



CONTRACT PLANS COMPONENTS

STRUCTURES
CIVIL
ELECTRICAL

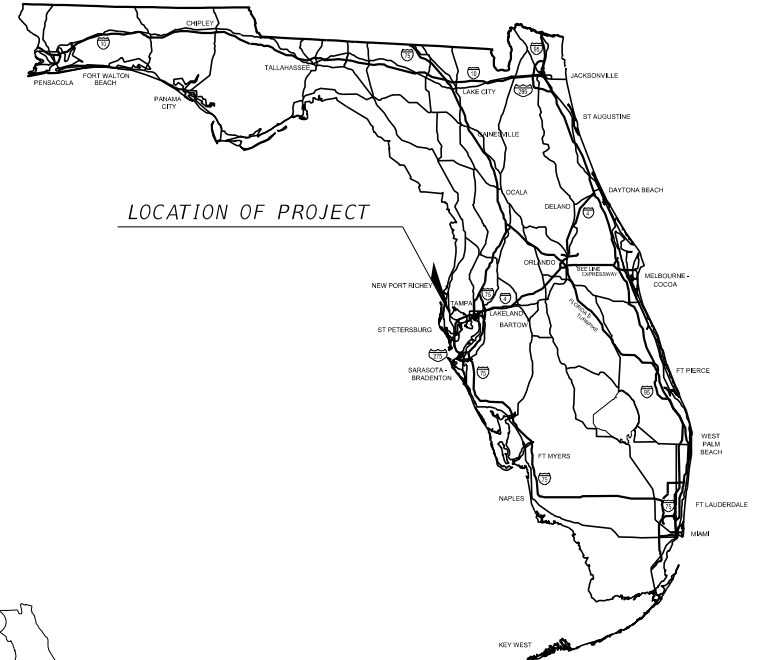
FIRE PROTECTION
PLUMBING

CITY OF SAFETY HARBOR

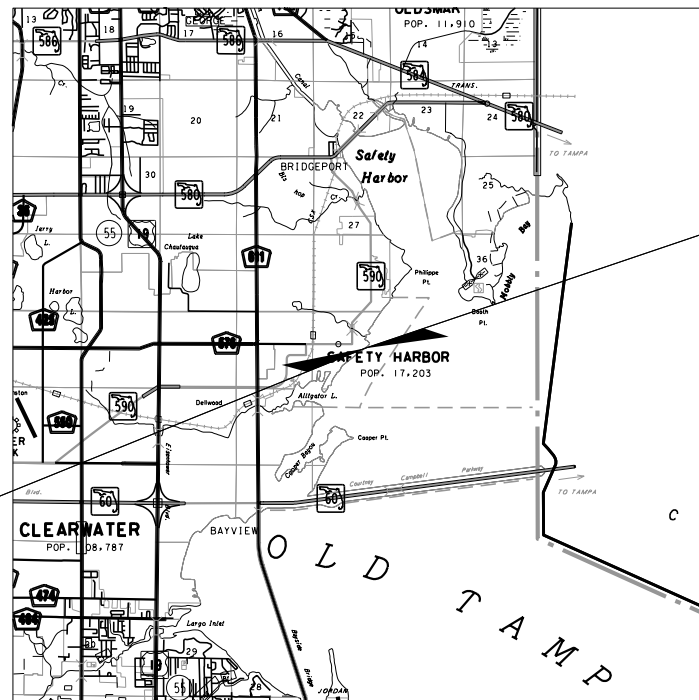
CONTRACT PLANS

MARINA REPLACEMENT

110 VETERANS MEMORIAL LANE



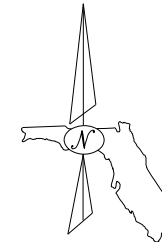
LOCATION OF PROJECT



BEGIN PROJECT
CL VETERANS MEMORIAL LANE
N 27°59'22.96"
W 82°41'15.35"

END PROJECT
CL VETERANS MEMORIAL LANE
N 27°59'21.62"
W 82°41'12.88"

LOCATION MAP
SECTION 3 TOWNSHIP 29S, RANGE 16E



BOARD OF CITY COMMISSIONERS

JOE AYOUB
ANDY STEINGOLD
NANCY BESORE
CARLOS DIAZ
JACOB BURNETT

MAYOR
VICE-MAYOR
COMMISSIONER
COMMISSIONER
COMMISSIONER

SHOP DRAWINGS
TO BE SUBMITTED TO:

DAVID R. JOHNSON, P.E.
DRMP, INC.
15310 AMBERLY DRIVE
SUITE 310
TAMPA FL, 33647

PLANS PREPARED BY:

DRMP, INC.
15310 AMBERLY DRIVE
SUITE 310
TAMPA FL, 33647
PHONE: (813) 265-9800
DAVID R. JOHNSON, P.E. 79354

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

GOVERNING DESIGN STANDARDS:

Florida Department of Transportation, FY 2024-25 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs) and as amended by Contract Documents.

For Design Standard Plans click on "Standards Plans for Road and Bridge Construction" at the following web site: <https://www.fdot.gov/design/standardplans/>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, Standard Specifications for Road and Bridge Construction FY2024-25 as amended by Contract Documents.

ASSISTANT PUBLIC WORKS DIRECTOR - CHARLES AHRENS, P.E.

GOOGLE EARTH LINK PROVIDED FOR BRIDGE LOCATION.
<https://maps.app.goo.gl/VC2t1DhWkQB3zUEAA>

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ENGINEER OF RECORD: DAVID R. JOHNSON, P.E.

P.E. NO.: 79354

FISCAL YEAR	SHEET NO.
24	S-01

INDEX OF STRUCTURE PLANS

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S-06	SUMMARY OF QUANTITIES
S-07	DEMOLITION PLAN
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S-09	SOIL PROFILES
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INDEX OF ELECTRICAL PLANS

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E-03	ELECTRICAL SPECIFICATIONS (2 OF 3)
E-04	ELECTRICAL SPECIFICATIONS (3 OF 3)
E-05	ELECTRICAL PLAN NOTES
E-06	ELECTRICAL DEMOLITION PLAN
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E-09	POWER ONE-LINE DIAGRAM
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FP-02	FIRE PROTECTION SPECIFICATIONS
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P-01	PLUMBING NOTES, LEGEND, AND SCHEDULE
P-02	PLUMBING FLOOR PLAN
P-03	PLUMBING DETAILS

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: BCS 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE: INDEX OF SHEETS		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
											S-02

GENERAL NOTES

SPECIFICATIONS

DESIGN AND CONSTRUCTION SPECIFICATIONS:

- A) FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FY2024-25 EDITION, AS AMENDED BY CONTRACT DOCUMENTS.
- B) FLORIDA BUILDING CODE 8TH EDITION (2023).
- C) NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION - AMERICAN WOOD COUNCIL 2018 EDITION.
- D) AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-16.
- E) AISC STEEL CONSTRUCTION MANUAL 16TH EDITION.

DESIGN METHOD

LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD USING STRENGTH AND SERVICE LIMIT STATES.

DESIGN LOADINGS

- 1. DEAD LOAD - 10 PSF
- 2. LIVE LOAD - 100 PSF
- 3. WIND LOAD:
 - A) DESIGN WIND SPEED 150 MPH
 - B) RISK CATEGORY II
 - C) EXPOSURE CATEGORY D
 - D) IMPORTANCE FACTOR 1.0

GENERAL NOTES

- 1. COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN WORK PERMITS THAT ARE REQUIRED PRIOR TO CONSTRUCTION.
- 2. LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. VERIFY THE LOCATION, ELEVATION, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE WORK.
- 3. ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET AND INCHES EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.
- 4. PLAN ELEVATIONS ARE IN FEET AND REFER TO NAVD 1988 DATUM. VERTICAL DATUM CONVERSION, NGVD29 TO NAVD88 = -0.856
- 5. PROVIDE AND MAINTAIN TURBIDITY BARRIERS IN ACCORDANCE WITH PERMITS.
- 6. DRAWINGS ARE NOT TO SCALE UNLESS NOTED OTHERWISE.

MARINE NAVIGATION

- 1. MAINTAIN VISIBLE AND FUNCTIONAL EXISTING SIGNS AT ALL TIMES DURING CONSTRUCTION. AT THE APPROVAL OF THE ENGINEER TEMPORARILY RELOCATE EXISTING SIGNS TO FACILITATE CONSTRUCTION. RETURN ALL RELOCATED SIGNS TO THEIR ORIGINAL LOCATION AFTER CONSTRUCTION IS COMPLETED.
- 2. MARINE TRAFFIC CONSTRUCTION SIGNS ARE TO BE PLACED AT THE ENTRANCE OF THE PARKING LOT AND AT THE CHANNEL ENTRANCE PRIOR TO THE BOAT RAMP FOR INCOMING MARINE TRAFFIC. PLACEMENT OF THE SIGNS IS TO BE SUCH THAT THEY ARE CLEARLY VISIBLE TO APPROACHING TRAFFIC. BARGES LEFT IN WATER IN LOW-LIGHT CONDITIONS SHALL BE ILLUMINATED SO AS TO BE VISIBLE TO MARINE TRAFFIC.
- 3. NOTIFY LT. CLARK SANFORD AT THE USCG SECTOR ST. PETERSBURG AT 813-228-2191 EXT. 8105 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. IN ADVANCE OF ACTIONS DURING CONSTRUCTION OR DEMOLITION WHICH POTENTIALLY AFFECT WATERWAY USERS AND PRIOR TO THE PLACEMENT OF ANY FLOATING CONSTRUCTION EQUIPMENT IN THE WATERWAY. NOTIFY NO LESS THAN 60 DAYS IN ADVANCE OF ACTIONS WHICH COULD POTENTIALLY AFFECT THE WATERWAY. KEEP THE CHANNEL OPEN TO WATERWAY TRAFFIC AT ALL TIMES.

MATERIALS

- 1. TIMBER: UNLESS OTHERWISE NOTED, ALL SAWN LUMBER AND TIMBER PILES EXCEPT BENT CAPS AND STRINGERS SHALL BE GRADE NO. 2 SOUTHERN YELLOW PINE OR BETTER. BENT CAPS AND STRINGERS SHALL BE NO. 1 SOUTHERN YELLOW PINE OR BETTER.
- 2. DECKING: ALL DECKING SHALL BE A UV-RESISTANT ENGINEERED COMPOSITE MATERIAL, WEARDECK OR EQUAL. COLOR OF DECKING SHALL BE "SADDLE". ALTERNATIVE TIMBER DECKING SHALL BE GRADE NO. 2 SOUTHERN YELLOW PINE OR BETTER.
- 3. HURRICANE FASTENERS: STAINLESS STEEL AISI TYPE 316 W/ UPLIFT CAPACITY OF 360 LBF. EACH MINIMUM.
- 4. ANCHOR BOLTS: STAINLESS STEEL AISI TYPE 316.
- 5. ANCHOR BOLT ADHESIVE: TYPE F ADHESIVE EPOXY MATERIAL.

UTILITIES

- 1. PROVIDE TWO WORKING DAYS NOTICE TO UTILITY AGENCY/OWNER'S (UAO) IN ORDER TO LOCATE AND IDENTIFY THEIR EXISTING UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, AS ESTABLISHED BY THE "UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT".
- 2. COORDINATE CONSTRUCTION SCHEDULING WITH UTILITY AGENCY/OWNER'S. MEET WITH UAO'S PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONSTRUCTION SCHEDULE.

EXISTING STRUCTURE

- 1. REMOVAL OF EXISTING STRUCTURES SHALL COMPLY WITH SECTION 110-7 OF THE SPECIFICATIONS. IF PILES ARE UNABLE TO BE PULLED CLEANLY, CUT PILES 2'-0" BELOW MUDLINE. PROPERLY DISPOSE OF TREATED TIMBER PER SPECIFICATIONS. WORK IS TO BE PAID FOR UNDER PAY ITEM 110-82, "REMOVE & DISPOSE OF STRUCTURAL TIMBER."
- 2. ORIGINAL STRUCTURE YEAR BUILT IS UNKNOWN. MAJORITY OF STRUCTURE WAS RECONSTRUCTED IN 2006. 2006 EXISTING PLANS ARE PROVIDED AND ARE FOR INFORMATIONAL PURPOSES ONLY.

MONITOR EXISTING STRUCTURES

MONITOR SETTLEMENT AND VIBRATIONS ON EXISTING STRUCTURES PER SPECIFICATIONS SECTION 108.

PILE INSTALLATION NOTES

- 1. ALL 8" Ø TIMBER DOCK PILES AND 10" Ø TIE PILES SHALL BE DRIVEN. JETTING IS NOT ALLOWED WITHOUT APPROVAL OF THE ENGINEER.
- 2. VERIFY THE LOCATION OF ALL UTILITIES AND NOTIFY ALL INVOLVED UTILITY COMPANIES PRIOR TO EXCAVATION, PILE DRIVING OR CONSTRUCTION TO AVOID DAMAGE. ENSURE THAT ACTIVE UTILITIES ARE PROPERLY MAINTAINED AND PROTECTED DURING CONSTRUCTION.
- 3. FOR DETAILS REGARDING SPT SOIL BORINGS, SEE "SOIL PROFILES" SHEET.
- 4. PRIOR TO PILE DRIVING OPERATIONS, INFORM THE ENGINEER IF ANY PROPOSED PILE LOCATION INTERFERES WITH EXISTING PILE, AND PILE WAS UNABLE TO BE CLEANLY REMOVED.
- 5. DRIVE PILES TO THE NOMINAL BEARING RESISTANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 455 AND AS FOLLOWS,

$$\frac{\text{FACTORED DESIGN LOAD} + \text{NET SCOUR RESISTANCE} + \text{DOWN DRAG}}{\varnothing}$$

- 6. NOMINAL BEARING RESISTANCE = 7 TONS BASED ON FACTORED DESIGN LOAD = 8 KIPS AND Ø = 0.65.
- 7. ESTIMATED PILE TIP DEPTH BELOW MUDLINE VARIES (9 FT. TO 22 FT.). REFUSAL MAY BE ENCOUNTERED PRIOR TO THESE DEPTHS IF A DENSER SOIL LAYER IS ENCOUNTERED.
- 8. SELECT THE APPROPRIATE HAMMER TO ACHIEVE DESIGN REQUIREMENTS SHOWN IN THE PLANS AND SUBMIT A PILE INSTALLATION PLAN AND FOUNDATION LAYOUT PRIOR TO MOBILIZATION.
- 9. RESTRICT PILE DRIVING TO DAYTIME HOURS.
- 10. WEATHERED LIMESTONE WAS ENCOUNTERED WITHIN BORINGS. EXCAVATIONS/PREFORMING INTO AND/OR THROUGH THESE MATERIALS WILL BE DIFFICULT AND REQUIRE NON-CONVENTIONAL CONSTRUCTION TECHNIQUES AND SPECIALIZED EQUIPMENT. LIMESTONE IS POROUS AND WILL BE DIFFICULT TO DEWATER.
- 11. ARTESTIAN CONDITIONS SHOULD BE EXPECTED. TOOLS AND CONSTRUCTION METHODS SHALL INCLUDE THE ABILITY TO HANDLE A POTENTIOMETRIC HEAD ELEVATION OF +10 FT. (NGVD29) AT NO ADDITIONAL COST.
- 12. CONTACT THE ENGINEER IF PRACTICAL REFUSAL IS MET BEFORE 10 FEET OF EMBEDMENT IS ACHIEVED.

PILE WRAP

- 1. INSTALL PILE WRAP PER MANUFACTURER'S RECOMMENDATIONS.
- 2. PILE WRAP: 0.03" BLACK, UV-RESISTANT POLYETHYLENE MATERIAL

MISCELLANEOUS

- 1. CLEAT: 8" STANDARD MOUNT CLEAT, STAINLESS STEEL
- 2. SAFETY LADDERS: 7 STEP RETRACTABLE WITH 2" STEP WIDTH, ALUMINUM
- 3. PILE CAPS: BLACK, CONICAL SHAPED, PVC MATERIAL
- 4. SECURITY GATE: 6 FT. HEIGHT W/ GATE LOCK. HOT DIP GALVANIZED STEEL W/ BLACK POWDER COAT FINISH. PROVIDE ORNAMENTAL GATE WITH SUNBURST DESIGN TO DISCOURAGE UNAUTHORIZED ACCESS TO THE MARINA. POSTS AND GATE EXTENSION TO MATCH MATERIAL AND BLACK POWDER COAT FINISH TO GATE. GATE STYLE TO BE DURAGATE DGT-GGFW FLAT TOP GARDEN GATE OR APPROVED EQUAL. CONTRACTOR TO SUBMIT GATE AND DESIGN DATA SHEET TO OWNER FOR APPROVAL.

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: BCS 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE: GENERAL NOTES (1 OF 2)		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.	
										S-04	

GENERAL NOTES (CONTINUED)

WOOD

- 1. ALL MEMBERS SHALL BE AIR DRIED TO LESS THAN 19% MOISTURE CONTENT, GRADED IN ACCORDANCE WITH THE SPIB GRADE RULES, SECTION 4, AND MAY HAVE ANY OR ALL OF THE CHARACTERISTICS OF THIS GRADE.
- 2. ALL DECKING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED IN THE PLANS.
- 3. ALL BOLT HOLES THROUGH TIMBERS TO BE AN EXTRA 1/16" IN DIAMETER RELATIVE TO THE BOLT DIAMETER.
- 4. MEMBERS WITH WANE OF 3/8" OR MORE MAY BE GROUNDS FOR REJECTION, REMOVAL, AND REPLACEMENT.
- 5. INSTALL DECKING PER MANUFACTURER RECOMMENDATIONS.
- 6. TREAT ALL WOOD SURFACES EXPOSED TO VIEW WITH A FINISH & SEAL WATER REPELLENT. COLOR OF REPELLENT SHALL MATCH COLOR OF COMPOSITE DECKING.
- 7. BEAMS, STRINGER, AND RAILS SHALL BE CONTINUOUS OVER SINGLE SPANS UNLESS OTHERWISE NOTED IN THE PLANS.
- 8. FIELD PRESERVATIVE CHEMICALS SHALL BE APPLIED TO ALL FIELD CUTS AND DRILLED HOLES TO MAINTAIN TIMBER PRESSURE TREATMENT INTEGRITY.
- 9. PILES SHALL BE PRESSURE PRESERVATIVE TREATED WITH CCA TO 2.5 PCF RETENTION. TIMBER PILES SHALL CONFORM TO ASTM STANDARD D-25 FOR PHYSICAL CHARACTERISTICS AND QUALITY. SIZE SHALL BE 1" TAPER IN 10 LINEAR FEET.
- 10. PILES SHALL FOLLOW SPECIFICATION SECTION 953.
- 11. SAWN LUMBER SHALL BE PRESSURE PRESERVATIVE TREATED WITH ACQ TO 0.6 PCF RETENTION. INSTALL WITH NATURAL CAMBER BOWED UP WHEN POSSIBLE.

FASTENERS

- 1. ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH FLORIDA BUILDING CODE TABLE 2304.10.1 EXCEPT AS SHOWN OR NOTED BELOW:
 - A) PICKETS TO RAILS - TWO, #8x2½" WOOD SCREWS
 - B) RAILS TO RAILING POST - ONE, ¼" Ø THRU-BOLT
 - C) RAIL CAP TO RAILING POST - FOUR, #10x3" WOOD SCREWS
 - D) BLOCKING TO STRINGERS - FOUR, #10x3" WOOD SCREWS, TOE-NAILED
 - E) DECK BOARDS TO STRINGERS - THREE, #10x3" WOOD SCREWS PER SUPPORT, FACE SCREWED
- 2. WOOD SCREWS SHALL BE STAINLESS STEEL AND IN ACCORDANCE WITH ANSI/ASME STANDARD B18.6.1.
- 3. BOLTS SHALL BE IN ACCORDANCE WITH ANSI/ASME STANDARD B18.2.1.
- 4. PRE-DRILL ALL CONNECTIONS WITH WOOD SCREWS TO AVOID SPLITTING OF THE CONNECTED MEMBERS.
- 5. ALL THRU-BOLTS EXPOSED TO HUMAN CONTACT SHALL BE CUT OFF AND GROUND SMOOTH, FLUSH WITH THE NUT.
- 6. "O-GEE" WASHERS SHALL BE USED FOR ALL TIMBER SIDE CONNECTOR SIZES EQUAL TO OR GREATER THAN 1/2" Ø.
- 7. HURRICANE ANCHOR SHALL BE ATTACHED WITH NAILS (8D). WHENEVER POSSIBLE ALL ANCHORS SHALL BE PLACED IN THE LEAST VISIBLE MANNER TO THE PUBLIC.
- 8. 9/32" Ø HOLE SHALL BE DRILLED PRIOR TO LAG SCREW INSTALLATION.
- 9. ALL THROUGH NAILS SHALL BE BENT ON PROTRUDING SIDE.
- 10. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS SECTION 416 FOR HOLE DIAMETER AND CLEANING TECHNIQUE.

ENVIRONMENTAL COMMITMENTS

- 1. USE A RAMP-UP PROCEDURE DURING THE INSTALLATION OF PILES. THIS PROCEDURE ALLOWS FOR A GRADUAL INCREASE IN NOISE LEVELS IN ORDER TO GIVE SENSITIVE SPECIES AMPLE TIME TO FLEE PRIOR TO INITIATION OF FULL NOISE LEVELS. THIS APPROACH CAN ALSO REDUCE THE LIKELIHOOD OF ANY SECONDARY OR SUB-LETHAL EFFECTS FROM SOUND IMPULSES ASSOCIATED WITH PILE DRIVING.
- 2. COMPLY WITH NOAA PROTECTED SPECIES CONSTRUCTION CONDITIONS DURING CONSTRUCTION.
- 3. COMPLY WITH THE FOLLOWING PROTECTED SPECIES CONSTRUCTION CONDITIONS REGARDING SEA TURTLES AND SMALLTOOTH SAWFISH:
 - A) INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF THESE SPECIES AND THE NEED TO AVOID COLLISIONS WITH SEA TURTLES AND SMALLTOOTH SAWFISH. ALL CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF THESE SPECIES.
 - B) ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING SEA TURTLES AND SMALLTOOTH SAWFISH, WHICH ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT OF 1973.

ENVIRONMENTAL COMMITMENTS (CONT'D.)

- C) SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH SEA TURTLES OR SMALLTOOTH SAWFISH CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID PROTECTED SPECIES ENTRAPMENT. BARRIERS MAY NOT BLOCK SEA TURTLE OR SMALLTOOTH SAWFISH ENTRY TO OR EXIT FROM DESIGNATED CRITICAL HABITAT WITHOUT PRIOR AGREEMENT FROM THE NATIONAL MARINE FISHERIES SERVICE'S PROTECTED RESOURCES DIVISION, ST. PETERSBURG, FLORIDA.
- D) ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "NO WAKE/IDLE" SPEEDS AT ALL TIMES WHILE IN THE CONSTRUCTION AREA AND WHILE IN WATER DEPTHS WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL PREFERENTIALLY FOLLOW DEEP-WATER ROUTES (E.G., MARKED CHANNELS) WHENEVER POSSIBLE.
- E) IF A SEA TURTLE OR SMALLTOOTH SAWFISH IS SEEN WITHIN 100 YARDS OF THE ACTIVE DAILY CONSTRUCTION OPERATION OR VESSEL MOVEMENT, ALL APPROPRIATE PRECAUTIONS SHALL BE IMPLEMENTED TO ENSURE ITS PROTECTION. THESE PRECAUTIONS SHALL INCLUDE CESSATION OF OPERATION OF ANY MOVING EQUIPMENT CLOSER THAN 50 FEET OF A SEA TURTLE OR SMALLTOOTH SAWFISH. OPERATION OF ANY MECHANICAL CONSTRUCTION EQUIPMENT SHALL CEASE IMMEDIATELY IF A SEA TURTLE OF SMALLTOOTH SAWFISH IS SEEN WITHIN A 50-FT. RADIUS OF THE EQUIPMENT. ACTIVITIES MAY NOT RESUME UNTIL THE PROTECTED SPECIES HAS DEPARTED THE PROJECT AREA OF ITS OWN VOLITION.
- F) ANY COLLISION WITH AND/OR INJURY TO A SEA TURTLE OR SMALLTOOTH SAWFISH SHALL BE REPORTED IMMEDIATELY TO THE NATIONAL MARINE FISHERIES SERVICES PROTECTED RESOURCES DIVISION (727-824-5312) AND THE LOCAL AUTHORIZED SEA TURTLE STRANDING/RESCUE ORGANIZATION.
- 4. THE PERMITTEE SHALL COMPLY WITH THE FOLLOWING CONDITIONS INTENDED TO PROTECT MANATEES FROM DIRECT PROJECT EFFECTS:
 - A) INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF MANATEES AND MANATEE SPEED ZONES, AND THE NEED TO AVOID COLLISIONS WITH AND INJURY TO MANATEES. ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES, WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT, THE ENDANGERED SPECIES ACT, AND THE FLORIDA MANATEE SANCTUARY ACT.
 - B) ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES WHILE IN THE IMMEDIATE AREA AND WHILE IN WATER WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.
 - C) SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID PROTECTED SPECIES ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
 - D) ALL ON-SITE PROJECT PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S). ALL IN-WATER OPERATIONS, INCLUDING VESSELS, MUST BE SHUTDOWN IF A MANATEE(S) COMES WITHIN 50 FEET OF THE OPERATION. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS MOVED BEYOND THE 50-FOOT RADIUS OF THE PROJECT OPERATION, OR UNTIL 30 MINUTES ELAPSES IF THE MANATEE(S) HAS NOT REAPPEARED WITHIN 50 FEET OF THE OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING.
 - E) ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) HOTLINE AT 1-888-404-3922. COLLISION AND/OR INJURY SHOULD ALSO BE REPORTED TO THE U.S. FISH AND WILDLIFE SERVICE IN JACKSONVILLE (1-904-731-3336) FOR NORTH FLORIDA OR IN VERO BEACH (1-722-562-3909) FOR SOUTH FLORIDA, AND EMAILED TO FWC AT IMPERILEDSPECIES@MYFWC.COM.
 - F) TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL IN-WATER PROJECT ACTIVITIES. ALL SIGNS ARE TO BE REMOVED UPON COMPLETION OF THE PROJECT. TEMPORARY SIGNS THAT HAVE ALREADY BEEN APPROVED FOR THIS USE BY THE FWC MUST BE USED. ONE SIGN WHICH READ "CAUTION: BOATERS" MUST BE POSTED. A SECOND SIGN MEASURING AT LEAST 8½" BY 11" EXPLAINING THE REQUIREMENTS FOR "IDLE SPEED/NO WAKE" AND THE SHUT DOWN OF IN-WATER OPERATIONS MUST BE POSTED IN A LOCATION PROMINENTLY VISIBLE TO ALL PERSONNEL ENGAGED IN WATER-RELATED ACTIVITIES. THESE SIGNS CAN BE VIEWED AT [HTTP://WWW.MYFWC.COM/WILDLIFEHABITATS/MANATEE_SIGN_VENDORS.HTM](http://www.myfwc.com/wildlifehabitats/manatee_sign_vendors.htm). QUESTIONS CONCERNING THESE SIGNS CAN BE FORWARDED TO THE EMAIL ADDRESS LISTED ABOVE.

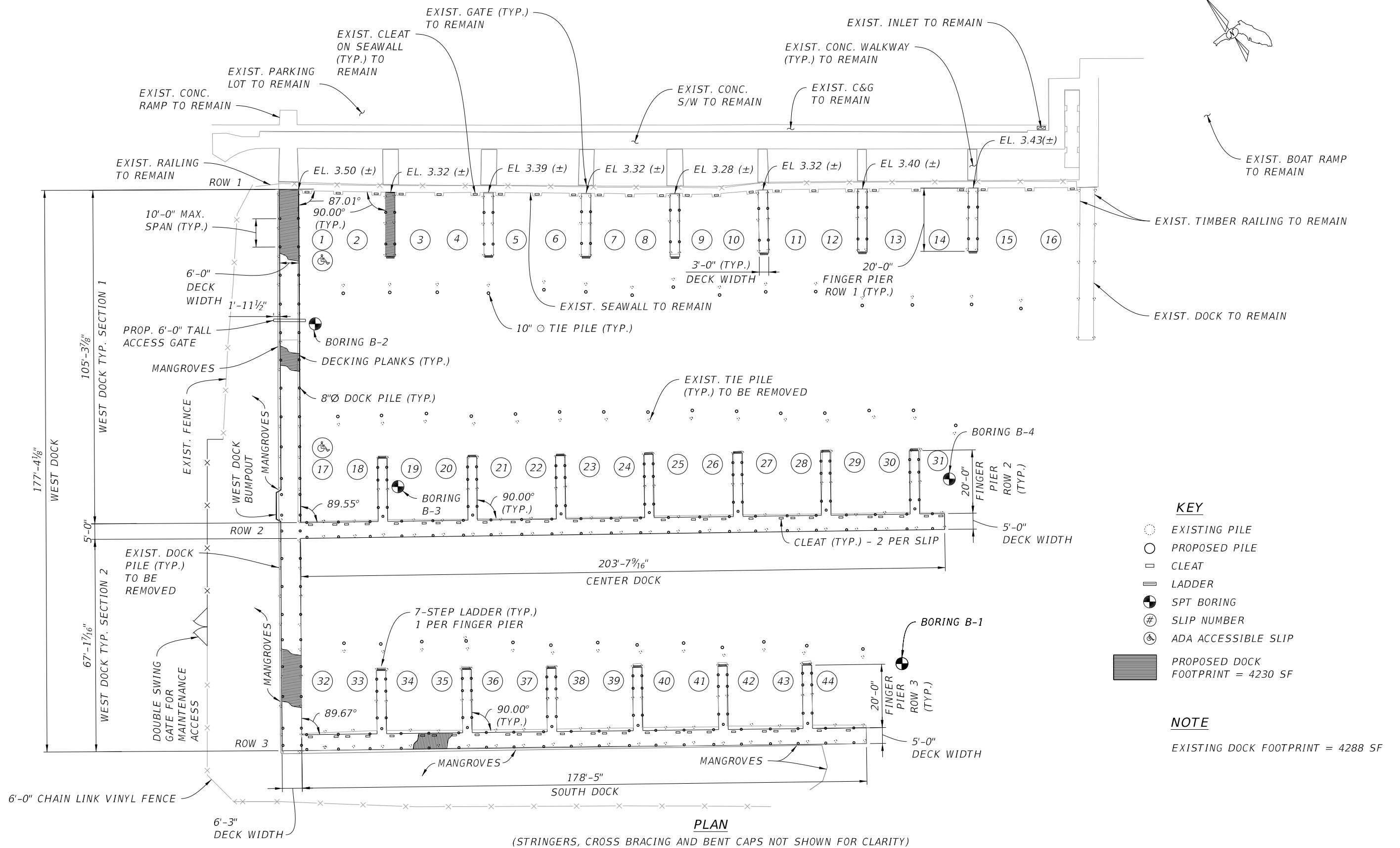
REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: <u>BCS 06-24</u> CHECKED BY: <u>DRJ 06-24</u> DESIGNED BY: <u>DRJ 06-24</u> CHECKED BY: <u>CS 06-24</u>		SHEET TITLE: GENERAL NOTES (2 OF 2)		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.	
										S-05	

BID ITEMS FOR SAFETY HARBOR MARINA REPLACEMENT			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
CIVIL			
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10	SEDIMENT BARRIER	LF	340
104-11	FLOATING TURBIDITY BARRIER	LF	255
110-1-1	CLEARING & GRUBBING	LS	1
110-82	REMOVE & DISPOSE OF STRUCTURAL TIMBER	MB	20.9
110-82	REMOVE & DISPOSE OF STRUCTURAL TIMBER, STORM DAMAGE	MB	7.8
350-5	CLEANING & SEALING JOINTS - CONCRETE PAVEMENT	LF	30
515-2-311	PEDESTRIAN / BICYCLE RAILING, ALUMINUM ONLY, 42" TYPE 1	LF	21
550-10-222	FENCING, TYPE B, 5.1'-6.0', W/ VINYL COATING	LF	340
550-60-222	FENCE GATE, TYPE B, DOUBLE 6.1'-12.0' OPENING	EA	1
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12SF	EA	4
700-1-50	SINGLE POST SIGN, RELOCATE	EA	1
999-90	SECURITY GATE, 6FT.	EA	1
999-91	CLEATS	EA	56
999-92	SAFETY LADDER	EA	20
STRUCTURES			
470-1	TREATED STRUCTURAL TIMBER	MB	7.3
999-93	TREATED TIMBER PILING (8 IN. DIAMETER)	LF	5,680
999-94	TREATED TIMBER PILING (10 IN. DIAMETER)	LF	1,239
999-95	PILE WRAPS	EA	288
999-96	PILE CAP	EA	220
999-97	COMPOSITE DECKING (ALTERNATIVE 1)	SF	4,236
470-1-9	TIMBER DECKING (ALTERNATIVE 2)	MB	6.4

BID ITEM NOTES

1. POST-INSTALLED ANCHORS LABOR AND MATERIAL IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER".
2. ALL HARDWARE LABOR AND MATERIAL IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER." TIMBER BLOCKING IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER."
3. PAYMENT FOR NEOPRENE SHIM IS CONSIDERED INCIDENTAL TO PAY ITEM NO. 470-1, "TREATED STRUCTURAL TIMBER".
4. LABOR & MATERIAL FOR INSTALLING SECURITY GATE IS TO BE PAID FOR UNDER PAY ITEM 999-90, "SECURITY GATE, 6 FT.".
5. LABOR & MATERIAL FOR INSTALLING CLEATS IS TO BE PAID FOR UNDER PAY ITEM 999-91, "CLEATS".
6. LABOR & MATERIAL FOR INSTALLING SAFETY LADDERS IS TO BE PAID FOR UNDER PAY ITEM 999-92, "SAFETY LADDER".
7. LABOR & MATERIAL FOR INSTALLING DOCK PILES IS TO BE PAID FOR UNDER PAY ITEMS 999-93, "TREATED TIMBER PILING 8 IN. DIAMETER".
8. LABOR & MATERIAL FOR INSTALLING TIE PILES IS TO BE PAID FOR UNDER PAY ITEM 999-94, "TREATED TIMBER PILING 10 IN. DIAMETER".
9. LABOR & MATERIAL FOR INSTALLING PILE WRAPS IS TO BE PAID FOR UNDER PAY ITEM 999-95, "PILE WRAPS".
10. LABOR & MATERIAL FOR INSTALLING PILE CONICAL CAPS IS TO BE PAID FOR UNDER PAY ITEM 999-96, "PILE CAPS".
11. LABOR & MATERIAL FOR INSTALLING COMPOSITE DECKING (ALTERNATIVE 1) IS TO BE PAID FOR UNDER PAY ITEM 999-97, "COMPOSITE DECKING".
12. LABOR & MATERIAL FOR INSTALLING TIMBER DECKING (ALTERNATIVE 2) IS TO BE PAID FOR UNDER PAY ITEM 470-1-9, "TIMBER DECKING (ALTERNATIVE 2)".
13. ANY VEGETATION REMOVAL AND/OR TREE TRIMMING REQUIRED FOR THE PERIMETER FENCE INSTALLATION TO BE PAID FOR UNDER PAY ITEM 110-1-1, "CLEARING AND GRUBBING".
14. REMOVAL OF EXISTING CHAIN-LINK FENCE TO BE PAID FOR UNDER PAY ITEM 110-1-1, "CLEARING AND GRUBBING".
15. ANY INCIDENTAL GRADING AND SODDING DUE TO INSTALLATION OF THE PROPOSED PERIMETER FENCE TO BE PAID FOR UNDER PAY ITEM 550-10-222, "FENCING, TYPE B, 5.1'-6.0' W/ VINYL COATING".
16. PREFORMED JOINT FILLER TO BE PAID FOR UNDER PAY ITEM 350-5, "CLEANING & SEALING JOINTS-CONCRETE PAVEMENT".
17. SUNBURST SECURITY FENCE GATE, EXTENSION AND GATE LOCK SYSTEM TO BE PAID FOR UNDER PAY ITEM 999-90, "SECURITY GATE, 6 FT".
18. ANY POTENTIAL DEWATERING ACTIVITIES NEEDED FOR THE INSTALLATION OF PROPOSED FENCING CONCRETE POST FOOTINGS ARE CONSIDERED INCIDENTAL TO PAY ITEM 550-10-222, "FENCING, TYPE B, 5.1'-6.0', W/ VINYL COATING".

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: BCS 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				SUMMARY OF QUANTITIES		
									PROJECT NAME:		SHEET NO.
									SAFETY HARBOR MARINA REPLACEMENT		S-06



REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE: MARINA LAYOUT PLAN		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.	S-08

LEGEND

- 1

DARK GRAY TO DARK BROWN SILT (ML/MH)
- 2

GRAY SILTY SAND (SM)
- 3

GRAY TO BLUE CLAYEY SAND (SC)
- 4

GRAY TO BLUE CLAY (CL/CH)
- 5

WEATHERED LIMESTONE, OCCASIONALLY WITH CALCAREOUS CLAY
- W - WATER
- SP

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N

NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4

NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH

SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR

SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200
NMC
LL
PI

PERCENT PASSING #200 SIEVE
NATURAL MOISTURE CONTENT (%)
LIQUID LIMIT (%)
PLASTICITY INDEX (%)
- CASING
- EASTING

EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING

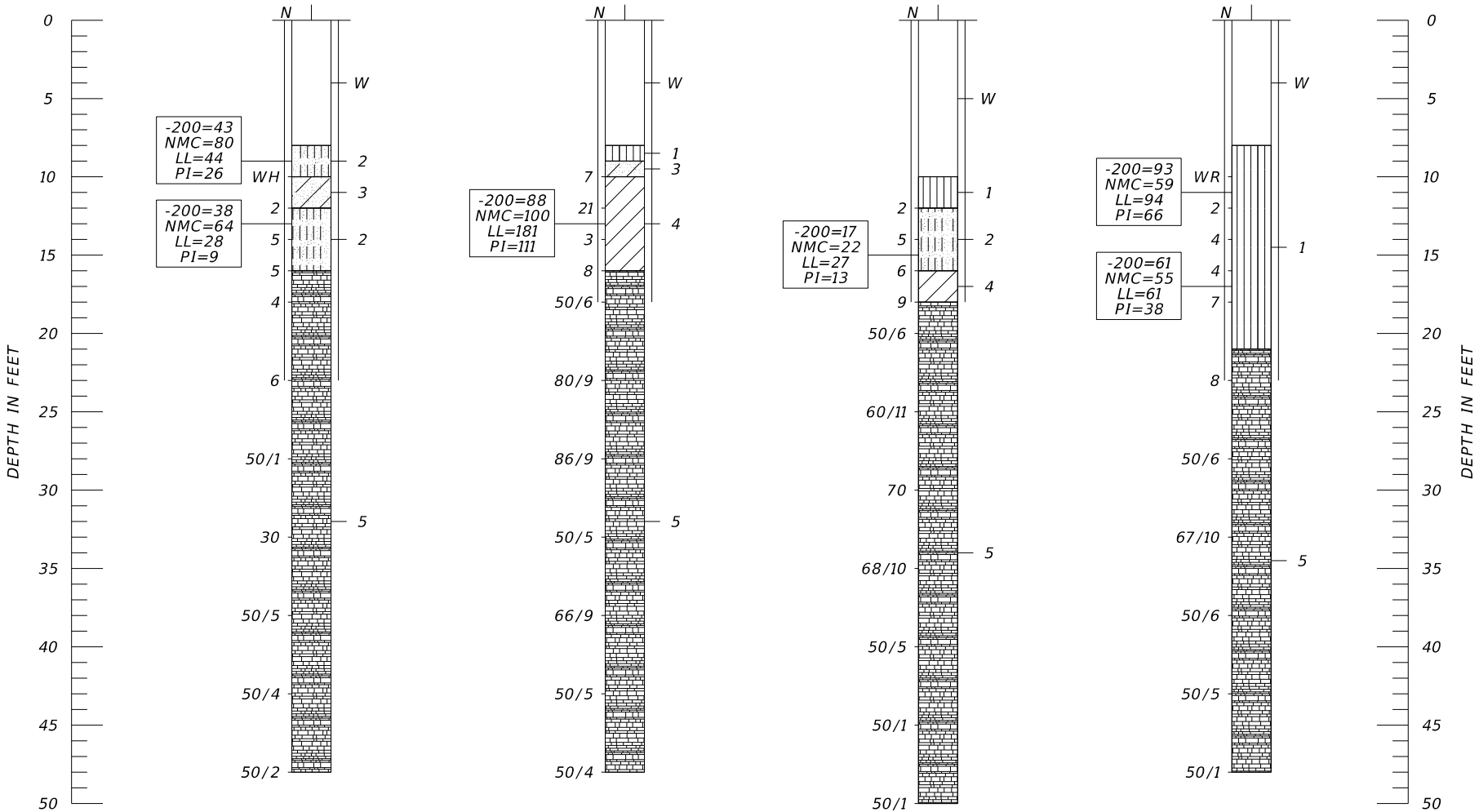
NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

BOR # B-1
EASTING 434324
NORTHING 1329300
DATE 8/24/2023
DRILLER D. STAKELIN
HAMMER AUTOMATIC
RIG CME 55

BOR # B-2
EASTING 434227
NORTHING 1329497
DATE 8/22/2023
DRILLER D. STAKELIN
HAMMER AUTOMATIC
RIG CME 55

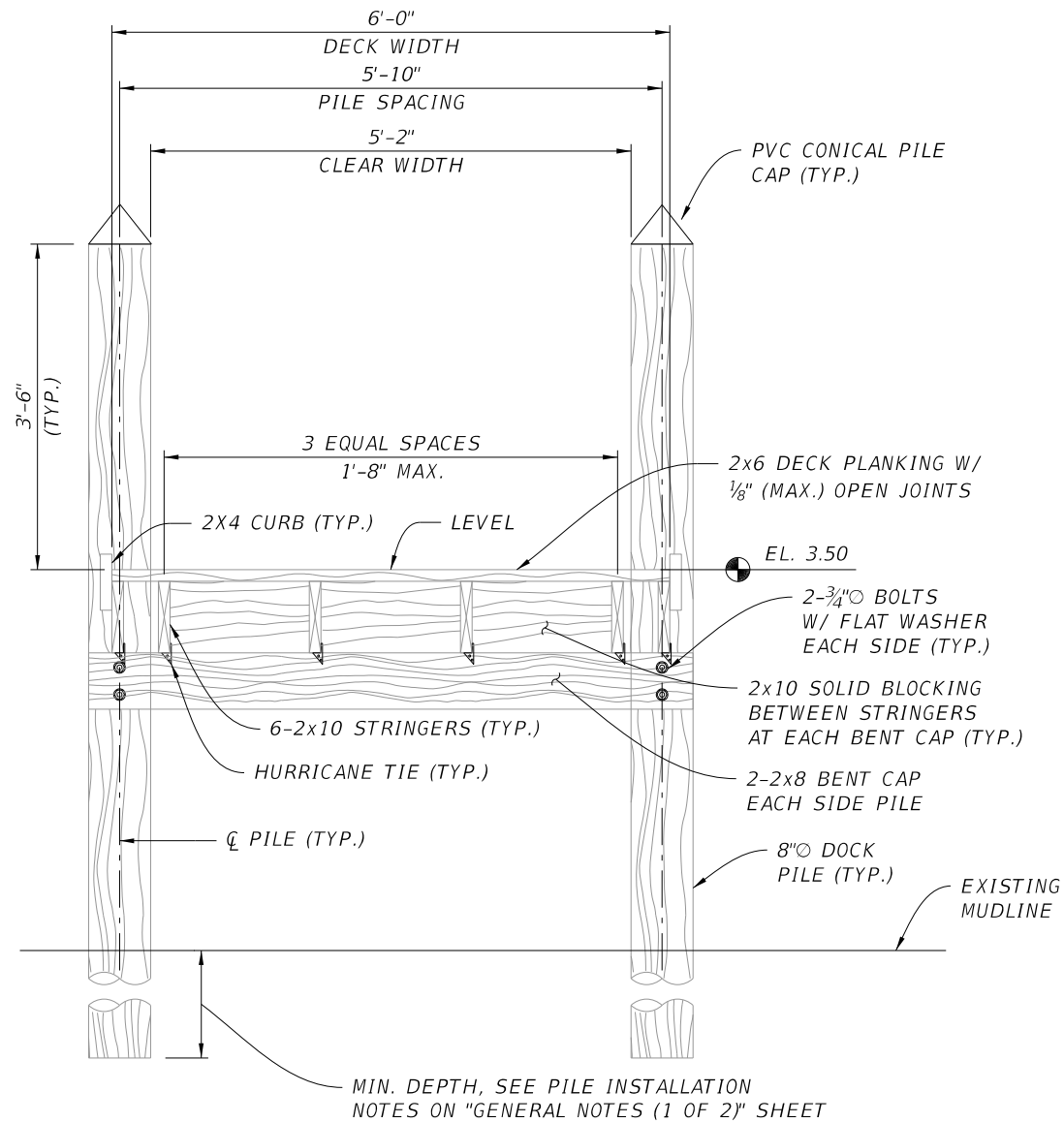
BOR # B-3
EASTING 434224
NORTHING 1329437
DATE 8/23/2023
DRILLER D. STAKELIN
HAMMER AUTOMATIC
RIG CME 55

BOR # B-4
EASTING 434376
NORTHING 1329350
DATE 8/24/2023
DRILLER D. STAKELIN
HAMMER AUTOMATIC
RIG CME 55

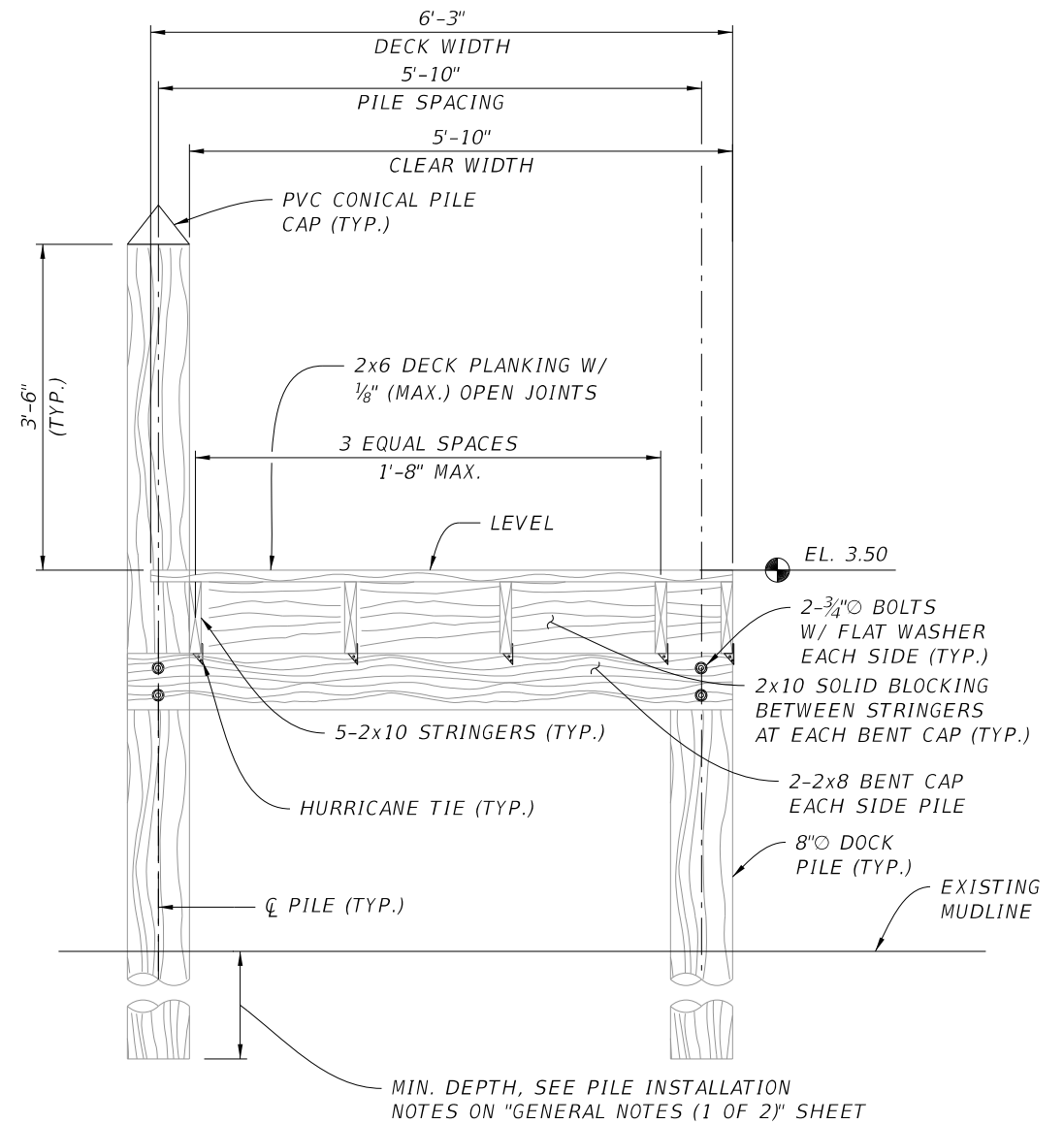


	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS						DRAWN BY: BMG 02/24 CHECKED BY: DRR 02/24 DESIGNED BY: BMG 02/24 CHECKED BY: DRR 02/24		SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			SOIL PROFILES		
								PROJECT NAME:		SHEET NO.
								SAFETY HARBOR MARINA REPLACEMENT		S-09
DANIEL R. RUEL, P.E. P.E. LICENSE NUMBER 82404 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637										



SECTION A-A
WEST DOCK TYPICAL SECTION 1
 (DIAGONAL CROSS BRACING NOT SHOWN)



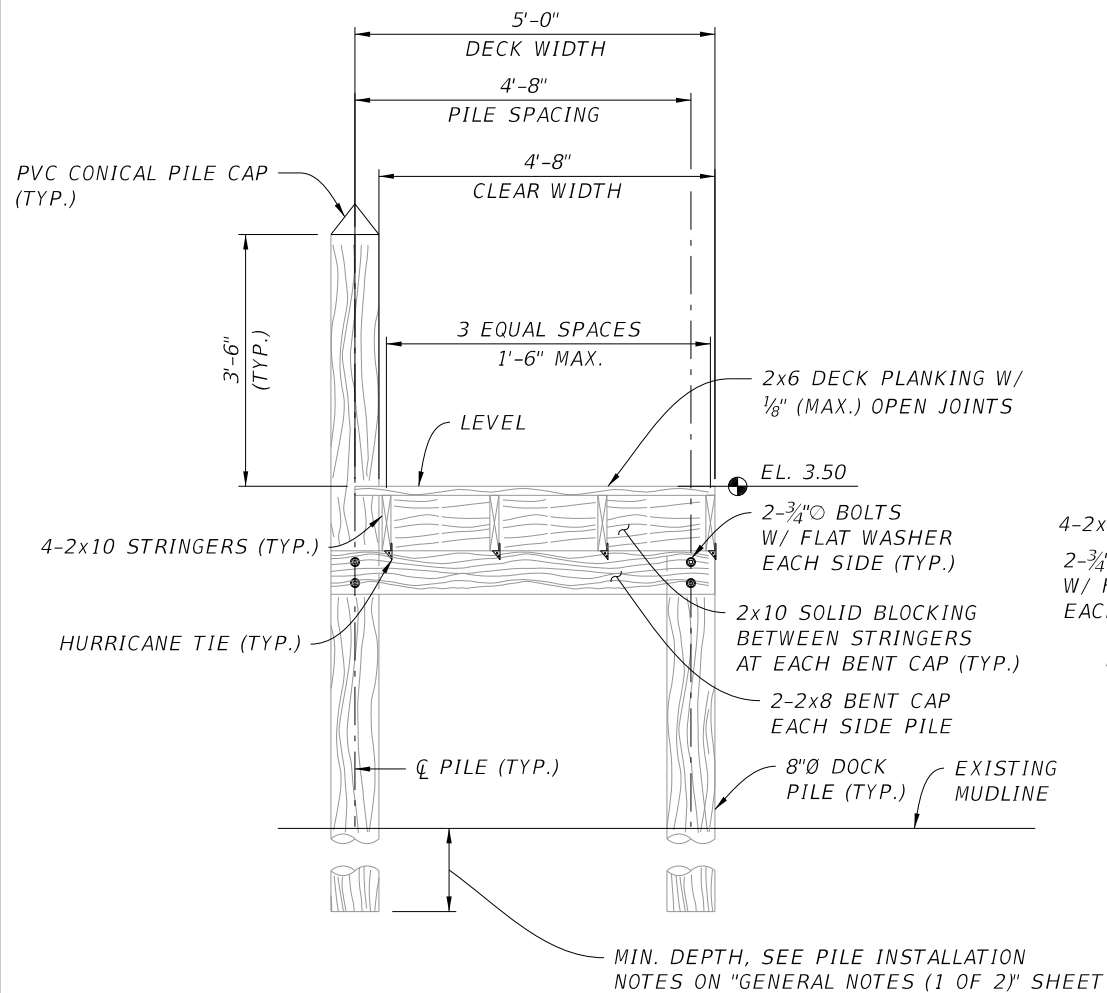
SECTION B-B
WEST DOCK TYPICAL SECTION 2
 (DIAGONAL CROSS BRACING NOT SHOWN)

NOTE

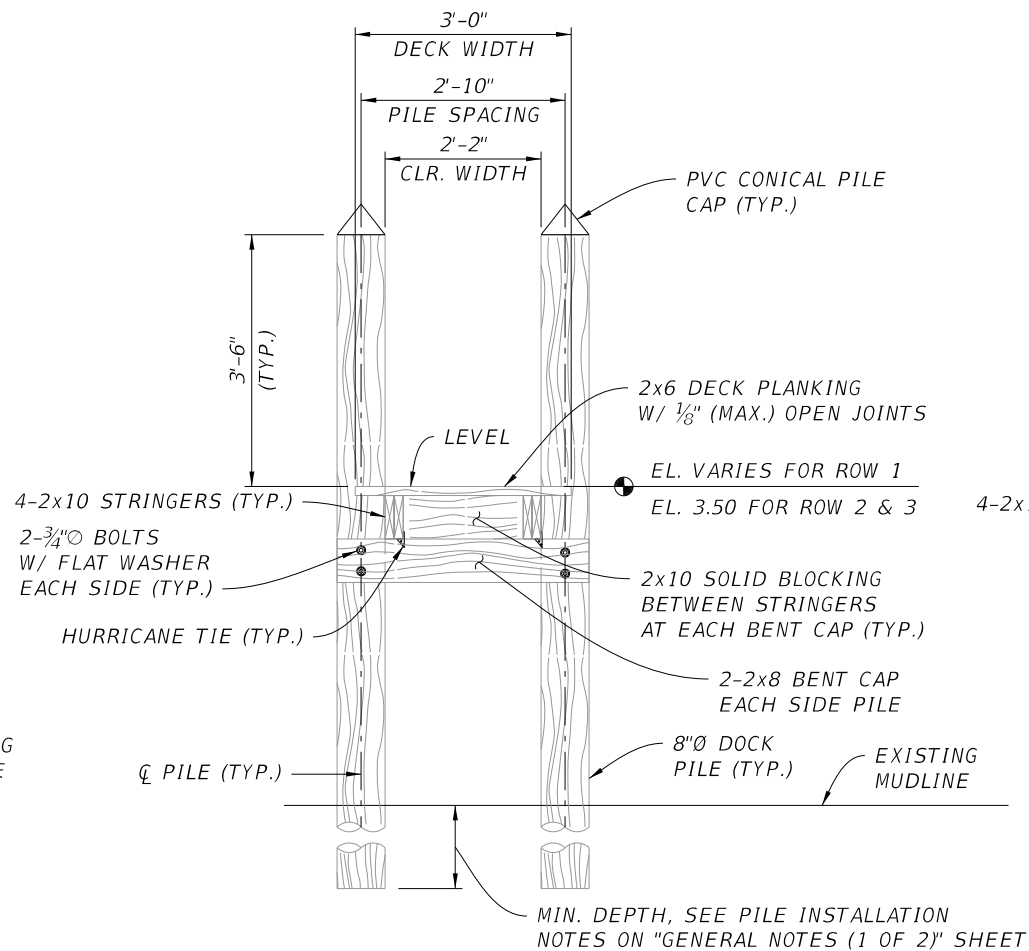
PROVIDE FLAT WASHERS BETWEEN PILING AND BENT CAP ON EITHER THE TOP OR BOTTOM CONNECTION BOLTS AS NECESSARY TO ENSURE PLUMB INSTALLATION.

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				TYPICAL SECTIONS (1 OF 2)		
								PROJECT NAME:	SHEET NO.		
								SAFETY HARBOR MARINA REPLACEMENT	S-11		

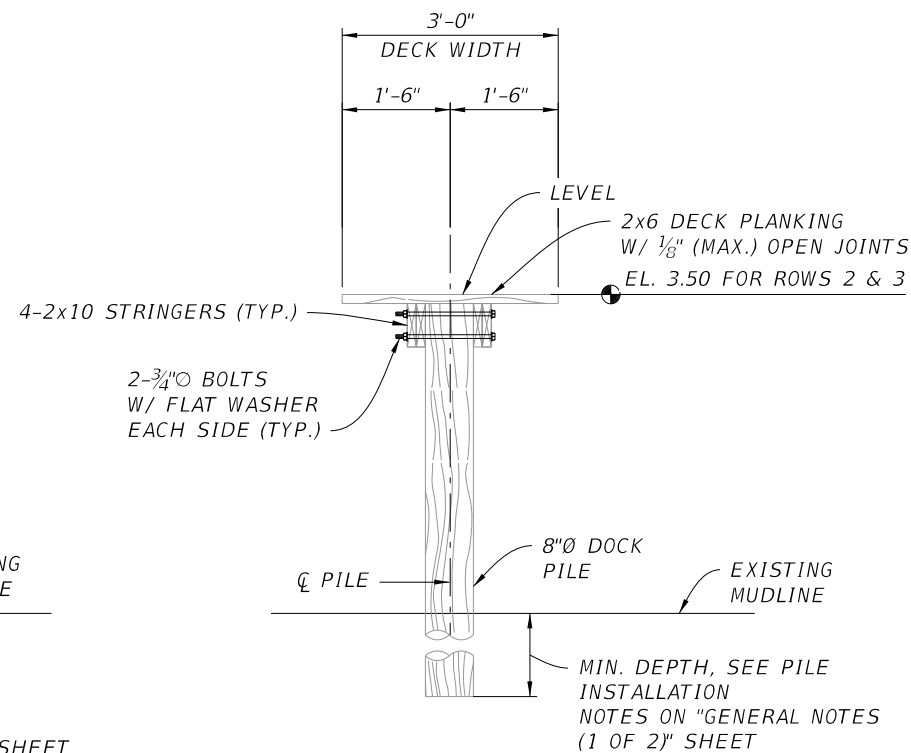
Plotted By: Christian.Hodges 3/7/2025 10:33:11 AM P:\Projects\22\22-00709.001_Marina_Basin_-_Dock_Repair\CADD\struct\B1_Sections.dgn



SECTION C-C
CENTER DOCK TYPICAL SECTION
 (SOUTH DOCK IS SIMILAR)
 (DIAGONAL CROSS BRACING NOT SHOWN)



SECTION D-D
FINGER PIER TYPICAL SECTION
 (FINGER PIERS CONNECTED TO EXIST. SEAWALL
 AND CENTER AND SOUTH END FINGER PIERS)

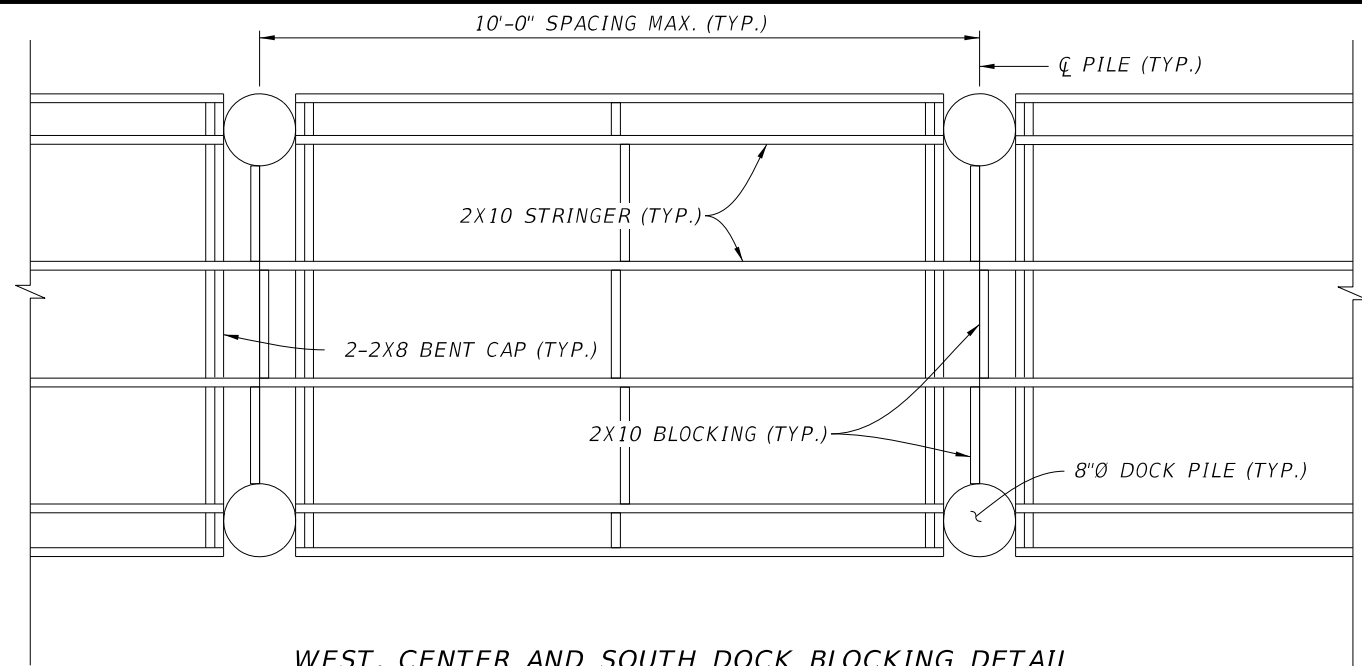


SECTION E-E
FINGER PIER TYPICAL SECTION
 (CENTER AND SOUTH DOCK FINGER PIERS)

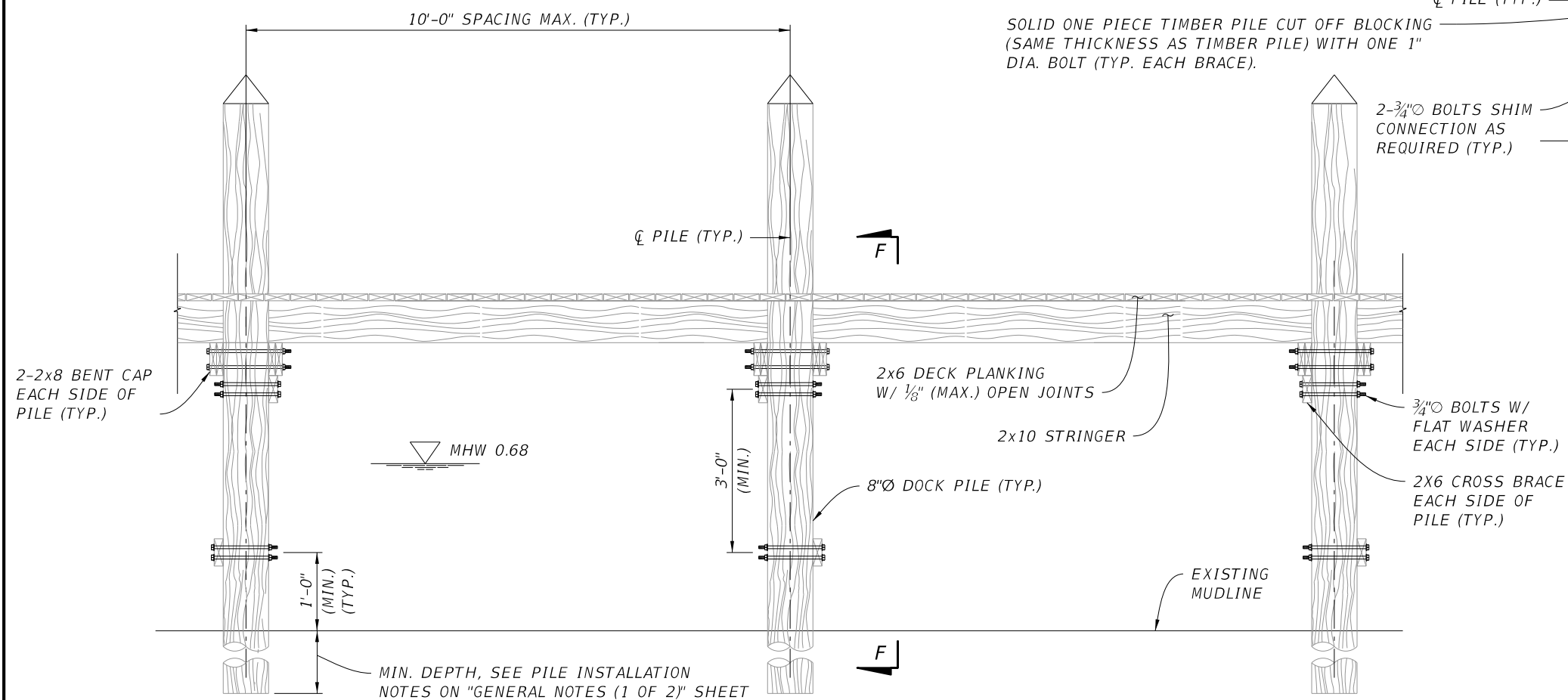
NOTE

PROVIDE FLAT WASHERS BETWEEN PILING AND BENT CAP ON EITHER THE TOP OR BOTTOM CONNECTION BOLTS AS NECESSARY TO ENSURE PLUMB INSTALLATION.

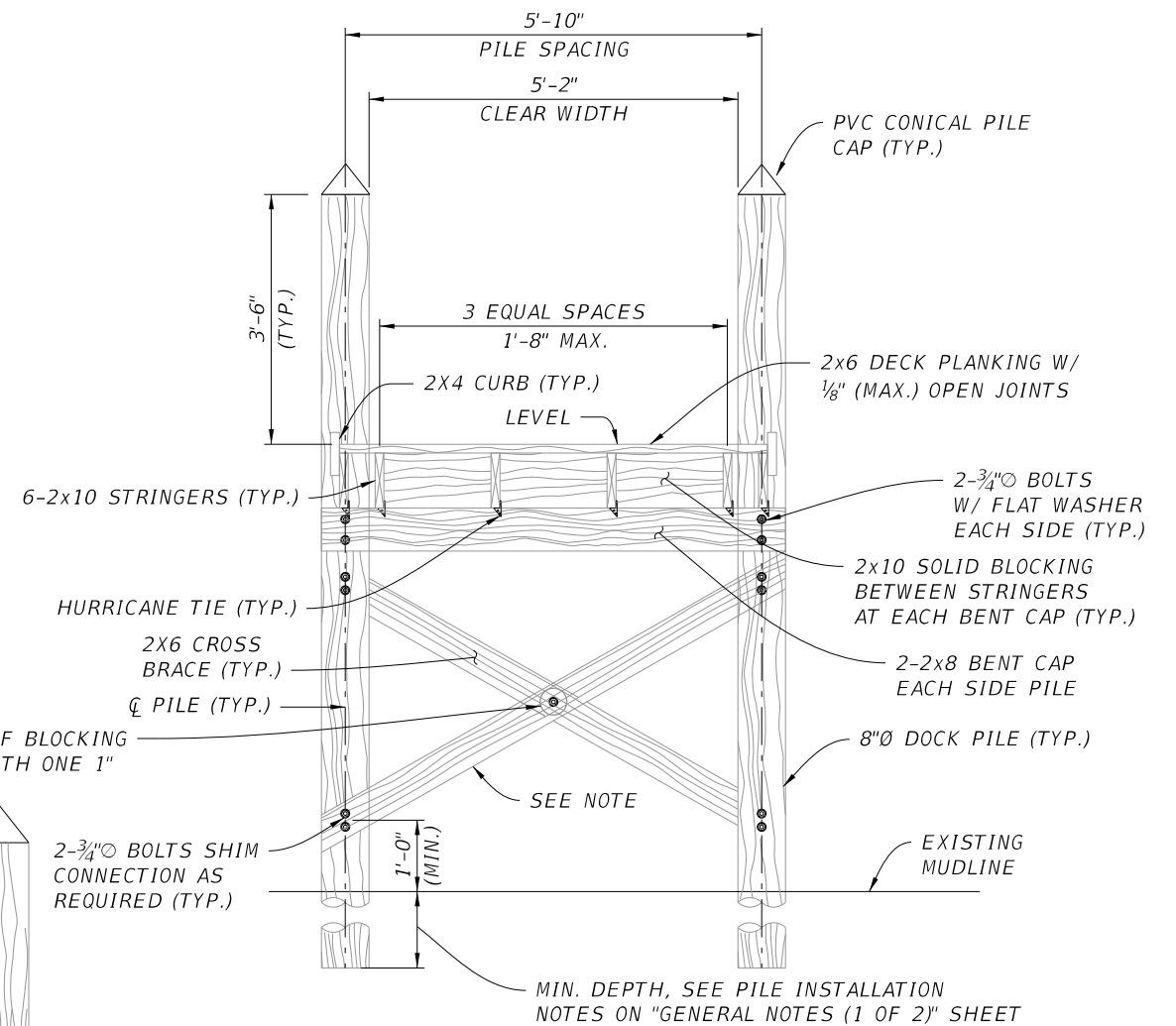
REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE: TYPICAL SECTIONS (2 OF 2)	TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					
									PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO. S-12



WEST, CENTER AND SOUTH DOCK BLOCKING DETAIL
(DECK AND CAPS NOT SHOWN FOR CLARITY)



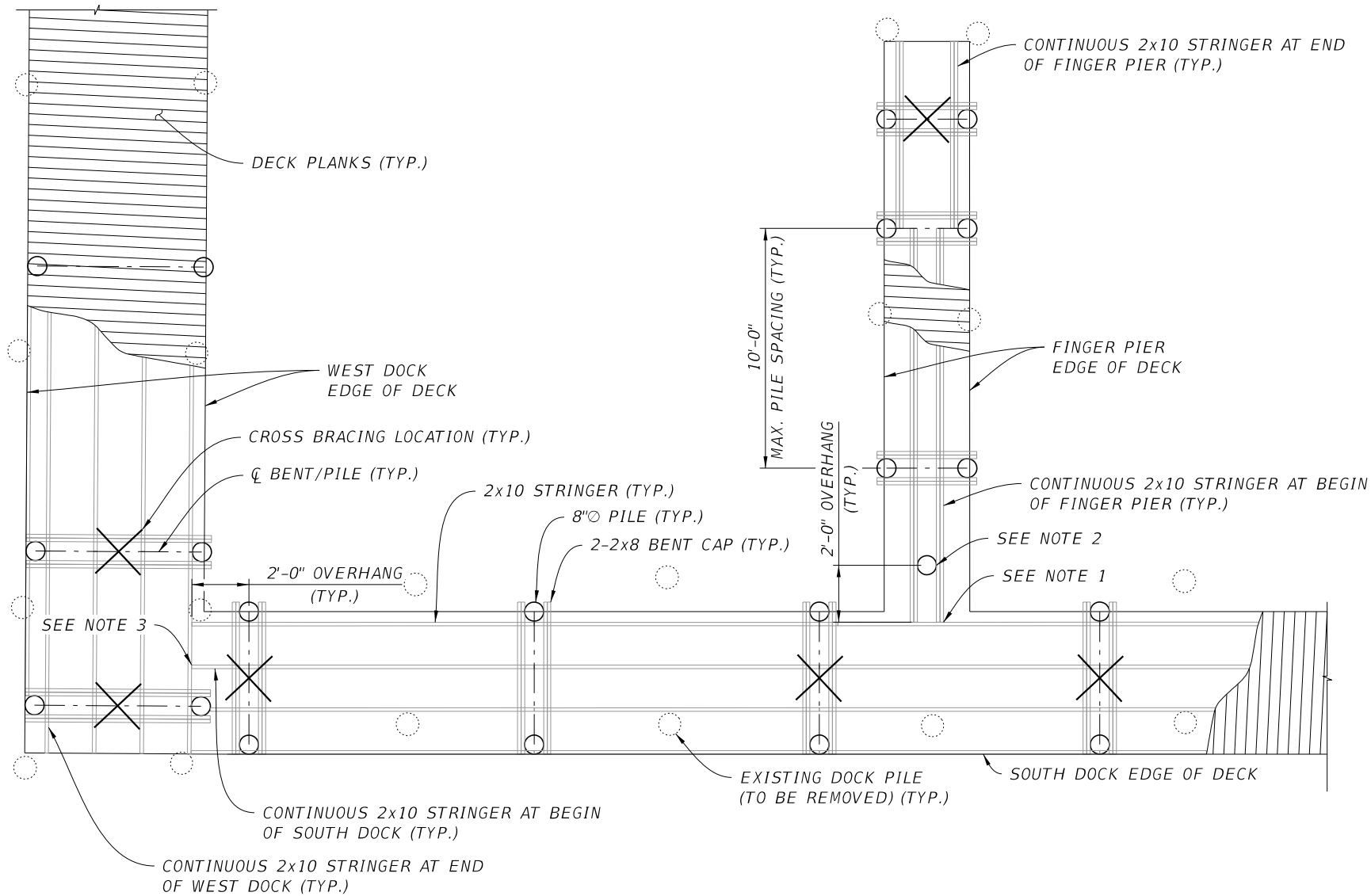
WEST DOCK ELEVATION
(CROSS BRACING SIMILAR FOR CENTER DOCK, SOUTH DOCK, AND FINGER PIERS, WHERE APPLICABLE. SEE NOTE.)



SECTION F-F

NOTE
DIAGONAL CROSS BRACING IS NOT REQUIRED IF DISTANCE FROM BOTTOM OF BENT CAP TO EXISTING MUDLINE IS LESS THAN 5'-0".

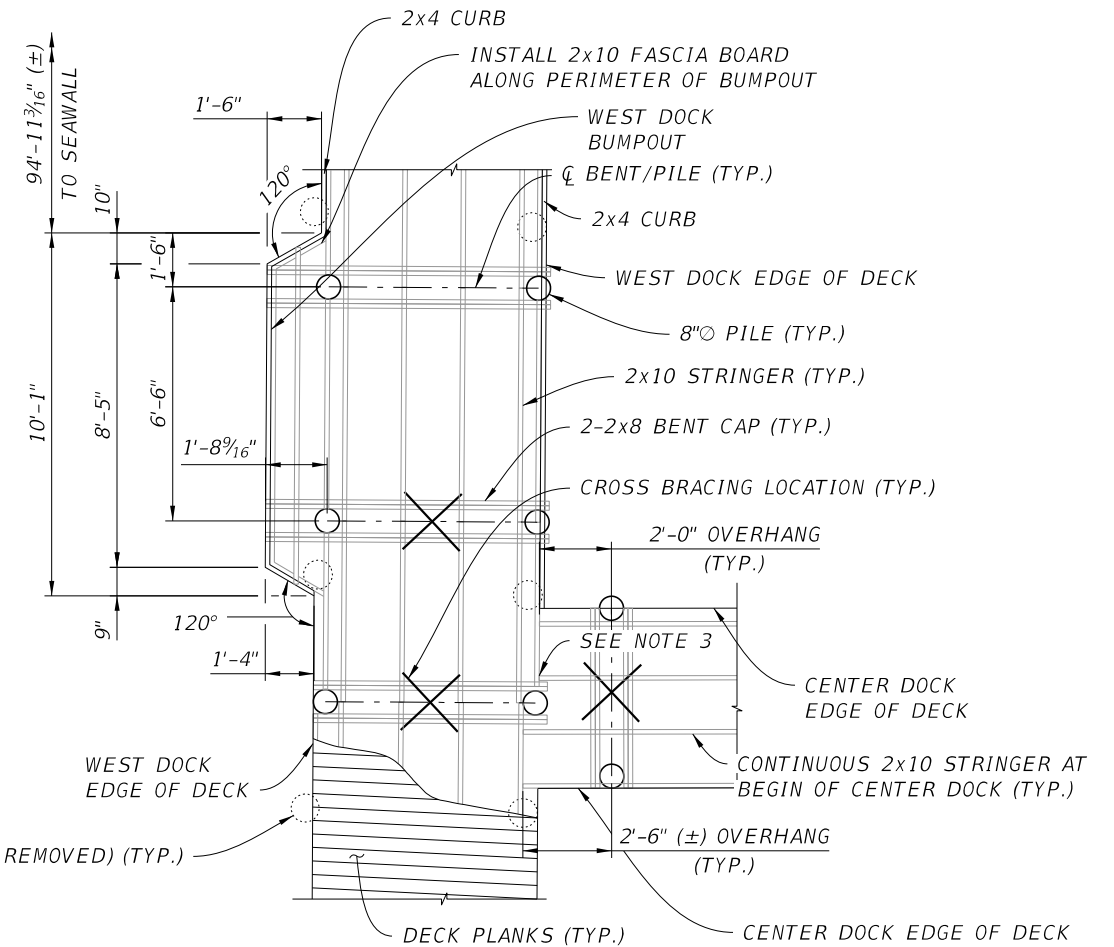
REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME:		SHEET NO.
									MISCELLANEOUS DETAILS (1 OF 3)		
									SAFETY HARBOR MARINA REPLACEMENT	S-13	



WEST DOCK CONNECTION TO SOUTH DOCK
(BLOCKING, CLEATS AND LADDERS NOT SHOWN FOR CLARITY)

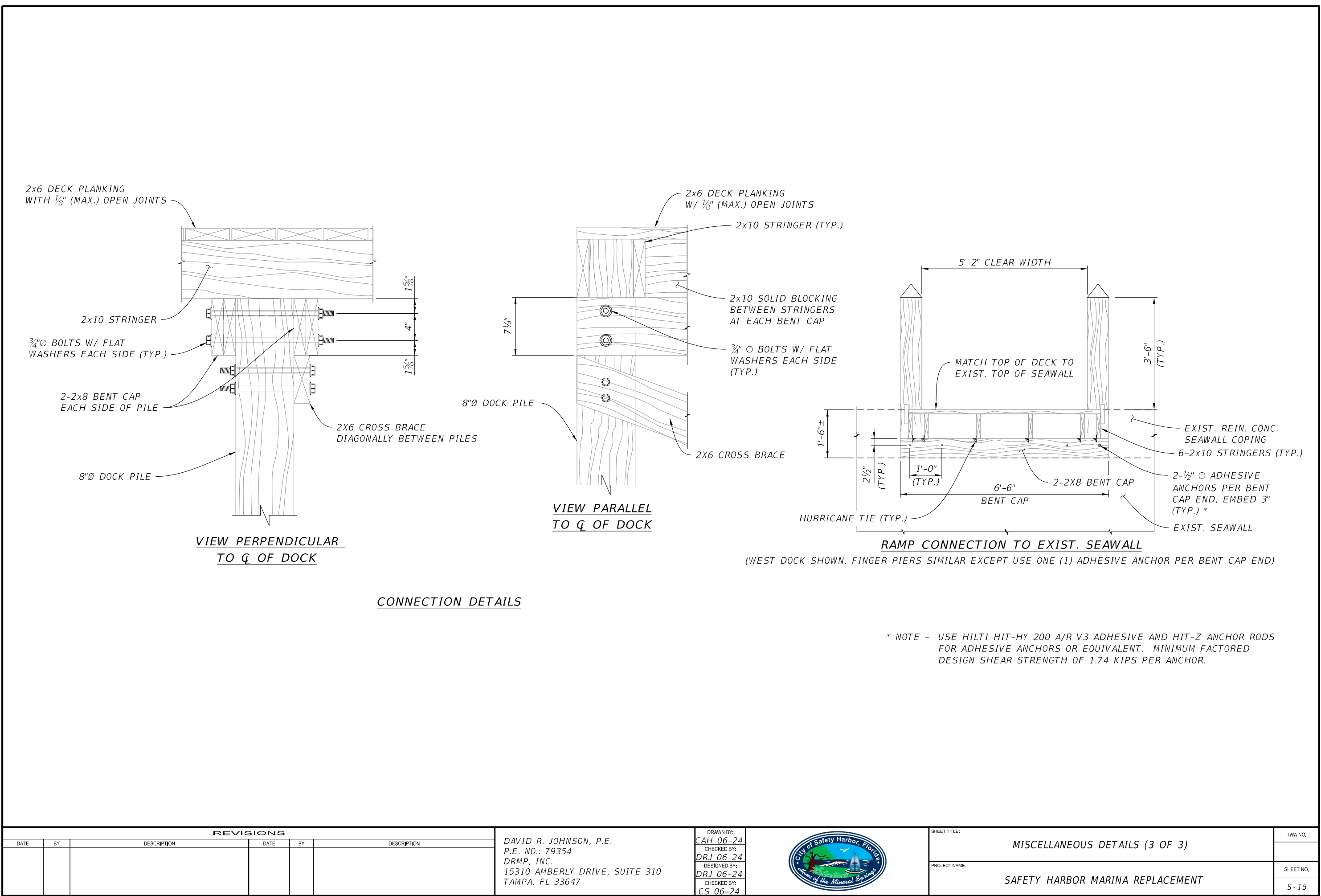
NOTES

1. ATTACH FINGER PIER STRINGERS TO EXTERIOR STRINGER OF DOCK USING STAINLESS STEEL "LUS SIMPSON STRONG TIE" HANGER OR EQUIVALENT AT SOUTH AND CENTER DOCK FINGER PIERS.
2. CONNECT STRINGERS TO PILE USING 3/4" DIA. BOLTS WITH FLAT WASHERS EACH SIDE.
3. ATTACH CENTER/SOUTH DOCK STRINGERS TO EXTERIOR STRINGER OF WEST DOCK USING STAINLESS STEEL "LUS SIMPSON STRONG TIE" HANGER OR EQUIVALENT.



WEST DOCK CONNECTION TO CENTER DOCK
(BLOCKING, CLEATS AND LADDERS NOT SHOWN FOR CLARITY)

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				MISCELLANEOUS DETAILS (2 OF 3)		
									PROJECT NAME:	SHEET NO.	
									SAFETY HARBOR MARINA REPLACEMENT	S- 14	



THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: CAH 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24		SHEET TITLE:		TWA NO.	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				MISCELLANEOUS DETAILS (3 OF 3)			
									PROJECT NAME:		SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
											S - 15	

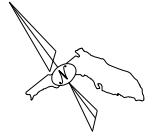
GENERAL NOTES

EROSION AND SEDIMENT CONTROL

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS USING BEST MANAGEMENT PRACTICES. REFER TO CONSTRUCTION PLANS, DETAILS, SPECIFICATIONS AND APPROVED PERMITS FOR DETAILS. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH ONE HALF THE HEIGHT ON AN EROSION DEVICE OR AS DIRECTED BY THE ENGINEER.
2. DURING THE CONSTRUCTION OF STRUCTURES REQUIRING EXCAVATION, THE CONTRACTOR SHALL PLACE APPROVED BARRIERS OR OTHER APPROVED DEVICES AROUND SUCH STRUCTURES TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT TO POINTS OUTSIDE THE CONSTRUCTION AREA. THE APPROVED BARRIERS OR OTHER APPROVED DEVICES SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORM WATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION OR AS DIRECTED BY THE ENGINEER.
3. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION. ALL EROSION CONTROL MEASURES, SAND, SILT, AND DEBRIS SHALL BE REMOVED FROM ALL STRUCTURES AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO CITY FINAL WALK-THROUGH.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT/TURBIDITY BARRIERS TO CONTROL EROSION AND SEDIMENT FROM TAKING PLACE OUTSIDE THE PROJECT LIMITS. THE SILT/TURBIDITY BARRIERS SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION, THROUGHOUT THE DURATION OF THE PROJECT AND ALL ASPECTS OF CONSTRUCTION. ALL DAMAGED OR INEFFECTIVE EROSION CONTROL DEVICES SHALL BE REPLACED AT NO ADDITIONAL COST TO THE CITY.
5. EROSION CONTROL PLAN - ANY MODIFICATIONS TO THIS PLAN MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REPRESENTING THE CONTRACTOR. THESE MODIFICATIONS MUST BE APPROVED BY THE CITY AND THE PERMITTING AGENCY. NO CONTRACT DELAYS WILL BE ALLOWED FOR SUCH MODIFICATIONS OR APPROVALS.
6. APPROVED BARRIERS (OR OTHER APPROVED SEDIMENT CONTROL DEVICES) THESE SHALL BE PLACED AT THE BASE OF ANY SLOPE WHERE A RAINFALL EVENT COULD ERODE A SLOPE AND TRANSPORT SEDIMENTS OFF-SITE. APPROVED BARRIERS SHALL BE DOUBLE STAKED IN ACCORDANCE WITH FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, AND STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION. ANY DAMAGED OR INEFFECTIVE APPROVED BARRIERS ARE TO BE REPLACED WITH NEW ONES. THE LOCATION AND INSTALLATION OF APPROVED BARRIERS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER.
7. STOCKPILED MATERIALS SHALL BE PROTECTED BY COVER, APPROVED BARRIERS OR OTHER APPROVED SEDIMENT CONTROL DEVICES.
8. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 3 DAYS AFTER ½" RAIN EVENT DISTURBANCE.

9. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION, OR OTHER ACCEPTABLE METHODS.
10. THE EROSION CONTROL DEVICE QUANTITIES SHOWN ON THE BID FORMS ARE ESTIMATES OF THE ACTUAL QUANTITIES THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SPECIFY ACTUAL QUANTITIES AND COSTS ASSOCIATED WITH THIS SPECIFIC EROSION CONTROL IMPLEMENTATION SCHEDULE. EROSION CONTROL ITEMS MAY BE ADDED OR DELETED FROM THE PAY ITEM LIST AS THE EROSION CONTROL IMPLEMENTATION SCHEDULE PROVIDED BY THE CONTRACTOR IS MODIFIED TO MEET SITE SPECIFIC CONDITIONS.
11. ALL EROSION CONTROL FENCES, BARRIERS, AND SILTATION DEVICES SHALL BE ERECTED PRIOR TO ANY LAND ALTERATIONS, SHALL BE MAINTAINED IN GOOD WORKING ORDER DURING CONSTRUCTION, AND REMOVED FOLLOWING SOIL STABILIZATION AND FINAL DRESSING. STOCKPILE AREAS SHALL INCLUDE SILT FENCING AROUND THE PERIMETER.
12. THE CONTRACTOR SHALL NOT RESTRICT OR BLOCK THE EXISTING DRAINAGE FLOW OVERLAND OR WITHIN RESHAPED SWALES. FLOW WITHIN EXISTING DRAINAGE PIPES SHALL BE MAINTAINED AT ALL TIMES. STORM WATER WILL BE CONVEYED VIA EXISTING SWALES, DITCHES, OR PROPOSED DITCHES, EXISTING AND PROPOSED STORM SEWERS.
13. THERE IS TO BE NO DISCHARGE (I.E. PUMPING, SHEET FLOW, SWALE, DITCH, ETC.) INTO EXISTING DITCHES OR CANALS WITHOUT THE USE OF SETTLING PONDS. IF THE CONTRACTOR DESIRES TO DISCHARGE INTO EXISTING DITCHES OR CANALS A SETTLING POND PLAN PREPARED BY THE CONTRACTOR MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND LOCAL REGULATORY AGENCY PRIOR TO CONSTRUCTION.

REVISIONS						BRUNO J. ARRIOLA, P.E. P.E. NO.: 88984 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 310 TAMPA, FL 33647	DRAWN BY: BCS 06-24 CHECKED BY: DRJ 06-24 DESIGNED BY: DRJ 06-24 CHECKED BY: CS 06-24 	SHEET TITLE: EROSION CONTROL GENERAL NOTES		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
								C-01		



PROP. ALUMINUM PEDESTRIAN/BICYCLE
RAILING PER FDOT STANDARD
PLANS INDEX 515-062

FILL EXIST. JOINT GAP WITH
PREFORMED JOINT FILLER
PER FDOT STANDARD PLANS
INDEX 522-001 (TYP.)

21'-0"

KEY

- FLOATING TURBIDITY BARRIER
- 6' CHAIN LINK FENCE
- SEDIMENT BARRIER
- EXIST. FENCE TO BE REMOVED

INSTALL "NO SWIMMING -
WARNING - POTENTIAL SHOCK
HAZARD - ELECTRICAL CURRENTS
MAY BE PRESENT IN THE WATER."
PER NATIONAL ELECTRICAL CODE
555.10

(A)

NOTES

- PROPOSED PERIMETER FENCE LAYOUT IS APPROXIMATE ONLY AND MAY NEED FIELD ADJUSTMENTS DURING CONSTRUCTION SINCE TOPOGRAPHIC SURVEY LIMITS DO NOT COVER THE ENTIRE PROJECT AREA. PROVIDE FINAL LAYOUT AND DIMENSIONS IN SHOP DRAWINGS FOR OWNER'S APPROVAL AND ENGINEER'S REVIEW.
- FIELD VERIFY PROPOSED PERIMETER FENCE POSTS AND CORRESPONDING FOOTINGS WILL NOT IMPACT EXISTING UTILITIES AND DRAINAGE PIPES/STRUCTURES.
- REFER TO "GENERAL NOTES (1 OF 2)" SHEET FOR MORE INFORMATION ON PROPOSED MARINA ACCESS GATE. PROVIDE SHOP DRAWINGS FOR ACCESS GATE FOR OWNER'S APPROVAL AND ENGINEER'S REVIEW.

EXIST. 4' CHAIN LINK FENCE TO REMAIN

PROP. 6' TALL ACCESS GATE
W/ SUNBURST GATE
EXTENSION DESIGN
REMOVE EXIST.
FENCE

RELOCATE EXIST. ACCESS GATE SIGN

EXIST. FENCE GATE
TO BE REMOVED

CONNECT TO
EXIST. FENCE

INSTALL 340 LF OF
6' CHAIN LINK FENCE
(BLACK VINYL COATED)
PER FDOT STANDARD
PLANS INDEX 550-002

SEDIMENT
BARRIER

INSTALL DOUBLE SWING GATES
FOR MAINTENANCE ACCESS

EXIST. HEADWALL TO REMAIN

EXIST. UTILITY POLE TO REMAIN

EXIST. 12" PALM TREE
TO REMAIN

REMOVE EXIST.
FENCE

MANGROVES

MANGROVE LIMITS
(TYP.)

FLOATING TURBIDITY
BARRIER

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

BRUNO J. ARRIOLA, P.E.
P.E. NO.: 88984
DRMP, INC.
15310 AMBERLY DRIVE, SUITE 310
TAMPA, FL 33647

DRAWN BY:
CAH 06-24
CHECKED BY:
DRJ 06-24
DESIGNED BY:
DRJ 06-24
CHECKED BY:
CS 06-24



SHEET TITLE:

SITE CIVIL AND EROSION CONTROL PLAN

PROJECT NAME:

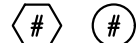
SAFETY HARBOR MARINA REPLACEMENT

TWA NO.

SHEET NO.

C-02

Z:\2023 Projects\2307C Safety Harbor Marina\Drawings\Electrical\Sheet Set\2307C_E-01 Electrical Legend.dwg Mar.12.2025 8:41 am

LEGEND																					
SYMBOL		DESCRIPTION		MOUNTING/REMARKS		SYMBOL		DESCRIPTION		MOUNTING/REMARKS											
		LIGHTING CABINET: DENOTED BY LABEL		SURFACE, TOP 78" AFF OR AS REQUIRED BY MANUFACTURER		ABBREVIATIONS:															
		DEVICE AS NOTED		AS NOTED		A		AMPS OR AMPERE		FLA		FULL LOAD AMPS		NEC		NATIONAL ELECTRICAL CODE					
		BRANCH CIRCUIT PANELBOARD: 240 VAC		TOP 78" AFF		A/E		ARCHITECT/ENGINEER		FO		FIBER OPTIC		NEMA		NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION					
		ELECTRICAL EQUIPMENT: DENOTED BY LABEL		AS NOTED		AF		AMPERE FRAME		FT		FOOT (FEET)		NFPA		NATIONAL FIRE PROTECTION ASSOCIATION					
		ELECTRIC UTILITY METER/CABINET		AS REQUIRED BY UTILITY COMPANY		AFCI		ARC-FAULT CIRCUIT INTERRUPTER		GC		GENERAL CONTRACTOR		NO		NORMALLY OPEN					
		CIRCUIT HOME RUN TO PANELBOARD INDICATED				AFF		ABOVE FINISHED FLOOR		GEN		GENERATOR		NTS		NOT TO SCALE					
		CIRCUIT/CONDUIT OR CABLE CONCEALED				AFG		ABOVE FINISHED GRADE		GFCI		GROUND-FAULT CIRCUIT INTERRUPTER		OB		OUTLET BOX					
'EQUIP'		EQUIPMENT LABEL		REFER TO RESPECTIVE SCHEDULE		AHJ		AUTHORITY HAVING JURISDICTION		GFP		GROUND-FAULT MONITORING PANEL		P		POLE					
PNL-CIR		PANELBOARD-CIRCUIT DESIGNATION		REFER TO PANEL SCHEDULE		AIC		AMPERE INTERRUPTING CAPACITY		GND		GROUND		PA		PUBLIC ADDRESS					
		KEYED NOTES		REFER TO LIKE-NUMBERED NOTES		AL		ALUMINUM		HOA		HAND-OFF-AUTO		PB		PULL BOX					
OBJECT STATE LINETYPES: EXISTING OBJECT OR CONSTRUCTION: _____ EXISTING OBJECT OR CONSTRUCTION TO BE DEMOLISHED: - - - - - NEW OBJECT OR CONSTRUCTION TO BE PROVIDED: _____						ANSI		AMERICAN NATIONAL STANDARDS INSTITUTE		HPS		HIGH PRESSURE SODIUM		PH/φ		PHASE					
						ASD		ADJUSTABLE SPEED DRIVE		HV		HIGH VOLTAGE		PNL		PANELBOARD (PANEL)		RECPT		RECEPTACLE	
						AT		AMPERE TRIP		HZ		HERTZ		SCC		SHORT CIRCUIT CAPACITY		SF		SQUARE FOOT (FEET)	
OBJECT STATE SUBSCRIPTS: D EXISTING OBJECT TO BE DEMOLISHED E EXISTING OBJECT TO REMAIN M EXISTING OBJECT TO BE REMOVED & RELOCATED R RELOCATED EXISTING OBJECT						ATS		AUTOMATIC TRANSFER SWITCH		IG		ISOLATED GROUND		SPEC		SPECIFICATION					
						AUTO		AUTOMATIC		IN		INCH (INCHES)		JB		JUNCTION BOX		SPD		SURGE PROTECTIVE DEVICE	
						AWG		AMERICAN WIRE GAUGE		kcmil		THOUSAND CIRCULAR MIL		SS		STAINLESS STEEL		SWBD		SWITCHBOARD	
						BLDG		BUILDING		kV		KILOVOLT		SWGR		SWITCHGEAR					
						BFG		BELOW FINISHED GRADE		kVA		KILOVOLT AMPERE		TR		TAMPER RESISTANT		TYP		TYPICAL	
						BRKR		BREAKER		kW		KILOWATT		UL		UNDERWRITERS LABORATORY		UON		UNLESS OTHERWISE NOTED	
						C		CONDUIT		kWh		KILOWATT HOUR		UPS		UNINTERRUPTIBLE POWER SUPPLY					
						CB		CIRCUIT BREAKER		LED		LIGHT EMITTING DIODE		UTIL		UTILITY		V		VOLT OR VOLTAGE	
						CKT		CIRCUIT		LPS		LIGHTNING PROTECTION SYSTEM		VA		VOLT AMPERE		VD		VOLTAGE DROP	
						COMM		COMMUNICATIONS		LTG		LIGHTING		VFD		VARIABLE FREQUENCY DRIVE					
						CT		CURRENT TRANSFORMER		LTNG		LIGHTNING		W		WATT OR WIRE		WP		WEATHERPROOF	
						CU		COPPER		LV		LOW VOLTAGE		WR		WEATHER RESISTANT		WT		WATERTIGHT	
						*C		DEGREES CELSIUS		MAX		MAXIMUM		XFER		TRANSFER					
						*F		DEGREES FAHRENHEIT		MCA		MINIMUM CIRCUIT AMPACITY		XFMR		TRANSFORMER		XP		EXPLOSION RATED	
						DISC		DISCONNECT		MCC		MOTOR CONTROL CENTER									
						DP		DISTRIBUTION PANELBOARD		MDP		MAIN DISTRIBUTION PANELBOARD									
						DS		DISCONNECT SWITCH		MH		METAL HALIDE									
						DWG		DRAWING		MHz		MEGAHERTZ									
						EC		ELECTRICAL CONTRACTOR		MIN		MINIMUM									
						EG		EQUIPMENT GROUND		MLO		MAIN LUGS ONLY									
						ELEC		ELECTRIC OR ELECTRICAL		MOCp		MAXIMUM OVERCURRENT PROTECTION									
						ELEV		ELEVATOR		MTS		MANUAL TRANSFER SWITCH									
						EMER		EMERGENCY		N		NEUTRAL									
						EPO		EMERGENCY POWER OFF		NA		NOT APPLICABLE									
						EPS		EMERGENCY POWER SUPPLY		NC		NORMALLY CLOSED									
						EXIST		EXISTING													
						FA		FIRE ALARM													
						FC		FOOTCANDLE													

ELECTRICAL SHEET INDEX					
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REVISIONS						ADAM V. EACHES, P.E PE No. 76151 HALL ENGINEERING GROUP 3820 GUNN HWY., SUITE 200 TAMPA FL, 33618		DRAWN BY: CJV CHECKED BY: AVE DESIGNED BY: CVP CHECKED BY: AVE		 SAFETY HARBOR FL		SHEET TITLE:		TWA NO.	
DATE	BY	DESCRIPTION		DATE	BY							DESCRIPTION		ELECTRICAL LEGEND	
												SHEET NO.			
												SAFETY HARBOR MARINA REPLACEMENT		E-01	

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DRAWING SPECIFICATIONS

GENERAL:

- A. PROVIDE SHALL MEAN FURNISH AND INSTALL.
- B. THE COMPLETE ELECTRICAL SYSTEM WHICH SHALL BE PROVIDED BY THE CONTRACTOR SHALL INCLUDE ALL WORK, MATERIALS AND APPARATUSES SPECIFIED HEREINAFTER AND INDICATED ON THE DRAWINGS. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND NO SUBSTANDARD WORK WILL BE ACCEPTED.
- C. PROVIDE ALL WORK AND ELECTRICAL SYSTEMS COMPONENTS REQUIRED TO SERVE LOADS AS SPECIFIED HEREINAFTER AND INDICATED ON THE DRAWINGS. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL ELECTRICAL SYSTEMS AT THE COMPLETION OF THE WORK AND MAKING ANY CHANGES AND ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEMS.
- D. MAKE A THOROUGH EXAMINATION OF THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO EXECUTING THE CONTRACT. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE RECOGNIZED FOR DIFFICULTIES ENCOUNTERED WHICH AN EXAMINATION OF SITE CONDITIONS AND CONTRACT DOCUMENTS WOULD HAVE REVEALED.
- E. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE THE FLOODPLAIN ELEVATION. CONTRACTOR SHALL COORDINATE FLOODPLAIN ELEVATION AND EQUIPMENT REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- F. THE PLANS ARE GENERALLY DIAGRAMMATIC. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED TO AVOID INTERFERENCES BETWEEN TRADES (i.e. BEAMS, CONDUITS, EQUIPMENT, DUCTWORK, ETC).
- G. REMOVE ALL EXISTING LIGHTING FIXTURES, EQUIPMENT, DEVICES, CONDUCTORS, RACEWAYS, ETC. MADE UNNECESSARY BY THE NEW INSTALLATION. PRIOR TO REMOVAL FROM SITE, COORDINATE WITH OWNER TO DETERMINE IF OWNER WISHES TO RETAIN ANY REMOVED EQUIPMENT.

WORK PERFORMANCE:

- A. JOB SITE SAFETY AND WORKER SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
- B. ARRANGE, PHASE AND PERFORM ALL WORK DURING TIME PERIODS SCHEDULED WITH AND ACCEPTABLE TO THE OWNER BEFORE PROCEEDING. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR WORK NECESSITATED BY ILL-TIMED, DEFECTIVE, OR NON-CONFORMING WORK.
- C. THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND/OR REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER UPON COMPLETION OF CONSTRUCTION AND TESTING. COMPILE COMPLETE AND UPDATED AS-BUILT DRAWINGS/DOCUMENTS AND ISSUE ONE (1) SET TO THE OWNER.
- D. ELECTRICAL WORK SHALL BE ACCOMPLISHED WITH ALL AFFECTED CIRCUITS OR EQUIPMENT DE-ENERGIZED. WHEN AN ELECTRICAL OUTAGE CANNOT BE ACCOMPLISHED IN THIS MANNER FOR THE REQUIRED WORK, THE FOLLOWING REQUIREMENTS ARE MANDATORY:
 - 1. ELECTRICIANS MUST USE AND WEAR FULL PROTECTIVE EQUIPMENT (PPE) (i.e. CERTIFIED AND TESTED INSULATING MATERIAL TO COVER EXPOSED ENERGIZED ELECTRICAL COMPONENTS, CERTIFIED AND TESTED INSULATED TOOLS, ETC.) WHILE WORKING ON ENERGIZED SYSTEMS IN ACCORDANCE WITH NFPA 70E. THE LEVEL OF PPE SHALL BE DETERMINED BY A COMPUTER GENERATED ARC FLASH CALCULATION PROVIDED AND PAID FOR BY THE CONTRACTOR. THE ARC FLASH DATA SHALL BE PRESENTED WITH THE SUBMITTAL BELOW.
 - 2. WORK ON ENERGIZED CIRCUITS OR EQUIPMENT CANNOT BEGIN UNTIL PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE OWNER.

- E. NEW WORK SHALL BE INSTALLED AND CONNECTED TO EXISTING WORK NEATLY AND CAREFULLY. PROVIDE PROTECTIVE MATS, COVERS, ETC. AS REQUIRED FOR ALL EXISTING WORK SUSCEPTIBLE TO DAMAGE. VERIFY SPECIFIC LOCATIONS AND REQUIREMENTS WITH THE OWNER. DISTURBED OR DAMAGED WORK AS A RESULT OF ELECTRICAL WORK SHALL BE REPLACED OR REPAIRED TO ITS PRIOR CONDITIONS.
- F. ENSURE THAT ELECTRICAL SERVICE REMAINS UNINTERRUPTED FOR OTHER BUILDINGS AND FACILITIES AT ALL TIMES. PERFORM ALL TEMPORARY WORK NECESSARY TO MAINTAIN CONTINUITY OF ELECTRICAL SERVICE WHEN CONNECTION IS MADE TO EXISTING SYSTEMS. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY THE OWNER. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.
- G. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUTDOORS. EQUIPMENT SHALL BE STORED IN AN OWNER/ENGINEER APPROVED MEDIUM AND LOCATION.

CODES & STANDARDS:

- A. PERFORM WORK IN COMPLIANCE WITH THE LATEST EDITION OF ALL APPLICABLE, FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS, TO INCLUDE THOSE LISTED BELOW, ADOPTED BY THE AUTHORITY HAVING JURISDICTION. WHERE DIFFERENCES MAY OCCUR THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. IN CASE OF CONFLICT PROVIDE WRITTEN NOTIFICATION AND OBTAIN A DECISION FROM THE ARCHITECT/OWNER.
 - 1. NFPA 70: NATIONAL ELECTRICAL CODE (2020)
 - 2. NFPA 70E: STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE (2024)
 - 3. NFPA 101: LIFE SAFETY CODE (2021)
 - 4. NFPA 241: STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS (2022)
 - 5. FBC: FLORIDA BUILDING CODE (2023)
 - 6. OSHA PART 1910: OCCUPATIONAL SAFETY AND HEALTH STANDARDS
 - 7. OSHA PART 1926: SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

WARRANTY:

- A. CONTRACTOR SHALL WARRANTY ALL WORK FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL RECTIFY ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WITHIN SAID PERIOD. THE OWNER WILL GIVE NOTICE OF DEFECTS WITH REASONABLE PROMPTNESS.
- B. PROVIDE COMPLETE WARRANTY INFORMATION FOR EACH ITEM TO INCLUDE PRODUCT OR EQUIPMENT; DATE OR BEGINNING OF WARRANTY OR BOND; DURATION OF WARRANTY OR BOND; AND NAMES, ADDRESSES, AND TELEPHONE NUMBERS AND PROCEDURES FOR FILING A CLAIM AND OBTAINING WARRANTY SERVICES.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					

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DRAWING SPECIFICATIONS

SUBMITTALS:

- A. SUBMIT ONE (1) ELECTRONIC PDF COPY. THE ENGINEER WILL RETURN SUBMITTAL REVIEW COMMENTS NO LATER THAN 14 CALENDAR DAYS OF RECEIPT.
- B. APPROVAL SHALL BE OBTAINED FOR ALL EQUIPMENT AND MATERIAL BEFORE DELIVERY TO THE JOB SITE. DELIVERY, STORAGE OR INSTALLATION OF EQUIPMENT OR MATERIAL WHICH HAS NOT HAD PRIOR APPROVAL, WILL NOT BE PERMITTED AT THE JOB SITE.
- C. ALL SUBMITTALS SHALL INCLUDE ADEQUATE DESCRIPTIVE LITERATURE, CATALOG CUTS, SHOP DRAWINGS AND OTHER DATA NECESSARY FOR THE ARCHITECT/ENGINEER TO ASCERTAIN THAT THE PROPOSED EQUIPMENT AND MATERIALS COMPLY WITH SPECIFICATION REQUIREMENTS. CATALOG CUTS SUBMITTED FOR APPROVAL SHALL BE LEGIBLE AND CLEARLY IDENTIFY EQUIPMENT BEING SUBMITTED.
- D. SUBMITTALS FOR INDIVIDUAL SYSTEMS AND EQUIPMENT ASSEMBLIES WHICH CONSIST OF MORE THAN ONE ITEM OR COMPONENT SHALL BE MADE FOR THE SYSTEM OR ASSEMBLY AS A WHOLE. PARTIAL SUBMITTALS WILL NOT BE CONSIDERED FOR APPROVAL
- E. SUBMITTAL OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES WILL BE ACCEPTED ONLY WHEN SUBMITTED BY THE CONTRACTOR. DATA SUBMITTED FROM SUBCONTRACTORS AND MATERIAL SUPPLIERS DIRECTLY TO THE ARCHITECT/ENGINEER WILL NOT BE PROCESSED.
- F. SUBMITTALS SHALL BE MARKED TO SHOW SPECIFICATION REFERENCE INCLUDING THE SECTION AND PARAGRAPH NUMBERS. SUBMIT EACH SECTION SEPARATELY AND INCLUDE THE FOLLOWING:
 - 1. INFORMATION THAT CONFIRMS COMPLIANCE WITH CONTRACT REQUIREMENTS. INCLUDE THE MANUFACTURER’S NAME, MODEL OR CATALOG NUMBERS, CATALOG INFORMATION, TECHNICAL DATA SHEETS, SHOP DRAWINGS, PICTURES, NAMEPLATE DATA AND TEST REPORTS AS REQUIRED.
 - 2. PARTS LIST WHICH SHALL INCLUDE THOSE REPLACEMENT PARTS RECOMMENDED BY THE EQUIPMENT MANUFACTURER, QUANTITY OF PARTS, CURRENT PRICE AND AVAILABILITY OF EACH PART.
- G. MANUALS: SUBMIT IN ACCORDANCE WITH "A" ABOVE FOR REVIEW AND COMMENT.
 - 1. MAINTENANCE AND OPERATION MANUALS: SUBMIT AS REQUIRED FOR SYSTEMS AND EQUIPMENT SPECIFIED IN THE TECHNICAL SECTIONS. FURNISH THREE (3) COPIES, BOUND IN HARDBACK BINDERS, (MANUFACTURER’S STANDARD BINDERS) OR AN APPROVED EQUAL. FURNISH ONE COMPLETE MANUAL AS SPECIFIED IN THE TECHNICAL SECTION BUT IN NO CASE LATER THAN PRIOR TO PERFORMANCE OF SYSTEMS OR EQUIPMENT TEST, AND FURNISH THE REMAINING MANUALS PRIOR TO CONTRACT COMPLETION.
 - 2. INSCRIBE THE FOLLOWING IDENTIFICATION ON THE COVER: THE WORDS “MAINTENANCE AND OPERATION MANUAL,” THE NAME AND LOCATION OF THE SYSTEM, EQUIPMENT, BUILDING, NAME OF CONTRACTOR, AND CONTRACT NUMBER. INCLUDE IN THE MANUAL THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF EACH SUBCONTRACTOR INSTALLING THE SYSTEM OR EQUIPMENT AND THE LOCAL REPRESENTATIVES FOR THE SYSTEM OR EQUIPMENT.

MATERIALS AND METHODS:

- A. MATERIALS AND APPARATUSES SHALL COMPLY WITH ALL APPLICABLE TESTS, RATINGS, SPECIFICATIONS, AND REQUIREMENTS OF THE IEEE, NEMA, NFPA AND UL, SHALL BEAR THE UL LABEL OF APPROVAL AND BE LISTED FOR THE PROPOSED APPLICATION.
- B. FINISHED PRODUCTS SHALL BE FACTORY PRIMED AND FINISH COATED WITH THE MANUFACTURER’S PRIME COAT AND STANDARD FINISH UNLESS SPECIFIED OTHERWISE BY THE ARCHITECT.
- C. UNLESS OTHERWISE SPECIFIED, UNFINISHED PRODUCTS SHALL BE GALVANIZED, COATED OR PLATED TO RESIST CORROSION.

- D. INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, AS RECOMMENDED BY THE MANUFACTURER AND AS CLOSE AS PRACTICABLE TO LOCATIONS INDICATED ON DRAWINGS.
- E. INSTALLATIONS SHALL FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. ACCESS, WORKING SPACES AND CLEARANCES SHALL NOT BE LESS THAN SPECIFIED BY THE NEC FOR ALL VOLTAGES SPECIFIED.

IDENTIFICATION:

- A. INSTALL LABEL TAGS ON ALL WIRE AND CABLE IN JUNCTION BOXES, WIREWAYS AND WIRING GUTTERS OF PANELS. TAGS SHALL IDENTIFY WIRE OR CABLE CIRCUIT NUMBER AND/OR EQUIPMENT SERVED AS INDICATED ON DRAWINGS.
- B. JUNCTION BOXES SHALL BE LABELED IN A PERMANENT MANNER REFLECTING PANELBOARD/CIRCUIT NUMBER OF BRANCH CIRCUIT WIRING CONTAINED WITHIN.
- C. PANELBOARD DIRECTORIES SHALL BE TYPEWRITTEN, REFLECTING RECORD CONDITIONS TO INCLUDE CIRCUIT NUMBER, TYPE AND LOCATION OF LOAD.
- D. INSTALL PLASTIC PLACARDS ON EQUIPMENT REFLECTING, EQUIPMENT NAME, NUMBER AND RATING.

RACEWAYS:

- A. RACEWAYS:
 - 1. EXTERIOR EXPOSED/UNDER DOCK: SCHEDULE 80 POLYVINYL CHLORIDE CONDUIT (PVC).
 - 2. EXTERIOR CONNECTIONS TO MOTORS, TRANSFORMERS AND VIBRATING EQUIPMENT: LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC).
 - 3. UNDERGROUND: SCHEDULE 40 PVC.
 - 4. PENETRATIONS THROUGH CONCRETE SLABS SHALL BE MADE WITH PVC COATED RIGID GALVANIZED STEEL CONDUIT.
- B. SCHEDULE 40 PVC WILL BE PERMITTED WHERE ALLOWED BY APPLICABLE CODES AND AS OUTLINED ABOVE. ALL BENDS IN PVC LARGER THAN 1” NOMINAL TRADE SIZE SHALL BE MADE WITH PVC COATED RIGID METAL CONDUIT.
- C. ALL CONDUIT SHALL BE PROPERLY ALIGNED, GROUPED AND SUPPORTED. EXPOSED CONDUIT SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL TO THE PRINCIPAL STRUCTURAL MEMBERS. PROVIDE SUPPORT A MINIMUM OF 18” FROM BENDS AND OUTLET BOXES AND ON INTERVALS NOT TO EXCEED 4’–0”. CONDUIT IS NOT TO SPAN ANY SPACE UNSUPPORTED. ALL CONDUIT STRAPS SHALL BE 2–HOLE.
- D. UNDERGROUND CONDUITS SHALL BE INSTALLED WITH MINIMUM 36” COVER.
- E. PROVIDE NYLON PULL CORD AND LEAVE IN PLACE IN EACH EMPTY CONDUIT.
- F. PROVIDE EXPANSION FITTINGS IN CONDUIT RUNS CROSSING EXPANSION JOINTS IN THE STRUCTURE.

BOXES:

- A. ALL BOXES SHALL BE RIGIDLY MOUNTED AND SHALL BE EQUIPPED WITH SUITABLE SCREW FASTENED COVERS. OPEN KNOCK–OUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH A SUITABLE BLANKING DEVICE.
- B. EXTERIOR BRANCH BOXES SHALL BE WEATHERPROOF CAST "FS" BOXES.
- C. HANDHOLES AND COVERS SHALL BE HUBBELL QUAZITE OR EQUAL, UL LISTED TIER 15 RATED, LOCKABLE COVERS, OPTIONS AS NEEDED, STAINLESS STEEL BOLTS.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					

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SUSERS *SDATES* *STIMES* *SFILES*

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DRAWING SPECIFICATIONS

CONDUCTORS:

- A. UNLESS OTHERWISE INDICATED, ALL BRANCH CIRCUIT CONDUCTORS SHALL BE NO. 12 AWG. BRANCH CIRCUITS RUN OVER 75 FEET IN LENGTH, MEASURING ONE WAY FROM THE FIRST OUTLET OF THE CIRCUIT TO THE PANEL, SHALL BE NO. 10 AWG FOR THE ENTIRE CIRCUIT.
- B. CONDUCTORS SHALL BE COPPER WITH XHHW-2 90°C INSULATION. THE FOLLOWING SYSTEMS OF COLOR CODING SHALL BE STRICTLY ADHERED TO AND SHALL BE CONSISTENTLY FOLLOWED THROUGHOUT:
 - 1. GROUND WIRES: GREEN
 - 2. GROUNDED NEUTRAL WIRES: WHITE
 - 3. 240/120 VOLT, UNGROUNDED PHASE WIRES: BLACK AND RED
- C. UNDERGROUND SPLICES, JOINTS, TERMINATIONS, ETC. SHALL BE WATERPROOF.
- D. MULTIPLE CIRCUITS IN SAME CONDUIT SHALL NOT SHARE NEUTRAL CONDUCTORS.
- E. INSTALL SPLIT BOLT CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 6 AWG AND LARGER.
- F. INSTALL SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER.
- G. INSTALL INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER.
- H. "PUSH-IN" OR "STAB" TYPE CONNECTORS ARE NOT ACCEPTABLE.

GROUNDING:

- A. THE ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS SPECIFIED HEREINAFTER.
- B. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE AND SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT THE ENTIRE SYSTEM.
- C. ALL GROUND CONDUCTORS SHALL BE INSULATED COPPER UON.
- D. ALL RACEWAYS WITH NO. 10 OR 12 AWG PHASE CONDUCTORS FOR RECEPTACLES, LIGHTING FIXTURES AND SIMILAR CIRCUITS (NEW BRANCH CIRCUITS) SHALL BE PROVIDED WITH A PARITY SIZED GREEN EQUIPMENT GROUND CONDUCTOR. GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM. EQUIPMENT GROUND CONDUCTOR SIZES FOR CIRCUITS WITH PHASE CONDUCTORS LARGER THAN NO. 12 AWG ARE INDICATED ON DRAWINGS. GROUND CONDUCTORS SHALL BE CONNECTED TO GROUND BUS IN PANELBOARDS.

- E. TERMINATE FEEDER AND BRANCH CIRCUIT INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH GROUNDING LUG, BUS, OR BUSHING. CONDUCTORS LOOPED UNDER SCREW OR BOLT HEADS WILL NOT BE PERMITTED.
- F. INSTALL CLAMP-ON CONNECTORS ON CLEAN METAL CONTACT SURFACES TO ENSURE ELECTRICAL CONDUCTIVITY AND CIRCUIT INTEGRITY.
- G. TEST THE GROUNDING SYSTEM TO ASSURE CONTINUITY AND THAT RESISTANCE TO GROUND DOES NOT EXCEED 25 OHMS UNLESS OTHERWISE NOTED. TEST EACH GROUND ROD FOR RESISTANCE TO GROUND BEFORE MAKING ANY CONNECTIONS TO THE ROD; THEN TIE ENTIRE GROUNDING SYSTEM TOGETHER AND TEST FOR RESISTANCE TO GROUND. MAKE RESISTANCE MEASUREMENTS IN NORMALLY DRY WEATHER, NOT LESS THAN 48 HOURS AFTER RAINFALL. MAKE GROUND RESISTANCE MEASUREMENTS WITH A GROUND RESISTANCE TEST METER CALIBRATED WITHIN THE LAST TWELVE MONTHS.

EQUIPMENT:

- A. APPROVED MANUFACTURERS SHALL BE: SQUARE-D, CUTLER-HAMMER, GENERAL ELECTRIC AND SIEMENS.
- B. EQUIPMENT BUSES SHALL BE COPPER.
- C. OUTDOOR EQUIPMENT SHALL BE NEMA 4X.
- D. PANELBOARDS:
 - 1. PANELBOARDS SHALL BE SQUARE-D: NQ, NF, I-LINE OR APPROVED EQUAL, SERIES RATED PANELBOARDS WILL NOT BE PERMITTED.
 - 2. FULL SIZE, COPPER NEUTRAL BUS (UON), MOUNTED ON INSULATED SUPPORTS.
 - 3. COPPER GROUND BUS WITH SUFFICIENT TERMINALS FOR ALL GROUNDING CONDUCTORS. BUSES BRACED FOR THE AVAILABLE SHORT CIRCUIT CURRENT, BUT NOT LESS THAN 10,000 AMPERES SYMMETRICAL FOR 240/120 VOLT PANELBOARDS.
 - 4. MAIN CIRCUIT BREAKER MOUNTING SHALL BE VERTICAL, AHEAD OF BUSES; HORIZONTAL MOUNTING WILL NOT BE ACCEPTED.
- E. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.
- F. SURGE PROTECTIVE DEVICE MANUFACTURERS SHALL BE: PQ PROTECTION, ADVANCED PROTECTION TECHNOLOGIES, ATLANTIC SCIENTIFIC, OR CURRENT TECHNOLOGY.

REVISIONS						ADAM V. EACHES, P.E PE No. 76151 HALL ENGINEERING GROUP 3820 GUNN HWY., SUITE 200 TAMPA FL, 33618	DRAWN BY: CJV CHECKED BY: AVE DESIGNED BY: CVP CHECKED BY: AVE	 SAFETY HARBOR FL	SHEET TITLE: <i>ELECTRICAL SPECIFICATIONS (3 OF 3)</i>		TWANO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: <i>SAFETY HARBOR MARINA REPLACEMENT</i>		SHEET NO.
									<i>E-04</i>		

TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES.

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DRAWING NOTES (SHEETS E-06 – E-07)

- 1. EXISTING EQUIPMENT RACK; MODIFY/EXTEND AS REQUIRED TO ACCOMMODATE THE NEW ELECTRICAL EQUIPMENT. REFER TO POWER ONE-LINE DIAGRAM AND ELECTRICAL RACK DETAIL 02 ON SHEET E-07 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 2. EXISTING PANELBOARD AND ASSOCIATED FEEDER AND BRANCH CIRCUIT CONDUCTORS AND CONDUITS TO BE REMOVED AND REPLACED WITH NEW.
- 3. EXISTING MARINA RECEPTACLE PEDESTAL AND ASSOCIATED DEVICES, CONDUCTORS, AND CONDUITS TO BE REMOVED AND REPLACED WITH NEW.
- 4. EXISTING 240/120 V, 1ϕ, 3W, 150 A MCB PANELBOARD TO REMAIN.
- 5. EXISTING LIGHTING CONTROL CABINET TO REMAIN.
- 6. NEW ELECTRIC UTILITY METER. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 7. EXISTING ELECTRIC UTILITY METER TO REMAIN.
- 8. MARINA PEDESTAL. REFER TO SCHEDULE ON SHEET E-13.
- 9. NEW CONDUITS AND CONDUCTORS FEEDING PANEL 'B'. REFER TO POWER ONE-LINE DIAGRAM FOR QUANTITY AND SIZES.
- 10. NEW CONDUITS AND CONDUCTORS FEEDING PANEL 'C'. REFER TO POWER ONE-LINE DIAGRAM FOR QUANTITY AND SIZES.
- 11. EXISTING MARINA ELECTRIC UTILITY METER, PANELBOARD AND ENCLOSED CIRCUIT BREAKERS TO BE REMOVED.

DRAWING GENERAL NOTES (SHEETS E-06 – E-07)

- A. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- B. REFER TO PLUMBING AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.
- C. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- D. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- E. MAXIMUM 3 QUARTER TURNS (TOTAL 270°) CONDUIT BENDS BETWEEN JUNCTION/PULL BOXES.
- F. MAINTAIN MINIMUM 12" SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES/INFRASTRUCTURE.
- G. COORDINATE WITH EXISTING UNDERGROUND UTILITIES AND CONDITIONS. HAND DIG TRENCHES AS REQUIRED.
- H. SAW CUT AND PATCH PAVEMENT AS REQUIRED. COORDINATE WORK WITH OWNER.
- I. ALL CONDUCTORS SHALL BE TYPE XHHW-2.
- J. ALL EXPOSED CONDUITS SHALL BE UV RESISTANT, SCHEDULE 80 PVC.
- K. ALL FASTENERS, ANCHORS, STRAPS, HARDWARE, STRUT-CHANNEL, ETC. SHALL BE STAINLESS STEEL (TYPE 316).
- L. ALL STRUT CHANNEL SHALL BE MINIMUM 1 5/8" X 1 5/8".
- M. THE ELECTRICAL DATUM PLANE SHALL BE 2 FEET ABOVE THE HIGHEST TIDE LEVEL.
- N. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE LOCATED ABOVE THE ELECTRICAL DATUM PLANE.
- O. ELECTRICAL EQUIPMENT AND DEVICES LOCATED ON THE DOCK SHALL BE MINIMUM 12" ABOVE THE DECK BUT SHALL NOT BE LOCATED BELOW THE ELECTRICAL DATUM PLANE.
- P. CONDUITS ROUTED UNDER THE DOCK SHALL BE SECURELY FASTENED TO THE STRUCTURE MAXIMUM 4' SPACING USING STAINLESS STEEL (TYPE 316) COMPONENTS AND HARDWARE.
- Q. PROVIDE SAFETY SIGNS PER NEC 555.10.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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SAFETY HARBOR FL

SHEET TITLE:

ELECTRICAL PLAN NOTES

PROJECT NAME:

SAFETY HARBOR MARINA REPLACEMENT

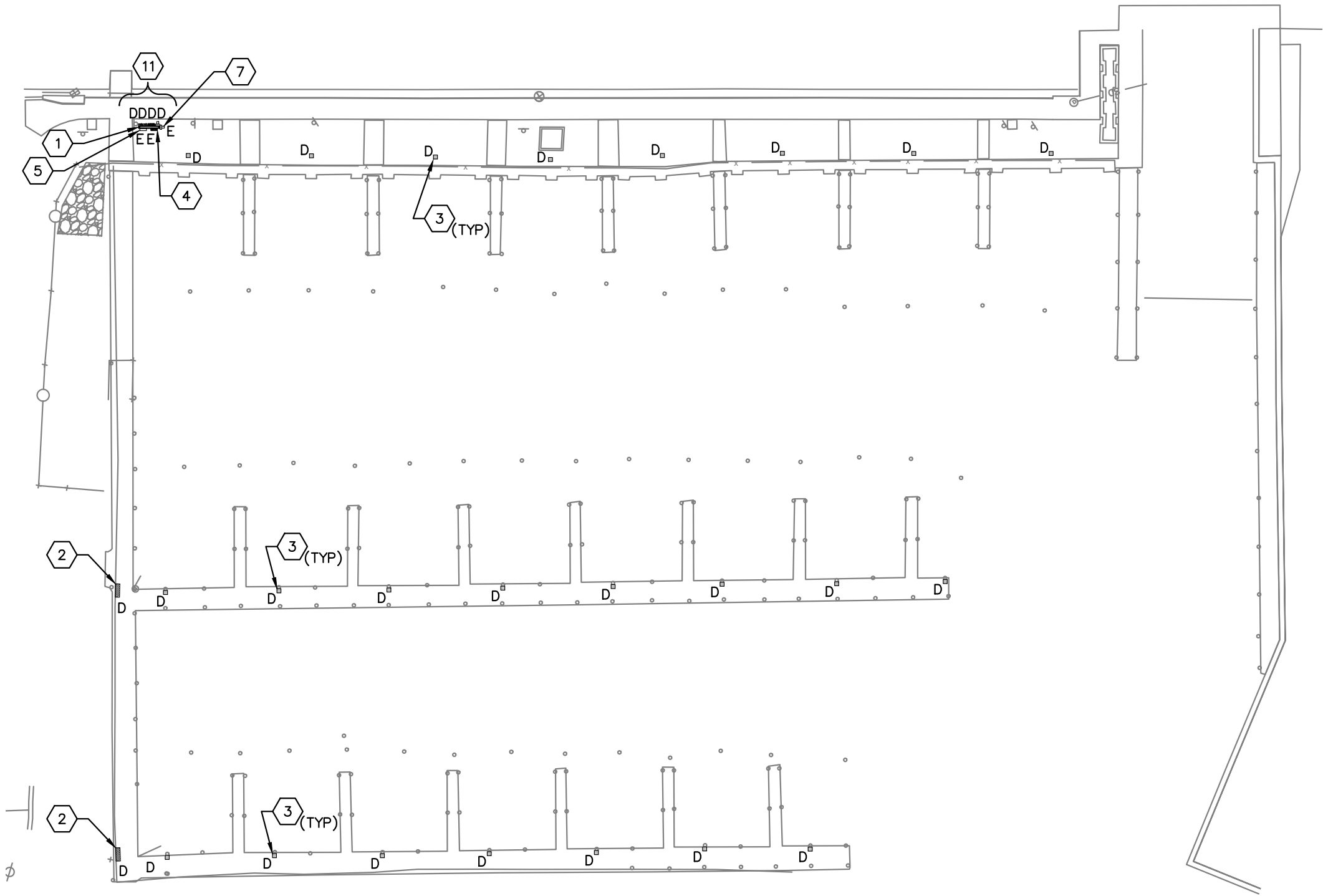
TWANO.

SHEET NO.

E-05

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01

ELECTRICAL DEMOLITION PLAN
SCALE: 1"=30'

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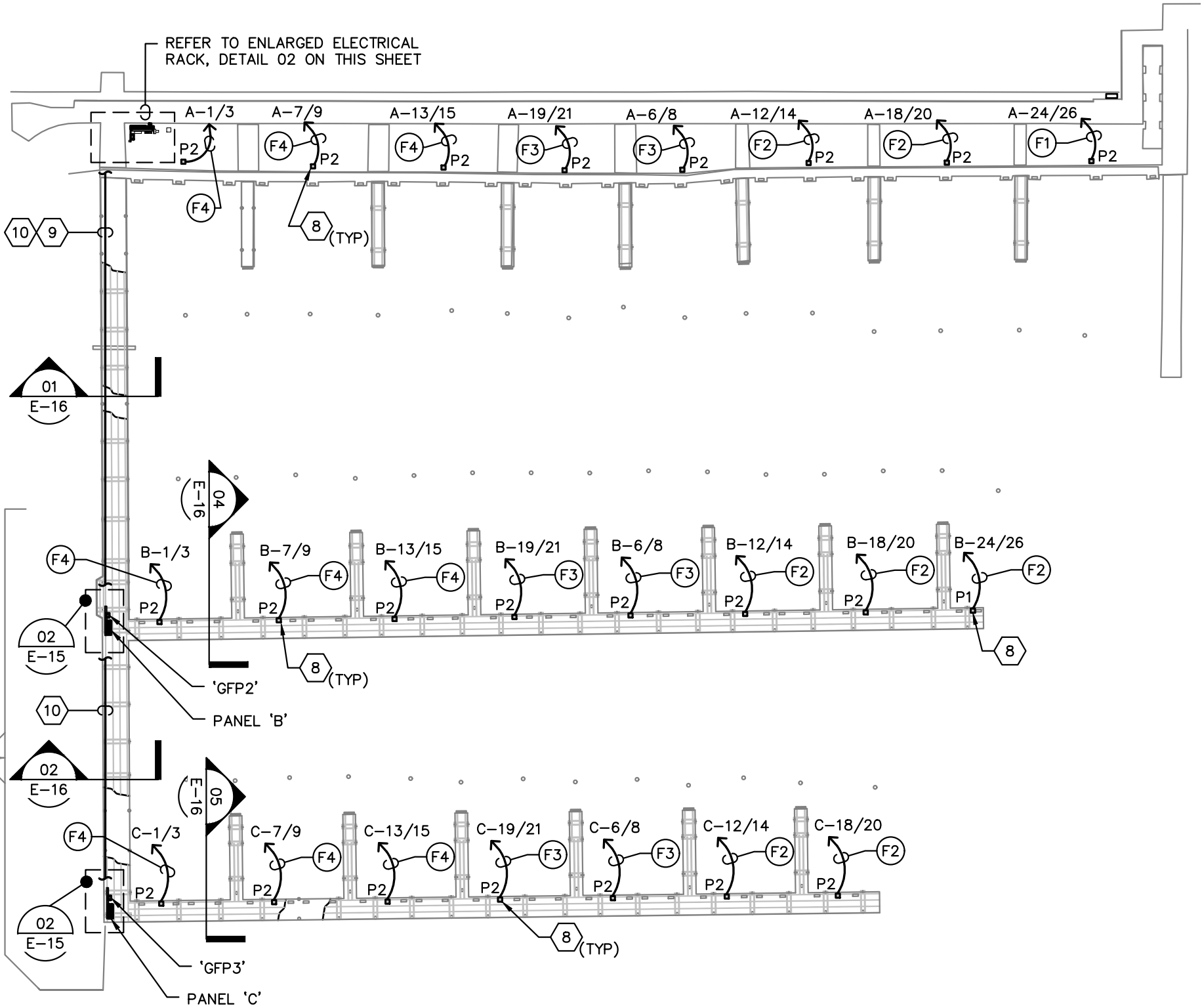
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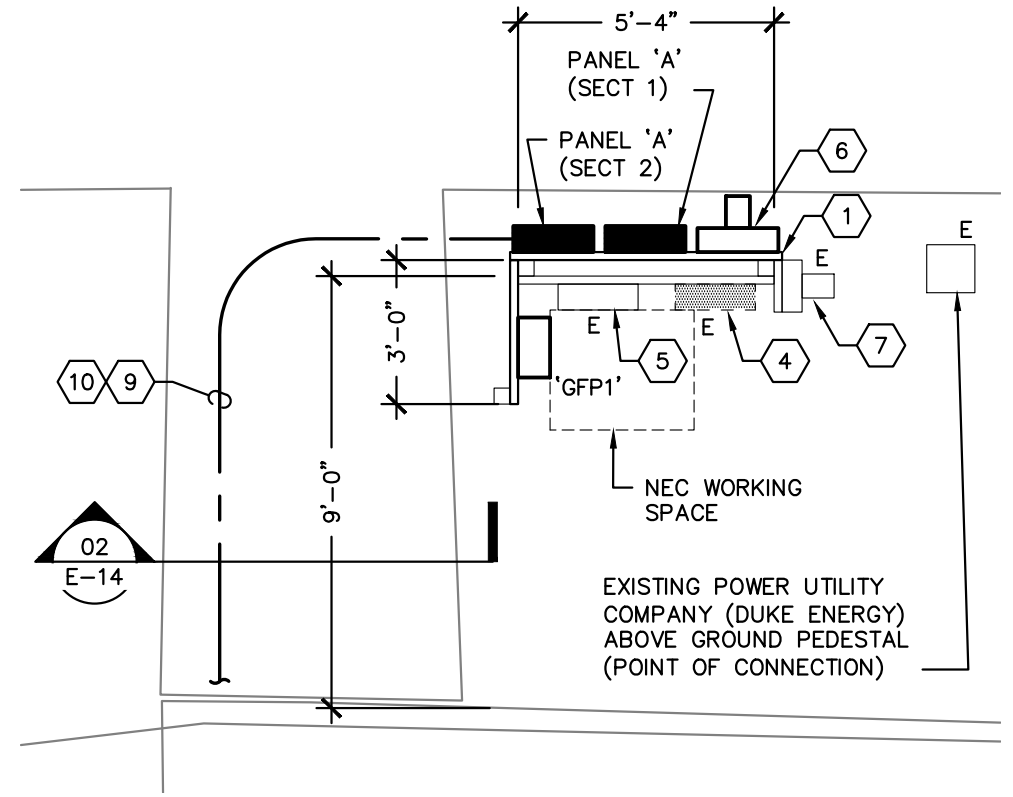
SAFETY HARBOR | **FL**

SHEET TITLE:	ELECTRICAL DEMOLITION PLAN		TWANO.
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
			E-06

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01 ELECTRICAL PLAN
SCALE: 1"=30'



02 ELECTRICAL RACK
SCALE: 1/4"=1'-0"

#	FEEDER SCHEDULE
F1.	3 #4 + #4 EG - 1 1/4" C.
F2.	3 #6 + #6 EG - 1" C.
F3.	3 #8 + #8 EG - 1" C.
F4.	3 #10 + #10 EG - 3/4" C.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION							

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 SAFETY HARBOR FL

SAFETY HARBOR MARINA REPLACEMENT

E-07

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DRAWING NOTES (SHEET E-09)

- 1. EXISTING UTILITY COMPANY (DUKE ENERGY) POWER PEDESTAL. UTILITY COMPANY TO EVALUATE AND REWORK AS REQUIRED.
- 2. 3 #600 KCMIL – 3 1/2” C.
- 3. NEW UTILITY METER.
- 4. REPLACE EXISTING 240/120 V, 1ϕ, 3W, 150 A MCB PANELBOARD AND ENCLOSED CIRCUIT BREAKERS WITH NEW 2-SECTION, SERVICE ENTRANCE PANEL. REFER TO PANEL SCHEDULE.
- 5. EXISTING CONCRETE POSTS TO REMAIN. PROVIDE STAINLESS STEEL (TYPE 316) STRUT CHANNEL; SIZE AND QUANTITY AS REQUIRED.
- 6. EXISTING EQUIPMENT RACK TO BE EXTENDED IN “L” FORMATION (REFER TO DETAIL 02 ON SHEET E-07). UTILIZE EXISTING CONCRETE POST ON WEST SIDE OF RACK AND PROVIDE (1) NEW CONCRETE POST TO MATCH EXISTING INSTALLATION WITH NEW STAINLESS STEEL (TYPE 316) STRUT CHANNEL; SIZE AND QUANTITY AS REQUIRED. FOLLOW FDOT STANDARD SPECIFICATIONS FOR CONCRETE (SECTION 347 AND 400) AND REINFORCING STEEL (415) MATERIAL PROPERTIES. CONCRETE SHALL BE CLASS NS (NON-STRUCTURAL) WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. CONCRETE POST TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE FOOTERS WITH DIMENSIONS OF 1’-0” DIAMETER X 2’-6” DEPTH. EMBED CONCRETE POST 2’-0” INTO FOOTER.
- 7. NEW EQUIPMENT RACK MOUNTED TO DOCK PILES (REFER TO DETAIL 02 ON SHEET E-15); STAINLESS STEEL (TYPE 316) STRUT CHANNEL. SIZE AS REQUIRED.
- 8. GROUND FAULT MONITORING PANEL; BENDER, MARINAGUARD MG-T OR ENGINEER APPROVED EQUAL. INSTALL PER MANUFACTURER’S INSTALLATION INSTRUCTIONS.
- 9. GROUND FAULT MONITORING PANEL “GFP1” WILL MONITOR THE FEEDERS TO PANELBOARDS “B” AND “C” AS WELL AS THE FEEDERS TO THE MARINE PEDESTALS SERVING SLIPS 1-16; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 10. GROUND FAULT MONITORING PANEL “GFP2” WILL MONITOR THE FEEDERS TO THE MARINE PEDESTALS SERVING SLIPS 17-31; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 11. GROUND FAULT MONITORING PANEL “GFP3” WILL MONITOR THE FEEDERS TO THE MARINE PEDESTALS SERVING SLIPS 32-44; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 12. REPLACE EXISTING 240/120 V, 1ϕ, 3W, 225 A MLO PANELBOARD WITH NEW; REFER TO PANEL SCHEDULE.
- 13. REPLACE EXISTING CONDUIT AND CONDUCTORS AS FOLLOWS: 3 #4/0 + #4 EG – 2 1/2” C.
- 14. REPLACE EXISTING CONDUIT AND CONDUCTORS AS FOLLOWS: 3 #300 KCMIL + #2 EG – 3” C.
- 15. SPD; PQ PROTECTION, MODEL #PQC160-240V OR ENGINEER APPROVED EQUAL.
- 16. MIN 3/4” CONDUITS AS REQUIRED FOR GROUND-FAULT CT WIRING AND SHUNT-TRIP WIRING FOR FEEDERS TO PANELS “B” AND “C”. INSTALL PER MANUFACTURER’S RECOMMENDATIONS.
- 17. MIN 3/4” CONDUITS AS REQUIRED FOR GROUND-FAULT CT WIRING AND SHUNT-TRIP WIRING FOR FEEDERS TO MARINE PEDESTALS. INSTALL PER MANUFACTURER’S RECOMMENDATIONS.
- 18. 3/4” X 10’ STAINLESS STEEL (TYPE 316) GROUND ROD.
- 19. GROUNDING ELECTRODE SYSTEM. REFER TO GROUNDING DETAIL 01 ON SHEET E-15 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 20. EXOTHERMIC WELD.
- 21. PROVIDE (1) SPARE 2 1/2” C. STUB UP UNDER PANEL “B”, CAP AND LABEL “SPARE”.
- 22. PROVIDE (1) SPARE 3” C. STUB UP UNDER PANEL “C”, CAP AND LABEL “SPARE”.

DRAWING GENERAL NOTES (SHEET E-09)

- A. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- B. MAXIMUM 3 QUARTER TURNS (TOTAL 270°) CONDUIT BENDS BETWEEN JUNCTION/PULL BOXES.
- C. MAINTAIN MINIMUM 12” SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES/INFRASTRUCTURE.
- D. COORDINATE WITH EXISTING UNDERGROUND UTILITIES AND CONDITIONS. HAND DIG TRENCHES AS REQUIRED.
- E. SAW CUT AND PATCH PAVEMENT AS REQUIRED. COORDINATE WORK WITH OWNER.
- F. ALL CONDUCTORS SHALL BE TYPE XHHW-2.
- G. ALL EXPOSED CONDUITS SHALL BE UV RESISTANT, SCHEDULE 80 PVC.
- H. ALL FASTENERS, ANCHORS, STRAPS, HARDWARE, STRUT-CHANNEL, ETC. SHALL BE STAINLESS STEEL (TYPE 316).
- I. ALL STRUT CHANNEL SHALL BE MINIMUM 1 5/8” X 1 5/8”.
- J. THE ELECTRICAL DATUM PLANE SHALL BE 2 FEET ABOVE THE HIGHEST TIDE LEVEL.
- K. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE LOCATED ABOVE THE ELECTRICAL DATUM PLANE.
- L. ELECTRICAL EQUIPMENT AND DEVICES LOCATED ON THE DOCK SHALL BE MINIMUM 12” ABOVE THE DECK BUT SHALL NOT BE LOCATED BELOW THE ELECTRICAL DATUM PLANE.
- M. CONDUITS ROUTED UNDER THE DOCK SHALL BE SECURELY FASTENED TO THE STRUCTURE MAXIMUM 4’ SPACING USING STAINLESS STEEL (TYPE 316) COMPONENTS AND HARDWARE.
- N. ALL PENETRATIONS IN ELECTRICAL PANELS SHALL BE MADE WITH UL LISTED WEATHERTIGHT CONNECTORS TO MAINTAIN NEMA 4X RATING.
- O. CONTRACTOR SHALL SUBMIT PANELBOARD/RACK INSTALLATION PLAN TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION. INSTALLATION PLAN SHALL SPECIFY FASTENER TYPE, SPACING, AND LOCATION.

REVISIONS

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SAFETY
HARBOR



SHEET TITLE:

POWER ONE-LINE DIAGRAM NOTES

PROJECT NAME:

SAFETY HARBOR MARINA REPLACEMENT

TWANO.

SHEET NO.

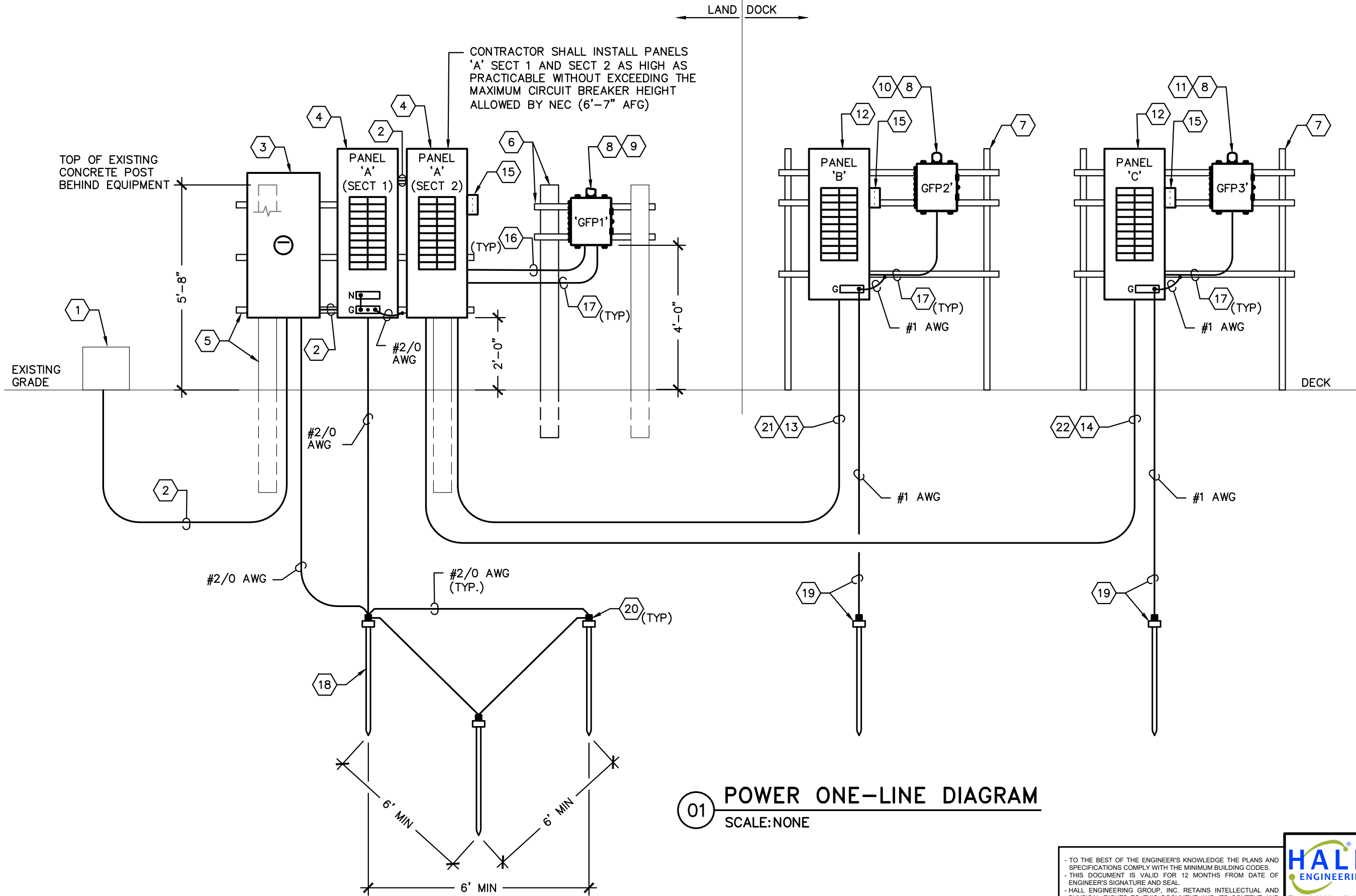
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01

POWER ONE-LINE DIAGRAM

SCALE: NONE

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SAFETY HARBOR | FL

SHEET TITLE: POWER ONE-LINE DIAGRAM	TWANO.
PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO. E-09

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PANELBOARD A SCHEDULE																																																																			
VOLTAGE (L-L/L-N): 240 / 120 V			PHASE: 1		WIRES: 3		MAIN TYPE (1): MCB		MAIN OC DEVICE (4): 400 A																																																										
BUS RATING: 400 A			MIN AIC RATING: 22,000 A			ENCLOSURE TYPE (2): NEMA 4X			MOUNTING: SURFACE																																																										
FEED-THRU LUGS: YES			SUB-FEED LUGS: NO			ISOLATED GND BUS: NO			NEUTRAL BUS: YES																																																										
SECTION: S1																																																																			
CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO																																																								
		POLE	TRIP	A		B		TRIP	POLE																																																										
1	SLIP 1 & 2 (3) (5)	2	30	3,600	—					SPACE	2																																																								
3	"					3,600	—			SPACE	4																																																								
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 9 & 10 (3) (5)	6																																																								
7	SLIP 3 & 4 (3) (5)	2	30			3,600	3,600			"	8																																																								
9	"			3,600	0					(SHUNT-TRIP)	10																																																								
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 11 & 12 (3) (5)	12																																																								
13	SLIP 5 & 6 (3) (5)	2	30	3,600	3,600					"	14																																																								
15	"					3,600	0			(SHUNT-TRIP)	16																																																								
17	(SHUNT-TRIP)			0	3,600			30	2	SLIP 13 & 14 (3) (5)	18																																																								
19	SLIP 7 & 8 (3) (5)	2	30			0	3,600			"	20																																																								
21	"			3,600	0					(SHUNT-TRIP)	22																																																								
23	(SHUNT-TRIP)					3,600	3,600	30	2	SLIP 15 & 16 (3) (5)	24																																																								
25	GFP1 CONTROL POWER	1	20	300	3,600					"	26																																																								
27	SPACE					—	0			(SHUNT-TRIP)	28																																																								
29	SPACE			—	—					SPACE	30																																																								
31	SPACE					—	—			SPACE	32																																																								
33	SPACE			—	—					SPACE	34																																																								
35	SPACE					—	—			SPACE	36																																																								
37	SPACE			—	—					SPACE	38																																																								
39	SPACE					—	—			SPACE	40																																																								
41	SPACE			—	—					SPACE	42																																																								
SECTION: S2																																																																			
43	PANEL B (SUB-FEED BREAKER) (5)	2	225			27,300	0	20	2	SPD	44																																																								
45	"			27,000	0					"	46																																																								
47	(SHUNT-TRIP)					0	—			SPACE	48																																																								
49	PANEL C (SUB-FEED BREAKER) (5)	2	225	23,700	—					SPACE	50																																																								
51	"					23,400	—			SPACE	52																																																								
53	(SHUNT-TRIP)			0	—					SPACE	54																																																								
55	SPACE					—	—			SPACE	56																																																								
57	SPACE			—	—					SPACE	58																																																								
59	SPACE					—	—			SPACE	60																																																								
61	SPACE			—	—					SPACE	62																																																								
63	SPACE					—	—			SPACE	64																																																								
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79	SPACE					—	—			SPACE	80																																																								
81	SPACE			—	—					SPACE	82																																																								
83	SPACE					—	—			SPACE	84																																																								
TOTAL				79,800		79,500																																																													
<table><tr><th>LOAD CLASSIFICATION</th><th>CONNECTED (VA)</th><th>DEMAND FACTOR</th><th>DEMAND (VA)</th></tr><tr><td>EXTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>INTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>RECEPTACLE (1st 10 k)</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>RECEPTACLE (Over 10 k)</td><td>0</td><td>0.50</td><td>0</td></tr><tr><td>AIR HANDLERS</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>ELECTRIC HEAT</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>COOLING</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>EQUIPMENT/MOTORS</td><td>900</td><td>1.00</td><td>900</td></tr><tr><td>LARGEST MOTOR</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>SHORE POWER RECPTS</td><td>158,400</td><td>0.50</td><td>79,200</td></tr><tr><td>TOTAL</td><td>159,300</td><td></td><td>80,100</td></tr></table> <table><tr><th colspan="2">PANEL SUMMARY</th></tr><tr><td>CONNECTED</td><td>664 A</td></tr><tr><td>DEMAND</td><td>334 A</td></tr><tr><td>SPARE CAPACITY</td><td>17 %</td></tr></table>												LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)	EXTERIOR LIGHTING	0	1.25	0	INTERIOR LIGHTING	0	1.25	0	RECEPTACLE (1st 10 k)	0	1.00	0	RECEPTACLE (Over 10 k)	0	0.50	0	AIR HANDLERS	0	1.00	0	ELECTRIC HEAT	0	1.00	0	COOLING	0	1.00	0	EQUIPMENT/MOTORS	900	1.00	900	LARGEST MOTOR	0	1.25	0	SHORE POWER RECPTS	158,400	0.50	79,200	TOTAL	159,300		80,100	PANEL SUMMARY		CONNECTED	664 A	DEMAND	334 A	SPARE CAPACITY	17 %
LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)																																																																
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ELECTRIC HEAT	0	1.00	0																																																																
COOLING	0	1.00	0																																																																
EQUIPMENT/MOTORS	900	1.00	900																																																																
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SPARE CAPACITY	17 %																																																																		
NOTES:																																																																			
1. SERVICE ENTRANCE RATED.																																																																			
2. PROVIDE STAINLESS STEEL (TYPE 316) ENCLOSURE.																																																																			
3. PROVIDE SHUNT-TRIP CIRCUIT BREAKER.																																																																			
4. PROVIDE 100% RATED MAIN CIRCUIT BREAKER.																																																																			
5. PROVIDE GROUND-FAULT CURRENT TRANSFORMER.																																																																			

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ADAM V. EACHES, P.E
PE No. 76151
HALL ENGINEERING GROUP
3820 GUNN HWY., SUITE 200
TAMPA FL, 33618

DRAWN BY:
CJV
CHECKED BY:
AVE
DESIGNED BY:
CVP
CHECKED BY:
AVE



SAFETY HARBOR | FL

SHEET TITLE: PANEL SCHEDULE A		TWANO.
PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO. E-10

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PANELBOARD B SCHEDULE											
VOLTAGE (L-L/L-N): 240 / 120 V			PHASE: 1		WIRES: 3		MAIN TYPE: MCB		MAIN OC DEVICE: 225 A		
BUS RATING: 225 A			MIN AIC RATING: 10,000 A			ENCLOSURE TYPE (1): NEMA 4X			MOUNTING: SURFACE		
FEED-THRU LUGS: NO			SUB-FEED LUGS: NO			ISOLATED GND BUS: NO			NEUTRAL BUS: YES		
CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO
		POLE	TRIP	A		B		TRIP	POLE		
1	SLIP 17 & 18 (2) (3)	2	30	3,600	0			20	2	SPD	2
3	"					3,600	0			"	4
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 25 & 26 (2) (3)	6
7	SLIP 19 & 20 (2) (3)	2	30			3,600	3,600			"	8
9	"			3,600	0					(SHUNT-TRIP)	10
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 27 & 28 (2) (3)	12
13	SLIP 21 & 22 (2) (3)	2	30	3,600	3,600					"	14
15	"					3,600	0			(SHUNT-TRIP)	16
17	(SHUNT-TRIP)			0	3,600			30	2	SLIP 29 & 30 (2) (3)	18
19	SLIP 23 & 24 (2) (3)	2	30			0	3,600			"	20
21	"			3,600	0					(SHUNT-TRIP)	22
23	(SHUNT-TRIP)					3,600	1,800	30	2	SLIP 31 (2) (3)	24
25	GFP2 CONTROL POWER	1	20	300	1,800					"	26
27	SPACE					-	0			(SHUNT-TRIP)	28
29	SPACE			-	-					SPACE	30
31	SPACE					-	-			SPACE	32
33	SPACE			-	-					SPACE	34
35	SPACE					-	-			SPACE	36
37	SPACE			-	-					SPACE	38
39	SPACE					-	-			SPACE	40
41	SPACE			-	-					SPACE	42
TOTAL				27,300		27,000					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	0	1.25	0
INTERIOR LIGHTING	0	1.25	0
RECEPTACLE (1st 10 k)	0	1.00	0
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	0	1.00	0
COOLING	0	1.00	0
EQUIPMENT/MOTORS	300	1.00	300
LARGEST MOTOR	0	1.25	0
SHORE POWER RECPTS	54,000	0.70	37,800
TOTAL	54,300		38,100

PANEL SUMMARY	
CONNECTED	226 A
DEMAND	159 A
SPARE CAPACITY	12 %

NOTES:
1. PROVIDE STAINLESS STEEL (TYPE 316) ENCLOSURE.
2. PROVIDE SHUNT-TRIP CIRCUIT BREAKER.
3. PROVIDE GROUND-FAULT CURRENT TRANSFORMER.

REVISIONS						ADAM V. EACHES, P.E PE No. 76151 HALL ENGINEERING GROUP 3820 GUNN HWY., SUITE 200 TAMPA FL, 33618	DRAWN BY: CJV CHECKED BY: AVE DESIGNED BY: CVP CHECKED BY: AVE  SAFETY HARBOR FL	SHEET TITLE:		TWA NO.	
DATE	BY	DESCRIPTION						PANEL SCHEDULE B			
									SAFETY HARBOR MARINA REPLACEMENT		
						SUSERS					

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FL C.O.A. #: 27620

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PANELBOARD C SCHEDULE																																																																			
VOLTAGE (L-L/L-N): 240 / 120 V			PHASE: 1		WIRES: 3		MAIN TYPE: MCB		MAIN OC DEVICE: 225 A																																																										
BUS RATING: 225 A			MIN AIC RATING: 10,000 A			ENCLOSURE TYPE (1): NEMA 4X			MOUNTING: SURFACE																																																										
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CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO																																																								
		POLE	TRIP	A		B		TRIP	POLE																																																										
1	SLIP 32 & 33 (2) (3)	2	30	3,600	0			20	2	SPD	2																																																								
3	"					3,600	0			"	4																																																								
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 40 & 41 (2) (3)	6																																																								
7	SLIP 34 & 35 (2) (3)	2	30			3,600	3,600			"	8																																																								
9	"			3,600	0					(SHUNT-TRIP)	10																																																								
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 42 & 43 (2) (3)	12																																																								
13	SLIP 36 & 37 (2) (3)	2	30	3,600	3,600					"	14																																																								
15	"					3,600	0			(SHUNT-TRIP)	16																																																								
17	(SHUNT-TRIP)			0	1,800			30	2	SLIP 44 (2) (3)	18																																																								
19	SLIP 38 & 39 (2) (3)	2	30			0	1,800			"	20																																																								
21	"			3,600	0					(SHUNT-TRIP)	22																																																								
23	(SHUNT-TRIP)					3,600	-			SPACE	24																																																								
25	GFP3 CONTROL POWER	1	20	300	-					SPACE	26																																																								
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39	SPACE					-	-			SPACE	40																																																								
41	SPACE			-	-					SPACE	42																																																								
TOTAL				23,700		23,400																																																													
<table><tr><th>LOAD CLASSIFICATION</th><th>CONNECTED (VA)</th><th>DEMAND FACTOR</th><th>DEMAND (VA)</th></tr><tr><td>EXTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>INTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>RECEPTACLE (1st 10 k)</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>RECEPTACLE (Over 10 k)</td><td>0</td><td>0.50</td><td>0</td></tr><tr><td>AIR HANDLERS</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>ELECTRIC HEAT</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>COOLING</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>EQUIPMENT/MOTORS</td><td>300</td><td>1.00</td><td>300</td></tr><tr><td>LARGEST MOTOR</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>SHORE POWER RECPTS</td><td>46,800</td><td>0.80</td><td>37,440</td></tr><tr><td>TOTAL</td><td>47,100</td><td></td><td>37,740</td></tr></table> <table><tr><th colspan="2">PANEL SUMMARY</th></tr><tr><td>CONNECTED</td><td>196 A</td></tr><tr><td>DEMAND</td><td>157 A</td></tr><tr><td>SPARE CAPACITY</td><td>13 %</td></tr></table>												LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)	EXTERIOR LIGHTING	0	1.25	0	INTERIOR LIGHTING	0	1.25	0	RECEPTACLE (1st 10 k)	0	1.00	0	RECEPTACLE (Over 10 k)	0	0.50	0	AIR HANDLERS	0	1.00	0	ELECTRIC HEAT	0	1.00	0	COOLING	0	1.00	0	EQUIPMENT/MOTORS	300	1.00	300	LARGEST MOTOR	0	1.25	0	SHORE POWER RECPTS	46,800	0.80	37,440	TOTAL	47,100		37,740	PANEL SUMMARY		CONNECTED	196 A	DEMAND	157 A	SPARE CAPACITY	13 %
LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)																																																																
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NOTES: 1. PROVIDE STAINLESS STEEL (TYPE 316) ENCLOSURE. 2. PROVIDE SHUNT-TRIP CIRCUIT BREAKER. 3. PROVIDE GROUND-FAULT CURRENT TRANSFORMER.																																																																			

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ADAM V. EACHES, P.E
PE No. 76151
HALL ENGINEERING GROUP
3820 GUNN HWY., SUITE 200
TAMPA FL, 33618

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CJV
CHECKED BY:
AVE
DESIGNED BY:
CVP
CHECKED BY:
AVE



SAFETY HARBOR | FL

SHEET TITLE: PANEL SCHEDULE C		TWANO.
PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO. E-12

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MARINA PEDESTAL SCHEDULE	
TAG	DESCRIPTION
P1	(1) 30 A, 1 PH, 125 V RECEPTACLE; NEMA L5-30, 1 HOSE BIBB, LED LIGHT, 30 mA GFPE RELAY AND SHUNT-TRIP CIRCUIT BREAKER, NEMA 3R, SS (TYPE 316) PEDESTAL, MEE - MARINA MATE SS OR ENGINEER APPROVED EQUIVALENT.
P2	(2) 30 A, 1 PH, 125 V RECEPTACLE; NEMA L5-30 (ONE RECEPTACLE PER SIDE), 2 HOSE BIBBS (ONE HOSE BIBB PER SIDE), LED LIGHT, 30 mA GFPE RELAYS AND SHUNT-TRIP CIRCUIT BREAKERS, NEMA 3R, SS (TYPE 316) PEDESTAL, MEE - MARINA MATE SS OR ENGINEER APPROVED EQUIVALENT.
NOTES: 1. RECEPTACLES SHALL BE ENCLOSED IN WET LOCATION LISTED, WHILE-IN-USE WEATHERPROOF ASSEMBLIES. 2. RECEPTACLES SHALL BE MARINE GRADE, WEATHER RESISTANT TYPE. 3. SUBMIT MARINA PEDESTALS FOR OWNER/ENGINEER REVIEW AND APPROVAL.	

REVISIONS						ADAM V. EACHES, P.E PE No. 76151 HALL ENGINEERING GROUP 3820 GUNN HWY., SUITE 200 TAMPA FL, 33618	DRAWN BY: CJV CHECKED BY: AVE DESIGNED BY: CVP CHECKED BY: AVE	 SAFETY HARBOR FL	SHEET TITLE: MARINA PEDESTAL SCHEDULE		TWANO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
											E-13

SUSERS

SDATES

STIMES

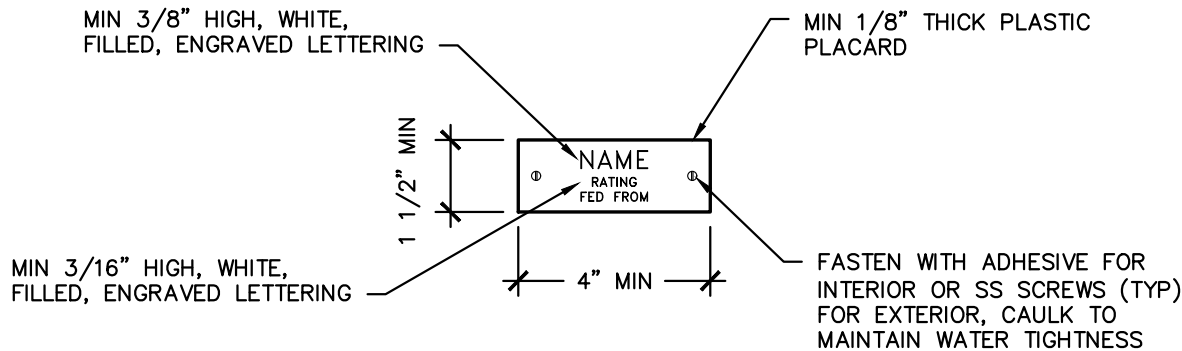
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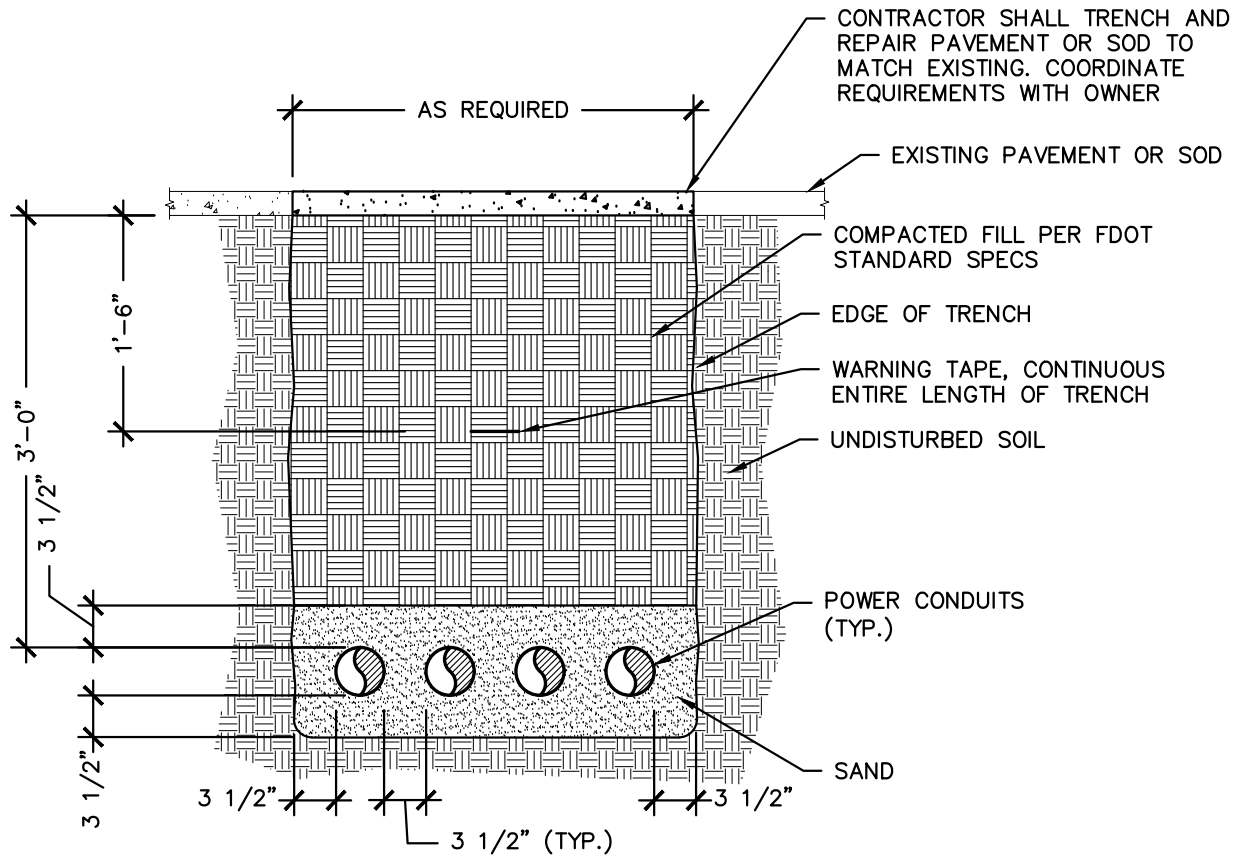


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01 **PLACARD DETAIL**
SCALE:N.T.S.



02 **CONDUIT TRENCH DETAIL**
SCALE:N.T.S.

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3820 GUNN HWY., SUITE 200
TAMPA FL, 33618

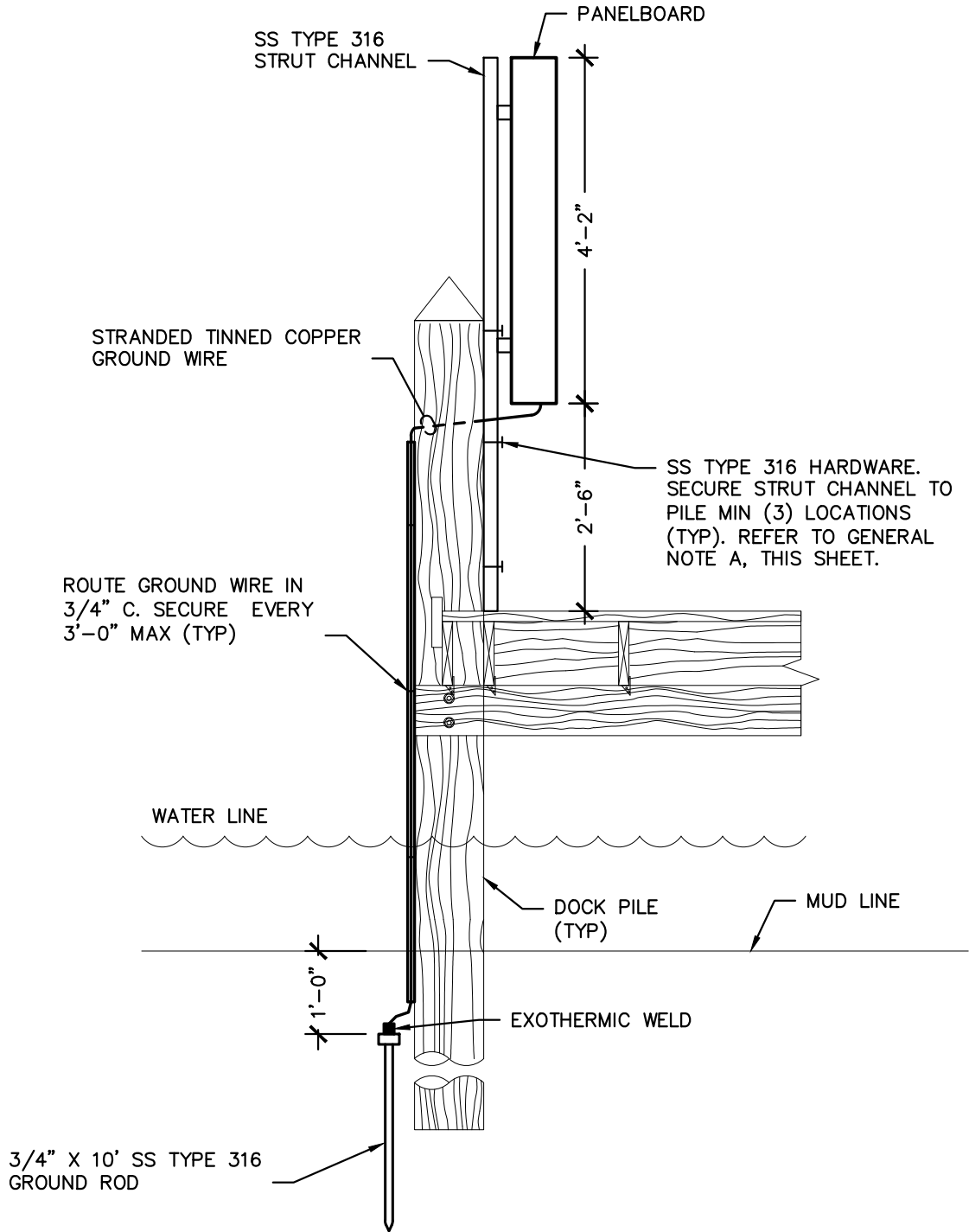
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CHECKED BY:
AVE



SAFETY HARBOR | FL

SHEET TITLE:		TWANO.
DETAILS (1 OF 3)		
PROJECT NAME:		SHEET NO.
SAFETY HARBOR MARINA REPLACEMENT		E-14

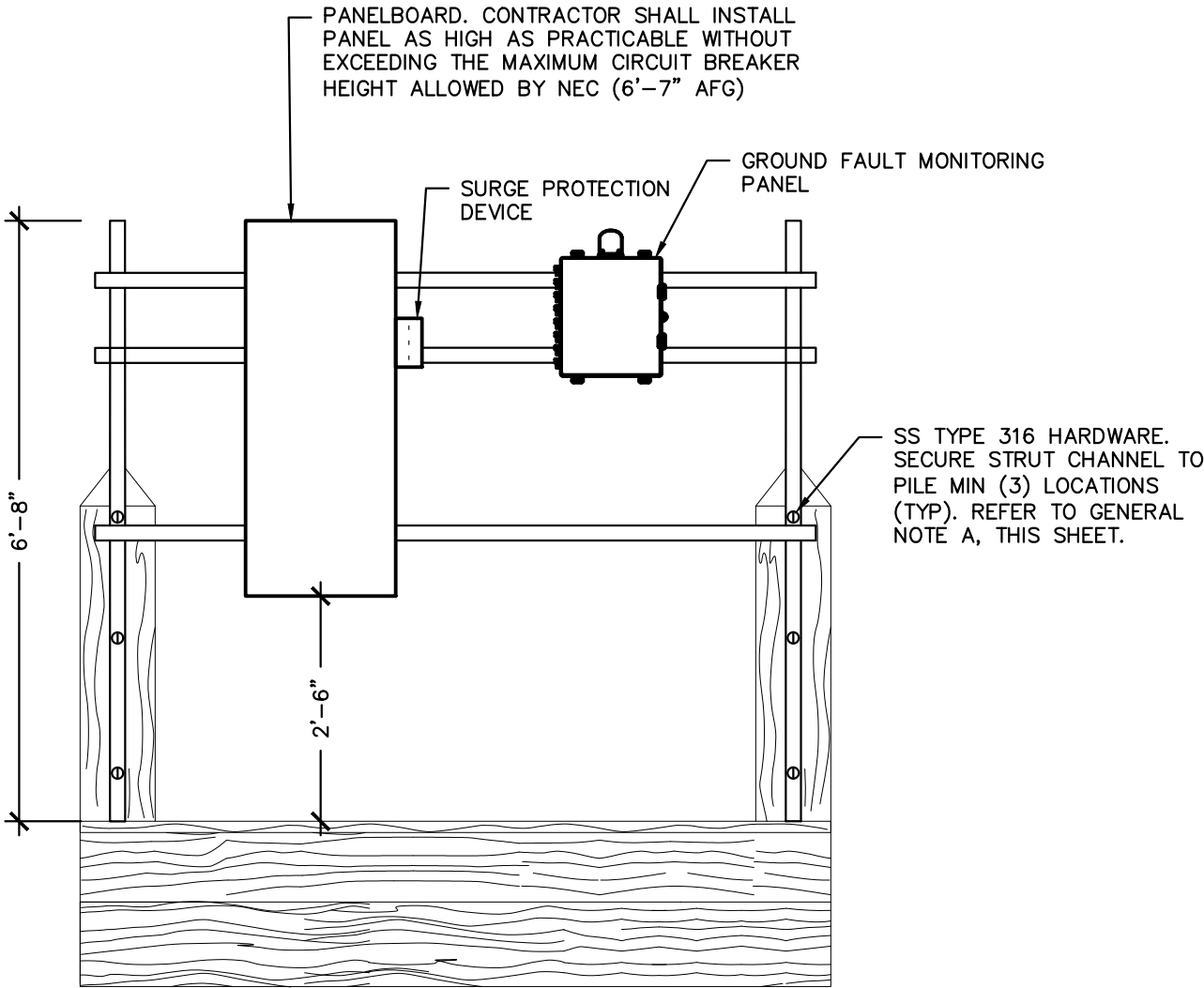
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01 PANELBOARDS "B"&"C" TYPICAL GROUNDING DETAIL
SCALE:NONE

DRAWING GENERAL NOTES

A. CONTRACTOR SHALL SUBMIT PANELBOARD/RACK INSTALLATION PLAN TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION. INSTALLATION PLAN SHALL SPECIFY FASTENER TYPE, SPACING, AND LOCATION.



02 DOCK MOUNTED EQUIPMENT RACK
SCALE:NONE

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ADAM V. EACHES, P.E
PE No. 76151
HALL ENGINEERING GROUP
3820 GUNN HWY., SUITE 200
TAMPA FL, 33618

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CHECKED BY:
AVE
DESIGNED BY:
CVP
CHECKED BY:
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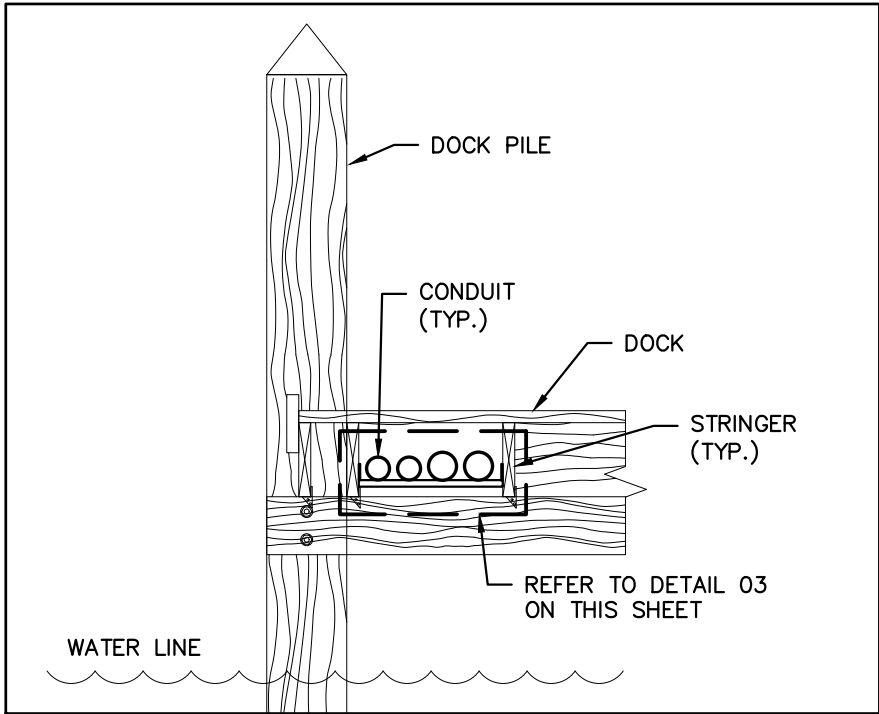


SAFETY HARBOR FL

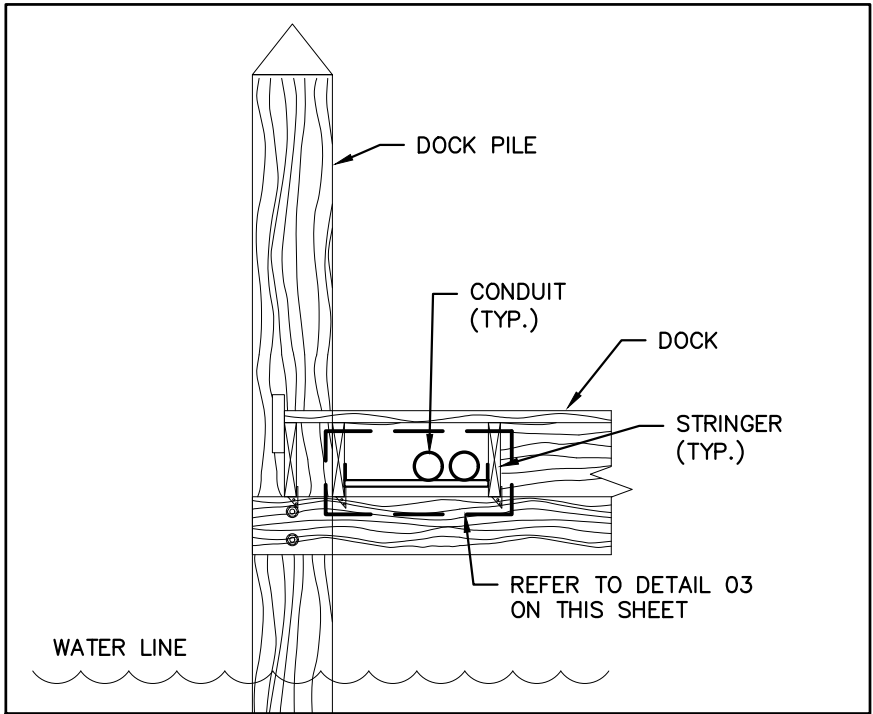
SHEET TITLE: DETAILS (2 OF 3)	TWANO.
PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT	SHEET NO. E-15

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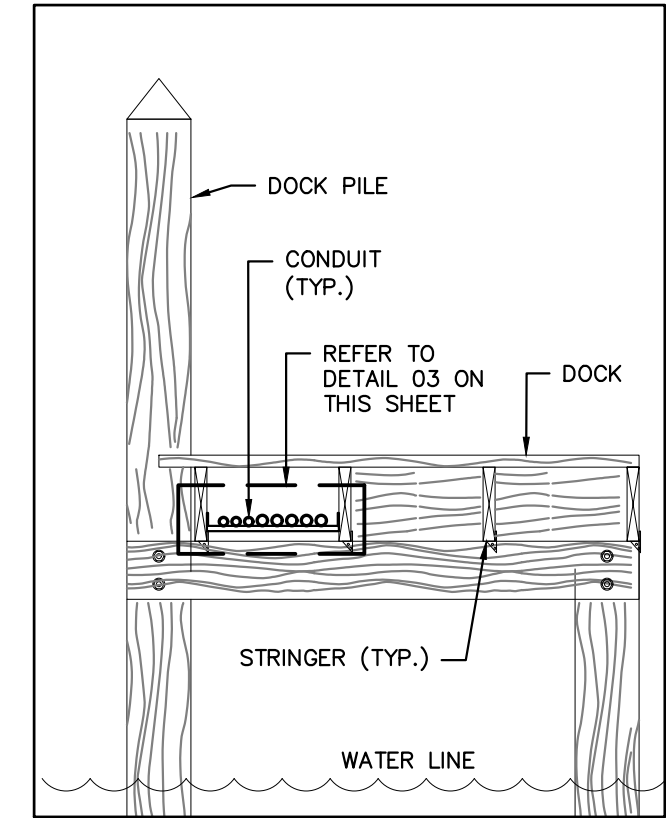
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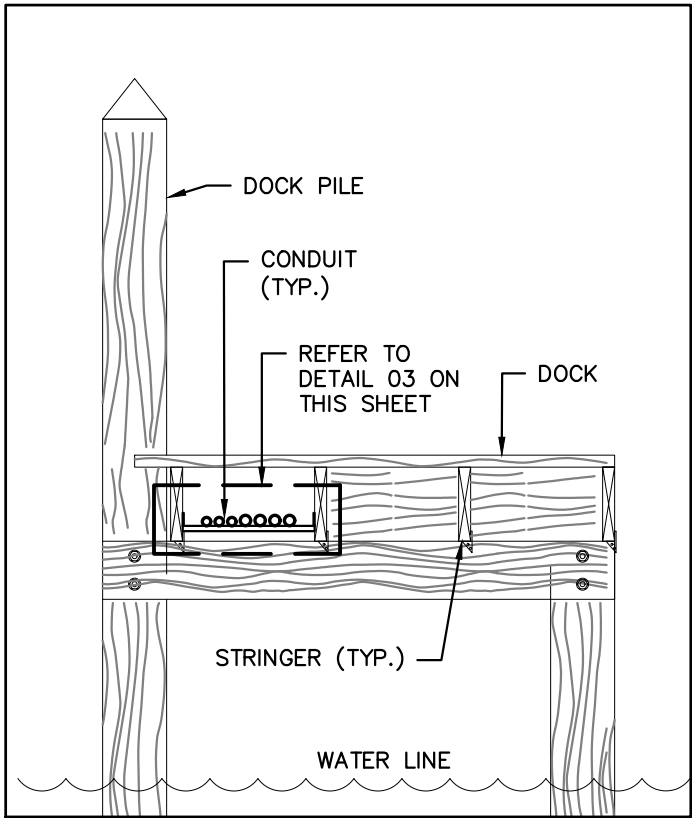
01 CONDUIT MOUNTING DETAIL
SCALE:NONE



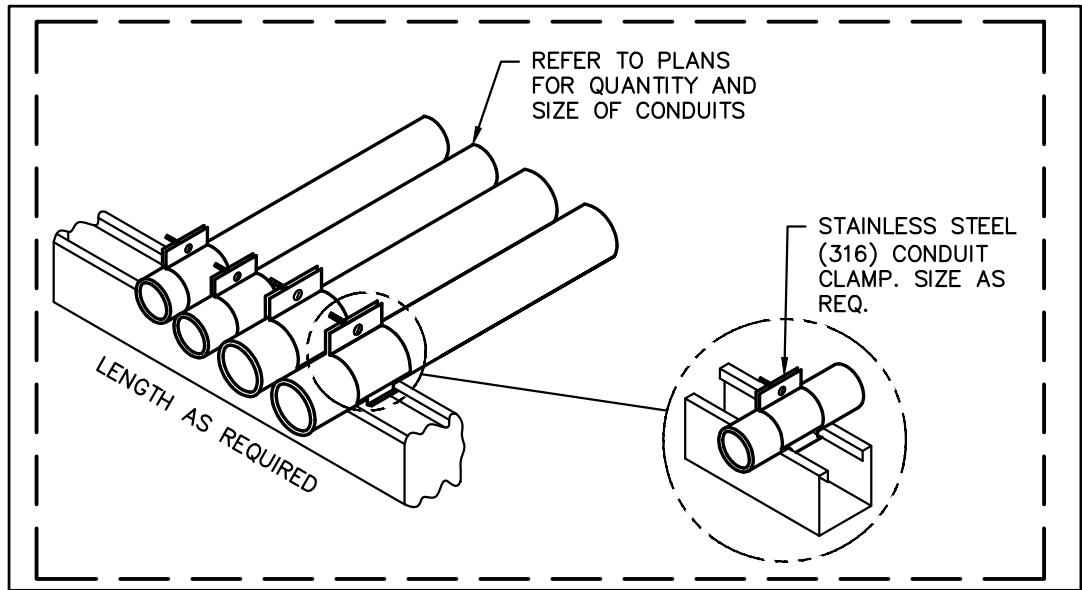
02 CONDUIT MOUNTING DETAIL
SCALE:NONE



04 CONDUIT MOUNTING DETAIL
SCALE:N.T.S.



05 CONDUIT MOUNTING DETAIL
SCALE:N.T.S.



03 CONDUIT SUPPORT DETAIL
SCALE:NONE

- ### DRAWING GENERAL NOTES
- A. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
 - B. MAINTAIN MINIMUM 12" SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES/INFRASTRUCTURE.
 - C. ALL EXPOSED CONDUITS SHALL BE UV RESISTANT, SCHEDULE 80 PVC.
 - D. ALL FASTENERS, ANCHORS, STRAPS, HARDWARE, STRUT-CHANNEL, ETC. SHALL BE STAINLESS STEEL (TYPE 316).
 - E. CONDUITS ROUTED UNDER THE DOCK SHALL BE SECURELY FASTENED TO THE STRUCTURE MAXIMUM 4' SPACING USING STAINLESS STEEL (TYPE 316) COMPONENTS AND HARDWARE. CONTRACTOR SHALL SUBMIT CONDUIT SUPPORT LAYOUT AND ASSOCIATED HARDWARE DESIGN AND DATA SHEET TO OWNER/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
 - F. FASTEN CHANNEL STRUT TO SIDE OF STRINGERS.
 - G. ALL STRUT CHANNEL SHALL BE MINIMUM 1 5/8" X 1 5/8".

TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES. THIS DOCUMENT IS VALID FOR 12 MONTHS FROM DATE OF ENGINEER'S SIGNATURE AND SEAL. HALL ENGINEERING GROUP, INC. RETAINS INTELLECTUAL AND PHYSICAL RIGHTS TO THIS DOCUMENT AND ITS CONTENT AND PROHIBITS ITS PUBLISHING, DISCLOSURE OR REPRODUCTION WITHOUT CONSENT.



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SAFETY
HARBOR



FL

PROJECT NAME:

DETAILS (3 OF 3)

SAFETY HARBOR MARINA REPLACEMENT

TWANO.

SHEET NO.

E-16

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

COMPLIANCE NOTES

COMPLIANCE NOTES CONTINUED

FLORIDA ADMINISTRATIVE CODE: 61G15-32.004

SCOPE OF WORK

INSTALLATION OF A NEW CLASS 1 MANUAL DRY STANDPIPE SYSTEM TO REPLACE AN EXISTING ON A REPLACED DOCK, DESIGNED IN COMPLIANCE WITH THE APPLICABLE NFPA STANDARDS LISTED WITHIN THESE DOCUMENTS.

ACCEPTANCE TEST CRITERIA

SHALL COMPLY WITH NFPA-14. SPRINKLER SYSTEM SHALL BE PROPERLY INSPECTED AND MAINTAINED IN ACCORDANCE WITH NFPA-25 STANDARD FOR INSPECTION, TESTING, AND MAINTENANCE OF WATER BASED SYSTEM.

HAZARD CLASSIFICATION

CLASSIFICATION: ORDINARY HAZARD (GROUP 1 AND GROUP 2).

APPLICABLE NFPA STANDARDS TO BE APPLIED

FLORIDA BUILDING CODE (8TH EDITION)
FLORIDA FIRE PREVENTION CODE (8TH EDITION)
NFPA 303
NFPA 13
NFPA 14
NFPA 24
NFPA 25

FIRE ALARM SYSTEM

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

POINT OF SERVICE

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA

ORDINARY HAZARD (GROUP 2): MARINA / DOCK

DESIGN APPROACH

MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PER NFPA-14 15.5.6 WITH FULL WORKING SHOP DRAWINGS.

CHARACTERISTICS OF THE WATER SUPPLY TO BE USED

STREET MAIN IS CIRCULATING. MINIMUM DURATION OF 60-90 MINUTES.

FLOW TEST DATA:

TO BE PREFORMED BY CONTRACTOR, UPON REQUEST BY AHJ.

VALVING AND ALARM REQUIREMENTS TO MINIMIZE POTENTIAL FOR IMPAIRMENTS AND UNRECOGNIZED FLOW OF WATER:

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

MICROBIAL INDUCED CORROSION (MIC)

WATER SOURCE IS FROM EXISTING PUBLIC UTILITY WATER MAIN. THERE ARE NO KNOWN CONDITIONS PRESENT THAT CONTRIBUTE TO MICROBIOLOGICAL CORROSION (M.I.C.). CONTRACTOR SHALL REEVALUATE WATER SUPPLY AND ENVIRONMENTAL CONDITIONS FOR EXISTENCE OF MICROBES AND CONDITIONS THAT CONTRIBUTE TO M.I.C. PRIOR TO START OF CONSTRUCTION. WHERE CONDITIONS ARE FOUND THAT CONTRIBUTE TO M.I.C. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER.

BACKFLOW PREVENTION AND METERING SPECIFICATIONS

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS

ALL NEW YARD AND INTERIOR FIRE PROTECTION EQUIPMENT SHALL BE UL LISTED AND/OR FM APPROVED.

FIRE PUMP REQUIREMENT

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

WATER STORAGE TANK REQUIREMENT

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

OWNER’S CERTIFICATE FOR STORAGE FACILITIES

PROPERTY IS NOT A STORAGE OCCUPANCY. OWNER’S CERTIFICATE IS NOT REQUIRED.

FIRE PROTECTION SPECIFICATIONS		FIRE PROTECTION SPECIFICATIONS CONTINUED	
1.0 GENERAL PROVISIONS		3.0 FIRE PROTECTION VALVES AND ACCESSORIES	
1.1	PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE AND PROPERLY OPERATING FIRE PROTECTION SYSTEM.	3.1	BALL VALVE: TWO INCH (2") AND SMALLER: STANDARD FULL PORT BALL VALVE WITH STAINLESS STEEL BODY CONFORMING TO ASTM584, CHROME PLATED BRASS BALL AND STAINLESS STEEL STEM WITH TFE SEAL RATED FOR 365PSI. ACCEPTABLE MANUFACTURERS, VICTAULIC SERIES 728.
1.2	CODES AND STANDARDS: THE FIRE SPRINKLER PROTECTION SYSTEMS INSTALLATION, FLUSHING AND TESTING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 14, AND ALL LOCAL CODES HAVING JURISDICTION.	3.2	BUTTERFLY VALVE: TWO INCH (2") AND LARGER IN LIEU OF GATE VALVE: 300 PSI GROOVED ENDS. STAINLESS STEEL BODY, ASTM A536 GRADE 65-45-12; DUCTILE IRON DISC, ASTM A536 WITH ELECTROLESS NICKEL COATING CONFORMING TO ASTM B-733; STAINLESS STEEL STEM AND HAND WHEEL OPERATED WITH WEATHER PROOF ACTUATOR RATED TO 300PSI. (STEM SHALL BE OFFSET FROM THE DISC CENTERLINE TO PROVIDE COMPLETE 360-DEGREE CIRCUMFERENTIAL SEATING ON NITRILE SEAT.) VICTAULIC SERIES 705 AND SERIES 765
1.3	PIPE THREAD PATTERN: ALL THREADS SHALL BE IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT SPECIFICATIONS AND NFPA 1963.	3.3	CHECK VALVE: TWO INCH (2") - TWELVE INCH (12"), STAINLESS STEEL BODY, ASTM A-536, GRADE 65-45-12, MINIMUM OF 250 PSI WITH SINGLE DISC MECHANISM INCORPORATING A SPRING ASSISTED FEATURE FOR NON-SLAMMING OPERATION AND CAN BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY. VICTAULIC SERIES 717, AND SERIES 717H.
1.4	UL/FM APPROVAL: ALL EQUIPMENT, VALVES, COUPLINGS, HANGERS AND DEVICES SHALL BE APPROVED BY UNDERWRITERS' LABORATORY (UL) OR FACTORY MUTUAL (FM) FOR USE IN FIRE PROTECTION SERVICES.	3.3	CHECK VALVE: TWO INCH (2") - TWELVE INCH (12"), STAINLESS STEEL BODY, ASTM A-536, GRADE 65-45-12, MINIMUM OF 250 PSI WITH SINGLE DISC MECHANISM INCORPORATING A SPRING ASSISTED FEATURE FOR NON-SLAMMING OPERATION AND CAN BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY. VICTAULIC SERIES 717, AND SERIES 717H.
1.5	LICENSURE: THE FIRE PROTECTION SYSTEMS SHALL BE INSTALLED BY A STATE CERTIFIED FIRE PROTECTION CONTRACTOR.	3.4	HOSE VALVE: 2.5"x2.5"; GUARDIAN 5000 SERIES OR EQUAL
1.6	ALL FIRE PROTECTION WORK SHALL BE DONE IN A NEAT AND WORKMAN-LIKE MANNER.	3.5	FIRE DEPARTMENT CONNECTION:
1.7	CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND FEES, ETC., REQUIRED FOR THE EXECUTION OF THIS WORK.		1) SIAMESE CONNECTION: BRASS BODY, ANGLE BODY, TWO-WAY, SIAMESE CONNECTION. CONNECTION SIZES SHALL BE 4" OUTLET AND TWO (2) AND 2½" FEMALE INLETS, HAVING NH STANDARD THREADS, FOR THE CONNECTION SIZE INDICATED, AS SPECIFIED IN NFPA 1963. EACH INLET SHALL HAVE A CLAPPER VALVE, AND PLUG AND CHAIN. WHEN REQUIRED PROVIDE AN 18" HIGH CHROME PLATED BRASS SLEEVE AND CHROME PLATED BRASS SIDEWALK PLATE, WITH WORDS "STANDPIPE - FIRE DEPT CONNECTION" OR "AUTO SPKR - FIRE DEPT CONNECTION," OR "AUTO SPKR & STANDPIPE - FIRE DEPT CONNECTION" IN RAISED LETTERS. ACCEPTABLE MANUFACTURER OF FIRE DEPARTMENT CONNECTION IS GUARDIAN FIRE EQUIPMENT, INC.
1.8	CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACE DAMAGED EQUIPMENT AND/OR MATERIAL.		
2.0 BASIC MATERIALS AND METHODS			
2.1	ALL PIPING MATERIALS SHALL HAVE A CORROSION RESISTANCE RATING (CFR) OF 1.0 OR GREATER.		
2.2	HANGERS: ALL HANGER SPACING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA-13. HANGERS TO BE PROTECTED FROM CORROSION (316 STAINLESS STEEL)		
2.3	HYDROSTATIC TESTS: ABOVE GROUND AND BELOW GROUND PIPING SYSTEMS SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI PRESSURE OR AT 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF 2 HOURS. THE TEST PRESSURE SHALL BE READ FROM A GAUGE LOCATED AT THE LOW ELEVATION POINT OF THE INDIVIDUAL SYSTEM OR PORTION OF THE SYSTEM BEING TESTED. THE SPRINKLER PIPING SHALL NOT HAVE LEAKAGE EXCEEDING THE AMOUNTS SPECIFIED IN NFPA 24. LEAKAGE QUANTITIES SHALL BE DETERMINED BY PUMPING AT THE SPECIFIED TEST PRESSURE FROM A CALIBRATED CONTAINER. REPAIR LEAKING JOINTS AND RETEST AS NECESSARY UNTIL ALL SYSTEMS HAVE BEEN TESTED. TEST THE PIPING BETWEEN THE CHECK VALVE IN THE FIRE DEPARTMENT INLET PIPE AND THE OUTSIDE CONNECTION THE SAME AS THE BALANCE OF THE SYSTEM.		

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DATE	BY	DESCRIPTION		DATE	BY				FIRE PROTECTION SPECIFICATIONS		
									PROJECT NAME:		
									SAFETY HARBOR MARINA REPLACEMENT		
									FP-02		
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GENERAL NOTES

GENERAL NOTES CONTINUED

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13, 14, AND STATE FIRE PREVENTION CODE.
2. FINAL INSPECTION AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION (SAFETY HARBOR FIRE DEPARTMENT).
3. CONTRACTOR TO SUBMIT A SET OF WORKING PLANS AS DEFINED IN NFPA-13 TO ENGINEER FOR REVIEW PRIOR TO SUBMITTING WORKING PLANS TO AUTHORITY HAVING JURISDICTION (SAFETY HARBOR FIRE DEPARTMENT) FOR FINAL APPROVAL.
4. ALL MATERIAL SHALL BE OF APPROVED QUALITY AND THE WORK SHALL BE DONE IN A THOROUGH AND WORKMANLIKE MANNER. THE WORK, MATERIALS AND TEST SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NFPA REQUIREMENTS.
5. PIPE ROUTING SHOWN IS SCHEMATIC ONLY. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE ANY ADDITIONAL OFFSETS, ETC. REQUIRED FOR A COMPLETE AND NFPA COMPLIANT INSTALLATION. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SITE TO ENSURE SPRINKLER OPERATION IS NOT OBSTRUCTED AND SPACING IS MAINTAINED PER NFPA-13.
6. PROVIDE A PERMANENTLY ATTACHED NAME TAG ATTACHED TO THE FIRE DEPARTMENT CONNECTION, STATING NEW AND EXISTING COVERAGE AREAS. METAL (RED WITH WHITE LETTERS)
7. COORDINATE PIPING WITH ALL OTHER TRADES (PANELS, UTILITIES, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.
8. FIRE PROTECTION SYSTEM ACCEPTANCE TESTS SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE ASSOCIATED NFPA CODES.
9. FIRE PROTECTION SYSTEM ACCEPTANCE TESTS SHALL BE WITNESSED BY AUTHORITY HAVING JURISDICTION.
10. CONTRACTOR SHALL PROVIDE FLUSHING CONNECTIONS AT THE END OF ALL MAINS.
11. PIPE SUPPORTS: HANGERS, CLAMPS, RODS AND OTHER ACCESSORIES OF AN APPROVED TYPE AND IN SUFFICIENT NUMBER TO PROPERLY SUPPORT ALL PIPING SHALL BE FURNISHED AND INSTALLED.
12. CONTRACTOR SHALL PROVIDE THE OWNER WITH A THREE RING BINDER OF ALL LITERATURE AND INSTRUCTIONS AS PROVIDED BY THE MANUFACTURER DESCRIBING PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND DEVICES INSTALLED, A COPY OF NFPA-25 "STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS", AND THE APPROPRIATE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S), COMPLETED AND SIGNED, AS INDICATED IN NFPA-13.

13. CONTRACTOR SHALL SUBMIT HANGAR INSTALLATION PLAN TO ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.
14. COORDINATE FIRE PROTECTION PIPING WITH ALL OTHER TRADES. PROVIDE OFFSETS AS REQUIRED FOR THE INSTALLATION AS REQUIRED. FINAL FIELD COORDINATION BETWEEN ALL TRADES SHALL BE COMPLETED PRIOR TO START OF CONSTRUCTION.
15. PROVIDE ACCESS PANELS FOR ALL VALVES IN NON-ACCESSIBLE LOCATIONS.
16. ALL HANGERS, CLAMPS, FASTENERS, AND HARDWARE SHALL BE 316 STAINLESS STEEL.
17. PROVIDE DIALECTIC SEPARATION AS REQUIRED TO PREVENT DISSIMILAR METAL/ GALVANIC CORROSION IN ALL MATERIALS. TWO MATERIALS WITH KNOWN POTENTIAL FOR GALVANIC ACTION SHALL NOT BE USED IN CONNECTION TO ONE ANOTHER..

PIPE MATERIAL SPECIFICATION

LOCATION USED	MATERIAL
UNDERGROUND	DR14 (BLUE BRUTE)
IN-BUILDING RISER	NA
FIRE RISER	NA
STANDPIPE	FM APPROVED, DR9 HDPE, UV RESISTANT, 250 PSI, EQUAL TO JM EAGLE
COMMERCIAL	NA
RESIDENTIAL	NA
EXTERIOR / DRY	FM APPROVED, DR9 HDPE, UV RESISTANT, 250 PSI, EQUAL TO JM EAGLE

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SHEET TITLE:

FIRE PROTECTION GENERAL NOTES

PROJECT NAME:

SAFETY HARBOR MARINA REPLACEMENT

TWA NO.

SHEET NO.

FP-03

FIRE PROTECTION LEGEND	
SYMBOL	DESCRIPTION
	CONTROL VALVE WITH TAMPER SWITCH
	OS&Y VALVE WITH TAMPER SWITCH
	CHECK VALVE
	FIRE DEPARTMENT CONNECTION – SIAMESE
	FLOW SWITCH
	CABINET WITH 2i” FDV, 1i” REDUCER, CAP, AND CHAIN
	STANDPIPE WITH FIRE DEPARTMENT VALVE
	STANDPIPE, FLOOR CONTROL VALVE, INSPECTOR’S TEST, AND DRAIN RISER
	PIPE CONTINUATION
	PIPE UP
	PIPE DOWN
	FIRE RISER
	ENDCAP WITH FLUSHING CONNECTION
	AREA OF REVISION
	HYDRAULIC REFERENCE NODE
	NEW SPRINKLER PIPING
	NEW SPRINKLER MAIN
	NEW UNDERGROUND FIRE MAIN
	NEW STANDPIPE PIPING
EC	EXTENDED COVERAGE
FC	FLUSHING CONNECTION
FCV	FLOOR CONTROL VALVE
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
SIV	STANDPIPE ISOLATION VALVE
	REVISION REFERENCE

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				FIRE PROTECTION LEGEND	
									PROJECT NAME:	SHEET NO.
									SAFETY HARBOR MARINA REPLACEMENT	FP-04

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THERE IS AN EXISTING FIRE HYDRANT ACROSS FROM EXISTING AND PROPOSED FDC APPROXIMATELY 100' AWAY.

NEW FDC TO REPLACE EXISTING IN SIMILAR LOCATION, EXTENDED OVER WESTWARD AS REQUIRED TO BE WITHIN 100' OF EXISTING FIRE HYDRANT ACROSS THE STREET. FIELD COORDINATE FINAL PLACEMENT WITH AHJ (SAFETY HARBOR FIRE)

NEW FDC SERVING NEW STANDPIPE SYSTEM, COORDINATE FINAL LOCATION WITH HARBOR MASTER AND FIRE MARSHAL. PROVIDE PLACARD STATING AREAS SERVED AND PRESSURE REQUIRED AT FLOW PER NFPA-14 15.4.2.3.3 AND 15.5.4.2.3.4.

FIRE PROTECTION PIPE SHALL BE SECURED / HUNG IN THE MOST EAST BAY WITH POTABLE, AWAY FROM ELECTRICAL, COORDINATE WITH ELECTRICAL WORK AND STRUCTURAL PLANS.

NEW 5" STANDPIPE (4.25" ID)

NEW STAND PIPE HOSE CONNECTIONS SHALL BE SPACED A MAXIMUM OF 150' PER NFPA 14 15.5.1.2.1 AND 15.5.1.2.2

CONFIRM HOSE CONNECTION SIZE WITH LOCAL AHJ (SAFETY HARBOR FIRE DEPARTMENT) (TYP.)

3" TAP (2.68" ID) FROM 5" MAIN TO 2.5" FIRE DEPARTMENT VALVE HOSE CONNECTION, PROVIDE WITH CAP AND CHAIN(TYP.)

COORDINATE LOCATION OF FIRE PROTECTION WITH ELECTRICAL WORK UNDER CENTER OF DOCK BAY. ENSURE 12" MINIMUM BETWEEN UTILITIES.

FIRE PROTECTION FLOOR PLAN
N.T.S. 23.0141



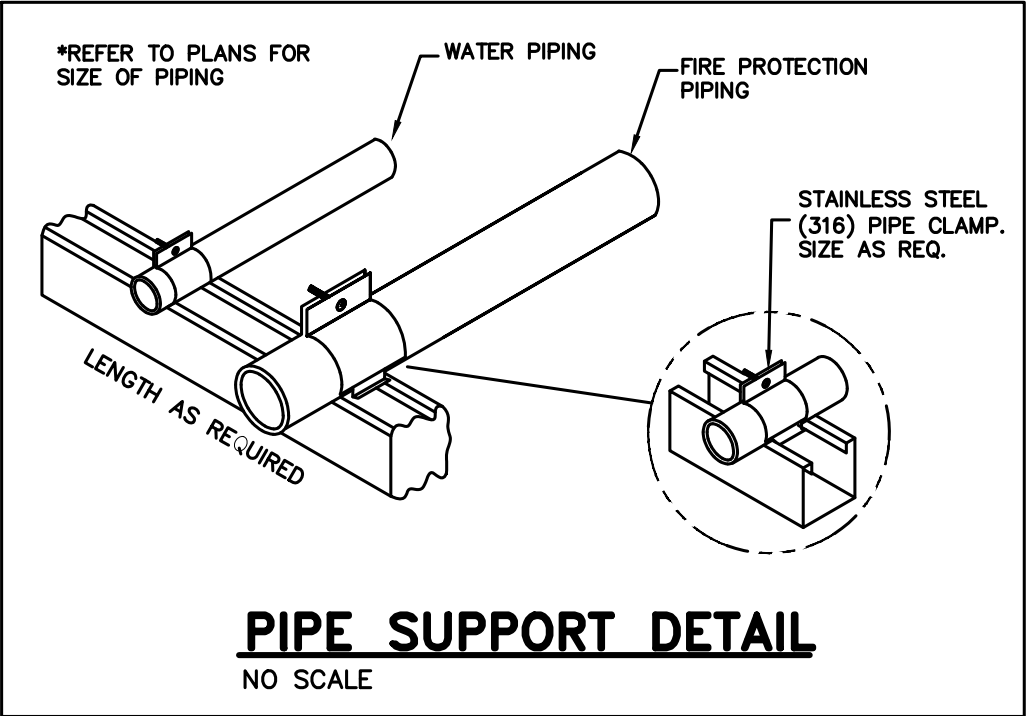
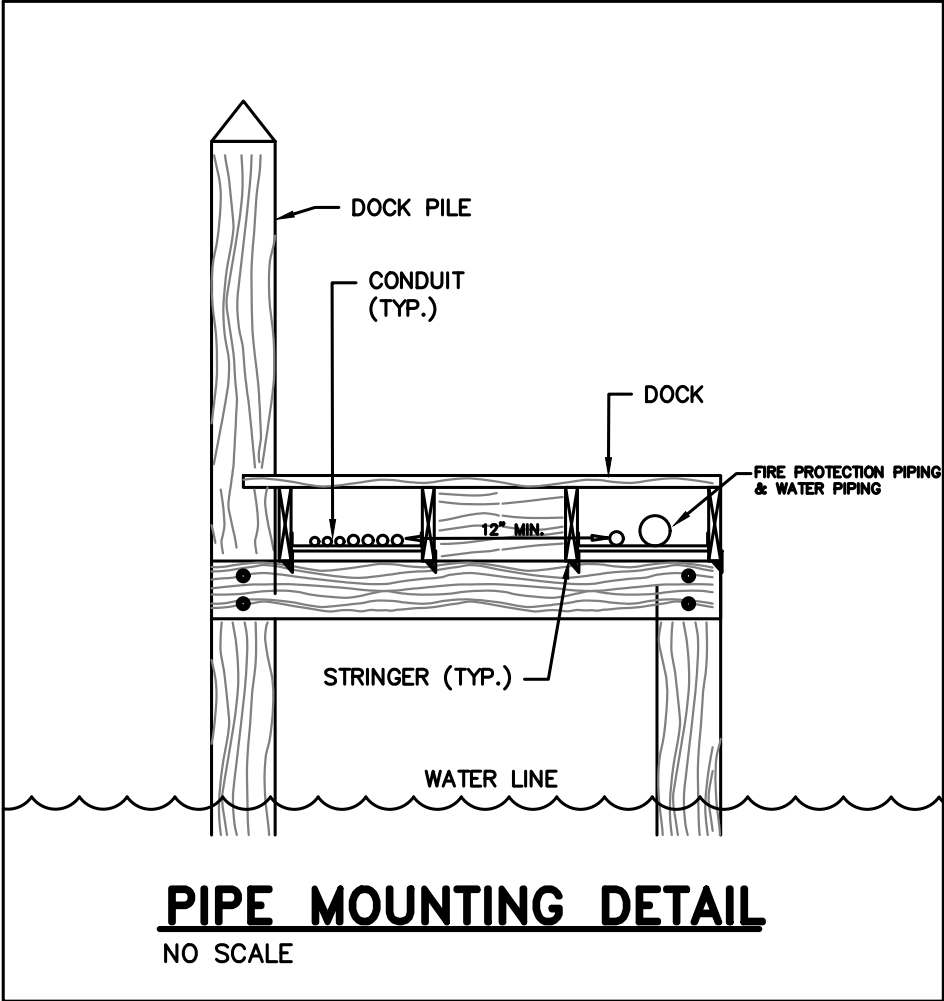
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PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		FP-05



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PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		FP-06

PLUMBING LEGEND		
DESCRIPTION	ABBREV.	SYMBOL
SANITARY PIPING	SAN	_____
VENT PIPING	V	- - - - -
COLD WATER PIPING	CW	_____
EXISTING PIPING TO REMAIN		///
EXISTING PIPING TO BE REMOVED		x x x x x
HOSE BIBB	HB	HB + ●
TEE UP		○
TEE DOWN		⊖
90° UP		○
90° DOWN		G
LEAD FREE BALL VALVE	BV	⋈

MATERIAL SPECIFICATIONS:

1. DOMESTIC COLD WATER PIPING AND SOLVENT FITTINGS SHALL BE CPVC. ALL AREAS EXPOSED TO SUNLIGHT SHALL BE INSULATED WITH A UV STABLE INSULATION OR CONDUIT. FIELD COORDINATE AREAS OF UV EXPOSURE.
- ALL PIPING SHALL BE INSTALLED AND SUPPORTED WITH HANGERS COMPLIANT WITH MANUFACTURER’S INSTALLATION INSTRUCTIONS AND CODES. SUBMIT HANGER INSTALLATION PLAN TO ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.

PLUMBING FIXTURE SCHEDULE

HB: HOSE BIBB – STAINLESS STEEL HOSE BIBB EQUALS TO SSHB5205. SEE PEDESTAL MANUFACTURER DOCUMENTS FOR DETAILS. 3/4”CW. HB TO BE INSTALLED IN UTILITY PEDESTAL. (2) PER PEDESTAL UNLESS SHOWN AS (1).

PLUMBING GENERAL NOTES	
● ALL PLUMBING WORK SHALL MEET ALL THE REQUIREMENTS OF THE "FLORIDA BUILDING CODE, PLUMBING – 8TH EDITION (2023)". ● REVIEW PLANS OF ALL TRADES PRIOR TO BIDDING AND INSTALLATION TO INCLUDE ALL PLUMBING FOR COMPLETE SYSTEMS SHOWN ON THE PLANS AND AS REQUIRED. ● COORDINATE WITH OTHER TRADES TO PREVENT INTERFERENCE. ● ALL CHANGES SHALL BE APPROVED BY THE ENGINEER. ● COORDINATE WITH OTHER TRADE DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES AND EQUIPMENT SUPPLIES. ● THE PLUMBING SUBCONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES, UNLESS NOTED OTHERWISE. ● THE PLUMBING SUBCONTRACTOR SHALL INSTALL AND MAKE ALL PLUMBING CONNECTIONS TO OWNER FURNISHED EQUIPMENT. ● VERIFY MOUNTING HEIGHT AND WATER CONNECTION SIZES TO ALL PLUMBING FIXTURES PRIOR TO ROUGH-IN. ● ENSURE ALL COLD WATER PIPING CONNECTIONS TO FIXTURES AND EQUIPMENT ARE PROPERLY CONNECTED PER CODE AND INDUSTRY STANDARDS, EVEN IF SOME FITTINGS AND CONNECTIONS ARE NOT SHOWN FOR A COMPLETE AND FUNCTIONAL SYSTEM. ● VERIFY LOCATION OF EXISTING WATER SERVICE. ● THE CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING NECESSARY TO INSTALL ANY PART OF THIS WORK. USE NEW MATERIALS OF THE SAME TYPE AS THOSE REMOVED FOR PATCHES, AND REFINISH THE PATCHED SURFACE TO MATCH THE EXISTING ADJACENT AREAS. THE STRUCTURAL INTEGRITY OF ALL STRUCTURE AND STRUCTURAL MEMBERS MUST NEVER BE COMPROMISED OR MODIFIED BY ANY CUTTING OR PATCHING. ● IT IS IN THE INTENT OF THESE DRAWINGS TO COVER ALL WORK AND MATERIAL FOR A FIRST CLASS INSTALLATION. ANY EQUIPMENT, PLUMBING FIXTURE, TRIM HARDWARE AND/OR DEVICES USUALLY UTILIZED IN THE CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THESE DRAWINGS, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK (AS DETERMINED BY THE ENGINEER) SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF HIS TOTAL WORK. ● ALL HANGERS, CLAMPS, FASTENERS, AND HARDWARE SHALL BE 316 STAINLESS STEEL.	

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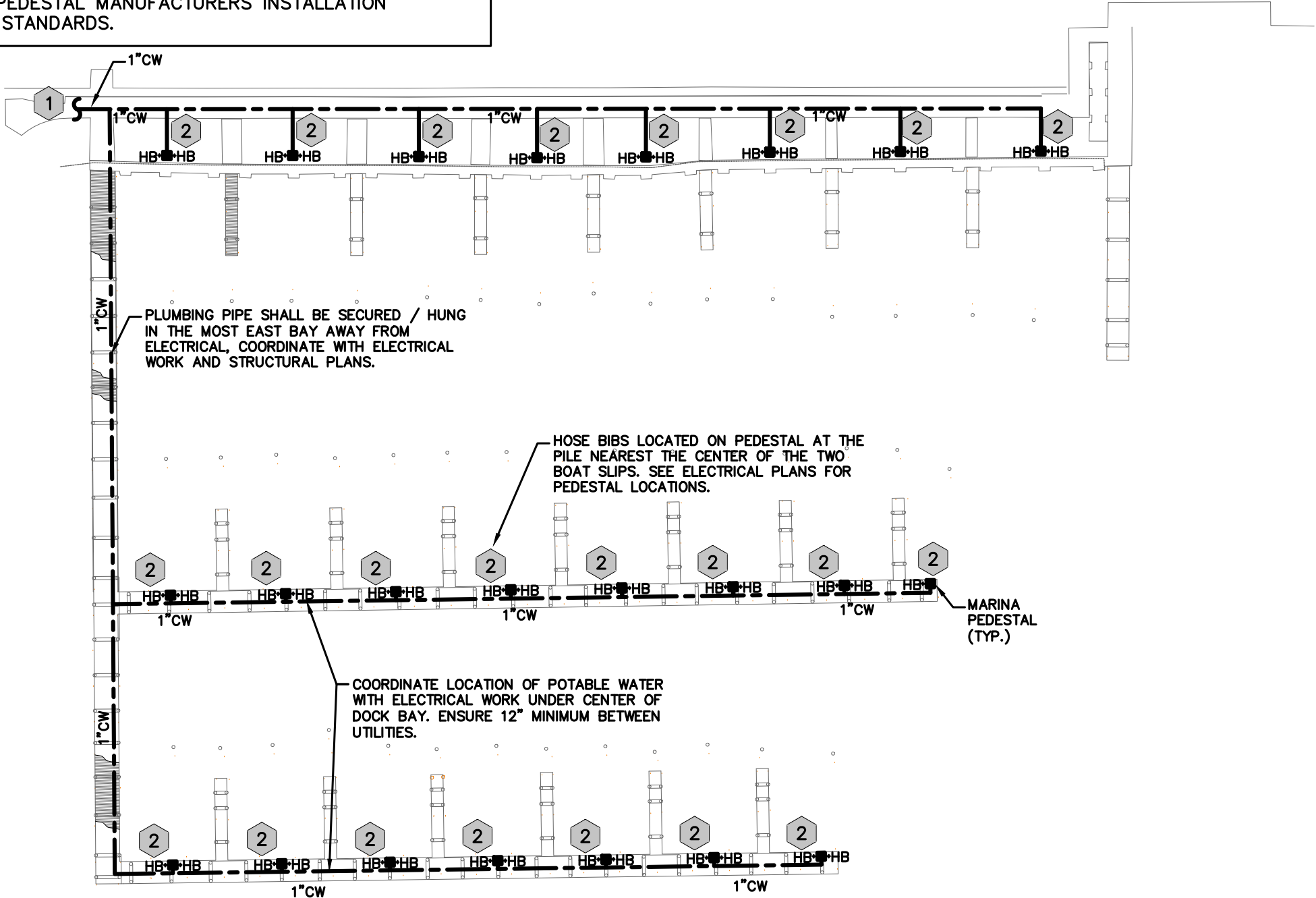
SHEET TITLE:	PLUMBING NOTES, LEGEND, AND SCHEDULE	TWA NO.
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		P-01

CONSTRUCTION NOTES:

- 1

CONTRACTOR TO FIELD LOCATE AND CONNECT NEW 1" CW LINE TO NEAREST EXISTING WATER LINE.
- 2

1" CW OVER AND TO HOSE BIBB(S) AT PEDESTAL. SEE ELECTRICAL PLANS FOR PEDESTAL SPECIFICATION AND DETAILS. HOSE BIBS TO BE INSTALLED ON OPPOSITE SIDES OF PEDESTAL PARALLEL TO DOCK AND PER PEDESTAL MANUFACTURERS INSTALLATION GUIDELINES AND STANDARDS.



WATER FLOOR PLAN

N.T.S

23.0141



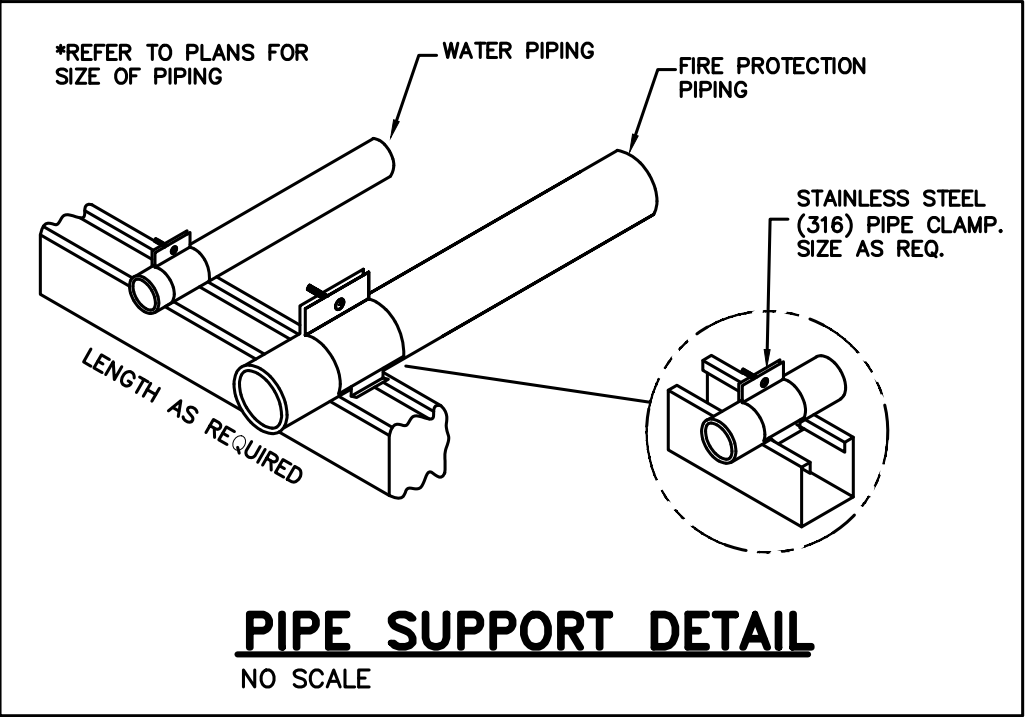
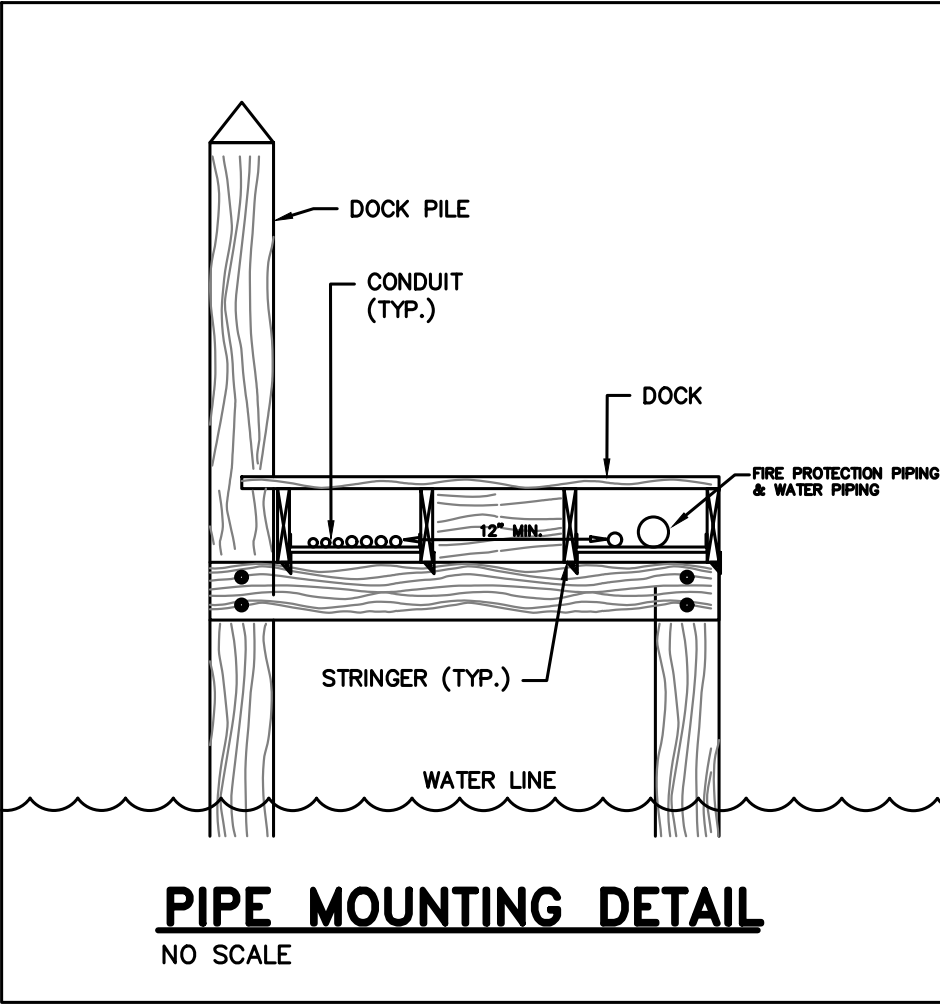
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SHEET TITLE:	PLUMBING FLOOR PLAN	TWA NO.
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		P-02



REVISIONS					
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