

CKD	CHECKED BY
CONC	CONCRETE
DWN	DRAWN BY
FB/PG	FIELD BOOK AND PAGE
SIR	SET 5/8"IRON ROD & CAP #6448
SNC	SET NAIL & CAP #6448
FIR	FOUND IRON ROD
FIP	FOUND IRON PIPE
FNC	FOUND NAIL & CAP
FND	FOUND NAIL & DISK
PRM	PERMANENT REFERENCE MARKER
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
SPC	STATE PLANE COORDINATES
0.00	ELEVATIONS

THAT PART OF THE SOUTH 200 FEET OF THE NORTH 600 FEET OF SECTION 33, TOWNSHIP 46 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, BOUNDED ON THE EAST BY THE WEST RIGHT-OF-WAY LINE OF STATE ROAD A-1-A, AS DESCRIBED IN DEED BOOK 584 AT PAGE 358, PALM BEACH COUNTY PUBLIC RECORDS AND BOUNDED ON THE WEST BY THE EAST RIGHT-OF-WAY LINE OF THE INTRACOASTAL WATERWAY ACCORDING TO THE PLAT THEREOF, RECORDED IN PLAT BOOK 17 AT PAGE 19, OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

I HEREBY CERTIFY THAT THE "SPECIFIC PURPOSE SURVEY" OF THE HEREON DESCRIBED PROPERTY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED IN THE FIELD UNDER MY DIRECTION IN FEBRUARY, 2021. I FURTHER CERTIFY THAT THIS SURVEY MEETS THE STANDARD OF PRACTICE FOR SURVEYING IN THE STATE OF FLORIDA ACCORDING TO CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE. PURSUANT TO SECTION 472.027, FLORIDA STATUTES. THERE ARE NO ABOVE GROUND ENCROACHMENTS OTHER THAN THOSE SHOWN HEREON, SUBJECT TO THE QUALIFICATIONS NOTED HEREON.

Rod at E. Co.

RICHARD E. COUSINS  
PROFESSIONAL SURVEYOR AND MAPPER  
FLORIDA REGISTRATION NO. 4188

SURVEY DATE : 02/22/21

1. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS-OF-WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD.
3. THIS SURVEY WAS DONE SOLELY FOR DESIGN PURPOSES AND DOES NOT DEPICT THE JURISDICTION OF ANY MUNICIPAL, STATE, FEDERAL OR OTHER ENTITIES.
4. THE LAND DESCRIPTION SHOWN HEREON WAS PROVIDED BY THE CLIENT.
5. UNDERGROUND IMPROVEMENTS NOT SHOWN.
6. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
7. BENCHMARK DESCRIPTION: PALM BEACH COUNTY BENCHMARK #M 310 (2005), ELEVATION = 5.23' (NAVD88)

(a) PROJECTION:  
UNIVERSAL TRANSVERSE MERCATOR PROJECTION AS ESTABLISHED FOR THE FLORIDA  
EAST ZONE COORDINATE SYSTEM.

(b) DATUM:  
THE STATE PLANE COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 WITH A SUBSEQUENT RE-ADJUSTMENT DONE IN 2007 (NAD 83 (NATIONAL SPATIAL REFERENCE SYSTEM 2007)).

(c) METHODOLOGY:  
COORDINATES WERE DETERMINED USING THE TOPCON HI-PER SR AND THE TOPCON  
FC-5000 WITH THE TDS PACKAGE TOGETHER WITH THE 'L-NET' ROVER SYSTEM

(d) ESTIMATED ACCURACIES:  
HORIZONTAL ACCURACIES TO 0.04'

3921 SW 47TH AVENUE, SUITE 1011  
DAVIE, FLORIDA 33314  
CERTIFICATE OF AUTHORIZATION : LB # 6448  
PHONE (954)689-7766 FAX (954)689-7799  
EMAIL: OFFICE@CSASURVEY.NET

CLIENT :

HEATHER RUBIN

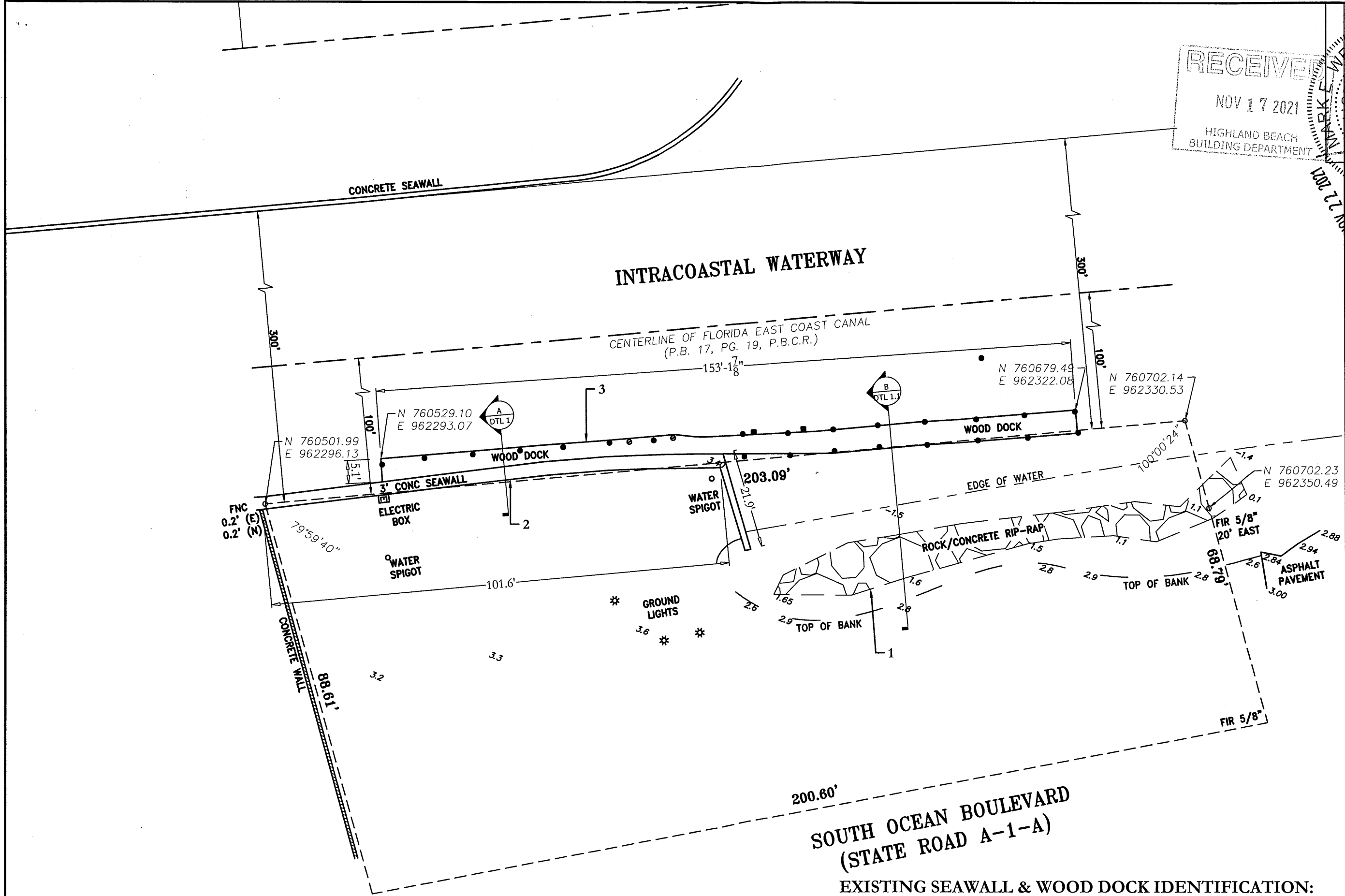
REVISIONS	DATE	FB/PG	DWN	CKD
SPECIFIC PURPOSE SURVEY	02/22/21	SKETCH	JD	REC
ADDED SPC AND CANAL CENTERLINE	02/22/21	SKETCH	JD	REC

COMMUNITY NUMBER	125111
PANEL NUMBER	0987F
ZONE	AE
BASE FLOOD ELEVATION	6
EFFECTIVE DATE	10/05/17

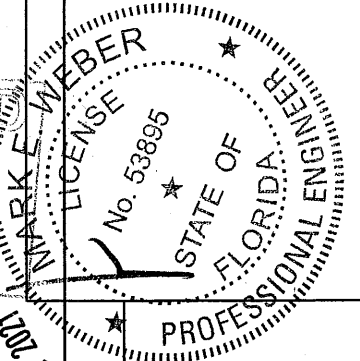
PROPERTY ADDRESS :  
2901 S OCEAN BLVD 301

SCALE: 1" = 20'

SHEET 1 OF 1



RECEIVED  
NOV 17 2021  
HIGHLAND BEACH  
BUILDING DEPARTMENT



Mark E. Weber, P.E.  
LICENSE #53895 | CA 30702  
MW ENGINEERING, INC  
902 NE 1 Street Suite #2  
Pompano Beach, Florida 33060  
Ofc: 754-333-0877  
WWW.MWEngineering.net

PREPARED FOR:  
B & M MARINE  
CONSTRUCTION, INC.  
1211 South Military Trail, Suite 200  
Deerfield Beach, FL 33442  
954-421-1700 CGC052820

Seawall and Dock for:  
Highlands Place Condo  
2901 S Ocean Blvd  
Highland Beach, FL 33487

DATE	NOTES/REVISIONS

SCALE: As Noted  
DATE: 7/28/2021

JOB No: 20-2529

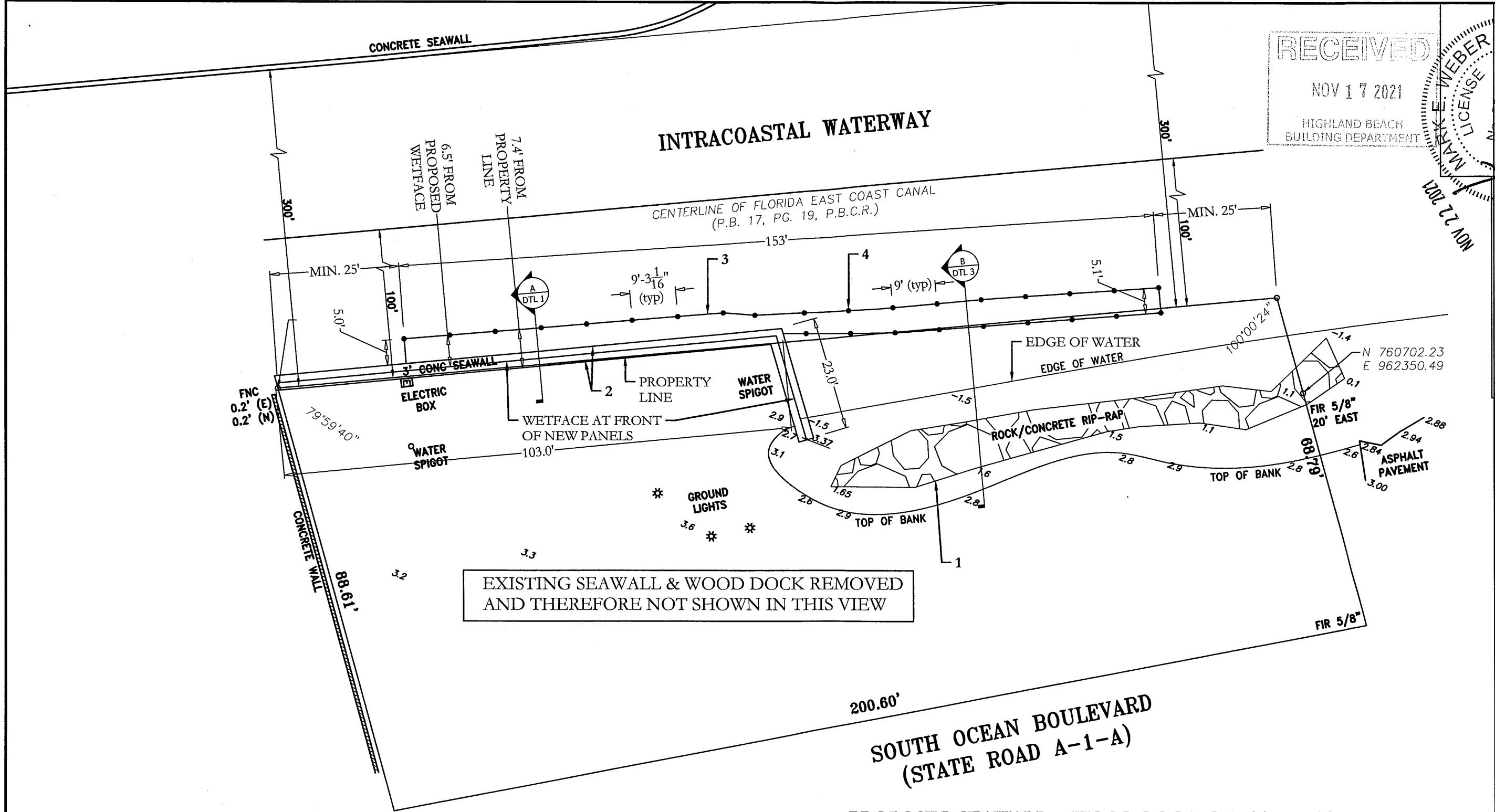
EC

EXISTING CONDITIONS  
SCALE: 1" = 20'-0"

SOUTH OCEAN BOULEVARD  
(STATE ROAD A-1-A)

EXISTING SEAWALL & WOOD DOCK IDENTIFICATION:

1. EXISTING RIPRAP BOULDERS TO REMAIN
2. EXISTING SEAWALL, CAP AND PILINGS TO BE REMOVED
3. EXISTING 693SF WOOD DOCK AND PILINGS TO BE REMOVED



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NOV 22 2021  
MARK E. WEBER  
LICENSE  
No. 53895  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

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PC

**PROPOSED OVER EXISTING CONDITIONS**  
SCALE: 1" = 20'-0"

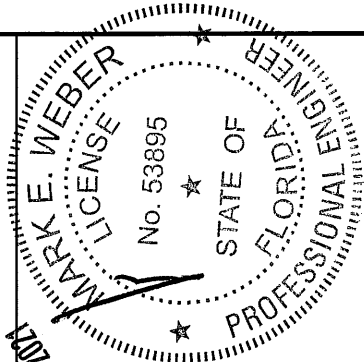
**PROPOSED SEAWALL & WOOD DOCK IDENTIFICATION:**

1. EXISTING RIPRAP BOULDERS TO REMAIN
2. 126' OF NEW SEAWALL, CAP AND PILINGS
3. NEW 721SF WOOD DOCK
4. (27) NEW 10" DIA. WOOD DOCK PILINGS

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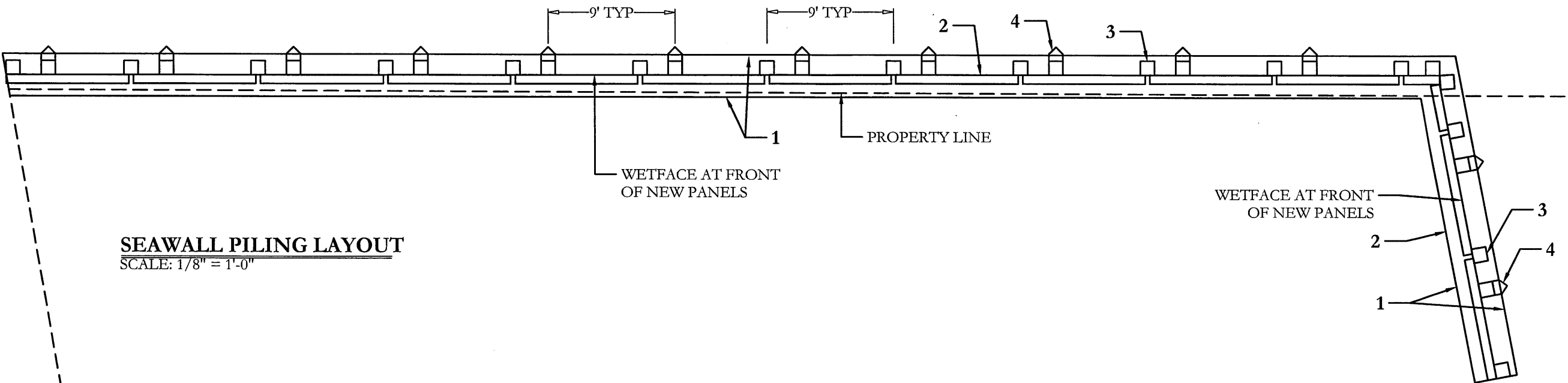
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PL

3 of 8

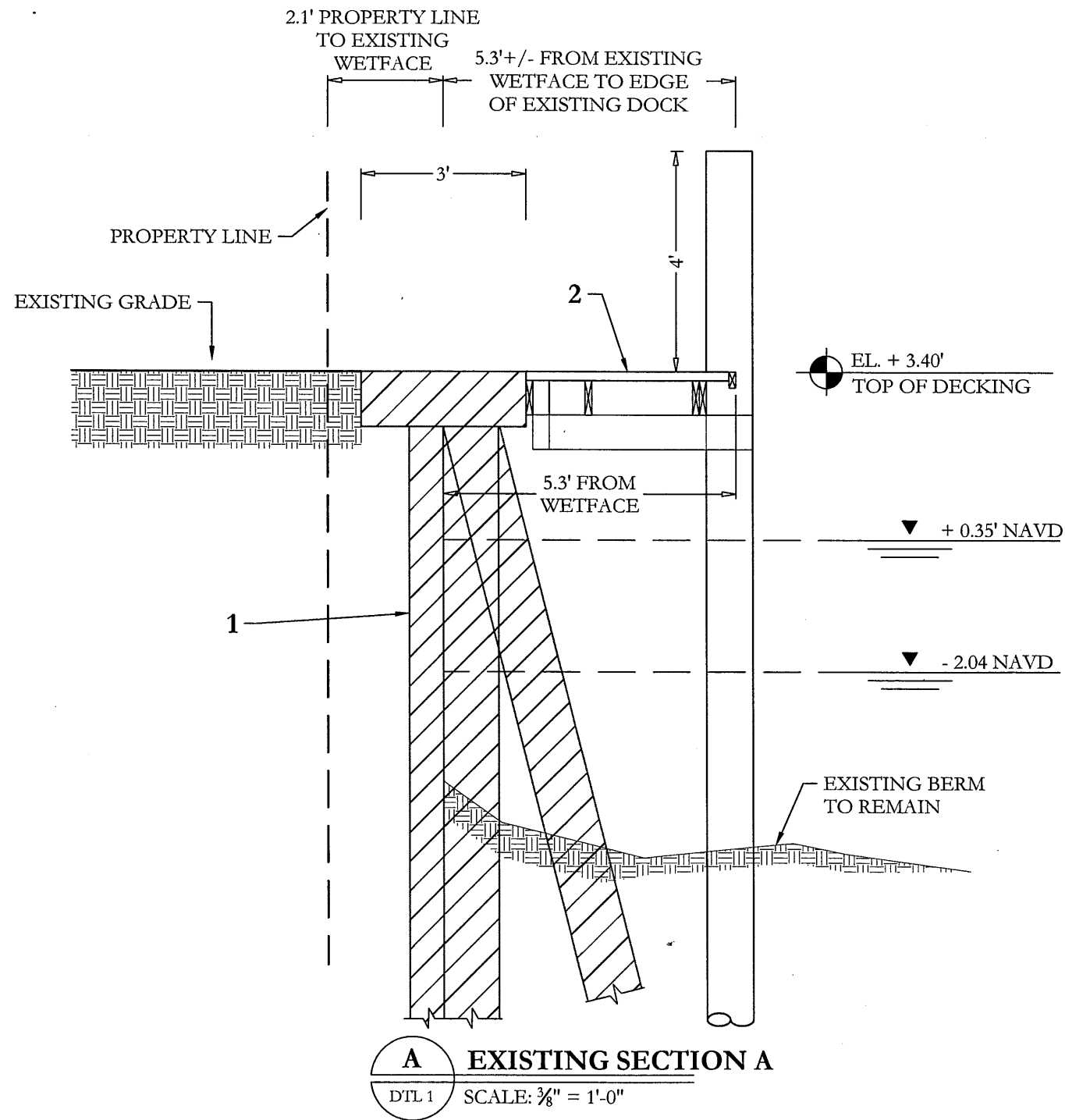
**SEAWALL PILING LAYOUT**

SCALE: 1/8" = 1'-0"



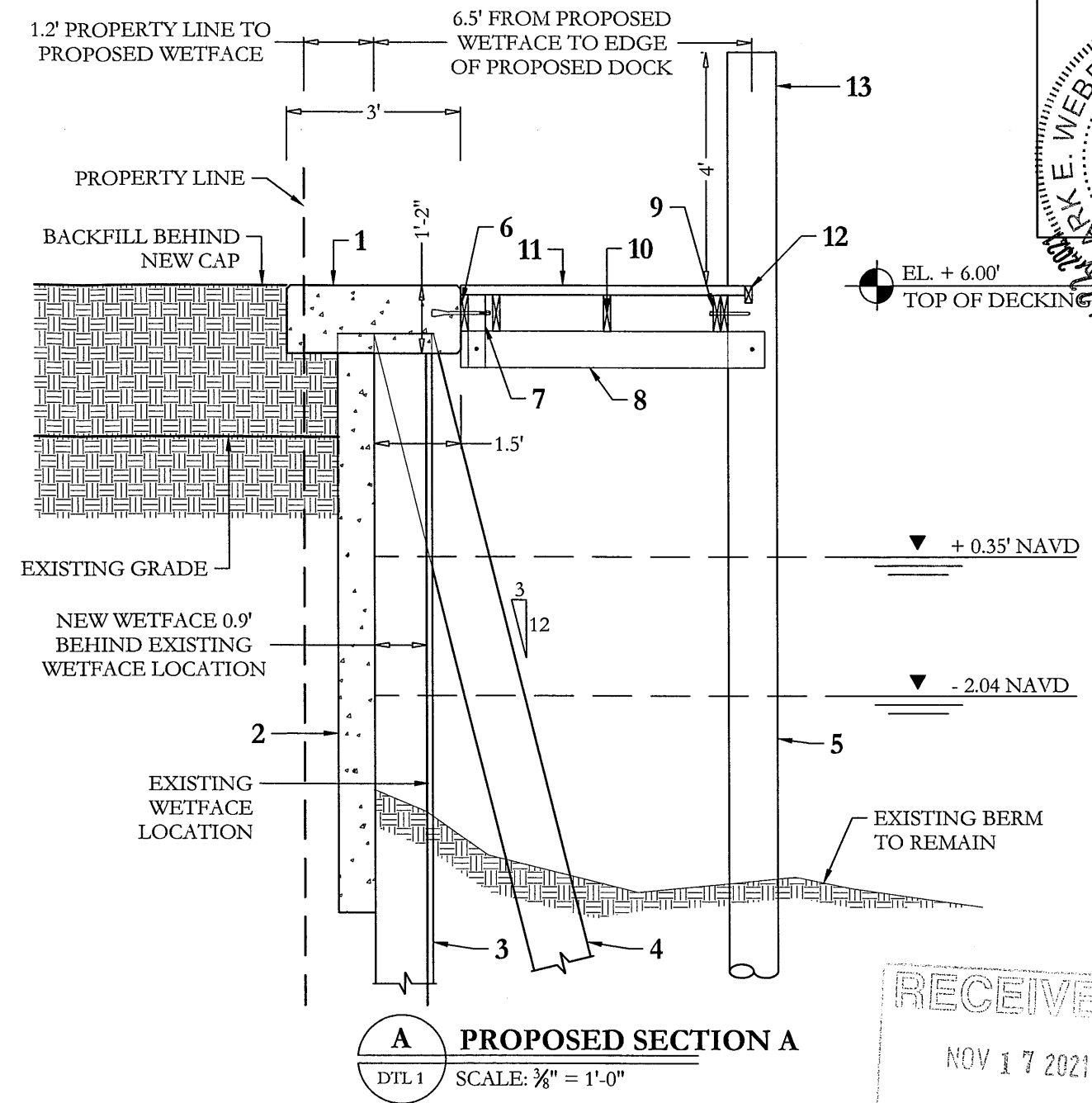
**PROPOSED SEAWALL & WOOD DOCK IDENTIFICATION:**

1. 126' OF NEW SEAWALL, CAP AND PILINGS
2. NEW CONCRETE PANELS (10' X 8'-8" X 7.5")
3. (17) NEW 12" X 12" CONCRETE VERTICAL PILINGS
4. (13) NEW 12" X 12" CONCRETE BATTER PILINGS



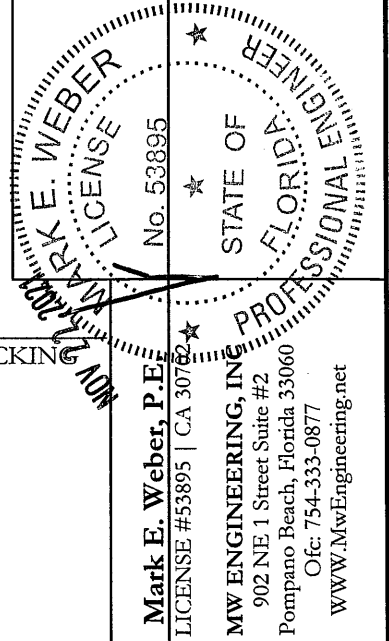
### EXISTING SEAWALL & WOOD DOCK IDENTIFICATION:

- EXISTING SEAWALL, CAP AND PILINGS TO BE REMOVED
- EXISTING 693SF WOOD DOCK AND PILINGS TO BE REMOVED



### PROPOSED SEAWALL WOOD DOCK IDENTIFICATION:

- NEW 36" X 14" CONCRETE CAP; SEE SEAWALL CAP STEEL DETAIL ON SHEET DTL 2
- PROPOSED 8'-8" X 7.5" X 12' PRE-CAST CONCRETE PANEL; SEE CONCRETE PANEL DETAIL ON DTL 2
- PROPOSED 12" X 12" CONC. KING PILE
- PROPOSED 12" X 12" CONC. BATTER PILE
- NEW MIN. 10" DIA. WOOD PILINGS
- 2" X 8" LEDGER TO CAP WITH 5/8" WEDGE ANCHORS @ 36" O.C, MIN. 4" EMBEDMENT
- 4" X 10" HANGER TO CAP WITH (1) 5/8" WEDGE ANCHOR, MIN. 4" EMBEDMENT
- 2" X 8" SUBSTRINGER EACH SIDE OF PILING WITH (1) 5/8" THRU BOLT OR LAG BOLT @ PILINGS AND HANGERS
- (2) 2" X 8" STRINGERS @ PILINGS WITH (1) 5/8" THRU BOLT OR LAG BOLT TO PILINGS
- 2" X 8" STRINGERS W/ (2) 16D NAILS TO EACH SUBSTRINGER; @ 16" O.C. FOR AZEK DECKBOARDS OR 24" O.C.. FOR PRESSURE TREATED WOOD DECKBOARDS OR 5/4" IPE DECKBOARDS
- 2" X 6" DECKING WITH (2) #8 X 3" DECK SCREWS PER STRINGER
- 2" X 4" WOOD TRIM
- NON-STRUCTURAL FINISH PER OWNER'S SELECTION AROUND TOP OF PILINGS



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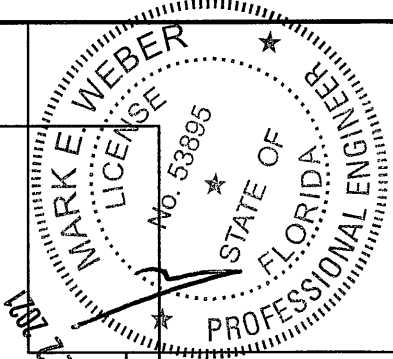
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**DTL 1**

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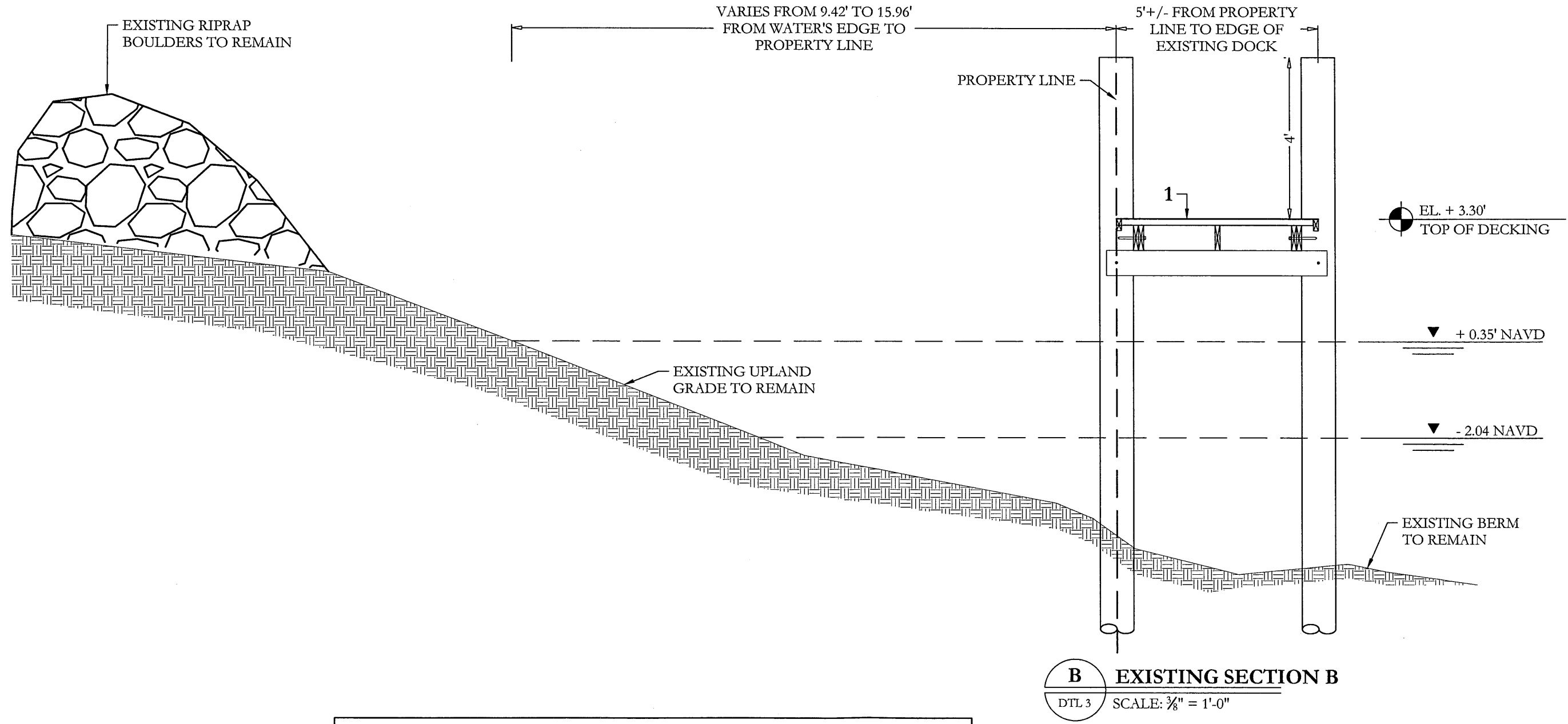
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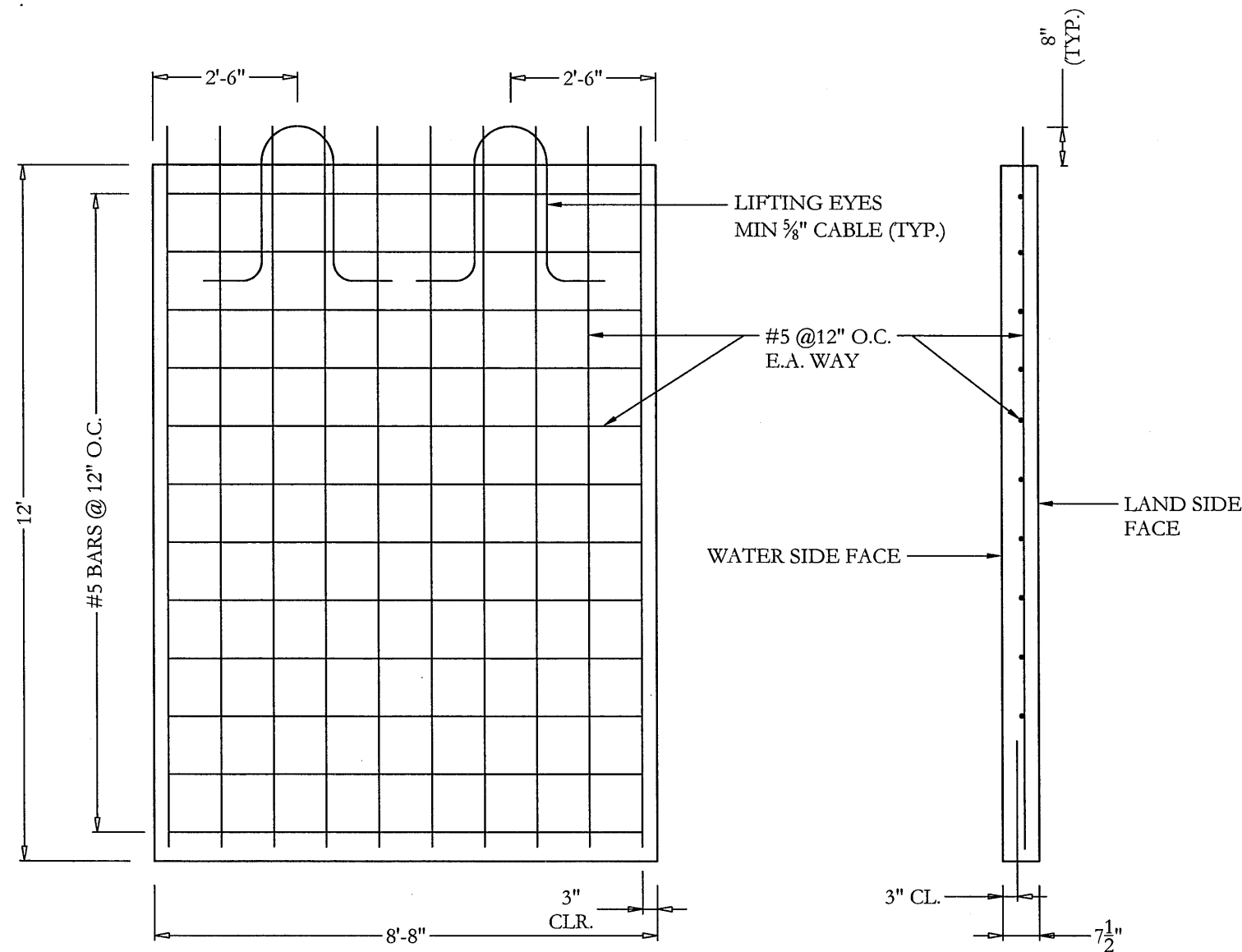
JOB No: 20-2529

DTL 1.1



**EXISTING SEAWALL & WOOD DOCK IDENTIFICATION:**

- 1. EXISTING 693SF WOOD DOCK AND PILINGS TO BE REMOVED

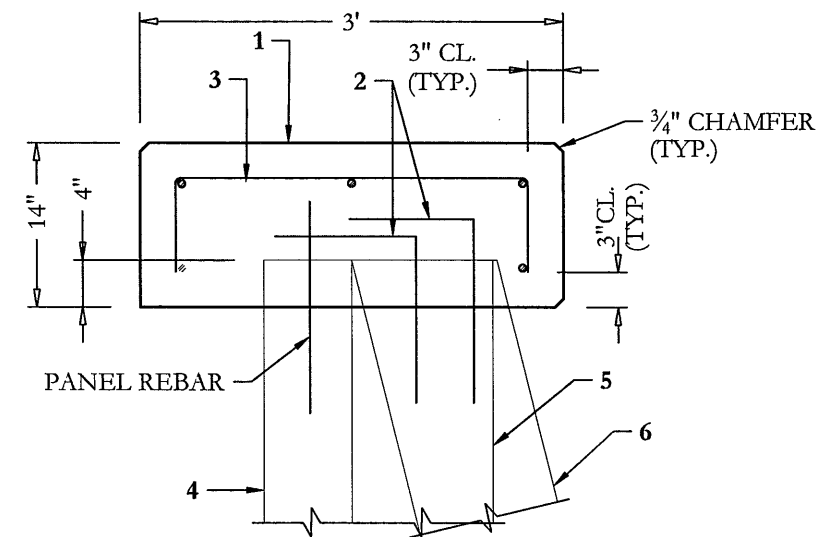


### CONCRETE PANEL DETAIL

SCALE: 3/8" = 1'-0"

### SIDE VIEW

SCALE: 3/8" = 1'-0"

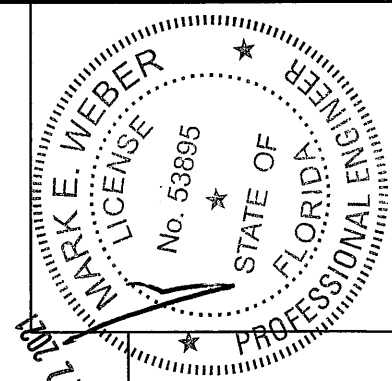
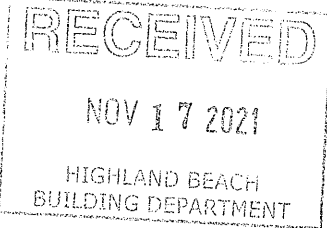


### SEAWALL CAP STEEL DETAIL

SCALE: 3/4" = 1'-0"

### SEAWALL AND CONCRETE DOCK STEEL IDENTIFICATION:

- 36" X 14" CONCRETE CAP
- SEE CONCRETE PILE NOTE #5
- (5)#5 BARS CONTINUOUS WITH #3 STIRRUPS @ 18" O.C.
- PROPOSED 8'-8" X 7.5" X 12' PRE-CAST CONC. PANEL (SEE DTL 2 FOR DETAILS)
- PROPOSED 12" X 12" CONC. KING PILE
- PROPOSED 12" X 12" CONC. BATTER PILE



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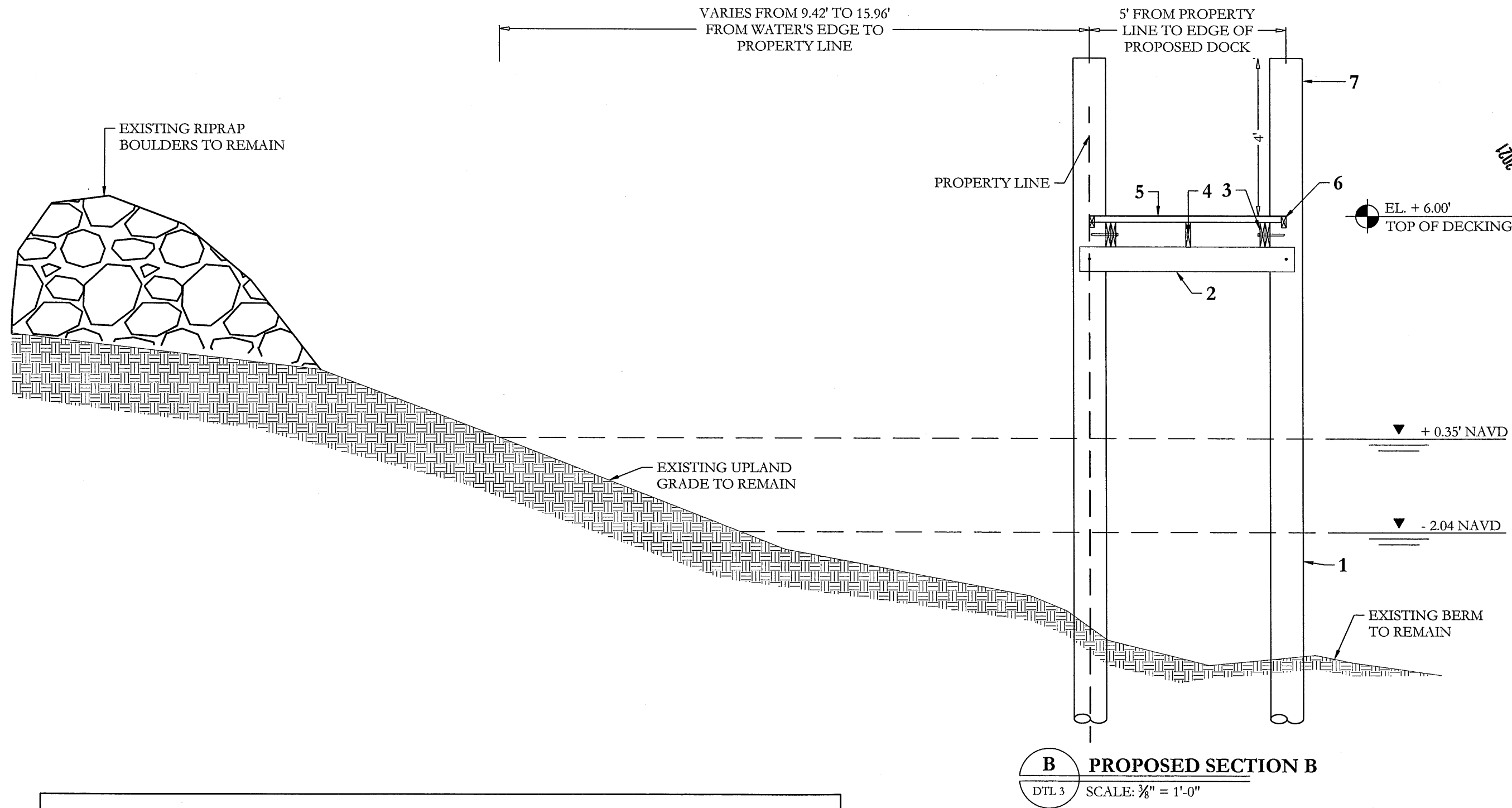
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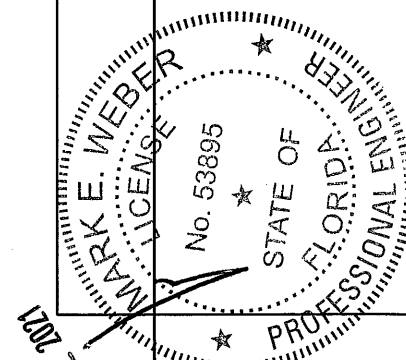
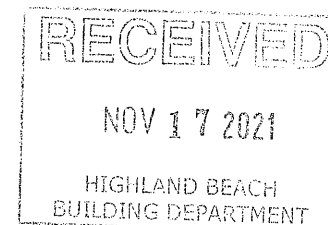
JOB No: 20-2529

**DTL 2**



### PROPOSED SEAWALL WOOD DOCK IDENTIFICATION:

1. NEW MIN. 10" DIA. WOOD PILINGS
2. 2" X 8" SUBSTRINGER EACH SIDE OF PILING WITH (1) 5/8" THRU BOLT OR LAG BOLT @ PILINGS AND HANGERS
3. (2) 2" X 8" STRINGERS @ PILINGS WITH (1) 5/8" THRU BOLT OR LAG BOLT TO PILINGS
4. 2" X 8" STRINGERS W/ (2) 16D NAILS TO EACH SUBSTRINGER; @ 16" O.C. FOR AZEK DECKBOARDS OR 24" O.C. FOR PRESSURE TREATED WOOD DECKBOARDS OR 5/4" IPE DECKBOARDS
5. 2" X 6" DECKING WITH (2) #8 X 3" DECK SCREWS PER STRINGER
6. 2" X 4" WOOD TRIM
7. NON-STRUCTURAL FINISH PER OWNER'S SELECTION AROUND TOP OF PILINGS



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**DTL 3**

7 of 8



GENERAL NOTES:

1. Construction to follow the Florida Building Code 7th Edition (2020) and amendments as applicable and all Local, State and Federal Laws.
2. Licensed contractor shall verify the existing conditions prior to the commencement of the work. Any conflicts or omissions between existing conditions or the various elements of the working drawing shall be brought to the attention of the Engineer prior to the commencement of the work. The Licensed Contractor and all subcontractors are responsible for all lines, elevations, and measurements in connection with their work.
3. Do not scale drawings for dimensions.
4. Any deviation and/or substitution from the information provided herein shall be submitted to the Engineer for approval prior to commencement of work.
5. All unanticipated or unforeseen demolition and/or new construction conditions which require deviation from the plans and notes herein shall be reported to the Engineer prior to commencement of work.
6. All new work and/or materials shall conform to all requirements of each administrative body having jurisdiction in each appertaining circumstance.
7. All new materials and/or patchwork shall be provided to match existing materials and/or adjoining work where practical except as specifically noted herein.
8. Licensed Contractor to shall use all possible care to protect all existing materials, surfaces, and furnishings from damage during all phases of construction.
9. Licensed Contractor to verify location of existing utilities prior to commencing work.
10. The Licensed contractor to install and remove all shoring and bracing as required for the proper execution of the work.
11. Licensed Contractor to obtain all permits as necessary from all Local, State, and Federal agencies.
12. Turbidity barriers to be marked with site contractor's company name using permanent markings no smaller than 3 inches in height on the top of the barrier.

PILE DRIVING: (IF NEW PILES ARE INSTALLED)

1. Piles shall be driven using an approved cushion block consisting of material so arranged so as to provide the transmission of hammer energy.
2. All pilings shall be driven to develop a minimum allowable bearing capacity of 10 tons and shall penetrate a minimum of 8' into yielding material or 2' min. penetration into rock is required.
3. Piles shall be driven with a drop hammer or gravity hammer provided the hammer shall weight no less than 3,000 pounds, and the fall of the hammer shall not exceed 6'.
4. Piles shall be driven with a variation of not more than ¼ inch per foot from the vertical, or from the batter line indicated, with a maximum variation of the head of the pile from the position shown on the plans of not more than three inches.
5. Where piling must penetrate strata offering high resistance to driving, the structural engineer of record or special inspector may require that the piles be set in pre-drilled or punched holes. The piles shall reach their final penetration by driving.

CONCRETE NOTES: (IF CONCRETE STRUCTURES ARE INSTALLED)

1. Concrete shall conform to ACI 318-14 and shall be regular weight, sulfate resistant, with a design strength of 5000 psi at 28 days with a maximum water-cementitious materials ratio, by weight aggregate concrete of 0.40.
2. Owner shall employ and pay for testing services from an independent testing laboratory for concrete sampling and testing in accordance with ASTM.
3. Licensed contractor is responsible for the adequacy of forms and shoring and for safe practice in their use and removal.
4. Concrete cover shall be 3" unless otherwise noted on the approved drawings.
5. Reinforcing steel shall be in conformance with the latest version of ASTM A615 Grade 60 specifications. All reinforcement shall be placed in accordance with ACI 315 and ACI Manual of Standard Practice.
6. Splices in reinforcing bars shall be not be less than 48 bar diameters and reinforcing shall be continuous around all corners and changes in direction. Continuity shall be provided at corners or changes in direction by bending the longitudinal steel around the corner 48 bar diameters.
7. Defective, cracked or loose concrete areas must be cut out, the rebar must be cleaned, coated with zinc and repaired with at least 3" of expoxy-concrete mix or gunnite concrete with sulfate-resistant cement.
8. For cap overpours, dowel and epoxy #5 bars or L-bars into top and front of existing cap, staggered @ 24" o.c., min. 4" embedment.

CONCRETE PILE NOTES: (IF CONCRETE PILES ARE INSTALLED)

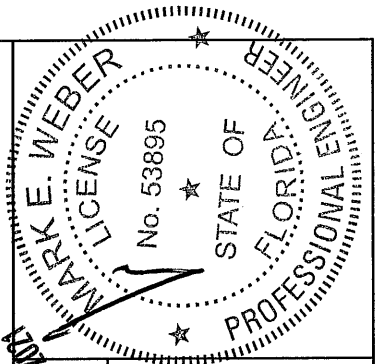
1. Concrete piles shall attain 5000 psi compressive strength in 28 days.
2. Concrete piles shall be reinforced with four - 7/16"Ø lo-lax strands, 270 kips, and 5 ga. spiral ties.
3. Concrete piles shall be 12"x12" square, minimum length of 20'.
4. Concrete piles shall be cut to leave strands exposed a min. of 18" and tied to dock or cap steel.
5. For all prestressed pilings, extend pilings strands a min. of 18" into cap/dock slab steel or cut strands even w/ top of pilings & dowel & epoxy (2) #5 L-bars, 12" long w/ 12" bend, into top of pilings, w/ a min. of 4" embedment.
6. New batter and vertical pilings and panels to have a minimum 4" penetration into the new cap form. New dock pilings to have a minimum 3" penetration into the new dock slab form.

WOOD PILES NOTES: (IF WOOD PILES ARE INSTALLED)

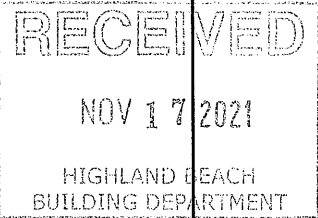
1. Wood piles to be 2.5lb CCA treated in accordance with AWWPA Standard C18.
2. Wood piles shall be a minimum diameter of 10"; Miami Dade County requires minimum diameter of 12".

WOOD DOCK/PIER NOTES: (IF WOOD STRUCTURES ARE INSTALLED)

1. All materials to be pressure treated pine unless otherwise noted.
2. All frame work materials to be Southern Yellow Pine Grade #1, Fb=1200 PSI and Fv=175 PSI.
3. All decking materials to be grade #1 unless otherwise noted.
4. All hardware to be Stainless Steel or Galvanized unless otherwise noted.



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