON & ASSOCIATES, INC
 3563 NW 53 STREET
 FORT LAUDERDALE, FLORIDA 33309
 MATT EDGE, CNU-A
 ALEX SCHEFFER, PE
 JOE HANDLEY, RLA
 PHONE: 954-739-6400

STRUCTURAL

S&F ENGINEERS
 2529 WEST CYPRESS CREEK RD, STE 200
 FORT LAUDERDALE, FL 33309
 PHONE: 954-938-0020

**MECHANICAL,
 ELECTRICAL,
 PLUMBING**

DELTA G CONSULTING ENGINEERS, INC
 707 NE 3RD AVENUE, STE 202
 FORT LAUDERDALE, FL 33304
 PHONE: 954-527-1112

TABLE OF CONTENTS

DWG NO:	DRAWING TITLE
C-1	COVER SHEET
SH-1 - SH-2	PROPOSED PLAT
V-1 - V-2	SURVEY

UTILITY SERVICE PROVIDERS

**CITY OF FORT LAUDERDALE:
 WATER, SANITARY SEWER, STORMWATER**

XFINITY

FLORIDA POWER & LIGHT, INC.

AMERICAN & TELEPHONE & TELEGRAPH CO.

CTA PROJECT NO.: 20-0030

 **CRAVEN • THOMPSON AND ASSOCIATES, INC.**
 ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
 FAX: (954) 739-6409 TEL: (954) 739-6400

FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
 FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

MATERIAL SHOWN HEREON IS THE PROPERTY OF CRAVEN THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE
 REPRODUCED IN WHOLE OR IN PART WITHOUT PERMISSION OF CRAVEN THOMPSON & ASSOCIATES, INC. COPYRIGHT
 2023

PREPARED FOR:
 City of Fort Lauderdale /
 Trustees of the Internal Improvement Fund
 of the State of Florida



DEVELOPMENT APPLICATION FORM

Application Form: All Applications | Rev. 01/24/2023

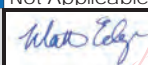
INSTRUCTIONS: The following information is required pursuant to the City's Unified Land Development Regulations (ULDR). The development application form must be filled out accurately and all applicable sections must be completed. Only complete the sections indicated for application type with N/A for those section items not applicable. Refer to "Specifications for Plan Submittal" by application type for information requirements for submittal. Select the application type and approval level in **SECTION A** and complete the sections specified.

A APPLICATION TYPE AND APPROVAL LEVEL *Select the application type from the list below and check the applicable type.*

<input type="checkbox"/> LEVEL I ADMINISTRATIVE REVIEW COMMITTEE (ADMIN) New nonresidential less than 5,000 square feet Change of use (same impact or less than existing use) Plat note/Nonvehicular access line amendment Administrative site plan Amendment to site plan* Property and right-of-way applications (MOTs, construction staging) Parking Agreements (separate from site plans) COMPLETE SECTIONS B, C, D, G	<input type="checkbox"/> LEVEL II DEVELOPMENT REVIEW COMMITTEE (DRC) New Nonresidential 5,000 square feet or greater Residential 5 units or more Nonresidential use within 100 feet of residential property Redevelopment proposals Change in use (if great impact than existing use) Development in Regional Activity Centers (RAC)* Development in Uptown Project Area* Regional Activity Center Signage Design Review Team (DRT) Affordable Housing (≥10%) COMPLETE SECTIONS B, C, D, E, F	<input type="checkbox"/> LEVEL III PLANNING AND ZONING BOARD (PZB) Conditional Use Parking Reduction Flex Allocation Cluster / Zero Lot Line Modification of Yards* Waterway Use Mixed Use Development Community Residences* Social Service Residential Facility (SSRF) Medical Cannabis Dispensing Facility* Community Business District for uses greater than 10,000 square feet COMPLETE SECTIONS B, C, D, E, F	<input checked="" type="checkbox"/> LEVEL IV CITY COMMISSION (CC) Land Use Amendment Rezoning Plat Public Purpose Use Central Beach Development of Significant Impact* Vacation of Right-of-Way City Commission Review Only <i>(review not required by PZB)</i> Vacation of Easement* COMPLETE SECTIONS B, C, D, E, F
<input type="checkbox"/> EXTENSION Request to extend approval date for a previously approved application COMPLETE SECTIONS B, C, H	<input type="checkbox"/> DEFERRAL Request to defer after an application is scheduled for public hearing COMPLETE SECTIONS B, C, H	<input type="checkbox"/> APPEAL/DE NOVO Appeal decision by approving body De Novo hearing items COMPLETE SECTIONS B, C, H	<input type="checkbox"/> PROPERTY AND ROW ITEM Road closures Construction staging plan Revocable licenses COMPLETE SECTIONS B, C, E

*Application is subject to specific review and approval process. Levels III and IV are reviewed by Development Review Committee unless otherwise noted.

B APPLICANT INFORMATION *If applicant is the business operator, complete the agent column and provide property owner authorization.*

Applicant/Property Owner	Trustees of Internal Imprvmt Fund	Authorized Agent	Craven Thompson & Assoc.
Address		Address	3563 NW 53rd Street
City, State, Zip		City, State, Zip	Fort Lauderdale, FL 33309
Phone		Phone	954-739-6400
Email		Email	medae@craventhompson.com
Proof of Ownership		Authorization Letter	Not Applicable
Applicant Signature:		Agent Signature:	 Digitally signed by Matt Edge Date: 2024.01.02 19:03:10 -0500

C PARCEL INFORMATION

Address/General Location	Hugh Taylor Birch State Park
Folio Number(s)	494236000010
Legal Description (Brief)	A portion of Gov Lot 6, 36-49-42
City Commission District	2
Civic Association	N/A

D LAND USE INFORMATION

Existing Use	PARK - OPEN SPACE
Land Use	WATER, CONSERVATION, LOW-M
Zoning	B-2
Proposed	<i>Applications requesting land use amendments and rezonings.</i>
Proposed Land Use	PARK - OPEN SPACE
Proposed Zoning	B-2

E PROJECT INFORMATION *Provide project information. Circle yes or no where noted. If item is not applicable, indicate N/A.*

Project Name	FIRE STATION No. 13										
Project Description (Describe in detail)	Application to Plat Fire Station 13 site.										
Estimated Project Cost	\$	<i>(Estimated total project cost including land costs for all new development applications only)</i>									
Affordable Housing Number of Units (AMI)		30%	50%	60%	80%	100%	120%	140%			
Affordable Housing Number of Units (MFI)		30%	50%	60%	80%	100%	120%	140%			



Waterway Use	No
Flex Units Request	No
Commercial Flex Acreage	No
Residential Uses	
Single Family	0
Townhouses	0
Multifamily	0
Cluster/Zero Lot Line	0
Other	0
Total (dwelling units)	0
Unit Mix (dwelling units)	
Studio-1 Bedroom	
2 Bedroom	
3+ Bedroom	

Traffic Study Required	No
Parking Reduction	No
Public Participation	No
Non-Residential Uses	
Commercial	
Restaurant	
Office	
Industrial	
Other	Fire Station
Total (square feet)	8,994 sq ft

F PROJECT DIMENSIONAL STANDARDS *Indicate all required and proposed standards for the project. Circle yes or no where indicated.*

	Required Per ULDR	Proposed	
Lot Size (Square feet/acres)			
Lot Density (Units/acres)			
Lot Width			
Building Height (Feet)			
Structure Length			
Floor Area Ratio (F.A.R)			
Lot Coverage			
Open Space			
Landscape Area			
Parking Spaces			
SETBACKS (Indicate direction N,S,E,W)	Required Per ULDR	Proposed	
Front []			
Side []			
Corner / Side []			
Rear []			
<i>For projects in Downtown, Northwest, South Andrews, and Uptown Master Plans to be completed in conjunction with the applicable items above.</i>			
Tower Stepback	Required Per ULDR	Proposed	Deviation
Front / Primary Street []			
Sides / Secondary Street []			
Building Height			
Streetwall Length			
Podium Height			
Tower Separation			
Tower Floorplate (square feet)			
Residential Unit Size (minimum)			

G AMENDED PROJECT INFORMATION *Provide approved and proposed amendments for project. Circle yes or no where indicated.*

Project Name			
Proposed Amendment Description (Describe in detail)			
	Original Approval	Proposed Amendment	Amended
Residential Uses (dwelling units)			
Non-Residential Uses (square feet)			
Lot Size (Square feet/acres)			
Lot Density (Units/acres)			
Lot Width			
Building Height (Feet)			
Structure Length			
Floor Area Ratio (F.A.R)			
Lot Coverage			
Open Space			
Landscape Area			
Parking Spaces			
Tower Stepback			
Building Height			
Streetwall Length			
Podium Height			
Tower Separation			
Tower Floorplate (square feet)			
Residential Unit Size (minimum)			
Does this amendment require a revision to the traffic statement or traffic study completed for the project?			
Does this amendment require a revised water sewer capacity letter?			

H EXTENSION, DEFERRAL, APPEAL INFORMATION *Provide information for specific request. Circle approving body and yes or no.*

Project Name						
Request Description						
EXTENSION REQUEST		DEFERRAL REQUEST		APPEAL REQUEST / DE NOVO HEARING		
Approving Body		Approving Body		Approving Body		
Original Approval Date		Scheduled Meeting Date		30 Days from Meeting (Provide Date)		
Expiration Date (Permit Submittal Deadline)		Requested Date	Deferral	60 Days from Meeting (Provide Date)		
Expiration Date (Permit Issuance Deadline)		Previous Deferrals Granted		Appeal Request		



<p>Requested Extension <i>(No more than 24 months)</i></p> <p>Code Enforcement <i>(Applicant Obtain by Code Compliance Division)</i></p>	<p>Justification Letter Provided</p>	<p>Indicate Approving Body Appealing De Novo Hearing Due to City Commission Call-Up</p>
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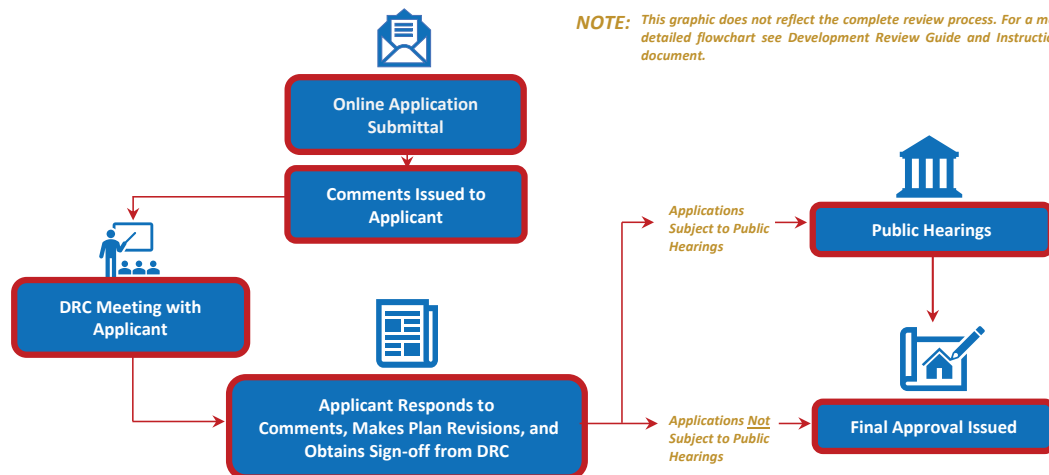
CHECKLIST FOR SUBMITTAL AND COMPLETENESS: The following checklist outlines the necessary items for submittal to ensure the application is deemed complete. Failure to provide this information will result in your application being deemed **incomplete**.

- Preliminary Development Meeting** completed on the following date: 11/9/21 - Site Plan meeting **PROVIDE DATE**
- Development Application Form** completed with the applicable information including signatures.
- Proof of Ownership** warranty deed or tax record including corporation documents and SunBiz verification name. **N/A**
- Address Verification Form** applicant contact Devon Anderson at 954-828-5233 or Danderson@fortlauderdale.gov
- Project and Unified Land Development Code Narratives** project narrative and the applicable ULDR sections and criteria as described in the specifications for submittal by application type.
- Electronic Files, File Naming, and Documents** consistent with the applicable specifications for application type, consistent with the online submittal requirements including file naming convention, plan sets uploaded as single pdf.
- Traffic Study or Statement** submittal of a traffic study or traffic statement. **N/A**
- Stormwater Calculations** signed and sealed by a Florida registered professional engineer consistent with calculations as described in the specifications for plan submittal for site plan applications.
- Water and Wastewater Capacity Request** copy of email to Public Works requesting the capacity letter.

OVERVIEW FOR ONLINE SUBMITTAL REQUIREMENTS: Submittals must be conducted through the City’s online citizen access portal [LauderBuild](#). No hardcopy application submittals are accepted. Below only highlights the important submittal requirements that applicants must follow to submit online and be deemed complete. View all the requirements at [LauderBuild Plan Room](#).

- **Uploading Entire Submittal** upload all documents at time the application is submitted to prevent delays in processing.
- **File Naming Convention** file names must adhere to the City’s [File Naming Convention](#).
- **Reduce File Size** plan sets and other large files must be merged or flattened to reduce file size.
- **Plan Sets** plan sets like site plans, plats, etc. must be submitted as a single pdf file. Staff will instruct when otherwise.
- **Document Categories** choose the correct document category when uploading.

DRC PROCESS OVERVIEW: The entire development review process flowchart can be found in the [Development Application Guide and Instructions](#) document. Below is a quick reference flowchart with key steps in the process to guide applicants.

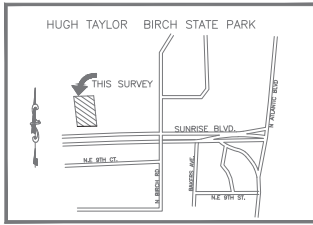


CONTACT INFORMATION: Questions regarding the development process or [LauderBuild](#), see contact information below.

GENERAL URBAN DESIGN AND PLANNING QUESTIONS	
Planning Counter 954-828-6520, Option 5 planning@fortlauderdale.gov	

LAUDERBUILD ASSISTANCE AND QUESTIONS	
DSD Customer Service 954-828-6520, Option 1 lauderbuild@fortlauderdale.gov	

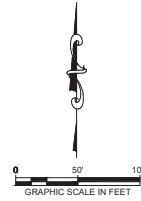
SKETCH OF SURVEY BOUNDARY & TOPOGRAPHIC SURVEY



LOCATION SKETCH
(NOT TO SCALE)

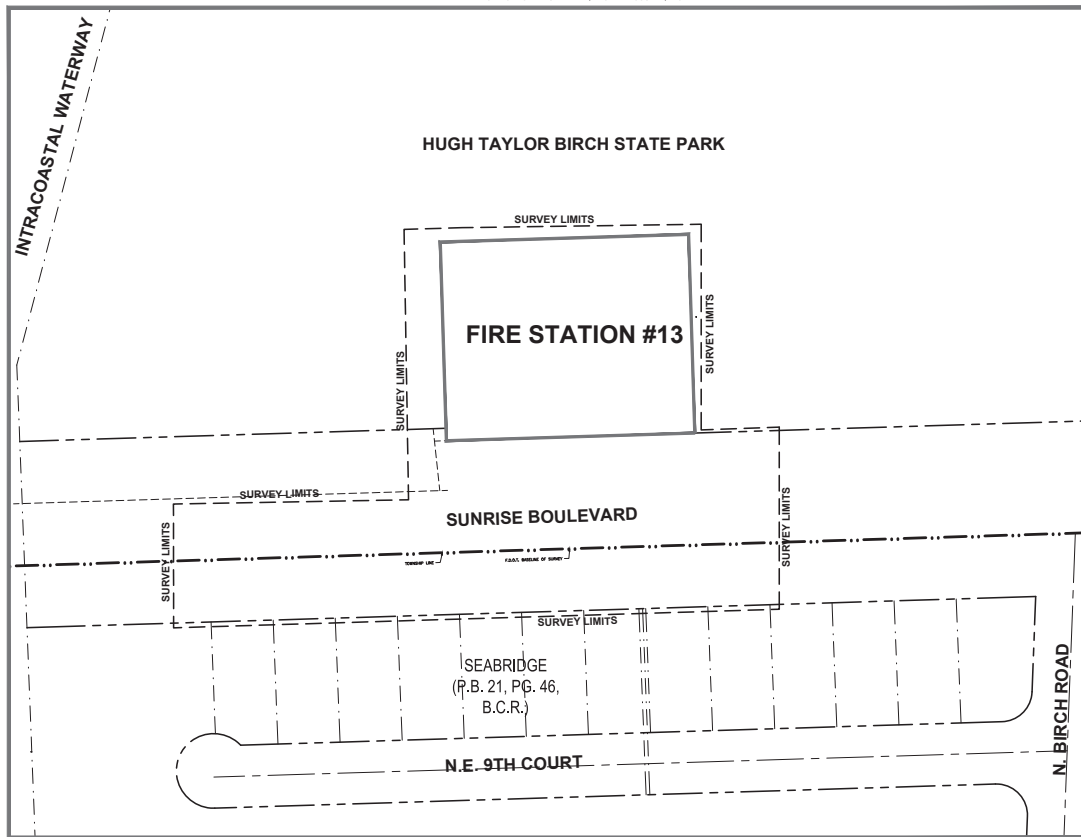
TREE TABLE

TREE#	DESCRIPTION	CANOPY	TREE#	DESCRIPTION	CANOPY
T1	7" COCONUT PALM BH=28'	14'	T17	16" SABAL PALM BH=11'	20'
T2	7" COCONUT PALM BH=22'	14'	T18	24" STRANGLER FIG	30'
T3	7" COCONUT PALM BH=28'	14'	T19	14" GUMBO LIMBO	30'
T4	7" SABAL PALM BH=20'	14'	T20	6" ROBELLINE PALM BH=17'	20'
T5	12" MADAGASCAR OLIVE	25'	T21	10" COCONUT PALM BH=22'	12'
T6	15" SABAL PALM BH=28'	12'	T22	12" SABAL PALM BH=8'	10'
T7	16" FAN PALM BH=35'	16'	T23	16" BLACK OLIVE	25'
T8	12" YELLOW TAMERUKA	25'	T24	10" SEA GRAPE	15' (CLUSTER)
T9	16" BLACK OLIVE	35'	T25	8" COCONUT PALM BH=20'	12'
T10	18" CABRAGE PALM BH=8'	10'	T26	8" COCONUT PALM BH=16'	12'
T11	11" SABAL PALM BH=14'	15'	T27	8" COCONUT PALM BH=20'	12'
T12	12" MADAGASCAR OLIVE	18'	T28	30" BLACK OLIVE	25'
T13	10" STRANGLER FIG	25'	T29	12" COCONUT PALM BH=20'	11'
T14	12" STRANGLER FIG	25'	T30	6" COCONUT PALM BH=14'	14'
T15	12" SABAL PALM BH=20'	20'	T31	8" COCONUT PALM BH=8'	9'
T16	14" SABAL PALM BH=22'	15'			



SITE MAP

SECTION 36, TOWNSHIP 49 S., RANGE 42 E.
FIRE STATION #13
2871 E. SUNRISE BLVD
CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA



**ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
SEE SHEET 2 FOR , TOPOGRAPHIC LOCATIONS AND LEGENDS**

DESCRIPTION:

A PARCEL OF LAND IN GOVERNMENT LOT 6, SECTION 36, TOWNSHIP 49 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 6; THENCE WEST ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 6, A DISTANCE OF 739.9 FEET TO A POINT; THENCE NORTH AT RIGHT ANGLES TO SAID SOUTH LINE OF GOVERNMENT LOT 6, A DISTANCE OF 50 FEET TO THE POINT OF BEGINNING OF THE LANDS HEREIN DESCRIBED; THENCE CONTINUING NORTH ALONG SAID LINE, THAT IS AT RIGHT ANGLES TO SAID SOUTH LINE OF GOVERNMENT LOT 6, A DISTANCE OF 200 FEET TO A POINT; THENCE WEST AT RIGHT ANGLES A DISTANCE OF 200 FEET TO A POINT; THENCE SOUTH AT RIGHT ANGLES A DISTANCE OF 200 FEET TO A POINT; THENCE EAST AT RIGHT ANGLES A DISTANCE OF 200 FEET TO THE POINT OF BEGINNING; LESS THE SOUTH 40 FEET THEREOF.

SURVEYOR'S NOTES:

- THIS SURVEY MEETS AND EXCEEDS THE HORIZONTAL AND VERTICAL ACCURACY REQUIREMENTS AS DEFINED IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PERTAINING TO THE STANDARDS AND PRACTICE OF PROFESSIONAL SURVEYORS AND MAPPERS. THE ACCURACY OF MEASUREMENTS AND LINEAR CLOSURE FOUND HEREON EXCEED THAT OF 1 IN 10,000 FEET, PREMISED UPON THE EXPECTATION THAT THE USE OF THIS TYPE OF SURVEY AND MAP WILL BE FOR THOSE ACTIVITIES TYPICALLY CONDUCTED IN COMMERCIAL/HIGH RISK AREAS. THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
 - THIS SURVEY DOES NOT INCLUDE UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
 - THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS MEASURED UTILIZING A TRIMBLE DINI 0.3" DIGITAL LEVEL AS REFERENCED TO AN FDOT BRIDGE EDH17-860466 BEING A FOUND BRASS DISC IN CONCRETE STAMPED "EDH17 RESET 1985", ELEVATION = 4.56.
 - THE HORIZONTAL CONTROL MEASUREMENTS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE) AND WERE OBTAINED BY UTILIZING "TRIMBLE R10" REAL TIME KINEMATICS SYSTEMS. THE ACCURACY OF THE HORIZONTAL CONTROL MEASUREMENTS HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS AND ADJUSTED USING TRIMBLE BUSINESS CENTER SOFTWARE. THE ADJUSTMENT IS BASED ON A LEAST SQUARE ADJUSTMENT CALCULATIONS AND MEETS A 95% CONFIDENCE LEVEL TO THE FOLLOWING PROJECT NETWORK CONTROL POINTS, AS ESTABLISHED BY FLORIDA DEPARTMENT OF TRANSPORTATION. THE MAXIMUM HORIZONTAL RESIDUAL ERROR OF 0.03+/-, AND HAVING HORIZONTAL ADJUSTMENT SCALE VALUE WAS CALCULATED TO BE 1.0000338155.
- | PT# | NORTHINGS | EASTINGS | ELEV. | DESCRIPTION |
|-------|------------|------------|-------|------------------------------------|
| BLC2 | 658195.206 | 950605.011 | 7.640 | BRASS DISC STAMPED "A1A-86-16-C02" |
| BLC3 | 659462.471 | 950726.582 | 7.483 | BRASS DISC STAMPED "A1A-86-16-C03" |
| DblC6 | 653260.009 | 950366.819 | 7.387 | BRASS DISC STAMPED "A1A-86-12-C06" |
- BEARINGS SHOWN HEREON ARE BASED ON SAID PROJECT NETWORK CONTROL MAP. A BEARING OF NORTH 44°07'45" EAST BEING ESTABLISHED BETWEEN BLC2 AND BLC3. ALL OTHER BEARINGS SHOWN HEREON ARE RELATIVE THERETO.
 - TREE TYPES ARE DETERMINED TO THE BEST OF OUR KNOWLEDGE. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
 - SHEET 1 OF THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=50' OR SMALLER, SHEET 2 INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20'. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
 - THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, NO INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST.
 - REFERENCE CRAVEN-THOMPSON AND ASSOCIATES JOB NUMBER 20-0030-001-01

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN RULES 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS PREPARED UNDER MY DIRECTION.

LAST DATE OF FIELD WORK: 10/19/2022

Digitally signed
by Todd H. Bates
Date: 2023.09.13
16:05:17 -04'00'

TODD H. BATES FOR THE FIRM
FLORIDA PROFESSIONAL SURVEYOR MAPPER NO 7165
CRAVEN THOMPSON & ASSOCIATES, INC.
LICENSED BUSINESS NUMBER NO. 271

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17 FLORIDA ADMINISTRATIVE CODE.

SURVEYOR
TODD H. BATES
NO. 7165
DATE: 09/13/23

DATE: 07/14/20
SCALE: 1"=50'
CHECKED BY: RB

FIELD BOOK: 317A, PAGES 33-34

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

100 North Andrews Avenue, Fort Lauderdale, Florida 33301

NO.	DATE	BY	REVISIONS
1.	10/14/21	RB	ROUSE SDM# 6555 ASBL# INF
2.	10/19/23	TB	UPDATE SURVEY
3.	09/13/23	TB	ROUSE INVERT ELEVATIONS

NOT FOR CONSTRUCTION OR BID

PROJECT # 10918
FIRE STATION #13
COVER SHEET, NOTES, DESCRIPTION
2871 E. SUNRISE BLVD

SHEET NO.	OF
1	1

TOTAL: 1
CAD FILE: 10918SURV
DRAWING FILE NO. 4-XXX-XX

FIRE STATION No.13

A PORTION OF GOVERNMENT LOT 6,
SECTION 36, TOWNSHIP 49 SOUTH, RANGE 42 EAST
CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA
APRIL, 2023

PLAT BOOK _____ PAGE _____
SHEET 1 OF 2 SHEETS

BROWARD COUNTY PLANNING COUNCIL

THIS IS TO CERTIFY THAT THE BROWARD COUNTY PLANNING COUNCIL APPROVED THIS PLAT SUBJECT TO ITS COMPLIANCE WITH DEDICATION OF RIGHTS-OF-WAY FOR TRAFFICWAYS THIS _____ DAY OF _____, 20____.

BY: _____
CHAIRPERSON

THIS PLAT COMPLIES WITH THE APPROVAL OF THE BROWARD COUNTY PLANNING COUNCIL ON THE ABOVE DATE AND IS APPROVED AND ACCEPTED FOR RECORD THIS _____ DAY OF _____, 20____.

BY: _____
EXECUTIVE DIRECTOR OR DESIGNEE

BROWARD COUNTY FINANCE AND ADMINISTRATIVE SERVICES DEPARTMENT, COUNTY RECORDS DIVISION - MINUTES SECTION

THIS IS TO CERTIFY THAT THIS PLAT COMPLIES WITH THE PROVISIONS OF CHAPTER 177, FLORIDA STATUTES, AND WAS ACCEPTED FOR RECORD BY THE BOARD OF COUNTY COMMISSIONERS OF BROWARD COUNTY, FLORIDA THIS _____ DAY OF _____, 20____.

BY: _____
MAYOR - COUNTY COMMISSION

BROWARD COUNTY HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION

THIS PLAT HAS BEEN REVIEWED FOR CONFORMITY WITH CHAPTER 177, PART I, FLORIDA STATUTES, AND IS APPROVED AND ACCEPTED FOR RECORD.

BY: _____ DATE _____ BY: _____ DATE _____
ROBERTO CHAVEZ PROFESSIONAL SURVEYOR AND MAPPER FLORIDA REGISTRATION NO. LS 7280
RICHARD TORNESE, DIRECTOR FLORIDA PROFESSIONAL ENGINEER REGISTRATION NO. 40263

BROWARD COUNTY RESILIENT ENVIRONMENT DEPARTMENT

THIS PLAT IS APPROVED AND ACCEPTED FOR RECORD THIS _____ DAY OF _____, 20____.

BY: _____
DIRECTOR / DESIGNEE

CITY PLANNING AND ZONING BOARD

THIS IS TO CERTIFY THAT THIS PLAT HAS BEEN APPROVED AND ACCEPTED FOR RECORD BY THE CITY OF FORT LAUDERDALE PLANNING AND ZONING BOARD THIS _____ DAY OF _____, 20____.

BY: _____
CHAIRPERSON

CITY COMMISSION

THIS IS TO CERTIFY THAT THIS PLAT HAS BEEN APPROVED AND ACCEPTED FOR RECORD BY THE CITY COMMISSION OF THE CITY OF FORT LAUDERDALE, FLORIDA, BY, IN AND BY RESOLUTION NO. _____, ADOPTED BY SAID COMMISSION THIS _____ DAY OF _____, 20____.

CONCURRENCY/IMPACT FEES FOR THE CONSTRUCTION, EXPANSION, AND/OR CONVERSION OF A BUILDING WITHIN THIS PLAT SHALL BE PAID ON THE DATE OF BUILDING PERMIT ISSUANCE.

BY: _____ DATE _____
DAVID R. SOLOMAN CITY CLERK

CITY ENGINEER

THIS PLAT IS HEREBY APPROVED FOR RECORD BY THE CITY ENGINEER OF THE CITY OF FORT LAUDERDALE, FLORIDA, THIS _____ DAY OF _____, 20____.

BY: _____
DANIEL A. REY, CITY ENGINEER
FLORIDA P.E. REGISTRATION NO. 81248

DEDICATION

STATE OF FLORIDA
COUNTY OF BROWARD

KNOW ALL MEN BY THESE PRESENTS: THE CITY OF FORT LAUDERDALE, A FLORIDA MUNICIPAL CORPORATION, OWNER OF THE LANDS AS SHOWN AND DESCRIBED HEREON, HAS CAUSED SAID LANDS TO BE SUBDIVIDED AND PLATTED IN THE MANNER SHOWN HEREIN, SAID PLAT TO BE KNOWN AS FIRE STATION NO. 13.

IN WITNESS WHEREOF, THE CITY OF FORT LAUDERDALE HAS CAUSED THESE PRESENTS TO BE SIGNED FOR AN ON ITS BEHALF BY _____ THIS DAY OF _____, 20____.

CITY OF FORT LAUDERDALE,
A FLORIDA MUNICIPAL CORPORATION

BY: _____ TITLE: _____

WITNESS _____ WITNESS _____

WITNESS - PRINTED NAME _____ WITNESS - PRINTED NAME _____

ACKNOWLEDGEMENT

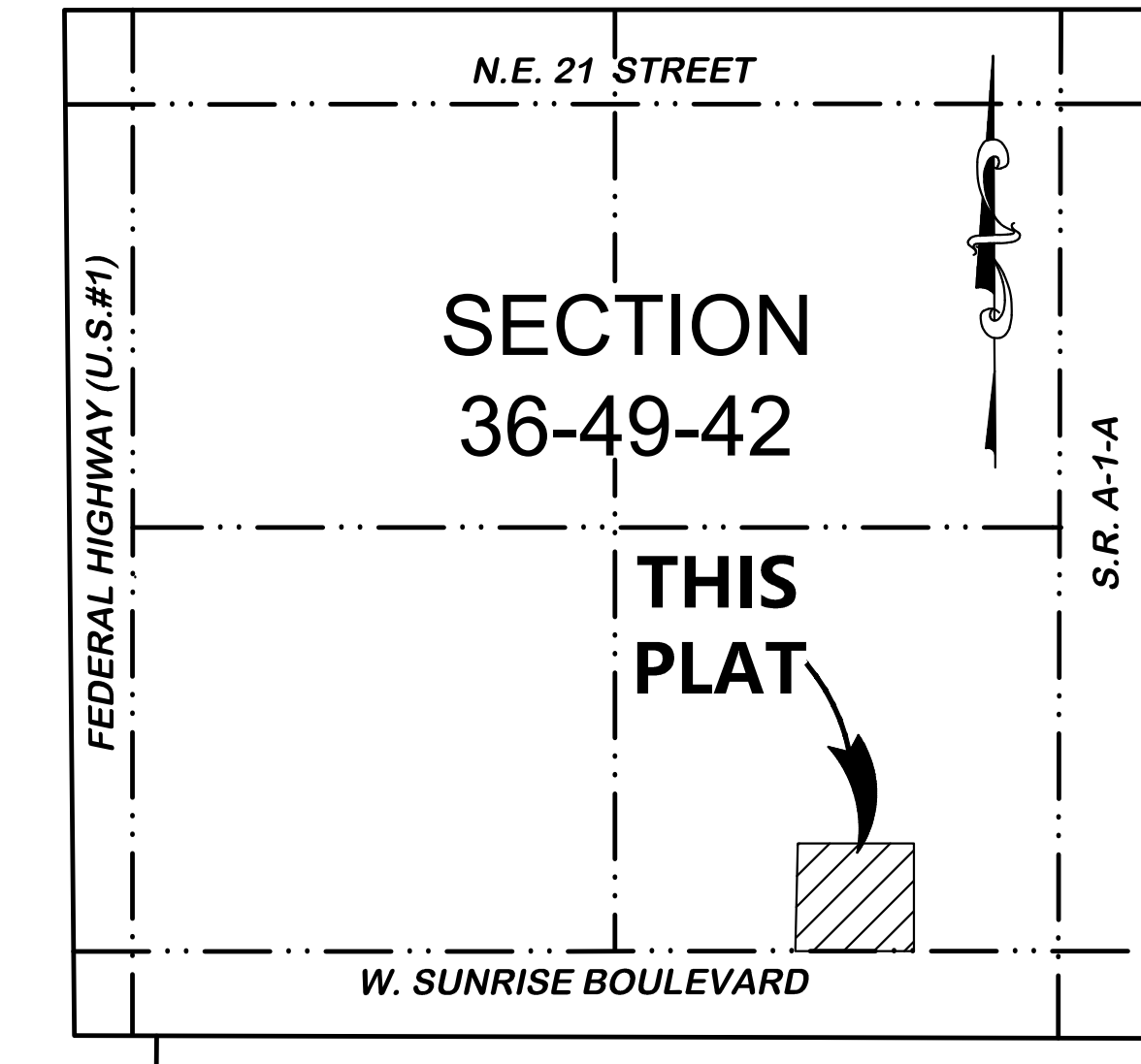
STATE OF FLORIDA
COUNTY OF BROWARD

I HEREBY CERTIFY THAT ON THIS DAY THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY MEANS OF PHYSICAL PRESENCE OR ONLINE NOTARIZATION BY AS _____ OF THE CITY OF FORT LAUDERDALE, WHO IS PERSONALLY KNOWN TO ME, OR HAS PRODUCED _____ AS IDENTIFICATION, AND WHO EXECUTED THE FOREGOING PLAT AND INSTRUMENT OF DEDICATION AND SEVERALLY ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FREELY AND VOLUNTARILY FOR THE PURPOSES THEREIN EXPRESSED.

WITNESS MY SIGNATURE AND OFFICIAL SEAL THIS _____ DAY OF _____, 20____.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC - STATE OF FLORIDA



LOCATION MAP
Not To Scale

DESCRIPTION:

A PARCEL OF LAND IN GOVERNMENT LOT 6, SECTION 36, TOWNSHIP 49 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 6; THENCE WEST ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 6, A DISTANCE OF 739.9 FEET TO A POINT; THENCE NORTH AT RIGHT ANGLES TO SAID SOUTH LINE OF GOVERNMENT LOT 6, A DISTANCE OF 50 FEET TO THE POINT OF BEGINNING OF THE LANDS HEREIN DESCRIBED; THENCE CONTINUING NORTH ALONG SAID LINE, THAT IS AT RIGHT ANGLES TO SAID SOUTH LINE OF GOVERNMENT LOT 6, A DISTANCE OF 200 FEET TO A POINT; THENCE WEST AT RIGHT ANGLES A DISTANCE OF 200 FEET TO A POINT; THENCE SOUTH AT RIGHT ANGLES A DISTANCE OF 200 FEET TO A POINT; THENCE EAST AT RIGHT ANGLES A DISTANCE OF 200 FEET TO THE POINT OF BEGINNING; LESS THE SOUTH 40 FEET THEREOF.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE ATTACHED PLAT IS A TRUE AND CORRECT REPRESENTATION OF THE LANDS RECENTLY SURVEYED, SUBDIVIDED AND PREPARED UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION; THAT THE PLAT AND SURVEY DATA SHOWN CONFORMS TO ALL THE APPLICABLE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND WITH THE APPLICABLE SECTIONS OF CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, AS REQUIRED TO COMPLY WITH THE BROWARD COUNTY LAND DEVELOPMENT CODE.

THE PERMANENT REFERENCE MONUMENTS (PRM'S) WERE SET IN ACCORDANCE WITH SECTION 177.091 OF SAID CHAPTER 177 ON THIS _____ DAY OF _____, 202....

BY: _____ DATE: _____
RAYMOND YOUNG - FOR THE FIRM
PROFESSIONAL LAND SURVEYOR AND MAPPER
STATE OF FLORIDA REGISTRATION NUMBER 5799
CRAVEN THOMPSON & ASSOCIATES, INC.
3563 NW 53RD STREET, FORT LAUDERDALE, FL, 33309
CERTIFICATE OF AUTHORIZATION NUMBER LB 271

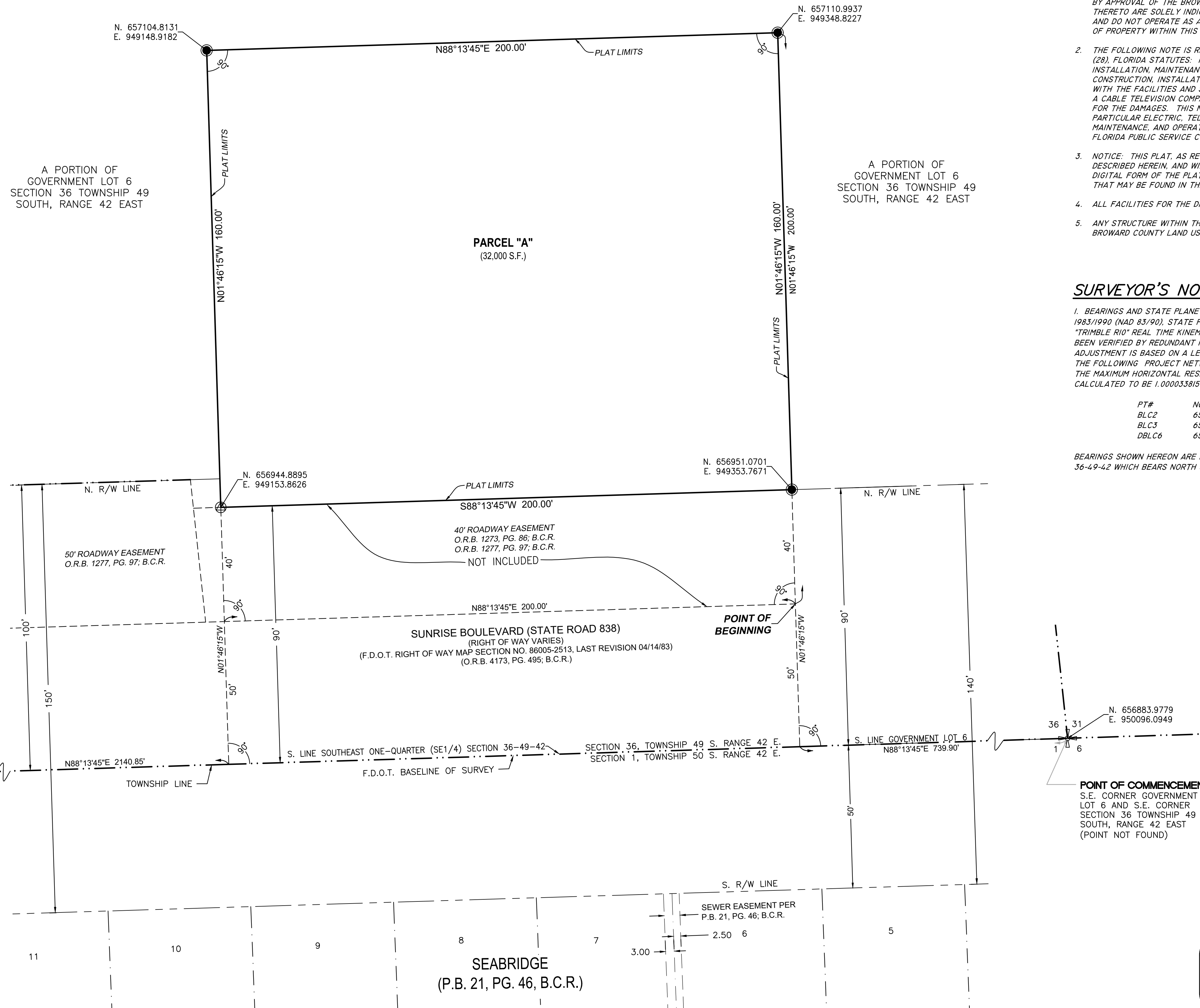
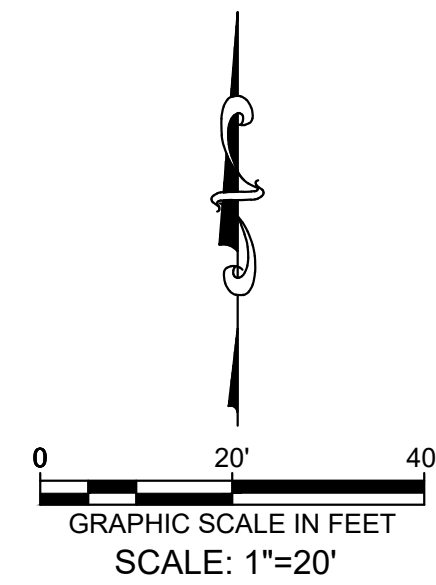
CRAVEN THOMPSON & ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
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TEL.: (561) 688-5010 FAX: (561) 688-1037
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TEL.: (954) 739-6400 FAX: (954) 739-6409
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

PREPARED BY: RAYMOND YOUNG, PSM 5799
CTA PROJECT NO. 20-0030-001-01

OWNER	CITY COMMISSION	COUNTY COMMISSION	COUNTY ENGINEER	COUNTY SURVEYOR	SURVEYOR

FIRE STATION No. 13

A PORTION OF GOVERNMENT LOT 6,
SECTION 36, TOWNSHIP 49 SOUTH, RANGE 42 EAST
CITY OF FORT LAUDERDALE, BROWARD COUNTY, FLORIDA
APRIL, 2023



PLAT NOTES:

- THIS PLAT IS RESTRICTED TO 16,000 SQUARE FEET OF FIRE STATION.
- THIS NOTE IS REQUIRED BY CHAPTER 5, ARTICLE IX, BROWARD COUNTY CODE OF ORDINANCES, AND MAY BE AMENDED BY APPROVAL OF THE BROWARD COUNTY BOARD OF COUNTY COMMISSIONERS. THE NOTATION AND ANY AMENDMENTS THERETO ARE SOLELY INDICATING THE APPROVED DEVELOPMENT LEVEL FOR PROPERTY LOCATED WITHIN THE PLAT AND DO NOT OPERATE AS A RESTRICTION IN FAVOR OF ANY PROPERTY OWNER INCLUDING ANY OWNER OR OWNERS OF PROPERTY WITHIN THIS PLAT WHO TOOK TITLE TO THE PROPERTY WITH REFERENCE TO THIS PLAT.
- THE FOLLOWING NOTE IS REQUIRED BY THE BROWARD COUNTY SURVEYOR PURSUANT TO CHAPTER 177.091, SUBSECTION (28), FLORIDA STATUTES: PLATTED UTILITY EASEMENTS ARE ALSO EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES. PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS NOTE DOES NOT APPLY TO PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRIC SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN, AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
- ALL FACILITIES FOR THE DISTRIBUTION OF ELECTRICITY, TELEPHONE, AND CABLE SHALL BE INSTALLED UNDERGROUND.
- ANY STRUCTURE WITHIN THIS PLAT MUST COMPLY WITH SECTION 2.1.F DEVELOPMENT REVIEW REQUIREMENTS, OF THE BROWARD COUNTY LAND USE PLAN, REGARDING HAZARDS TO THE AIR NAVIGATION.

SURVEYOR'S NOTES:

1. BEARINGS AND STATE PLANE COORDINATES SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE) AND WERE OBTAINED BY UTILIZING "TRIMBLE R10" REAL TIME KINEMATICS SYSTEMS. THE ACCURACY OF THE HORIZONTAL CONTROL MEASUREMENTS HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS AND ADJUSTED USING TRIMBLE BUSINESS CENTER SOFTWARE. THE ADJUSTMENT IS BASED ON A LEAST SQUARE ADJUSTMENT CALCULATIONS AND MEETS A 95% CONFIDENCE LEVEL TO THE FOLLOWING PROJECT NETWORK CONTROL POINTS, AS ESTABLISHED BY FLORIDA DEPARTMENT OF TRANSPORTATION. THE MAXIMUM HORIZONTAL RESIDUAL ERROR OF 0.03+/-, AND HAVING HORIZONTAL ADJUSTMENT SCALE VALUE WAS CALCULATED TO BE 1.0000338155.

PT#	NORTHINGS	EASTINGS	DESCRIPTION
BLC2	658195.206	950605.011	BRASS DISC STAMPED "AIA-86-16-C02"
BLC3	659462.471	950726.582	BRASS DISC STAMPED "AIA-86-16-C03"
DBLC6	653260.009	950366.819	BRASS DISC STAMPED "AIA-86-12-C6"

BEARINGS SHOWN HEREON ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST ONE-QUARTER (SE1/4) OF SECTION 36-49-42 WHICH BEARS NORTH 88°13'45" EAST. ALL OTHER BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

LEGEND

- INDICATES SET 4"X 4" CONCRETE MONUMENT, MINIMUM LENGTH 24", WITH MAG NAIL AND "PRM-#LB271" WASHER (UNLESS OTHERWISE NOTED)
- INDICATES SET MAG NAIL W/ "PRM-#LB271" WASHER (UNLESS OTHERWISE NOTED)
- ▲ B.C.E.D. INDICATES BROWARD COUNTY ENGINEERING DEPARTMENT
- B.C.R. INDICATES BROWARD COUNTY RECORDS
- C INDICATES CENTERLINE
- FND INDICATES FOUND
- L INDICATES ARC LENGTH
- LB INDICATES LICENSED BUSINESS
- M.D.C.R. INDICATES MIAMI-DADE COUNTY RECORDS
- O.R.B. INDICATES OFFICIAL RECORDS BOOK
- P.B. INDICATES PLAT BOOK
- PG. INDICATES PAGE
- PRM INDICATES PERMANENT REFERENCE MONUMENT
- R DENOTES RADIUS
- S.F. INDICATES SQUARE FEET
- W/ INDICATES WITH
- N. 5000.0000 INDICATES STATE PLANE COORDINATE VALUE
- E. 5000.0000
- Δ INDICATES CENTRAL ANGLE
- CBWCD INDICATES CENTRAL BROWARD WATER CONTROL DISTRICT
- R/W INDICATES RIGHT-OF-WAY
- L.E. INDICATES LANDSCAPE EASEMENT
- R.E. INDICATES RECREATION EASEMENT

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PREPARED BY: RAYMOND YOUNG, PSM 5799
CTA PROJECT NO. 20-0030-001-01

XXX-MP-23

CITY OF FORT LAUDERDALE FIRE STATION #13 REPLACEMENT



JANUARY 2022

CTA PROJECT NO. 20-0030-001-01



CRAVEN THOMPSON AND ASSOCIATES, INC.

ENGINEERS • PLANNERS • SURVEYORS

3563 N.W. 53rd Street, Fort Lauderdale, Florida 33309

Tel.: (954) 739-6400

STORMWATER
CALCULATIONS



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1.0 – PROJECT LOCATION, INTRODUCTION & HISTORY

The Fire Station #13 project site is a 0.74 AC site located west of Florida State Road A-1-A, east of the Sunrise Drawbridge and south of Birch State Park, within the City of Fort Lauderdale. The project includes the demolition of an existing Fire Station and the reconstruction of a new Fire Station facility with adjacent parking lot, potable water, sanitary sewer service and various other amenities. See below Aerial Exhibit and attached Site Plan and Engineering Plans for details.



Fire Station #13 Aerial Exhibit & Location Map

2.0 – EXISTING STORMWATER SYSTEM ASSESSMENT

OVERVIEW

The existing fire station drainage system is currently comprised of a few interconnected catch basins with two (2) connections to the FDOT Stormwater system located along E Sunrise Boulevard. The existing system does not currently have any type of control structure limiting discharge to the FDOT system.

We also investigated and researched the existing topography, to further gather and analyze the existing elevations on site.

3.0 – PROPOSED STORMWATER SYSTEM DESIGN OUTLINE

After analyzing the existing site conditions, as-builts and geotechnical report, we have outlined a summary below of the proposed stormwater improvements and design elements for Fire Station #13.

PROPOSED STORMWATER IMPROVEMENTS

The proposed Fire Station #13 project stormwater system consists of a collection drainage system retaining the water on-site to meet the water quality elevation, with a collection of catch basins, dry detention areas, underground storage areas, and control structure holding water on-site until water quality elevation is met.

A detailed summary of the stormwater system is described below.

WATER QUALITY DESIGN SUMMARY

The water quality treatment volume is provided for the project by utilizing dry detention facilities & exfiltration trenches. The required water quality for the site is 0.122 AC-FT (1.463 AC-IN) and the required water quality treatment volume is met at an elevation of 4.0 NAVD without utilizing the dry detention credit. The provided water quality treatment volume is 0.144 AC-FT (1.724 AC-IN) without considering dry detention credit and 0.189 AC-FT (2.267 AC-IN) considering a 50% dry detention credit. There are a total of three (3) dry detention facilities proposed, with a bottom elevation of 3.00 NAVD and a top of 6.75 NAVD.

The project provides 250 LF of 10' wide X 5' high exfiltration trench with a water quality treatment volume of 0.098 AC-FT (1.181 AC-IN) provided at elevation 4.0. A control structure holds back all water treatment volume up to elevation 4.0 NAVD prior to discharge into the underground storage facility and outfall off-site into the FDOT stormwater conveyance system.

WATER QUANTITY DESIGN SUMMARY

In addition to water quality the provided through the proposed stormwater system, an underground stormwater facility is proposed to increase the site's underground water storage prior to discharge off-site. A total of 4,920 CF (0.113 AC-FT) of underground storage is provided utilizing chambers manufactured by Stormtech (ADS) (SC-740 Chamber). There are 60 chambers provided, which include a 12" rock sub base providing a total storage of 82 CF per chamber.

INTERCONNECTION OF STORMWATER SYSTEM & SITE OUTFALL

In addition to the water quality and quantity provided on-site, the two (2) existing off-site connections are to be consolidated into one (1) outfall connection located within the new driveway



to the existing structure labeled STM MH #555 within the FDOT Right-Of-Way. This existing 15" connection is to remain and through the use of retaining walls and installation of a 4'X8' control structure, off-site discharge is held back under the pre-development discharge rate. The control structure is designed with a 12" long by 24" deep rectangular weir which is set at elevation 5.0 NAVD, and a 4" diameter orifice set at elevation 4.0 NAVD to allow discharge off-site only after water quality requirement for the site is achieved. Refer to the Pre-Development vs. Post-Development Maximum Stage & Discharge Summary Table outlining the results of the ICPR Model.

4.0 – STORMWATER REPORT SUMMARY

In summary, the proposed improvements outlined in Section 3.0 provide adequate stormwater water quality and quantity improvements to serve the site as required by the SFWMD & FDOT criteria. In order to properly determine the result of the improvements, an ICPR model was prepared of the pre-development stormwater infrastructure and the post-development stormwater infrastructure and site improvements. This model was created to demonstrate and quantify how these improvements will serve site during the required storm events.

In preparation of the pre-development model, the survey data points were used to create an existing surface and then imported into the ICPR software and analyzed, refer to APPENDIX A-PRE-DEV: OVERALL PRE-DEVELOPMENT DRAINAGE AREA MAP. The pre-development model includes the existing off-site connection to the Sunrise Boulevard FDOT Stormwater system and quantifies the pre-development discharge to the FDOT stormwater system.

In preparation of the post-development model, the pre-development surface was used as a baseline surface and the limits of disturbance were created with the proposed grading surface elevations to create a finished grade surface. This finished grade surface was then imported into the ICPR software the same one basin was created and analyzed with the new surface data, refer to APPENDIX A-POST-DEV: OVERALL POST-DEVELOPMENT DRAINAGE AREA MAP showing the Drainage Basin, proposed improvements, and schematic off-site connection. The DAM Map takes into account the proposed improvements, additional above and below ground stormwater facility storage areas.

In summary, the post-development improvements provide additional water quality, storage, and improvements to adequately serve the post-development conditions, as demonstrated by the ICPR modeling data and results. The required stages were met and the off-site discharge to the Sunrise Boulevard (FDOT) stormwater system was reduced in the post-development conditions. Please refer to APPENDIX B: PRE-DEVELOPMENT & POST-DEVELOPMENT MAXIMUM STAGE SUMMARY & APPENDIX C: PRE-DEVELOPMENT & POST-DEVELOPMENT MAXIMUM STAGE SUMMARY. The reduction results are summarized below, with the amount of reduction depicted in green:

DIFFERENCE IN STAGES (POST-DEVELOPMENT - PRE-DEVELOPMENT)					
10 YEAR - 24 HOUR		25 YEAR - 72 HOUR		100 YEAR - 72 HOUR	
SUB-BASIN	MAXIMUM STAGE (FT)	SUB-BASIN	MAXIMUM STAGE (FT)	SUB-BASIN	MAXIMUM STAGE (FT)
SITE	3.31	SITE	1.29	SITE	1.67



DIFFERENCE IN PEAK FLOW (POST-DEVELOPMENT - PRE-DEVELOPMENT)					
10 YEAR - 24 HOUR		25 YEAR - 72 HOUR		100 YEAR - 72 HOUR	
to node	PEAK DISCHARGE (CFS)	to node	PEAK DISCHARGE (CFS)	to node	PEAK DISCHARGE (CFS)
FDOT	-2.59	FDOT	-0.55	FDOT	--

The detailed ICPR modeling input data and model information report are included in the report as APPENDIX F: ICPR INPUT DATA. Also included as APPENDIX G: EXHIBITS are all the backup data and research information gathered for the project, including the following:

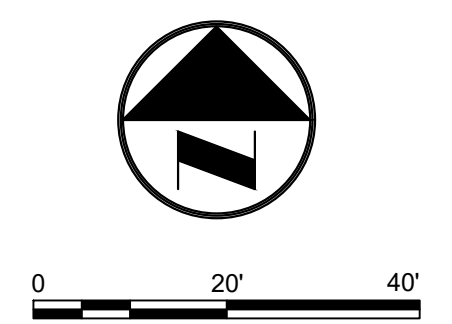
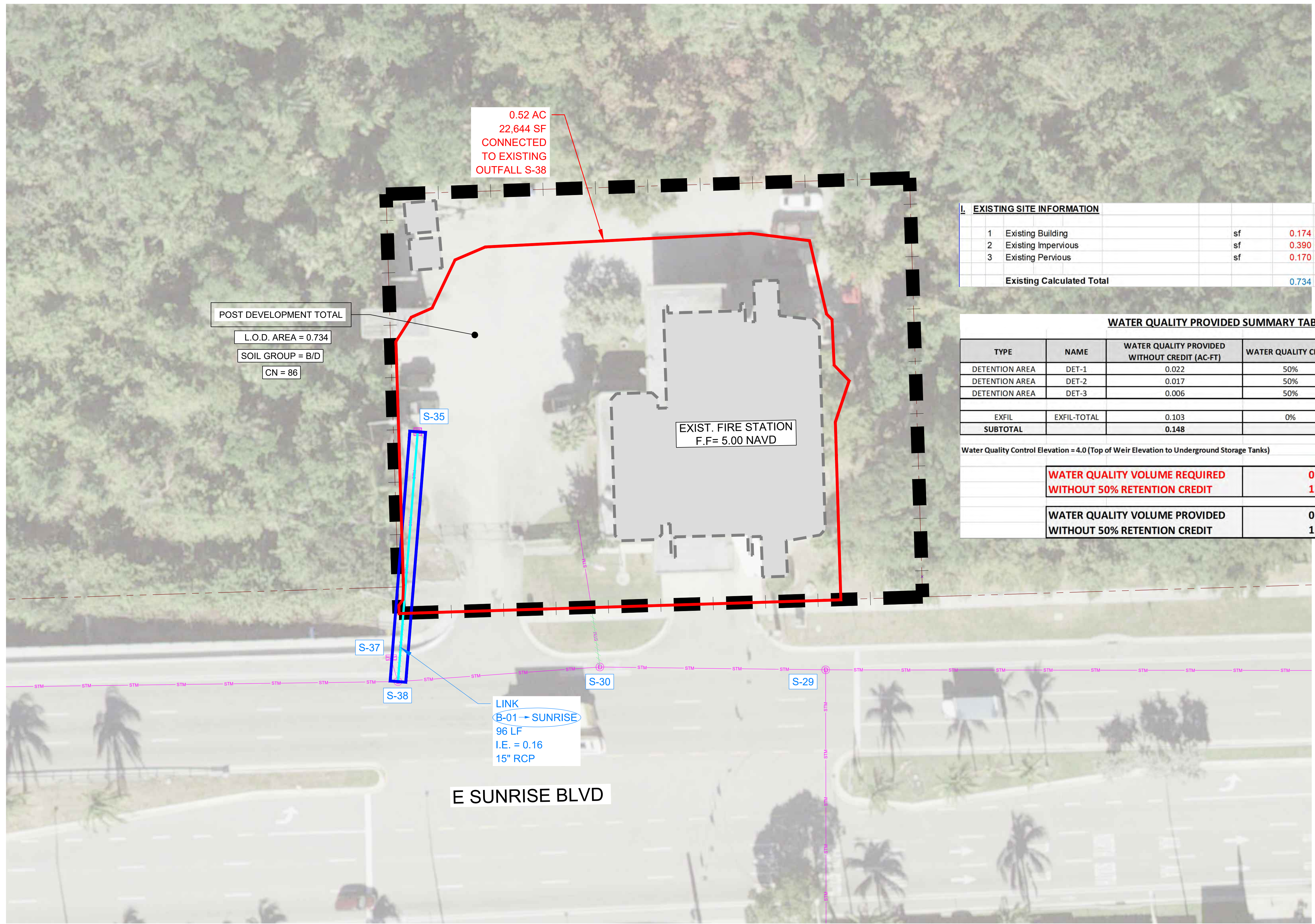
- Exhibit #1 - Proof of Ownership
- Exhibit #2 - Location Sketch
- Exhibit #3 - USGS Location Map
- Exhibit #4 - USDA SCS Map
- Exhibit #5 - FEMA Map
- Exhibit #6 - Broward County Rainfall, FDOT Rainfall & NOAA Precipitation Data
- Exhibit #7 - Broward County Future Wet Season Water Table Exhibit
- Exhibit #8 - Geotechnical Report





APPENDIX A: OVERALL PRE-DEVELOPMENT DRAINAGE AREA MAP





I. EXISTING SITE INFORMATION

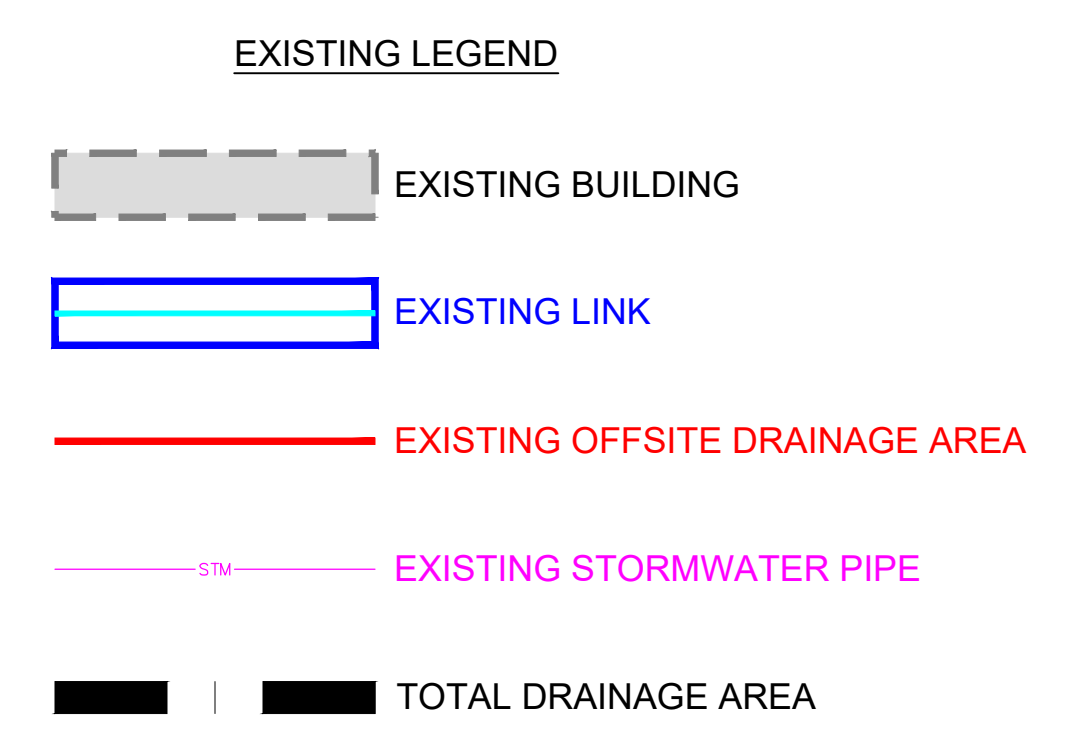
1	Existing Building	sf	0.174 ac.	23.71%
2	Existing Impervious	sf	0.390 ac.	53.13%
3	Existing Pervious	sf	0.170 ac.	23.16%
Existing Calculated Total			0.734 ac.	100%

WATER QUALITY PROVIDED SUMMARY TABLE

TYPE	NAME	WATER QUALITY PROVIDED WITHOUT CREDIT (AC-FT)	WATER QUALITY CREDIT	WATER QUALITY PROVIDED WITH CREDIT (AC-FT)
DETENTION AREA	DET-1	0.022	50%	0.043
DETENTION AREA	DET-2	0.017	50%	0.034
DETENTION AREA	DET-3	0.006	50%	0.013
EXFIL	EXFIL-TOTAL	0.103	0%	0.103
SUBTOTAL		0.148		0.193

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

WATER QUALITY VOLUME REQUIRED WITHOUT 50% RETENTION CREDIT	0.122 AC-FT 1.463 AC-IN
WATER QUALITY VOLUME PROVIDED WITHOUT 50% RETENTION CREDIT	0.148 AC-FT 1.773 AC-IN



Alexander Scheffer, State of Florida, Professional Engineer, License No. 73802. This item has been digitally signed and sealed by Alexander Scheffer on the date indicated here. Printed copies of this document are not considered signed and sealed and must be verified on any electronic copies.
DATE: 1/21/22

ENGINEER:
ALEXANDER D. SCHEFFER
DATE: 05/29/21
DRAWN BY: MR
DESIGNED BY: MR
CHECKED BY: ADS
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

NOT FOR CONSTRUCTION OR BID

PROJECT # P10918
FIRE STATION #13
BUILDING REPLACEMENT
OVERALL PRE-DEVELOPMENT DRAINAGE MAP
2871 E. SUNRISE BLVD., FORT LAUDERDALE, FL.

SHEET NO.	OF
1	2

TOTAL:
CAD FILE:
DRAWING FILE NO.

ACAI
associates, inc.
architecture-engineering
roofing consulting
construction management

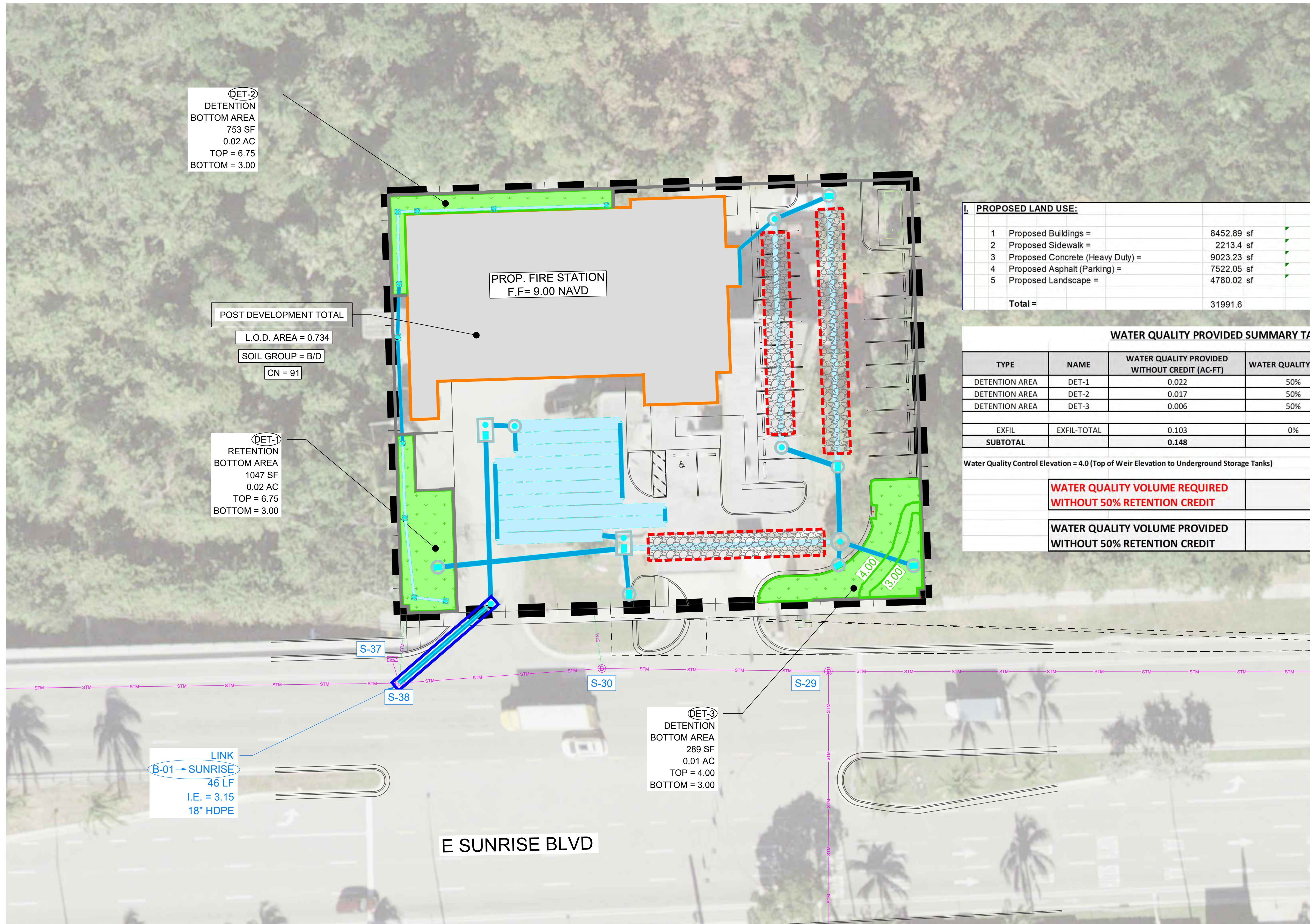
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APPENDIX B: OVERALL POST-DEVELOPMENT DRAINAGE AREA MAP





DET-2
DETENTION
BOTTOM AREA
753 SF
0.02 AC
TOP = 6.75
BOTTOM = 3.00

POST DEVELOPMENT TOTAL
L.O.D. AREA = 0.734
SOIL GROUP = B/D
CN = 91

DET-1
RETENTION
BOTTOM AREA
1047 SF
0.02 AC
TOP = 6.75
BOTTOM = 3.00

LINK
B-01 → SUNRISE
46 LF
I.E. = 3.15
18" HDPE

DET-3
DETENTION
BOTTOM AREA
289 SF
0.01 AC
TOP = 4.00
BOTTOM = 3.00

PROP. FIRE STATION
F.F= 9.00 NAVD

I. PROPOSED LAND USE:

1	Proposed Buildings =	8452.89 sf	0.194 ac.	26.42%
2	Proposed Sidewalk =	2213.4 sf	0.051 ac.	6.92%
3	Proposed Concrete (Heavy Duty) =	9023.23 sf	0.207 ac.	28.21%
4	Proposed Asphalt (Parking) =	7522.05 sf	0.173 ac.	23.51%
5	Proposed Landscape =	4780.02 sf	0.110 ac.	14.94%
Total =		31991.6	0.734 ac.	100%

WATER QUALITY PROVIDED SUMMARY TABLE

TYPE	NAME	WATER QUALITY PROVIDED WITHOUT CREDIT (AC-FT)	WATER QUALITY CREDIT	WATER QUALITY PROVIDED WITH CREDIT (AC-FT)
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EXFIL	EXFIL-TOTAL	0.103	0%	0.103
SUBTOTAL		0.148		0.193

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

WATER QUALITY VOLUME REQUIRED WITHOUT 50% RETENTION CREDIT	0.122 AC-FT 1.463 AC-IN
WATER QUALITY VOLUME PROVIDED WITHOUT 50% RETENTION CREDIT	0.148 AC-FT 1.773 AC-IN

PROPOSED LEGEND

	PROPOSED BUILDING		STORMWATER DETENTION FACILITY
	PROPOSED LINK		PROP. STORMWATER PIPE
	EXISTING STORMWATER PIPE		PROP. STORMWATER TRENCH
	TOTAL DRAINAGE AREA		PROP. WALL

Alexander Scheffer, State of Florida, Professional Engineer, License No. 73802. This item has been digitally signed and sealed by Alexander Scheffer on the date indicated here. Printed copies of this document are not considered signed and sealed and must be verified on any electronic copies.
1/21/22

ENGINEER:
ALEXANDER D. SCHEFFER
DATE: 1/21/22
TEL: #Tel
FAX: #Fax

DRAWN BY: MR
DESIGNED BY: MR
CHECKED BY: ADS
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

NO.	DATE	BY	CHK'D	DESCRIPTION

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PROJECT # P10918
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roofing consulting
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Fort Lauderdale, Florida 33309
Tel: 954.484.4000 • Fax: 954.484.5588

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CAD FILE:	
DRAWING FILE NO.	



APPENDIX C: PRE-DEVELOPMENT & POST-DEVELOPMENT AREA SUMMARY & WATER
QUALITY CALCULATIONS





**FIRE STATION 13
CITY OF FORT LAUDERDALE
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

I. EXISTING SITE INFORMATION

1	Existing Building	sf	0.174 ac.	23.71%
2	Existing Impervious	sf	0.390 ac.	53.13%
3	Existing Pervious	sf	0.170 ac.	23.16%
Existing Calculated Total			0.734 ac.	100%
Total overall impervious surface =			0.564	100.00%



**FIRE STATION 13
PRE-DEVELOPMENT
DRAINAGE CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

CURVE NUMBER & SOIL CLASSIFICATION CHART
PRE DEVELOPMENT

BASIN	SOIL CLASSIFICATION	HYDROLOGIC SOIL GROUP	RUNOFF CURVE NUMBERS	AREA	CN X AREA	CURVE NUMBER (WEIGHTED)
SITE						BASIN TOTAL AREA (AC)
	OPEN SPACE		CN (TABLE 2.2 - USGS TR-55)	AREA (AC)		SITE 0.734
	GOOD CONDITION (GRASS > 75%)	A	49	0.174	8.526	CN (WEIGHTED) 86
	IMPERVIOUS PAVED AREAS / ROOFS	A	98	0.56	54.88	



**FIRE STATION 13
POST-DEVELOPMENT
DRAINAGE CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

CURVE NUMBER & SOIL CLASSIFICATION CHART
POST DEVELOPMENT

BASIN	SOIL CLASSIFICATION	HYDROLOGIC SOIL GROUP	RUNOFF CURVE NUMBERS	AREA	CN X AREA	CURVE NUMBER (WEIGHTED)
SITE			CN (TABLE 2.2 - USGS TR-55)	AREA (AC)		BASIN TOTAL AREA (AC)
	OPEN SPACE					SITE 0.734
	GOOD CONDITION (GRASS > 75%)	A	49	0.109	5.341	CN (WEIGHTED) 91
	IMPERVIOUS PAVED AREAS / ROOFS	A	98	0.625	61.25	



**FIRE STATION 13
CITY OF FORT LAUDERDALE
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

I. PROPOSED LAND USE:

1	Proposed Buildings =	8452.89 sf	0.194 ac.	26.42%
2	Proposed Sidewalk =	2213.4 sf	0.051 ac.	6.92%
3	Proposed Concrete (Heavy Duty) =	9023.23 sf	0.207 ac.	28.21%
4	Proposed Asphalt (Parking) =	7522.05 sf	0.173 ac.	23.51%
5	Proposed Landscape =	4780.02 sf	0.110 ac.	14.94%
Total =		31991.59	0.734 ac.	100%
Total overall impervious surface =		27211.57	0.625 ac.	85.06%

II. WATER QUALITY CRITERIA:

Quality standards shall be provided during a 3 year, 1 hour storm event as follows:

1. If a wet detention system, then whichever is the greater of the following:
 - a. The first inch of runoff from the entire project site.
 - b. The amount of 2.5 inches times the percent impervious for the project site.
2. Exfiltration trench shall provide the volume required for the wet detention system.

III. WATER QUALITY CALCULATIONS:

1. Compute the first inch of runoff from the entire developed project site:

$$= 1 \text{ inch} \times 0.73 \text{ acres} \times (1 \text{ foot} / 12 \text{ inches})$$

$$= \underline{\underline{0.061 \text{ ac-ft for the first inch of runoff}}}$$
2. Compute 2.5 inches times the percent impervious for the developed project site:
 - a. Site area for water quality pervious / impervious calculations only:

$$= \text{Total Project} - (\text{Lake Area} + \text{Buildings})$$

$$= 0.734 \text{ acres} - (0.000 \text{ acres} + 0.194 \text{ acres})$$

$$= \underline{\underline{0.540 \text{ acres of developed site area for water quality calculations}}}$$
 - b. Impervious area for water quality pervious / impervious calculations only:

$$= \text{Site area for water quality} - \text{Pervious area}$$

$$= 0.540 \text{ acres} - 0.110 \text{ acres}$$

$$= \underline{\underline{0.431 \text{ acres of impervious area for water quality calculations}}}$$
 - c. Percentage of impervious area for water quality:

$$= \text{Impervious area for water quality} / \text{Site area for water quality} \times 100\%$$

$$= 0.431 \text{ acres} / 0.540 \text{ acres} \times 100\%$$

$$= \underline{\underline{79.69 \% \text{ Impervious}}}$$
 - d. For 2.5 inches times the percentage of impervious area:

$$= 2.5 \text{ inches} \times 79.69 \%$$

$$= \underline{\underline{1.992 \text{ inches to be treated}}}$$
 - e. Compute volume required for quality detention:

$$= \text{Inches to be treated} \times (\text{Total Site Area} - \text{Lake Area})$$

$$= 1.992 \text{ inches} \times (0.734 \text{ acres} - 0.000 \text{ acres}) \times (1 \text{ foot} / 12 \text{ inches})$$

$$= \underline{\underline{0.122 \text{ ac-ft required for detention storage}}}$$

The first inch of runoff from the entire developed site = 0.061 ac-ft
 2.5 inches times the percentage of impervious area = 0.122 ac-ft

	Volume of	0.122 ac-ft controls
		1.463 ac-in controls
Volume Required Utilizing 50% Dry Detention Credit (DRY DETENTION UTILIZED)		0.061 ac-ft
		0.732 ac-in

IV. EXFILTRATION TRENCH CALCULATIONS:

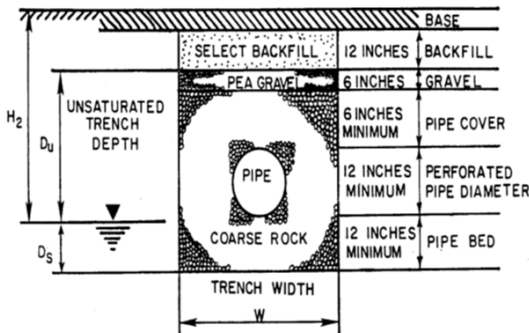
WATER QUALITY

1. Design Formula: $L = 2 * (0.5 * V_{wq} + V_{add}) / (K((H_2 * W) + (2 * H_2 * D_u) - (D_u^2) + (2 * H_2 * D_s)) + (1.39 * 10^4 * W * D_u))$

2. Design Information:

- Weir Needed in ET System? YES
- Weir Elevation 4.00
- V_{wq} = Water Quality Vol. to be Exfiltrated: 1.11 ac-in
- V_{add} = Add. Storage Vol. in 1 hour (up to 3.28"xSite - V_{wq}): 0.13 ac-in
- W = Trench Width: 10.00 ft.
- K = Hydraulic Conductivity: 2.480E-05 cfs/sq-ft per ft head
- H₂ = Depth of Water Table: 2.50 ft.
- D_u = Non-Saturated Trench Depth: 3.00 ft.
- D_s = Saturated Trench Depth: 2.00 ft.
- Total Trench Depth: 5.00 ft.

- 3. Exfiltration Trench (V_{wq} & V_{add}) Required: 213 ft.
- 4. Exfiltration Trench Provided: 237 ft.
- 5. Exfiltration Trench WQ/Storage Vol Required: 1.230 ac-in or 0.103 ac-ft



Thickness (i Elev (ft))	
6.00	Lowest Inlet
18	Asphalt + Base Thickness
0	Select Backfill
4.50	Top of Trench (Top of Pea Gravel)
0	Pea Gravel
24	Pipe Cover
4.00	Weir Elevation (if applicable)
2.50	Top of Pipe
15	Pipe Size
2.5	Pipe Thickness
1.04	Invert of Pipe
16	Pipe Bed
-0.50	Bottom of Trench
1.50	Water Table / Control Water Elev.

v. STAGE STORAGE CALCULATIONS:

1. Exfiltrated Volume Volume= 0.103 ac-ft

Exfiltrated Volume (Assuming Linear Progression)	
Stage (ft)	Storage (ac-ft)
1.5	0.000
2	0.021
2.5	0.041
3	0.062
3.5	0.082
4	0.103

EXFILTRATION TRENCH VOLUME PROVIDED		
STANDARD:		
	1.230	ac-in
	0.103	ac-ft



**FIRE STATION 13
WATER QUALITY PROVIDED
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

WATER QUALITY PROVIDED SUMMARY TABLE

TYPE	NAME	WATER QUALITY PROVIDED WITHOUT CREDIT (AC-FT)	WATER QUALITY CREDIT	WATER QUALITY PROVIDED WITH CREDIT (AC-FT)
DETENTION AREA	DET-1	0.022	50%	0.043
DETENTION AREA	DET-2	0.017	50%	0.034
DETENTION AREA	DET-3	0.006	50%	0.013
EXFIL	EXFIL-TOTAL	0.103	0%	0.103
SUBTOTAL		0.148		0.193

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

WATER QUALITY VOLUME REQUIRED WITHOUT 50% RETENTION CREDIT	0.122 AC-FT 1.463 AC-IN
WATER QUALITY VOLUME PROVIDED WITHOUT 50% RETENTION CREDIT	0.148 AC-FT 1.773 AC-IN
WATER QUALITY PROVIDED WITH 50% RETENTION CREDIT	0.193 AC-FT 2.316 AC-IN



**FIRE STATION 13
CITY OF FORT LAUDERDALE
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

DET-1

DRY DETENTION FACILITY WATER QUALITY VOLUME

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

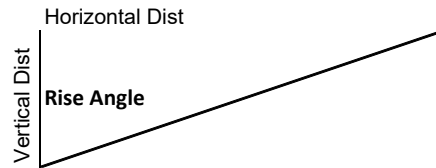
Total Facility Area	946	SF	0.022	AC
Facility Area Bottom	946	SF	0.022	AC
Facility Area Sides	-	SF	0.000	AC

	Facility Area Depth (ft)	Facility Area (AC)	Vertical Volume (AC-FT)
Bottom Area	1.00	0.022	0.022

TOTAL VOLUME PROVIDED IN FACILITY:

BOTTOM	0.022	AC-FT
SIDES	0.000	AC-FT
TOTAL	0.022	AC-FT

Slope	Rise Angle
2:1	63.43
3:1	71.56
4:1	75.96
5:1	78.69
6:1	80.54



TOTAL VOLUME PROVIDED WITH 50% DRY
DETENTION CREDIT
WQprov X 2.00 (For 50% Credit)

TOTAL	0.043	AC-FT
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**FIRE STATION 13
CITY OF FORT LAUDERDALE
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

DET-2

DRY DETENTION FACILITY WATER QUALITY VOLUME

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

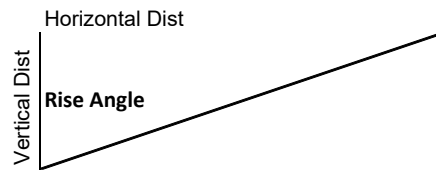
Total Facility Area	749	SF	0.017	AC
Facility Area Bottom	749	SF	0.017	AC
Facility Area Sides	-	SF	0.000	AC

	Facility Area Depth (ft)	Facility Area (AC)	Vertical Volume (AC-FT)
Bottom Area	1.00	0.017	0.017

TOTAL VOLUME PROVIDED IN FACILITY:

BOTTOM	0.017	AC-FT
SIDES	0.000	AC-FT
TOTAL	0.017	AC-FT

Slope	Rise Angle
2:1	63.43
3:1	71.56
4:1	75.96
5:1	78.69
6:1	80.54





**FIRE STATION 13
CITY OF FORT LAUDERDALE
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/25/2022

DET-3

DRY DETENTION FACILITY WATER QUALITY VOLUME

Water Quality Control Elevation = 4.0 (Top of Weir Elevation to Underground Storage Tanks)

Total Facility Area	820	SF	0.019	AC
Facility Area Bottom	205	SF	0.005	AC
Facility Area Sides	615	SF	0.014	AC

	Facility Area Depth (ft)	Facility Area (AC)	Vertical Volume (AC-FT)
Bottom	0.50	0.005	0.002

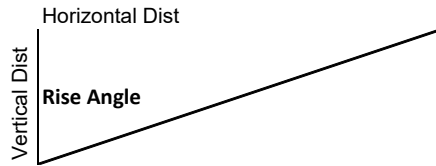
VOLUME PROVIDED IN SIDES & SWALE (4:1 SLOPE)

	Elevation	Horiz Dist / Elev (Feet)	Area (Acres)	Linear Volume (Acre-FT)
	3.50	0.00	0.000	0.000
	3.75	1.00	0.007	0.001
Water Quality Elevation	4.00	2.00	0.014	0.004

TOTAL VOLUME PROVIDED IN DETENTION:

BOTTOM	0.002	AC-FT
SIDES	0.004	AC-FT
TOTAL	0.006	AC-FT

Slope	Rise Angle
2:1	63.43
3:1	71.56
4:1	75.96
5:1	78.69
6:1	80.54





APPENDIX D: PRE-DEVELOPMENT & POST-DEVELOPMENT MAXIMUM STAGE &
DISCHARGE SUMMARY





**FIRE STATION 13
APPENDIX D:
STORMWATER CALCULATIONS**

Designed By: MR
Checked By: ADS
Date: 1/24/2022

PRE DEVELOPMENT & POST DEVELOPMENT MAXIMUM STAGE & DISCHARGE SUMMARY

MAXIMUM STAGE (FT)		
STORM EVENT	PRE-DEV.	POST-DEV.
3 YR - 24 HR	1.12	4.27
5 YR - 24 HR	1.2	4.37
10 YR - 24 HR	1.34	4.65
100 YR - 24 HR	--	--
25 YR - 72 HR	4.5	5.79
100 YR - 72 HR	5.97	7.64

MAXIMUM DISCHARGE (CFS)		
STORM EVENT	PRE-DEV.	POST-DEV.
3 YR - 24 HR	2.29	0.22
5 YR - 24 HR	2.55	0.31
10 YR - 24 HR	3	0.41
100 YR - 24 HR	--	--
25 YR - 72 HR	3.28	2.73
100 YR - 72 HR	--	--

ZERO DISCHARGE

DIFFERENCE IN STAGES (POST DEVELOPMENT - PRE DEVELOPMENT)		
SUB-BASIN	REDUCTION (FT)	INCREASE (FT)
3 YR - 24 HR	-	3.15
5 YR - 24 HR	-	3.17
10 YR - 24 HR	-	3.31
100 YR - 24 HR	-	-
25 YR - 72 HR	-	1.29

DIFFERENCE IN DISCHARGE (POST DEVELOPMENT - PRE DEVELOPMENT)		
SUB-BASIN	REDUCTION (CFS)	INCREASE (CFS)
3 YR - 24 HR	2.07	-
5 YR - 24 HR	2.24	-
10 YR - 24 HR	2.59	-
100 YR - 24 HR	-	-
25 YR - 72 HR	0.55	-



APPENDIX E: ICPR – MAX STAGE & PEAK OFF-SITE RESULTS



Link Min/Max Conditions with Times (POST-DEV)											
Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Time to Max Flow [hrs]	Time to Min Flow [hrs]	Time to Min/Max Delta Flow [hrs]	Time to Max Us Velocity [hrs]	Time to Max Ds Velocity [hrs]
CU-SITE-EXFIL	10 YR - 24 HR	1.62	-0.40	-0.14	1.32	1.32	11.8082	12.1757	9.3730	11.8082	11.8082
DS-SITE-FDOT - Pipe	10 YR - 24 HR	0.41	0.00	-0.26	0.42	0.33	13.4145	0.0000	17.8017	13.4145	13.4145
DS-SITE-FDOT - Weir: 1	10 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
DS-SITE-FDOT - Weir: 2	10 YR - 24 HR	0.29	0.00	0.00	3.34	3.34	14.0593	0.0000	11.8378	14.0593	14.0593
DS-SITE-UST - Pipe	10 YR - 24 HR	2.76	-0.12	-0.28	2.25	2.25	12.0915	17.6842	12.3571	12.0915	12.0915
DS-SITE-UST - Weir: 1	10 YR - 24 HR	2.98	-0.10	-0.09	2.30	2.30	12.0865	16.3592	16.3592	12.0866	12.0866
CU-SITE-EXFIL	100 YR - 72 HR	1.31	0.00	-0.12	1.07	1.07	59.7763	9.8480	25.4611	59.7763	59.7763
DS-SITE-FDOT - Pipe	100 YR - 72 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
DS-SITE-FDOT - Weir: 1	100 YR - 72 HR	0.07	0.00	0.04	0.07	0.07	59.7311	0.0000	60.3670	59.6671	59.6671
DS-SITE-FDOT - Weir: 2	100 YR - 72 HR	0.06	0.00	0.01	1.24	1.24	52.9625	0.0000	54.1872	52.9739	52.9739
DS-SITE-UST - Pipe	100 YR - 72 HR	2.11	-0.05	0.33	1.72	1.72	59.7322	67.9916	59.3520	59.7322	59.7322
DS-SITE-UST - Weir: 1	100 YR - 72 HR	4.90	0.00	1.68	0.98	0.98	59.7311	67.9949	59.7311	59.7311	59.7311
CU-SITE-EXFIL	25 YR - 72 HR	1.16	-0.28	0.11	0.95	0.95	59.7780	60.2897	30.6657	59.7780	59.7780
DS-SITE-FDOT - Pipe	25 YR - 72 HR	2.73	-0.05	-0.26	2.22	2.22	60.1442	47.4927	70.5428	60.1442	60.1442
DS-SITE-FDOT - Weir: 1	25 YR - 72 HR	2.24	0.00	0.00	2.84	2.84	60.1367	0.0000	60.0009	60.1367	60.1367
DS-SITE-FDOT - Weir: 2	25 YR - 72 HR	0.49	-0.03	0.00	5.77	5.77	60.1281	48.0029	54.6414	60.1281	60.1281
DS-SITE-UST - Pipe	25 YR - 72 HR	1.44	-0.49	-0.33	1.18	1.18	59.7747	60.2876	60.1191	59.7747	59.7747
DS-SITE-UST - Weir: 1	25 YR - 72 HR	1.52	-0.45	0.22	0.91	0.91	59.7721	60.3468	60.1191	54.1841	54.1841
CU-SITE-EXFIL	3 YR - 24 HR	1.35	-0.12	-0.14	1.10	1.10	11.9326	12.2849	10.0722	11.9326	11.9326
DS-SITE-FDOT - Pipe	3 YR - 24 HR	0.22	0.00	0.18	0.23	0.18	15.8939	20.6781	15.8939	15.8939	15.8939
DS-SITE-FDOT - Weir: 1	3 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
DS-SITE-FDOT - Weir: 2	3 YR - 24 HR	0.12	0.00	0.00	1.58	1.58	16.0820	0.0000	12.0330	16.0849	16.0849
DS-SITE-UST - Pipe	3 YR - 24 HR	0.97	-0.01	-0.23	0.79	0.79	12.1809	16.5197	13.3063	12.1809	12.1809
DS-SITE-UST - Weir: 1	3 YR - 24 HR	1.09	-0.01	0.05	1.65	1.65	12.1752	16.5212	14.0172	12.1754	12.1754
CU-SITE-EXFIL	5 YR - 24 HR	1.47	-0.26	-0.18	1.20	1.20	11.9026	12.2350	9.5316	11.9026	11.9026
DS-SITE-FDOT - Pipe	5 YR - 24 HR	0.31	0.00	-0.27	0.32	0.25	15.0779	21.9548	15.0793	15.0779	15.0779
DS-SITE-FDOT - Weir: 1	5 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
DS-SITE-FDOT - Weir: 2	5 YR - 24 HR	0.18	0.00	0.00	2.13	2.13	12.1254	0.0000	11.9493	12.1254	12.1254
DS-SITE-UST - Pipe	5 YR - 24 HR	1.65	-0.05	-0.24	1.35	1.35	12.1302	17.0460	12.7012	12.1302	12.1302
DS-SITE-UST - Weir: 1	5 YR - 24 HR	1.83	-0.03	-0.08	1.96	1.96	12.1254	17.0476	12.9620	12.1256	12.1256

Link Min/Max Conditions with Times (PRE-DEV)											
Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Time to Max Flow [hrs]	Time to Min Flow [hrs]	Time to Min/Max Delta Flow [hrs]	Time to Max Us Velocity [hrs]	Time to Max Ds Velocity [hrs]
CU-SITE-FDOT15 (S30)	10 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S38)	10 YR - 24 HR	3.00	0.00	0.04	2.50	4.26	12.0028	0.0000	5.3027	12.0159	12.0028
CU-SITE-FDOT15 (S30)	100 YR - 72 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S38)	100 YR - 72 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S30)	25 YR - 72 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S38)	25 YR - 72 HR	3.28	-0.03	-0.10	2.67	2.67	60.0686	22.7662	35.7508	60.0686	60.0686
CU-SITE-FDOT15 (S30)	3 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S38)	3 YR - 24 HR	2.29	0.00	-0.04	2.26	3.92	12.0086	0.0000	5.7111	12.0345	11.9633
CU-SITE-FDOT15 (S30)	5 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.0000	0.0000
CU-SITE-FDOT15 (S38)	5 YR - 24 HR	2.55	0.00	-0.04	2.34	4.03	12.0084	0.0000	5.3777	12.0116	12.0182



APPENDIX F: ICPR RESULTS – INPUT DATA



Simulation: 10 YR - 24 HR

Scenario: POST-DEV
 Run Date/Time: 12/17/2021 1:19:33 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 24-HR
 Extern Hydrograph Set:
 Curve Number Set: PRE DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: PRE-DEV
 Roughness Set:

Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	ET for Manual Basins: False
Over-Relax Weight Fact: 0.5 dec	Smp/Man Basin Rain Opt: Global
dZ Tolerance: 0.0010 ft	OF Region Rain Opt: Global
Max dZ: 1.0000 ft	Rainfall Name: SFWMD24
Link Optimizer Tol: 0.0001 ft	Rainfall Amount: 8.75 in
Edge Length Option: Automatic	Storm Duration: 24.0000 hr
Dflt Damping (2D): 0.0050 ft	Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2	Min Node Srf Area (1D): 100 ft2
Energy Switch (2D): Energy	Energy Switch (1D): Energy

Comment:

Simulation: 100 YR - 72 HR

Scenario: POST-DEV
 Run Date/Time: 12/17/2021 1:19:41 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
------	-------	-----	-----------	----------------------

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 72-HR
Extern Hydrograph Set:
Curve Number Set: PRE DEV CN
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: PRE-DEV
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 72.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: -SFWMD-72
Rainfall Amount: 17.75 in
Storm Duration: 72.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 25 YR - 72 HR

Scenario: POST-DEV
Run Date/Time: 12/17/2021 1:20:02 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
Reference ET Folder:

Lookup Tables

Boundary Stage Set: 72-HR
Extern Hydrograph Set:

Unit Hydrograph Folder:

Curve Number Set: PRE DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: PRE-DEV
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight Fact: 0.5 dec
 dZ Tolerance: 0.0010 ft
 Max dZ: 1.0000 ft
 Link Optimizer Tol: 0.0001 ft
 Edge Length Option: Automatic
 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

IA Recovery Time: 72.0000 hr
 ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: -SFWMD-72
 Rainfall Amount: 14.75 in
 Storm Duration: 72.0000 hr

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

Comment:

Simulation: 3 YR - 24 HR

Scenario: POST-DEV
 Run Date/Time: 12/17/2021 1:20:24 PM
 Program Version: ICP4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 24-HR
 Extern Hydrograph Set:
 Curve Number Set: PRE DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: PRE-DEV
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

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

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: SFWMD24
 Rainfall Amount: 6.80 in
 Storm Duration: 24.0000 hr

Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

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

Comment:

Simulation: 5 YR - 24 HR

Scenario: POST-DEV
 Run Date/Time: 12/17/2021 1:20:32 PM
 Program Version: ICPRA 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 24-HR
 Extern Hydrograph Set:
 Curve Number Set: PRE DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: PRE-DEV
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight Fact: 0.5 dec
 dZ Tolerance: 0.0010 ft
 Max dZ: 1.0000 ft
 Link Optimizer Tol: 0.0001 ft
 Edge Length Option: Automatic
 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False
 Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: SFWMD24
 Rainfall Amount: 7.50 in
 Storm Duration: 24.0000 hr
 Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area (1D): 100 ft2
 Energy Switch (1D): Energy

Comment:

Simulation: 10 YR - 24 HR

Scenario: PRE-DEV
 Run Date/Time: 12/17/2021 1:20:40 PM
 Program Version: ICPRA 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 24-HR
 Extern Hydrograph Set:
 Curve Number Set: POST DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: POST-DEV
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

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

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False

Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global

Link Optimizer Tol: 0.0001 ft
 Edge Length Option: Automatic
 DfIt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

Rainfall Name: SFWMD24
 Rainfall Amount: 8.75 in
 Storm Duration: 24.0000 hr
 DfIt Damping (1D): 0.0050 ft
 Min Node Srf Area (1D): 100 ft2
 Energy Switch (1D): Energy

Comment:

Simulation: 100 YR - 72 HR

Scenario: PRE-DEV
 Run Date/Time: 12/17/2021 1:20:47 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000
				60.0000

Restart File
Save Restart: False

Resources & Lookup Tables

Resources	Lookup Tables
Rainfall Folder: SFWMD	Boundary Stage Set: 72-HR
Reference ET Folder:	Extern Hydrograph Set:
Unit Hydrograph Folder:	Curve Number Set: POST DEV CN
	Green-Ampt Set:
	Vertical Layers Set:
	Impervious Set: POST-DEV
	Roughness Set:
	Crop Coef Set:
	Fillable Porosity Set:
	Conductivity Set:
	Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 72.0000 hr
Max Iterations: 6	ET for Manual Basins: False
Over-Relax Weight Fact: 0.5 dec	Smp/Man Basin Rain Opt: Global
dZ Tolerance: 0.0010 ft	OF Region Rain Opt: Global
Max dZ: 1.0000 ft	Rainfall Name: -SFWMD-72
Link Optimizer Tol: 0.0001 ft	Rainfall Amount: 17.75 in
Edge Length Option: Automatic	Storm Duration: 72.0000 hr
Dflt Damping (2D): 0.0050 ft	Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2	Min Node Srf Area (1D): 100 ft2
Energy Switch (2D): Energy	Energy Switch (1D): Energy

Comment:

Simulation: 25 YR - 72 HR

Scenario: PRE-DEV
Run Date/Time: 12/17/2021 1:21:07 PM
Program Version: ICPRA 4.07.08

General

Run Mode: Normal

N:\Clerical\Jobs\2020\20-0030-001-01 Fort Lauderdale Fire Station No. 13\400 Design Calculations\Civil\13 Storm Drainage\ICPRFS 13\ 12/17/2021 14:03

Start Time:	Year	Month	Day	Hour [hr]
End Time:	0	0	0	0.0000
	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File
Save Restart: False

Resources & Lookup Tables

Resources	Lookup Tables
Rainfall Folder: SFWMD	Boundary Stage Set: 72-HR
Reference ET Folder:	Extern Hydrograph Set:
Unit Hydrograph Folder:	Curve Number Set: POST DEV CN
	Green-Ampt Set:
	Vertical Layers Set:
	Impervious Set: POST-DEV
	Roughness Set:
	Crop Coef Set:
	Fillable Porosity Set:
	Conductivity Set:
	Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 72.0000 hr
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N:\Clerical\Jobs\2020\20-0030-001-01 Fort Lauderdale Fire Station No. 13\400 Design Calculations\Civil\13 Storm Drainage\ICPRFS 13\ 12/17/2021 14:03

Max Iterations: 6
 Over-Relax Weight Fact: 0.5 dec
 dZ Tolerance: 0.0010 ft
 Max dZ: 1.0000 ft
 Link Optimizer Tol: 0.0001 ft
 Edge Length Option: Automatic
 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

ET for Manual Basins: False
 Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: -SFWMD-72
 Rainfall Amount: 14.75 in
 Storm Duration: 72.0000 hr
 Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area (1D): 100 ft2
 Energy Switch (1D): Energy

Comment:

Simulation: 3 YR - 24 HR

Scenario: PRE-DEV
 Run Date/Time: 12/17/2021 1:21:27 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder: SFWMD
 Reference ET Folder:
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set: 24-HR
 Extern Hydrograph Set:
 Curve Number Set: POST DEV CN
 Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set: POST-DEV
 Roughness Set:
 Crop Coef Set:
 Fillable Porosity Set:
 Conductivity Set:
 Leakage Set:

Tolerances & Options

Time Marching: SAOR
 Max Iterations: 6
 Over-Relax Weight Fact: 0.5 dec
 dZ Tolerance: 0.0010 ft
 Max dZ: 1.0000 ft
 Link Optimizer Tol: 0.0001 ft
 Edge Length Option: Automatic
 Dflt Damping (2D): 0.0050 ft
 Min Node Srf Area (2D): 100 ft2
 Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
 ET for Manual Basins: False
 Smp/Man Basin Rain Opt: Global
 OF Region Rain Opt: Global
 Rainfall Name: SFWMD24
 Rainfall Amount: 6.80 in
 Storm Duration: 24.0000 hr
 Dflt Damping (1D): 0.0050 ft
 Min Node Srf Area (1D): 100 ft2
 Energy Switch (1D): Energy

Comment:

Simulation: 5 YR - 24 HR

Scenario: PRE-DEV
 Run Date/Time: 12/17/2021 1:21:34 PM
 Program Version: ICPR4 4.07.08

General				
Run Mode:	Normal			
	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000
	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]	
Min Calculation Time:	60.0000	0.1000	900.0000	
Max Calculation Time:		30.0000		
Output Time Increments				
Hydrology				
Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000
Surface Hydraulics				
Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 15.0000
Groundwater				
Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0		0.0000 60.0000
Restart File				
Save Restart:	False			
Resources & Lookup Tables				
Resources		Lookup Tables		
Rainfall Folder:	SFWM	Boundary Stage Set:	24-HR	
Reference ET Folder:		Extern Hydrograph Set:		
Unit Hydrograph Folder:		Curve Number Set:	POST DEV CN	
		Green-Ampt Set:		
		Vertical Layers Set:		
		Impervious Set:	POST-DEV	
		Roughness Set:		
		Crop Coef Set:		
		Fillable Porosity Set:		
		Conductivity Set:		
		Leakage Set:		

Tolerances & Options	
Time Marching:	SAOR
Max Iterations:	6
Over-Relax Weight Fact:	0.5 dec
dZ Tolerance:	0.0010 ft
Max dZ:	1.0000 ft
Link Optimizer Tol:	0.0001 ft
Edge Length Option:	Automatic
Dflt Damping (2D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2
Energy Switch (2D):	Energy
IA Recovery Time:	24.0000 hr
ET for Manual Basins:	False
Smp/Man Basin Rain Opt:	Global
OF Region Rain Opt:	Global
Rainfall Name:	SFWM24
Rainfall Amount:	7.50 in
Storm Duration:	24.0000 hr
Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (1D):	100 ft2
Energy Switch (1D):	Energy

Comment:

Curve Number: POST DEV CN [Set]

Land Cover Zone	Soil Zone	Curve Number [dec]
CN	CN	91.0

Curve Number: PRE DEV CN [Set]

Land Cover Zone	Soil Zone	Curve Number [dec]
CN	CN	86.0

Manual Basin: SITE

Scenario: POST-DEV
 Node: SITE
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 10.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 0.7400 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.7400	CN	CN			

Comment:

Manual Basin: SITE

Scenario: PRE-DEV
 Node: SITE
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 10.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 0.5200 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.5200	CN	CN			

Comment: 0.74

Node: EXFIL TRENCH

Scenario: POST-DEV
 Type: Stage/Volume
 Base Flow: 0.00 cfs
 Initial Stage: 1.50 ft
 Warning Stage: 4.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.50	0.00	0
2.00	0.02	871
2.50	0.04	1699
3.00	0.06	2570
3.50	0.08	3441
4.00	0.10	4269

Comment: WQ ELEV. 4.0

213 LF 18" RCP WITH 5' WIDE X 10' LONG EXFILTRATION TRENCH PROVIDED.

Node: FDOT

Scenario: POST-DEV
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 4.55 ft
 Warning Stage: 0.00 ft
 Boundary Stage: FDOT

Comment: CROWN OF PIPE ELEVATION 4.66

I.E. 3.12 (N) 15" RCP

Node: SITE

Scenario: POST-DEV
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 1.50 ft
 Warning Stage: 8.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0402	1752
3.10	0.0402	1752
3.20	0.0402	1752
3.30	0.0402	1752
3.40	0.0402	1752
3.50	0.0452	1967
3.60	0.0455	1983
3.70	0.0460	2002
3.80	0.0466	2029
3.90	0.0473	2059
4.00	0.0479	2087
4.10	0.0486	2115
4.20	0.0492	2144
4.30	0.0499	2172
4.39	0.0505	2198
4.49	0.0511	2226
4.59	0.0518	2255
4.69	0.0524	2284
4.79	0.0531	2313
4.89	0.0538	2342
4.99	0.0544	2371
5.09	0.0551	2400
5.19	0.0558	2429
5.29	0.0564	2458
5.39	0.0571	2487
5.49	0.0578	2517
5.59	0.0588	2562
5.69	0.0600	2612
5.79	0.0613	2671
5.89	0.0633	2757
5.99	0.0656	2856
6.09	0.0708	3084
6.19	0.0821	3577
6.29	0.0986	4297
6.39	0.1177	5128
6.49	0.1376	5993
6.59	0.1597	6955
6.69	0.1849	8052

Stage [ft]	Area [ac]	Area [ft2]
6.79	0.2155	9386
6.89	0.2372	10334
6.99	0.2554	11124
7.09	0.2732	11903
7.19	0.2835	12348
7.29	0.2901	12638
7.39	0.2986	13009
7.49	0.3089	13454
7.59	0.3201	13945
7.69	0.3389	14763
7.79	0.3513	15301
7.89	0.3638	15845
7.99	0.3756	16363
8.09	0.3894	16962
8.19	0.4069	17726
8.29	0.4266	18582
8.39	0.4431	19301
8.49	0.4589	19990
8.59	0.4753	20704
8.69	0.4919	21427
8.79	0.5057	22027
8.89	0.5180	22566
8.99	0.5360	23348
9.09	0.5428	23644
9.19	0.5428	23646
9.29	0.5429	23647
9.39	0.5429	23648
9.49	0.5429	23650
9.59	0.5432	23663
9.69	0.5433	23664
9.79	0.5433	23666
9.89	0.5433	23667
9.99	0.5434	23668
10.09	0.5434	23670
10.19	0.5434	23671
10.29	0.5434	23673
10.39	0.5435	23674
10.49	0.5435	23675
10.59	0.5435	23677
10.69	0.5436	23678
10.79	0.5436	23680
10.89	0.5436	23681
10.99	0.5437	23682
11.09	0.5437	23684
11.19	0.5438	23686

Stage [ft]	Area [ac]	Area [ft2]
11.29	0.5438	23690
11.39	0.5440	23695
11.49	0.5440	23699
11.59	0.5441	23702
11.69	0.5442	23704
11.79	0.5442	23706
11.89	0.5443	23708
11.99	0.5443	23711
12.09	0.5444	23713
12.19	0.5444	23715
12.29	0.5445	23717
12.39	0.5445	23719
12.49	0.5445	23720
12.59	0.5446	23722
12.69	0.5446	23723
12.79	0.5446	23725
12.89	0.5447	23726
12.99	0.5447	23727
13.09	0.5447	23729
13.19	0.5448	23730
13.29	0.5448	23731
13.39	0.5448	23733
13.49	0.5449	23734
13.59	0.5449	23736
13.69	0.5449	23737
13.79	0.5450	23738
13.89	0.5450	23740
13.99	0.5450	23741
14.09	0.5451	23743
14.19	0.5451	23744
14.29	0.5451	23745
14.39	0.5451	23747
14.49	0.5452	23748
14.59	0.5452	23749
14.69	0.5452	23751
14.79	0.5453	23752
14.89	0.5453	23754
14.99	0.5453	23755
15.09	0.7360	32061
15.19	0.7360	32061

Comment:

Node: UST

Scenario: POST-DEV
 Type: Stage/Volume
 Base Flow: 0.00 cfs
 Initial Stage: 1.50 ft
 Warning Stage: 5.50 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
0.00	0.00	0
2.00	0.00	0
5.50	0.11	4922

Comment: TOTAL OF 60 - 8' LONG
 SC-740 CHAMBERS WITH 12" SUB BASE FOR A TOTAL OF 82 CF PER CHAMBER.

30 = 0.0565

60 CHAMBERS X 82 CF / CHAMBER = 4920 CF = 0.113 AC-FT

90 CHAMBERS X 82 CF / CHAMBER = 7380 CF = 0.169 AC-FT

Node: FDOT

Scenario: PRE-DEV
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 0.41 ft
 Warning Stage: 0.00 ft
 Boundary Stage: FDOT

Comment: CROWN OF PIPE ELEVATION 4.55.
 I.E. 3.12 (N) 15" RCP

Node: SITE

Scenario: PRE-DEV
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 0.41 ft
 Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.53	0.0000	1
3.60	0.0009	38
3.70	0.0042	182
3.80	0.0084	366
3.90	0.0124	538
4.00	0.0235	1025
4.09	0.0372	1619
4.19	0.0586	2554
4.29	0.0862	3754
4.39	0.1141	4969
4.49	0.1453	6331
4.59	0.1845	8037
4.69	0.2464	10731
4.79	0.3436	14967
4.89	0.5200	22651
8.49	0.5200	22651

Comment: 3.53 2.3E-05

3.6 0.000872
 3.7 0.004178
 3.8 0.008402
 3.9 0.012351
 4 0.023531
 4.09 0.037167
 4.19 0.058632
 4.29 0.08618
 4.39 0.114073
 4.49 0.14534
 4.59 0.184504
 4.69 0.24635
 4.79 0.343595
 4.89 0.421534
 4.99 0.474816
 5.09 0.548026
 5.19 0.643595
 5.29 0.683609
 5.39 0.700092
 5.49 0.703994

5.59 0.707874
 5.69 0.710767
 5.79 0.713613
 5.89 0.715978
 5.99 0.718205
 6.09 0.719927
 6.19 0.721258
 6.29 0.722911
 6.39 0.724242
 6.49 0.725712
 6.59 0.726997
 6.69 0.728076
 6.79 0.729017
 6.89 0.729614
 6.99 0.730257
 7.09 0.730762
 7.19 0.73129
 7.29 0.73168
 7.39 0.732117
 7.49 0.73253
 7.59 0.73292
 7.69 0.733287
 7.79 0.733609
 7.89 0.733861
 7.99 0.734206
 8.1 0.734452
 8.2 0.734688
 8.29 0.734986
 8.39 0.736014
 8.49 0.736014

Pipe Link: CU-SITE-EXFIL	Upstream	Downstream
Scenario: POST-DEV	Invert: 1.04 ft	Invert: 1.04 ft
From Node: SITE	Manning's N: 0.0120	Manning's N: 0.0120
To Node: EXFIL TRENCH	Geometry: Circular	Geometry: Circular
Link Count: 1	Max Depth: 1.25 ft	Max Depth: 1.25 ft
Flow Direction: Both	Bottom Clip	
Damping: 0.0000 ft	Default: 0.00 ft	Default: 0.00 ft
Length: 215.00 ft	Op Table:	Op Table:
FHWA Code: 2	Ref Node:	Ref Node:
Entr Loss Coef: 0.50	Manning's N: 0.0000	Manning's N: 0.0000
Exit Loss Coef: 1.00	Top Clip	
Bend Loss Coef: 0.00	Default: 0.00 ft	Default: 0.00 ft
Bend Location: 0.00 dec	Op Table:	Op Table:
Energy Switch: Energy	Ref Node:	Ref Node:
	Manning's N: 0.0000	Manning's N: 0.0000

Comment:

Drop Structure Link: DS-SITE-FDOT		Upstream Pipe	Downstream Pipe
Scenario:	POST-DEV	Invert: -0.50 ft	Invert: -1.50 ft
From Node:	SITE	Manning's N: 0.0120	Manning's N: 0.0120
To Node:	FDOT	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 1.25 ft	Max Depth: 1.25 ft
Flow Direction:	Both	Bottom Clip	
Solution:	Split	Default: 0.00 ft	Default: 0.00 ft
Pipe Count:	1	Op Table:	Op Table:
Damping:	0.0000 ft	Ref Node:	Ref Node:
Length:	75.00 ft	Manning's N: 0.0000	Manning's N: 0.0000
FHWA Code:	2	Top Clip	
Entr Loss Coef:	0.50	Default: 0.00 ft	Default: 0.00 ft
Exit Loss Coef:	1.00	Op Table:	Op Table:
Bend Loss Coef:	0.00	Ref Node:	Ref Node:
Bend Location:	0.00 dec	Manning's N: 0.0000	Manning's N: 0.0000
Energy Switch:	Energy		

Pipe Comment:

Weir Component		
Weir:	1	Bottom Clip
Weir Count:	1	Default: 0.00 ft
Weir Flow Direction:	Both	Op Table:
Damping:	0.0000 ft	Ref Node:
Weir Type:	Sharp Crested Vertical	Top Clip
Geometry Type:	Rectangular	Default: 0.00 ft
Invert:	5.00 ft	Op Table:
Control Elevation:	5.00 ft	Ref Node:
Max Depth:	2.00 ft	Discharge Coefficients
Max Width:	1.00 ft	Weir Default: 3.200
Fillet:	0.00 ft	Weir Table:
		Orifice Default: 0.600
		Orifice Table:

Weir Comment:

Weir Component		
Weir:	2	Bottom Clip
Weir Count:	1	Default: 0.00 ft
Weir Flow Direction:	Both	Op Table:
Damping:	0.0000 ft	Ref Node:
Weir Type:	Sharp Crested Vertical	Top Clip
Geometry Type:	Circular	Default: 0.00 ft
Invert:	4.00 ft	Op Table:
Control Elevation:	4.00 ft	Ref Node:
Max Depth:	0.33 ft	Discharge Coefficients
		Weir Default: 3.200
		Weir Table:

	Orifice Default: 0.600
	Orifice Table:

Weir Comment:

Drop Structure Comment:

Drop Structure Link: DS-SITE-UST		Upstream Pipe		Downstream Pipe	
Scenario:	POST-DEV	Invert:	0.50 ft	Invert:	0.50 ft
From Node:	SITE	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	UST	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	Both	Bottom Clip			
Solution:	Split	Default:	0.00 ft	Default:	0.00 ft
Pipe Count:	1	Op Table:		Op Table:	
Damping:	0.0000 ft	Ref Node:		Ref Node:	
Length:	10.00 ft	Manning's N:	0.0000	Manning's N:	0.0000
FHWA Code:	2	Top Clip			
Entr Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Exit Loss Coef:	1.00	Op Table:		Op Table:	
Bend Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Location:	0.00 dec	Manning's N:	0.0000	Manning's N:	0.0000
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Sharp Crested Vertical	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.00 ft	Ref Node:	
Control Elevation:	4.00 ft	Discharge Coefficients	
Max Depth:	2.00 ft	Weir Default:	3.200
Max Width:	2.50 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: CU-SITE-FDOT15 (S30)		Upstream		Downstream	
Scenario:	PRE-DEV	Invert:	3.12 ft	Invert:	0.78 ft
From Node:	SITE	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	FDOT	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	None	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	35.00 ft	Op Table:		Op Table:	
FHWA Code:	2	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: CU-SITE-FDOT15 (S38)		Upstream	Downstream
Scenario:	PRE-DEV	Invert: 0.16 ft	Invert: -0.10 ft
From Node:	SITE	Manning's N: 0.0120	Manning's N: 0.0120
To Node:	FDOT	Geometry: Circular	Geometry: Circular
Link Count:	1	Max Depth: 1.25 ft	Max Depth: 1.25 ft
Flow Direction:	Both	Bottom Clip	
Damping:	0.0000 ft	Default: 0.00 ft	Default: 0.00 ft
Length:	95.00 ft	Op Table:	Op Table:
FHWA Code:	2	Ref Node:	Ref Node:
Entr Loss Coef:	0.50	Manning's N: 0.0000	Manning's N: 0.0000
Exit Loss Coef:	1.00	Top Clip	
Bend Loss Coef:	0.00	Default: 0.00 ft	Default: 0.00 ft
Bend Location:	0.00 dec	Op Table:	Op Table:
Energy Switch:	Energy	Ref Node:	Ref Node:
		Manning's N: 0.0000	Manning's N: 0.0000

Comment:



APPENDIX G: EXHIBITS



EXHIBIT #1 – PROOF OF OWNERSHIP



Site Address	3109 E SUNRISE BOULEVARD, FORT LAUDERDALE FL 33305	ID #	4942 36 00 0010
Property Owner	TIITF/DNR DIV REC & PARKS HUGH TAYLOR BIRCH ST PARK	Millage	0312
Mailing Address	DEP DOUGLAS BLDG TALLAHASSEE FL 32399	Use	82
Abbr Legal Description	36-49-42 LOT 1 LESS PAR 1 & 3 AS IN PB 17/13,PT OF LOT 2 LYING E OF INTRACOASTAL W/W R/W ALSO THAT PT OF NEW RIVER SOUND IN NE1/4 OF SEC 36 LYING E OF INTRACOASTAL W/W R/W & PT OF LOT 5 LYING E OF INTRA W/W R/W, LOT 6 LESS PAR 6 AS IN PB 17/13 & LESS RD R/W,ALSO THAT PT OF NEW RIVER SOUND IN THE SE1/4 LYING E OF INTRACOASTAL W/W R/W		

The just values displayed below were set in compliance with **Sec. 193.011, Fla. Stat.**, and include a reduction for costs of sale and other adjustments required by **Sec. 193.011(8)**.

* 2022 values are considered "working values" and are subject to change.

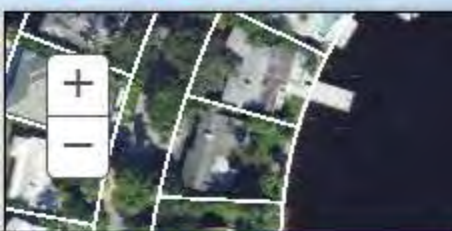
Property Assessment Values					
Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2022	\$37,799,210	\$1,862,010	\$39,661,220	\$39,661,220	
2021	\$37,799,210	\$1,862,010	\$39,661,220	\$38,724,640	
2020	\$37,799,210	\$1,869,080	\$39,668,290	\$35,204,220	

2022 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Portability	0	0	0	0
Assessed/SOH	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type 10	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Taxable	0	0	0	0

Sales History			
Date	Type	Price	Book/Page or CIN

Land Calculations		
Price	Factor	Type
\$10.00	3,779,921	SF
Adj. Bldg. S.F. (Card, Sketch)		23127
Units		2
Eff./Act. Year Built: 1972/1968		

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
03								
X								
23127								

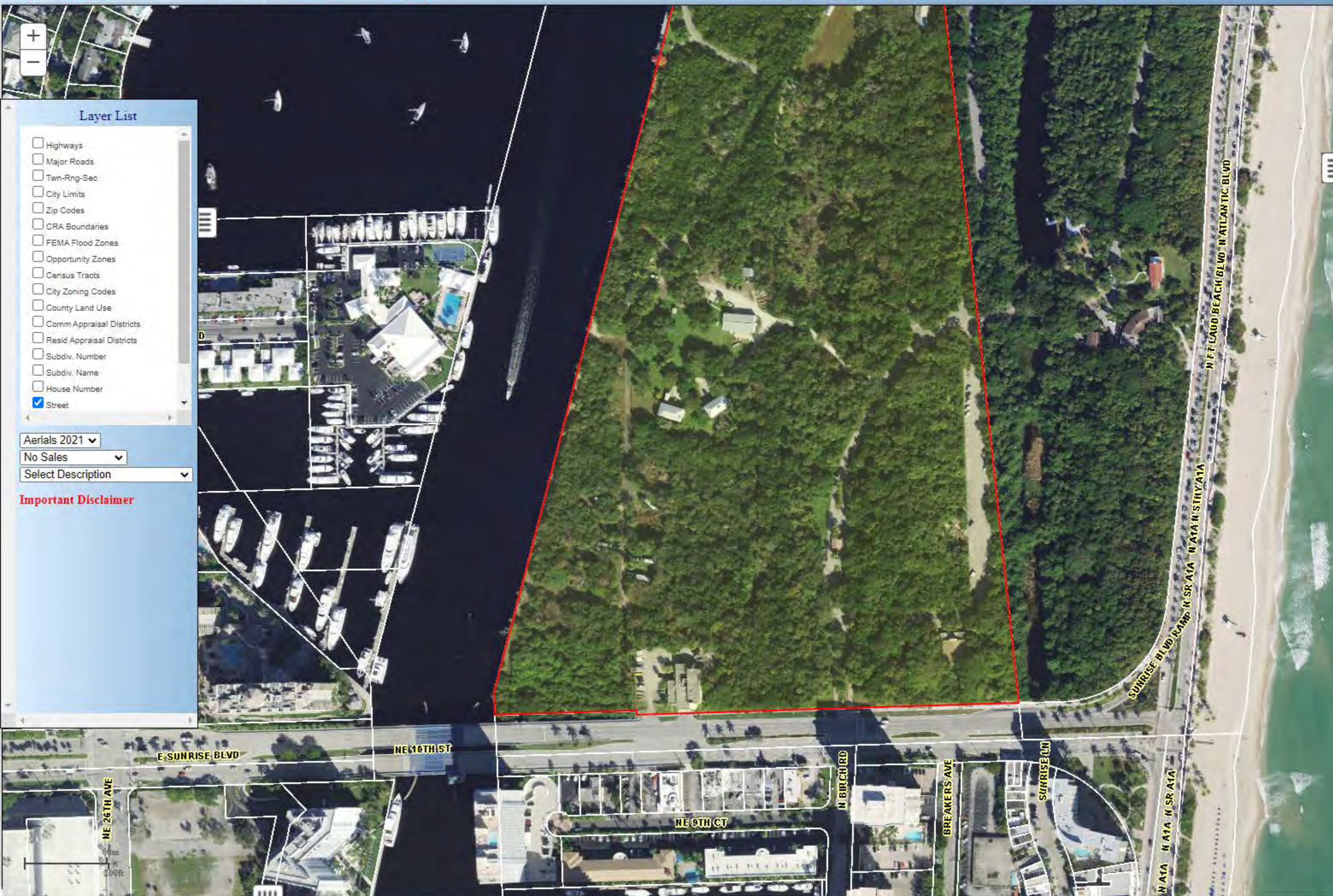


Layer List

- Highways
- Major Roads
- Twn-Rng-Sec
- City Limits
- Zip Codes
- CRA Boundaries
- FEMA Flood Zones
- Opportunity Zones
- Census Tracts
- City Zoning Codes
- County Land Use
- Comm Appraisal Districts
- Resid Appraisal Districts
- Subdiv. Number
- Subdiv. Name
- House Number
- Street

Aerials 2021
 No Sales
 Select Description

Important Disclaimer



Parcel Information

Parcel Id: [494236000010](#)

Owner: TIITF/DNR DIV REC & PARKS
HUGH TAYLOR BIRCH ST PARK

Situs Address: 3109 E SUNRISE BLVD FORT LAUDERDALE FL 33305

Legal: 36-49-42 LOT 1 LESS PAR 1 & 3 AS IN PB 17/13, PT OF LOT 2 LYING E OF INTRACOASTAL W/W R/W ALSO THAT PT OF NEW RIVER SOUND IN NE 1/4 OF SEC 36 LYING E OF

Millage Code: 0312

Use Code: 82

Land Value: \$ 37,799,210

Building Value: \$ 1,862,010

Other Value: 0

Total Value: \$ 39,661,220

SOH Capped Value: \$ 39,661,220

Homestead Exempt Amt: \$ 0

WVD Exempt Amt: \$ 0

Other Exempt Amt: \$ 39,661,220

Taxable Value: \$ 0

Sale Date 1:
Sale Price 1: 0

Deed Type 1:

Sale Date 2:
Sale Price 2: 0

Deed Type 2:

Adj Bldg S.F.: 23127

Neighborhood:

EXHIBIT #2 – LOCATION SKETCH

Fire Station #13

Project # P10918

Legend

 Fort Lauderdale Fire Rescue #13



Fort Lauderdale Fire Rescue #13

E Sunrise Blvd

Spa Sunrise Sun | Massage Fort Lauderdale

Eleven

Sonesta Fort Lauderdale Beach

Primanti Brothers

McSorley's Beach Pub

NE 9th St

Bonnet House Museum & Gardens

N Birch Rd

Breakers Ave

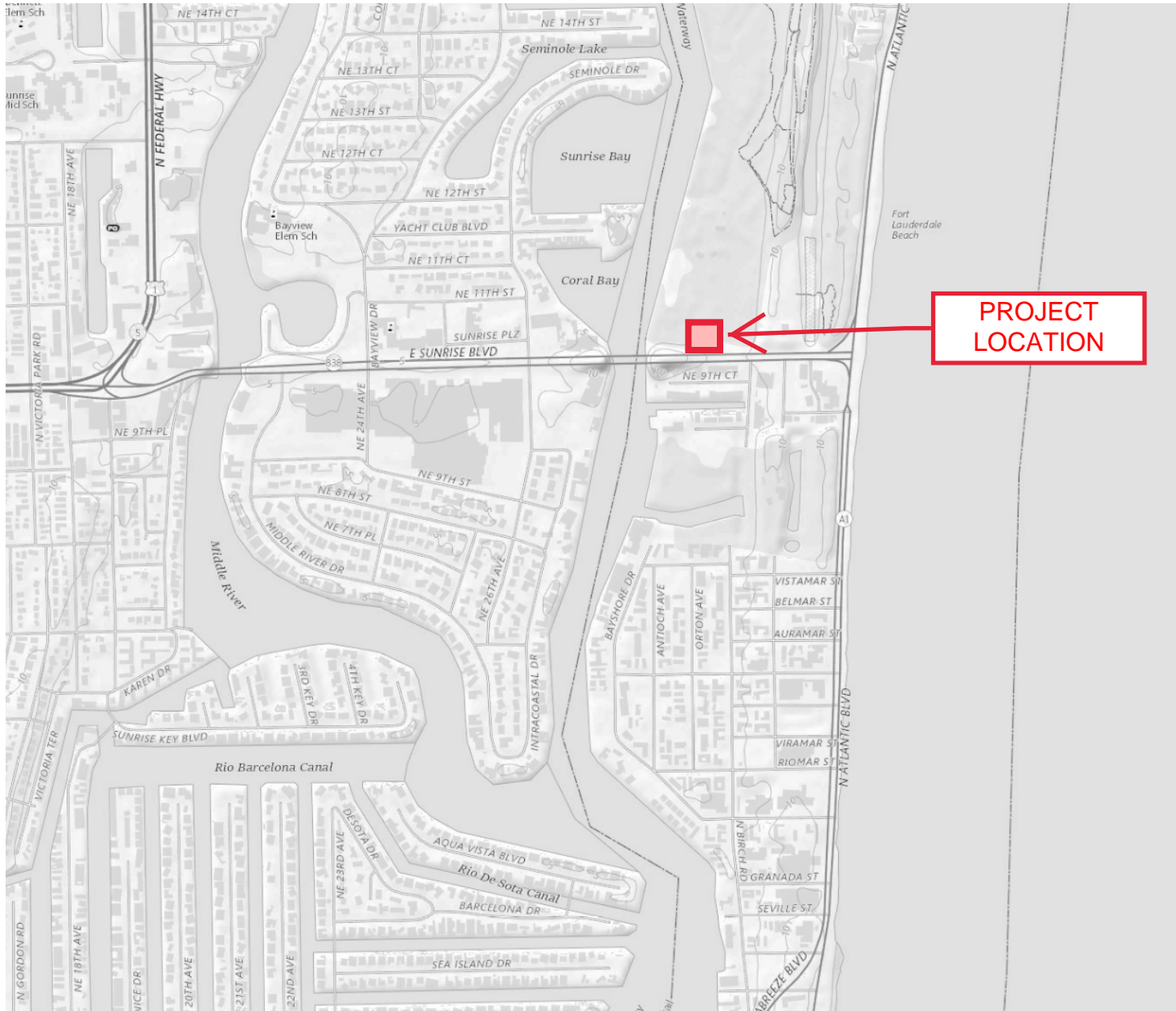
W Sunrise

Florida State Road 7



EXHIBIT #3 – USGS LOCATION MAP

USGS Map



Legends

Dataset Details

Map Credits

Print Disclaimer

Disclaimer: The suggestions and illustrations included in this map are intended to support scientific research; however, they do not guarantee the safety of an individual or structure. The contributors and sponsors of this product do not assume liability for any injury, death, property damage, or other effects because of using this map. This map must not be used for navigation or precise spatial analysis. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government. Powered by TerriaJS. <https://terria.io/>

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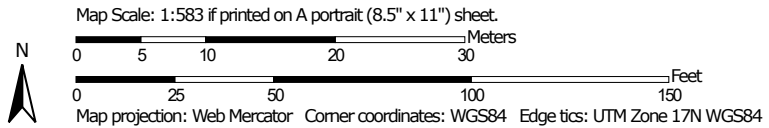
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**EXHIBIT #4 – US
DEPARTMENT OF
AGRICULTURE SCS MAP**

Hydrologic Soil Group—Broward County, Florida, East Part
(City of Fort Lauderdale - Fire Station 13)




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Broward County, Florida, East Part
 Survey Area Data: Version 17, Aug 25, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 2, 2019—Mar 26, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
32	Perrine variant silt loam, frequently flooded	B/D	0.9	59.0%
40	Urban land, 0 to 2 percent slopes		0.6	41.0%
Totals for Area of Interest			1.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

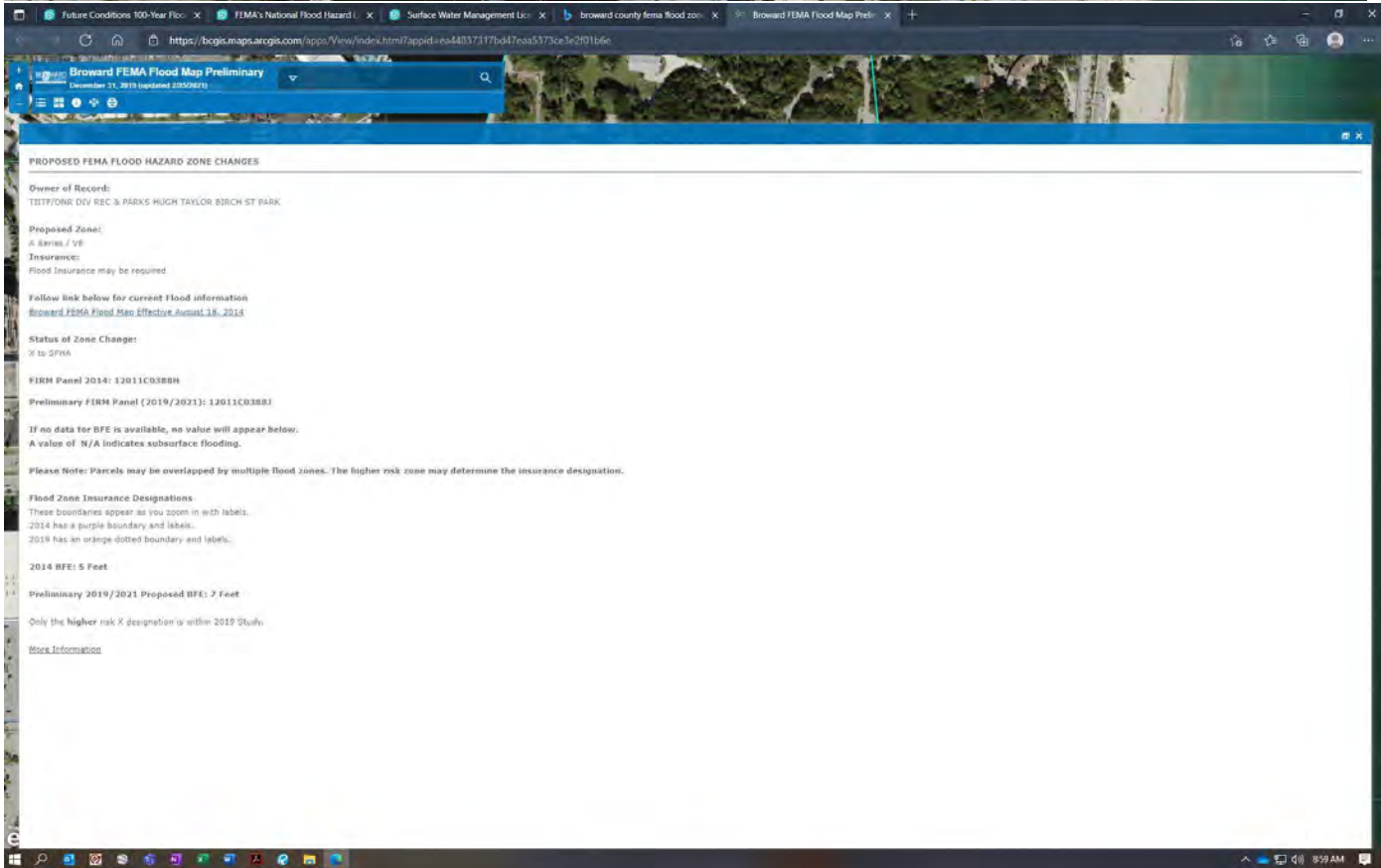
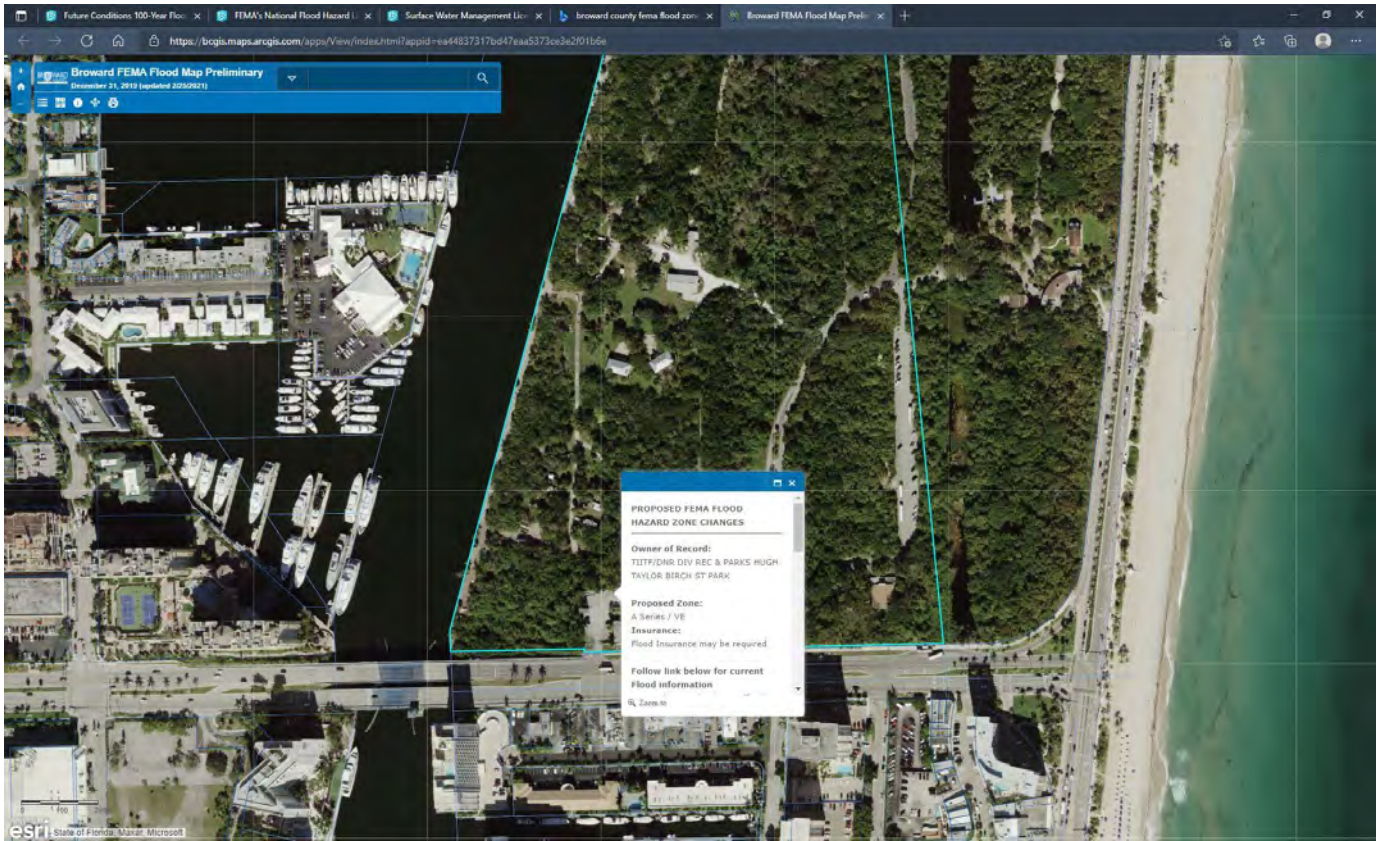
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

EXHIBIT #5 – FEMA MAP



**EXHIBIT #6 – BROWARD
COUNTY RAINFALL,
FDOT RAINFALL &
NOAA PRECIPITATION
DATA**

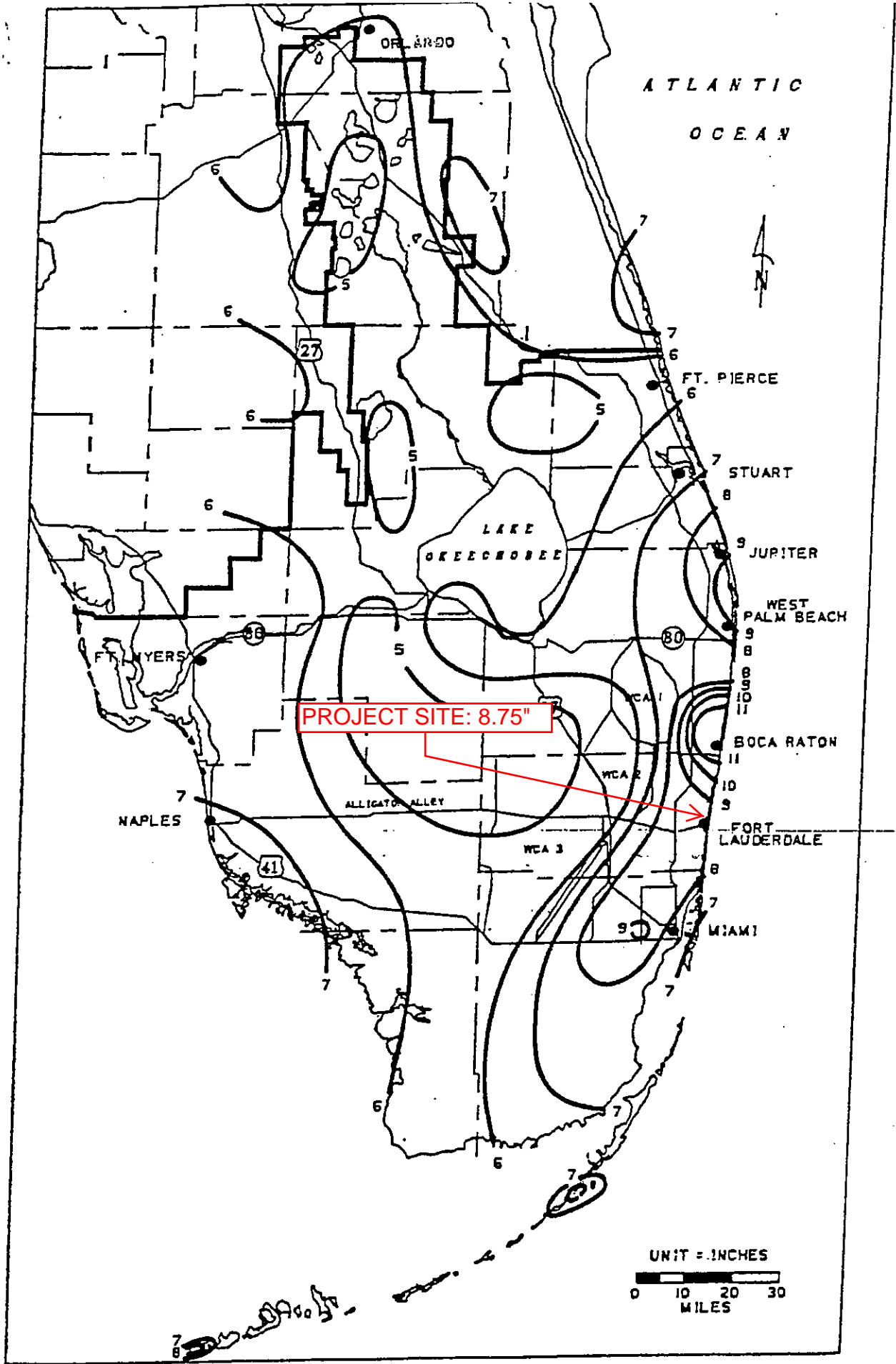


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

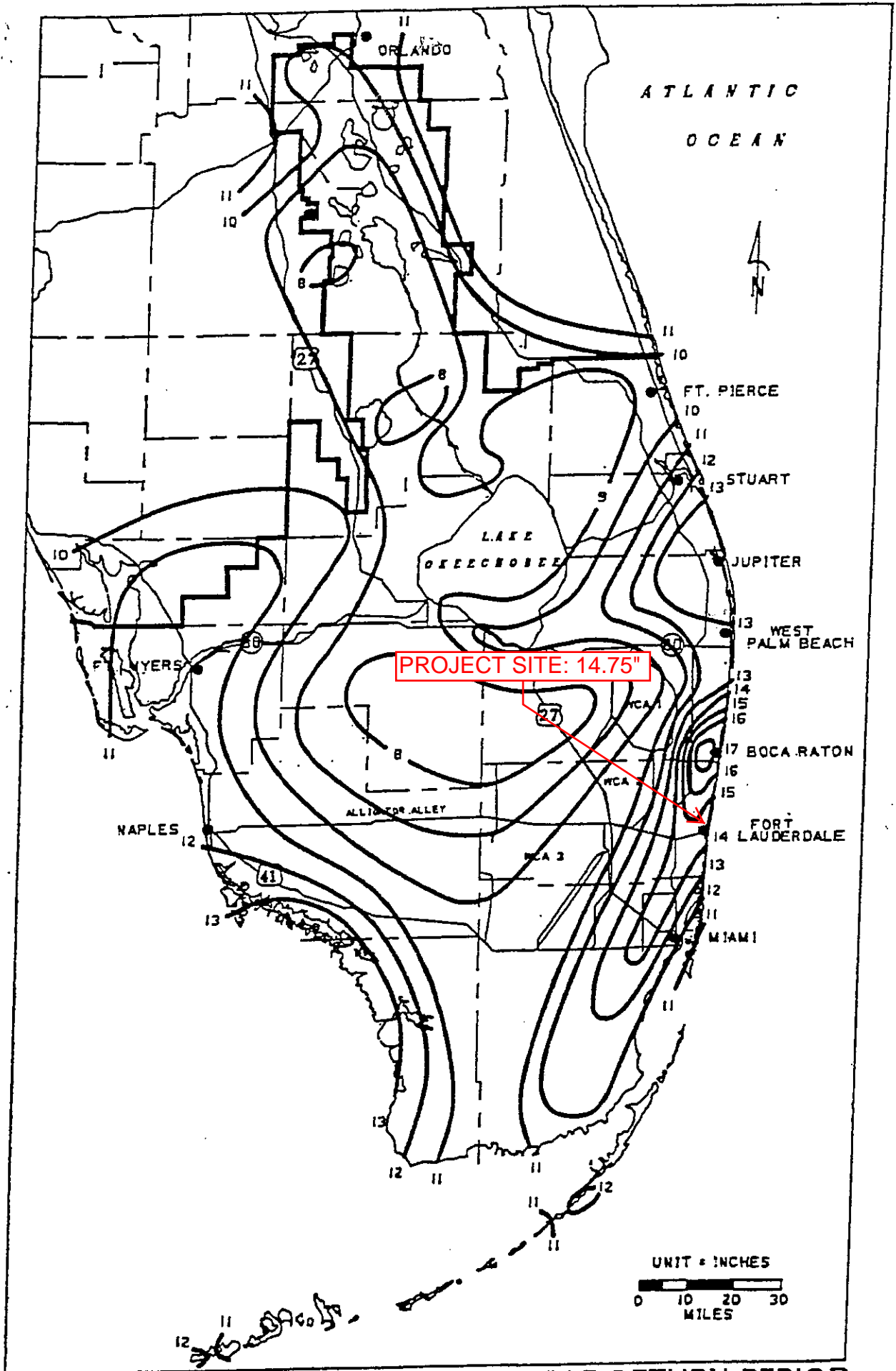


FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

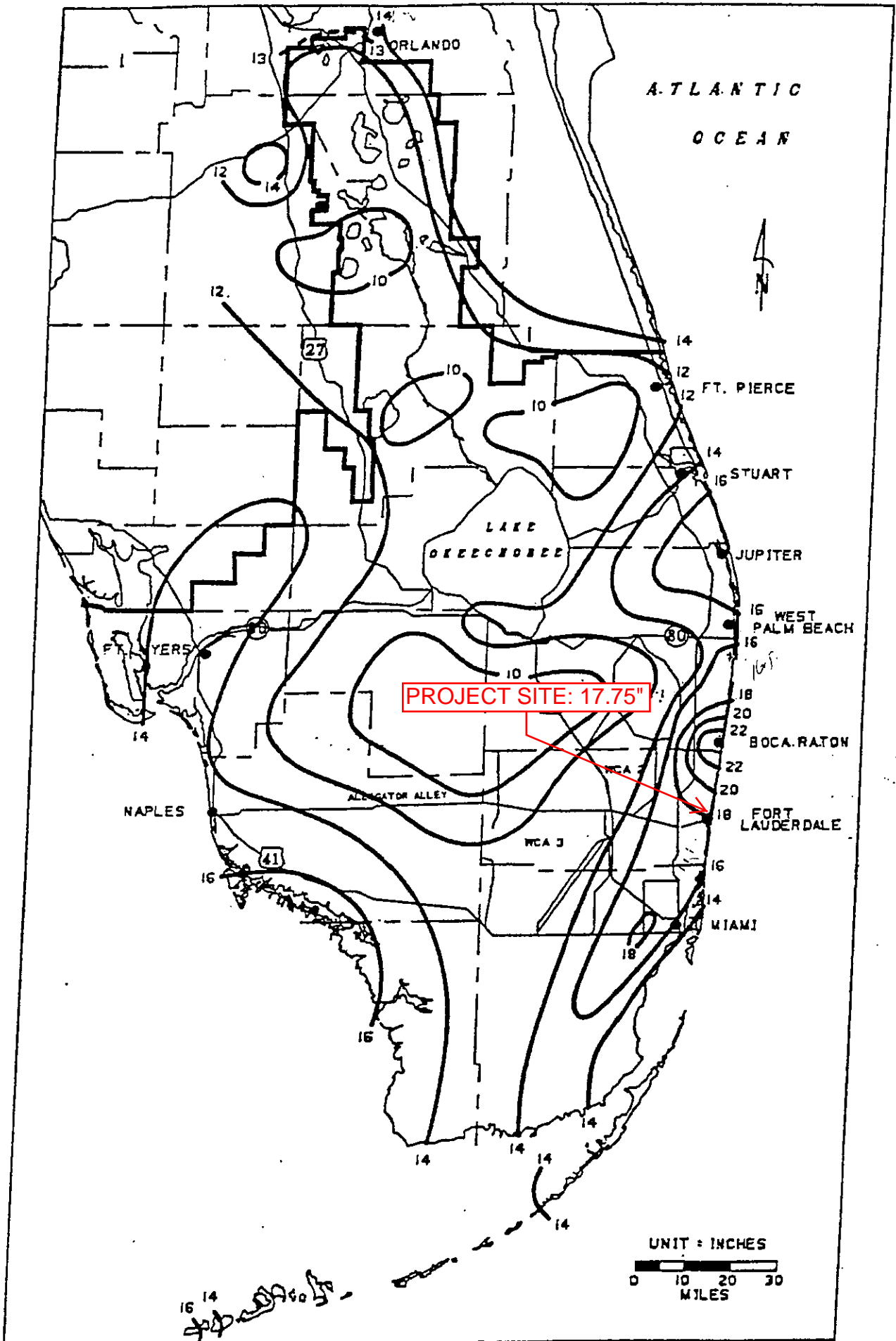


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD



NOAA Atlas 14, Volume 9, Version 2
 Location name: Hollywood, Florida, USA*
 Latitude: 26.024°, Longitude: -80.1708°
 Elevation: 3.3 ft**



* source: ESRI Maps
 ** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.549 (0.438-0.692)	0.638 (0.508-0.805)	0.784 (0.622-0.991)	0.906 (0.715-1.15)	1.08 (0.822-1.41)	1.21 (0.903-1.61)	1.34 (0.970-1.83)	1.48 (1.03-2.08)	1.66 (1.11-2.40)	1.80 (1.18-2.64)
10-min	0.804 (0.641-1.01)	0.934 (0.744-1.18)	1.15 (0.911-1.45)	1.33 (1.05-1.69)	1.57 (1.20-2.07)	1.77 (1.32-2.35)	1.96 (1.42-2.68)	2.16 (1.50-3.04)	2.43 (1.63-3.51)	2.63 (1.72-3.87)
15-min	0.981 (0.782-1.24)	1.14 (0.907-1.44)	1.40 (1.11-1.77)	1.62 (1.28-2.06)	1.92 (1.47-2.52)	2.15 (1.61-2.87)	2.39 (1.73-3.27)	2.64 (1.83-3.71)	2.96 (1.98-4.28)	3.21 (2.10-4.72)
30-min	1.57 (1.25-1.98)	1.84 (1.46-2.32)	2.27 (1.80-2.87)	2.64 (2.08-3.35)	3.14 (2.40-4.13)	3.54 (2.65-4.71)	3.93 (2.85-5.38)	4.34 (3.02-6.10)	4.88 (3.27-7.07)	5.30 (3.47-7.80)
60-min	2.16 (1.72-2.72)	2.49 (1.99-3.14)	3.07 (2.44-3.89)	3.59 (2.84-4.56)	4.36 (3.36-5.78)	4.99 (3.75-6.70)	5.65 (4.11-7.79)	6.36 (4.45-9.02)	7.36 (4.96-10.7)	8.16 (5.34-12.0)
2-hr	2.74 (2.20-3.44)	3.15 (2.52-3.94)	3.88 (3.09-4.87)	4.55 (3.61-5.74)	5.57 (4.33-7.38)	6.44 (4.88-8.63)	7.37 (5.41-10.1)	8.39 (5.92-11.9)	9.84 (6.69-14.3)	11.0 (7.27-16.1)
3-hr	3.07 (2.47-3.83)	3.50 (2.81-4.37)	4.32 (3.46-5.41)	5.10 (4.07-6.42)	6.34 (4.97-8.43)	7.41 (5.66-9.94)	8.59 (6.34-11.8)	9.89 (7.02-14.0)	11.8 (8.05-17.1)	13.3 (8.83-19.5)
6-hr	3.57 (2.89-4.43)	4.12 (3.33-5.12)	5.19 (4.18-6.45)	6.21 (4.98-7.76)	7.84 (6.20-10.4)	9.27 (7.13-12.4)	10.9 (8.07-14.9)	12.6 (9.02-17.7)	15.2 (10.4-21.9)	17.3 (11.5-25.0)
12-hr	4.03 (3.28-4.95)	4.80 (3.90-5.92)	6.23 (5.05-7.70)	7.56 (6.10-9.38)	9.62 (7.62-12.6)	11.4 (8.78-15.1)	13.3 (9.92-18.0)	15.4 (11.0-21.4)	18.4 (12.7-26.3)	20.8 (14.0-30.0)
24-hr	4.54 (3.71-5.55)	5.54 (4.53-6.78)	7.33 (5.97-8.99)	8.95 (7.26-11.0)	11.4 (9.04-14.8)	13.4 (10.4-17.6)	15.6 (11.7-21.0)	18.0 (13.0-24.8)	21.3 (14.8-30.2)	24.0 (16.2-34.3)
2-day	5.26 (4.33-6.39)	6.37 (5.24-7.75)	8.34 (6.84-10.2)	10.1 (8.26-12.4)	12.8 (10.2-16.5)	15.0 (11.7-19.6)	17.4 (13.2-23.3)	20.0 (14.6-27.4)	23.7 (16.6-33.4)	26.6 (18.2-37.8)
3-day	5.86 (4.84-7.09)	6.95 (5.73-8.41)	8.90 (7.32-10.8)	10.7 (8.75-13.0)	13.4 (10.8-17.2)	15.7 (12.3-20.3)	18.1 (13.8-24.1)	20.8 (15.2-28.4)	24.6 (17.3-34.5)	27.7 (19.0-39.1)
4-day	6.41 (5.31-7.73)	7.45 (6.16-8.99)	9.34 (7.70-11.3)	11.1 (9.10-13.5)	13.8 (11.1-17.6)	16.0 (12.6-20.8)	18.5 (14.1-24.5)	21.2 (15.5-28.9)	25.0 (17.7-35.1)	28.2 (19.4-39.7)
7-day	7.83 (6.51-9.40)	8.77 (7.29-10.5)	10.5 (8.72-12.7)	12.2 (10.0-14.7)	14.8 (12.0-18.8)	17.0 (13.4-21.9)	19.4 (14.9-25.6)	22.1 (16.3-30.0)	25.9 (18.5-36.2)	29.1 (20.1-40.9)
10-day	9.01 (7.52-10.8)	9.99 (8.33-12.0)	11.8 (9.81-14.2)	13.5 (11.2-16.3)	16.1 (13.1-20.4)	18.4 (14.6-23.5)	20.8 (16.0-27.3)	23.5 (17.4-31.7)	27.3 (19.5-37.9)	30.4 (21.1-42.6)
20-day	12.1 (10.1-14.3)	13.6 (11.4-16.1)	16.1 (13.5-19.2)	18.3 (15.2-21.9)	21.4 (17.4-26.6)	23.9 (19.0-30.1)	26.5 (20.4-34.3)	29.3 (21.7-38.9)	33.0 (23.7-45.2)	36.0 (25.2-50.0)
30-day	14.6 (12.3-17.2)	16.5 (13.9-19.6)	19.7 (16.5-23.4)	22.4 (18.7-26.6)	25.9 (21.0-31.9)	28.7 (22.8-35.8)	31.4 (24.2-40.2)	34.2 (25.4-45.0)	37.8 (27.2-51.3)	40.5 (28.5-56.0)
45-day	17.7 (14.9-20.8)	20.2 (17.0-23.8)	24.1 (20.3-28.5)	27.3 (22.8-32.4)	31.3 (25.3-38.1)	34.3 (27.2-42.4)	37.1 (28.6-47.1)	39.8 (29.6-52.0)	43.1 (31.0-58.1)	45.5 (32.1-62.6)
60-day	20.4 (17.3-23.9)	23.3 (19.7-27.3)	27.7 (23.4-32.7)	31.2 (26.2-36.9)	35.6 (28.8-42.9)	38.6 (30.7-47.5)	41.4 (32.0-52.3)	44.0 (32.8-57.2)	47.0 (33.9-63.0)	49.0 (34.7-67.3)

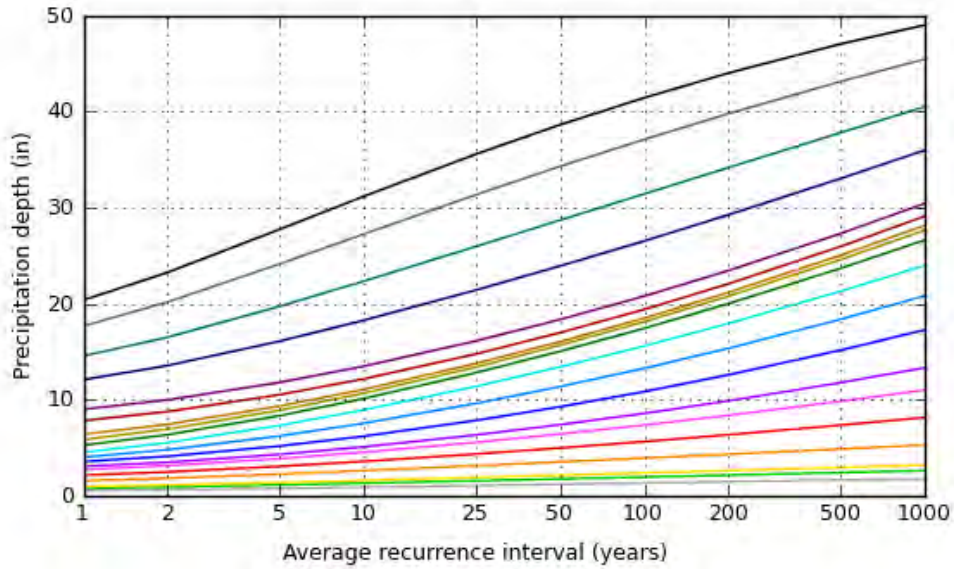
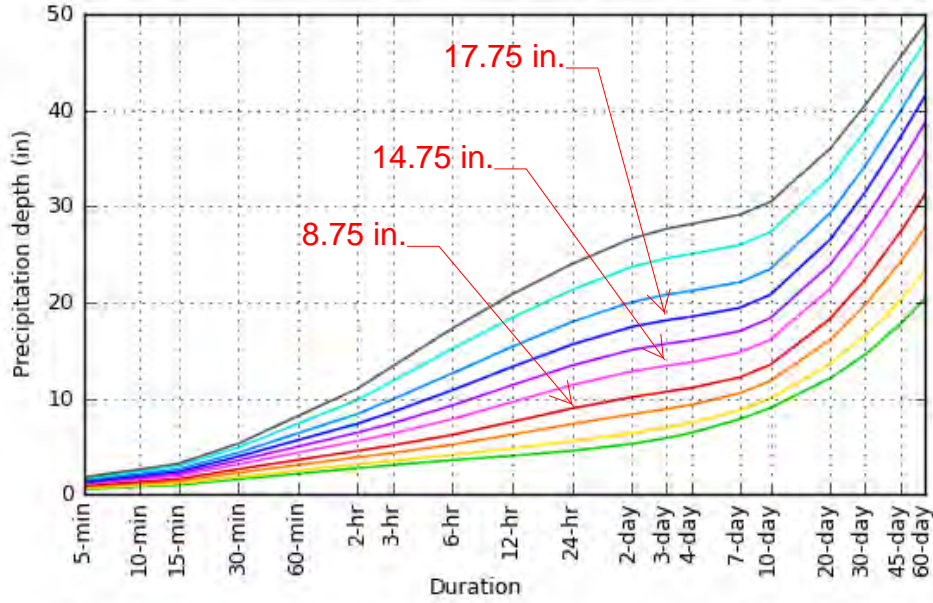
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves

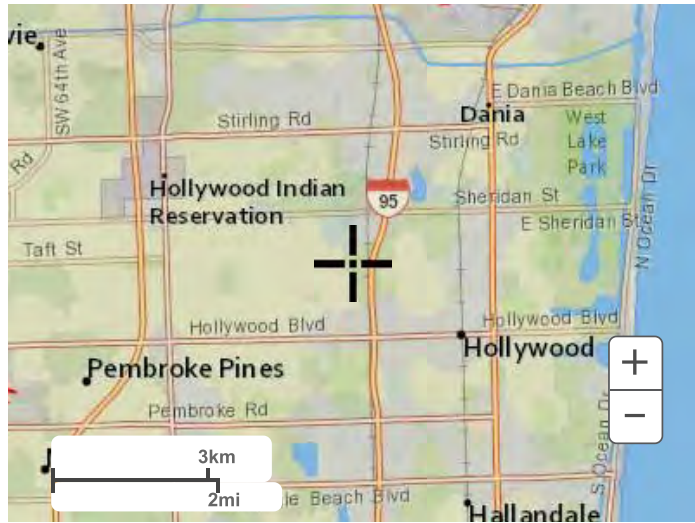
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Maps & aerials

Small scale terrain



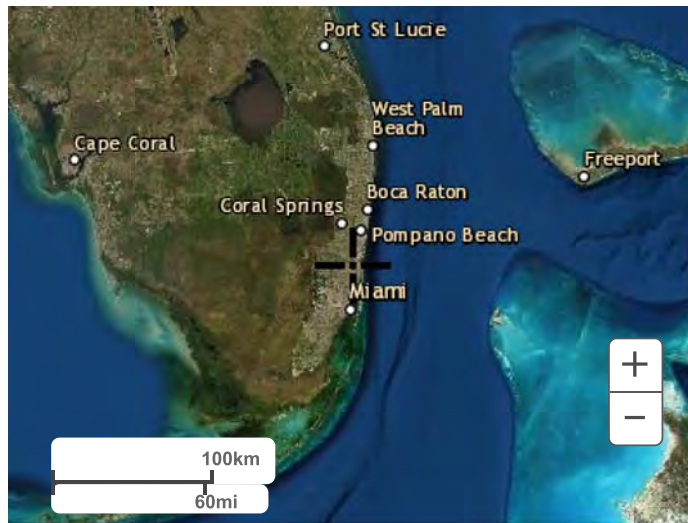
Large scale terrain



Large scale map



Large scale aerial



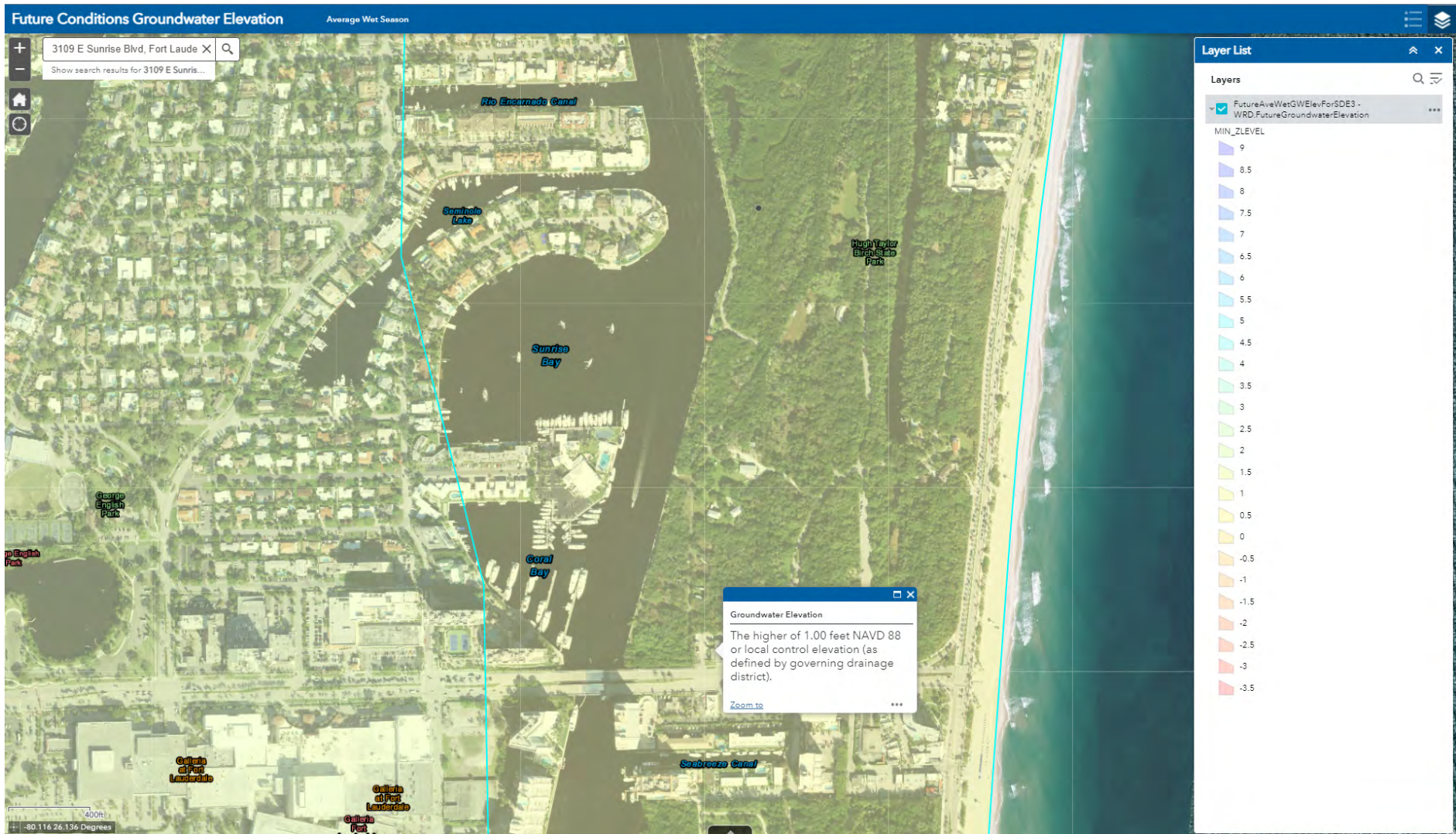
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**EXHIBIT #7 – BROWARD
COUNTY FUTURE WET
SEASON WATER TABLE
EXHIBIT**

BROWARD COUNTY - FUTURE WET SEASON WATER TABLE EXHIBIT



**EXHIBIT #8 –
GEOTECHNICAL
REPORT**

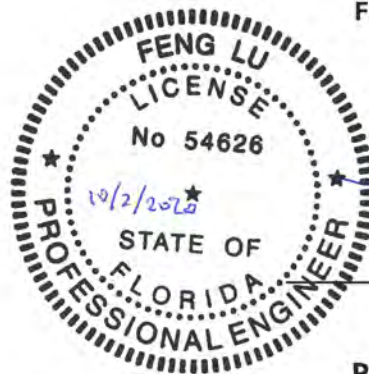
**GEOTECHNICAL ENGINEERING STUDY
Fire Station #13
2871 E Sunrise Boulevard
Ft. Lauderdale, Broward County, Florida**

Prepared For:

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A handwritten signature in blue ink, reading "Roger A. Archabal".

**Roger A. Archabal, P.E.
Principal/Vice President
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LANGAN

**2 October 2020
330069001**

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INTRODUCTION

This report presents our geotechnical engineering study performed for the proposed Fire Station No. 13 at 2871 E. Sunrise Boulevard in Ft. Lauderdale, Broward County, Florida ("the Project"). The proposed development will consist of constructing a new 2-story Fire Station building with associated access entry and parking lot. The purpose of the study was to: 1) perform a site-specific subsurface investigation and engineering inspection, 2) perform a foundation analysis and evaluation, and 3) discuss other critical foundation construction activities, such as site preparation and ground improvement, slab and foundation preparation, construction excavation and backfilling related activities. This work was performed in general accordance with our 10 March 2020 proposal, which was authorized by Ms. Beatriz Loynaz, AIA in an "Authorization to Proceed Memorandum", dated 24 August 2020.

Our understanding of the existing site conditions is based on our observations made during the field investigation as well as review of available historical aerial photographs from the Google Earth. We have been provided the following information during this report preparation:

- Sketch of Survey - Boundary and Topographic Survey, dated 14 July 2020, prepared by Nicholas Messina Jr.
- Sketch Showing Limits of the Proposed Building over a Google Map, provided in an email dated 4 September 2020.

All elevations given herein are in feet and refer to the North America Vertical Datum of 1988 (NAVD88).

SITE DESCRIPTION

The project site is located at 2871 E. Sunrise Boulevard in Ft. Lauderdale, Broward County, Florida. The site is approximately rectangular shaped, measuring about 200 ft in the east-west direction and about 160 ft in north-south direction. The site is bound to the south by Sunrise Boulevard and to the east, north and west by the Hugh Taylor Birch State Park. The site currently occupied by the existing 2-story Fire Station #13 building with associated at-grade parking/driveway and green area. The existing building is located on the southern and middle-eastern portions of the site.

Based on furnished survey plan, the site is relatively flat with ground surface elevation ranging from about el +4 to el +5 in the parking/driveway/green area and around el +5.35 to el +5.43 in the building/garage area. According to the Google Earth, the site conditions have been similar to the current condition since the earliest available aerial photograph of 1995.

PROPOSED CONSTRUCTION

The proposed development consists of constructing a new 2-story Fire Station building after demolition of the existing building. The limits of the new Fire Station building are shown on Figure 1. The rest of area will mainly serve as at-grade parking and drives. The proposed finish floor elevation of the building is el +8.0. The proposed grade for the surrounding at-grade parking/driveway is expected to be transition from el +8.0 to probable low points of el +5.0.

Preliminary structural information for the proposed 2-story structure was provided to us by Donata Williams Beasley, P.E. of S&F Engineers, Inc. The provided worst-case loads are as follows:

Column: DL=160 kips, LL = 55 kips;
Wall: DL = 4.15 kips/ft, LL = 0.75 kips/ft

SUBSURFACE INVESTIGATION

Our subsurface investigation was performed on 8 September 2020. The investigation consisted of drilling three Standard Penetration Test (SPT) test borings (identified as B1 through B3) and one percolation test (identified as PT1 at the same location as B3) at approximate locations as shown on Figure 1. All investigation work was performed by a specialty drilling subcontractor under the direction and supervision of a Langan engineer. Details of this field investigation are discussed in the following subsections.

Test Borings

Among the total of three test borings, two (B1 and B2) were drilled to a depth of 50 ft for the proposed 2-story building and one 10-ft deep boring (B3) was drilled for the proposed at-grade parking lots/driveway. All soil test boring logs are included in Appendix A.

All test borings were advanced using mud rotary drilling techniques. Split-spoon sampling was typically performed continuously in the upper 10 ft and at 5 ft intervals thereafter. The soil samples were visually examined and classified by Langan’s geotechnical engineers both in the field and in our office.

Percolation Test

One 10-ft percolation tests (identified as PT1) was performed at the project site. The percolation test was performed in general accordance with the South Florida Water Management District (SFWMD) Usual Condition Constant Head Techniques to determine the hydraulic conductivity (k-values) of the soil. The percolation test result is included in Appendix B.

SUBSURFACE CONDITIONS

Generalized Subsurface Conditions

Based on the test borings performed, the generalized subsurface conditions encountered are summarized in the following table. In addition, a generalized subsurface profile is shown on Figure 1.

Stratum Number	Material Description	Approx. Top of Stratum Elevation (ft, NAVD88)	Thickness (ft)	Typical Range of SPT N-values (blows/ft)
1	1 to 2 inches of asphalt, followed by fine sand and limerock Fill (medium dense)	+4.5 to +5.0 (Ground Surface at boring locations)	2	21 to 26
2	fine Sand, trace to some shells, limerock and silt (medium dense to very loose)	+2.5 to +3.0	3.5 to 4	1 to 13
3	Intermixed Peat, Silt and Sand, followed by sandy Silt with organics (typically, very loose or soft with local medium dense)	-0.5 to -1.5	13 to 14 (Boring B3 terminated in this stratum)	0 to 27 (typ. < 5)
4	Limestone followed by Limestone/Cemented Sand with a localized zone of silty Sand (moderately hard to very hard)	-14.5	Borings 1 and 2 terminated in this stratum	11 to over 100

Groundwater

The groundwater level was measured in two test borings during initial drilling. The measured groundwater level was typically around 4.5 to 4.8 ft below the existing grade (approximately el +0.2 to el +0.5). The groundwater levels will fluctuate seasonally as a function of rainfall and infiltration into the soil. The groundwater levels may also be influenced by the tidal variations from adjacent Intracoastal waterway and Atlantic Ocean.

Based on the Flood Insurance Rate Map (FIRM) number 12011C0388H, effective 18 August 2014, most of the site is in Zone X (0.2% annual chance flood hazard).

FOUNDATION EVALUATIONS

Based on the results of the subsurface investigation and our understanding of the proposed new construction, the following items have been considered during our foundation evaluation:

- The existing near surface granular fill and sandy materials (Strata 1 and 2) are typically medium dense in the upper 4 ft and become loose to very loose between depth of 4 and 6 ft, especially below the groundwater. Considering this and the presence of the very weak and compressible Stratum 3 material, the upper surface material can only be used for support of non-critical or non-settlement sensitive ground features. For those non-critical ground features, a soil allowable bearing pressure of 1,000 psf may be used in design.
- The peat and silt material (Stratum 3) encountered below the Stratum 2 is typically very soft and highly compressible material with thickness of 13 to 14 ft. Any additional loads causing stress into this material will result in substantial short and long-term settlements. Therefore, for support of any critical structures, this material must be either improved through a ground improvement program (i.e., preload or removal and replacement) or by-passed with a deep pile foundation system. Considering the relatively deep and thick condition of the Stratum 3 material, a ground improvement program operation would be relatively costly and not a preferable option. Therefore, a deep pile foundation system would be the preferable option for any settlement sensitive structures.
- The Stratum 4 limestone material below the Stratum 3 is moderately hard to very hard and found to be over 30 ft thick. Based on our experience, this limestone stratum will be suitable and ideal to support the proposed 2-story structure. The structure supported by a pile foundation, such as the augercast pile foundation system, embedded into the Stratum 4 – limestone would have limited settlement.
- As previously mentioned, the underlying Stratum 3 peat and silt are highly compressible. Even minor increases in ground surface elevation (i.e. increased surface loading) could result in significant settlement of any elements not structurally supported on deep foundation. While deep foundations are being provided for support of the proposed 2-story structure, we are of the understanding that the site will also be raised from the current grade of el +4 to +5 to the proposed grade of el +5 to el +8. Hence, the site grade will be raised about 1.0 to 3.5 ft which could result in surface settlements on the order of 6 to 12 inches. Therefore, we recommend that a preloading program be considered to “pre-compress” the site as discussed in detail in the “At-grade Parking/Driveway” section of the report.

For the proposed 2-story structure, considering relatively light loads associated with the structure and based on our experience, 14-inch-diameter 35-ton compressive design augercast piles appropriately embedded into

the Stratum 4 Limestone would be suitable for efficient support of the proposed 2-story structure with limited settlement.

FOUNDATION RECOMMENDATIONS

Proposed 2-story Structure

The proposed 2-story structure can be safely supported on short 14-inch-diameter augercast piles with a 35-ton design compressive capacity. The augercast piles should be drilled to a minimum 6 ft embedment into the relatively competent Stratum 4 limestone. According to local practice, experience and interpretation of the Florida Building Code, no load testing is required for piles supporting 35 tons or less, if a geotechnical engineering study is performed. Hence, no load testing would be required for this project.

Details of the pile design requirements are summarized as follows:

Pile Size and Type:	14-inch-diameter augercast
Bearing Capacity:	35 tons
Uplift Capacity:	15 tons (for wind loads)
Lateral Capacity:¹	2.5 tons
Pile Embedment:	6 ft into the relatively competent limestone with approximate tip elevation of el -21 (or 29 ft assuming pile installation working grade at el +8)
Minimum Pile Spacing:	3.5 ft on centers
Minimum Steel Reinforcement:	Four #6 bars extending full length; #3 ties at 6-inch spacing for 10 ft below the pile cap and 12-inch spacing for remaining length.
Grout Compressive Strength:	4,000 lbs/in ²

¹ Assumes about ¼ inch lateral deflection under fix-head condition. If additional lateral capacity is required, piles on a 1H:6V batter could be used.

Due to relatively light load associated with the structure, we anticipate that settlement for the proposed augercast-pile supported structure should be in an order of ½ inch or less.

Ground Floor Slab

The proposed finished ground floor slab will be at el +8, which will be about 2.5 to 3.5 ft higher than the current grade. Considering the presence of a relatively thick, very weak/soft and highly compressible Stratum 3- organic peat and silt material and relatively small footprint of the building, we recommend that a structural slab be used in the design. The following items should be considered in the design and construction for the recommended structural slab approach.

- To minimize the potentially large differential settlement impacts between the pile supported building/structural slab and the abutting at-grade support driveway, an appropriately implemented preload ground improvement program should be performed. This program is discussed in the following section of the report.
- All pipes below floor level should be structurally hung from the slab using appropriate connectors in order to prevent pipe settlement as the ground surface settles away from the slab. Flexible connection should be incorporated into all pipes at the interface between the pile supported structures and the non-pile supported area outside the structure.

- To minimize a potentially negative downdrag force being applied to the proposed piles (by the settling upper soils), the process of raising grade to around the proposed grade should be performed as soon as possible and remain in place for at least 4 weeks prior to pile installation. Also, the pile length has been adjusted to account for some negative skin friction loading on the piles.

At-grade Parking/Driveway

The existing site is relatively flat with typical topographic elevations varying from approximately el+4 to el +5. The proposed grade for the surrounding at-grade parking/driveway is expected to be transition from el +8.0 to probably low points of el +5.0. The site would like be raised to about 1 to 3.5 ft. Since the presence of a relatively thick very loose/soft and highly compressible organic peat and silt material (Stratum 3) is near surface, any grade or loading condition changes will cause additional stress into this weak stratum and will result in substantial short and long-term settlements. (Estimated settlements were previously discussed in this report.) Therefore, a preload program as discussed below is recommended to pre-compress the underlying compressible soils in order to minimize short and long-term settlement, and associated pavement distress, for the proposed at-grade parking/driveway.

Based on the height of fill required to raise grade, the following table provides our recommendations for the preload requirements and surcharge fill heights (above the finished grade):

Height of New Fill to Raise Grade (ft)	Preload Surcharge Fill Height (ft)
0 to 1	2
1 to 2	3.5
2 to 3.5	5

After raising grade the site to the proposed grade with the engineered fill, we recommend the placement of preload fill (above finished grade) within the limits of the proposed at-grade parking/driveway area plus 5 ft beyond where applicable. If desired, the preloading program can be performed in a piece-meal pattern with at least 5 ft overlap between each phase. A minimum duration of the preload is likely about eight to ten weeks. The preload duration could be reduced if preload height is increased. After completion of the preload process, the at-grade parking/driveway construction may be performed in its typical manner.

OTHER CONSIDERATIONS

Site Preparation, Raising Grade and Preload

The site preparation work is expected to involve demolition of the existing building and removal of any underground foundations and utilities. Stripping and grubbing should be performed, as necessary, to remove asphalt, grass/vegetation/topsoil, and other deleterious materials. After that, the entire site should be graded level and compacted in-placed (proofrolled) with a minimum of six uniform overlapping passes of a 5-ton (static drum weight) vibratory roller, such as an Ingersoll Rand SD-100D, or equivalent. If soft or unstable areas are observed during proofrolling, these materials should be removed and replaced with clean, engineered fill.

Then, raising grade to the proposed grade with the engineered fill should be performed followed by the preload program, where applicable.

Fill for Raising Grade and Engineered Fill

In order to raise grade at the project site, imported fill will be required. All imported fill material shall be certified as environmentally free of contamination by the source providing the fill. We recommend that the engineered fill, as specified herein, be used at the project site.

The engineered fill material should be either on-site or imported, environmentally clean, inorganic granular material with less than 10% fines passing the #200 sieve. The proposed fill should be approved by Langan. The engineered fill should be used to raise grades or to backfill around pile caps. These fills should be placed in lifts no greater than 12 inches thick, and each lift should be compacted to at least 95% of the material's maximum dry density as determined by ASTM D1557. In restricted areas, where a small compactor must be used, the lift thickness should be reduced to 6 to 9 inches, as directed by our inspecting engineer. When backfilling below the water table (if required), crushed ¾-inch filter stone (#57 stone) should be used and tamped in lifts with an excavator bucket. No density tests will be required for the #57 stone.

Utilities

All utilities should be installed per the requirements of Broward County and the Civil Engineer's drawings and specifications.

When backfilling over the utility lines, the engineered fill, as specified above, should be used. If ¾-inch filterstone or other gravel type material is used as pipe bedding and sandy backfill is placed above, the filterstone and sandy backfill should be separated by a filterfabric (i.e., Mirafi 140N or equivalent) to prevent migration of the sandy material into the voids of the underlying pipe bedding.

Construction Excavation and Dewatering

Properly sloped or benched open-cut excavations, meeting the requirements of OSHA, are expected to be sufficient for the shallow pile cap and grade beam excavations. For those deeper cap excavations (typically greater than 4 ft), a trench box or other means and methods, meeting the OSHA requirements, should be applied where sloping cannot be achieved.

Pile caps deeper than el +1 to el +2 will likely require dewatering to allow for construction. Based on anticipated pile cap bottom elevation, dewatering should not be required for most of pile caps, if not all of pile caps. If the pile caps extend about 1 to 3 ft below the groundwater, dewatering could probably be accomplished with localized sump pumping. To minimize the dewatering efforts, we recommend that pile caps be designed as high as possible.

If dewatering is required, the general contractor should discuss the discharge of pumped water with the Owner and Broward County to determine (1) if discharging pumped water into the County's storm drains is permitted; (2) if on-site disposal of the pumped water is required, and (3) if any special permits are required. Reduction of the turbidity of the discharged water will most likely be required and could be accomplished through the use of temporary baffled sedimentation tanks and or other means, if applicable.

A design of the proposed dewatering system should be prepared by the prospective dewatering contractor. His design should include the equipment, layout strategy, and anticipated pumping capacity. In addition, the general contractor should prepare an excavation procedure, excavation support shoring, pre-stabilization plan, if required. We suggest both of these designs and procedures be submitted to our office for review and comments. A meeting with owner, general contractor, dewatering contractor, and Langan should be scheduled prior to construction to discuss the excavation procedure, the dewatering plan, and other related issues.

TECHNICAL SPECIFICATIONS AND ENGINEERING INSPECTION

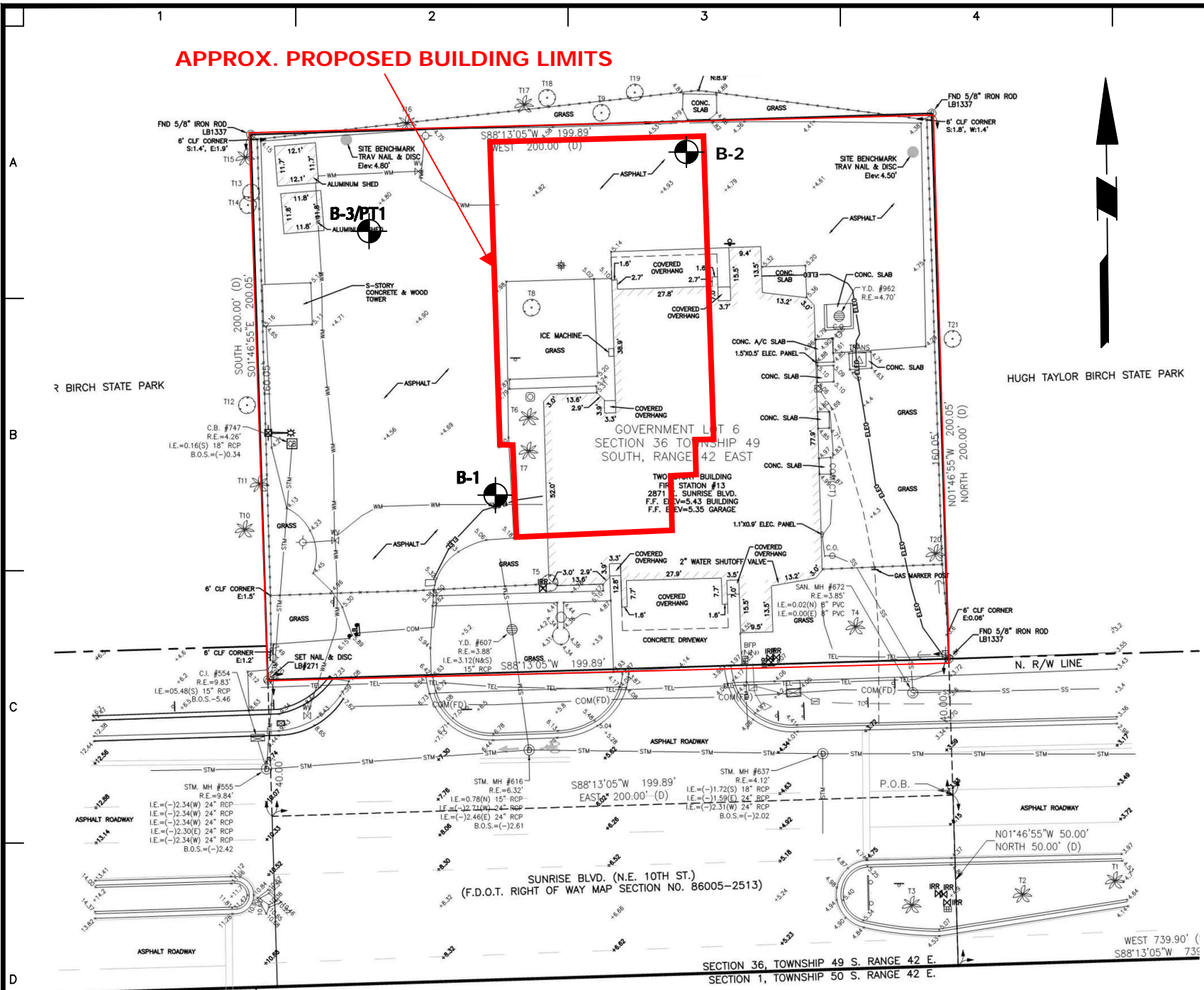
A set of technical specifications will be required for production pile installation, site preparation, preloading, earthwork, and foundation preparation. Considering our knowledge of the site, these specifications should be prepared by Langan.

During construction, it is important that all geotechnical related work be done under qualified geotechnical engineering inspection in order to ensure proper procedures are followed. Production piles should be installed under full-time engineering inspection to confirm that the piles are installed properly and to ensure satisfactory performance of the capacity augercast piles. Field observations and prompt engineering decisions must be made to determine the required length of the rock socket, especially if soft rock conditions are encountered. All excavations and backfilling should be inspected and tested by a qualified geotechnical engineer. To insure proper implementation of our recommendations and to maintain the continuity of our responsibility on this project, we strongly recommend that our firm be engaged in the engineering inspection, monitoring, and testing of the foundation-related work during construction.

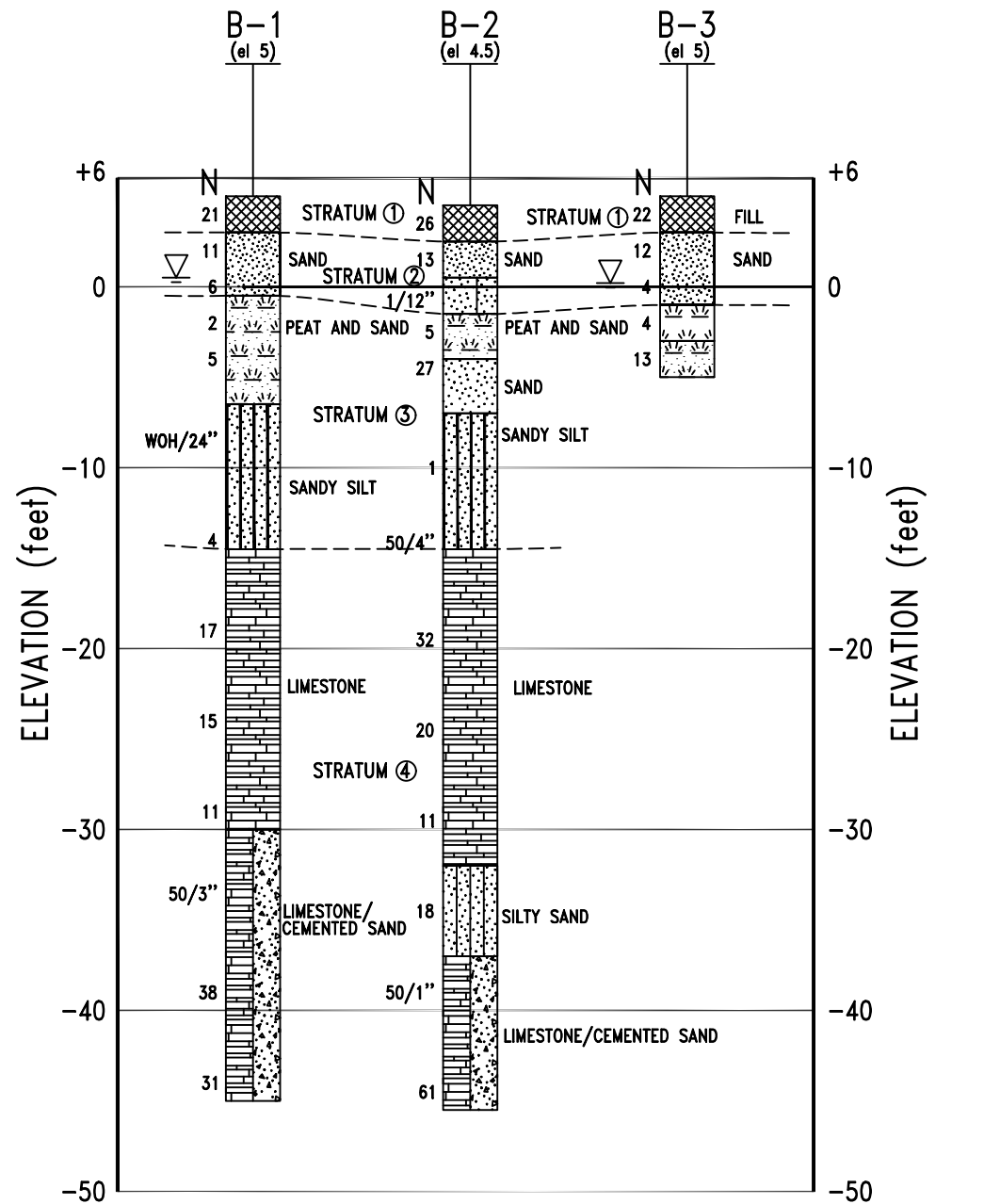
LIMITATIONS

The foundation alternatives and associated recommendations given herein are our best engineering judgment as to viable foundation support systems for the proposed construction. Final structural loading information should be forwarded to us promptly for review to determine if they would have an impact on the recommendations given in this report. To ensure proper foundation construction, qualified geotechnical engineering inspection must be provided during all foundation-related site preparation and installation work, and earthwork. Our continued involvement in the project is required for us to verify that the recommendations given herein are implemented and to maintain our continuity of responsibility on this project.

APPROX. PROPOSED BUILDING LIMITS



BORING LOCATION PLAN
SCALE: 1" = 40'



GENERALIZED SUBSURFACE PROFILE
VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: N.T.S.

NOTES:

1. LOCATIONS SHOWN ARE APPROXIMATE.
2. THE PROFILE SHOWS ONLY GENERALIZED SUBSURFACE CONDITIONS AT RESPECTIVE BORING LOCATIONS. VARIATIONS IN SUBSURFACE CONDITIONS SHOULD BE EXPECTED BETWEEN BORINGS. SEE BORING LOGS FOR DETAILED DESCRIPTIONS OF CONDITIONS ENCOUNTERED AT EACH LOCATION.
3. ELEVATIONS SHOWN ARE APPROXIMATE AND ARE IN FEET, REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD 1988).
4. BASE PLAN WAS REPRODUCED FROM A PROVIDED EXISTING SURVEY PLAN PREPARED BY NICHOLAS MESSINA JR. DATED 7/14/2020.

LEGEND:

- B-3/PT1
 - N
 - WATER ENCOUNTERED AT TIME OF DRILLING
 - APPROXIMATE GROUND SURFACE ELEVATION (NAVD88)
- APPROXIMATE LOCATIONS OF SOIL BORINGS/PERCOLATION TEST
- STANDARD PENETRATION RESISTANCE N-VALUE (BLOWS/FT)

 Langan Engineering and Environmental Services, Inc. 15150 NW 79th Court, Suite 200 Miami Lakes, FL 33016 T: 786.264.7200 F: 786.264.7201 www.langan.com FL Certificate of Authorization No. 00006601/LB8172/LB8198	Project FT. LAUDERDALE FIRE STATION 13 2871 E SUNRISE BLVD	Drawing Title BORING LOCATION PLAN AND GENERALIZED SUBSURFACE PROFILE	Project No. 330069001	Drawing No. FIG.1
	Project BROWARD FLORIDA	Date SEPTEMBER 2020	Drawn By MY	Checked By FL

APPENDIX A

LOGS OF TEST BORINGS

PROJECT Ft Lauderdale Fire Station 13			PROJECT NO. 330069001		
LOCATION 2871 E Sunrise Blvd.			ELEVATION AND DATUM Approx. + 5 (ft. NAVD88)		
DRILLING EQUIPMENT CME-55 Truck Mounted			DATE STARTED 9/8/20		DATE FINISHED 9/8/20
SIZE AND TYPE OF BIT 2-7/8in Tricone Roller Bit			NUMBER OF SAMPLES 13		DIST. -
CASING DIAMETER (in) 2-3/4in			WATER LEVEL (ft.) 4.5		COMPLETION DEPTH 50 ft.
SAMPLER 2-inch-diameter split spoon			DRILLING FOREMAN Jaime Perez		
SAMPLER HAMMER Automatic	WEIGHT(lbs) 140lbs	DROP(in) 30inches	INSPECTING ENGINEER Gurriel Zeigerman		

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ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		
+5.0	Approximately 1-2" ASPHALT PAVEMENT	[Cross-hatch pattern]		S1	SS	14	20	11	21	
+3.0	Brown to light gray fine SAND and LIMEROCK [FILL]	[Dotted pattern]		S2	SS	18	8	5	11	
	Light brown to brown fine SAND, trace shells and limerock fragents	[Dotted pattern]	5	S3	SS	13	3	3	6	
-0.5	Dark brown PEAT, some sand	[Wavy pattern]		S4	SS	20	1	1	2	
	Dark brown PEAT and fine SAND	[Wavy pattern]	10	S5	SS	16	2	2	5	
-6.5	Gray sandy SILT, trace to some organics	[Vertical lines]		S6	SS	24	WOH/24"		WOH/24"	Easy drilling
-14.5		[Vertical lines]	20	S7	SS	16	2	1	4	Moderate drilling
		[Vertical lines]	25	S8	SS	18	10	7	17	Moderate drilling
	Light gray LIMESTONE, some sand	[Horizontal lines]	30	S9	SS	12	6	7	15	Moderate drilling
-30.0		[Horizontal lines]	35	S10	SS	12	8	7	11	Moderate drilling
		[Horizontal lines]	40	S11	SS	3	9 50/3"		50/3"	Hard drilling
	Light gray LIMESTONE/CEMENTED SAND, some sand	[Horizontal lines]	45	S12	SS	14	15	12	38	Hard drilling
-45.0	Boring terminated at 50 feet	[Horizontal lines]	50	S13	SS	12	7	15	31	

PROJECT Ft Lauderdale Fire Station 13			PROJECT NO. 330069001		
LOCATION 2871 E Sunrise Blvd.			ELEVATION AND DATUM Approx. + 4.5 (ft. NAVD88)		
DRILLING EQUIPMENT CME-55 Truck Mounted			DATE STARTED 9/8/20		DATE FINISHED 9/8/20
SIZE AND TYPE OF BIT 2-7/8in Tricone Roller Bit			NUMBER OF SAMPLES 13		DIST. -
CASING DIAMETER (in) 2-3/4in			WATER LEVEL (ft.) ▽		COMPLETION DEPTH 50 ft.
SAMPLER 2-inch-diameter split spoon			DRILLING FOREMAN Jaime Perez		
SAMPLER HAMMER Automatic	WEIGHT(lbs) 140lbs	DROP(in) 30inches	INSPECTING ENGINEER Gurriel Zeigerman		

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ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT.		
+4.5	Approximately 1-2" ASPHALT PAVEMENT	[Cross-hatch symbol]		S1	SS	18	18			
+2.5	Light brown fine SAND and LIMEROCK [FILL]	[Dotted symbol]		S2	SS	20	13	26		
+0.5	Light brown fine SAND, trace shell and limerock fragments	[Dotted symbol]		S3	SS	18	7	13		
-1.5	Brown to gray SAND and SILT	[Dotted symbol]	5	S4	SS	16	6	13		
-4.0	Brown to dark brown fine SAND, some peat	[Dotted symbol]		S5	SS	24	1	1/12"		
-7.0	Gray fine SAND, some shell fragments	[Dotted symbol]	10	S6	SS	19	7	2		
-14.5	Gray to dark gray sandy SILT, trace to some organics	[Dotted symbol]	15	S7	SS	24	3	4		
			20	S8	SS	18	4	12		
			25	S9	SS	12	15	12		
			30	S10	SS	14	3	4		
			35	S11	SS	24	4	12		
-32.0	Light gray silty SAND, trace to some limestone	[Dotted symbol]	40	S12	SS	1	1	2		
-37.0			45	S13	SS	19	29	30		
-45.5	Light gray LIMESTONE / CEMENTED SAND, some sand	[Dotted symbol]	50				50/4"	50/4"		Hard drilling
	Boring terminated at 50 feet						10	7		
							11	26		Moderate to hard drilling Rig chattering
							50/1"	50/1"		Hard drilling Rig chattering
							29	31		
							50/1"	50/1"		

PROJECT Ft Lauderdale Fire Station 13			PROJECT NO. 330069001		
LOCATION 2871 E Sunrise Blvd.			ELEVATION AND DATUM Approx. + 5 (ft. NAVD88)		
DRILLING EQUIPMENT CME-55 Truck Mounted			DATE STARTED 9/8/20		DATE FINISHED 9/8/20
SIZE AND TYPE OF BIT 2-7/8in Tricone Roller Bit			NUMBER OF SAMPLES 5		DIST. 5
CASING DIAMETER (in) 2-3/4in			WATER LEVEL (ft.) 4.8		UNDIST. -
SAMPLER 2-inch-diameter split spoon			DRILLING FOREMAN Jaime Perez		
SAMPLER HAMMER Automatic	WEIGHT(lbs) 140lbs	DROP(in) 30inches	INSPECTING ENGINEER Gurriel Zeigerman		
			COMPLETION DEPTH 10 ft.		CORE -
			FIRST 4.8		COMPL. ▼
			FIRST ▼		24 HR. ▼

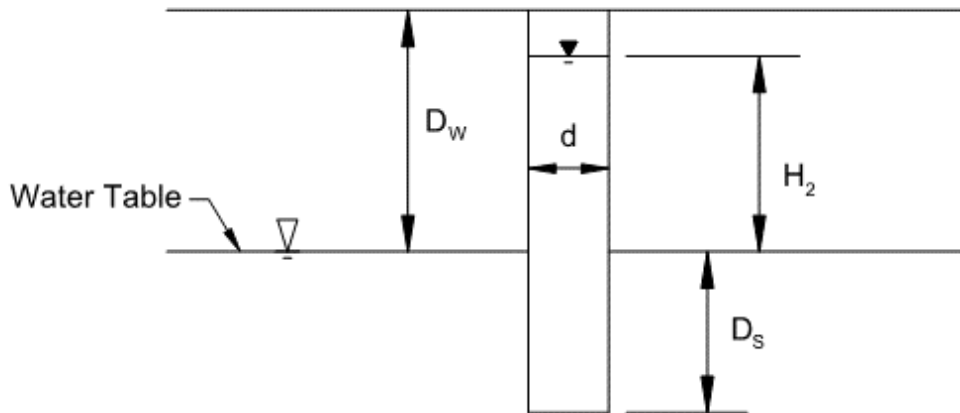
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ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS PER FT		
+5.0	Approximately 1-2" of ASPHALT PAVEMENT Light brown fine SAND and LIMEROCK [FILL]			S1	SS	18	37	14	22	
+3.0	Light brown fine SAND, trace shells and limerock fragments		2	S2	SS	12	8	6	12	
-1.0	Dark brown PEAT with sand		4	S3	SS	12	3	2	4	
-3.0	Dark brown fine SAND, some PEAT		6	S4	SS	24	2	2	4	
-5.0	Boring terminated at 10 feet		8	S5	SS	18	3	6	13	
			10				7	11		
			12							
			14							
			16							
			18							
			20							
			22							
			24							

APPENDIX B

PERCOLATION TEST RESULT SHEET

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
"USUAL CONDITION" OPEN-HOLE
EXFILTRATION TEST**



Test No.	Test Date	Test Depth	Test Location	Surface Elevation	Witnessed by:
PT1	9/8/2020	10 feet	Shown on Plan	+5 ft, NAVD88	Guriel Zeigeman

TEST DATA

D = Test Hole Diameter:	6 inches
D_w = Depth to Water Table:	4.83 feet
H₂ = Head on Water Table:	4.83 feet
D_s = Saturated Hole Depth:	5.16 feet
Q = Average Stabilized Flow Rate:	0.65 gallons per minute

HYDRAULIC CONDUCTIVITY

$$K = \text{Hydraulic Conductivity} = 4Q / [\pi d(2H_2^2 + 4H_2D_s + H_2d)]$$

K = 2.48 x 10⁻⁵ CFS/ft² per foot of head

SOIL PROFILE

<u>Depth</u>	<u>Description</u>
0 – 2'	1-2" Asphalt over light brown fine Sand and Limerock
2' – 6'	Light brown fine SAND, trace shells and limerock fragments
6' – 10'	Dark brown Peat with Sand

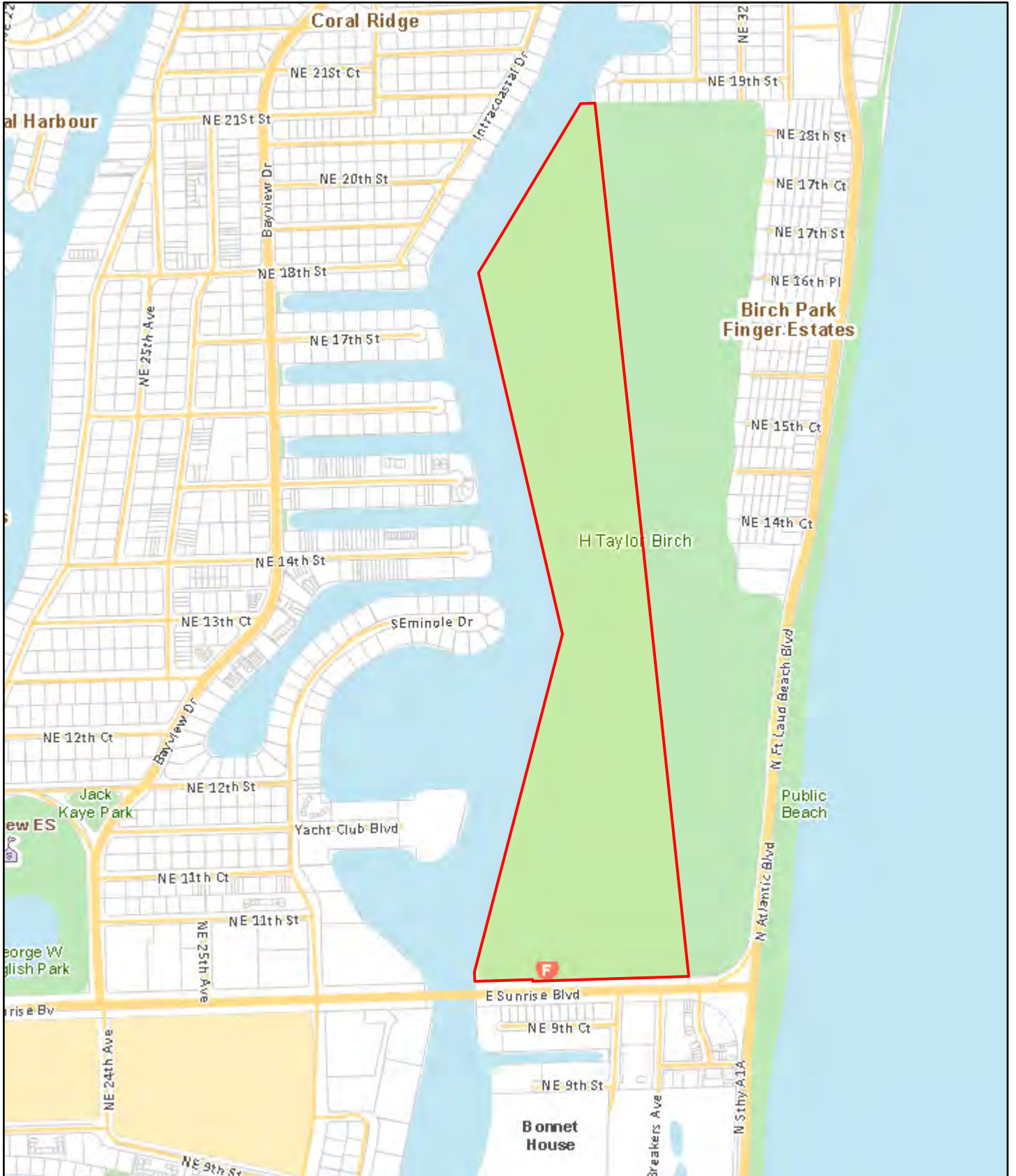
LANGAN

Langan Engineering & Environmental Services, Inc.
15150 NW 79th Court, S-200
Miami Lakes, FL 33016
P.786.264.7200 F.786.264.7201
FL Certificate of Authorization No. 0006601

Ft. Lauderdale Fire Station #13
2871 E Sunrise Blvd., Ft. Lauderdale, Florida

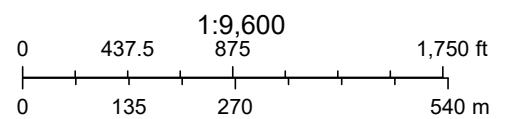
Project No. 330069001
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Fire Station No. 13 - Hugh Taylor Birch State Park



April 11, 2023

Folio # 49423600010





Florida Department of Transportation

RON DESANTIS
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

KEVIN J. THIBAUT
SECRETARY

July 7, 2021

THIS PRE-APPLICATION LETTER IS VALID UNTIL – July 7, 2022
THIS LETTER IS NOT A PERMIT APPROVAL

Alex Scheffer, P.E.
Craven Thompson & Associates, Inc.
3563 NW 53rd Street
Fort Lauderdale, FL 33309

Dear Craven Thompson & Associates, Inc.:

RE: Pre-application Review for **Category B Driveway**, Pre-application Meeting Date: **April 15, 2021**

Broward County - Fort Lauderdale; SR 838; Sec. # 86005000; MP: 0.995; Access Class - 5;

Posted Speed - 35; SIS - No; Ref. Project: FM 444120.1-Vandana Nagole-PRELIMINARY ENGINEERING, FM 441754.1- Donovan Pessoa- ATMS - ARTERIAL TRAFFIC MGMT

Request:

- **Driveway 1: Maintain existing full access driveway on the north side of SR 838, approximately 20 feet east of the western property line, with a proposed driveway width of 66 feet.**
- **Driveway 2: Maintain existing full access driveway on the north side of SR 838, approximately 40 feet east of Driveway 1, with a proposed driveway width of 24 feet.**

SITE SPECIFIC INFORMATION

Project Name & Address: **Fire Station #13 - Building Replacement – 2871 E Sunrise Blvd., Fort Lauderdale, FL 33304**
Applicant/Property Owner: City of Fort Lauderdale; Parcel Size: **0.74 Acres**
Development Size: **8,994 SF Fire Station**

WE APPROVE YOUR REQUEST

This decision is based on your presentation of the facts, site plan and survey - please see the conditions and comments below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:

- **A minimum driveway length of 25 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided.**
- **The existing SR 838 eastbound left turn lane shall be modified to meet the minimum requirements in the Florida Design Manual (FDM). The median nose shall be extended east, and a standard 50-foot taper shall be provided.**
- **A design variation for the substandard driveway width shall be prepared by the Engineer of Record and submitted to the District Permits Engineer for review and approval.**

Comments:

- All driveways not approved in this letter must be fully removed and the area restored.
- A Drainage Permit is required for any stormwater impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage).
- The applicant shall donate property to the Department if right-of-way dedication is required to implement the improvements.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway System and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Note, this letter does not guarantee permit approval.** The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: <https://osp.fdot.gov>; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.

Please contact the Access Management Manager - Tel. # 954-777-4363 or e-mail: D4AccessManagement@dot.state.fl.us with any questions regarding the Pre-Approval Letter and Permits Office - Tel. # 954-777-4383 with any questions regarding permits.

Sincerely,

Digitally signed by:
Dalila Fernandez
Date: 2021.07.07
13:10:46 -04'00'

Dalila Fernandez, P.E.
District Access Management Manager

cc: Jonathan Overton, P.E., Roger Lemieux

File: S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2021-04-15\3. 86005000 MP 0.995 SR 838_Fire Station #13 - Building Replacement\Letter Revision\86005 MP 0.995 SR 838_Fire Station #13_Rev.docx

www.dot.state.fl.us

January 2, 2024

Mr. Christopher Cooper, Development Services Department Director
City of Fort Lauderdale Development Services Department
700 NW 19th Avenue
Fort Lauderdale, FL 33311

**RE: FORT LAUDERDALE FIRE STATION 13
UNIFIED LAND DEVELOPMENT CODE NARRATIVES
(ULDC SECTIONS 47-24.5 AND 47.25.2)
CTA PROJECT NO.: 20-0030-001-01**

Dear Mr. Cooper:

This request is to plat the site located at 2871 E Sunrise Boulevard, Fort Lauderdale, FL in order to construct a fire station to replace of the existing Fire Station No. 13. The site is located within the 178.66 total acres of the Hugh Taylor Birch State Park, owned by the Trustees of the Internal Improvement Fund of the State of Florida. It is located on the north side of E Sunrise Blvd, east of the Intercoastal Waterway, in the City of Fort Lauderdale. The boundary plat lies within Government Lot 6 in Section 36, Township 49 S, Range 42 E, and contains 32,000 square feet (0.735 acres). The Fire Station will lie within folio 494236000010 and the state park is managed by the Florida Department of Environmental Protection Agency.

Below are our responses for compliance to the subject code for Subdivision Regulations and Adequacy Requirements view for the subject plat:

Sec. 47-24.5. Subdivision regulations.

A. *Subdivision approval.*

1. *Applicability of subdivision regulations.* No person shall create a subdivision of land nor develop land in the city unless it conforms to these regulations. A subdivision shall be defined as the division of land into two (2) or more lots, sites, tracts, parcels, tiers, blocks, units or any other division of land; and includes establishment of new streets and alleys, additions, and resubdivisions; and, when appropriate to the context, relates to the process of subdividing or to the lands or area subdivided.

Response: Acknowledged.

2. *Platting required.* Plat or replat means a map or delineated representation of the subdivision of lands. No building permit shall be issued for the construction of a principal building on a parcel of land unless a plat including the parcel or parcels of land has been recorded in the official public records of Broward County subsequent to June 4, 1953 (Commencing at Plat Book 32, page 15), except as provided herein.

Response: Acknowledged.

3. *Exceptions to platting.* The requirements in subsection A.2, shall not apply to an application for a building permit which meets any one (1) or more of the following criteria:

CRANEN THOMPSON



& ASSOCIATES INC.

Engineers
Planners
Surveyors
Landscape Architects

- a. Construction of two (2) or fewer residential dwelling units. Applications for two (2) or fewer residential dwelling units on property under the same ownership, within five hundred (500) feet of property exempted within the past twelve (12) months, shall not be exempt.
- b. Construction of any principal structure for a multifamily or nonresidential use on a lot or parcel which is less than ten (10) acres in size and the majority of which is specifically delineated on a plat recorded on or before June 4, 1953;
- c. Construction of a replacement building in which the proposed reconstruction will be utilized for the same general use, is equal to or less than the gross area of the original principal building and will be located within the same general footprint. (For the purpose of this guideline, "original building" means the total gross floor area devoted to the principal use on a parcel as of November 22, 1978. November 22, 1978, was the effective date of the 1977 Broward County Land Use Plan countywide platting requirement.)
- d. Construction of single-family, infill development that is deed-restricted to affordable housing for a time period of at least fifteen (15) years. For the purposes of this exemption, infill development shall be defined as, "the development of new housing on scattered vacant sites in a built-up area."
- e. A building permit may be issued for a parcel of land for which plat approval has been given by the city commission and the Board of County Commissioners although the plat has not yet been recorded, provided such authorization is granted in an agreement among the developer, the city, and the county. Such agreements shall at a minimum require compliance with the applicable provisions of plat approval and shall prohibit the issuance of a certificate of occupancy until the plat is recorded. The municipality and county shall be required to make a finding that facilities and services will be available at the adopted level of service standards concurrent with the issuance of the building permit; or

Response: A building permit is desired as soon as possible.

- f. A building permit may be issued for an essential governmental facility after preliminary plat review where the Broward County Commission finds that immediate construction of the governmental facility is essential to the health, safety, or welfare of the public and where the board determines that public facilities and services will be available at the adopted level of service standards concurrent with the impact of the development of the governmental facility. Such a finding shall be made in a resolution if Broward County is the government seeking to construct the facility and issue the permit; and by agreement with the affected units of local government in other circumstances. A certificate of occupancy shall not be issued until the plat is recorded. In addition to meeting the above criteria, the issuance of the building permit shall be subject to all of the following:
 - i. Compliance with the applicable land development regulations; and
 - ii. Any land within the lot or parcel which is necessary to comply with the Broward County Trafficways Plan and the city's street width provisions provided in this section has been conveyed to the public by deed or grant of easement.

Response: A building permit is desired as soon as possible.

4. *Resubdivision of lots of record.* Division of lots in a subdivision of record shall be permitted as follows:
 - a. *Lands platted before June 4, 1953.* A lot or parcel specifically delineated in a plat recorded on or before June 4, 1953, which is less than five (5) acres in size and is reduced in size in combination with enlarging an abutting specifically delineated lot or parcel provided the resulting lots satisfy the dimensional requirements of the zoning district in which they are located, as well as these subdivision regulations. In addition, any land within the lot or parcel which is necessary to comply with the Broward County Trafficways Plan must have been conveyed to the public by deed or grant of easement. In addition:

- i. In the RS-4.4, RS-8 and RD-15 districts lots or parcels may be recombined without replatting provided the resulting lots are not reduced in size below that in the original subdivision of record, except that each unit of a duplex in an RD-15 district may be on a separate lot of three thousand (3,000) square feet.
 - ii. In all other districts, lots may be recombined without replatting if no additional building lots or parcels are created.
 - b. *Lands platted after June 4, 1953.* A lot or parcel specifically delineated in a plat recorded after June 4, 1953 which is less than five (5) acres in size and is reduced in size in combination with enlarging an abutting specifically delineated lot or parcel provided the resulting lots satisfy the dimensional requirements of the zoning district in which they are located, as well as these subdivision regulations. In addition, any land within the lot or parcel which is necessary to comply with the Broward County Trafficways Plan must have been conveyed to the public by deed or grant of easement. In addition:
 - i. In the RS-4.4, RS-8 and RD-15 districts lots or parcels may be recombined without replatting provided the resulting lots are not reduced in size below that in the original subdivision of record, except that each unit of a duplex in an RD-15 district may be on a separate lot of three thousand (3,000) square feet.
 - ii. In all other districts, lots may be divided or recombined without replatting.
 - c. *Lots of record redivided prior to April 6, 1976.* Lots in the RS-4.4, RS-8 and RD-15 districts consisting of portions or combinations of portions of lots in a subdivision plat of record redivided prior to April 6, 1976, shall be considered as conforming to these regulations provided they meet the building site requirements of the zoning district. Redivided prior to the above date shall mean: (1) Record ownership of the redivided lots, or portions thereof, was vested prior to said date in two (2) or more individuals; or (2) A building permit was applied for prior to said date on a portion of the redivided lots; provided, however, that not more than two (2) additional permits shall be issued pursuant to this section.
 - d. *Building permits prior to April 6, 1976.* All building permits issued in accordance with the provisions of subsections A.4.a, b, and c, prior to April 6, 1976, are hereby confirmed, ratified, and approved.

Response: Not applicable. The land is not currently platted.

- B. *Procedure for preparation and filing of plats.* Plats shall be reviewed and approved by the city prior to or concurrent with review and approval by the county. The requirements for the preparation of and the procedure for filing of a plat shall be as follows:
 1. *Applicant.* The owner of property proposed to be platted.
 2. *Application to Development Review Committee (DRC).*
 - a. An application for plat review shall first be submitted to the department. The department shall forward the application to the DRC for review pursuant to subsection B.4.
 - b. The proposed plat shall be presumed to have the maximum impact on necessary services and facilities permitted under the city's land use plan, as amended. An applicant for a development permit for plat approval may apply for review of a plat at less than the presumed maximum impact and the city shall review that application for impact on services and facilities at the developmental level requested. The face of each recorded plat shall bear a notation indicating the developmental level at which the plat was reviewed for adequacy of services pursuant to this section. All future development shall be limited to the restrictions indicated by the notation.
 3. *Application to planning and zoning board.* An application for plat review and approval by the planning and zoning board and city commission shall be made to the department, upon determination by the DRC of plat conformity with applicable regulations, pursuant to subsection B.5.
 4. *DRC review process.*
 - a. An application for plat review shall be submitted to the department for review by the DRC.
 - b. The DRC shall conduct a meeting to consider the application and the applicant shall have an opportunity to be heard in accordance with the rules of procedure which the DRC shall adopt.

- c. The DRC shall forward to the applicant a written report of the comments and recommendations discussed at the meeting regarding compliance with the provisions of this section and applicable land development regulations.
5. *Planning and zoning board/city commission review process.*
 - a. Upon determination by the DRC of the plat's conformity with applicable regulations, an application for plat review and approval shall be submitted to the department for submittal to the planning and zoning board for review.
 - b. The DRC and the department shall forward its recommendation(s) to the planning and zoning board for consideration.
 - c. During a regular public meeting the planning and zoning board shall consider the application and the record and recommendations forwarded by the DRC and the department and shall hear public comment on the application.
 - d. The planning and zoning board shall determine whether the proposed plat meets the provisions of this section and other applicable land development regulations and shall forward its recommendation to the city commission.
 - e. During a regular public meeting the city commission shall consider the application and the record and recommendations forwarded by the DRC, the department, and the planning and zoning board and shall hear public comment on the application.
 - f. If the city commission determines that the proposed plat satisfies the provisions of this section and other applicable land development regulations, it shall approve the plat by resolution, with or without modification. If the city commission determines that the plat does not satisfy all applicable regulations, it shall deny the plat.
6. *City engineer sign-off.*
 - a. The city engineer shall sign the plat after it has been formally approved by the city commission and immediately prior to transmission to the county for recording.

Response: Procedures acknowledged. Plat note will restrict the land to a 16,000 square foot fire station.

- C. *Plat technical specifications.*
 1. The plat submitted for approval shall be clearly and legibly drawn in black waterproof drawing ink upon tracing cloth or an approved drafting film.
 2. Plats shall be on sheets twenty-four (24) inches by thirty-six (36) inches overall, with one (1) inch borders on three (3) sides and a three (3) inch border on the left. When the size or shape of the subdivision necessitates more than one (1) sheet, each sheet shall be clearly marked as near as possible to the upper right corner "Sheet No. (____) of (total) Sheets." All multiple sheet plats shall be clearly cross-referenced to the proper sheet numbers at the match lines and a reasonable portion of the overlapping area shall be shown in outline form. In addition, every plat sheet shall have placed in the upper right corner outside the border "Plat Book Page" for the use of the recorder.
 3. The plat shall be at a scale of not more than one hundred (100) feet to the inch and shall include the following information:
 - a. Subdivision name or identifying title including the section(s), township(s), range(s), city, county, and state.
 - b. Location sketch showing location of subdivision with respect to section lines and surrounding streets and landmarks.
 - c. North point, graphic scale and month and year plat drawn.
 - d. Corporate limits when in or adjacent to subdivision.
 - e. Boundary lines of the tract with accurate distances to hundredths of a foot and angles to half minutes. These boundaries shall be determined by accurate survey in the field, which shall be balanced and closed with error closures not to exceed one (1) foot to five thousand (5,000) feet. Surveys shall be coordinated and tied into the nearest established section corner or quarter section corner by angle and distance.

- f. The exact names, locations, and widths along the property lines of all existing or recorded streets intersecting or paralleling the boundaries of the tract.
- g. The accurate location of all permanent reference monuments.
- h. The exact layout including: street and alley lines, street names, bearings, angles of intersection and widths (including widths along the lines of any obliquely intersecting streets); lengths of area and radius, points of curvature and tangent bearings; all easements owned by or rights-of-way provided for public utilities; all lot lines with dimensions in feet and hundredths, and with bearings or angles if other than right angles to the street and alley lines.
- i. Lots numbered in numerical order within each block or lettered in alphabetical order within each block, and blocks numbered in numerical order or lettered in alphabetical order.
- j. The accurate outline of all property which is to be dedicated or proposed for public use including open drainage courses and suitable easements, and all property that may be reserved by covenants in deeds for the common use of the property owners in the subdivision with the purposes indicated thereon.
- k. A complete description of land intended to be subdivided, and the extent and boundaries of the platted area shall be graphically indicated in a clear and understandable manner.
- l. Names and locations of adjoining subdivisions, the adjacent portions of which shall be shown in outline form.
- m. Acknowledgment by the owner or owners and all mortgage lienholders of lands included within the plat of the execution of same and the dedication to public use of all streets, alleys, parks, easements, and other public places shown upon same.
- n. The certificate of the surveyor attesting to the accuracy of the survey and that the permanent reference monuments have been established according to law.
- o. Space and forms for the following necessary approvals:
 - i. City commission.
 - ii. City planning and zoning board.
 - iii. City engineer.
 - iv. County commission.
 - v. County engineer.
- p. *Dedication.* The plat shall contain upon the face thereof an unreserved dedication to the public of all streets, highways, alleys, parks, parkways, easements, commons or other public places included within the plat, such dedication to be subscribed to by the legal and equitable owners of such lands and by all persons holding mortgages against such lands, which dedication shall be acknowledged before an officer authorized to take acknowledgments of deeds. Such plat containing such dedication, when properly recorded, shall constitute a sufficient, unrevokable conveyance to vest in the city fee title to the parcel of land dedicated for public use, to be held by the city in trust for the uses and purposes intended, and the approval of the plat by the city commission shall have the force and effect of an acceptance.
- q. *Payment of taxes.* No plat shall be accepted by the city or approved by the city commission unless and until all taxes and improvement liens levied against the lands included in such plat have been paid and discharged.

Response: The plat will include all the above information and meet all the specifications and as noted. The mylar submittal will be drawn in black waterproof ink once the City's comments are addressed. No easements are proposed at this time. This property is exempt from property tax assessment.

D. *Subdivision layout.*

1. *Streets and alleys.*

- a. *Conformity to trafficways plan.* The location, direction and width of all streets, roads and highways shall conform to the official city plan, and to ordinances of city.

- b. *Relation to existing street system.* The arrangement of streets in new subdivisions shall make provision for the proper extension of existing dedicated streets in existing subdivisions, where such extension is appropriate. Streets shall bear numerical names, unless waived by the board.
- c. *Provision for platting adjoining unplatted areas.* The arrangement of streets in new subdivisions shall be such as to facilitate and coordinate with the desirable future platting of adjoining unplatted property, and to provide for local circulation and convenient access to neighborhood facilities.
- d. *Protection from through traffic.* Minor and collector residential streets shall be laid out and arranged so as to discourage their use by through traffic.
- e. *Primary arterial street frontage.* Where a residential subdivision abuts a primary arterial street either existing or proposed in the trafficways plan, the board may require marginal access streets, reverse frontage with screen planting contained in a nonaccess reservation along the rear property line, deep lots with or without rear service alleys, or such other treatment as may be necessary for adequate protection of residential properties and to assure separation of through and local traffic.
- f. *Plats adjacent to railroad or expressway right-of-way.* Where a subdivision borders on or contains a right-of-way for a railroad, expressway, drainage canal or waterway, the board may require a street approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land. Such distances shall also be determined with due regard for the requirements of approach grades for future bridges.
- g. *Reserve strips.* Reserve strips controlling access to streets shall be prohibited, except where deemed desirable by the board to prevent use of a residential street by business or industrial traffic.
- h. *Private streets.* There shall be no private streets platted in any subdivision. Every subdivided lot or property shall be served from a publicly dedicated street. This requirement may be waived by the board in special situations where the board finds public safety, convenience and welfare can be adequately served.
- i. *Half streets.* New half or partial streets shall not be permitted, except where it appears reasonable that the owner of adjacent lands will provide the balance of the needed right-of-way upon development of such adjacent lands. Wherever a tract to be subdivided borders on dedicated existing half or partial street the other part of the street shall be taken into consideration in meeting requirements.
- j. *Dead-end streets.* Dead-end streets shall be prohibited, except where appropriate as stubs to permit future street extension into adjoining unsubdivided tracts, or when designed as cul-de-sacs.
- k. *Cul-de-sac streets.*
 - i. Cul-de-sacs, permanently designed as such, shall not exceed four hundred (400) feet in length, except on finger islands.
 - ii. Cul-de-sacs shall be provided at the closed end with a circular dedicated area not less than seventy (70) feet in diameter for turnaround purposes.
- l. *Street rights-of-way.*
 - i. Street rights-of-way for expressways, primary arterials, major thoroughfares, and secondary thoroughfares shall conform to the Broward County Trafficways Plan. Other street rights-of-way shall be not less than the following, except when a greater right-of-way is specified in the Broward County Trafficways Plan:

Street Type	Right-of-Way (feet)
Collector	60
Minor, for business, industrial, high density residential	60
Minor, for low and medium density residential	50
Marginal access	50

- ii. Additional right-of-way width may be required to promote public safety and convenience, or to assure adequate access, circulation and parking in high density residential areas, commercial areas, industrial areas, and at intersections with arterial streets, pursuant to DRC review.
- iii. Where a subdivision abuts or contains an existing street of inadequate right-of-way width, additional right-of-way in conformance with the above standards may be required, pursuant to DRC review.
- m. *Alleys.*
 - i. Alleys shall be provided to serve multiple dwelling, business, commercial and industrial areas, except that the board may waive this requirement where other definite and assured provision is made for service access, off-street loading, unloading, and parking consistent with and adequate for the uses permissible on the property involved.
 - ii. The width of an alley shall be a minimum of twenty (20) feet for two-way travel, and may be less for one-way travel.
 - iii. Changes in alignment of alleys shall be made on a center line radius of not less than thirty-seven (37) feet.
 - iv. Dead-end alleys shall be avoided where possible, but if unavoidable, shall be provided with adequate turnaround facilities for service trucks and other vehicles at the dead-end, with a minimum external diameter of ninety-four (94) feet, or as determined to be adequate by the board.
- n. *Easements.*
 - i. Dedicated easements across lots or centered on rear or side lot lines shall be provided for public utilities where necessary and shall be at least ten (10) feet in width.
 - ii. Where a subdivision is traversed by a presently existing functional watercourse, drainage way, canal or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of such watercourses and such further width as will be adequate for the purpose. Parallel streets or parkways may be required in connection therewith where necessary for service or maintenance.
 - iii. Easements may be required for drainage purposes of such size and location as may be determined by the city engineer.
- o. *Street alignment.*
 - i. Curvilinear streets are recommended for residential minor and collector streets in order to discourage excessive vehicular speeds and to provide attractive vistas, where practicable.
 - ii. Whenever a street changes direction, or connecting street lines deflect from each other, by more than ten (10) degrees, that shall be a horizontal curve.
 - iii. To ensure adequate sight distance, minimum center line radii for horizontal curves shall be as follows:
 - a) Minor streets: one hundred fifty (150) feet.
 - b) Collector streets: three hundred (300) feet.
 - c) Secondary arterial streets and section line roads: five hundred (500) feet.
 - d) Major arterial thoroughfares: seven hundred fifty (750) feet.
 - iv. A tangent at least one hundred (100) feet long shall be provided between reverse curves on collector streets, and at least two hundred fifty (250) feet long on major and secondary arterial thoroughfares and section line roads.
- p. *Street intersections.*
 - i. Streets shall be laid out to intersect as nearly as possible at right angles. No street shall intersect another at an angle of less than sixty (60) degrees, except at a "Y" intersection of two (2) minor streets.
 - ii. Multiple intersections involving junction of more than two (2) streets shall be prohibited except where found to be unavoidable by the board.
 - iii. "T" intersections of minor and collector streets are to be encouraged.

- iv. As far as possible, intersections with arterial streets shall be located not less than eight hundred (800) feet apart, measured from center line to center line.
- v. Streets entering opposite sides of another street shall be laid out directly opposite each other or with a minimum offset of one hundred twenty-five (125) feet between their center lines.
- vi. Right-of-way lines at street intersections shall be in conformance with the following minimum criteria:
 - a) The right-of-way line shall be the chord of a twenty (20) foot radius for the intersection of two (2) minor streets.
 - b) The right-of-way line shall be the chord of a twenty-five (25) foot radius for the intersection of a minor and a major street.
 - c) The right-of-way line shall be the chord of a thirty (30) foot radius for the intersection of two (2) major streets.

Where the angle of intersection is less than sixty (60) degrees, the chord of a greater radius may be required by the board. The board may waive the requirement for a chord at the intersection of two (2) minor streets when that requirement has also been waived by the city engineer; however, the minimum radius of the right-of-way shall be twenty (20) feet.

- q. *Excessive street widths.* Streets shall not be platted to a width more than one hundred fifty percent (150%) of the minimum width specified in these regulations for the type of street involved. No street shall be platted for center median development except where such center median may be desirable or necessary for traffic separation and safety, and aesthetics as determined by the board.

Response: E Sunrise Boulevard is shown on the Broward County trafficways plan as a 120' arterial. There is currently 140'-150' of existing right-of-way, so no dedication is needed. No new streets or reserve strips are proposed. Subsections b, c, d, and e are not applicable since this is not a residential subdivision. The plat is not adjacent to a railroad or expressway right-of-way. Access to the site will be directly from E. Sunrise Boulevard. All other above standards are acknowledged.

2. *Blocks.*

- a. The lengths, widths, and shapes of blocks shall be determined with due regard to:
 - i. Provision of adequate building sites, suitable to the special needs of the type of use contemplated.
 - ii. Zoning requirements as to lot sizes and dimensions.
 - iii. Needs for convenient and safe access, circulation, control of pedestrian and vehicular traffic.
 - iv. Limitations and opportunities of topographic features.
- b. Block lengths shall not exceed one thousand three hundred twenty (1,320) feet nor be less than five hundred (500) feet, unless found unavoidable by the board.
- c. Pedestrian crosswalks, not less than ten (10) feet in width, may be required through blocks over one thousand (1,000) feet in length, where necessary in the judgment of the board to provide safe and convenient access to schools, playgrounds, shopping centers, transportation, or other community facilities.

Response: Not applicable. The plat is a boundary plat.

3. *Lots.*

- a. The lot arrangement and design shall be such that all lots will provide satisfactory and desirable building sites, properly related to topography and to the character of surrounding development.
- b. Lot dimensions and areas shall be not less than specified by applicable provisions of the zoning regulations in effect, and shall further conform to these regulations
- c. Lots for detached single family and duplex dwellings shall provide lot sizes not less than the following:
 - i. In the RS-4.4 district, lot area of ten thousand (10,000) square feet and width of one hundred (100) feet.

- ii. In the RS-8 district, lot area of seven thousand five hundred (7,500) square feet and width of seventy-five (75) feet.
- iii. In the RD-15, RC-15, RM-15, RML-25, RMM-25, RMH-25 and RMH-60 districts, lot area of seven thousand five hundred (7,500) square feet and width of seventy-five (75) feet.
- d. It is recommended that corner lots for residential use have such additional width, greater than a corresponding interior lot, as may be necessary to provide appropriate building setbacks and orientation to both streets.
- e. Side lot lines shall be substantially at right angles or radial to street lines.
- f. Double frontage and reverse frontage lots for residential use shall be avoided, except where essential to provide separation of residential development from traffic arteries or to overcome specific handicaps of topography and orientation. A planting strip of at least ten (10) feet, and across which there shall be no right of access, shall be provided along the line of lots abutting such a traffic artery or other disadvantageous situation.
- g. Street frontage. Every lot shall abut upon and have permanent access to a public street.
- h. Lot arrangement and design shall be properly related to topography, to nature of contiguous property and to the character of surrounding development. Where existing lots are replatted or the size and shape of a tract to be platted makes conformance with the provisions of these subdivision regulations unreasonable and impracticable in the judgment of the planning and zoning board, the board is hereby authorized to vary the requirement in appropriate cases in such manner as to carry out the spirit and purpose of the subdivision regulations.

Response: There are no lots proposed by the plat.

- 4. *Canals.* Canals and waterways, other than drainage ditches, shall be dedicated to public use. Canals shall be not less than sixty (60) feet in width. Canals which connect to navigable waterways shall have a center line water depth of at least nine (9) feet at mean high tide, or if not subject to tidal flow shall have a center line water depth of at least six and one-half (6½) feet at all times.

Response: Not Applicable. No canals proposed.

E. *Required subdivision improvements.*

- 1. *Preparation of plans.* Receipt of the signed copy of the approved preliminary plat is authorization for the subdivider to proceed with the plans and specification for the minimum improvements required under this section and with the preparation of the final plat. Prior to the construction of any improvements required or to the submission of a bond in lieu thereof, the subdivider shall furnish the city engineer all plans, information, and data necessary to determine the character of said improvements and compliance with city standards and specifications. These plans shall be examined by the city engineer and will be approved if in accordance with all requirements. Following this approval, construction can be started, or the amount of a bond determined. Construction shall be subject to supervision of the city engineer.

Response: Acknowledged.

- 2. *Subdivision improvements bond.* No final plat of any subdivision shall be approved unless the subdivider shall file with the city a surety bond executed by a surety company authorized to do business in the state and having a resident agent in the county, conditioned to secure the construction of the improvements required under this section, in a satisfactory manner and within a time period specified by the city commission, such period not to exceed two (2) years. No such bond shall be accepted unless it is enforceable by or payable to the city in a sum at least equal to one and one-half (1½) times the cost of constructing the improvements as estimated by the city engineer and in form with surety and conditions approved by the city attorney. In lieu of a bond, cash deposit or other acceptable security may be made. In case of forfeiture, the city shall proceed with the improvements to the extent of the available money realized from such forfeiture.

Response: Acknowledged.

3. *Subdivision improvements required.* The following minimum subdivision improvements shall be provided and installed by the subdivider, provided that the city commission may waive the provision or installation of such portions of these improvements by the subdivider on or in streets on the exterior boundary or perimeter of the subdivision, under one (1) of the following circumstances: Where the city commission finds that it would be unreasonable and inequitable to require the subdivider to be responsible for the entire cost of such improvements and the commission finds there is a reasonable probability that the remaining portion of such improvements will be provided through the subdividing of the contiguous property, or where the city commission finds that such improvements can be reasonably and satisfactorily provided through special assessments for local improvements:
 - a. *Monuments.* The subdivider shall provide and install monuments as follows:
 - i. At intersection of center lines of all streets, install a one-inch pipe, three (3) feet long, embedded in concrete, top flush with finished pavement.
 - ii. Permanent reference monuments as required by Florida Plat Law.
 - b. *Grading.* All streets, crosswalks and alleys shall be graded to their full width by the subdivider in accordance with city specifications. Due to special topographical conditions, deviation from the above will be allowed only with special approval of the city engineer.
 - c. *Storm drainage.* An adequate drainage system, including necessary open ditches, pipes, culverts, intersectional drains, drop inlets, bridges, etc., shall be provided by the subdivider for the proper drainage of all surface water. In cases where a subdivision is located at such a distance from waterways, main drains, or drainage canals that the board finds a complete storm drainage system for the subdivision to be impracticable and unreasonable, the board may waive or reduce this requirement.
 - d. *Paving.*
 - i. All streets of a subdivision shall be paved by the subdivider in full accordance with specifications of the city.
 - ii. *Minimum widths.* All minor and collector streets in residential areas shall be paved to a minimum width of thirty (30) feet and provided with concrete curbs and gutters where storm drainage is required. Where storm drainage is waived by the board, the minimum pavement width shall be twenty-four (24) feet and there shall be no curbs and gutters. On primary arterials, major thoroughfares, and secondary thoroughfares where storm drainage is required the subdivider shall have the option of providing the minimum twenty-four-foot pavement without curbs and gutters, or providing curbs and gutters with a pavement in excess of thirty (30) feet as determined by the city engineer.
 - e. *Sidewalks.*
 - i. Sidewalks shall be installed on both sides of all streets designated as primary arterials, major thoroughfares, and secondary arterials, and for streets zoned or intended for business or industrial development, unless deemed unnecessary for pedestrian travel by the board.
 - ii. Sidewalks shall be installed on both sides of all streets in residential areas, except that the board may modify this requirement where it can be shown that they are not needed for the protection of pedestrians and school children.
 - iii. All sidewalks shall be at least five (5) feet in width, constructed of portland cement concrete, and constructed to the specifications of the city. Sidewalks of greater width may be required on major streets and heavy pedestrian travel areas as provided for in this section.
 - iv. The board, upon recommendation of the city engineer, may waive the requirement for sidewalks on streets where the average width of lots is two hundred (200) feet or more, or where a park, railroad, canal, or other use on one (1) side of a street makes a sidewalk not essential for safety of pedestrians, or where the requirement for sidewalks would cause a storm drainage problem in a location where the requirement for storm drainage has been found impracticable by the board, or on finger islands where they are deemed impracticable by the board.

- v. Where it appears that a previously dedicated street forms a boundary of a subdivision, the subdivider must dedicate proper sidewalk areas upon the side of the street abutting the lands subdivided.
- f. *Water supply system.* Water mains properly connected with the city water supply system shall be provided by the subdivider in such a manner as to adequately serve all lots shown on the subdivision plat for both domestic use and fire protection. Water mains shall be designed and installed by or under the supervision of the city engineer.
- g. *Sanitary sewers.* Sanitary sewers shall be installed by the subdivider in areas where a sanitary sewerage system is available or has been authorized and financed. Such sanitary sewers, mains and laterals shall be properly connected to a city sewage disposal system or arranged for suitable future connection, and shall be designed by a registered engineer, subject to the approval of the city engineer. The installation shall be made under the supervision and inspection of the city engineer. Expense of design, supervision and inspection of the sewage disposal system shall be borne by the developer. In addition to sewer mains, laterals shall be installed to each platted lot and stubbed off at the property line for future connection. The sanitary sewer system shall also be subject to the approval of the state board of health. The use of individual septic tanks in lieu of a sanitary sewer system shall not be permitted without county health department approval, and only in cases where connection to the sanitary sewerage system is impracticable.
- h. *Canals and waterways.* All canals and other dedicated waterways shall be excavated by the subdivider to the width and length shown on the plat, and to the minimum depth specified in this section.

Response: Acknowledged.

- F. *Recordation and expiration of plat.* Proof must be submitted to the city commission prior to the adoption of a resolution approving the plat that the persons signing the plat and executing the dedication are all of the owners of all of the property platted or replatted. The approval of all persons holding mortgage liens against any property platted or replatted shall appear upon the plat. Such plat or replat must be recorded in the official records of the county within three (3) years after the adoption of the resolution approving same; otherwise, the approval is automatically rescinded and canceled, and the plat shall become null and void.

Response: Acknowledged.

Sec. 47-25.2. Adequacy requirements.

- A. *Applicability.* The adequacy requirements set forth herein shall be used by the city to evaluate the demand created on public services and facilities created by a proposed development permit.

Response: Acknowledged.

- B. *Communications network.* Buildings and structures shall not interfere with the city's communication network. Developments shall be modified to accommodate the needs of the city's communication network, to eliminate any interference a development would create or otherwise accommodate the needs of the city's communication network within the development proposal.

Response: Acknowledged. It is not anticipated that any structures would be tall enough to interfere with the city's communications network.

- C. *Drainage facilities.* Adequacy of stormwater management facilities shall be evaluated based upon the adopted level of service requiring the retention of the first inch of runoff from the entire site or two and one-half (2½) inches of runoff from the impervious surface whichever is greater.

Response: Acknowledged. Application shall be made to Broward County for approval of the Project's stormwater management facilities prior to building permit approval.

- D. *Environmentally sensitive lands.*

1. In addition to a finding of adequacy, a development shall be reviewed pursuant to applicable federal, state, regional and local environmental regulations. Specifically, an application for development shall be reviewed in accordance with the following Broward County Ordinances which address environmentally sensitive lands and wellfield protection which ordinances are incorporated herein by reference:
 - a. Broward County Ordinance No. 89-6.
 - b. Section 5-198(l), Chapter 5, Article IX of the Broward County Code of Ordinances.
 - c. Broward County Ordinance No. 84-60.
2. The applicant must demonstrate that impacts of the proposed development to environmentally sensitive lands will be mitigated.

Response: Acknowledged.

- E. *Fire protection.* Fire protection service shall be adequate to protect people and property in the proposed development. Adequate water supply, fire hydrants, fire apparatus and facilities shall be provided in accordance with the Florida Building Code, South Florida Fire Code and other accepted applicable fire and safety standards.

Response: Acknowledged.

- F. *Parks and open space.*

1. The manner and amount of providing park and open space is as provided in Section 47-38A, Park Impact Fees, of the ULDR.
2. No building permit shall be issued until the park impact fee required by Section 47-38A of the ULDR has been paid in full by the applicant.

Response: Acknowledged.

- G. *Police protection.* Police protection service shall be adequate to protect people and property in the proposed development. The development shall provide improvements which are consistent with Crime Prevention Through Environmental Design (CPTED) to minimize the risk to public safety and assure adequate police protection.

Response: Acknowledged.

- H. *Potable water.*

1. Adequate potable water service shall be provided for the needs of the proposed development. The proposed development shall be designed to provide adequate areas and easements which may be needed for the installation and maintenance of potable water systems in accordance with city engineering standards, the Florida Building Code, and applicable health and environmental regulations. The existing water treatment facilities and systems shall have sufficient capacity to provide for the needs of the proposed development and for other developments in the service area which are occupied, available for occupancy, for which building permits are in effect or for which potable water treatment capacity has been reserved. Capital expansion charges for water and sewer facilities shall be paid by the developer in accordance with Resolution 85-265, as it is amended from time to time. Improvements to the potable water service and system shall be made in accordance with city engineering standards and other accepted applicable engineering standards.

Response: Acknowledged, applicant has already made the request for a water/wastewater capacity letter from the City's Public Works Department and will provide the letter to the City upon receipt.

2. *Potable water facilities.*

- a. If the system is tied into the city treatment facility, the available capacity shall be determined by subtracting committed capacity and present flow from design capacity. If there is available capacity, the city shall determine the impact of the proposed development utilizing Table 3, Water and Wastewater, on file with the department.

- b. If there is adequate capacity available in the city treatment plant to serve the proposed development, the city shall reserve the necessary capacity to serve the development.
- c. Where the county is the projected service provider, a similar written assurance will be required.

Response: Acknowledged, applicant has already made the request for a water/wastewater capacity letter from the City's Public Works Department and will provide the letter to the City upon receipt.

I. *Sanitary sewer.*

- 1. If the system is tied into the city treatment facility, the available capacity shall be determined by subtracting committed capacity and present flow from the design capacity. If there is available capacity, the city shall determine the impact of the proposed development utilizing Table 3, Water and Wastewater, on file with the department.
- 2. If there is adequate capacity available in the city treatment plant to serve the proposed development, the city shall reserve the necessary capacity to serve the proposed development.
- 3. Where the county is the projected service provider, a written assurance will be required.
- 4. Where septic tanks will be utilized, the applicant shall secure and submit to the city a certificate from the Broward County Health Unit that certifies that the site is suitable for an on-site sewage disposal system for the proposed use.

Response: Above statements are acknowledged. Applicant has already made the request for a water/wastewater capacity letter from the City's Public Works Department and will provide the letter to the City upon receipt.

- J. *Public Schools.* For all development including residential units, the applicant shall be required to mitigate the impacts of such development on public school facilities in accordance with the Broward County Land Development Code or section 47-38C. Educational Mitigation, as applicable and shall provide a school capacity availability determination letter (SCAD) from Broward County Public Schools indicating that either the requirements of public school concurrency have been satisfied or that the application is exempt or vested pursuant to Section 47-38C.2 of the ULDR to the city prior to the issuance of a development permit.

Response: Acknowledged. The proposed plat does not include residential units and therefore will not generate school seats nor education mitigation.

K. *Solid waste.*

- 1. Adequate solid waste collection facilities and service shall be obtained by the applicant in connection with the proposed development and evidence shall be provided to the city demonstrating that all solid waste will be disposed of in a manner that complies with all governmental requirements.

Response: Acknowledged, applicant has requested an adequacy determination from the city.

- 2. *Solid waste facilities.* Where the city provides solid waste collection service and adequate service can be provided, an adequacy finding shall be issued. Where there is another service provider, a written assurance will be required. The impacts of the proposed development will be determined based on Table 4, Solid Waste, on file with the department.

Response: Acknowledged. Applicant will request an adequacy determination from the city.

- L. *Stormwater.* Adequate stormwater facilities and systems shall be provided so that the removal of stormwater will not adversely affect adjacent streets and properties or the public stormwater facilities and systems in accordance with the Florida Building Code, city engineering standards and other accepted applicable engineering standards.

Response: Acknowledged. Stormwater will be retained on site in accordance with the Broward County Department of Environmental Regulation.

M. *Transportation facilities.*

1. The capacity for transportation facilities shall be evaluated based on Table 1, Generalized Daily Level of Service Maximum Volumes, on file with the department. If a development is within a compact deferral area, the available traffic capacity shall be determined in accordance with Table 2, Flowchart, on file with the department.
2. *Regional transportation network.* The regional transportation network shall have the adequate capacity, and safe and efficient traffic circulation to serve the proposed development. Adequate capacity and safe and efficient traffic circulation shall be determined by using existing and site-specific traffic studies, the adopted traffic elements of the city and the county comprehensive plans, and accepted applicable traffic engineering standards. Site-specific traffic studies may be required to be made and paid for by the applicant when the city determines such a study is needed in order to evaluate the impacts of the proposed development on proposed or existing roadways as provided for in subsection M.4. An applicant may submit such a study to the city which will be considered by the DRC in its review. Roadway improvements needed to upgrade the regional transportation network shall be made in accordance with the city, the county, and Florida Department of Transportation traffic engineering standards and plans as applicable.
3. *Local streets.* Local streets shall have adequate capacity, safe and efficient traffic circulation, and appropriate functional classification to serve the proposed development. Adequate capacity and safe and efficient traffic circulation shall be determined by using existing and site-specific traffic studies, the city's comprehensive plan and accepted applicable traffic engineering standards. Site-specific traffic studies may be required to be made and paid for by the applicant when the city determines such a study is required in order to evaluate the impact of the proposed development on proposed or existing roadways as provided for in subsection M.4. An applicant may submit to the city such a study to be considered as part of the DRC review. Street improvements needed to upgrade the capacity or comply with the functional classification of local streets shall be made in accordance with the city engineering standards and acceptable applicable traffic engineering standards. Local streets are those streets that are not classified as federal, state or county roadways on the functional classification map adopted by the State of Florida.
4. *Traffic impact studies.*
 - a. When the proposed development may generate over one thousand (1,000) daily trips; or
 - b. When the daily trip generation is less than one thousand (1,000) trips; and (1) when more than twenty percent (20%) of the total daily trips are anticipated to arrive or depart, or both, within one-half (½) hour; or (2) when the proposed use creates varying trip generation each day, but has the potential to place more than twenty percent (20%) of its maximum twenty-four (24) hour trip generation onto the adjacent transportation system within a one-half (½) hour period; the applicant shall submit to the city a traffic impact analysis prepared by the county or a registered Florida engineer experienced in trafficways impact analysis which shall:
 - i. Provide an estimate of the number of average and peak hour trips per day generated and directions or routes of travel for all trips with an external end.
 - ii. Estimate how traffic from the proposed development will change traffic volumes, levels of service, and circulation on the existing and programmed trafficways.
 - iii. If traffic generated by the proposed development requires any modification of existing or programmed components of the regional or local trafficways, define what city, county or state agencies have programmed the necessary construction and how this programming relates to the proposed development.
 - iv. A further detailed analysis and any other information that the review committee considers relevant.
 - v. The traffic impact study may be reviewed by an independent licensed professional engineer contracted by the city to determine whether it adequately addresses the impact, and the study supports its conclusions. The cost of review by city's consultant shall be reimbursed to the city by the applicant.

- vi. When this subsection M.4.b. applies, the traffic study shall include an analysis of how the peak loading will affect the transportation system including, if necessary, an operational plan showing how the peak trips will be controlled and managed.
5. *Dedication of rights-of-way.* Property shall be conveyed to the public by plat, deed or grant of easement as needed in accordance with the Broward County Trafficways Plan, the city's comprehensive plan, subdivision regulations and accepted applicable traffic engineering standards.
6. *Pedestrian facilities.* Sidewalks, pedestrian crossing, and other pedestrian facilities shall be provided to encourage safe and adequate pedestrian movement on-site and along roadways to adjacent properties. Transit service facilities shall be provided for as required by the city and Broward County Transit. Pedestrian facilities shall be designed and installed in accordance with city engineering standards and accepted applicable engineering standards.
7. *Primary arterial street frontage.* Where a proposed development abuts a primary arterial street either existing or proposed in the trafficways plan, the development review committee (DRC) may require marginal access street, reverse frontage with screen planting contained in a nonaccess reservation along the rear property line, deep lots with or without rear service alleys, or such other treatment as may be necessary for adequate protection of residential properties and to assure separation of through and level traffic.
8. *Other roadway improvements.* Roadways adjustments, traffic control devices, mechanisms, and access restrictions may be required to control traffic flow or divert traffic, as needed to reduce, or eliminate development generated traffic.
9. *Street trees.* In order to provide for adequate landscaping along streets within the city, street trees shall be required along the length of the property abutting a street. A minimum of fifty percent (50%) of the required street trees shall be shade trees, and the remaining street trees may be provided as flowering or palm trees. These percentages may be varied based on existing or proposed physical conditions which may prevent the ability to comply with the street tree requirements of this subsection. The street trees shall be planted at a minimum height and size in accordance with the requirements of Section 47-21, Landscape and Tree Preservation Requirements, except in the downtown RAC districts the requirements of Sec. 47-13.20.H.8 shall apply. The location and number of street trees shall be determined by the department based on the height, bulk, mass, and design of the structures on the site and the proposed development's compatibility to surrounding properties. The requirements for street trees, as provided herein, may be located within the public right-of-way as approved by the entity with jurisdiction over the abutting right-of-way.

Response: All traffic related requirements are acknowledged. A traffic impact statement is not needed as no local streets are included within this plat. A traffic study will be provided if required.

N. *Wastewater.*

1. *Wastewater.* Adequate wastewater services shall be provided for the needs of the proposed development. The proposed development shall be designed to provide adequate areas and easements which may be needed for the installation and maintenance of a wastewater and disposal system in accordance with applicable health, environmental and engineering regulations, and standards. The existing wastewater treatment facilities and systems shall have adequate capacity to provide for the needs of the proposed development and for other developments in the service area which are occupied, available for occupancy, for which building permits are in effect or for which wastewater treatment or disposal capacity has been reserved. Capital expansion charges for water and sewer facilities shall be paid by the developer in accordance with Resolution 85-265, as it is amended for time to time. Improvements to the wastewater facilities and system shall be made in accordance with the city engineering and accepted applicable engineering standards.

Response: Acknowledged. Applicant has requested a water/wastewater capacity letter from the City's Public Works Department and will provide the letter to the City upon receipt.

- O. *Trash management requirements.* A trash management plan shall be required in connection with non-residential uses that provide prepackaged food or beverages for off-site consumption. Existing non-residential uses of this type shall adopt a trash management plan within six (6) months of the effective date of this provision.

Response: Acknowledged.

- P. *Historic and archaeological resources.*

1. If a structure or site has been identified as having archaeological or historical significance by any entity within the State of Florida authorized by law to do same, the applicant shall be responsible for requesting this information from the state, county, local governmental or other entity with jurisdiction over historic or archaeological matters and submitting this information to the city at the time of, and together with, a development permit application. The reviewing entity shall include this information in its comments.

Response: Acknowledged, this project is being rebuilt on the original site.


- Q. *Hurricane evacuation.* If a structure or site is located east of the Intracoastal Waterway, the applicant shall submit documentation from Broward County or such agency with jurisdiction over hurricane evacuation analysis either indicating that acceptable level of service of hurricane evacuation routes and hurricane emergency shelter capacity shall be maintained without impairment resulting from a proposed development or describing actions or development modifications necessary to be implemented in order to maintain level of service and capacity.

Response: Documentation will be provided from Broward County upon their review.

Should you have any questions or comments, please contact me at (954) 739-6400 or by email at medge@craventhompson.com.

Sincerely,

CRAVEN THOMPSON & ASSOCIATES, INC.


Matthew R. Edge, CNU-A
Planner



CITY OF FORT LAUDERDALE

DEPARTMENT OF SUSTAINABLE DEVELOPMENT • BUILDING SERVICES DIVISION

ADDRESS VERIFICATION

CONTACT: Devon Anderson
Phone: 954-828-5233
Email: DAnderson@fortlauderdale.gov

PROJECT ADDRESS: 1300, 1600 NW 31 AVE, 33311

PREVIOUS ADDRESS: 1300, 1600 NW 31 AVE, 33311

NOTES: PLOT PLAN

ZONING: B-2

FOLIO #: 494232000110, 494232000120

LEGAL DESCRIPTION: 32-49-42 SW1/4 OF NW1/4, LESS W 57, LESS PT DESC AS BEG AT INTERSEC OF N/L OF SW1/4 OF NW1/4 & 57 E OF W/L OF SEC 32, NELY ALG N/L OF SW1/4 OF NW1/4 1.46, S 75.43 TO POINT 57 E OF W/L OF SEC 32, NLY 75.39 TO POB K/A WINGATE 32-49-42 N1/2 OF NW1/4 OF SW1/4, LESS W 57, LESS E 43 OF W 100 OF S 25, & LESS PT SWLY OF ARC OF A CURVE WITH RADIUS OF 25 BEING TANGENT TO A LINE 25 N OF S/L OF N1/2 OF NW1/4 OF SW1/4 & BEING TANGENT TO A LINE 57 E OF W/L OF SEC 32 K/A WINGATE

DRC #: _____

AUTHORIZED SIGNATURE:  _____

DATE: 06/22/2022

PROPERTY SUMMARY
Tax Year: 2023

Property ID: 494236000010

Property Owner(s):TIITF/DNR DIV REC & PARKS
 HUGH TAYLOR BIRCH ST PARK

Mailing Address:DEP DOUGLAS BLDG TALLAHASSEE, FL 32399

Physical Address:3109 E SUNRISE BOULEVARD FORT LAUDERDALE, 33305

Property Use: 82-02 Forest, parks, recreational areas - State

Millage Code: 0312

Adj. Bldg. S.F.: 23127

Bldg Under Air S.F.:
Effective Year: 1972

Year Built: 1968

Units/Beds/Baths: 2 / /

Deputy Appraiser: Commercial Department

Appraisers Number: 954-357-6835

Email: commercialtrim@bcpa.net
Zoning : P - PARKS RECREATION AND OPEN SPACE

Abbr. Legal Des.: 36-49-42 LOT 1 LESS PAR 1 & 3 AS IN PB 17/13,PT OF LOT 2 LYING E OF INTRACOASTAL W/W R/W ALSO THAT PT OF NEW RIVER SOUND IN NE1/4 OF SEC 36 LYING E OF INTRACOASTAL W/W R/W & PT OF LOT 5 LYING E OF INTRA W/W R/W, LOT 6 LESS PAR 6 AS IN PB 17/13 & LESS RD R/W,ALSO THAT PT OF NEW RIVER SOUND IN THE SE1/4 LYING E OF INTRACOASTAL W/W R/W

PROPERTY ASSESSMENT

Year	Land	Building / Improvement	Agricultural Saving	Just / Market Value	Assessed / SOH Value	Tax
2023	\$37,799,210	\$1,862,010	0	\$39,661,220	\$39,661,220	
2022	\$37,799,210	\$1,862,010	0	\$39,661,220	\$39,661,220	
2021	\$37,799,210	\$1,862,010	0	\$39,661,220	\$38,724,640	

EXEMPTIONS AND TAXING AUTHORITY INFORMATION

	County	School Board	Municipal	Independent
Just Value	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Portability	0	0	0	0
Assessed / SOH	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Granny Flat				
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	\$39,661,220	\$39,661,220	\$39,661,220	\$39,661,220
Affordable Housing	0	0	0	0
Taxable	0	0	0	0

SALES HISTORY FOR THIS PARCEL

Date	Type	Price	Book/Page or Cin	Unit Price	Units	Type
				\$10.00	3,779,921 SqFt	Square Foot

RECENT SALES IN THIS SUBDIVISION

Property ID	Date	Type	Qualified/ Disqualified	Price	CIN	Property Address
494236000085	07/11/2021	Warranty Deed	Qualified Sale	\$2,950,000	117430176	1555 N FEDERAL HWY FORT LAUDERDALE, FL 33304
494236000050	07/11/2019	Warranty Deed	Qualified Sale	\$4,000,000	115937641	1620 N FEDERAL HWY FORT LAUDERDALE, FL 33305
494236000086	04/12/2019	Warranty Deed	Disqualified Sale	\$4,100,000	115739924	1431 N FEDERAL HWY FORT LAUDERDALE, FL 33304
494236000085	10/30/2018	Warranty Deed	Qualified Sale	\$2,900,000	115425782	1555 N FEDERAL HWY FORT LAUDERDALE, FL 33304
494236000180	12/14/2017	Special Warranty Deed	Disqualified Sale	\$22,500,000	114800871	1333 N FEDERAL HWY FORT LAUDERDALE, FL 33304

SPECIAL ASSESSMENTS

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc	SCHOOL
Ft Lauderdale Fire-rescue (03) Governmental (X) 23,127									Bayview Elementary: A Sunrise Middle: C Fort Lauderdale High: A

ELECTED OFFICIALS

Property Appraiser	County Comm. District	County Comm. Name	US House Rep. District	US House Rep. Name
Marty Kiar	4	Lamar P. Fisher	23	Jared Moskowitz
Florida House Rep. District	Florida House Rep. Name	Florida Senator District	Florida Senator Name	School Board Member
100	Chip LaMarca	37	Jason W. B. Pizzo	Sarah Leonardi

D E E D

WHEREAS, by Chapter 67-269, General Laws of 1967, it is required that on or by October 1, 1967, the Florida Board of Parks and Historic Memorials shall transfer and convey to the Trustees of the Internal Improvement Fund of the State of Florida by properly executed deed, title to all real property owned by such Board and the officers thereof, and all the right, title and interest in other properties which the Board and its officers manage and control, and

WHEREAS, the Florida Board of Parks and Historic Memorials owns, or claims to own, the real property hereinafter described and desires to convey the same to the Trustees of the Internal Improvement Fund of the State of Florida in compliance with the foregoing statutory provision, NOW THEREFORE,

THIS INDENTURE made this 27th day of September, A. D. 1967, between the Florida Board of Parks and Historic Memorials, party of the first part, and the Trustees of the Internal Improvement Fund of the State of Florida for the use and benefit of the State of Florida, party of the second part;

W I T N E S S E T H

That the Florida Board of Parks and Historic Memorials, party of the first part, pursuant to the mandate of the Legislature of Florida, hereinbefore mentioned, and in further consideration of the mutual covenants between the parties hereto, does hereby and herewith convey, transfer, deliver and set over to the Trustees of the Internal Improvement Fund of the State of Florida, party of the second part, their successors and assigns forever, all that certain parcel or parcels of land, more particularly described as follows:

All those lands described in deed of conveyance from the Florida Board of Forestry to the Florida Board of Parks and Historic Memorials, dated September 16, 1949 and recorded in the public records of Broward County, Florida, in deed book 672 on page 71, comprising Hugh Taylor Birch State Park, subject, however, to all conditions, reservations and restrictions in the said deed contained.

58 JUL 22 AM 9:22

Grantee's Address
TRUSTEES OF INTERNAL IMPROVEMENT FUND
Elliot Building
TALLAHASSEE, FLORIDA 32304

-1-

[Handwritten mark]

Together with all tenements, hereditaments and appurtenances, with every privilege, right, title, interest and estate, reversion, remainder and easement thereto belonging or in anywise appertaining.

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

IN WITNESS WHEREOF the party of the first part has caused these presents to be executed by its authorized officers and its seal to be hereunto affixed the day and year first above written.

FLORIDA BOARD OF PARKS AND HISTORIC MEMORIALS

By: *W. E. Jones*
Chairman

(SEAL)

ATTEST

E. M. Carroll
Secretary

STATE OF FLORIDA

COUNTY OF BREVARD

I hereby certify that on this 28 day of September, 1967, personally appeared before me, the undersigned authority,

W. E. Jones, to me known and by me known to be Chairman of Florida Board of Parks and Historic Memorials, and under oath acknowledged his execution of the foregoing instrument as the act and deed of the said Board, and further acknowledged that the seal thereunto affixed is the authorized seal of said Board, affixed by due authority.

Sworn to and subscribed before me this day first above written.

Sam Messie
Notary Public

STATE OF FLORIDA

COUNTY OF WASHINGTON

I hereby certify that on this 28th day of September, 1967, personally appeared before me, the undersigned authority, E. W. Carrwell, to me known and by me known to be Secretary of Florida Board of Parks and Historic Memorials, and under oath acknowledged his execution of the foregoing instrument as the act and deed of the said Board, and further acknowledged that the seal thereunto affixed is the authorized seal of said Board, affixed by due authority.

Sworn to and subscribed before me this day first above written.

Lunette Worthy
Notary Public

Notary Public, State of Florida at Large
My Commission Expires April 29, 1969
Bonded by American Fire & Casualty Co.

RECORDED IN OFFICIAL RECORDS BOOK
OF BROWARD COUNTY, FLORIDA
JACK WHEELER
CLERK OF CIRCUIT COURT