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NATURAL RESOURCES DIVISION
DEPARTMENT OF REGULATORY
AND ECONOMIC RESOURCES

CITY OF MIAMI

OFFICE OF CAPITAL IMPROVEMENTS

Steven C. Williamson, Director

Mayor
Francis Suarez

Commission:

Chairman - D5 Commissioner
Keon Hardemon

Vice Chairman - D2 Commissioner
Ken Russell

D1 Commissioner
Wifredo (Willy) Gort

D3 Commissioner
Joe Carollo

D4 Commissioner
Manolo Reyes

City Manager
Emilio T. Gonzalez

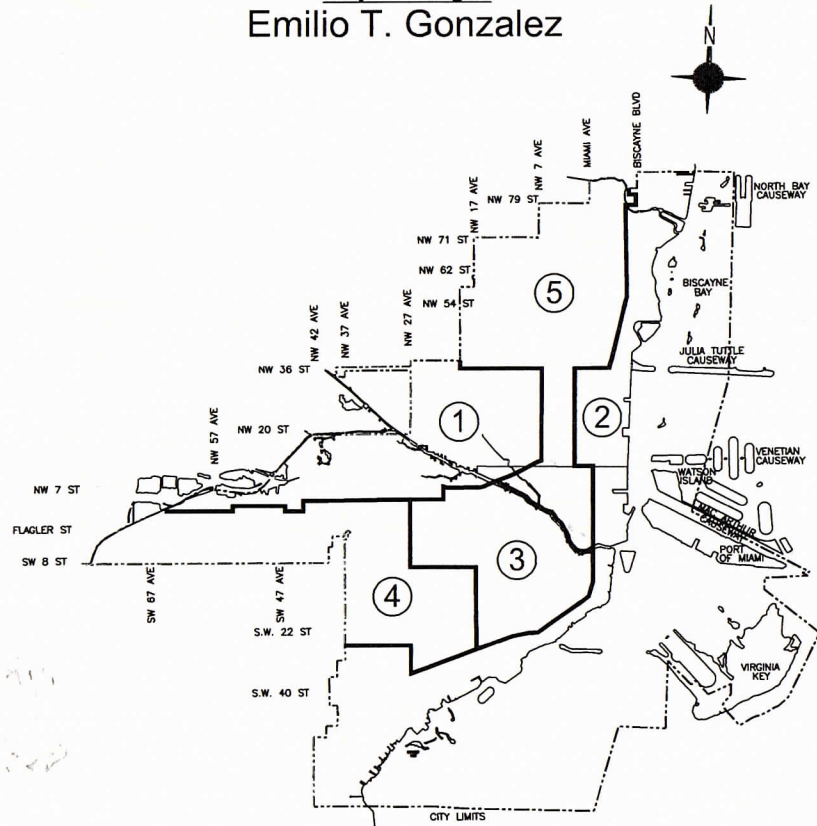
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JUL 17 2019
NATURAL RESOURCES DIVISION
DEPARTMENT OF REGULATORY
AND ECONOMIC RESOURCES

VIRGINIA KEY KAYAK LAUNCH D-2

[B-40584]

[3801 RICKENBACKER CSWY]

[PERMIT SET, APRIL 15, 2019]



INDEX OF DRAWINGS					
Sheet	Description	Sheet	Description	Sheet	Description
1	COVER SHEET	S-001	GENERAL NOTES AND ABBREVIATIONS		
2	GENERAL NOTES	S-101	CONCRETE PLATFORM - SECTION AND DETAILS		
3	EXISTING CONDITIONS	S-501	TYPICAL SHEET PILE SECTION		
4	CLEARING AND GRUBBING	S-502	SHEET PILE DETAIL		
5	SITE PLAN				
6	FLOATING DOCK DETAIL				
7	GANGWAY DETAIL				
8	GANGWAY DETAIL				
9	FLOATING DOCK SECTION AND DETAILS				
10	FLOATING DOCK DETAILS				
11	TURBIDITY BARRIER DETAILS				
12	TURBIDITY BARRIER DETAILS				
13	TREE PROTECTION DETAIL				

CL-2016-0396
RER - NATURAL RESOURCES DIVISION
PRELIMINARY APPROVAL
NAME [Signature]
DATE 7/15/19

RER - NATURAL RESOURCES DIVISION
FINAL APPROVAL
NAME [Signature]
DATE 11/20/19

Reviewed for CODE
City of Miami
Signature _____

APPROVED FOR PERMIT
REVIEWED FOR CODE COMPLIANCE
City of Miami
BUILDING DEPARTMENT
Approval of this plan is for permitting purposes only, and does not imply authority to violate, cancel, alter or set aside any of the provisions of the currently adopted technical codes, ordinances, laws or regulations. nor does issuance of a permit prevent the Building Official from requiring correction of errors in either the plans or construction, or any deficiencies which may have been omitted or overlooked in the plan review or permitting process.
BD18014372001
06/22/20

P. Works _____
Fire Prev. _____
Planning _____
Zoning _____
Building _____
Structural [Signature] 9/13/19
Electrical _____
Plumbing _____
Mech _____
S. Waste _____
Elevator _____

SPACE RESERVED FOR CITY OF MIAMI APPROVAL STAMP
[CONSULTANT NAMES]

T·Y·LIN INTERNATIONAL
201 ALHAMBRA CIRCLE SUITE 900
CORAL GABLES, FLORIDA 33134
PHONE: (305) 567-1888
FAX: (305) 567-1771
EB00002017

CIVIL ENGINEER OF RECORD:
FRANCISCO ALONSO, P.E.
P.E. NO.: 66918

STRUCTURAL ENGINEER OF RECORD:
ALEJANDRO SALAS, P.E.
P.E. NO.: 74789

PROJECT: VIRGINIA KEY KAYAK LAUNCH - D-2

No.	REVISIONS - SUBMITTALS	DATE

SEAL

SHEET No. COVER PAGE No. 1 of 17

GENERAL NOTES:

1. THE CONTRACTOR MUST HAND EXCAVATE AROUND AREAS WHERE EXISTING UNDERGROUND UTILITIES ARE EXPECTED OR SUSPECTED IN ORDER TO AVOID DAMAGES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS AND COSTS TO CORRECT DAMAGES RESULTING FROM FAILURE TO TAKE ALL NECESSARY PRECAUTIONS INCLUDING LOCATING, MARKING AND CAREFUL EXCAVATION, AND SHOULD BE INCIDENTAL TO THE COST OF THE PROJECT.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION.
3. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INVESTIGATION TO FULLY UNDERSTAND SUBSURFACE CONDITIONS PRIOR TO SUBMITTING THEIR BID. FAILURE TO DO SO, WILL NOT RELIEVE THEM OF THEIR OBLIGATION TO COMPLETE THE WORK FULLY AND ACCEPTABLE TO THE ENGINEER AND THE OWNER FOR THE CONSIDERATION SET FORTH IN THEIR BID.
4. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM PRINTS FOR CONSTRUCTION PURPOSES.
5. ALL DISTURBED GRASS AREAS SHALL BE RESTORED WITH SUITABLE SOIL AND SOLID ST AUGUSTINE SOD IF NOT SPECIFIED OTHERWISE ON THE PLANS.
6. IT IS THE INTENT OF THESE PLANS TO BE IN COMPLIANCE WITH APPLICABLE CODES OF AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING TREES, STRUCTURES, UTILITIES AND UTILITY MARKERS, WHICH MAY NOT BE SHOWN ON PLANS. ANY EXISTING STRUCTURES, PAVEMENT, TREES, UTILITIES, UTILITY MARKERS OR OTHER EXISTING IMPROVEMENT NOT SPECIFIED FOR REMOVAL WHICH IS TEMPORARILY DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED UNDER THIS CONTRACT, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION NOTES:

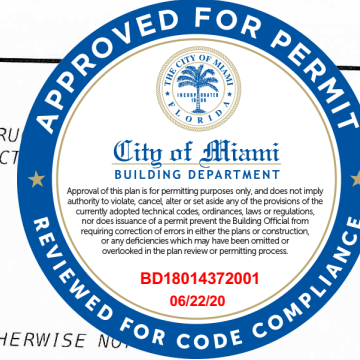
1. ALL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF, AND ACCEPTABLE TO, THE CITY OF MIAMI PUBLIC WORKS DEPARTMENT AND MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES.
2. THE CONTRACTOR SHALL PROVIDE THEIR OWN LINE AND GRADE FROM HORIZONTAL AND VERTICAL CONTROL. THE CONTRACTOR SHALL ALSO PROVIDE "AS BUILT" GRADES CERTIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AS REQUIRED BY THE CITY OF MIAMI PUBLIC WORKS DEPARTMENT.
3. BID PRICES SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS COMPLETE IN PLACE, TESTED, AND ACCEPTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL USE A SWEEPER (USING WATER) OR OTHER EQUIPMENT CAPABLE OF CONTROLLING AND REMOVING DUST. APPROVAL OF THE USE OF SUCH EQUIPMENT IS CONTINGENT UPON ITS DEMONSTRATED ABILITY TO DO WORK.
5. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING EXISTING INLETS CLEAN OF DEBRIS AND ANY OTHER MATERIALS USED DURING CONSTRUCTION AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. ALL EXISTING LINES AND STRUCTURES SHALL BE CLEANED PRIOR TO FINAL INSPECTION AND ACCEPTANCE.
6. CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE-CALL OF FLORIDA, INC (SUNSHINE 811) AT (800) 432-4770 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
7. ALL TREES SHALL BE RELOCATED OUTSIDE OF CONSTRUCTION AREA WHERE FEASIBLE. UNAVOIDABLE IMPACT TO MANGROVE TREES SHALL BE MITIGATED IN ACCORDANCE TO APPROVE PERMITS.
8. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS FOR ALL ITEMS LISTED IN PROJECT SPECIFICATION (WHERE APPLICABLE).
9. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
10. ALL EXISTING DRAINAGE STRUCTURES AND PIPES ARE TO REMAIN AND BE PROTECTED UNLESS OTHERWISE SPECIFIED AND APPROVED.
11. THE CONTRACTOR SHALL IMPLEMENT AND ENFORCE ALL NPDES EROSION AND SEDIMENT CONTROL RULES AND REGULATIONS.
13. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE FOR CLEARING AND GRUBBING.

ENVIRONMENTAL NOTES

1. ANY MATERIAL TO BE STOCKPILED FOR PERIODS GREATER THAN 24 HOURS SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES.
2. THE CONTRACTOR SHALL REVIEW ENVIRONMENTAL REQUIREMENTS OF ANY PROPOSED STAGING AREAS WITH THE PROJECT ENGINEER AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO USE.
3. NO STAGING OR OTHER ACTIVITIES FOR THIS PROJECT WILL BE ALLOWED WITHIN ENVIRONMENTALLY SENSITIVE AREAS.
4. THE CONTRACTOR SHALL NOT STAGE OR OPERATE EQUIPMENT WITHIN THE SPURRING OF TREES.
5. THE CONTRACTOR SHALL PROVIDE A CERTIFIED ARBORIST TO DETERMINE AND PERFORM OR DIRECT ANY ROOT PRUNING AND ANY OTHER TRIMMING ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL NOTES:

1. DESIGN SHALL BE IN ACCORDANCE WITH THE FDOT STRUCTURES MANUAL JANUARY 2018, AND SUBSEQUENT STRU BULLETINS, THE FDOT STRUCTURAL DESIGN STANDARD INDEXES/DRAWINGS, 2017-18, AS AMENDED BY CONTRACT SUBSEQUENT INTERIMS.
2. VERTICAL DATUM IS NGVD 29.
3. ENVIRONMENT IS CLASSIFIED AS EXTREMELY AGGRESSIVE.
4. PLAN DIMENSIONS
ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.
5. UTILITIES
8.1. LOCATIONS AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.
8.2. FOR STORM DRAINS AND OTHER UTILITIES, FOLLOW GENERAL NOTES ON PROCEDURES INVOLVING EXISTING UTILITIES.
6. JOINTS IN CONCRETE: CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.
7. CUT AND FILL OPERATIONS
10.1. THE CONTRACTOR SHALL NOTIFY ADJACENT OWNERS AND INVOLVED UTILITIES IN WRITING TWO (2) WEEKS BEFORE EXCAVATION OPERATIONS BEGIN.
10.2. QUANTITIES FOR CUT AND FILL SHOWN IN THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BIDDING.
10.3. ANY EXCAVATED MATERIAL THAT IS DEEMED BY THE ENGINEER UNSUITABLE FOR FILLING SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT AN APPROVED FACILITY OR DUMP SITE. THE COST FOR DISPOSAL OF UNSUITABLE MATERIAL SHALL BE INCLUDED IN THE COST OF CUT AND FILL.
8. MOBIMAT OR AS APPROVED EQUAL BY ENGINEER
11.1. INSTALLATION OF SPECIAL MOBIMAT SHALL BE UNDER SUPERVISION OF MAT PRODUCT REPRESENTATIVE.
11.2. MAINTENANCE SHALL BE PERFORMED PER MANUFACTURER'S RECOMMENDATIONS.



Permitted for Code Compliance
City of Miami

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Fire Prev _____
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S. Waste _____
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PRECAST CONCRETE PILES

1. INSTALL PILES IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) JANUARY 2018 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 455.
2. CONCRETE FOR PILES SHALL MEET THE REQUIREMENTS OF FDOT 2017-18 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 346. CLASS V (SPECIAL) (f'c= 6,000 PSI) WITH SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH.
3. PRESTRESSED PRECAST CONCRETE PILES (PPCP) SHALL BE IN ACCORDANCE WITH INDEX 20612 (12") & INDEX 20614 (14") OF THE 2017-18 FDOT DESIGN STANDARDS.
4. CONTRACTOR SHALL BE PREPARED TO PRE-DRILL HOLES AS NECESSARY TO INSTALL PILES TO THE REQUIRED MINIMUM TIP ELEVATION.
5. PILE DRIVING SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER HIRED BY THE CONTRACTOR.
6. COAT PILES WITH THOROCCOAT BY BASF OR APPROVED EQUAL, FROM TOP OF PILE TO 2' BELOW MLW LEVEL.

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CU-2016-0396

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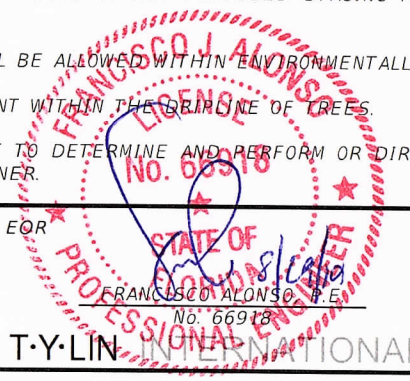
NAME: _____
DATE: 8/30/19

UTILITY COMPANY CONTACT LIST:

AT&T/DISTRIBUTION	STEVE LOW	305-222-8745
COMPACT CABLE	LEONARD MAXWELL-NEWBOLD	954-447-8405
DADE COUNTY PUBLIC WORKS & TRAFFIC	OCTAVIO VIDAL	305-412-0891 EXT. 201
FLORIDA POWER AND LIGHT-DADE	TRACY STERN	800-868-9554
FLORIDA POWWR AND LIGHT-SUT	SEYED HAJASSADOLLAH	305-228-5290
MIAMI-DADE SEWER	SERGIO GARCIA	786-268-5320

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FINAL APPROVAL

NAME: _____
DATE: 11/20/19



<p>REVISIONS</p> <table border="1"> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		DATE	BY	DESCRIPTION				<p>EOR</p> <p>FRANCISCO ALONSO, P.E. No. 66918</p> <p>T-Y-LIN INTERNATIONAL</p>	<p>CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM</p> <p>444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253</p>	<p>CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS</p> <table border="1"> <tr> <td>PROJECT NAME</td> <td>PROJECT No.</td> </tr> <tr> <td>VIRGINIA KEY KAYAK LAUNCH-D2</td> <td>B-40584</td> </tr> </table>	PROJECT NAME	PROJECT No.	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	<p>GENERAL NOTES</p> <p>SHEET NO. 2</p>
DATE	BY	DESCRIPTION													
PROJECT NAME	PROJECT No.														
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584														



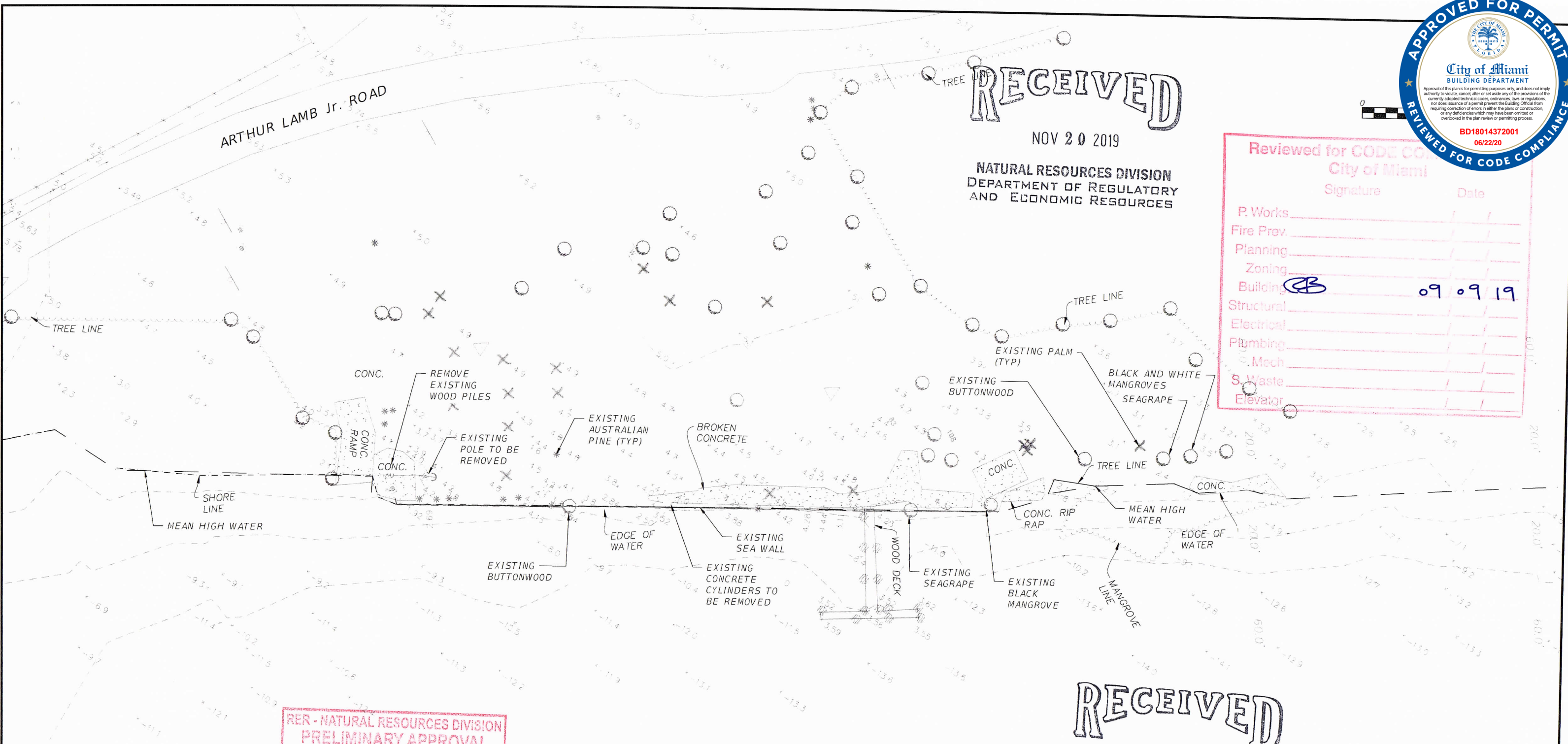
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Fire Prev.	
Planning	
Zoning	
Building CB	09/09/19
Structural	
Electrical	
Plumbing	
Mech	
S. Waste Elevator	



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DATE 7/18/19

LAMAR LAKE/BISCAYNE BAY

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FINAL APPROVAL
NAME [Signature]
DATE 11/20/19

FRANCISCO J. ALONSO
LICENSE
No. 66918
STATE OF FLORIDA
PROFESSIONAL ENGINEER



CITY OF MIAMI
CAPITAL IMPROVEMENTS PROGRAM
444 S.W. 2ND AVENUE, 8TH FLOOR
MIAMI, FLORIDA 33130
(305) 416-1213 FAX (305) 416-1253

CITY OF MIAMI
OFFICE OF CAPITAL IMPROVEMENTS

PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

EXISTING CONDITIONS

SHEET NO.
3

DATE	BY	DESCRIPTION

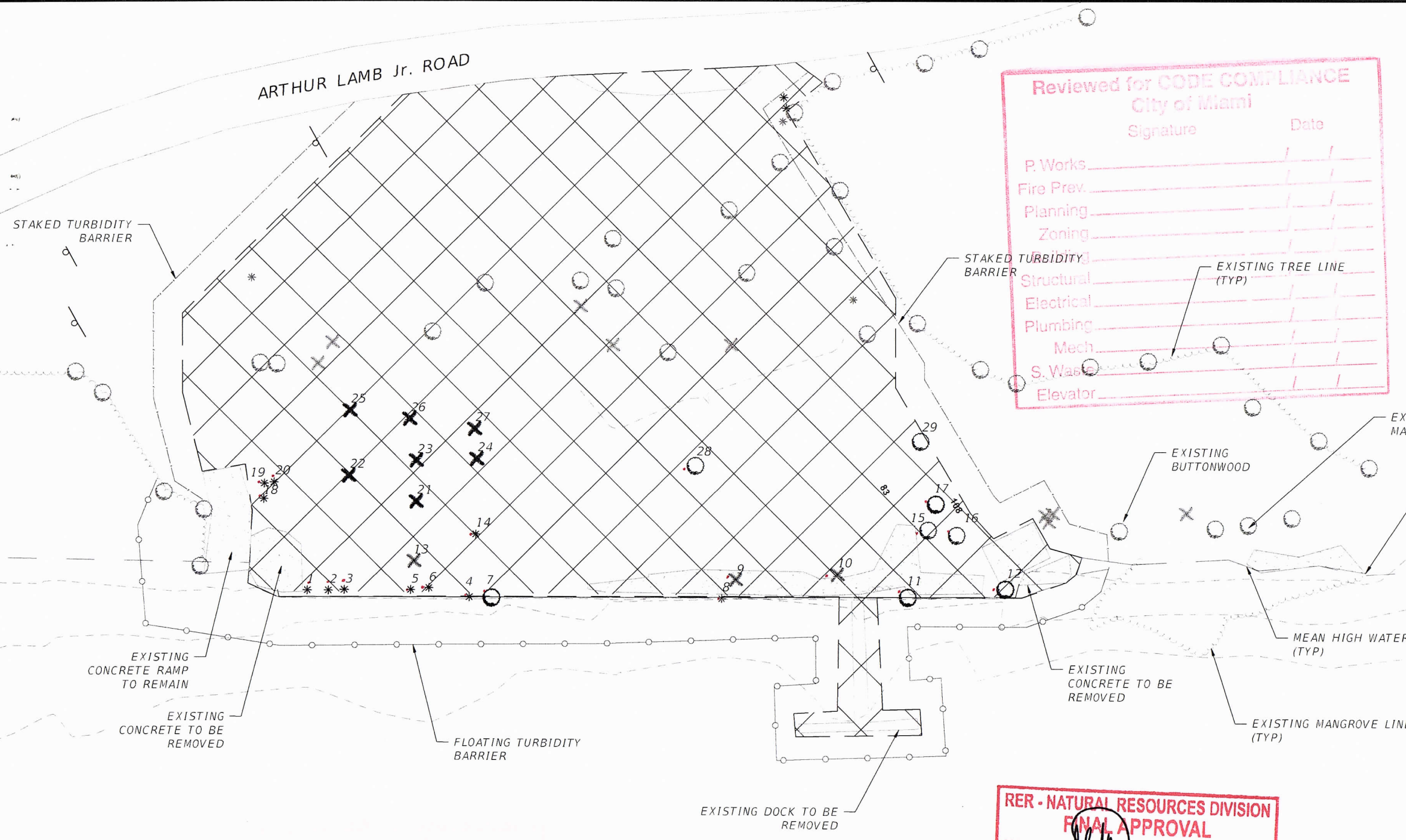


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P. Works	
Fire Prev.	
Planning	
Zoning	
Structural	
Electrical	
Plumbing	
Mech	
S. Wab	
Elevator	



Tree Deposition Plan

Tree ID	Common Name	Scientific Name	DBH (in)	HT (ft)	Spread (ft)	Status
1	Australian Pine	Casuarina equisetifolia	27	16	24	Remove (EPPC I)
2	Australian Pine	Casuarina equisetifolia	14	16	15	Remove (EPPC I)
3	Australian Pine	Casuarina equisetifolia	14	19	20	Remove (EPPC I)
4	Australian Pine	Casuarina equisetifolia	9	8	15	Remove (EPPC I)
5	Australian Pine	Casuarina equisetifolia	20	47	21	Remove (EPPC I)
6	Australian Pine	Casuarina equisetifolia	20	45	20	Remove (EPPC I)
7	Buttonwood	Canacarpus erectus	14	18	8	Remove*
8	Australian Pine	Casuarina equisetifolia	21	46	30	Remove (EPPC I)
9	Coconut Palm	Cocos nucifera	9	20	12	Remove (EPPC II)
10	Coconut Palm	Cocos nucifera	9	13	12	Remove (EPPC II)
11	Seagrass	Coccoloba uvifera	24	7	24	Remove
12	Black Mangrove	Avicennia germinans	5	8	5	Remove*
13	Sable Palm	Sabal palmetto	14	18	12	Remain
14	Australian Pine	Casuarina equisetifolia	25	41	60	Remove (EPPC I)
15	Seaside Mahoe	Thespesia Populnea	20	11	30	Remove (EPPC I)
16	Seaside Mahoe	Thespesia Populnea	23	12	36	Remove (EPPC I)
17	Java Plum	Syzygium cumini	10	13	18	Remove (EPPC I)
18	Australian Pine	Casuarina equisetifolia	22	20	39	Remove (EPPC I)
19	Australian Pine	Casuarina equisetifolia	21	13	24	Remove (EPPC I)
20	Australian Pine	Casuarina equisetifolia	11	33	18	Remove (EPPC I)
21	Sable Palm	Sabal palmetto	11	20	8	Remain
22	Sable Palm	Sabal palmetto	12	14	8	Remain
23	Sable Palm	Sabal palmetto	14	18	8	Remain
24	Sable Palm	Sabal palmetto	13	25	8	Remain
25	Sable Palm	Sabal palmetto	16	24	8	Remain
26	Sable Palm	Sabal palmetto	12	24	8	Remain
27	Sable Palm	Sabal palmetto	13	18	8	Remain
28	Java Plum	Syzygium cumini	9	14	21	Remove (EPPC I)
29	Seagrass	Coccoloba uvifera	6	18	9	Remain

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 DATE: 7/18/19

LEGEND

- CLEARING AND GRUBBING/DEMOLITION AREA
- STAKED TURBIDITY BARRIER
- FLOATING TURBIDITY BARRIER

LAMAR LAKE/BISCAYNE BAY

FRANCISCO J. ALONSO
 LICENSE No. 66918
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 T-Y-LIN

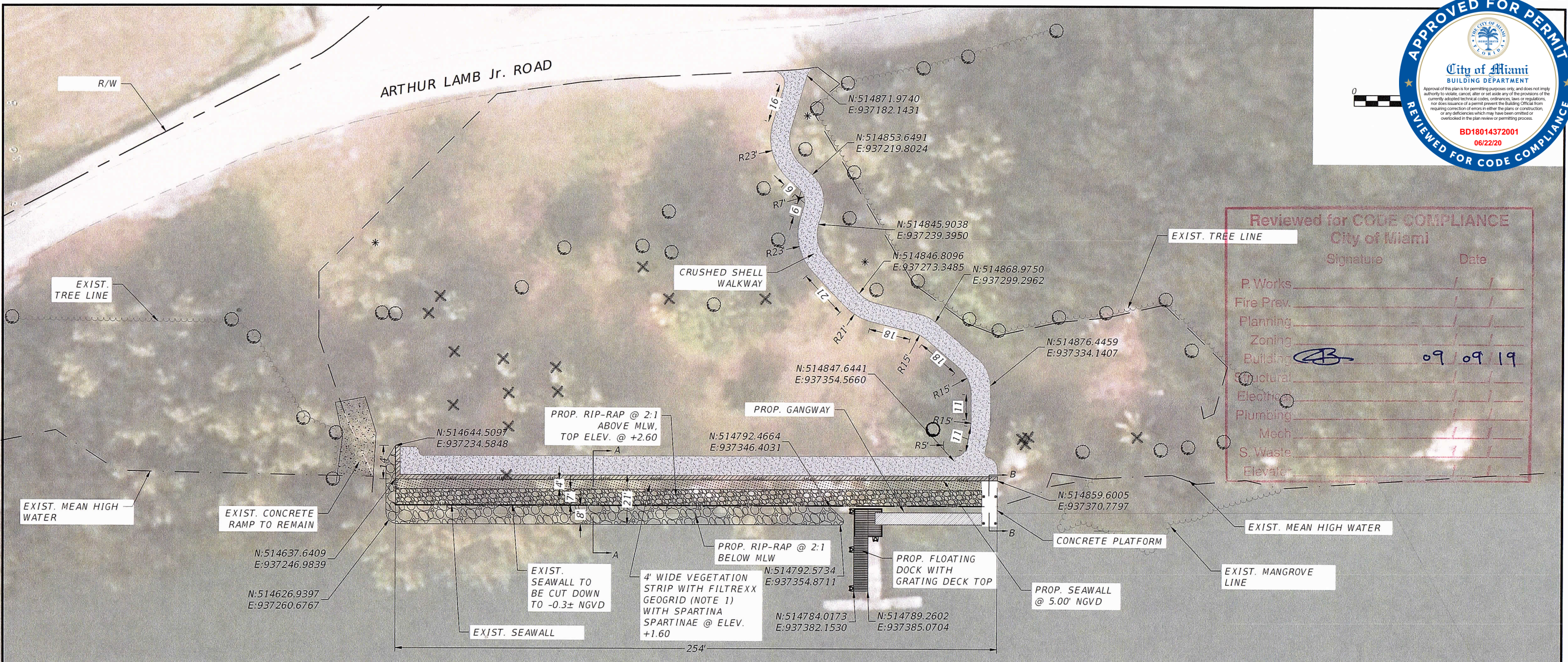
CITY OF MIAMI
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 444 S.W. 2ND AVENUE, 8TH FLOOR
 MIAMI, FLORIDA 33130
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CITY OF MIAMI
 OFFICE OF CAPITAL IMPROVEMENTS
 PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2
 PROJECT No.: B-40584

CLEARING & GRUBBING

SHEET NO. 4

DATE	BY	DESCRIPTION



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Signature	Date
P. Works	
Fire Prev.	
Planning	
Zoning	
Building	09/09/19
Structural	
Electric	
Plumbing	
Mech	
S. Waste	
Elevator	

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DATE 11/20/19

LEGEND

- PROPOSED RIP-RAP 1'-3' NATIVE LIME ROCK @ 2:1 SLOPE ABOVE MLW
- PROPOSED RIP-RAP 1'-3' NATIVE LIME ROCK @ 2:1 SLOPE BELOW MLW
- CRUSHED SHELL WALKWAY
- PROPOSED VEGETATION AREA WITH FILTREXX GEOGRID AND SPARTINA SPARTINAE
- PROPOSED SEAWALL AT 5.0' NGVD

NOTES:
1. FILTREXX GEOGRID OR AS APPROVED EQUAL BY ENGINEER.

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NAME *[Signature]*
DATE 7/18/19

FRANCISCO ALONSO
LICENSE No. 66918
STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 66918

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REVISIONS		EOR	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS	PROJECT NAME	PROJECT No.	SHEET NO.
DATE	BY					
				VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	5

CITY OF MIAMI
CAPITAL IMPROVEMENTS PROGRAM
444 SW 2ND AVENUE, 8TH FLOOR
MIAMI, FLORIDA 33130
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T-Y-LIN INTERNATIONAL

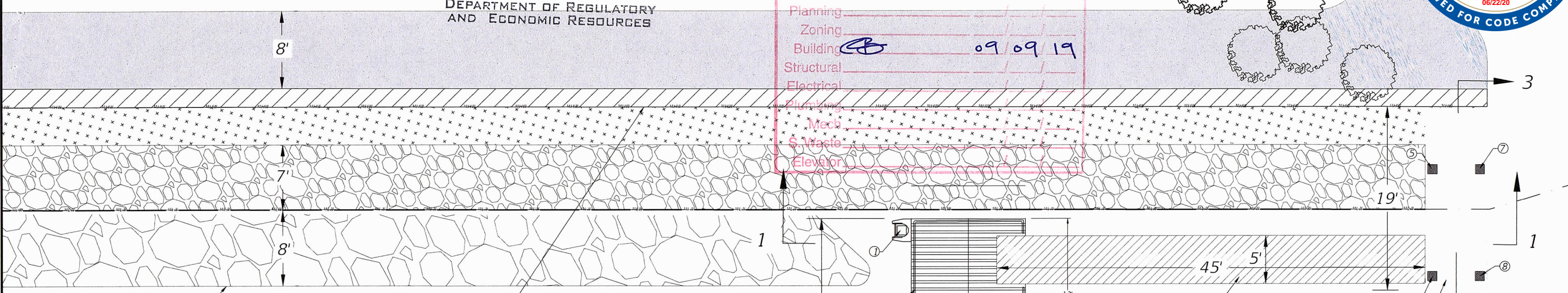
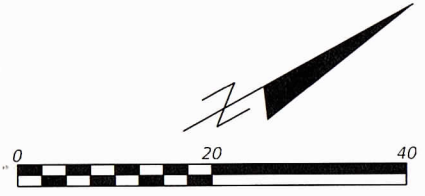
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Elevator	



RIPRAP
SEE SHEET S-501
FOR DETAILS

PROP. SEAWALL

RAILING

GANGWAY
SEE SHEETS 8, 9 & 10
FOR DETAILS

CONCRETE PLATFORM
SEE SHEET S-101
FOR DETAILS

FLOATING DOCK WITH THRUFLOW
GRATING TOP (SEE SHEET 10 & 11
FOR DETAIL)

EXTERNAL PILE
GUIDE
SEE SHEET 9
FOR DETAIL

FLOATING DOCK PILES		
PILE	N	E
1	514799.6028	937352.1990
2	514791.7026	937366.4026
3	514783.7645	937380.6579
4	514802.7638	937367.3481

CONCRETE PLATFORM PILES		
PILE	N	E
5	514851.3676	937373.7267
6	514845.8876	937383.5514
7	514855.7373	937376.1569
8	514850.2572	937385.9819

LEGEND

- 14" PILE, FDOT INDEX 20614
- 12" PILE, FDOT INDEX 20612

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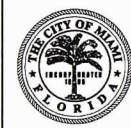
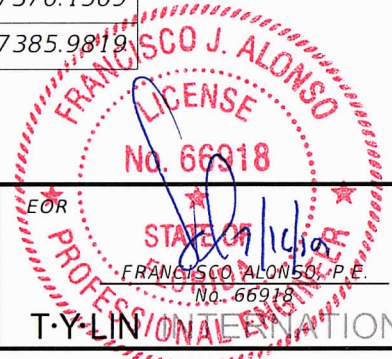
NOTES:

- TOTAL DOCK STRUCTURE AREA = 282 S.F.
TOTAL GANGWAY AREA = 225 S.F.
TOTAL CONCRETE PLATFORM AREA = 123 S.F.
UPPER RIP-RAP INSTALLATION LENGTH = 254 L.F.
UPPER RIP-RAP INSTALLATION AREA = 1,725 S.F.
LOWER RIP-RAP INSTALLATION LENGTH = 223 L.F.
LOWER RIP-RAP INSTALLATION AREA = 1,544 S.F.
- FOR SECTION VIEWS REFER TO SHEET 9.
- REFER TO STRUCTURAL SHEETS FOR SEAWALL AND PLATFORM DETAILS.

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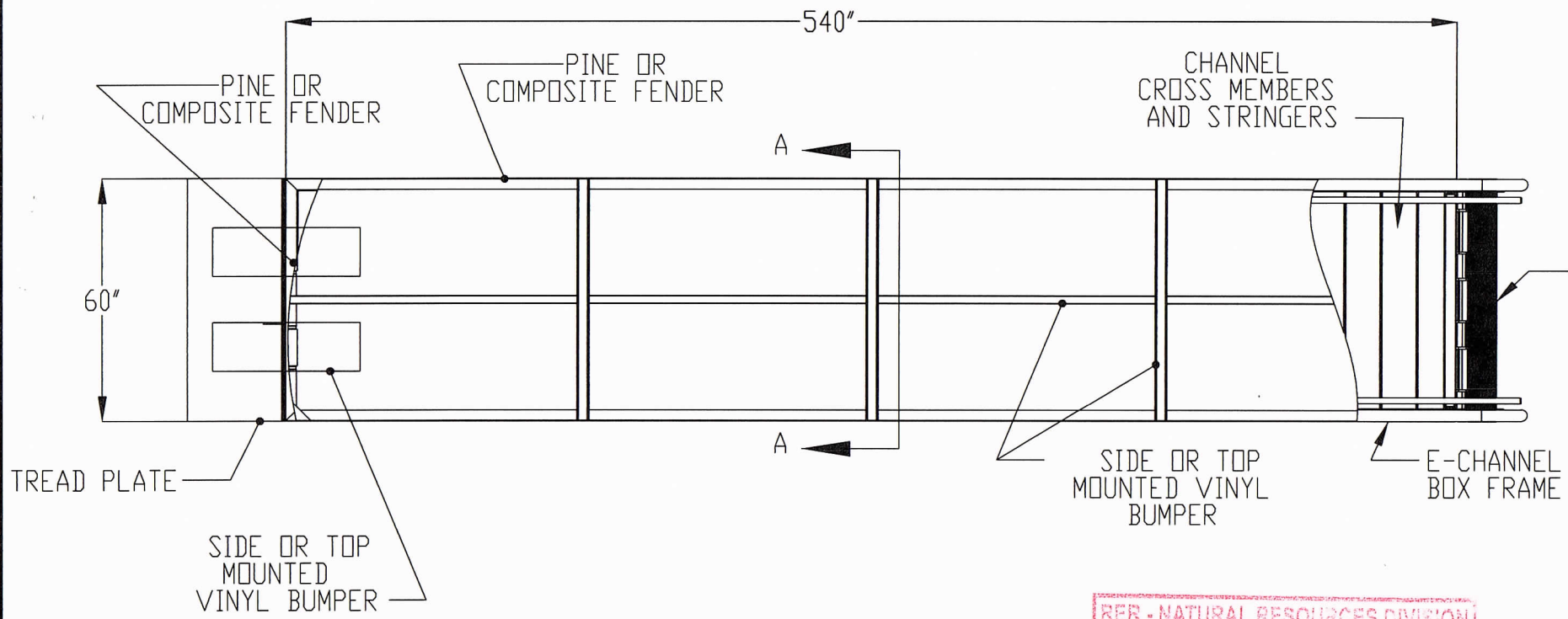
CITY OF MIAMI
OFFICE OF CAPITAL IMPROVEMENTS

PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

FLOATING DOCK DETAIL

SHEET NO.
6

REVISIONS		
DATE	BY	DESCRIPTION



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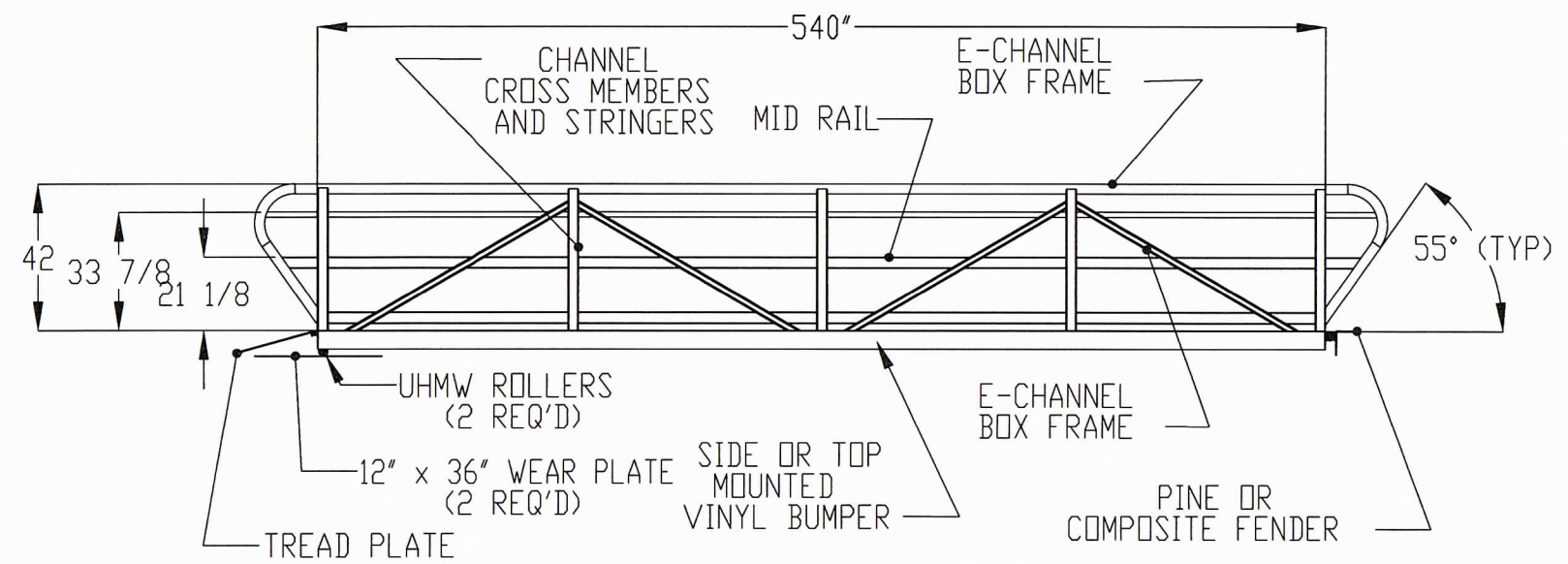
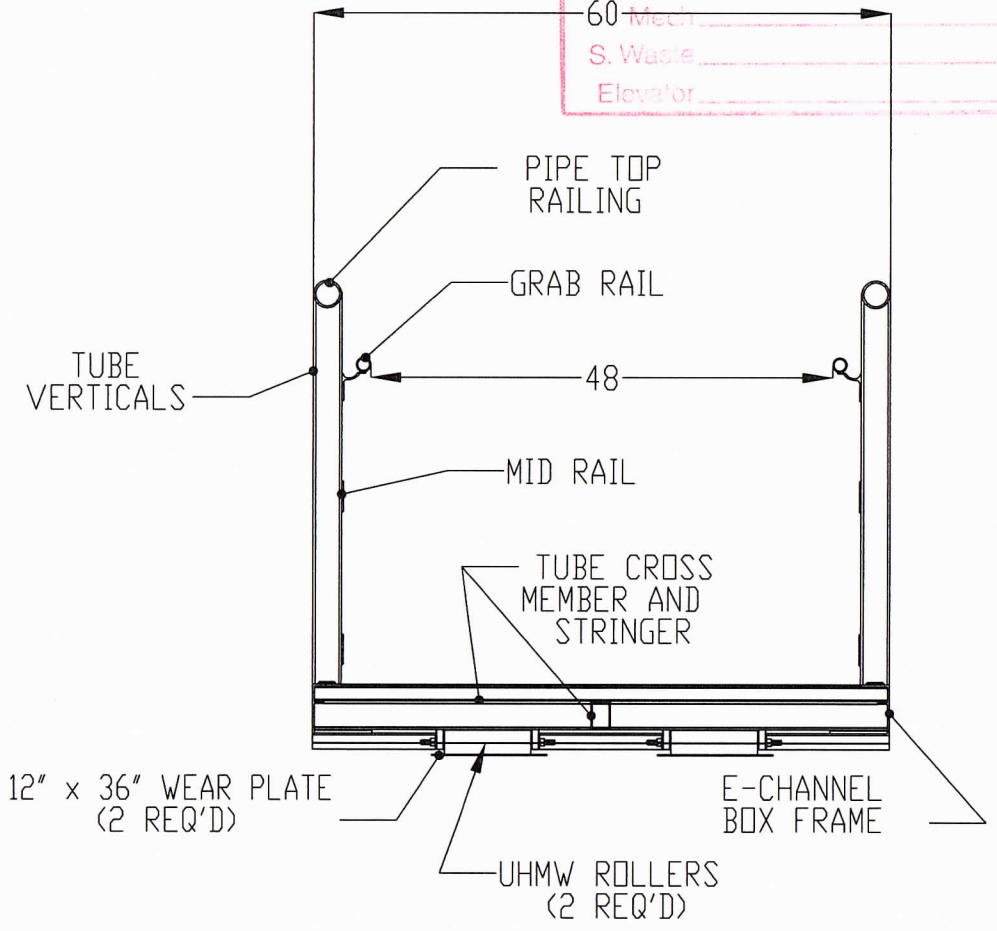
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 City of Miami
 Signature _____

P. Works _____
 Fire Prev. _____
 Planning _____
 Zoning _____
 Building RB 09 09 19
 Structural _____
 Electrical _____
 Plumbing _____
 Mech. _____
 S. Waste _____
 Elevator _____



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SECTION A-A
 SCALE: NTS

GATOR DOCK
 Marine Access Solutions
 2880 MELLONVILLE AVE, SANFORD, FL 32773
 800/256-8857 407/323-0190

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DATE	BY	DESCRIPTION

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 LICENSE No. 66918
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 T-Y-LIN INTERNATIONAL

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 444 S.W. 2ND AVENUE, 8TH FLOOR
 MIAMI, FLORIDA 33130
 (305) 416-1213 FAX (305) 416-1253

CITY OF MIAMI
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 PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2
 PROJECT No.: B-40584

GANGWAY DETAIL

SHEET NO.
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Zoning _____

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Electrical _____

Plumbing _____

Mech _____

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Planning _____

Zoning _____

Building _____

Structural _____

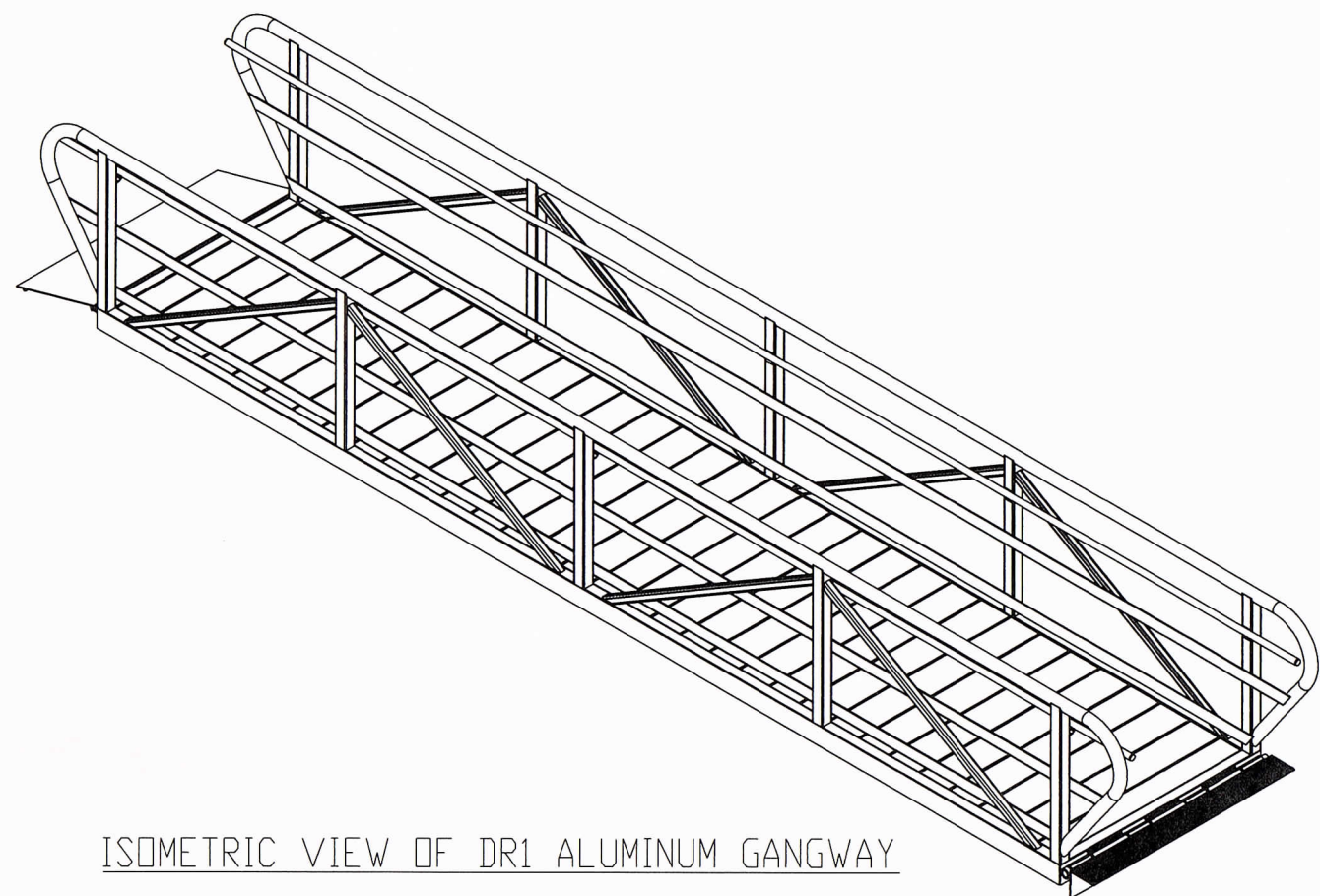
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ISOMETRIC VIEW OF DR1 ALUMINUM GANGWAY
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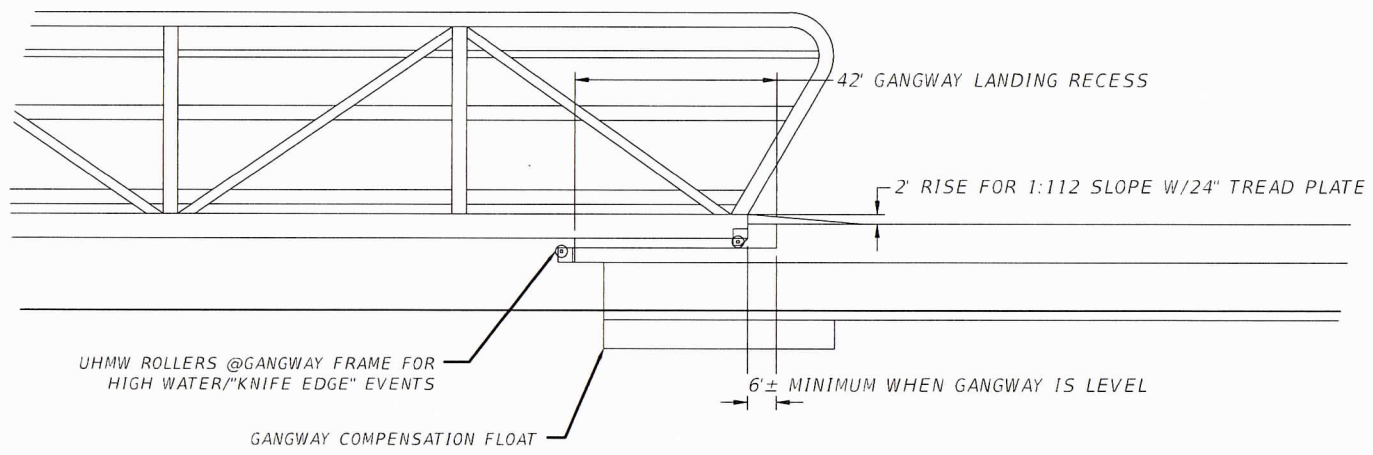
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DATE 7/18/19

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FINAL APPROVAL

NAME [Signature]

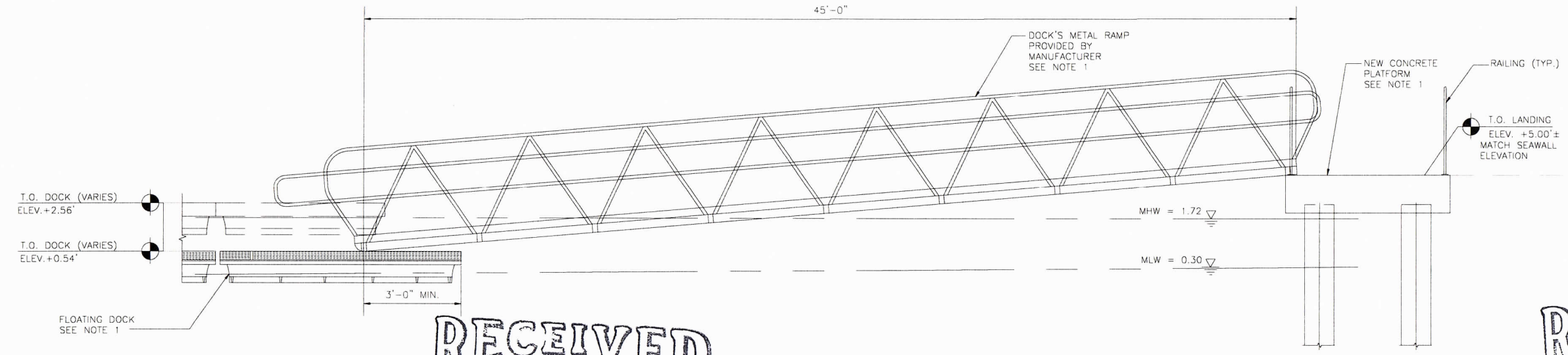
DATE 11/20/19

GATOR DOCK
Marine Access Solutions

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DATE	BY			DESCRIPTION	PROJECT NAME	
			444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	8



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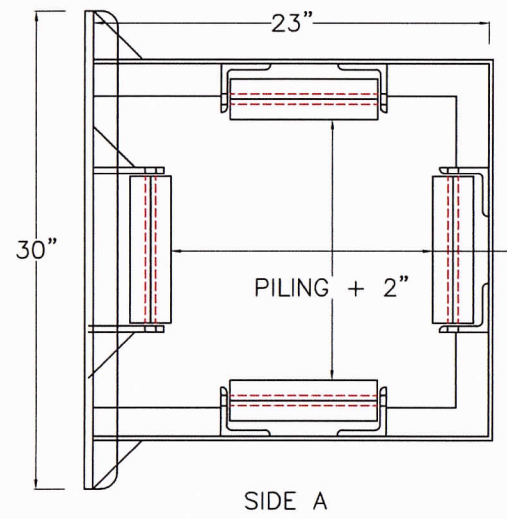
N.T.S.	Signature	Date
P. Works		
Fire Prev.		
Planning		
Zoning		
Building	<i>[Signature]</i>	09/09/19
Structural		
Electrical		
Plumbing		
Mech		
S. Waste		
Elevator		

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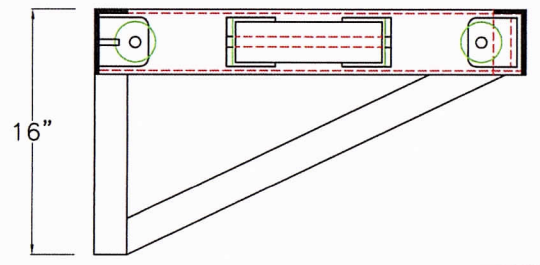
NATURAL RESOURCES DIVISION
DEPARTMENT OF REGULATORY
AND ECONOMIC RESOURCES

S.S. PILE GUIDE MADE FROM
4" X 2" X 1/4" S.S. ANGLE, RUBBER ROLLERS
S.S. BRACE

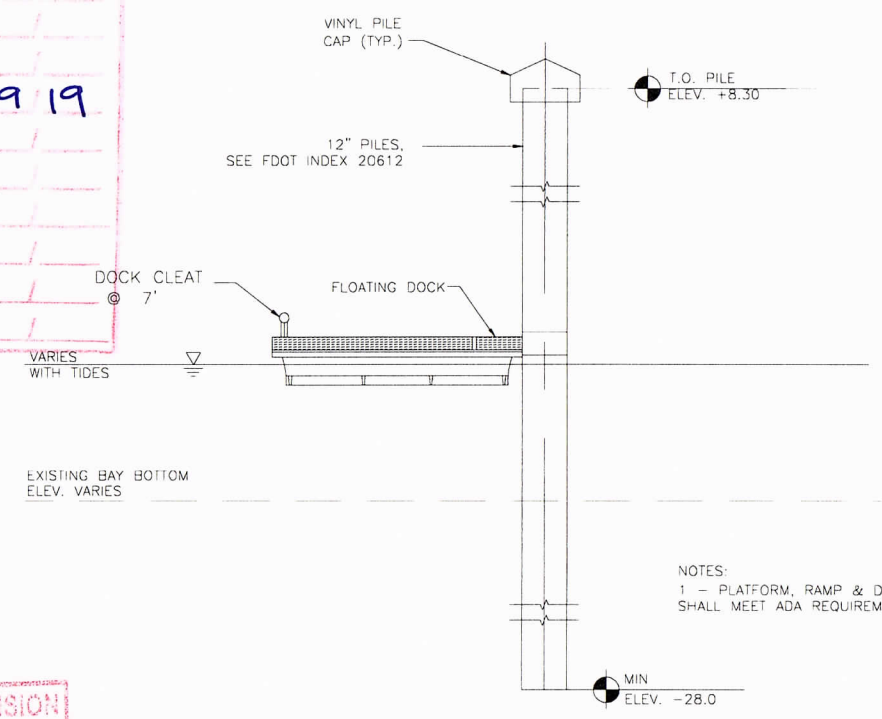


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DATE 11/20/19



EXTERNAL PILE GUIDE DETAIL



NOTES:
1 - PLATFORM, RAMP & DOCK
SHALL MEET ADA REQUIREMENTS

SECTION 2
N.T.S.

FRANCISCO J. ALONSO
LICENSE
No. 66918
STATE OF FLORIDA
PROFESSIONAL ENGINEER
T-Y-LIN INTERNATIONAL

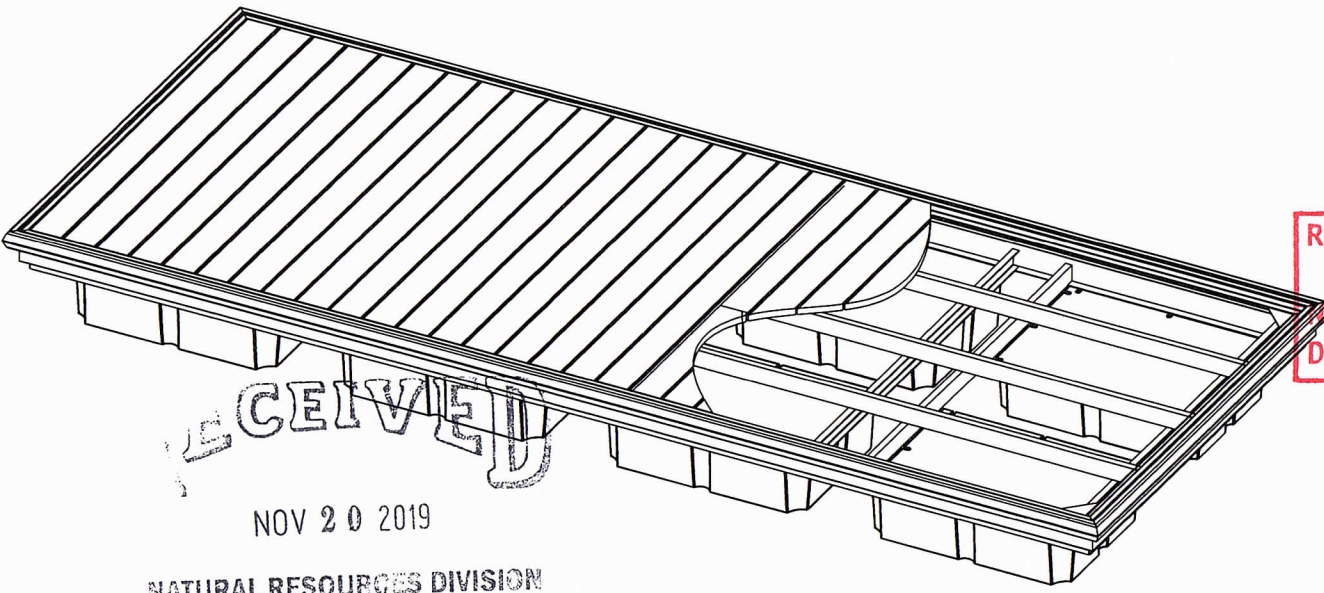
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CITY OF MIAMI
OFFICE OF CAPITAL IMPROVEMENTS

PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

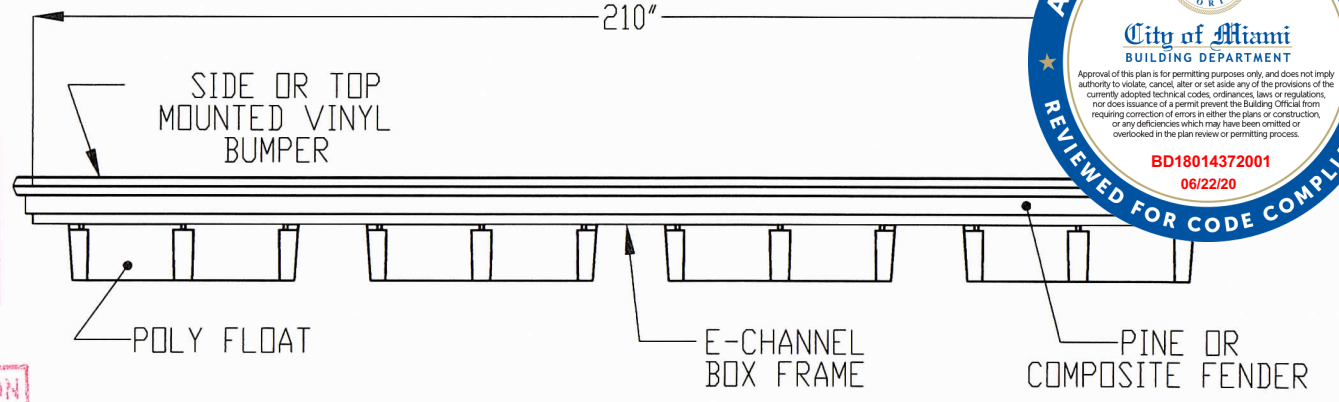
FLOATING DOCK SECTION & DETAILS

SHEET NO.
9



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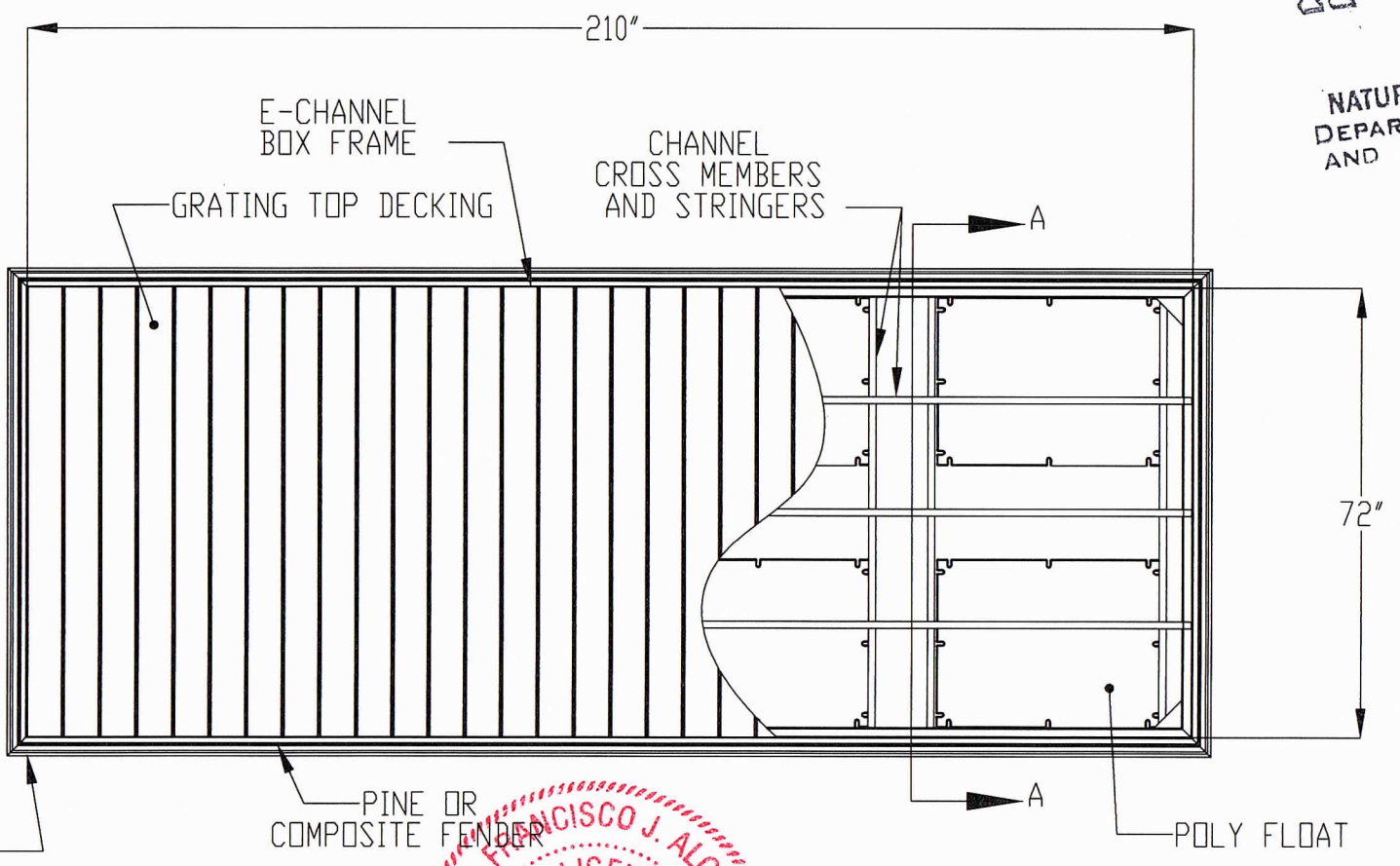
ELEVATION VIEW OF GRATING TOP DECKED POLY FLOATING DOCK

SCALE: NTS

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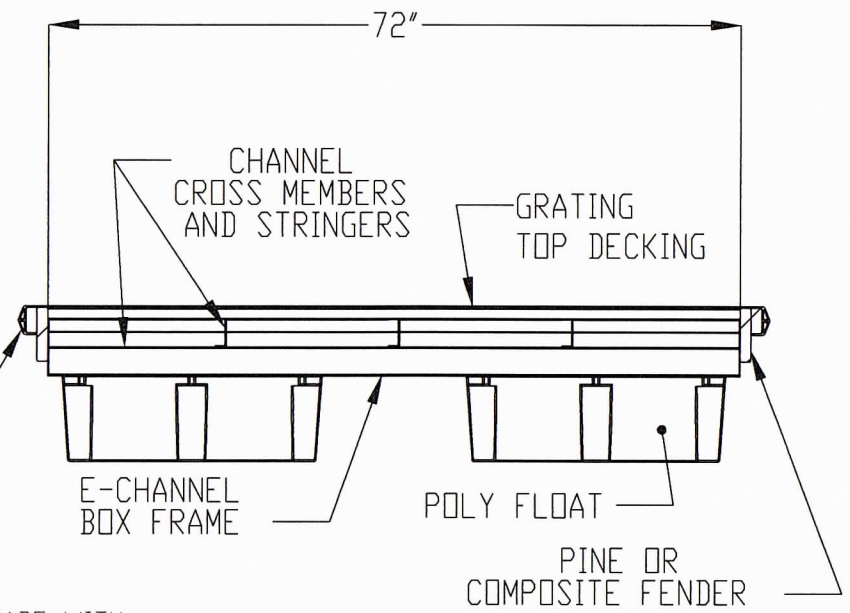
ISOMETRIC VIEW OF GRATING TOP DECKED POLY FLOATING DOCK

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PLAN VIEW OF GRATING TOP DECKED POLY FLOATING DOCK

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SECTION A-A

NOTE:
 GRATING DOCK SHALL BE MADE WITH THRUFLOW PANELS (COMPOSITE MATERIAL).
 GRATING DOCK SPECIFICATIONS:
 REINFORCED POLYPROPYLENE (THRUFLOW) OR APPROVED EQUAL, MIN 1.2" THICK
 LOAD MIN (1500LBS MID-SPAN)
 ULTRAVIOLET PROTECTION INDUSTRY LEADING
 UV PROTECTION, MAX WEIGHT 1.4LBS/SQ FT,
 MIN. LIGHT PENETRATION 43%,
 ENGINEERED NON-SLIP SURFACE TO COMPLY WITH ADA SPEC'S

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 City of Miami
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Work	_____
Prev.	_____
Flaming	_____
Zoning	_____
Building	_____
Structural	_____
Electrical	_____
Plumbing	_____
Mech.	_____
S. Waste	_____
Elevator	_____

GRATING TOP DECKED POLY FLOATING DOCK
GATOR DOCK
 Marine Access Solutions
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 LICENSE No. 66918
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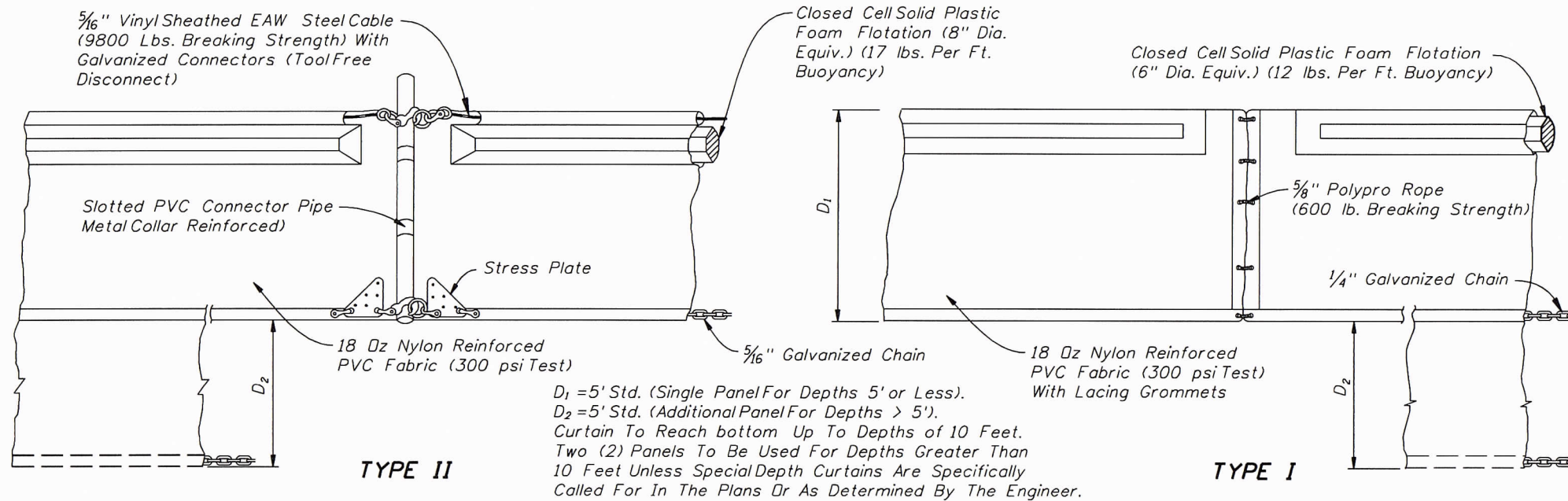
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 (305) 416-1213 FAX (305) 416-1253

CITY OF MIAMI
 OFFICE OF CAPITAL IMPROVEMENTS
 PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2
 PROJECT No.: B-40584

FLOATING DOCK DETAILS

SHEET NO. 10

DATE	BY	REVISIONS DESCRIPTION



NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

$D_1 = 5'$ Std. (Single Panel For Depths 5' or Less).
 $D_2 = 5'$ Std. (Additional Panel For Depths > 5').
 Curtain To Reach bottom Up To Depths of 10 Feet.
 Two (2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Are Specifically Called For In The Plans Or As Determined By The Engineer.

FLOATING TURBIDITY BARRIERS

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 City of Miami
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 Fire Prev. _____
 Planning _____
 Zoning _____
 Building _____
 Structural _____
 Electrical _____
 Plumbing _____
 Mech. _____

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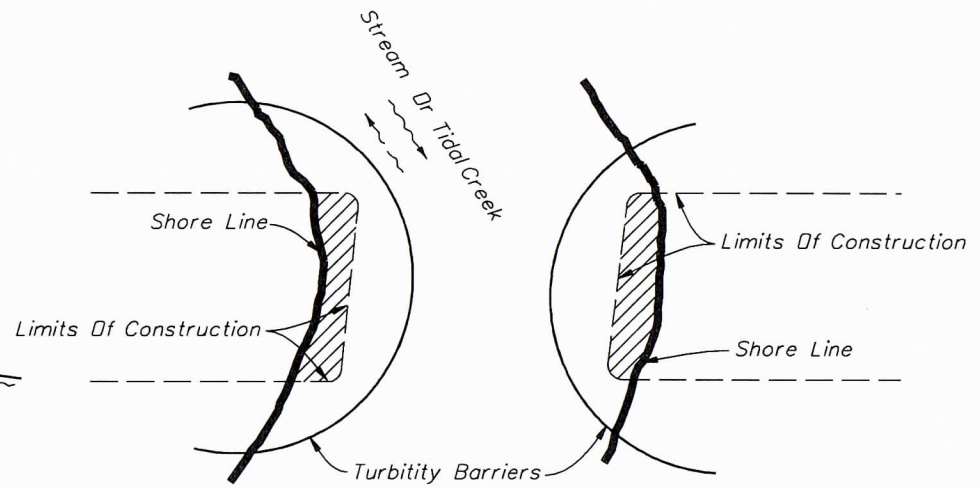
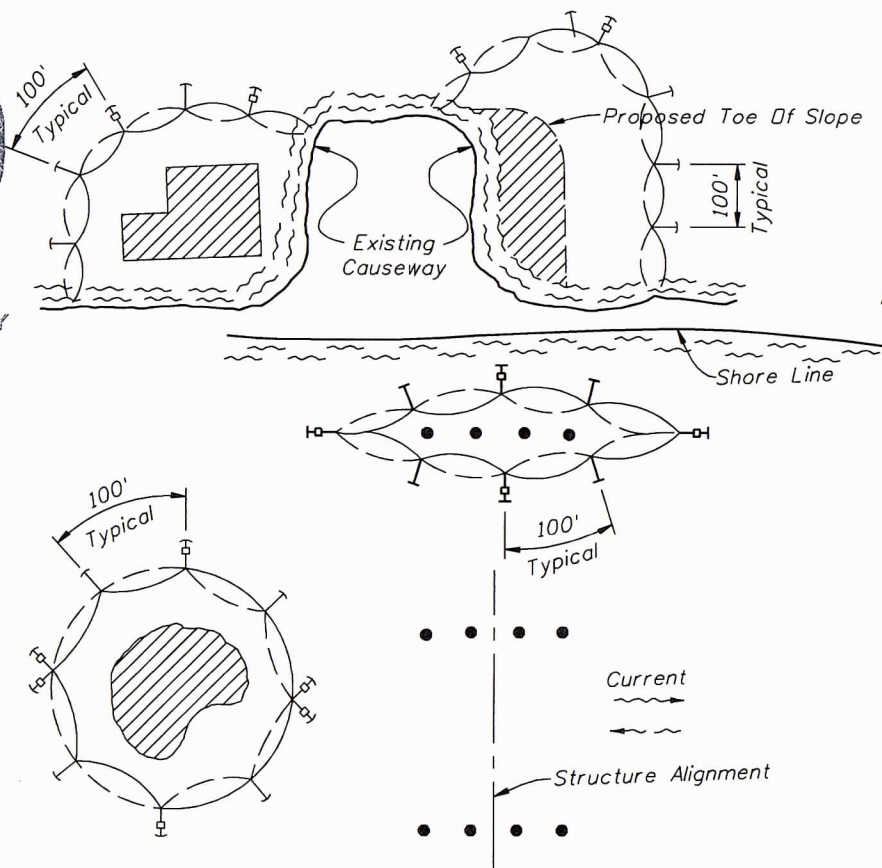


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LEGEND

- Pile Locations
- ▨ Dredge Or Fill Area
- ⊠ Mooring Buoy w/Anchor
- Anchor
- ⬭ Barrier Movement Due To Current Action

NATURAL RESOURCES DIVISION
 DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES



- Notes:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
 2. Number and spacing of anchors dependent on current velocities.
 3. Deployment of barrier around pile locations may vary to accommodate construction operations.
 4. Navigation may require segmenting barrier during construction operations.

Note:
 Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractor's option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

FRANCISCO J. ALONSO
 LICENSE
 No. 66918
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 T-Y-LIN INTERNATIONAL

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 OFFICE OF CAPITAL IMPROVEMENTS

PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

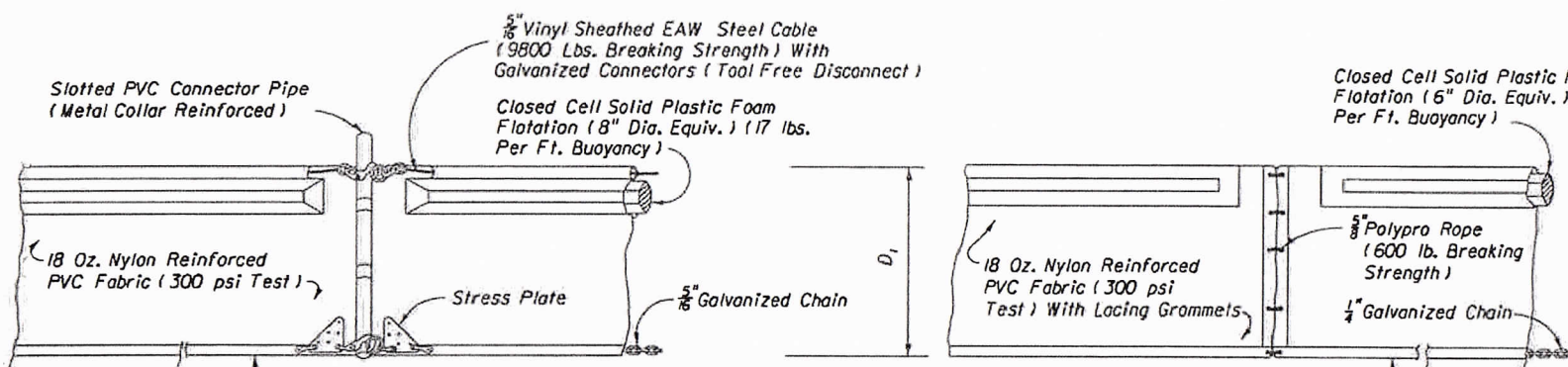
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DATE	BY	DESCRIPTION

TURBIDITY BARRIER DETAILS

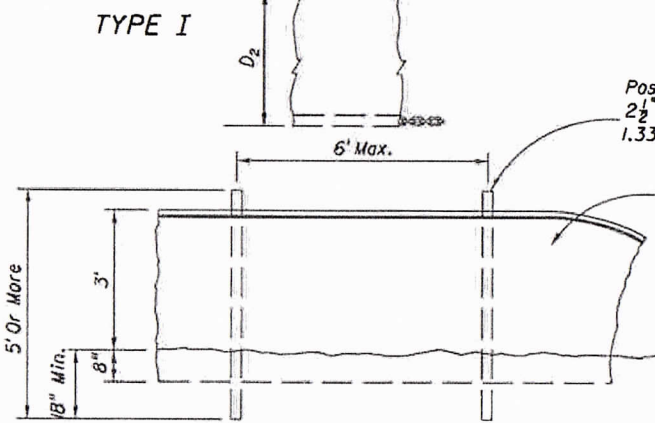
SHEET NO.
 11



TYPE II
 $D_1 = 5'$ Std. (Single Panel For Depths 5' or Less).
 $D_2 = 5'$ Std. (Additional Panel For Depths > 5').
 Curtain To Reach Bottom Up To Depths Of 10 Feet.
 Two (2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Call For In The Plans Or As Determined By The Engineer.

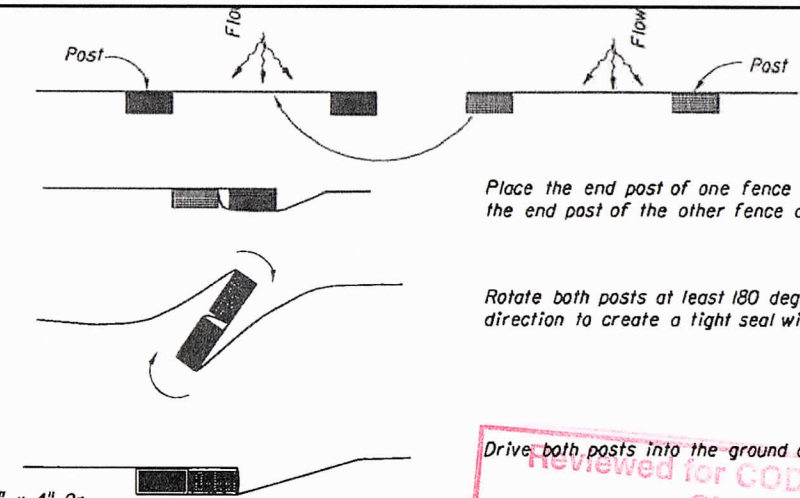
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS



STAKED TURBIDITY BARRIER

- LEGEND**
- Pile Locations
 - ▨ Dredge Or Fill Area
 - Mooring Buoy w/Anchor
 - Anchor
 - Barrier Movement Due To Current Action



Place the end post of one fence behind the end post of the other fence as shown.
 Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.

PLAN VIEW

JOINING TWO SILT FENCES

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Fire Prev.	
Planning	
Building	
Structural	
Electrical	
Plumbing	
Mech	
S. Waste	
Elevator	

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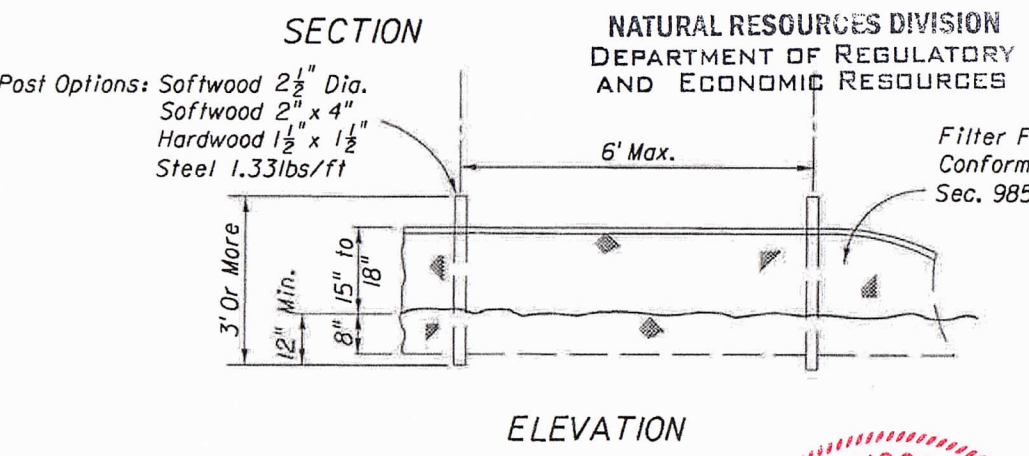
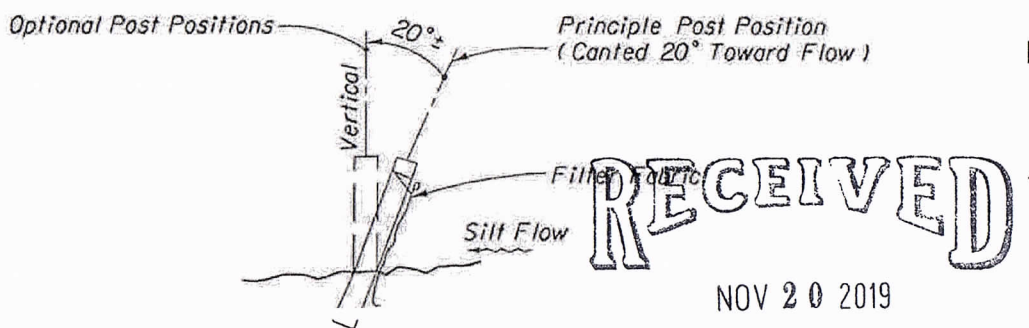
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NOTES FOR SILT FENCES

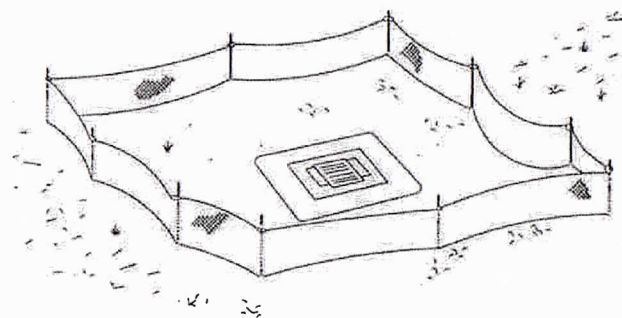
- Type III Silt Fence to be used at most locations. Where used in ditches, the spacing for Type III Silt Fence shall be in accordance with Chart 1, Sheet 1 of FDOT INDEX 102.
- Type IV Silt Fence to be used where large sediment loads are anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
- Do not construct silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
- Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channelizing runoff along the length of the fence.
- Silt Fence to be paid for under the contract unit price for Staked Silt Fence, (LF).

GENERAL NOTES

- Floating turbidity barriers are to be paid for under the contract unit price for Floating Turbidity Barrier, LF.
- Staked turbidity barriers are to be paid for under the contract unit price for Staked Turbidity Barrier, LF.



TYPE III SILT FENCE

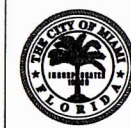


Silt Fence Protection Around Ditch Bottom Inlets.

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PROFESSIONAL ENGINEER
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 STATE OF FLORIDA

DATE	BY	DESCRIPTION



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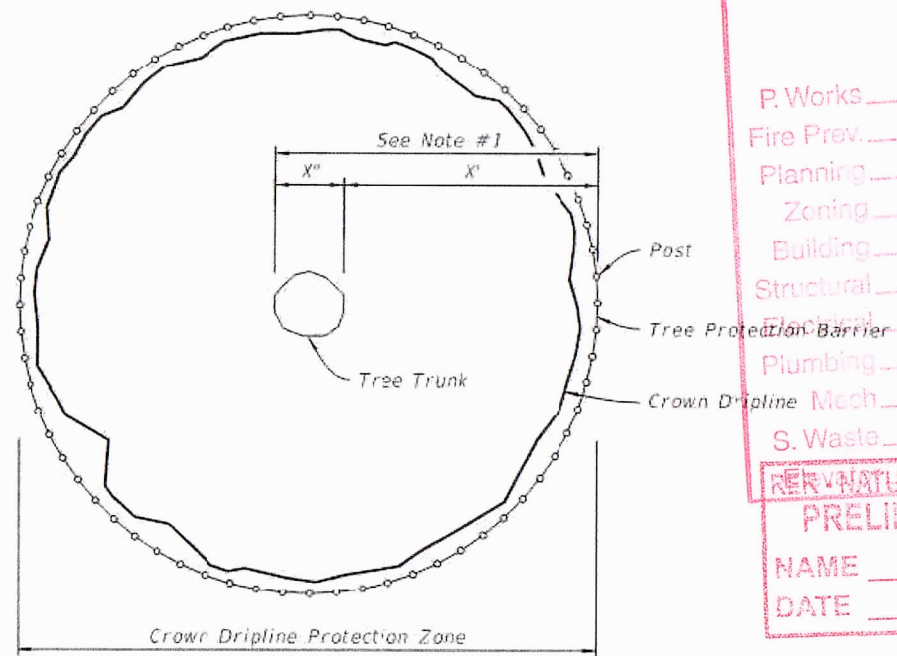
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PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

TURBIDITY BARRIER DETAILS

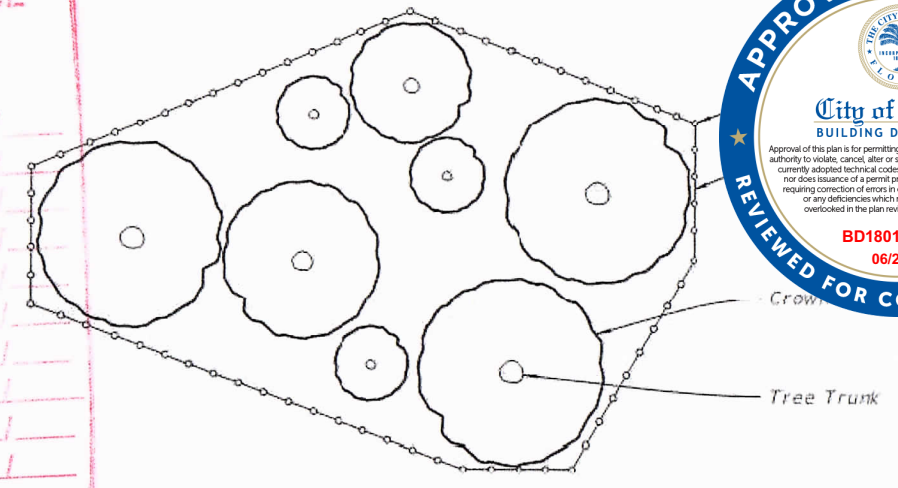
SHEET NO.
 12

NOTES:

1. Crown Dripline Protection Zone: Extends in all directions from trunk of tree to a distance equal to one foot per inch of trunk diameter at breast height.
2. Staging, storage, dumping, washing and operation of equipment is not permitted within the limits of the tree protection barrier, including during barrier installation.
3. Install all tree protection prior to commencement of construction and remove when directed by the engineer. Maintain protection at all times.
4. For closely spaced groups of trees, place the tree protection barrier around the entire group.
5. Inspect trunk protection and tree quarterly to prevent girdling. Adjust bands to allow tree growth as needed.
6. See plans for any additional requirements or modifications within the tree protection area.
7. Place weather resistant sign every 50' along the barrier, with 6" minimum text height and provide text in English and Spanish. Sign should read "Keep Out Tree Protection Area".
8. Alternate trunk protection details approved by the engineer may be used to help of the tree protection barrier detailed on this index.



PLAN



PLAN

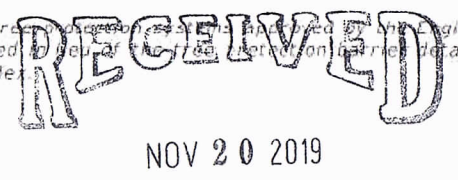
PROTECTION BARRIER FOR TREE GROUPINGS

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City of Miami

Signature	Date
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Planning	
Zoning	
Building	
Structural	
Electrical	
Plumbing	
Mech.	
S. Waste	

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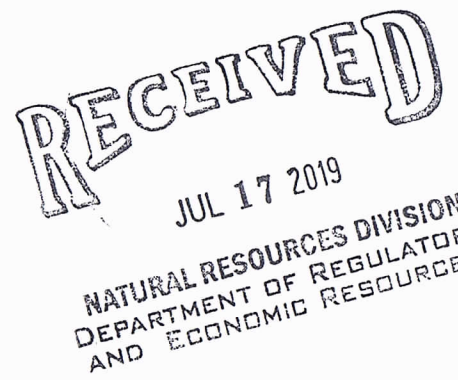
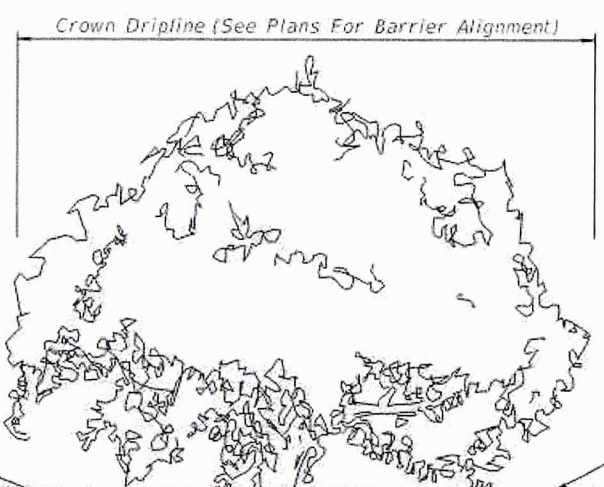
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DATE 7/18/19



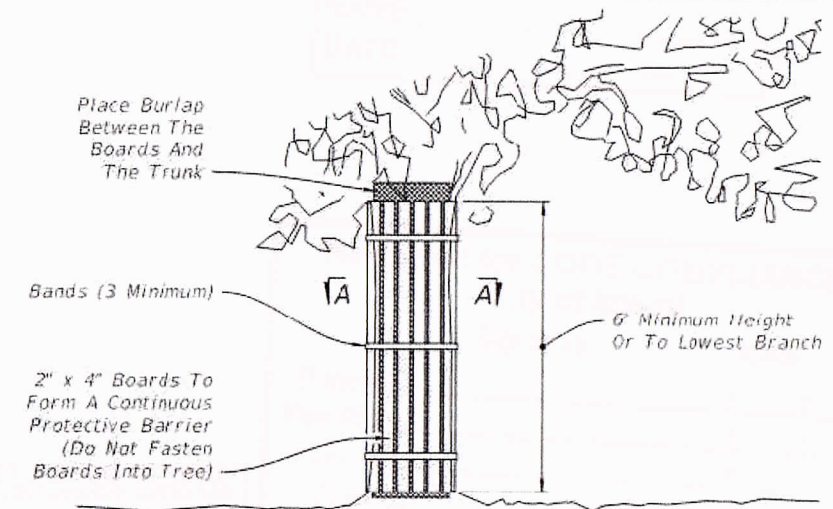
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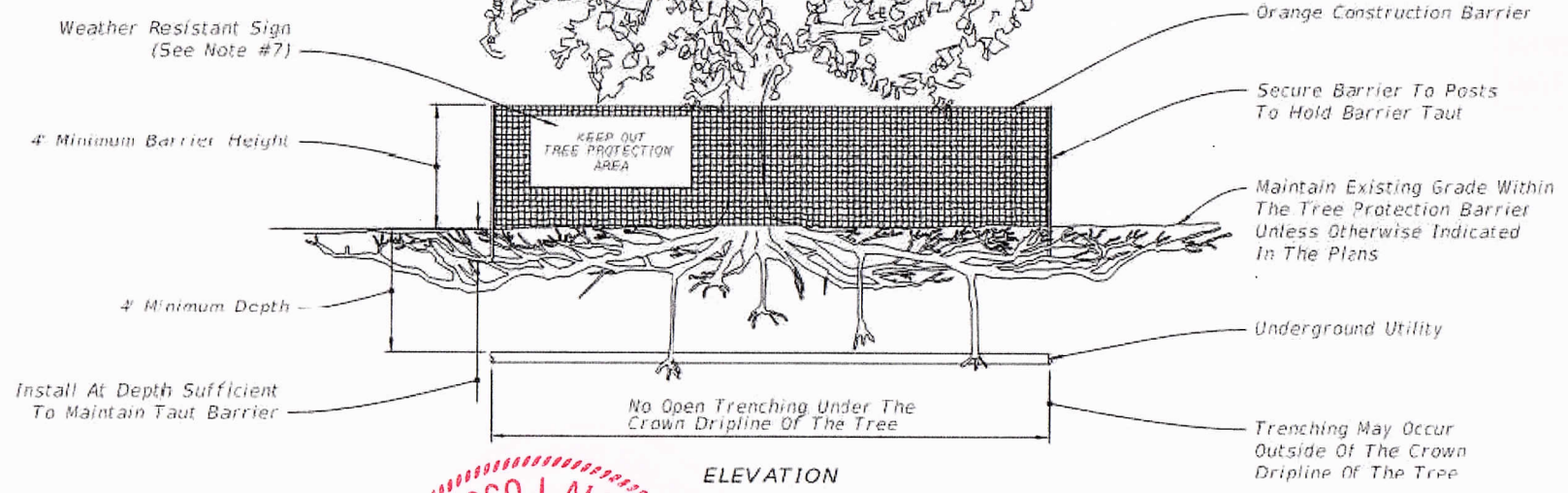
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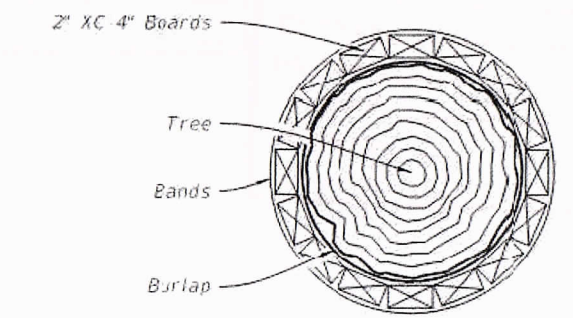


ELEVATION



ELEVATION

TREE PROTECTION BARRIER



SECTION A-A

- NOTES:**
1. Install trunk protection when Tree Protection Barrier can not be reasonably erected.
 2. See Selective Clearing and Grubbing Plan for location of trunk protection.
 3. Adjust bands to allow tree growth (inspect quarterly to prevent girdling).

TRUNK PROTECTION

DATE	BY	DESCRIPTION



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PROJECT NAME	PROJECT NO.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

TREE PROTECTION DETAIL

SHEET NO. 13

CITY OF MIAMI

CAPITAL IMPROVEMENTS PROGRAM

VIRGINIA KEY KAYAK LAUNCH - D2

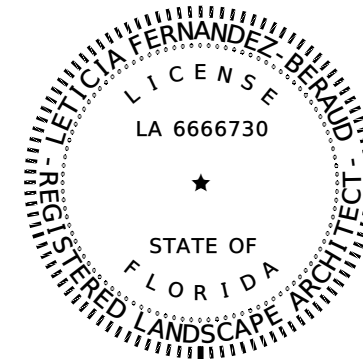
LANDSCAPE PLANS

06-02-2020



INDEX OF LANDSCAPE PLANS

<u>SHEET No.</u>	<u>SHEET DESCRIPTION</u>
LP-01	TITLE SHEET
LP-02	TREE DISPOSITION LIST
LP-03	TREE DISPOSITION PLAN WITH TREE PROTECTION FENCE LAYOUT
LP-04	TREE DISPOSITION PLAN WITH PROPOSED IMPROVEMENTS
LP-05	PLANT LIST AND MITIGATION CALCULATIONS
LP-06	PLANTING PLAN
LP-07	PLANTING DETAILS
LP-08	PLANT CORRECTION DETAILS
LP-09	SOIL DECOMPACTION DETAILS
LP-10	TREE PROTECTION DETAIL
LP-11	TREE PROTECTION NOTES
LP-12 to LP-13	PLANTING NOTES
LP-14 to LP-16	LANDSCAPE SPECIFICATIONS



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LANDSCAPE PLANS
LANDSCAPE ARCHITECT
OF RECORD:

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FL. RLA NO.: 6666730

FERNANDEZ-BERAUD, INC.
717 PONCE DE LEON BLVD., SUITE 223
CORAL GABLES, FL 33134
PHONE No. (305) 567-0110
CA No.: LC26000233

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

REVISIONS			LAR	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		TITLE SHEET AND INDEX OF LANDSCAPE PLANS	SHEET NO. LP-01
DATE	BY	DESCRIPTION			PROJECT NAME	PROJECT No.		
			Fernandez-Beraud, Inc. Landscape Architecture & Planning LETICIA FERNANDEZ-BERAUD, RLA LA 6666730	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584			

VIRGINIA KEY - KAYAK LAUNCH-2



Tree # Survey and Tree Disp. Plan	Tree # Certif. Arborist Report	Botanical Name	Common Name	DBH (in)	Height (ft)	Spread (ft)	Condition	Disposition	No Mitigation Required (Category 1 Invasive)	Tree DBH Remove/ Mitigate	Palms-Remove & MITIGATE (1 Palm=1 Tree)
55		<i>Syagrus romanzoffiana</i>	Queen Palm	10	25	25	Acceptable condition / Protect from damage	Remain			
56		<i>Washingtonia robusta</i>	Washington Palm	12	45	20	Acceptable condition / Protect from damage	Remain			
57	#25	<i>Washingtonia robusta</i>	Washington Palm	12	40	20	Acceptable condition / Protect from damage	Remain			
58	#22	<i>Washingtonia robusta</i>	Washington Palm	12	25	10	Acceptable condition / Protect from damage	Remain			
59	#23	<i>Washingtonia robusta</i>	Washington Palm	12	40	20			Remove		1
60		<i>Washingtonia robusta</i>	Washington Palm	12	25	10	Acceptable condition / Protect from damage	Remain			
61	#13	<i>Washingtonia robusta</i>	Washington Palm	12	25	10	In fair health / With trunk damage		Remove		1
62	#24	<i>Washingtonia robusta</i>	Washington Palm	12	40	10	In poor to fair shape / With bark damage / Potentially hazardous		Remove		1
63	#27	<i>Washingtonia robusta</i>	Washington Palm	12	40	10	Acceptable condition / Protect from damage	Remain			
64	#26	<i>Washingtonia robusta</i>	Washington Palm	12	35	20	Acceptable condition / Protect from damage	Remain			
65	#9	<i>Cocos nucifera</i>	Coconut Palm	10	25	20	In fair health / With trunk damage / In the way of construction		Remove		1
66	#10	<i>Cocos nucifera</i>	Coconut Palm	10	25	20	In fair health / Trunk is in poor shape / With some degree of nutrient deficiencies		Remove		1
67	#28	<i>Calophyllum sp.</i>	Calophyllum	8	15	15	Good condition / Protect from damage	Remain			
69		<i>Cocos nucifera</i>	Coconut Palm	8	30	20	Acceptable condition / Protect from damage	Remain			
70		<i>Caryota mitis</i>	Fishtail Palm	4	20	5	Acceptable condition / Protect from damage	Remain			
71		<i>Coccoloba uvifera</i>	Sea Grape	20	35	30	Acceptable condition / Protect from damage	Remain			
77		<i>Ficus benghalensis</i>	Banyan (Ficus)	50	40	50	Acceptable condition / Protect from damage	Remain			
78		<i>Chrysophyllum oliviforme</i>	Satin Leaf	10	20	20	With poor structure / In poor condition		Remove	10	
79		unknown	Unknown	8	25	25	Acceptable condition / Protect from damage	Remain			
80		<i>Calophyllum sp.</i>	Calophyllum	8	25	25	Acceptable condition / Protect from damage	Remain			
81		<i>Conocarpus erectus</i>	Green Buttonwood	10	20	20	In poor condition / Poor structure / With insect damage		Remove	10	
82	#29	<i>Calophyllum sp.</i>	Calophyllum	8	20	10	Acceptable condition / Protect from damage	Remain			
84	#11	<i>Coccoloba uvifera</i>	Sea Grape	20	30	30	in fair health overall but poor shape. Much of tree is in water due to poor planting location		Remove	20	
85		<i>Thespesia populnea</i>	Seaside Mahoe	14	30	25	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
86	#15	<i>Thespesia populnea</i>	Seaside Mahoe	14	30	25	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
89		<i>Musa acuminata</i>	Banana Cluster	4	12	5	Acceptable condition / Protect from damage	Remain			
90		<i>Musa acuminata</i>	Banana Cluster	4	12	5	Acceptable condition / Protect from damage	Remain			
91		<i>Casuarina equisetifolia</i>	Australian Pine	24	60	50	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
92		<i>Casuarina equisetifolia</i>	Australian Pine	24	60	50	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
93	#19	<i>Casuarina equisetifolia</i>	Australian Pine	18	40	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
94	#18	<i>Casuarina equisetifolia</i>	Australian Pine	18	40	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
95	#1	<i>Casuarina equisetifolia</i>	Australian Pine	18	40	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
96	#2	<i>Casuarina equisetifolia</i>	Australian Pine	10	25	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
97	#3	<i>Casuarina equisetifolia</i>	Australian Pine	18	40	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
98		<i>Casuarina equisetifolia</i>	Australian Pine	18	55	45	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
99	#5	<i>Casuarina equisetifolia</i>	Australian Pine	18	55	45	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
100	#6	<i>Casuarina equisetifolia</i>	Australian Pine	18	55	45	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
100a	#4	<i>Casuarina equisetifolia</i>	Australian Pine	18	55	45	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
100b	#7	<i>Conocarpus erectus</i>	Green Buttonwood	10	15	10	In poor condition / In the way of construction		Remove	10	
101	#4	<i>Casuarina equisetifolia</i>	Australian Pine	18	55	45	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
102	#8	<i>Casuarina equisetifolia</i>	Australian Pine	12	40	30	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
103		<i>Casuarina equisetifolia</i>	Australian Pine	38	70	40	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
104		<i>Casuarina equisetifolia</i>	Australian Pine	10	30	20	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
105		Unknown	Unknown	6	15	10	In acceptable condition / Very close to an Australian Pine / In the way of construction		Remove	6	
106		<i>Casuarina equisetifolia</i>	Australian Pine	38	70	40	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
107		<i>Thespesia populnea</i>	Seaside Mahoe	10	25	20	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
108	#16	<i>Thespesia populnea</i>	Seaside Mahoe	10	25	20	Category 1 - invasive exotic (www.fleppc.org)		Remove	x	
109	#17	<i>Coccoloba uvifera</i>	Sea Grape	8	25	20	In bad condition / Fallen tree with exposed roots / In the way of construction		Remove	8	
110		<i>Coccoloba diversifolia</i>	Pigeon Plum	8	25	20	With poor structure / In the way of construction		Remove	8	
111	#12	<i>Avicennia germinans</i>	Black Mangrove	12	15	10	In good health / In poor planting area / Leaning on the water / In the way of construction				
TOTAL TREE DBH TO REMOVE AND TO MITIGATE (inches)										72	5
										inches	trees

NOTE:
TREE # 111 (BLACK MANGROVE) IS TO BE REMOVED UNDER THE DERM CLASS I PERMIT OBTAINED FOR THIS PROJECT.

REVISIONS		
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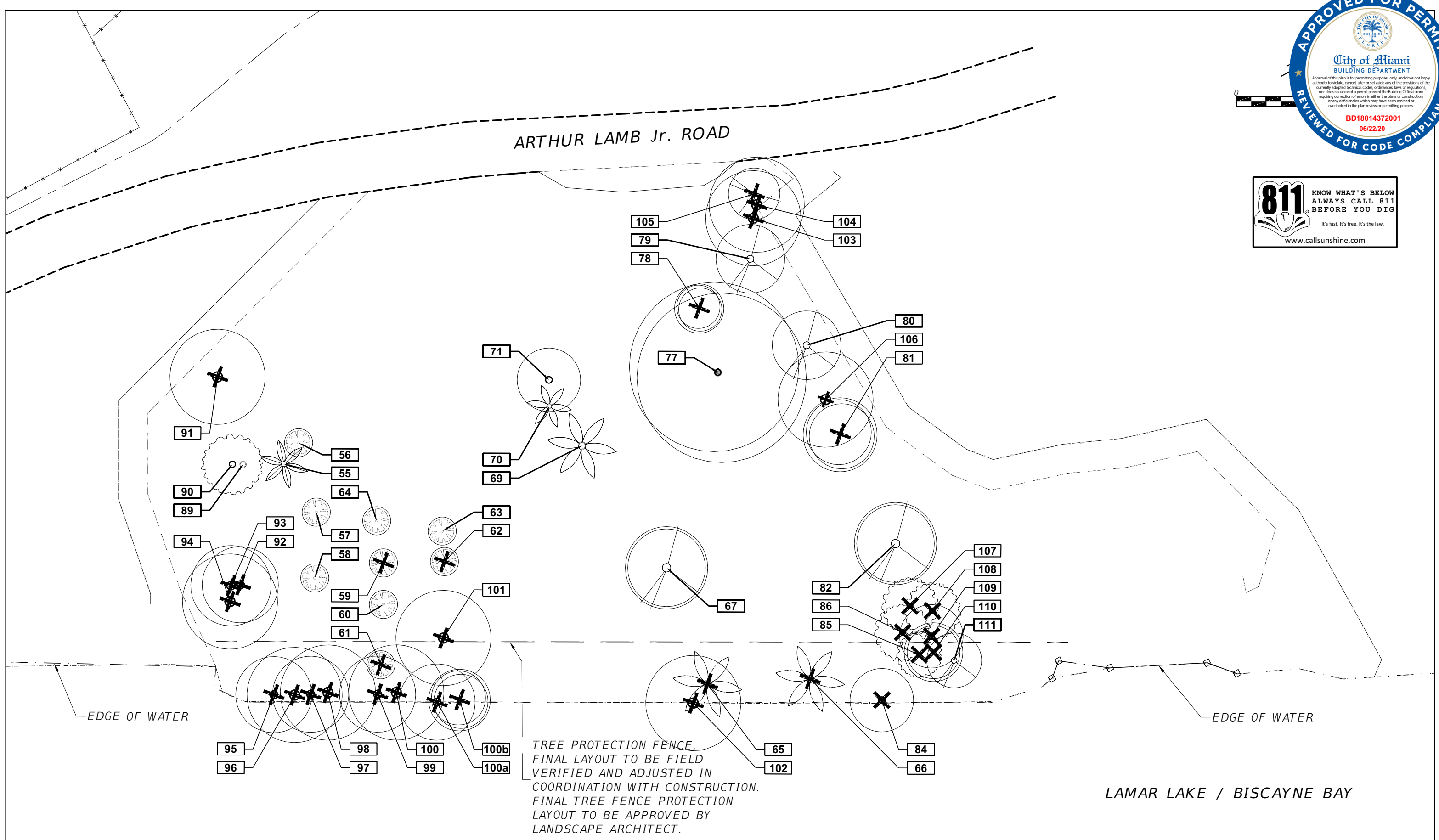


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CITY OF MIAMI
OFFICE OF CAPITAL IMPROVEMENTS
PROJECT NAME: **VIRGINIA KEY KAYAK LAUNCH-D2**
PROJECT No.: **B-40584**

TREE DISPOSITION LIST

SHEET NO.
LP-02



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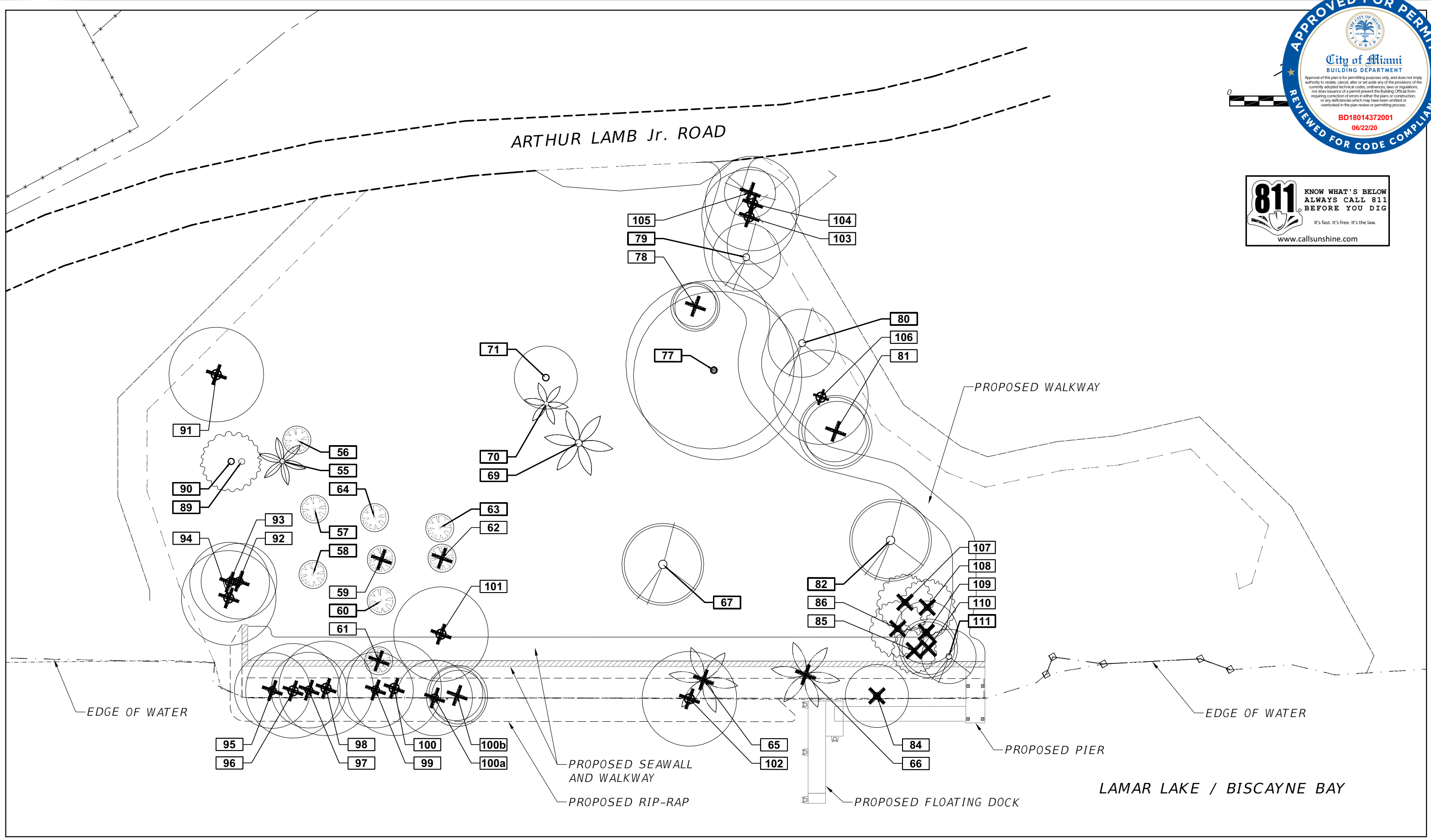


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CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS	
PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

**TREE DISPOSITION PLAN
 WITH PROTECTION FENCE LAYOUT**

SHEET NO.
LP-03



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CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS	
PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

TREE DISPOSITION PLAN WITH PROPOSED IMPROVEMENTS

SHEET NO.
 LP-04



PLANT LIST (06-02-2020)
VIRGINIA KEY - KAYAK LAUNCH-2 - City of Miami

TREES												
QUANT.	SYMBOL	SCIENTIFIC NAME	COMMON NAME	NATIVE	SALT TOLERANT	SIZE	SPACING	NOTES	WATER REQUIREMENT	MATURE PLANT SIZE (Height x Width) (FEET)	WIND R.	
10	BS	<i>Bursera simaruba</i>	Gumbo Limbo	YES	H	30 Gal (or B&B)	As Shown	2" min. DBH; 12' o.a. min.; 6' spread min. / single, strong & straight leader; symetrical and full canopy; Florida #1 or better.	LOW	40' x 35'	Highest	
9	CU	<i>Coccoloba uvifera</i>	Seagrape	YES	H	30 Gal (or B&B)	As Shown	2" min. DBH; 12' o.a. min.; 6' min. spread / single leader; symetrical and full canopy; Florida #1 or better.	LOW	30' x 25'	Medium-High	
9	CE	<i>Conocarpus erectus</i>	Green Buttonwood	YES	H	30 Gal (or B&B)	As Shown	2" min. DBH; 12' o.a. min.; 6' min. spread / single, strong & straight leader; symetrical and full canopy; Florida #1 or better.	LOW	35'x25'	Highest	
1	FC	<i>Ficus citrifolia</i>	Shortleaf fig	YES		30 Gal (or B&B)	As Shown	2" min. DBH; 12' o.a. min.; 6' min. spread / single, strong & straight leader; symetrical and full canopy; Florida #1 or better.				
29 Total new trees												

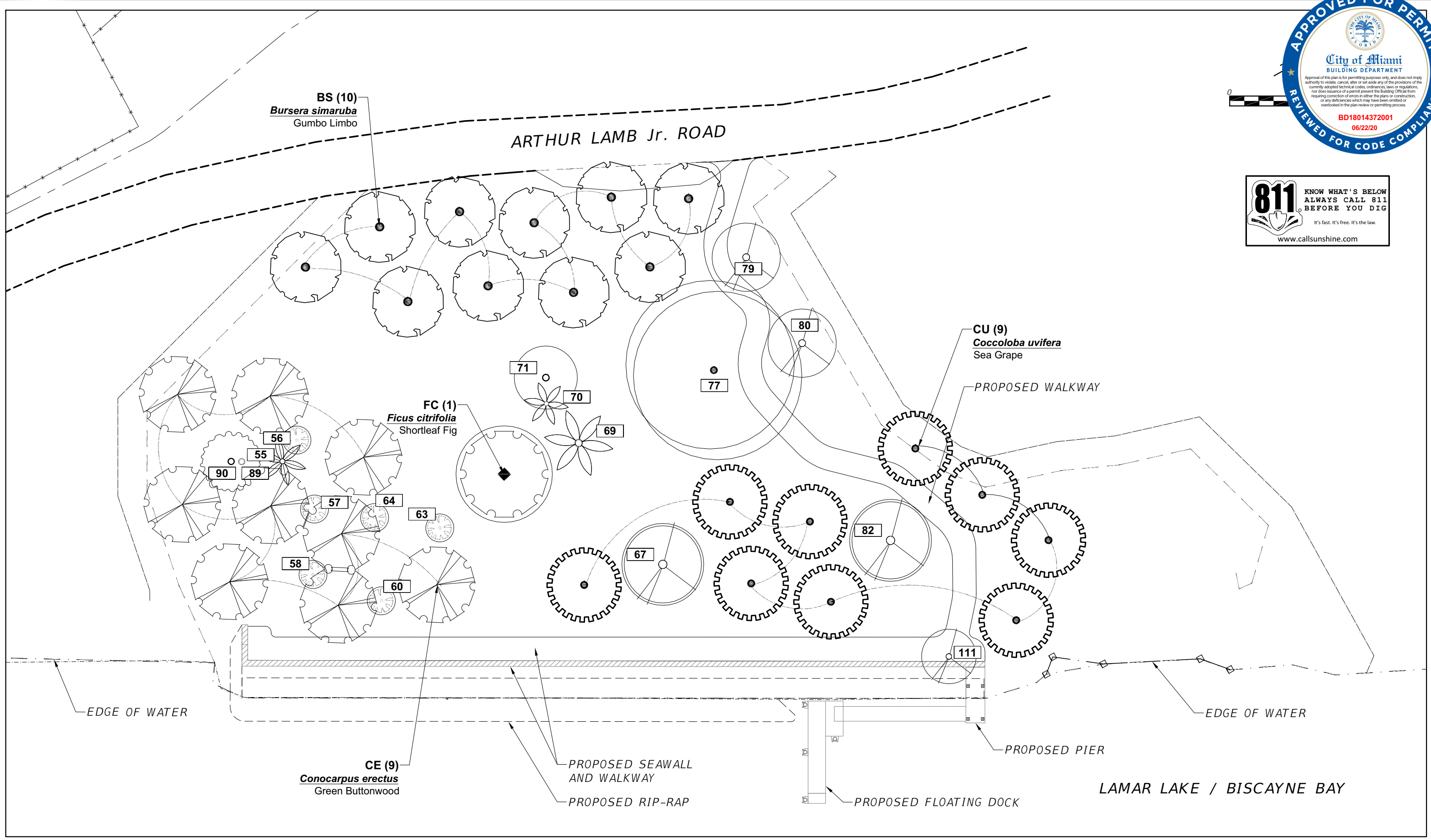
TREE MITIGATION CALCULATIONS:

- 1) TOTAL TREE DBH REMOVED: 72" / MITIGATION REQUIREMENTS: 24 TREES TOTAL (2" DBH X 6' SPREAD IN CANOPY X 12' HEIGHT MINIMUM).
 - 2) TOTAL PALM TREES REMOVED: 5 PALMS / MITIGATION REQUIREMENTS: 5 TREES TOTAL (2" DBH X 6' SPREAD IN CANOPY X 12' HEIGHT MINIMUM) (1 TREE TO MITIGATE 1 PALM).
- TOTAL MITIGATION TREES REQUIRED: 29 TREES (2" DBH X 6' SPREAD IN CANOPY X 12' HEIGHT MINIMUM).
TOTAL MITIGATION TREES PROVIDED: 29 TREES (2" DBH X 6' SPREAD IN CANOPY X 12' HEIGHT MINIMUM).
- 3) TOTAL NUMBER OF SPECIES: 4 TOTAL, ALL OF THE TREES BEING SOUTH FLORIDA NATIVE.

NOTES:

- 1) PLANS SUPERCEDE TABULATIONS. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL PLANT QUANTITIES AND BUILD AS PER PLANS, EVEN IF THERE IS A DISCREPANCIES BETWEEN PLANT LIST QUANTITIES AND PLANS. IN CASE OF DISCREPANCIES, NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY.
- 2) ALL PLANT SPECIFICATIONS IN TERMS OF GALLONAGE, HEIGHT, CANOPY, CALIPER, AND, DBH SHALL BE FULFILLED, EVEN THOUGH IF IT MEANS TO SURPASS SOME OF THOSE SPECIFICATIONS.
- 3) ALL PLANT LAYOUT SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CONTACT LANDSCAPE ARCHITECT AT LEAST 10 BUSINESS DAYS PRIOR TO INSTALLATION, IN ORDER TO REVIEW PLANTING LAYOUT.
- 4) PRIOR TO CONSTRUCTION, LANDSCAPE CONTRACTOR IS RESPONSIBLE TO SUBMIT TO THE LANDSCAPE ARCHITECT UNIT PRICES OF ALL LANDSCAPE MATERIAL AND IRRIGATION SPECIFIED.
- 5) PRIOR TO CONSTRUCTION, LANDSCAPE CONTRACTOR IS RESPONSIBLE TO SUBMIT TO THE LANDSCAPE ARCHITECT PHOTOGRAPHS OF ALL PLANT MATERIAL, SHOP DRAWINGS OF LANDSCAPE EDGING (IF REQUIRED), HORTICULTURAL SOIL ANALYSIS (IF REQUIRED AS PER SPECIFICATIONS), OR ANY OTHER REQUIRED SUBMITTAL AS PER SPECIFICATIONS.
- 6) ALL PLANT MATERIAL SHALL MEET OR EXCEED ALL SIZE REQUIREMENTS.
- 7) REFER TO TREE CORRECTION DETAILS. ROOT SHAVING AND PLANT CORRECTIONS WILL BE REQUIRED.
- 9) ALL NEWLY INSTALLED PLANTING MATERIAL WILL BE MAINTAINED IN A CONDITION THAT MEETS OR EXCEEDS FLORIDA GRADE #1 AND HAS A MINIMUM OF ONE (1) YEAR REPLACEMENT GUARANTEE.
- 10) EXISTING SUBSURFACE MATERIALS MAY INCLUDE ROCK FORMATIONS WITH HIGH RESISTANCE TO EXCAVATION. SPECIAL EQUIPMENT AND BREAKING TOOLS WILL BE REQUIRED AS NECESSARY TO EXCAVATE THE SUBSURFACE MATERIAL CONSISTING OF ROCK FORMATIONS, AND WILL BE CONSIDERED AS PART OF THE CONSTRUCTION COST AND AS PART OF THIS CONTRACT.

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> <th rowspan="2">DESCRIPTION</th> </tr> <tr> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISIONS		DESCRIPTION	DATE	BY				LAR Fernandez-Beraud, Inc. Landscape Architecture & Planning LETICIA FERNANDEZ-BERAUD, RLA LA 6666730	CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2 PROJECT No.: B-40584	PLANT LIST AND MITIGATION CALCULATIONS	SHEET NO. LP-05
REVISIONS		DESCRIPTION													
DATE	BY														



REVISIONS	
DATE	DESCRIPTION

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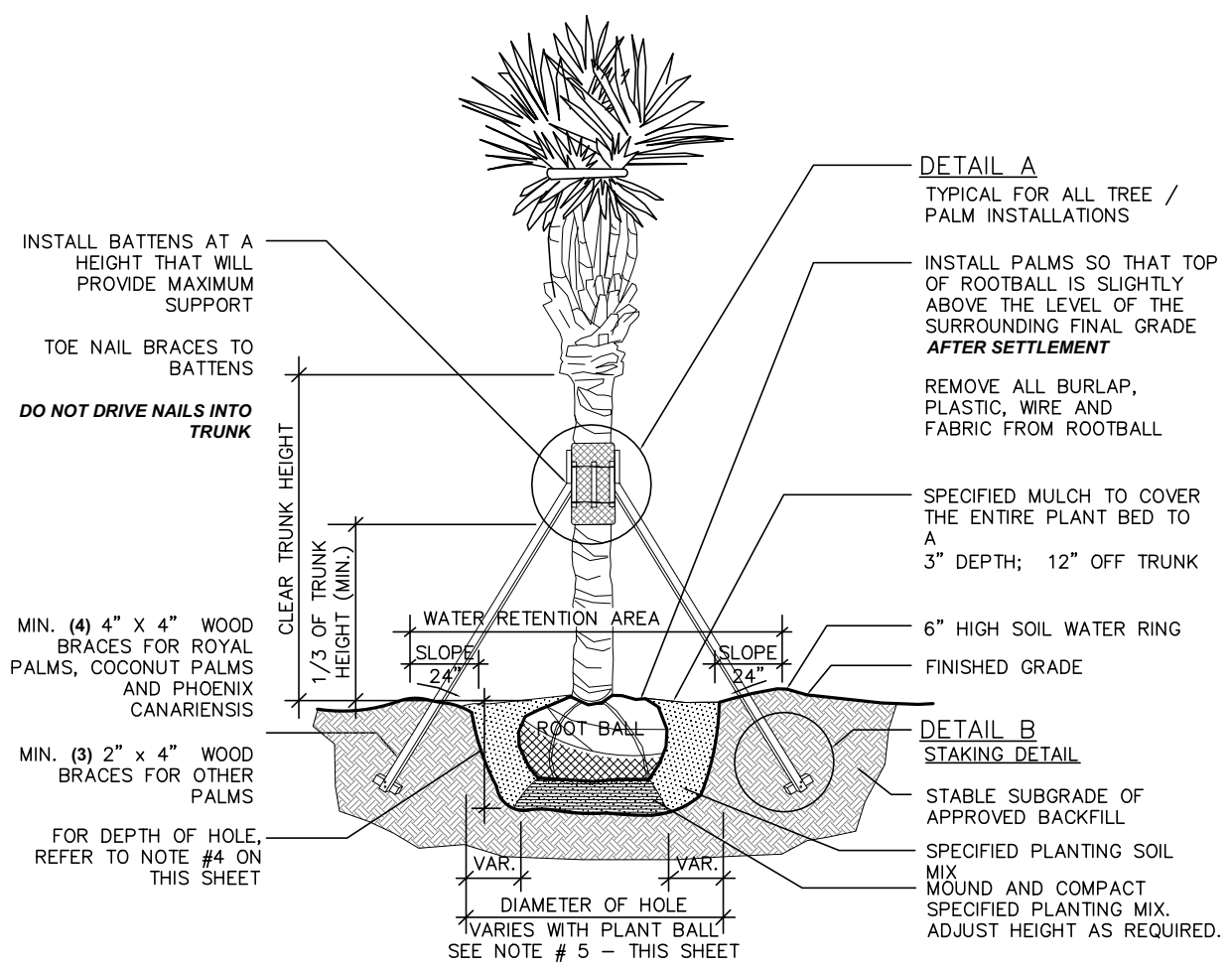


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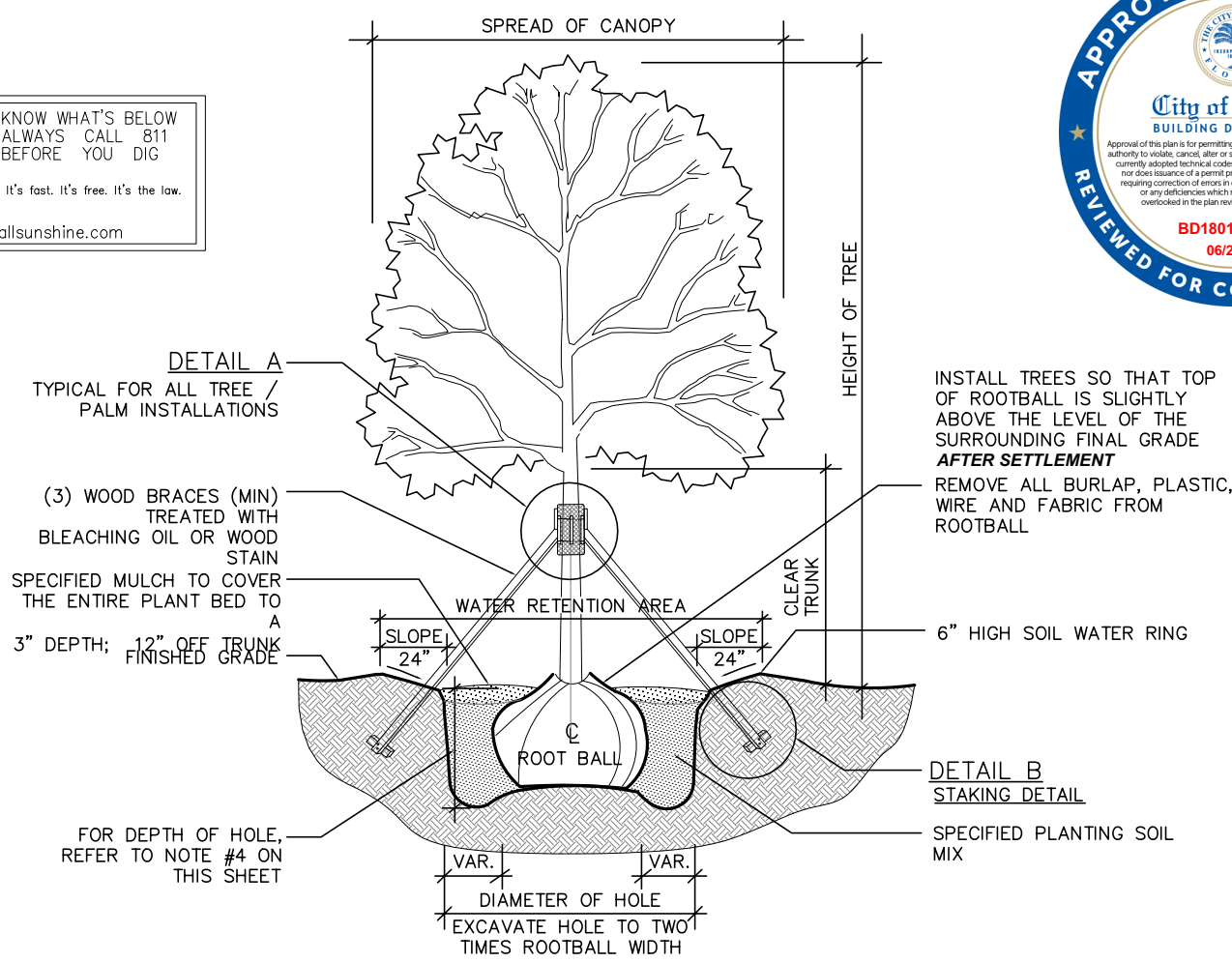
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PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

PLANTING PLAN

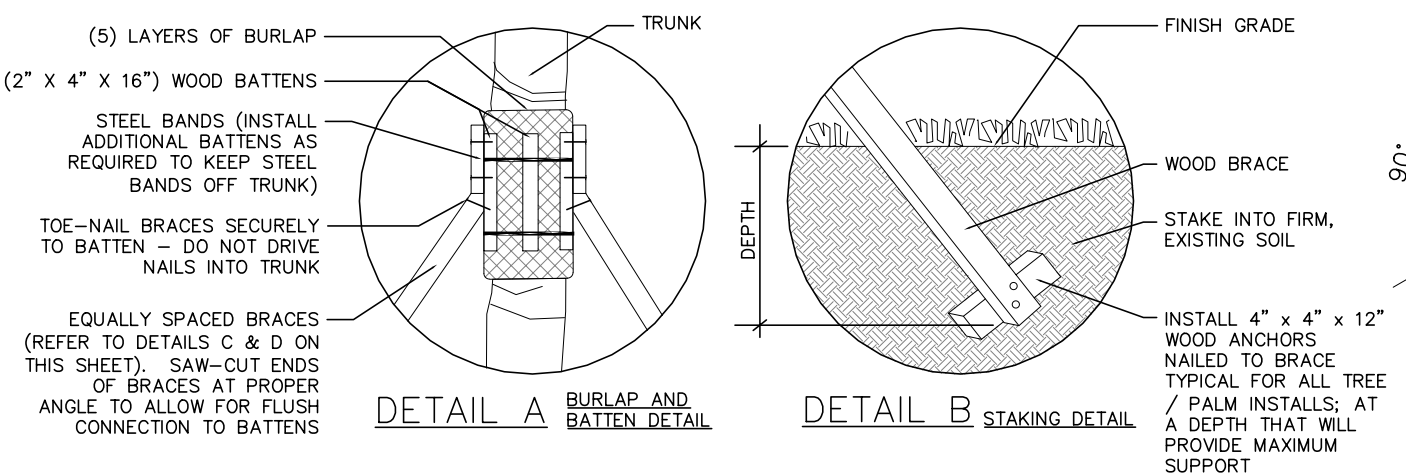
SHEET NO.
 LP-06



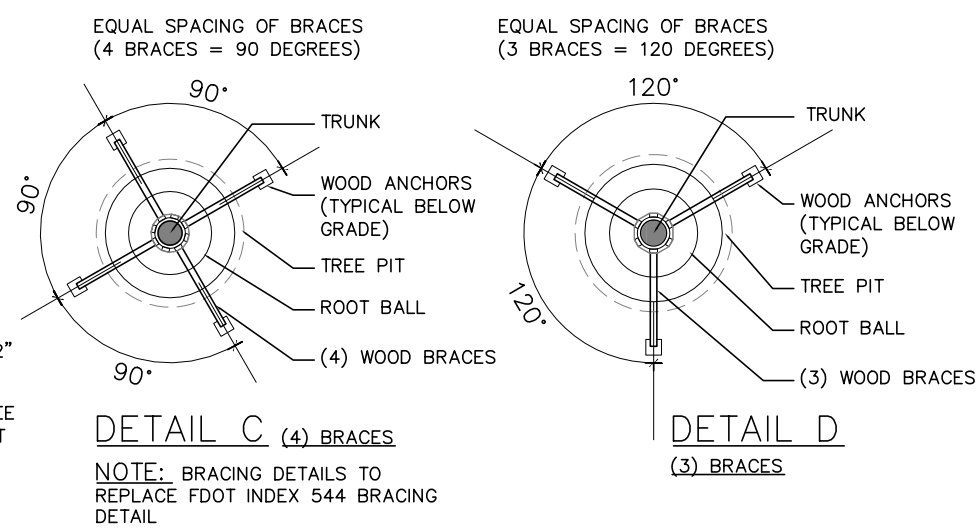
1 BRACING SECTION DETAIL - PALM
 LP-07 SCALE: NOT TO SCALE



3 BRACING SECTION DETAIL - TREE
 LP-07 SCALE: NOT TO SCALE



2 BRACING DETAILS - TYPICAL
 LP-07 SCALE: NOT TO SCALE



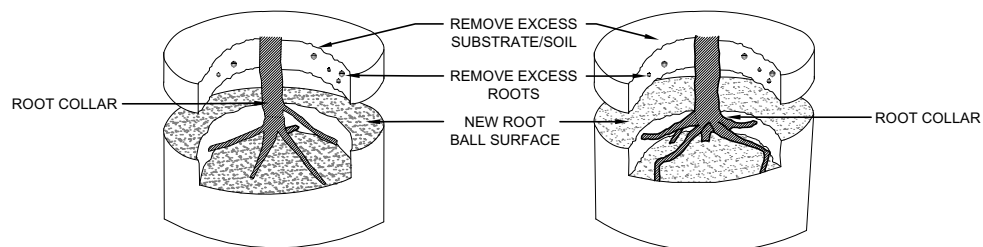
- NOTES:**
- 1) SECURE BATTENS WITH 2-3/4" HI CARBON STEEL BANDS TO HOLD BATTENS IN PLACE DURING PLANTING PROCESS.
 - 2) **DO NOT NAIL BATTENS TO PALM.** HEIGHT OF BATTENS SHALL BE LOCATED IN RELATION TO THE THE PALM HEIGHT FOR ADEQUATE BRACING.
 - 3) PLANT MATERIAL SHALL BE PLANTED AT THEIR NATURAL AND ORIGINAL PLANTING LEVEL PRIOR TO THEIR PLACEMENT ON THIS PROJECT OR JOB. WHEN LOWERED INTO THE HOLE, THE PLANTS SHALL REST ON THE PREPARED HOLE BOTTOM SUCH THAT THE SURFACE ROOTS AT THE TOP OF THE ROOTBALL ARE LEVEL OR SLIGHTLY ABOVE THE LEVEL OF THE SURROUNDING FINAL GRADE AFTER SETTLEMENT
 - 4) **DEPTH OF HOLE** SHALL BE EQUAL TO THE ROOTBALL DEPTH PLUS 12 INCHES, UNLESS FURTHER DEPTH IS REQUIRED TO PROVIDE ADEQUATE DRAINAGE.
 - 5) **DIAMETER OF HOLE** SHALL BE AS FOLLOWS:

ROOTBALL DIAMETER	HOLE DIAMETER
12" OR LESS	BALL DIA. + 12"
13" TO 24"	BALL DIA. + 18"
25" TO 60"	BALL DIA. + 24"
61" OR GREATER	BALL DIA. + 36"
 - 6) DIAMETER OF HOLE FOR TREES SHALL BE TWO TIMES (2x) THE WIDTH OF THE ROOTBALL.
 - 7) INSTALL THREE (3) 2 x 4 INCH BRACES ON TREES/PALMS WITH OVER 3 INCH CALIPER AND FOUR (4) 4 x 4 INCH BRACES ON TREES/PALMS OVER 5 INCH CALIPER; OR BRACE AS NOTED OTHERWISE.

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DATE	BY	DESCRIPTION				PROJECT NAME	PROJECT No.	
						VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	LP-07



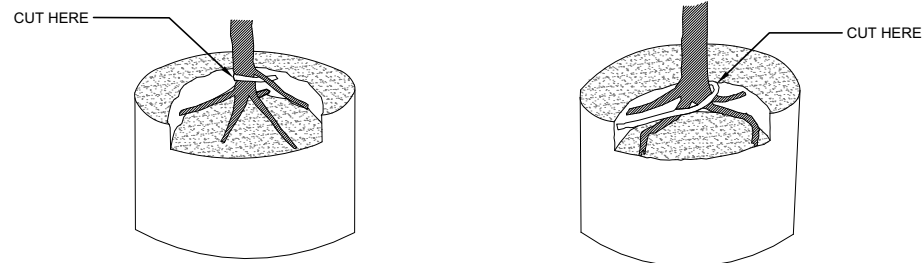
Step 1 - Remove substrate over root collar



TREE PLANTED TOO DEEPLY IN ROOT BALL. REMOVE EXCESS SUBSTRATE AND ROOTS TO MEET ROOT INSPECTION DETAIL.

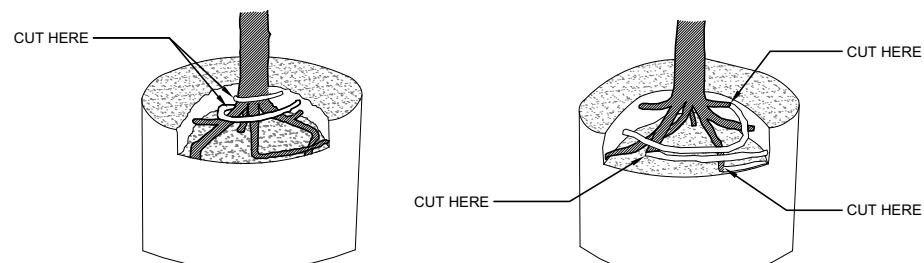
TREE PLANTED TOO DEEPLY IN ROOT BALL. REMOVE EXCESS SUBSTRATE AND ROOTS TO MEET ROOT INSPECTION DETAIL.

Step 2 - Remove defects



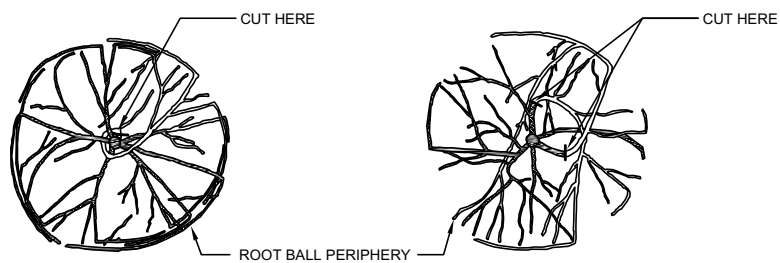
FIVE STRUCTURAL (LARGE) ROOTS SHOWN IN BLACK. REMOVE STRUCTURAL ROOT (WHITE) WRAPPING ROOT COLLAR.

FOUR STRUCTURAL ROOTS SHOWN IN BLACK. REMOVE ROOT (WHITE) GROWING OVER STRUCTURAL ROOTS.



SIX STRUCTURAL ROOTS SHOWN IN BLACK. REMOVE ROOTS (WHITE) GROWING OVER ROOT COLLAR BY CUTTING THEM JUST BEFORE THEY MAKE AN ABRUPT TURN.

SEVEN STRUCTURAL ROOTS SHOWN IN BLACK. REMOVE STRUCTURAL ROOTS (WHITE) GROWING AROUND OR OVER ROOT COLLAR BY CUTTING THEM JUST BEFORE THEY MAKE AN ABRUPT TURN.

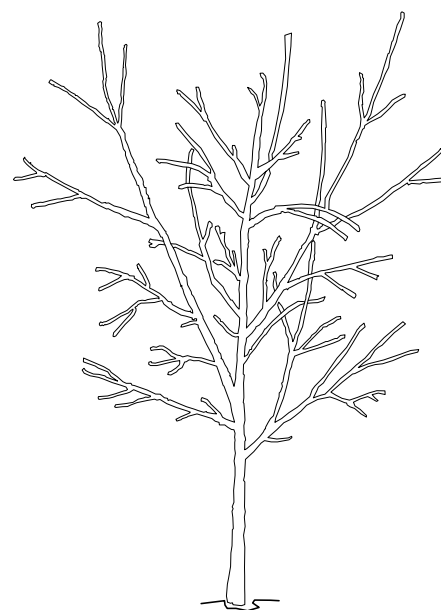


CUT STRUCTURAL ROOT JUST BEFORE IT MAKES ABRUPT TURN. PRUNING CUT SHOULD BE MADE TANGENT (PARALLEL) TO THE TRUNK.

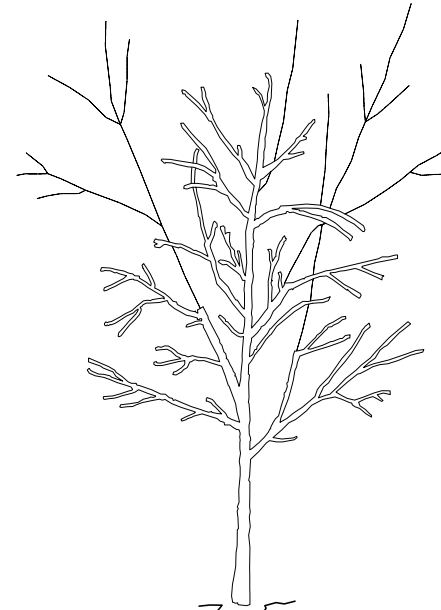
CUT STRUCTURAL ROOTS JUST BEFORE THEY MAKE ABRUPT TURN BY CUTTING TANGENT (PARALLEL) TO THE TRUNK (TWO CUTS SHOWN).

ROOT CORRECTION DETAIL - CONTAINER

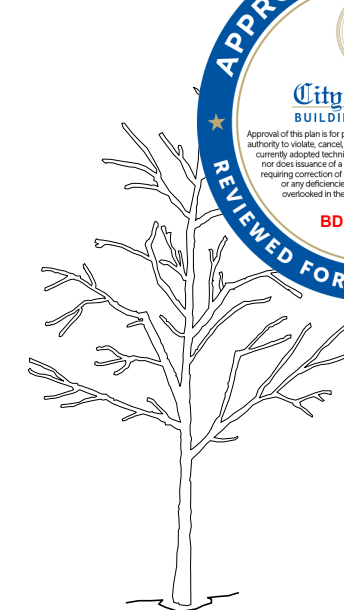
NOT TO SCALE REFER TO NOTE #1 (THIS SHEET)



BEFORE PLANTING, TREE HAS THREE CODOMINANT STEMS. THE TWO THAT COMPETE WITH THE ONE IN THE CENTER SHOULD BE PRUNED TO SUPPRESS THEIR GROWTH.



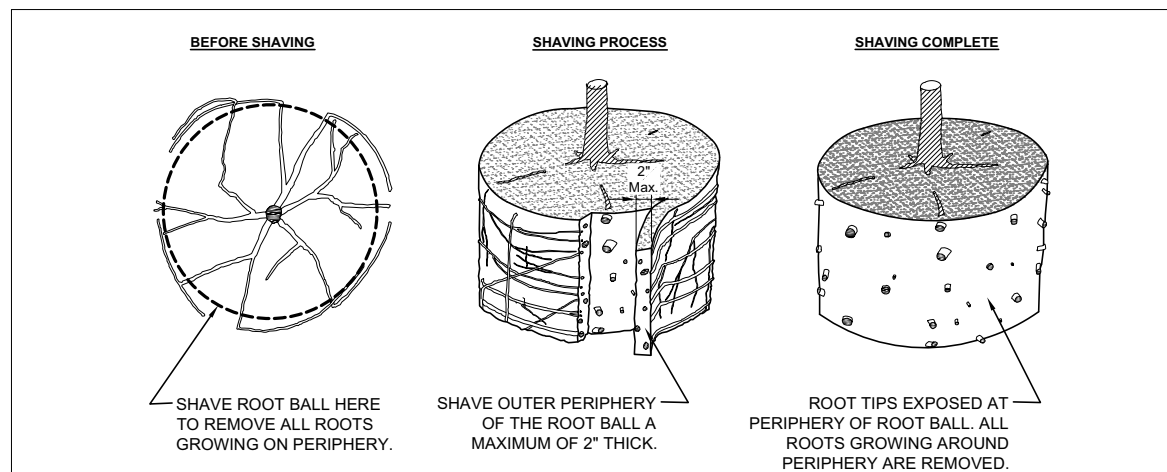
TWO COMPETING STEMS WERE REDUCED SUBSTANTIALLY, IN THIS CASE REMOVING ABOUT 70% OF THEIR FOILAGE USING REDUCTION CUTS.



AFTER PRUNING, TREE HAS ONLY ONE DOMINANT STEM.

CROWN CORRECTION DETAIL

NOT TO SCALE REFER TO NOTE #2 (THIS SHEET)



ROOT BALL SHAVING - CONTAINER

NOT TO SCALE REFER TO NOTE #3 (THIS SHEET)

NOTE #1

- 1- ALL TREES TO BE INSTALLED WILL BE REJECTABLE UNLESS THEY UNDERGO RECOMMENDED CORRECTION.
- 2- FIRST STEP 1, THEN STEP 2. ROOTS AND SOIL MAY BE REMOVED DURING THE CORRECTION PROCESS; SUBSTRATE/SOIL SHALL BE REPLACED AFTER CORRECTION HAS BEEN COMPLETED.
- 3- TREES SHALL MEET ROOT OBSERVATIONS DETAIL FOLLOWING CORRECTION.
- 4- SMALL ROOTS (1/4" OR LESS) ON THE PERIPHERY OF THE ROOT BALL ARE COMMON WITH CONTAINER PLANT PRODUCTION. THESE SMALL ROOTS ARE NOT DEFINED AS "DEFECTS" AND CAN BE ADDRESSED AT THE TIME OF INSTALLATION (SEE ROOT BALL SHAVING CONTAINER DETAIL).

NOTE #2

- 1- ALL TREES SHOWN ARE REJECTABLE UNLESS THEY UNDERGO RECOMMENDED TREATMENT.
- 2- TREE SHALL MEET CROWN OBSERVATION DETAIL FOLLOWING CORRECTION.

NOTE #3

- 1- SHAVING TO BE CONDUCTED USING A SHARP BLADE OR HAND SAW ELIMINATING NO MORE THAN NEEDED TO REMOVE ALL ROOTS ON THE PERIPHERY OF ROOT BALL.
- 2- SHAVING CAN BE PERFORMED JUST PRIOR TO PLANTING OR AFTER PLACING IN THE HOLE.

REVISIONS	
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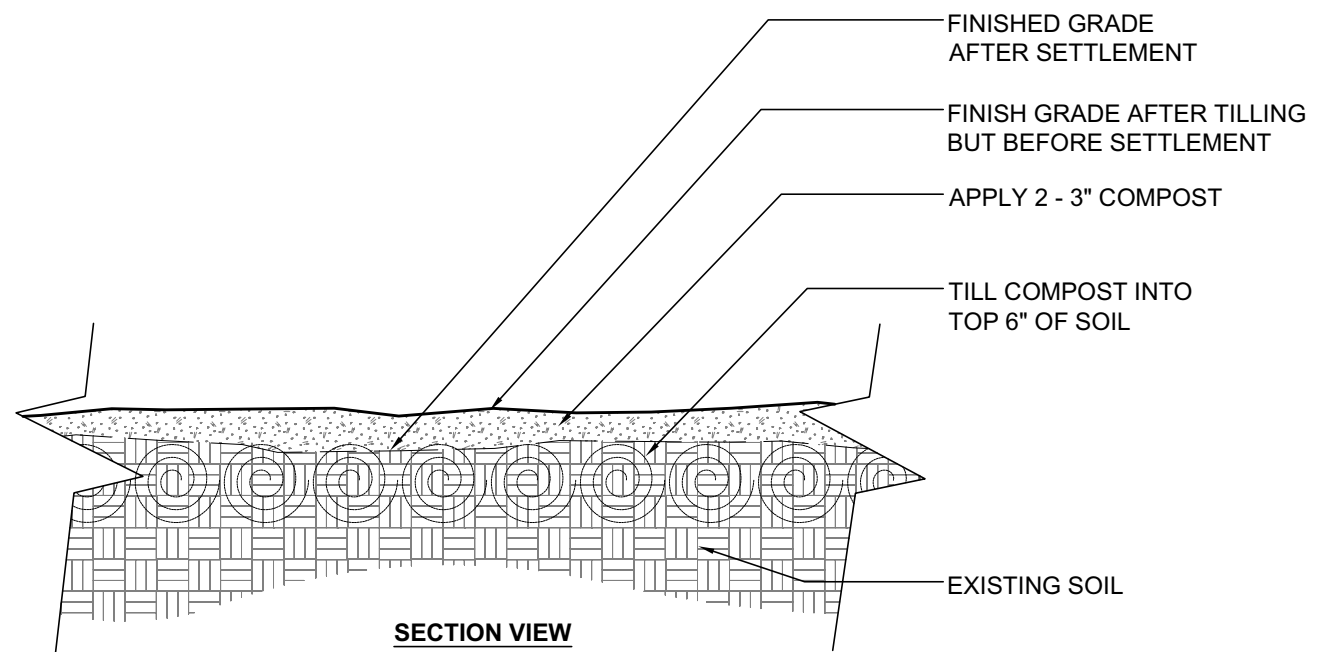


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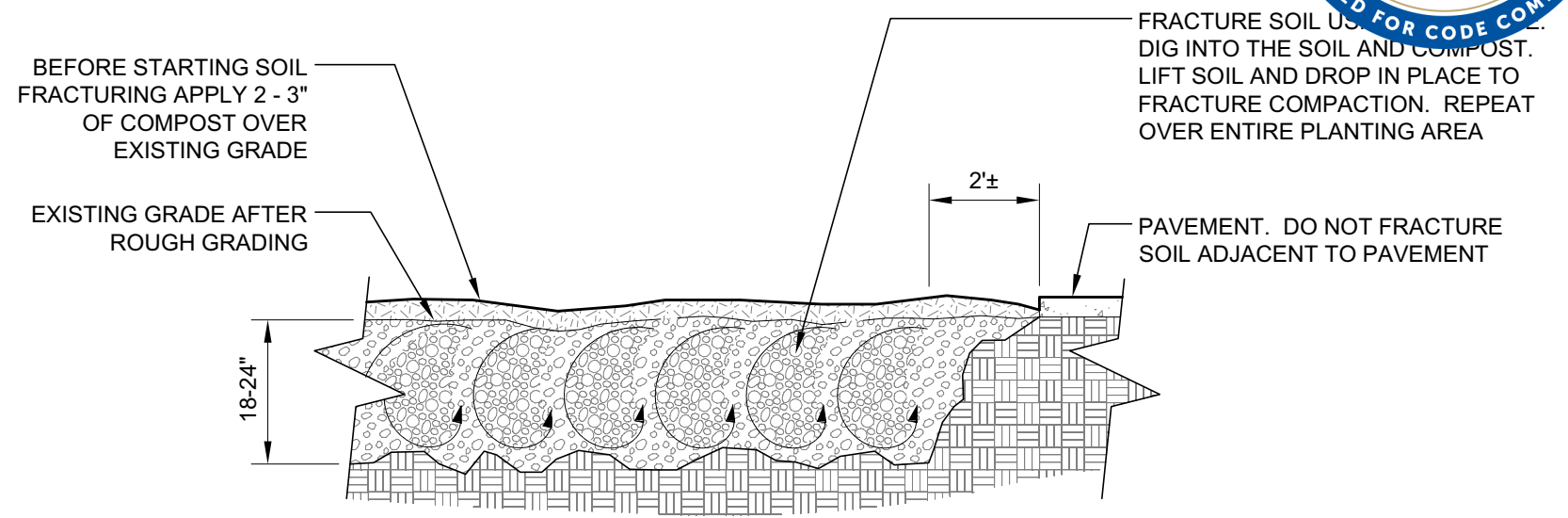
CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS	
PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

PLANT CORRECTION DETAILS

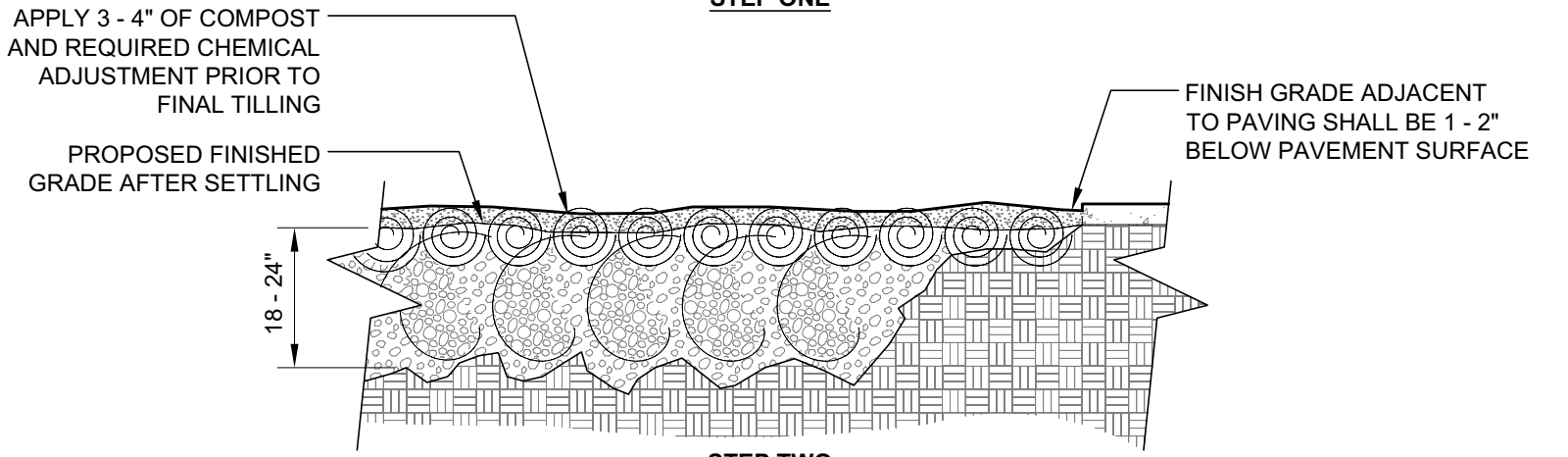
SHEET NO.
 LP-08



NOTE:
1 - SEE PLANTING SOIL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS



STEP ONE



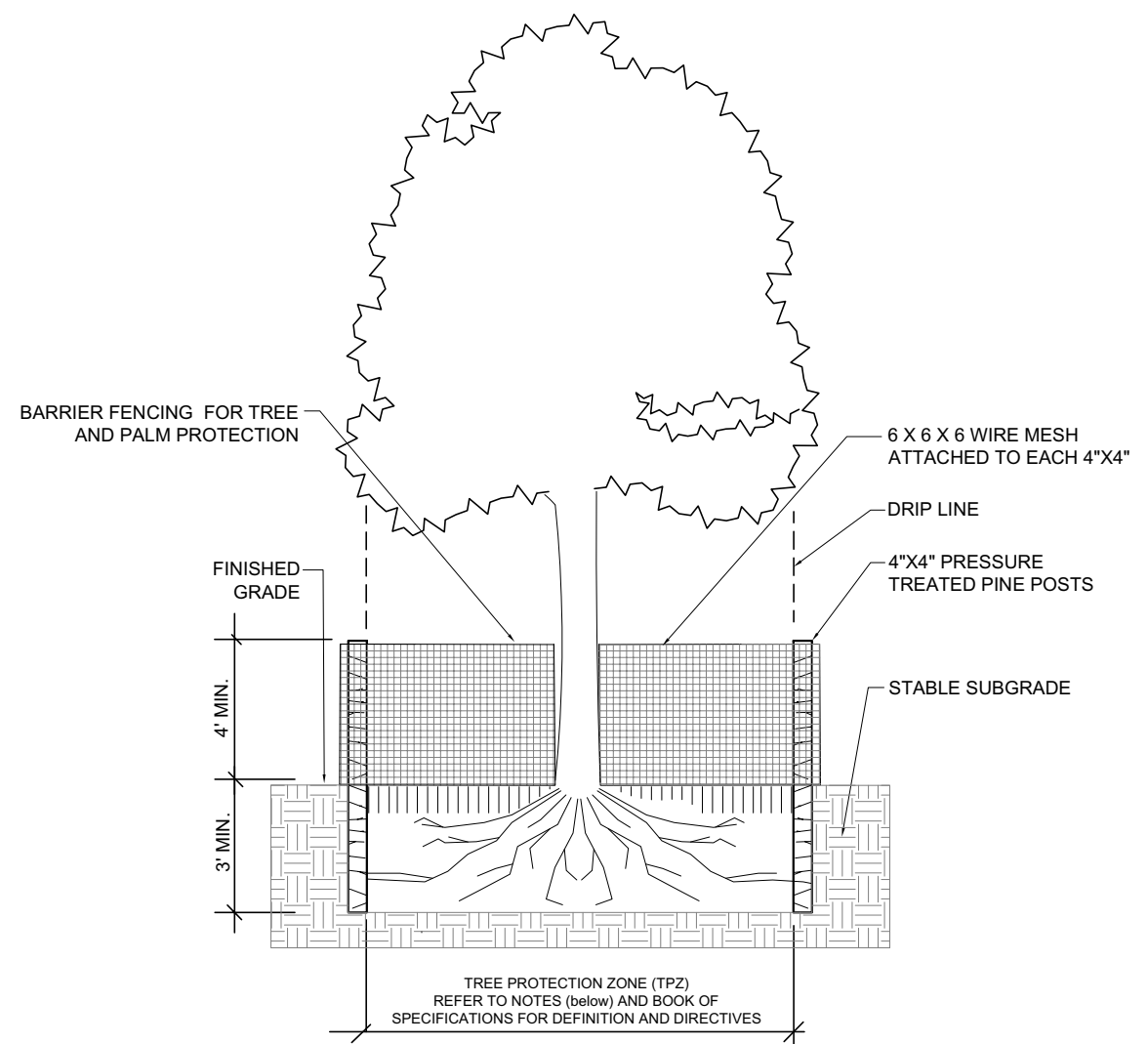
STEP TWO

NOTE:
1 - FOR PLANTING AREAS NARROWER THAN 8 FEET, REDUCE THE DISTANCE BETWEEN PAVING AND SOIL FRACTURING FROM 2 FOOT TO 1 FOOT
2 - SEE PLANTING SOIL SPECIFICATION FOR ADDITIONAL REQUIREMENTS

1 MODIFIED EXISTING SOIL - COMPACTED SURFACE SOIL
LP-09 SCALE: NOT TO SCALE

2 MODIFIED EXISTING SOIL - COMPACTED SUB SOIL (FRACTURING)
LP-09 SCALE: NOT TO SCALE

REVISIONS			LAR	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		SHEET NO.
DATE	BY	DESCRIPTION			PROJECT NAME	PROJECT No.	
			Fernandez-Beraud, Inc. Landscape Architecture & Planning LETICIA FERNANDEZ-BERAUD, RLA LA 6666730	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	SOIL DECOMPACTION DETAILS	
							LP-09



NOTES:

1. THIS TREE AND PALM FENCE PROTECTION DETAIL IS FOR ALL EXISTING TO REMAIN AND RELOCATED TREES AND PALMS WITHIN THE PROJECT LIMITS.
2. The TPZ shall be defined as the area directly beneath the canopy of the tree, with a minimum diameter equal to or greater than :
 - a) Tree Canopy diameter; or,
 - b) 0.75 feet for each inch of trunk diameter, WHICHEVER NUMBER IS GREATER.

In some areas, groups or clusters of trees shall be designated as a TPZ, as directed by the Consulting Arborist and/or Landscape Architect. Each TPZ shall be delineated using barrier fencing as per detail shown above.
3. Protection Fencing to go around the TPZ of all trees to remain and to be relocated.
4. THE STANDARD ORANGE FLEXIBLE AND TEMPORARY FENCE WILL NOT BE ACCEPTABLE FOR THIS PROJECT. THE CONTRACTOR SHALL INSTALL TREE PROTECTION FENCES AS PER DETAIL SHOWN ABOVE.

1 TREE PROTECTION DETAIL
 LP-10 SCALE: NOT TO SCALE

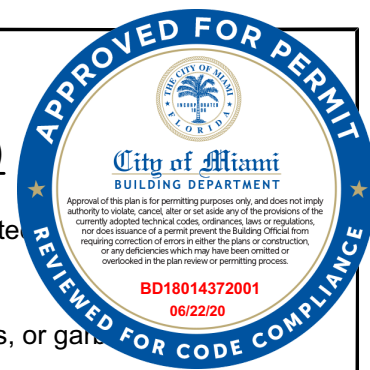
REVISIONS			LAR	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		SHEET NO.
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			Fernandez-Beraud, Inc. Landscape Architecture & Planning LETICIA FERNANDEZ-BERAUD, RLA LA 6666730		VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	LP-10

TREE PROTECTION GENERAL NOTES

1. All plans are incomplete without project specifications book.
2. All construction around existing trees to be field verified and adjusted accordingly with prior approval by Landscape Architect.
3. Before beginning work, the Contractor is required to meet with the Registered Consulting Arborist and the Landscape Architect at the site to review all work procedures, access routes, storage areas, and tree protection measures.
4. Fences shall be erected to protect trees to be preserved. Fences define a specific protection zone for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without the written permission of the Registered Consulting Arborist and the Landscape Architect.
5. Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
6. All underground utilities and drain or irrigation lines shall be routed outside the tree protection zone. If lines must traverse the protection area, they shall be tunneled or bored under the tree. Prior to any digging the Contractor shall get approval from the Registered Consulting Arborist and the Landscape Architect.
7. No materials, equipment, spoil, or waste or washout water may be deposited, stored, or parked within the tree protection zone (fenced area).
8. Additional tree pruning required for clearance during construction must be performed by a qualified certified arborist and not by construction personnel. All pruning shall be approved by the Registered Consulting Arborist and the Landscape Architect.
9. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use. Any pesticides used on site must be tree-safe and not easily transported by water.
10. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Registered Consulting Arborist and the Landscape Architect so that appropriate treatments can be applied.
11. Any grading, construction, demolition, or other work that is expected to encounter tree roots must be monitored by the Registered Consulting Arborist and/or the Landscape Architect.
12. Erosion control devices such as silt fencing, debris basins, and water diversion structures shall be installed to prevent siltation and/or erosion within the tree protection zone.
13. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw. Notify immediately the Registered Consulting Arborist and Landscape Architect about any root damage to existing trees.
14. If temporary haul or access roads must pass over the root area of trees to be retained, a road bed of 6 inches of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6-inch depth.

TREE PROTECTION GENERAL NOTES (cont.)

15. Spoil from trenches, basements, or other excavations shall not be placed within the tree protection zone temporarily or permanently.
16. No burn piles or debris pits shall be placed within the tree protection zone. No ashes, debris, or garbage shall be dumped or buried within the tree protection zone.
17. Maintain fire-safe areas around fenced areas. Also, no heat sources, flames, ignition sources, or smoking is allowed near mulch or trees.
18. Protection of existing shrubs and groundcover: Prior to starting the demolition process and in order to avoid damaging existing shrubs and groundcover plant material, the landscape architect shall identify those shrubs and groundcover beds in the field that are to remain and to be protected from damage during the construction process. The Landscape Contractor is responsible for setting up the pre-construction meeting with the Landscape Architect in order to outline all protection areas. In the case that existing shrubs and groundcover that were identified to remain and to be protected are damaged due to construction activities, the Landscape Contractor are responsible for replacing them with same species and sizes, at no additional cost to the client.



ADDITIONAL NOTES

1. Invasive plant material removal: Remove invasive plant material as listed below and spray with herbicides as necessary, in order to prevent additional growth or sprouts after manual removal. The following is plant material that shall be removed as part of the contract:
 - a. Remove all Category 1 invasive trees, shrubs, vines and groundcover (including Brazilian Pepper, Mahoe, Lead Tree, Schefflera, etc., as per Florida Exotic Pest Plant Council Invasive Plant Lists); and,
 - b. Remove all vines on existing structures, fences and trees.
2. Mulch:
 - a. Landscape Contractor is responsible to prepare mulch out of all native and non-invasive plant material that is to be removed. This mulch is to be installed as landscape mulch rings and landscape beds in all existing trees and palms to remain, giving priority to the existing trees and palms located along the proposed pedestrian path.
 - b. Mulch installation shall be done at a minimum distance of 12" from the base of trunk, avoiding the superficial roots.

REVISIONS			LAR Fernandez-Beraud, Inc. Landscape Architecture & Planning <i>LETICIA FERNANDEZ-BERAUD, RLA</i> LA 6666730	CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM <small>444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253</small>	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		TREE PROTECTION NOTES	SHEET NO.
DATE	BY	DESCRIPTION			PROJECT NAME	PROJECT No.		LP-11
					VIRGINIA KEY KAYAK LAUNCH-D2	B-40584		

GENERAL NOTES

1. Landscape Contractor is responsible for verifying locations of all underground and overhead utilities and easements prior to commencing work. All Utility companies and/or the General Contractor shall be notified to verify utility locations prior to digging. Utility trenching is to be coordinated with the Landscape plans prior to beginning of project. The Owner or Landscape Architect shall not be responsible for damage to utility or irrigation lines.
2. Landscape Contractor shall examine the site and become familiar with conditions affecting the installation prior to submitting bids. Failure to do so shall not be considered cause for future extras or complaints.
3. Landscape Contractor is responsible for verifying all plant quantities prior to bidding and within (7) seven calendar days of receipt of these plans shall notify the Landscape Architect in writing of any and all discrepancies. In case of discrepancies planting plans shall take precedence over plant list.
4. No substitutions are to be made without prior consent of the Landscape Architect. Plant material supply is the responsibility of the Landscape Contractor, and he/she shall take steps to insure availability at time of planting.
5. All plant material shall meet or exceed the size on the plant list. In all cases meeting the height and the spread specifications shall take precedence over container size.
6. The Landscape Contractor is responsible for coordinating tree and palm removals and transplants shown on the Tree/Palm Disposition Plan. The Landscape Contractor is to remove and discard from site existing unwanted trees, palms, shrubs, groundcovers, sod and weeds within landscape areas.

PLANTING NOTES

1. Landscape Contractor shall furnish and install all trees, palms, shrubs, groundcover, sod, seed, soil, and mulch.
2. Landscape Contractor shall guarantee all plant material for a period of one year from the day of final acceptance by the Landscape Architect.
3. All plant material shall be Florida #1 or better, as defined in the Grades and Standards for Nursery Plants, by the State of Florida Department of Agriculture (current edition).
4. Landscape Contractor is responsible for scheduling a nursery visit for Landscape Architect to approve all trees, palms and shrubs prior to delivery to the project site.
5. Landscape Contractor shall coordinate his work with that of the Irrigation and Landscape Lighting Contractor.
6. The Landscape Contractor shall treat plant areas with pre-emergence herbicide after weeds and grass have been removed. Landscape Contractor shall wait (7) seven days after pre-emergence treatment prior to planting.
7. Planting soil shall be a mix of 30% inland muck and 70% freshwater sand. Planting soil mix/backfill shall be clean and free of construction debris, weeds, rock and noxious pests and disease.
8. All soil mix in plant beds for groundcovers, shrubs, palms and trees shall be as per details. All other areas shall be dressed with a minimum of 4" topsoil.
9. All planting areas and planting pits shall be tested for sufficient percolation prior to final planting and irrigation installation to ensure proper drainage. Plant beds in parking lots and in areas compacted by heavy equipment shall be de-compacted so that drainage is not impeded.
10. All synthetic burlap, string, cords or wire baskets shall be removed before trees are planted. All synthetic tape shall be removed from branches and trunks prior to final acceptance. The top 1/3 of the burlap shall be removed or tucked into the plant pit before the trees are backfilled.
11. Landscape Contractor is responsible for mulching all plant beds and planters with a minimum 3" layer of natural color Eucalyptus or Enviromulch immediately after planting. In no case shall Cypress mulch be used.
12. All Trees/Palms in sod areas are to receive a 36"/48" diameter mulched saucer at the base of the trunk respectively.
13. Landscape Contractor shall guy and stake all trees and palms as per specifications and details. No nails, screws or wiring shall penetrate the outer surface of trees and palms. All guying and staking shall be removed twelve months after planting.
14. All palm and tree guy wires and bracing are to be flagged for visibility, for their duration. All unattended and unplanted tree pits shall be properly barricaded and flagged during construction.
15. All broken branches and clear trunk branches on street trees are to be pruned according to ANSI A-300 Guidelines for Tree Pruning to min. 5'-0" height clearance to the base of canopy.
16. Landscape Contractor to provide all plants with fertilizer 30 days after installation. Fertilizer shall comply with state fertilizer laws. It shall have a chemical designation as indicated for each type of plant:

Palms: 12-4-12 N-P-K, Slow Release Palm Special with micronutrients.
 Shrubs, Groundcover and Trees: 6-6-6 N-P-K, with micronutrients.



REVISIONS			LAR	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		SHEET NO.
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			Fernandez-Beraud, Inc. Landscape Architecture & Planning LETICIA FERNANDEZ-BERAUD, RLA LA 6666730	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	PLANTING NOTES LP-12	



I. WATERING NOTES

A. All new plant material shall have an establishment period of 12 (twelve) months from the time of final acceptance, following the Watering Schedule shown below:

WATERING SCHEDULE – FIRST 12 MONTHS				
Month	Frequency			
1	Monday	Tuesday	Thursday	Friday
2	Monday	Tuesday	Thursday	Friday
3	Monday	Tuesday	Thursday	Friday
4	Monday	Tuesday	Thursday	Friday
5	Monday	Wednesday	Friday	
6	Monday	Wednesday	Friday	
7	Monday	Wednesday	Friday	
8	Monday	Wednesday	Friday	
9	Monday	Friday		
10	Monday	Friday		
11	Monday	Friday		
12	Monday	Friday		

The total watering days is 144 (one hundred forty four) days.

B. The watering contract shall include:

- 1) Watering for new plant material, including the means and the materials for watering the new planting during 144 (one hundred forty four) days. The watering contract for new plant material shall be included in Landscape Contractor’s bid.
- 2) Watering for existing plant material that has been root-pruned or disturbed by construction. The watering contract for existing plant material shall be included in Landscape Contractor’s bid. All warranties shall be in place by the Contractor, regardless of drought conditions.

II. ESTABLISHMENT

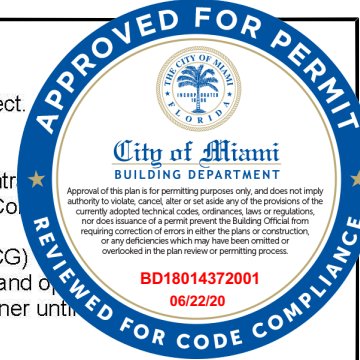
A. The establishment periods are defined as one year after installation of all plants and incidental landscaping. The establishment period will begin upon acceptance of the complete landscape installation, by the Landscape Architect.

B. During the establishment period the Contractor and the Landscape Sub-Contractor are responsible of the following:

- 1) Keep all plants undamaged, watered as per schedule, fertilized, mulched, pruned, staked, guyed as necessary to assure specified minimum grade of Florida No. 1;
- 2) Reset plant material whenever they are not plum;
- 3) Perform weeding for the full 12 (twelve) month warrantee period and for the complete extended warrantee period;
- 4) Replace plant material that is not in healthy growing condition at no cost to the Client. Extend the warrantee by 45 (forty five) days for all replacement plant material at no additional cost to the Client;
- 5) At the Client’s expense, the Contractor will replace any plant material damaged as a result of automobile accidents or ‘Acts of God’ limited to hail, freeze, lighting, and winds exceeding 75 miles per hour as defined by the Miami Hurricane Center;
- 6) Keep the individual plant locations and planting beds free of litter and undesirable vegetation;
- 7) Keep landscape bed lines correctly located and edged, and the mulch groomed and replenished;

<table border="1"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISIONS			DATE	BY	DESCRIPTION				<p>LAR Fernandez-Beraud, Inc. Landscape Architecture & Planning <u>LETICIA FERNANDEZ-BERAUD, RLA</u> LA 6666730</p>	 <p>CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253</p>	<p>CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS</p> <table border="1"> <tr> <th>PROJECT NAME</th> <th>PROJECT No.</th> </tr> <tr> <td>VIRGINIA KEY KAYAK LAUNCH-D2</td> <td>B-40584</td> </tr> </table>	PROJECT NAME	PROJECT No.	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	<p>PLANTING NOTES</p>	<p>SHEET NO. LP-13</p>
REVISIONS																				
DATE	BY	DESCRIPTION																		
PROJECT NAME	PROJECT No.																			
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584																			

Landscape Specifications



A. GENERAL:

1. Landscape Contractor shall furnish and install all trees, palms, shrubs, groundcover, sod, seed, soil, and mulch.
2. Install and establish landscaping as indicated in the Contract Documents.
3. If discrepancies in the contract plans are noted, Landscape Contractor is responsible to immediately notify the Landscape Architect for resolution.
4. Personnel performing landscape installation services are under the sole responsibility and supervision of the Contractor and must be competent, experienced, and skilled in all aspects of the required landscape installation and establishment practices.
5. Landscape Contractor is responsible that all new landscape is installed as per the latest edition of the Florida Department of Transportation (FDOT) Design Standards, including:
 - a. FDOT Specifications Section 580: Landscaping;
 - b. FDOT Index #580-001: Landscape Installation;
 - c. FDOT Index #110-100: Tree Protection and Preservation;
 - d. FDM: 215 Roadside Safety (Lateral Offsets); and,
 - e. FDM: 212 Intersections.
6. All areas impacted by construction shall be repaired and brought back to their original condition, for instance in the cases of existing sod, existing grading, existing landscaping affected by construction, existing utilities and infrastructure.
7. Landscape Contractor shall coordinate his work with that of the Irrigation and Landscape Lighting Contractor, and others as necessary.
8. The Landscape Contractor is responsible for coordinating tree and palm removals and transplants shown on the Tree/Palm Disposition Plan. The Landscape Contractor is to remove and discard from the site existing unwanted trees, palms, shrubs, groundcovers, sod and weeds within the landscape areas and within the limits of the work.

B. REMOVAL OF UNDESIRABLE PLANT MATERIAL:

1. All planting areas shall be free of grass and weeds, unwanted vines, or unwanted trees and palms.
2. Landscape Contractor is responsible to remove and dispose of off project site all nuisance exotic plant material found within project limits (nuisance exotic plant material as defined by Miami-Dade County Regulatory and Economic Resources Department (RER)).
3. In the cases that planting is adjacent to fences that include unwanted vines growing on these fences, the Landscape Contractor is responsible to remove and eliminate those unwanted vines prior to installing the new Landscaping.
4. After weeds and grass, and unwanted vines, trees and palms have been removed, the Landscape Contractor shall treat planting areas with pre-emergence and post-emergent herbicide. Landscape Contractor shall wait (7) seven days after pre-emergence treatment prior to planting. Re-apply when re-growth appears.
5. Weed control fabric shall be Pro-5 Weed Barrier by Dewitt or approved equal.

C. MATERIALS:

1. Authority for Nomenclature; Species, etc.: For the designated authority in the identification of all plant material, refer to two publications of L.H. Bailey: "Hortus III" and "Manual of Cultivated Plants," and ensure that all specimens are true to type, name, etc., as described therein. For the standard nomenclature, refer to the publication of the American Joint Committee on Horticultural Nomenclature, "Standardized Plant Names."
2. All plant material shall be Florida #1 or better, as defined in the Grades and Standards for Nursery Plants, Parts I and II by the State of Florida Department of Agriculture and Consumer Services. All plants must be the specified size and grade at the time of delivery to the site and the minimum grade maintained throughout the project construction period.
3. All plant material shall meet or exceed the size on the plant list. In all cases meeting the height, the spread and caliper specifications shall take precedence over container size.

4. No plant material substitutions are to be made without prior consent in writing of the Landscape Architect. Contractor is responsible to ensure plant availability at time of planting.
5. Substitution of Container-Grown (CG) Plants: With the Landscape Architect's written approval, the Contractor may substitute CG plants for any other root classification types, if he has met all other requirements of the Contract Documents.
6. Container-Grown Plants (CG): The Landscape Architect will not accept any Container-Grown Plants (CG) that have become pot-bound or for which the top system is too large for the size of the container. Fully cut and root containers in a manner that will not damage the root system. Do not remove CG plants from the container until approved before planting to prevent damage to the root system.
7. Balled-and-Burlapped Plants (B&B), and Wired Balled-and-Burlapped (WB & B):
 - a. General: Properly protect the root ball of these plants until planting them. The Landscape Architect may reject any plant which shows evidence of having been mishandled. Set the B&B and WB&B plants then remove the top 2/3 of all wire, rope, and binding surrounding the plant. Remove the burlap from the top 4 inches [100 mm] of the root ball. Do not disturb the root ball in any way. Bare root material is not allowed for substitution. At least 90 days before digging out B & B and WB & B plants, root-prune those 1½ inches [38 mm] or greater in diameter and certify such fact on accompanying invoices.
 - b. Provisions for Wiring: For plants grown in soil of a loose texture, which does not readily adhere to the root system (and especially in the case of large plants or trees), the Landscape Architect may require WB & B plants. For WB & B plants, before removing the plant from the excavated hole, place sound hog wire around the burlapped ball, and loop and tension it until the tightened wire netting substantially packages the burlapped ball such as to prevent disturbing of the loose soil around the roots during handling.
8. Use only plants that are true to type and species and ensure that the plants not specifically covered by Florida Department of Agriculture's "Grades and Standards for Nursery Plants" conform in type and species with the *standards and designations in general acceptance by Florida nurseries AND in conformance with Section 2* of the latest edition of the American Standard for Nursery Stock for shrubs. Prior to planting, furnish certification to the Landscape Architect that all plant materials have been purchased from Florida based Nurseryman Stock.
9. Move nursery stock in accordance with all Federal, State, and Local Rules and Regulations. For each shipment of nursery stock, provide the nursery's General Nursery Stock Inspection Certificate as required in Chapter 5B-2, F.A.C.
10. A minimum of two plants of each species on each shipment must be shipped with tags stating the botanical nomenclature and common name of the plant. Should discrepancies between botanical nomenclature and common name arise, the botanical name will take precedence.
11. Water: Meet the requirements of Section 983.
12. Mulch: All planted areas shall be mulched with a minimum 3" layer, in accordance with details. The mulch shall be shredded Grade "A" Eucalyptus of natural color, Enviromulch, or approved equal. Cypress mulch shall not be acceptable. The Landscape Contractor shall submit a mulch sample of one (1) cubic foot.
13. Mulch application: Landscape Contractor shall not apply mulch directly at the base of trunks of trees and palms. The mulch shall be applied as follows:
 - a. 6"-9" distance from the base of trunks of new trees and new small palms;
 - b. 12" distance from the base of trunks of new and existing large palms;
 - c. 12" distance (min.) from the base of trunks and surface large roots of existing large trees, or at a distance determined by the Landscape Architect.
14. Soil: Remove all unsuitable soil and debris to root ball depth. Replace soil meeting the requirements of Section 987-2.4.
15. Planting soil shall be a mix of 20% inland muck and 80% freshwater sand. Planting soil mix/backfill shall be clean and free of construction debris, weeds, rock and noxious pests and disease. Before planting materials are installed, test planting soil and amend planting soil as recommended by the Testing Laboratory such that the planting soil has an Infiltration Rate (K-sat) of 8-16 inches/hour.
16. Soil moisturizer shall be added to all planted areas. Soil moisturizer shall be "Terrasorb", as manufactured by Industrial Services, International or equal. Proportions shall be as follows:
 - a. For trees and palms up to 36 inches diameter root ball, use one 3 oz. packet;
 - b. For trees and palms with root ball larger than 36 inches in diameter, use two 3 oz. packets; and,
 - c. For bedding areas use one 3 oz. packet for every 20 square feet of planting areas, with packets thoroughly mixed in planting soil.
11. All soil mix in plant beds for groundcovers, shrubs, palms and trees shall be as per details. All other planting areas (including sod areas) shall be dressed with a minimum of 4" topsoil / planting soil.

REVISIONS			LAR	CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM <small>444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253</small>	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		LANDSCAPE SPECIFICATIONS	SHEET NO.
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			Fernandez-Beraud, Inc. Landscape Architecture & Planning <u>LETICIA FERNANDEZ-BERAUD, RLA</u> LA 6666730	CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM <small>444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253</small>	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584	LANDSCAPE SPECIFICATIONS	LP-14



12. Planting soil shall be amended by the addition of biostimulants. Biostimulants shall be Die Hard Transplant containing mycorrhizal fungi or approved equal. Proportions shall be as follows:
 - a. For trees and palms up to 36 inches diameter root ball, use one 8 oz. packet;
 - b. For trees and palms with root balls larger than 36 inches in diameter, use two 8 oz. packets; and,
 - c. For shrubs and groundcovers, follow manufacturer's recommendations.
12. Worksite Landscape Supervisor: Provide a Worksite Landscape Supervisor to directly oversee all landscape installation and establishment. The Worksite Landscape Supervisor must be a Certified Landscape Technician or Certified Landscape Contractor in accordance with the Florida Nursery Growers and Landscape Association (FNGLA) located at the following URL address: <https://www.fn gla.org/certifications/index.aspx>, or a State of Florida Registered Landscape Architect. Provide verification at the pre-construction meeting.
13. The Landscape Contractor shall schedule with the Landscape Architect a time in which to view and approve plant material in the nursery prior to installation. In the event that a nursery visit is not feasible, the Landscape Contractor shall submit photographs of proposed plant material if requested by the Landscape Architect.

D. INSTALLATION:

1. Installation Plan: At the pre-construction meeting, provide an Installation Plan for review and comment. Specifically describe the methods, activities, materials, and schedule to achieve installation as described in contract plans. Begin installation after Installation Plan is accepted by the Landscape Architect.
2. PRIOR TO INSTALLATION THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE CONDITIONS, AND TO FIELD VERIFY ALL EXISTING AND PROPOSED OVERHEAD / UNDERGROUND UTILITIES, DRAINAGE STRUCTURES AND PIPES, LIGHT POLES AND ELECTRICAL CONDUITS, FIBER OPTIC AND ITS POWER LINES, CCTV & RVSS CAMERAS, MVDS DEVICES, AND MAKE FIELD ADJUSTMENTS TO AVOID CONFLICTS OR DAMAGES. LANDSCAPE LAYOUT SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT IN CASE OF ANY DAMAGES.
3. Delivery: All materials must be available for inspection before installation and will be subject to approval or rejection.
4. Layout: Mark proposed planting beds and individual locations of trees and palms as shown in the Contract Documents for Landscape Architect's review, prior to excavation or planting. The Landscape Architect may request to review all proposed construction practices before the start of the operations. Make no changes to the layout, materials or any variations of plant materials from the Contract Documents without the written approval.
5. Soil Drainage: All planting areas and planting pits shall be tested for sufficient percolation prior to final planting and irrigation installation to ensure proper drainage. Immediately notify the Landscape Architect of drainage or percolation problems before plant installation. Plant beds in parking lots and in areas compacted by heavy equipment shall be de-compacted so that drainage is not impeded.
6. Landscape Contractor shall examine subgrade and rough grade before planting and alert the Landscape Architect prior to planting of any conditions which would be detrimental to plant development, in order to receive Landscape Architect's directions regarding the matter.
7. All planting areas shall be free of grass and weeds, unwanted vines, or unwanted trees and palms.
8. Site Repair and Restoration: Repair and restore existing areas disturbed by installation or maintenance activities. Where new turf is required to restore and repair disturbed areas, meet the requirements of Section 570 (Performance Turf).
9. Disposal of Surplus Materials and Debris: Remove from the jobsite any surplus material unless otherwise directed by the Landscape Architect. Surplus is defined as material not needed after installation of landscaping per Contract Documents. Upon commencement of landscape installation, remove daily, all debris from the jobsite.
10. All soil mix in plant beds for groundcovers, shrubs, palms and trees shall be as per details. All other areas shall be dressed with a minimum of 4" topsoil.
11. All synthetic burlap, string, cords or wire baskets shall be removed before trees are planted. All synthetic tape shall be removed from branches and trunks prior to final acceptance. The top 1/3 of the burlap shall be removed or tucked into the plant pit before the trees are backfilled.
12. Landscape Contractor shall guy and stake all trees and palms as per specifications and details. No nails, screws or wiring shall penetrate the outer surface of trees and palms. All guying and staking shall be removed twelve months after planting.
13. All planted areas shall be mulched in accordance with mulch details and specifications.

14. All Trees/Palms in sod areas are to receive a 60" diameter mulch saucer the base of the trunk for small trees and 72" diameter mulch saucer the base of the trunk for large trees and palms.
15. All trees and palms shall be staked or guyed immediately after planting. Staking and guying shall be done in accordance with the latest edition of FDOT Standards.
16. Landscape Contractor shall stake and guy all trees and palms as per FDOT Design Standards guidelines (Section 001) and planting details. No nails, screws or wiring shall penetrate the outer surface of trees and palms. All materials, except for replacements, are to be removed by the completion of the one (1) year warranty period.
17. All palm and tree guy wires and bracing are to be flagged for visibility, for their duration. All unattended and unplanted tree pits shall be properly barricaded and flagged during construction.
18. All plant material shall be installed as per the Florida Statutes (CHAPTER 479 Outdoor Advertising / 479.106 Vegetation Management).
19. Landscape Contractor to provide all plants with fertilizer 30 days after installation. Fertilizer shall comply with the State of Florida's fertilizer laws. The fertilizer to be used on all landscape material except for turfgrass and bedding plants shall be in granular form and have a 2-1-3 or similar ratio of N, P, and K (i.e., "Palm Special" 8-4-12), with at least 50% of the nitrogen and potassium in the slow-release form, preferably sulfur-coated. Fertilizer mix shall also contain micronutrients, specifically magnesium (at least 3%), manganese (at least 1%), iron (at least 1%), and trace amounts (less than 1%) of boron, copper, and zinc.
20. All free-standing palms and hardwood trees shall receive 1 to 8 pounds of the product recommended above (item 17), as per individual tree size (1 to 3 pounds each for small trees/palms; 3 to 5 pounds for each of the mid-size trees/palms; 5 to 8 pounds for large trees/palms).
21. Landscape Contractor is responsible for verifying all plant quantities prior to installing. Within seven (7) calendar days of receipt of these plans Landscape Contractor shall notify the Landscape Architect in writing of any and all discrepancies. In case of discrepancies, planting plans shall take precedence over plant list.
22. Installation Completion: Notify the Landscape Architect no less than seven calendar days in advance of completion. Upon completion of installation of plants and incidental landscaping, certify on a form provided by the Landscape Architect that the landscaping has been installed accordance with the Contract Documents.

E. WARRANTY:

1. Landscape Contractor shall warranty all plant material for the time period of one (1) year. The warranty period will starting from the day of final acceptance by the Landscape Architect.
2. Use replacement plants of the same species and planting medium as the plant being replaced and as specified in the Contract Documents. Replacement size must match the size of the adjacent grown-in plant material of the same species and that may be larger than the initially installed size.

F. UTILITIES, STRUCTURES AND SIGNAGE:

1. Landscape Contractor is responsible for verifying locations of all underground and overhead utilities and easements prior to commencing work. Landscape Contractor shall avoid by all means damage to any underground or overhead utilities. The Contractor is solely and directly responsible to the owners and operators of such properties for all damages, injuries, expenses, losses, inconveniences, or delays caused by the Contractor's operations. **ALWAYS CALL 811 BEFORE DIGGING** (Ph: 1-800-432-4770; Website: www.callsunshine.com). Additionally, the Landscape Contractor is responsible to notify the Town of Medley of any other utilities not a part of Sunshine One Call (i.e.: Street Lighting).
2. In cases of landscape installation adjacent to **existing underground or overhead utilities**, the Landscape Contractor is responsible to field adjust plant material accordingly, leaving the following minimum clearances (or distances as measured from the nearest edge of adjacent utility to the nearest edge of the proposed root ball):
 - a. Underground utilities:
 - i. For installation of small to large palms, leave min. 10 feet clearance;
 - ii. For installation of small trees, leave min. 10 feet clearance; and,
 - iii. For installation of medium to large trees, leave a minimum of 15 feet.
 - b. Overhead utilities (light poles, poles, etc.):
 - i. For installation of small trees, leave min. clearance of 15 feet;
 - ii. For installation of medium trees, leave min. clearance of 20 feet;
 - iii. For installation of large trees, leave min. clearance of 30 feet;
 - iv. For installation of small palms, leave min. clearance of 10 feet;

<table border="1"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISIONS			DATE	BY	DESCRIPTION				LAR Fernandez-Beraud, Inc. Landscape Architecture & Planning <u>LETICIA FERNANDEZ-BERAUD, RLA</u> LA 6666730	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2 PROJECT No.: B-40584	LANDSCAPE SPECIFICATIONS SHEET NO.: LP-15
REVISIONS															
DATE	BY	DESCRIPTION													



- v. For installation of medium palms, leave min. clearance of 15 feet; and,
 - vi. For installation of large palms, leave min. clearance of 20 feet.
 - c. **Note:** These dimensions are to be followed by the Landscape Contractor **unless shown otherwise in plans and approved by the Landscape Architect**. In all cases Landscape Contractor is responsible for field verification and appropriate landscape layout adjustments with the approval of the Landscape Architect prior to installation.
3. In cases of landscape installation **adjacent to guardrails, barrier walls and noise walls**, Landscape Contractor will be responsible to leave the following minimum clearances (or distances as measured from the nearest edge of adjacent guardrail / barrier wall / noise wall to the nearest edge of the proposed trunk):
 - a. For installation of small trees, leave min. clearance of 12 feet;
 - b. For installation of medium trees, leave min. clearance of 18 feet;
 - c. For installation of large trees, leave min. clearance of 25 feet;
 - d. For installation of small palms, leave min. clearance of 7 feet;
 - e. For installation of medium palms, leave min. clearance of 9 feet; and,
 - f. For installation of large palms, leave min. clearance of 15 feet.
 - g. **Note:** These dimensions are to be followed by the Landscape Contractor **unless shown otherwise in plans and approved by the Landscape Architect**. In all cases Landscape Contractor is responsible for field verification and appropriate landscape layout adjustments with the approval of the Landscape Architect prior to installation.
 4. In cases of landscape installation **adjacent to existing mature vegetation**, Landscape Contractor will be responsible to leave the following minimum clearances to the existing tree canopy (clearance is referred to the distance as measured from the nearest edge of tree canopy to the nearest edge of the proposed trunk):
 - a. For installation of small trees, leave min. clearance of 15 feet;
 - b. For installation of medium trees, leave min. clearance of 20 feet;
 - c. For installation of large trees, leave min. clearance of 30 feet;
 - d. For installation of small palms, leave min. clearance of 10 feet;
 - e. For installation of medium palms, leave min. clearance of 15 feet;
 - f. For installation of large palms, leave min. clearance of 20 feet.
 - g. **Note:** These dimensions are to be followed by the Landscape Contractor **unless shown otherwise in plans and approved by the Landscape Architect**. In all cases Landscape Contractor is responsible of field verification and appropriate landscape layout adjustments with the approval of the Landscape Architect prior to installation.
 5. **Landscape Contractor is responsible to field verify and field adjust the landscape installation in order to abide by the required clear visibility, accessibility, clearance, and setbacks** as set forth in the latest edition of the Florida Department of Transportation (FDOT) governing standards and specifications: FDOT Design Standards, FDOT Design Manual and FDOT Standard Specifications for Road and Bridge Construction as amended by contract documents; and all other requirements set forth by the Town of Medley.
 6. **Do not block signs with plant material.** Landscape Contractor is responsible to make the necessary field adjustments in order to **ensure visibility of signs**.

G. ANSI STANDARDS:

1. All landscape installation and procedures, including landscape maintenance, shall be performed in compliance with the American National Standards Institute (ANSI) (most recent editions):
 - a. ANSI A300 (Part 1): Pruning.
 - b. ANSI A300 (Part 2): Fertilization.
 - c. ANSI A300 (Part 3): Support Systems – Cabling, Bracing, and Guying Established Trees.
 - d. ANSI A300 (Part 5): Management of Trees and Shrubs during Site Planning, Site Development and Construction.
 - e. ANSI A300 (Part 6): Transplanting.
 - f. ANSI Z133.1-2000: Pruning, Trimming, Repairing, Maintaining, Removing Trees, and Cutting Brush – Safety Requirements.
2. All pruning, and the associated safety criteria, shall be performed according to American National Standard Institute ANSI A300 standards and shall be supervised by an International Society of Arboriculture (ISA) Certified Arborist.

**** Plant material size reference:**

Small trees: Trees smaller than 15 feet height.
 Medium trees: Trees from 15-25 feet height.
 Large trees: Trees larger than 25 feet height.
 Small palms: Palms with canopy/spread smaller than 7 feet.
 Medium palms: Palms with canopy/spread between 7-15 feet.
 Large palms: Palms with canopy/spread larger than 15 feet.

NOT USED

REVISIONS			LAR	 CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM 444 S.W. 2ND AVENUE, 8TH FLOOR MIAMI, FLORIDA 33130 (305) 416-1213 FAX (305) 416-1253	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS		LANDSCAPE SPECIFICATIONS	SHEET NO.
DATE	BY	DESCRIPTION			PROJECT NAME	PROJECT No.		
			Fernandez-Beraud, Inc. Landscape Architecture & Planning <u>LETICIA FERNANDEZ-BERAUD, RLA</u> LA 6666730	VIRGINIA KEY KAYAK LAUNCH-D2	B-40584		LP-16	



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DATE 11/20/19

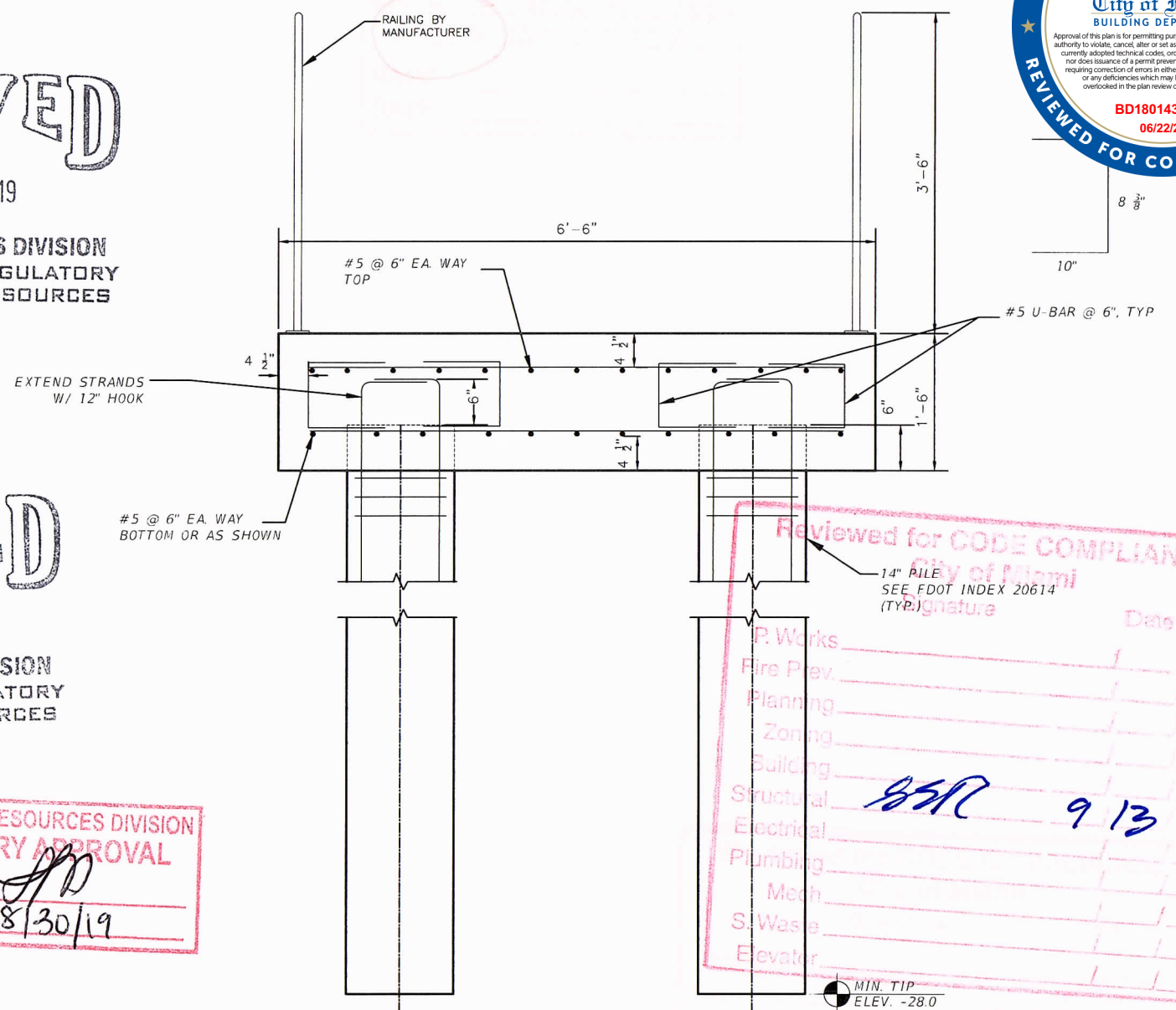
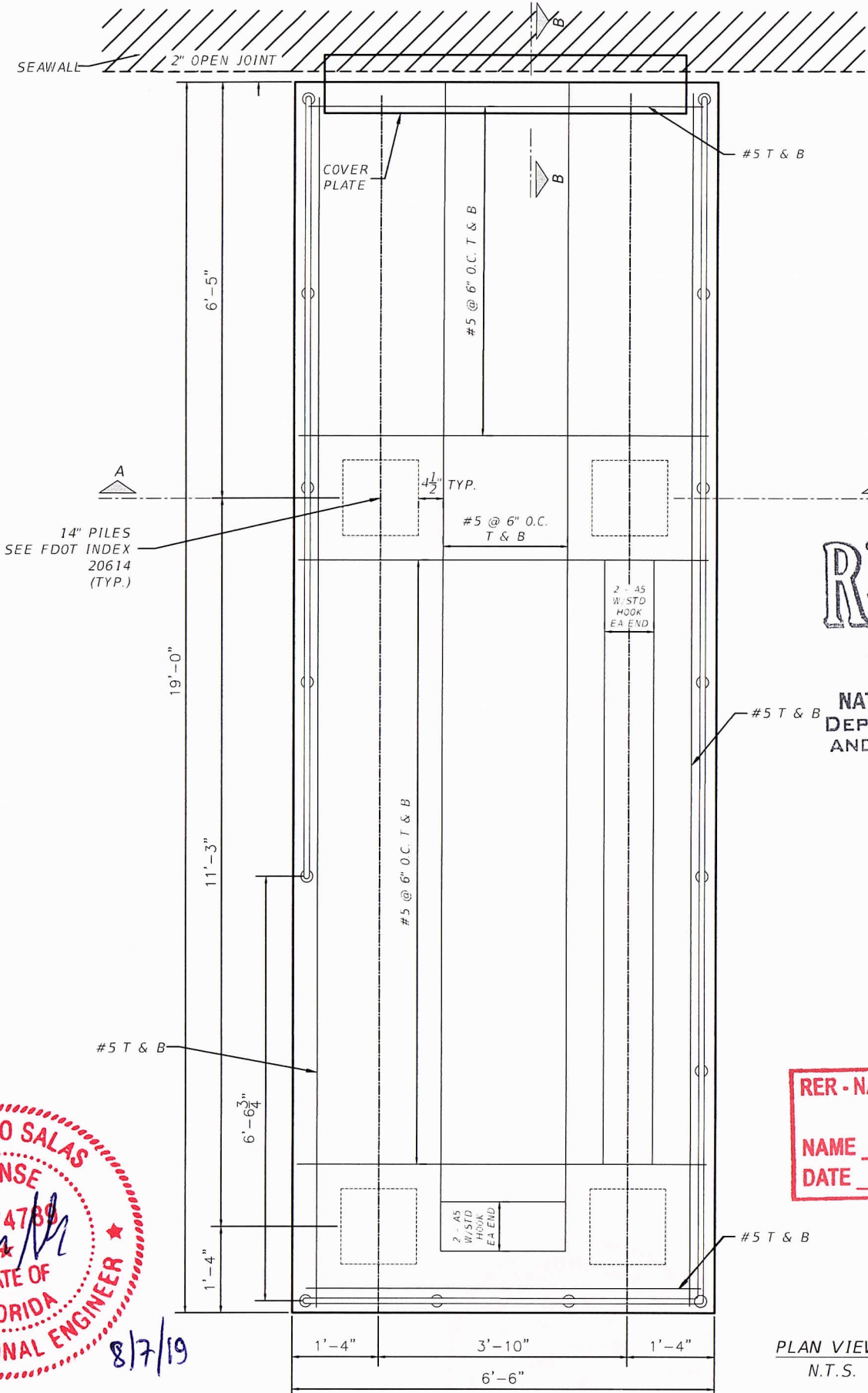
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SEE FDOT INDEX 20614 (TYP.)
Signature _____ Date _____

P. Works	
Fire Prev.	
Planning	
Zoning	
Building	
Structural	<i>AS</i>
Electrical	
Plumbing	
Mech.	
S. Waste	
Elevator	



PLAN VIEW
N.T.S.

SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

NOTE:
SLEEVE ANCHORS ARE REQUIRED AT THE TWO
OUTSIDE CORNERS OF THE SIDEWALK COVER
PLATE. SPACE SLEEVE ANCHORS UNIFORMLY
BETWEEN THE CORNER ANCHORS (6" CENTER
MAX.)



REVISIONS		EOR
DATE	DESCRIPTION	
		ALEJANDRO SALAS, P.E. NO. 14789
		T·Y·LIN INTERNATIONAL



CITY OF MIAMI
CAPITAL IMPROVEMENTS PROGRAM
444 S.W. 2ND AVENUE, 8TH FLOOR
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(305) 416-1213 FAX (305) 416-1253

CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM	
PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

CONCRETE PLATFORM -
SECTION & DETAILS

SHEET NO.
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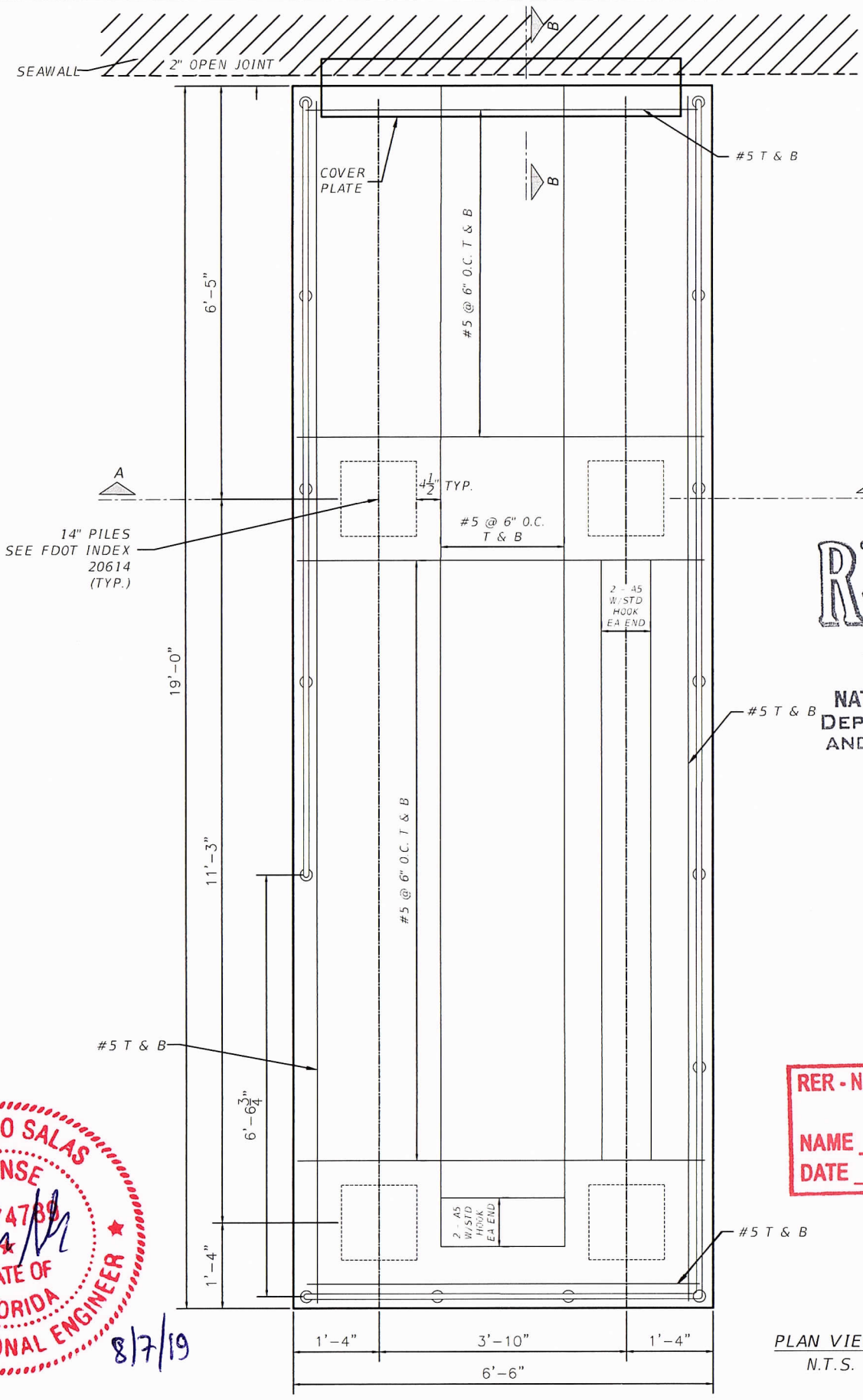
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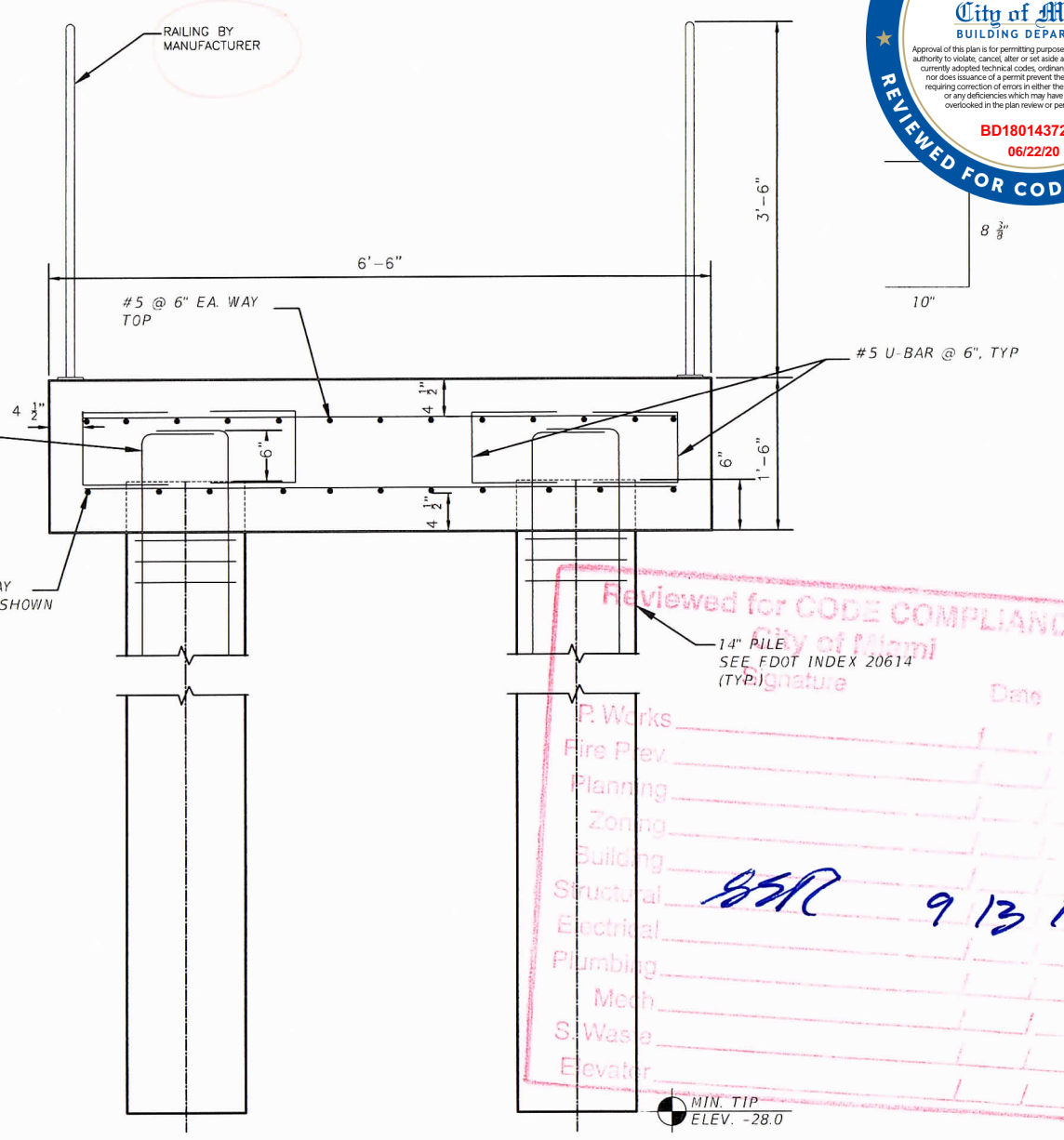
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PLAN VIEW
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SECTION A-A
N.T.S.

SECTION B-B
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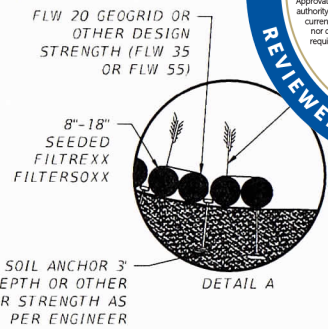
MIN. TIP
ELEV. -28.0



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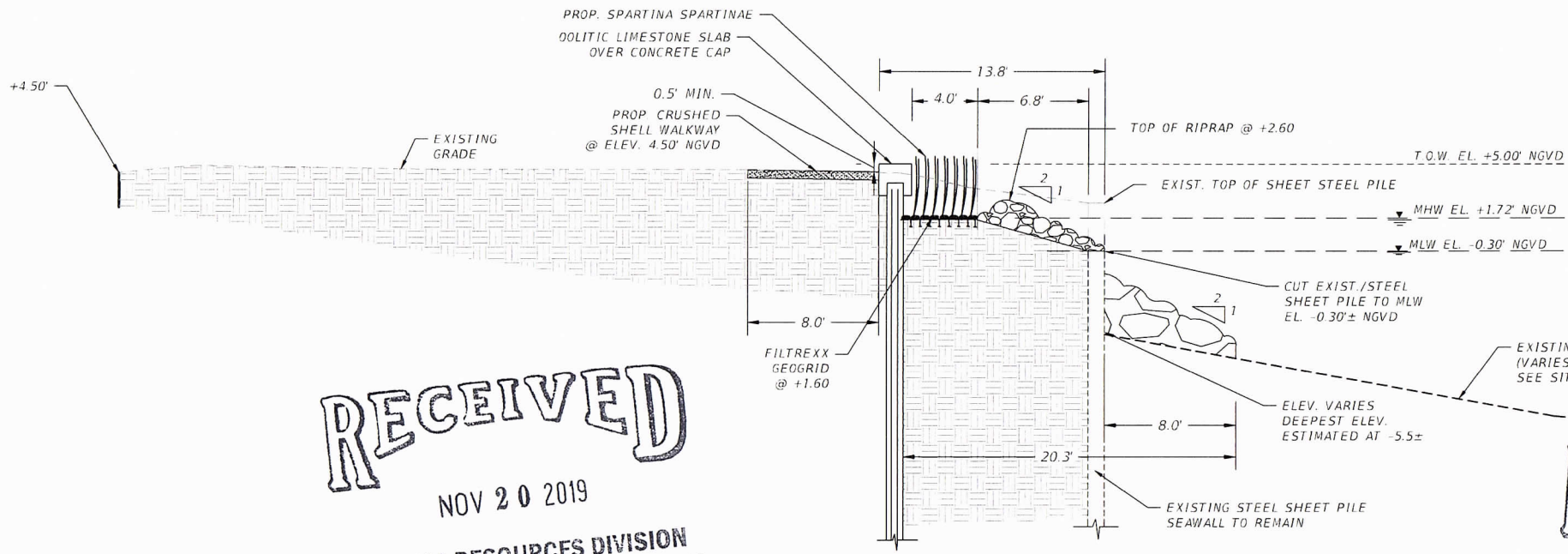
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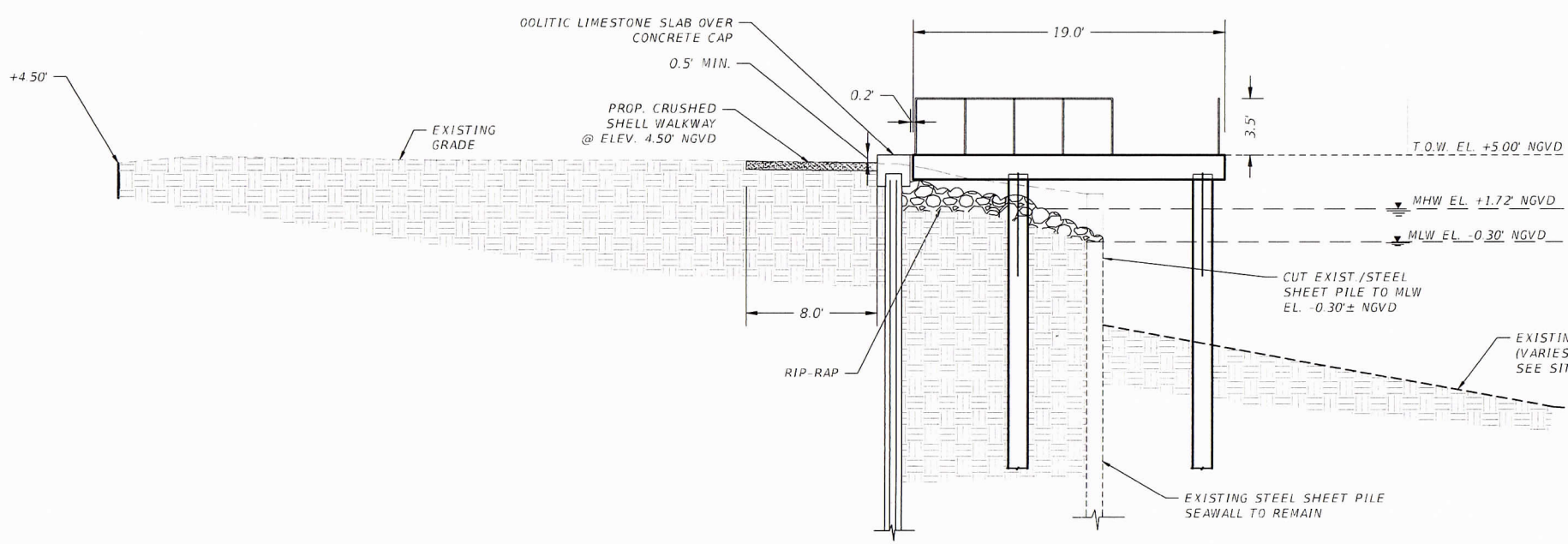
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Zoning	
Building	<i>JPP</i> 9/13/19
Structural	
Electrical	
Plumbing	
Mech.	
S. Waste	
Elevator	



SECTION A-A
 N.T.S.



SECTION B-B
 N.T.S.

NATURAL RESOURCES DIVISION
FINAL APPROVAL
 NAME *JPP*
 DATE *11/20/19*

ALEJANDRO SALAS
 LICENSE
 No. 74789
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
AS 8/7/19

DATE	BY	DESCRIPTION

EOR
T-Y-LIN INTERNATIONAL



CITY OF MIAMI
 CAPITAL IMPROVEMENTS PROGRAM
 444 S.W. 2ND AVENUE, 8TH FLOOR
 MIAMI, FLORIDA 33130
 (305) 416-1213 FAX (305) 416-1253

CITY OF MIAMI
 CAPITAL IMPROVEMENTS PROGRAM
 PROJECT NAME: VIRGINIA KEY KAYAK LAUNCH-D2
 PROJECT No.: B-40584

TYPICAL SHEET PILE SECTION
 SHEET NO. S-501

STEEL SHEET PILE WALL, CANTILEVER DATA TABLE

CONSTRUCTION INFORMATION				DESIGN PARAMETERS				
MINIMUM * SECTION MODULUS (in ³ /ft)	MINIMUM REQUIRED MOMENT OF INERTIA (in ⁴ /ft)	MINIMUM WALL TIP ELEVATION (ft)	WALL TOP ELEV. (ft)	SOIL ELEVATION		WATER ELEVATION		DESIGN LIVE LOAD (psf)
				FRONT OF WALL (ft)	BACK OF WALL (ft)	FRONT OF WALL (ft)	BACK OF WALL (ft)	
A-572 (ksi) fy=50 ksi				**	**			
30.20	50	-30.32	4.25	-5.5	4.5	+1.00	N/A	100

* MINIMUM SECTION MODULUS IS BASED ON HOT ROLLED SECTIONS. FOR COLD ROLLED SECTIONS, INCREASE MINIMUM SECTION MODULUS BY 20%.
 ** MINIMUM OF DESIGN GROUND SURFACE OF DESIGN SCOUR DEPTH.

- NOTES:
- THE DESIGN PARAMETERS INDICATED IN THIS TABLE WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS, WHICH EXCEED THE DESIGN PARAMETERS SHOWN ABOVE, THE CONTRACTOR'S SPECIALTY ENGINEER WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 3.0 INCHES.
 - STRUCTURAL STEEL SHALL CONFORM TO ASTM A572, Gr. 50 (Fy = 50 KSI) OR EQUAL APPROVED.
 - THE SHEET PILE HEIGHT SHALL NOT EXCEED 12 INCHES.
 - ENVIRONMENTAL CLASSIFICATION IS EXTREMELY AGGRESSIVE.
 - CONCRETE FOR CAST-IN-PLACE RETAINING WALL CAP SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 607 OF THE FDOT STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, JANUARY 2017 EDITION; AND SHALL BE CLASS V (SPECIAL) (FC = 6000 PSI) WITH SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH.
 - ALL SHEET PILE SHALL BE COATED PER SECTION 560-11 OF THE FDOT STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, JANUARY 2017 EDITION.

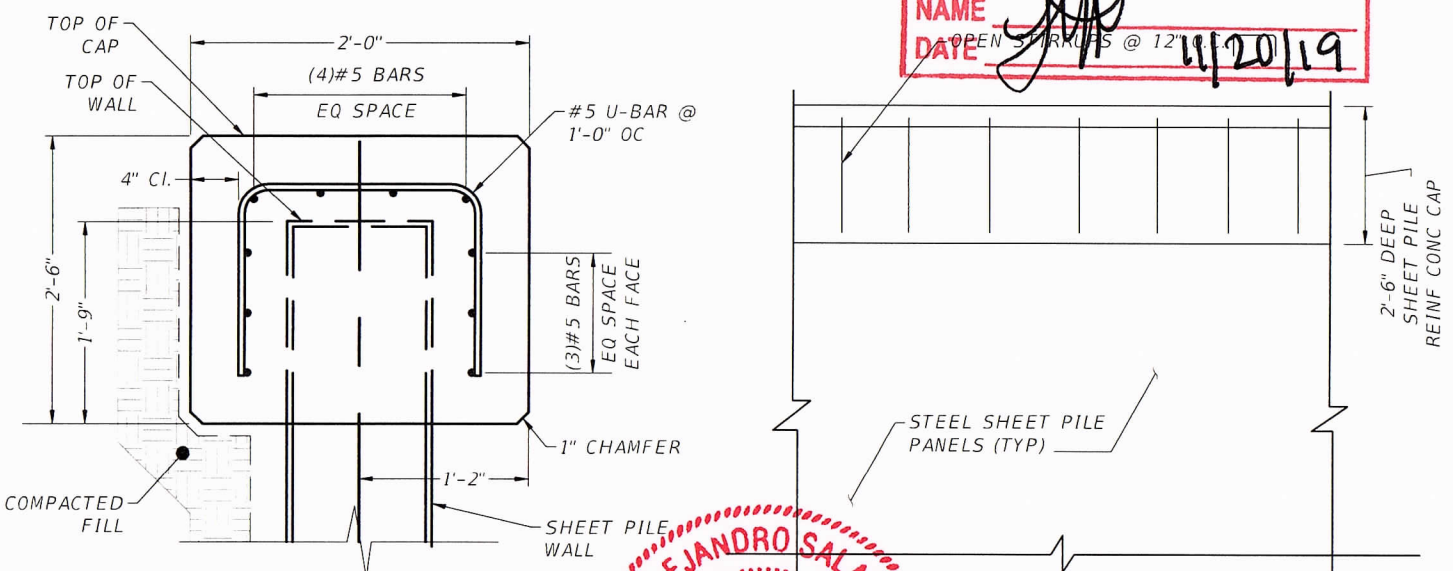
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CAP TYPICAL SECTION
NTS

SHEETPILE PARTIAL ELEVATION

ALEJANDRO SALAS
LICENSE No. 74789
PROFESSIONAL ENGINEER
8/7/19

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CAPITAL IMPROVEMENTS PROGRAM
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4.07	3.97	4.12	4.15	4.18	4.39	4.58	4.27	4.23	4.18	4.02	3.89	4.09	4.31	4.31	4.34	4.51	4.46	4.36	4.16	3.93	4.67	4.35	4.23	4.17	4.00	3.83
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-0+10+00 0+10 0+20 0+30 0+40 0+50 0+60 0+70 0+80 0+90 1+00 1+10 1+20 1+30 1+40 1+50 1+60 1+70 1+80 1+90 2+00 2+10 2+20 2+30 2+40 2+50 2+60 2+70 2+80

SHEET PILE PROFILE ELEVATION
NTS

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PYLE INTERNATIONAL

CITY OF MIAMI CAPITAL IMPROVEMENTS PROGRAM	
PROJECT NAME	PROJECT No.
VIRGINIA KEY KAYAK LAUNCH-D2	B-40584

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SHEET PILE DETAIL
SHEET NO. S-502



WALL ELEVATION PROFILE

