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NOT FOR CONSTRUCTION.**

CITY OF PALM COAST

CONTRACT PLANS

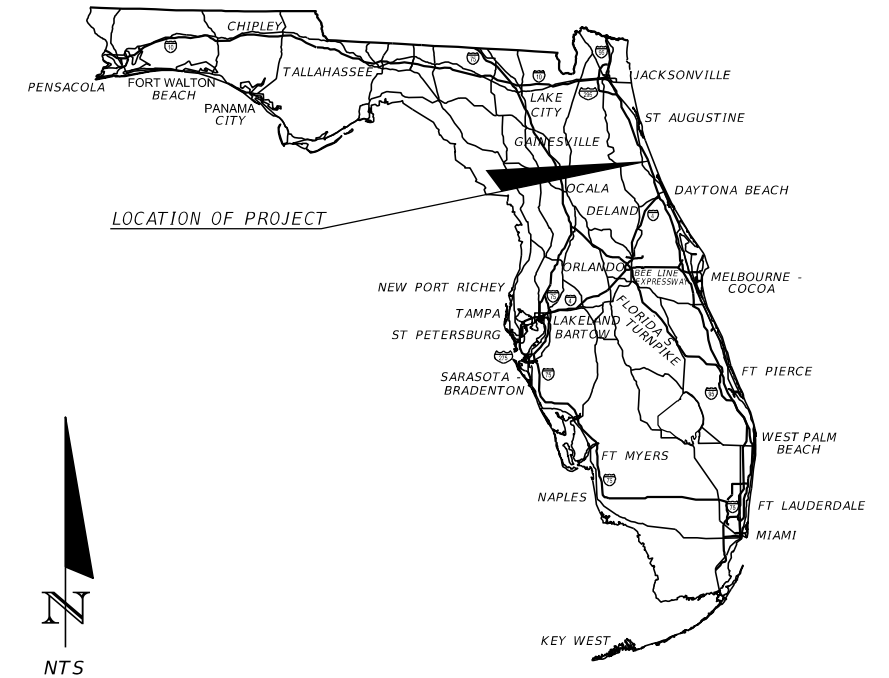
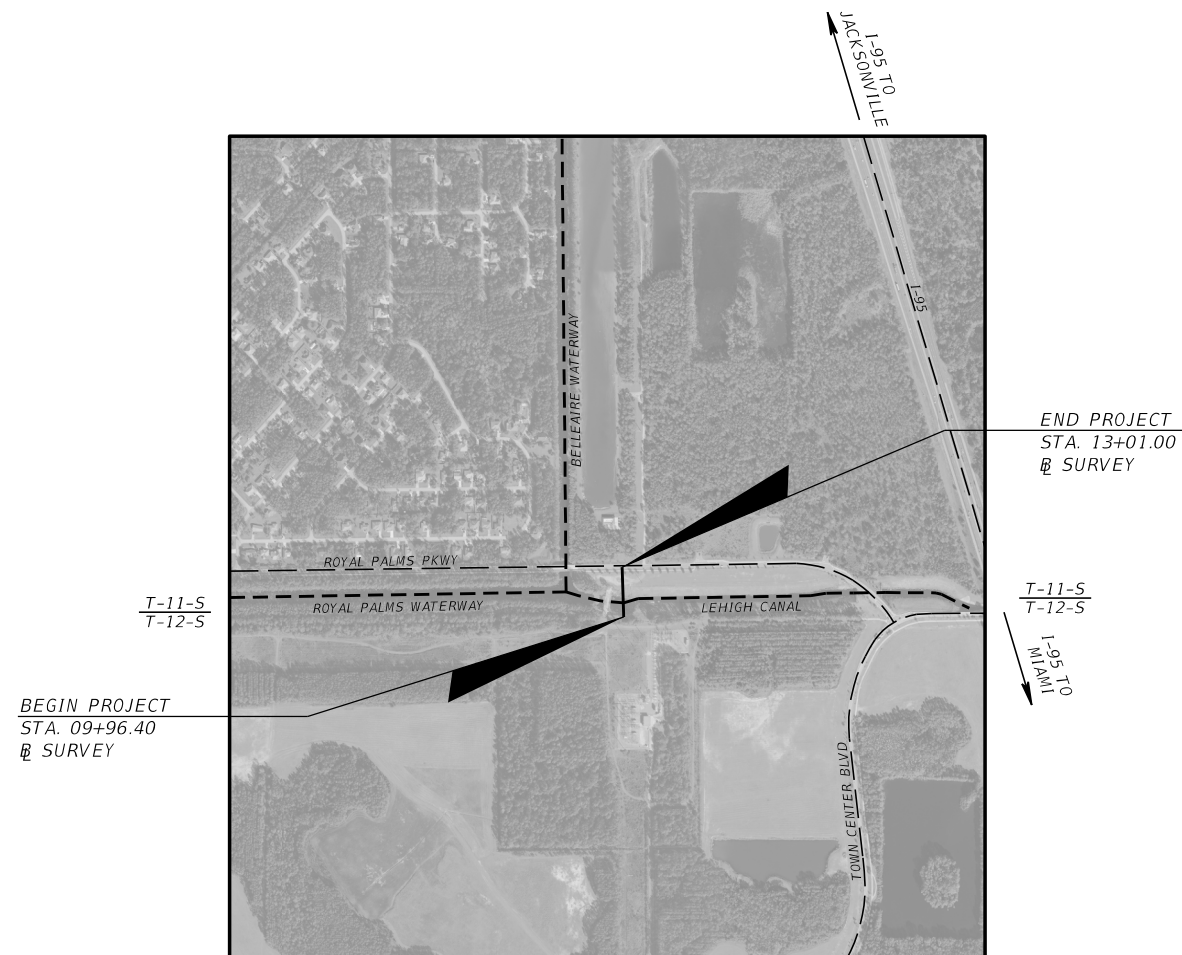
CITY OF PALM COAST, PO #20201232

FLAGLER COUNTY

SWCS L-4 STRUCTURE REPLACEMENT

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PLANS ENGINEER
OF RECORD:

JOHN LEWIS MINTON, P.E. NO. 54657
DRMP, INC.
941 LAKE BALDWIN LANE
ORLANDO, FLORIDA 32814
(407) 896-0594
VENDOR NO. F59179117001

CITY OF PALM COAST
PROJECT MANAGER
CARMELO MORALES, P.E.

GOVERNING DESIGN STANDARDS

Florida Department of Transportation, FY 2021-2022 Standard Plans
for Road and Bridge Construction and applicable Interim Revisions
(IRs) and 2018 Florida Greenbook.

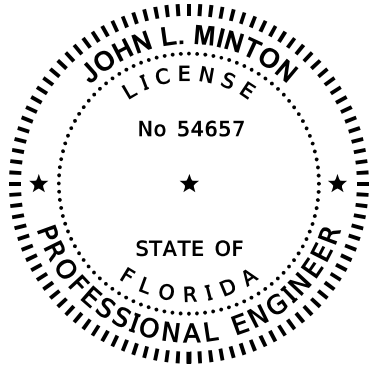
Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS

Florida Department of Transportation, July 2021 Standard Specifications
for Road and Bridge Construction at the following website:
<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

FINAL SUBMITTAL
JULY 14, 2022

<i>FISCAL YEAR</i>	<i>SHEET NO.</i>
<i>21</i>	<i>1</i>



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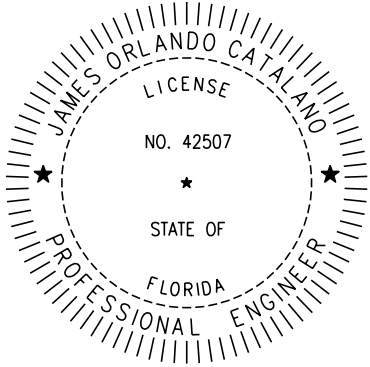
**DRMP**
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
DRMP, INC.
941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814
PHONE: (407) 896-0594 FAX: (407) 896-4836

JOHN L. MINTON JR., P.E. LICENSE NO. 54657

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

CONSTRUCTION PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3-5	GENERAL NOTES
6	PROJECT LAYOUT/SURVEY DATA
7	SITE PLAN
8	STORMWATER POLLUTION PREVENTION PLAN



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**Catalano Engineering, Inc.**
CIVIL - STRUCTURAL - MARINE
2119 WEST CASS STREET
TAMPA, FL 33606
(813) 254-1265
CERTIFICATE NO. 6828

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

STRUCTURAL PLANS

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
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S5	CONTROL STRUCTURE DETAILS
S6	CONSTRUCTION PHASING PLAN

REVISIONS				 DRMP <small>ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS</small> DRMP, INC. 941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814 PHONE: (407) 896-0594 FAX: (407) 896-4836	CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT			SIGNATURE SHEET	SHEET NO.
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						FLAGLER	20201232		
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GENERAL NOTES

1.
- THE CONTRACTOR BEFORE SUBMITTING HIS BID, SHALL VISIT AND BE RESPONSIBLE FOR HAVING ASCERTAINED LOCAL CONDITIONS, SUCH AS LOCATION, ACCESSIBILITY AND GENERAL CHARACTER OF THE SITE, EXTENT OF REMOVAL AND INSTALLATION WORK. THE CONTRACTOR SHALL FULLY EXAMINE ALL DRAWINGS RELATED TO THE WORK AND BECOME COMPLETELY INFORMED TO THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND PREVAILING EXISTING CONDITIONS. NO ALLOWANCES SHALL BE MADE FOR THE CONTRACTOR'S FAILURE TO AVAIL HIMSELF OF INFORMATION.
2.
- CONTRACTOR TO ASSUME RESPONSIBILITY TO CONFORM TO ALL GENERAL NOTES AND SPECIFICATIONS.
3.
- ALL RESIDENTS WHO MAY BE AFFECTED BY CANAL WATER LEVEL CHANGES MUST BE NOTIFIED PRIOR TO WORK BEGINNING.
4.
- FOR ADDITIONAL INFORMATION CONCERNING SOIL CONDITIONS AT THE SITE, PLEASE REFER TO THE REPORT TITLED "GEOTECHNICAL EVALUATION" BY UNIVERSAL ENGINEERING SCIENCES, DATED SEPTEMBER 11, 2020.

AS-BUILT DRAWING REQUIREMENTS

1.
- AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.
2.
- AT THE COMPLETION OF THE WORK, DELIVER THE DRAWINGS DOCUMENTING AS-BUILT INFORMATION, MEASURED BY A LICENSED SURVEYOR, TO THE ENGINEER, IN GOOD CONDITION AND FREE FROM ANY EXTRANEIOUS NOTATION. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- A.
- HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.
- B.
- DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.
- C.
- STORMWATER TOP OF BERM AND BOTTOM ELEVATIONS AT A MINIMUM OF SIX LOCATIONS.
- D.
- STORMWATER CONTROL STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.
- E.
- STORMWATER TOP AND BOTTOM HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF SIX LOCATIONS, WITH LOCATIONS TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.
- F.
- STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.
- G.
- HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.
- H.
- VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.
- I.
- HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.
- J.
- WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.
- K.
- WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.

PERMITS AND PERMIT REQUIREMENTS

1.
- THE CONTRACTOR SHALL OBTAIN FROM THE ENGINEER COPIES OF ALL REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS. THE CONTRACTOR SHALL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE REQUIREMENTS AND LIMITATIONS SET FORTH IN THE PERMITS.
2.
- CONTRACTOR SHALL APPLY FOR AND RECEIVE A SITE DEVELOPMENT PERMIT.

SITE ACCESS

1.
- ACCESS TO THE JOB SITE FOR CONSTRUCTION PURPOSES AND RELATED ACTIVITIES SHALL BE AS DESIGNATED BY OWNER AND ENGINEER.
2.
- SECURITY OF SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

TREE REMOVAL

1.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER WHEN ALL WORK IS LAID OUT (SURVEY STAKED) SO THAT DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER AND ENGINEER.

SITE PREPARATION

1.
- UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
2.
- STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.
3.
- PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
4.
- WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION - TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15-FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION - TREES AND SHRUBS TO REMAIN OUTSIDE A 15-FOOT WIDE PATH, CENTERED ON THE PIPELINE.
5.
- TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD.
6.
- AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.
7.
- CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR OTHERWISE OBSTRUCT THE WORK.
8.
- EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.
9.
- GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.
10.
- ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

SIGNS AND PAVEMENT MARKINGS

1.
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. DESIGN STANDARDS INDEX NO. 9535, 11860, 11862, 11865, 17302, 17346 AND 17349 APPLY. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6" EDGE LINES, 6" LANE LINES, 6" SINGLE CENTERLINES, AND 6" DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.
2.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 - 4" x 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT DESIGN STANDARDS INDEX NO. 17352.
3.
- PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971, NON-REFLECTIVE WHITE TRAFFIC PAINT.
4.
- ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETRO-REFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
5.
- INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETRO-REFLECTIVE.
6.
- THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
7.
- ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
8.
- PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

R/W RESTORATION

1.
- ALL AREAS WITHIN THE RIGHT-OF-WAY SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL NON-PAVED AREAS WITHIN THE R/W THAT ARE ADJACENT TO COMMON AREAS SHALL BE COMPLETELY SODDED FOLLOWING FINAL GRADING. NON-PAVED AREAS WITHIN THE R/W SHALL BE STABILIZED WITH SOD. ALL DRAINAGE SWALES AND RETENTION/DETENTION POND AND LAKE SLOPES SHALL BE STABILIZED WITH SOD IMMEDIATELY AFTER FINAL GRADING. UNLESS OTHERWISE NOTED, OTHER DISTURBED AREAS SHALL BE STABILIZED WITH SEED AND STRAW AFTER FINAL GRADING AND PRIOR TO FINAL INSPECTION. ALL GRASSING (SEED OR SOD) SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE OWNER/OPERATOR. THE USE OF SEED AND STRAW SHALL ONLY BE USED WITH PRIOR CITY APPROVAL.

REVISIONS				<div>DRMP <small>ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS</small> DRMP, INC. 941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814 PHONE: (407) 896-0594 FAX: (407) 896-4836 JOHN L. WINTON JR., P.E. LICENSE NO. 54657</div>	CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT			GENERAL NOTES (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PURCHASE ORDER #		
						FLAGLER	20201232		
									3

TRAFFIC CONTROL

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. ALL PROPOSED ROADWAY AND DRIVEWAY LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.

2. ALL CONSTRUCTION SIGNING AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH FDOT DESIGN STANDARDS INDEX NO. 600 AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). THE PLACEMENT OF THE SIGNING AND MARKINGS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.

3. ADEQUATE TRAFFIC CONTROL, BARRICADES, AND FLAGMAN SERVICES SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR AT ALL POINTS WHERE EQUIPMENT ENGAGED IN THE WORK REGULARLY ENTERS OR CROSSES ROADS.

4. NO MATERIALS ARE TO BE STOCKPILED IN ROADWAY RIGHT-OF-WAY, AND CONSTRUCTION ACTIVITIES WITHIN ROADWAY RIGHT-OF-WAY ARE TO BE KEPT TO A MINIMUM.

5. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.

6. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.

7. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.

8. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.

9. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.

10. WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 600 AND 602.

11. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK ENTRANCE INTO COMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.

2. FIELD DENSITY TESTING FREQUENCIES:

A. ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER;

B. ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES;

C. ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH;

D. ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL;

E. ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.

3. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.

A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP; UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.

B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.

4. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.

5. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS SHOWN BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.

6. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.

UTILITY GENERAL NOTES

1. UTILITY / AGENCY OWNERS:

COMPANY

CITY OF PALM COAST - WATER / SEWER

CITY OF PALM COAST - FIBER

AT&T DISTRIBUTION

FP&L

CONTACT

CHRIS JOHNSON

FIBERNET

DINO FARRUGGIO

JOEL BRAY

TELEPHONE NUMBER

(386) 986-2384

(386) 986-4732

(561) 997-0240

(386) 586-6403

2. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN POINTS HAVE NOT BEEN VERIFIED.

3. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.

4. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES. PER FLORIDA STATUTE 553.851, THE CONTRACTOR OR EXCAVATOR IS REQUIRED TO NOTIFY THE GAS COMPANY TWO (2) WORKING DAYS PRIOR TO STARTING EXCAVATION.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.

7. TYPICAL DETAILS AS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE METHOD OF CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDING HE SUBMITS A PROPOSAL FOR AN ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL AND USES MATERIALS AS DESIGNATED IN THE SPECIFICATIONS.

8. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWING, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

9. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

GRADING

1. GRADING SHOWN ON THESE PLANS ARE PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.

2. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE GRADER OPERATIONS.

3. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF ¼-INCH PER FOOT FOR 10-FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS AND WITHIN 10-FEET OF STRUCTURES SHALL BE WITHIN 1-INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN 3-INCHES OF THE PROPOSED GRADE.

4. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

REVISIONS

DATE

DESCRIPTION

DATE

DESCRIPTION

DRMP

ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS

DRMP, INC.

941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814

PHONE: (407) 896-0594 FAX: (407) 896-4836

JOHN L. WINTON JR., P.E.

LICENSE NO. 54657

CITY OF PALM COAST

SWCS L-4 STRUCTURE REPLACEMENT

ROAD NO.

COUNTY

PURCHASE ORDER #

FLAGLER

20201232

SHEET NO.

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DEWATERING AND FLOW DIVERSION

1. DESIGN AND PROVIDE DEWATERING AND FLOW DIVERSION SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE A SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL WATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2-FT BELOW EXCAVATIONS.
2. CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE AND BE FULLY RESPONSIBLE FOR DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.
3. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. SUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT STREAMS. DURING NORMAL PUMPING, AND UPON DEVELOPMENT OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE WATER SHALL NOT EXCEED 5-PPM.
4. IF DEWATERING EQUIPMENT NEEDED EXCEEDS ANY OF THE FOLLOWING:

A. 6" PUMP VOLUTE;

B. 100,000-GPD TOTAL 24-HOUR (1-DAY) DEWATERING;

C. 1,000,000-GPD PUMP CAPACITY;

THE CONTRACTOR SHALL BE REQUIRED TO PERMIT THE DEWATERING SYSTEM WITH THE WATER MANAGEMENT DISTRICT.
5. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.
6. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.
7. UPSTREAM AND DOWNSTREAM ELEVATIONS MUST BE MAINTAINED WITHIN 1-FT OF THE DESIGN ELEVATION, EITHER BY SHEET PILING OR OTHER TEMPORARY DAMMING METHODS.
8. THE CONSTRUCTION METHODS / PHASING USED SHALL ALLOW FOR THE UPSTREAM CANAL TO CONTINUE TO DISCHARGE IN A RAINFALL EVENT.
9. THE CITY OF PALM COAST MUST APPROVE ALL DEWATERING METHODS PRIOR TO ANY CONSTRUCTION.
10. CONTRACTOR IS RESPONSIBLE FOR DEWATERING AND MAINTENANCE OF FLOW THROUGHOUT PROJECT TIME. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED WITH THE EXCEPTION OF NAMED TROPICAL EVENTS.
11. CONTRACTOR SHALL PROVIDE FOR GRAVITY FLOW THROUGH OR AROUND THE WORK AREA TO THE EXTENT THAT NORMAL WATER LEVELS IN THE CANAL UPSTREAM OF THE WORK AREA MAY BE MAINTAINED WITH AT LEAST 2 FEET OF FREEBOARD TO THE WEIR OVERTOPPING ELEVATION.
12. CONTRACTOR SHALL DEVELOP A DEWATERING AND FLOW DIVERSION PLAN FOR THIS PROJECT THAT FOLLOWS GUIDANCE AND REQUIREMENTS INCLUDED IN PREVIOUS NOTES OF THIS SECTION. THE PLAN SHALL BE SUBMITTED TO THE CITY AND THE SJRWMD BY THE CONTRACTOR AND APPROVALS MUST BE OBTAINED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

APPLICABLE CODES

FLORIDA BUILDING CODE 2020 EDITION
FLORIDA MECHANICAL CODE 2020 EDITION
FLORIDA PLUMBING CODE 2020 EDITION
FLORIDA FIRE PREVENTION CODE 2020 EDITION
NATIONAL ELECTRICAL CODE 2020 EDITION

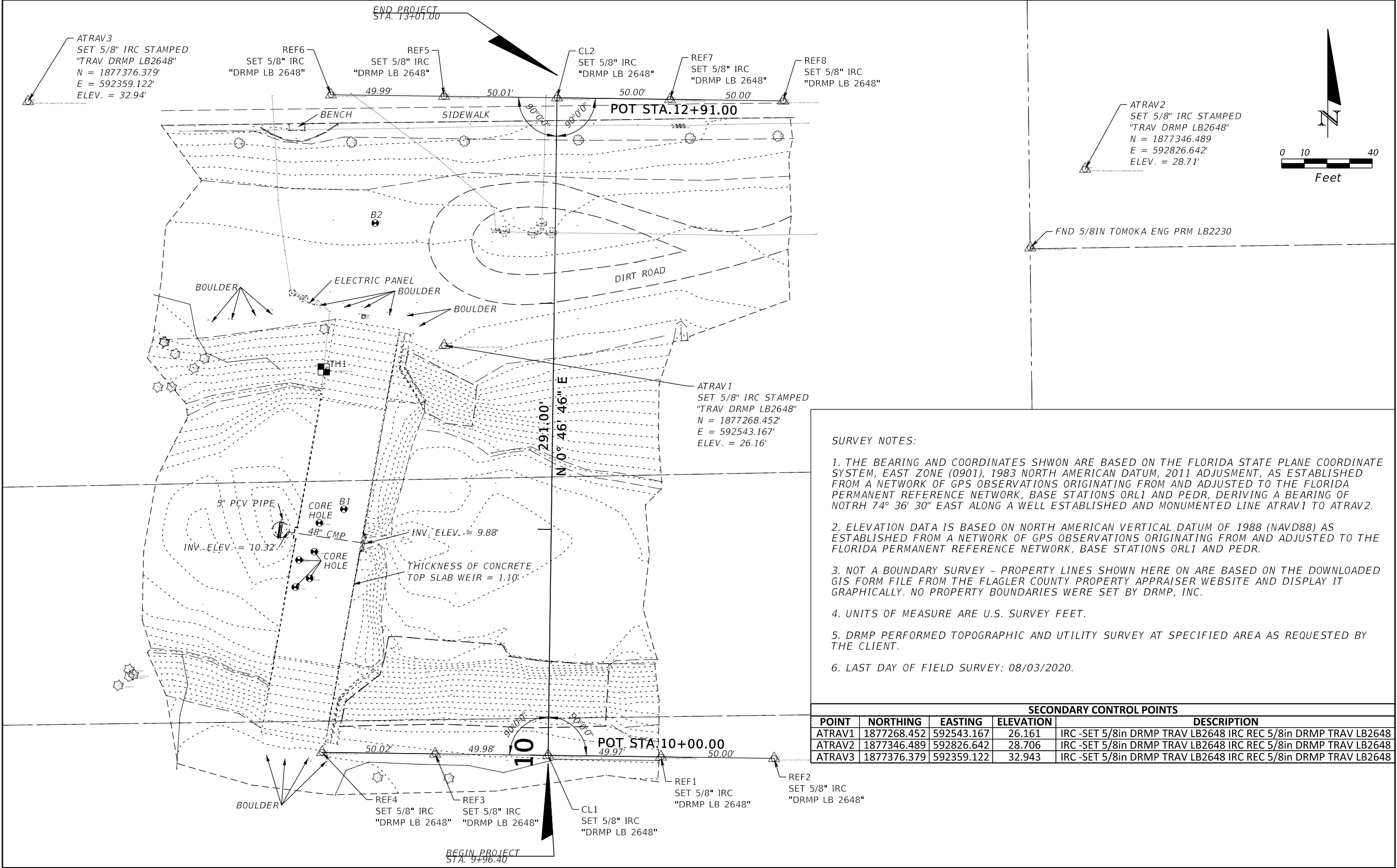
EROSION AND SEDIMENT CONTROL

1. EROSION AND SILTATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL USE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES IN STRICT ADHERENCE TO THESE PRACTICES AS DESCRIBED IN CHAPTER 6 OF "THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT" (FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, 1988) TO PREVENT VIOLATION OF STATE WATER QUALITY STANDARDS.
2. MAINTAIN TEMPORARY EROSION CONTROL SYSTEMS AS DIRECTED BY OWNER OR GOVERNING AUTHORITIES TO CONTROL EROSION AND SILTATION DURING LIFE OF CONTRACT. OWNER HAS AUTHORITY TO LIMIT SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY CLEARING AND GRUBBING, EXCAVATION, TRENCHING, BORROW AND EMBANKMENT OPERATIONS. OWNER ALSO HAS AUTHORITY TO DIRECT CONTRACTOR TO PROVIDE IMMEDIATE PERMANENT OR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
3. TEMPORARY EROSION CONTROLS FOR ALL EXPOSED SOILS WITHIN WETLANDS AND OTHER SURFACE WATERS SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS OF THE MOST RECENT CONSTRUCTION ACTIVITY. PREVENTION OF EROSION OF EXPOSED EARTH INTO WETLANDS AND OTHER SURFACE WATERS IS A CONSTRUCTION PRIORITY AND COMPLETED SLOPES SHALL NOT REMAIN UNSTABILIZED WHILE OTHER CONSTRUCTION CONTINUES.
4. CONTRACTOR SHALL RESPOND TO EROSION AND SEDIMENT CONTROL MAINTENANCE REQUIREMENTS OR IMPLEMENT ADDITIONAL MEASURES TO CONTROL EROSION ORDERED BY OWNER OR GOVERNING AUTHORITIES WITHIN 48-HOURS OR SOONER IF REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR WILL BE REQUIRED TO INCORPORATE PERMANENT EROSION CONTROL FEATURES INTO PROJECT AT EARLIEST PRACTICAL TIME TO MINIMIZE NEED FOR TEMPORARY CONTROLS.
6. INSPECT EVERY TWO (2) WEEKS DURING CONSTRUCTION, OR AFTER A RAIN EVENT. REMOVE ANY SEDIMENT BUILD-UP. REPAIR AND REINSTALL ANY DAMAGED OR MISSING SEDIMENT CONTROL MEASURES. INSTALL ADDITIONAL MEASURES IF INSPECTION REVEALS ADDITIONAL SEDIMENTATION CONTROL IS NECESSARY.
7. AREAS TO BE PAVED SHALL BE TREATED WITH A BITUMINOUS PRIME COAT AND SANDED TO MINIMIZE EROSION, WHERE PAVING IS SCHEDULED TO OCCUR MORE THAN 48-HOURS AFTER INSTALLATION OF BASE COURSE. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FDOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48-HOURS OF INSTALLATION OF THE SUBGRADE. INSTALL FINAL SURFACE COURSES WITHIN 14-DAYS AFTER REMOVAL OF EXISTING PAVEMENT.
8. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO ABIDE BY THE PROVISIONS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND SUBMITTING NPDES "NOTICE OF INTENT" (N.O.I.) AND "NOTICE OF TERMINATION" (N.O.T.) NOTICES TO THE EPA OR LOCAL STATE AGENCY HAVING JURISDICTION OVER THE NPDES PROGRAM. THE CONTRACTOR SHALL KEEP ONSITE A COPY OF THE SWPPP, NOI, AND WATER MANAGEMENT DISTRICT PERMITS ISSUED TOGETHER WITH THE INSPECTION REPORTS AND CURRENT PLANS, INCLUDING ANY MODIFICATIONS REQUIRED.
9. CONTRACTOR FURTHER AGREES THAT CONTRACTOR AND ITS SUBCONTRACTORS SHALL NOT CAUSE THE DISCHARGE, RELEASE, OR DISPOSAL OF ANY HAZARDOUS MATERIAL CREATED BY ITS WORK ON OR ABOUT THE JOB SITE. IN THE EVENT OF ANY SPILL, RELEASE, OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL IN PERSONS OR PROPERTY.

COMPACTION

1. FILL MATERIALS PLACED UNDER PAVEMENT SHALL BE COMPACTED TO AT LEAST 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. ALL OTHER FILL AREAS ARE TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. FILL MATERIALS SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12" LIFTS. REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND OWNER WITH ALL (PASSING AND FAILING) TESTING RESULTS. RESULTS SHALL BE PROVIDED ON A TIMELY AND REGULAR BASIS PRIOR TO CONTRACTOR'S PAY REQUEST SUBMITTAL.

REVISIONS				<div><div>DRMP <small>ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS</small> DRMP, INC. <small>941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814</small> <small>PHONE: (407) 896-0594 FAX: (407) 896-4836</small> <small>JOHN L. WINTON JR., P.E. LICENSE NO. 54657</small></div></div>	CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT			GENERAL NOTES (3)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PURCHASE ORDER #		
						FLAGLER	20201232		
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SURVEY NOTES:

- 1. THE BEARING AND COORDINATES SHOWN ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE (0901), 1983 NORTH AMERICAN DATUM, 2011 ADJUSTMENT, AS ESTABLISHED FROM A NETWORK OF GPS OBSERVATIONS ORIGINATING FROM AND ADJUSTED TO THE FLORIDA PERMANENT REFERENCE NETWORK, BASE STATIONS ORL1 AND PEDR, DERIVING A BEARING OF NOTRH 74° 36' 30" EAST ALONG A WELL ESTABLISHED AND MONUMENTED LINE ATRAV1 TO ATRAV2.
- 2. ELEVATION DATA IS BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED FROM A NETWORK OF GPS OBSERVATIONS ORIGINATING FROM AND ADJUSTED TO THE FLORIDA PERMANENT REFERENCE NETWORK, BASE STATIONS ORL1 AND PEDR.
- 3. NOT A BOUNDARY SURVEY - PROPERTY LINES SHOWN HERE ON ARE BASED ON THE DOWNLOADED GIS FORM FILE FROM THE FLAGLER COUNTY PROPERTY APPRAISER WEBSITE AND DISPLAY IT GRAPHICALLY. NO PROPERTY BOUNDARIES WERE SET BY DRMP, INC.
- 4. UNITS OF MEASURE ARE U.S. SURVEY FEET.
- 5. DRMP PERFORMED TOPOGRAPHIC AND UTILITY SURVEY AT SPECIFIED AREA AS REQUESTED BY THE CLIENT.
- 6. LAST DAY OF FIELD SURVEY: 08/03/2020.

SECONDARY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
ATRAV1	1877268.452	592543.167	26.161	IRC -SET 5/8in DRMP TRAV LB2648 IRC REC 5/8in DRMP TRAV LB2648
ATRAV2	1877346.489	592826.642	28.706	IRC -SET 5/8in DRMP TRAV LB2648 IRC REC 5/8in DRMP TRAV LB2648
ATRAV3	1877376.379	592359.122	32.943	IRC -SET 5/8in DRMP TRAV LB2648 IRC REC 5/8in DRMP TRAV LB2648

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

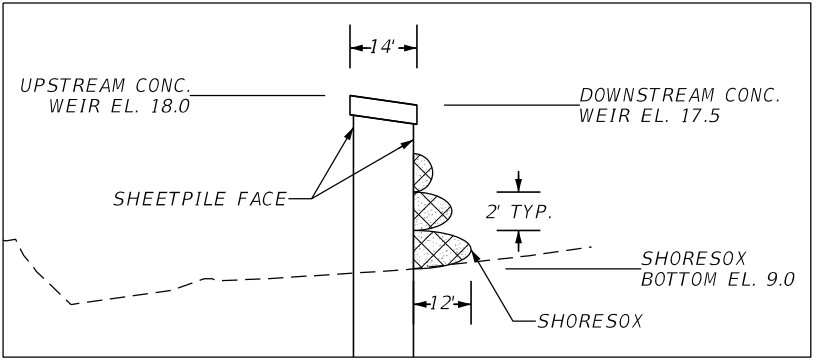
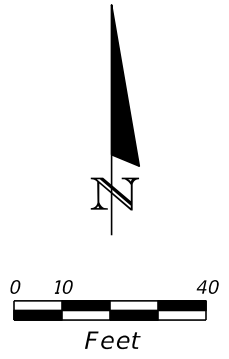
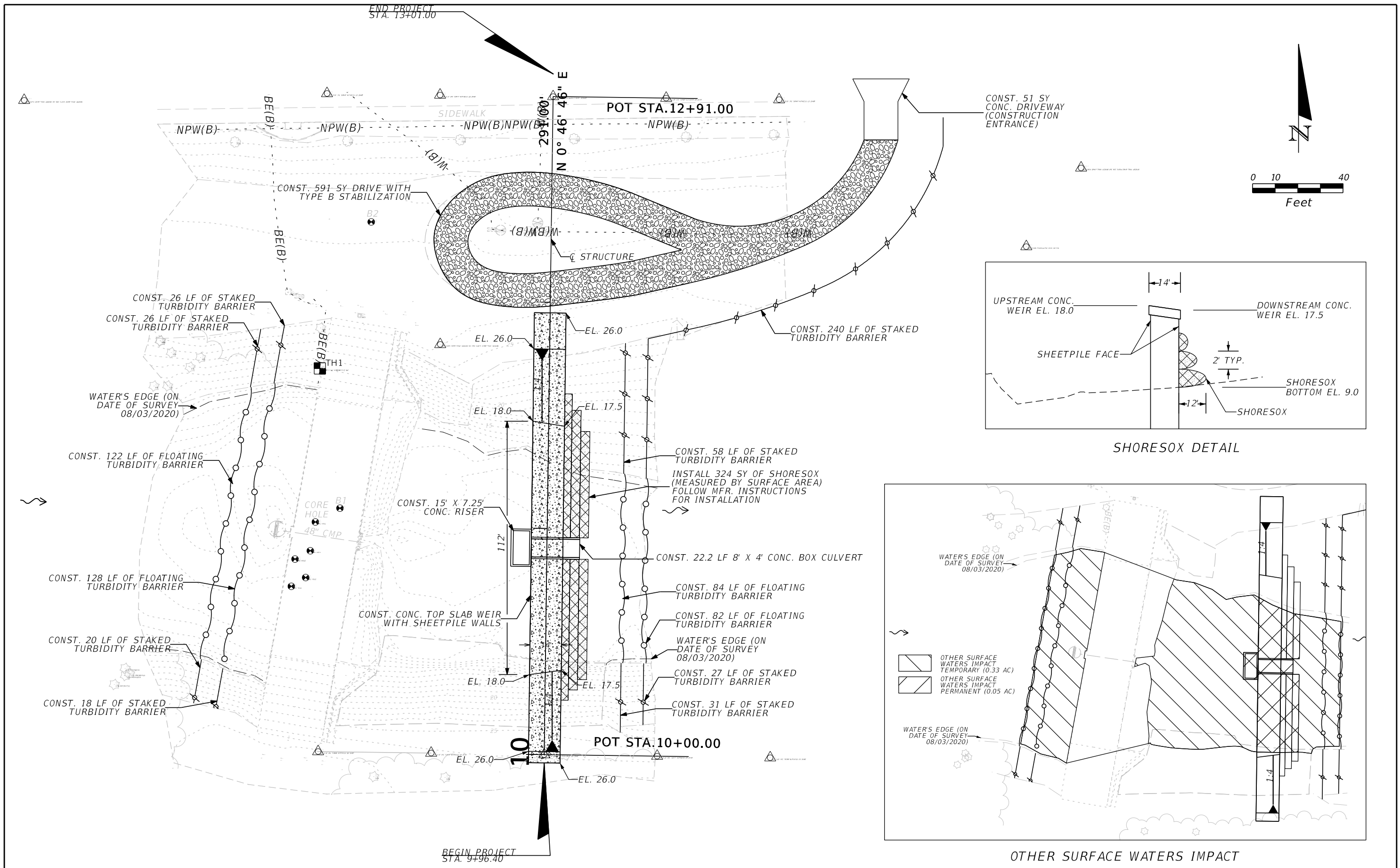


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DRMP, INC.
941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814
PHONE: (407) 896-0594 FAX: (407) 896-4836
JOHN L. WINTON JR., P.E. LICENSE NO. 54657

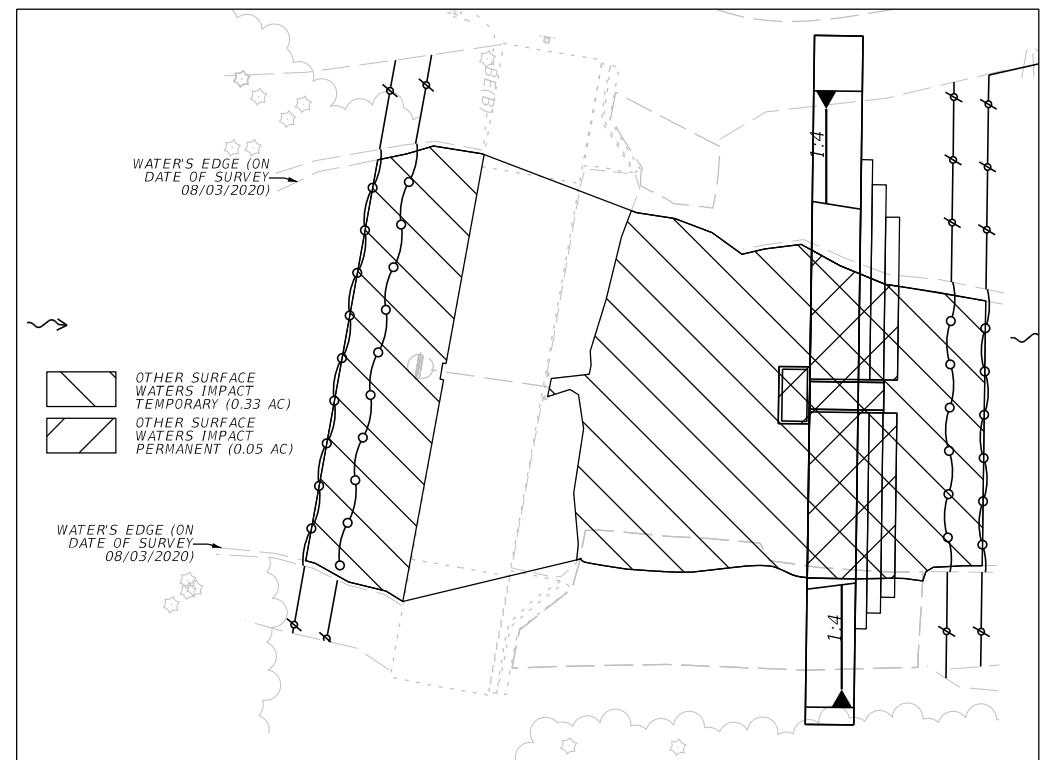
CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT		
ROAD NO.	COUNTY	PURCHASE ORDER #
	FLAGLER	20201232

PROJECT LAYOUT /
SURVEY DATA

SHEET NO.
6



SHORESOX DETAIL



OTHER SURFACE WATERS IMPACT

REVISIONS				<div>DRMP ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS DRMP, INC. 941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814 PHONE: (407) 896-0594 FAX: (407) 896-4836 JOHN L. WINTON JR., P.E. LICENSE NO. 54657</div>	CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT			SHEET NO. 7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PURCHASE ORDER #	
						FLAGLER	20201232	

1. SITE DESCRIPTION

A. Construction Activity/Project Limits

The project is located in Section 5, Township 12 South, Range 31 East and Section 32, Township 11 South, Range 31 East of Flagler County, where Royal Palms Waterway and Lehigh Canal meet, a third of a mile north-west of the Royal Palms Parkway and Town Center Boulevard intersection.

The project consists of replacing the existing L-4 Control Structure with a structurally sound structure.

B. Sequence of Major Activity and Implementation of Controls

- 1. Installation of control measures
- 2. Installation of temporary sheet pile and bypass system, and dewatering
- 3. Construction of proposed structure
- 4. Demolition of existing structure
- 5. Final stabilization of project area

In the Section 104 Erosion Control Plan, the contractor shall provide a detailed sequence of construction for all construction activities.

C. Estimate of Total Project Area and Area to be Disturbed

The total project area is estimated to be 1.1 acres. The estimated area to be disturbed is 1.1 acres.

D. Estimates of Runoff Coefficients, Existing Soil Data, and Outfall Drainage

The estimated runoff coefficient before, after, and during construction is expected to remain constant.

The USDA Natural Resources Conservation Service Soil Survey of Flagler County lists Smyrna Fine Sand (0-2% slopes) and Udarents (moderately wet) in the project area.

Project Outfall Locations

The Belleaire Waterway and the Royal Palms Waterway flow through the L-4 Control Structure and continues eastward into the Lehigh Canal and the Graham Swamp Conservation Area.

Outfall Location: Lat. 29°29'51.39" N Long. 81°10'48.09" W

E. Site Map

The following information shall be shown on a site map:

- 1. Drainage patterns – Existing drainage patterns are to be maintained. See construction plans.
- 2. Approximate slopes – 0% to 5.0%
- 3. Areas of soil disturbance – Generally areas within the limits of construction. See construction plans.
- 4. Areas that are not to be disturbed – Generally areas outside of construction. See construction plans.
- 5. Locations of controls identified in the plan – See plan sheets.
- 6. Areas that are to be stabilized against erosion – See plan sheets.
- 7. Surface waters (including wetlands)
- 8. Locations where stormwater is discharged to a surface water – Outfall discharging to the Graham Swamp Conservation Area.

F. Receiving Waters/Wetland Areas

The project is discharging into the Lehigh Canal and Graham Swamp Conservation Area.

Refer to Section 1.D for Latitude/Longitude of the outfall.

2. CONTROLS

A. Erosion and Sediment Controls

During the construction operations, the following control measures will be used to prevent erosion and sedimentation.

- Clearing and grubbing operations are controlled so as to minimize unprotected erodible areas exposed to weather. Areas outside the limits of construction will not be disturbed.
- Excavated material will not be deposited in locations where it could be washed away by high water or storm water runoff, and stockpiles shall be covered or encircled with sediment containment devices.
- New and existing structures will be protected from siltation during construction.

The Contractor must develop a detailed erosion and sediment control plan and submit for review. The plan must include:

- The construction project schedule with erosion and sediment control installation and maintenance tied to specific dates or construction activities.
- Modifications to the SWPPP and Erosion Control Plans due to the contractor's proposed construction means, methods, and phasing. The contractor's Erosion Control Plan will be utilized as the first formal update to the SWPPP.
- Name and phone number of contractor's representative responsible for erosion and sediment control installation and maintenance on a 24-hour basis.

The Contractor is advised that the contract drawings only indicate erosion, sediment, and turbidity controls at locations determined in the design process. However, the Contractor is required to update the SWPPP to reflect any additional controls necessary to prevent the possibility of silting any adjacent lowland parcel, receiving water, or otherwise violating State and Federal permit requirements. The contractor will also be required to modify the plan or materials to adapt to seasonal variations and supply contract time schedules for the implementation of each submittal.

In the Section 104 Erosion and Control Plan, the Contractor shall describe the proposed stabilization and structural practices based on the contractor's proposed Traffic Control Plan.

1) Stabilization Practices

The contractor shall be responsible for the following:

- Erosion and sediment control measures are to be placed prior to, or as the first step in construction. Sediment control devices will be employed as a perimeter defense against any transportation of silt off the site.
- Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in the portion of the site has temporarily or permanently ceased.
- Permanent soil erosion control measures for all slopes, channels, ditches or any Disturbed land areas shall be completed immediately after final grading. When it is not possible to permanently protect a disturbed area immediately after grading operation, temporary erosion control measures shall be installed. All temporary protection shall be maintained until permanent measures are in place and established.
- The Contractor shall furnish, install, maintain, and subsequently remove, all necessary erosion control, including but not limited to turbidity barriers and any other miscellaneous items as indicated within the contract documents, or as required per applicable standards or project engineer.

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed stabilization and structural practices proposed to control erosion. The contractor shall initiate all stabilization measures as soon as practical, but in no case more than 14-days after construction activities have temporarily or permanently ceased.

Permanent: Asphalt or concrete surface, or sod in accordance with FDOT Standard Specification section 574 and 570, respectively.

2) Structural Practices

The Contractor shall furnish, install, maintain, and subsequently remove, all necessary erosion control, including but not limited to turbidity barriers, and any other miscellaneous items as indicated within the contract documents and the Contractor's Erosion Control Plan, or as required per applicable standards or the project engineer.

The following structural practices may be included as pay items in the Summary of Quantities within the Construction Plans:

- Floating turbidity barriers
- Inlet protection systems
- Staked turbidity barriers
- Soil Tracking Prevention Device

B. Stormwater Management and Monitoring

The stormwater runoff from the project area will continue to flow as-is during construction.

C. Other Controls

1) Waste Disposal

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed methods to prevent the discharge of solid materials, including building materials, to waters of the United States.

2) Off-site Tracking/Spillage

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed methods for minimizing offsite vehicle tracking of sediments and generating dust.

3) State and Local Regulations for Waste Disposal, Sanitary Sewer or Septic Systems

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed procedures to comply with applicable state and local regulations for waste disposal, sanitary sewer or, septic systems.

4) Fertilizers and Pesticides

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed procedures for applying fertilizers and pesticides. The proposed procedures shall comply with applicable subsections of Section 570 of the FDOT Standard Specifications.

5) Toxic Substances

In the Section 104 Erosion Control Plan, the contractor shall provide a list of toxic substances that are likely to be used on the job and provide a plan addressing the generation, application, migration, storage and disposal of these substances.

D. Approved State and Local Plans or Permits

The following permits have been issued for the construction of the stormwater facilities for this project.

St. Johns River Water Management District XXXXXXXX.XXX

Construction Generic Permit (CGP) Number* -----

*Contractor shall obtain the CGP.

3. Maintenance

The contractor shall be responsible for maintaining all pollution prevention controls. Daily inspections shall be made by the contractor to determine the effectiveness of erosion, sedimentation, turbidity, and pollution control measures. Remedial action shall be performed immediately.

In the Section 104 Erosion and Sediment Control Plan, the contractor shall provide a plan for maintaining all erosion and sediment controls throughout construction.

4. Inspection

Contractor's qualified personnel shall inspect the following items at least once every seven (7) calendar days and within 24-hours of the end of a storm that is 0.5-inches or greater and submit the form to the engineer. To comply, the contractor shall install and maintain rain gages and record the daily rainfall. Where sites have been permanently stabilized, inspections shall be conducted at least once every month. The contractor shall also inspect that controls installed in the field agree with the latest Stormwater Pollution Prevention Plan (SWPPP).

- Points of discharge to waters of the United States.
- Points of discharge to the municipal separate storm sewer systems.
- Disturbed areas of the site that have not been finally stabilized.
- Areas used for storage of materials that are exposed to precipitation.
- Structural controls.
- Stormwater management systems.
- Locations where vehicles enter or exit the site.

The contractor shall initiate repairs within 24 hours of inspections that indicate items are not in good working order.

If inspections indicate the the installed stabilization and structural practices are not sufficient to minimize erosion, retain sediment, and prevent discharging pollutants, the contractor shall provide additional measures, as approved by the Engineer.

5. Non-Stormwater Discharges and Hazardous Waste

When the Contractor encounters a spill, construction will stop and work will not resume until directed by the project engineer. Disposition of hazardous waste will be made in accordance with any requirements and regulations of any local, state, or federal agency have jurisdiction.

In the Section 104 Erosion and Sediment Control Plan, the contractor shall identify all anticipated non-stormwater discharges (except flows from fire fighting activities). The contractor shall describe the proposed measures to prevent pollution of these non-stormwater discharges. If the contractor encounters contaminated soil or groundwater, contact the Flagler County NPDES Coordinator at (386) 986-2354.

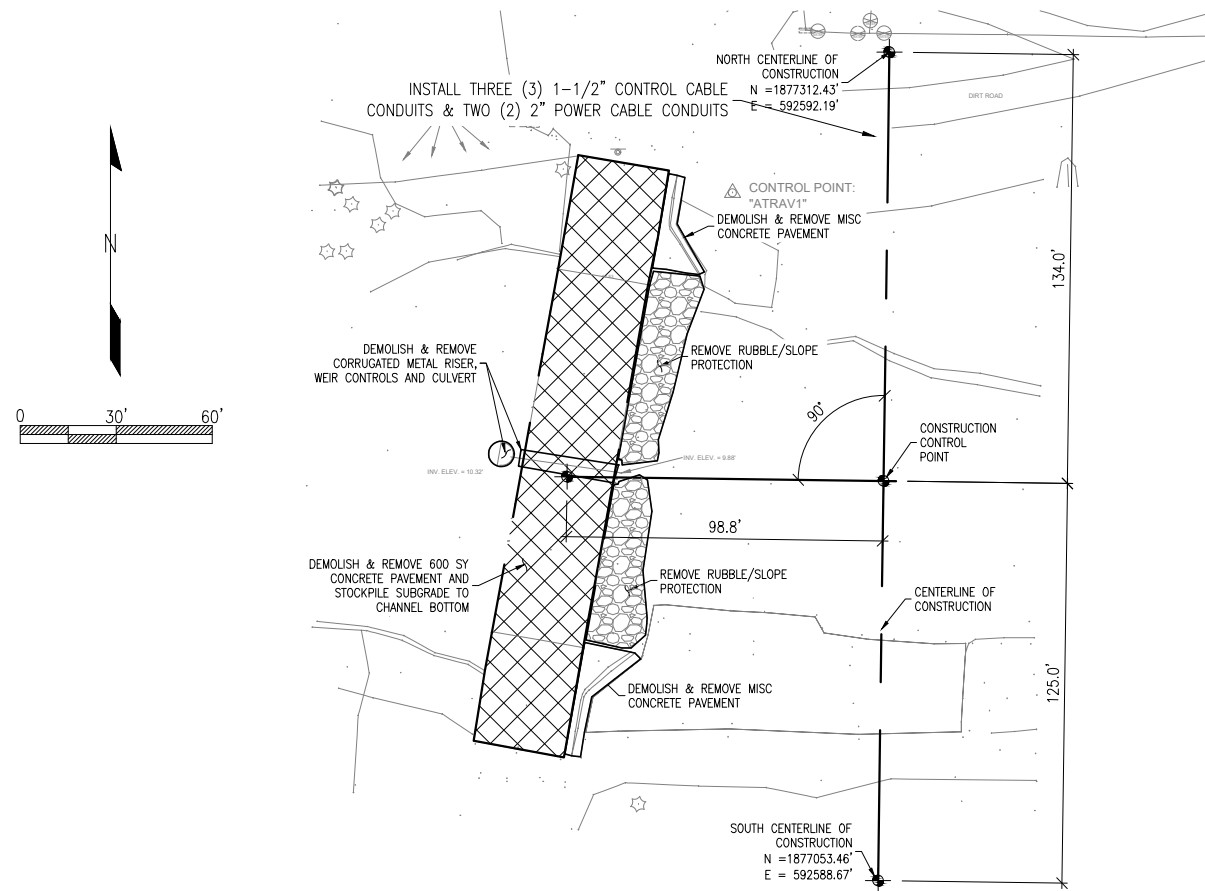
6. References

The construction plans and specifications for SWCS L-4 Structure Replacement are hereby referenced and made a part of this Stormwater Pollution Prevention Plan.

7. Quantities

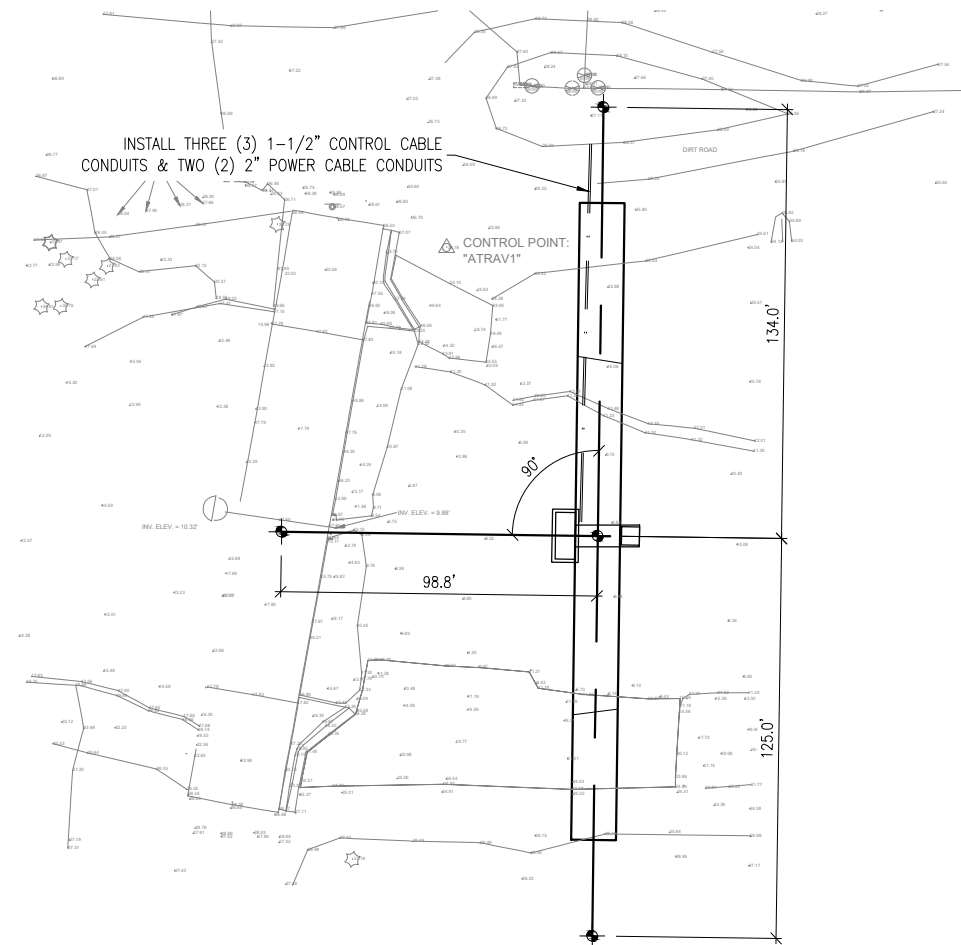
See Cost Estimate and Construction Plans for erosion control locations and quantities.

REVISIONS				<div><div><div><div>DRMP</div><div>ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS</div><div>DRMP, INC.</div><div>941 LAKE BALDWIN LANE, ORLANDO, FLORIDA 32814</div><div>PHONE: (407) 896-0594 FAX: (407) 896-4836</div><div>JOHN L. WINTON JR., P.E. LICENSE NO. 54657</div></div></div></div>	CITY OF PALM COAST SWCS L-4 STRUCTURE REPLACEMENT			STORMWATER POLLUTION PREVENTION PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PURCHASE ORDER #		8
						FLAGLER	20201232		

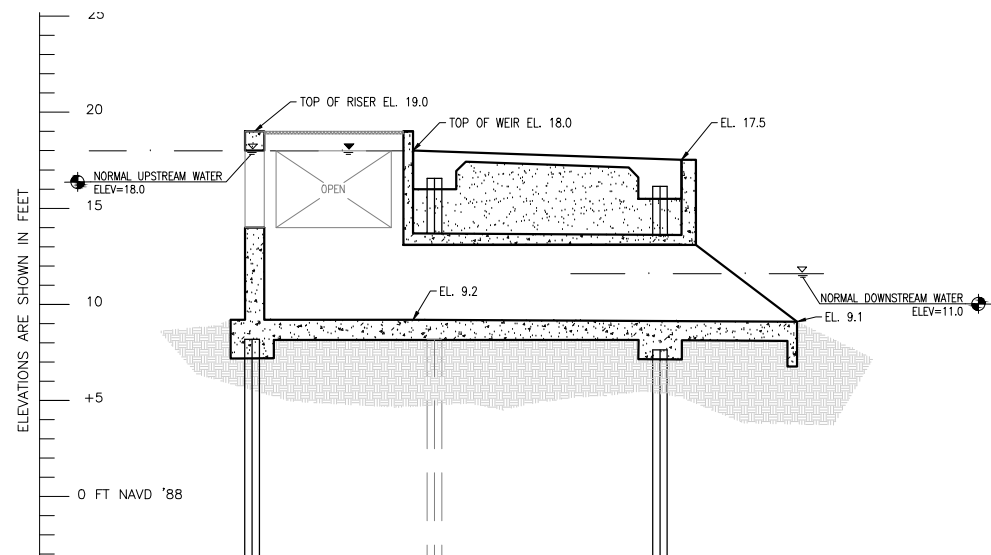


EXISTING & DEMOLITION PLAN

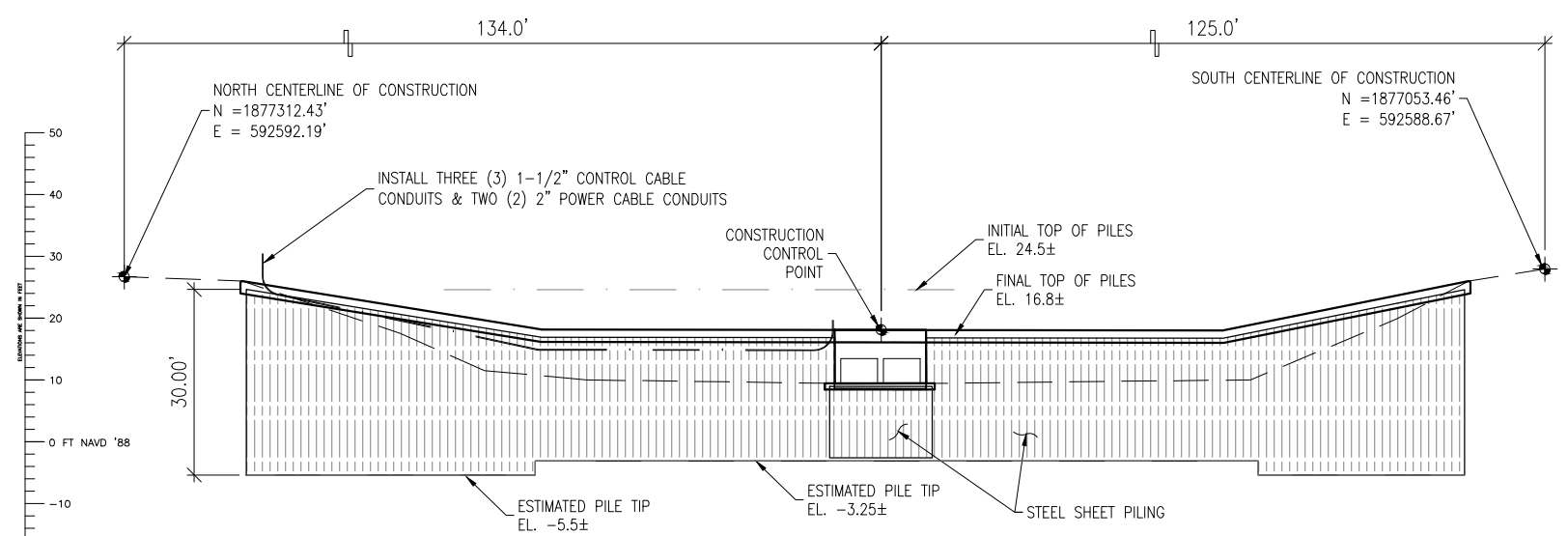
DEMOLITION NOTES:
110 CY± OF FLOWABLE FILL CONCRETE WAS ADDED BELOW THE EXISTING WEIR SLAB NEAR THE CENTER OF WEIR. ITS LIMITS AND ELEVATION ARE UNDETERMINED. THE CONTRACTOR SHALL PROVIDE A ALTERNATIVE BID LINE ITEM TO REMOVE THE FLOWABLE FILL.



GENERAL BASELINE/CONTROL PLAN




GENERAL SECTION THRU WEIR



ELEVATION

CONDUIT INSTALLATION NOTE:
PROPERLY CLEANED AND SECURELY GLUED JOINTS THROUGHOUT LENGTH W/ LONG SWEEP BENDS. CONDUIT TERMINATING 12" ABOVE FINISHED GRADE (MIN) WITH UNGLUED CAPS. STANDARD NYLON PULL STRING THREADED THROUGH CONDUIT AND SECURED AT EACH END.

REVISIONS				PREPARED BY: <div> Catalano Engineering, Inc. CIVIL - STRUCTURAL - MARINE 120 SOUTH EDISON AVE. TAMPA, FL 33606 (813) 254-1265 CERTIFICATE NO. 6828</div>	PREPARED FOR: <div>DRMP 941 LAKE BALDWIN LANE ORLANDO, FL 32814</div>	NAME DATE			APPROVED BY: JAMES CATALANO, PE PE No. 42507	CITY OF PALM COAST L-4 WEIR REPLACEMENT GENERAL PLAN & ELEVATION	CEI PROJECT NO. 19-011.01	SHEET NO. S1
NO.	DATE	DESCRIPTION				DESIGNED BY:		2/1/21				
						DRAWN BY:	CM	3/16/21				
						CHECKED BY:	JC	3/23/21				
						SUPERVISED BY:	JC					

GENERAL STRUCTURAL NOTES:

1. GENERAL AND MATERIAL SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SUPPLEMENTS THERETO.

2. DESIGN SPECIFICATIONS:

FLORIDA BUILDING CODE, SIXTH EDITION (2017)

3. DESIGN METHOD:

LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD).

4. DESIGN LOADING:

HL-93 LOADING

5. FUTURE WEARING SURFACE:

FUTURE WEARING SURFACE ALLOWANCE = 15 #/SF

6. EARTHQUAKE:

SEISMIC PERFORMANCE CATEGORY "A"

7. CONCRETE:

CONCRETE SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 346 AND AS NOTED BELOW.

CONCRETE CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (PSI)	LOCATION
II	f'c = 3,400	WEIR SLAB & PILE CAP
IV	f'c = 5,500	CONTROL STRUCTURE

8. REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. SEE STANDARD DRAWINGS FOR ADDITIONAL REQUIREMENTS.

9. STRUCTURAL ALUMINUM:

SKIMMER STRUTS SHALL BE FABRICATED FROM ASTM B308 6061-T6 ALUMINUM PLATE & STANDARD STRUCTURAL SHAPES.

10. CONCRETE COVER

CONCRETE COVERS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES.

MINIMUM CONCRETE COVER = 3" UNLESS NOTED OTHERWISE

11. CONCRETE SURFACE FINISH:

ALL HORIZONTAL SURFACES SHALL RECEIVE A BROOM FINISH. ALL SLOPED SURFACES SHALL RECEIVE A ROUGH FLOATED FINISH.

12. SCREEDING DECK SLABS:

THE WEIR SLAB SURFACE BE A SCREEDED AND BROOM FINISHED TO PROPOSED GRADES.

13. ANCHOR BOLTS:

ANCHOR BOLTS SHALL BE ASTM A193 GRADE B7 BOLTS AND THREADED STUDS. THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE A316 STAINLESS.

14. DEMOLITION:

THE CONTRACTOR SHALL COORDINATE THE TEMPORARY STORAGE, DISPOSAL AND RE-USE OF DEMOLISHED MATERIALS.

APPROXIMATELY 100 CY OF FLOWABLE FILL CONCRETE EXISTS BENEATH THE EXISTING WEIR STRUCTURE. REMOVAL OF THE FLOWABLE FILL IS NOT MADE PART OF THIS SCOPE OF WORK.

THE CONTRACTOR SHALL COORDINATE WITH THE CITY THE ORDER OF DEMOLITION AND CONSTRUCTION SO AS TO UTILIZE THE EXISTING WEIR FOR ACCESS, DEWATERING AND STAGING IF DESIRED.

15. PILE FOUNDATIONS: (FOUNDATION LAYOUT SHEET)

ALL PILES SHALL BE INSTALLED ACCORDING TO THE PILE LAYOUT AND SPECIFICATION HEREIN. ALL PILES SHALL BE PLUMB PZ-22 STEEL SHEET PILING.

16. UTILITIES:

THE UTILITIES SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. FOR ADDITIONAL INFORMATION, REFER TO THE CITY AS-BUILTS AND FIELD LOCATIONS PLANS.

17. MAINTENANCE OF TRAFFIC:

THERE IS NO PROVISION MADE FOR FOR MAINTENANCE OF PEDESTRIAN OR VEHICULAR TRAFFIC. ITS IS ASSUMED THAT THE CONSTRUCTION LIMITS WILL BE MADE OFF-LIMITS DURING CONSTRUCTION.

18. ENVIRONMENTAL PROTECTION:

THE CONTRACTOR SHALL INSTALL ALL ENVIRONMENTAL PROTECTION AND POLLUTION CONTROL MEASURES PRIOR TO DEMOLITION OR CONSTRUCTION.

19. DISPOSAL OF DEBRIS:

ALL CONSTRUCTION DEBRIS AND OTHER MATERIALS NOT TO BECOME PROPERTY OF THE CITY SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR OUTSIDE OF THE RIGHT OF WAY AS APPROVED BY THE CITY ENGINEER.

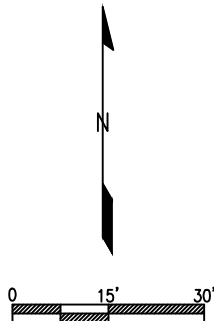
20. UNSUITABLE SOILS ENCOUNTERED:

THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL UNSUITABLE SOILS, BACKFILLS, AGGREGATES, ETC. ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION.

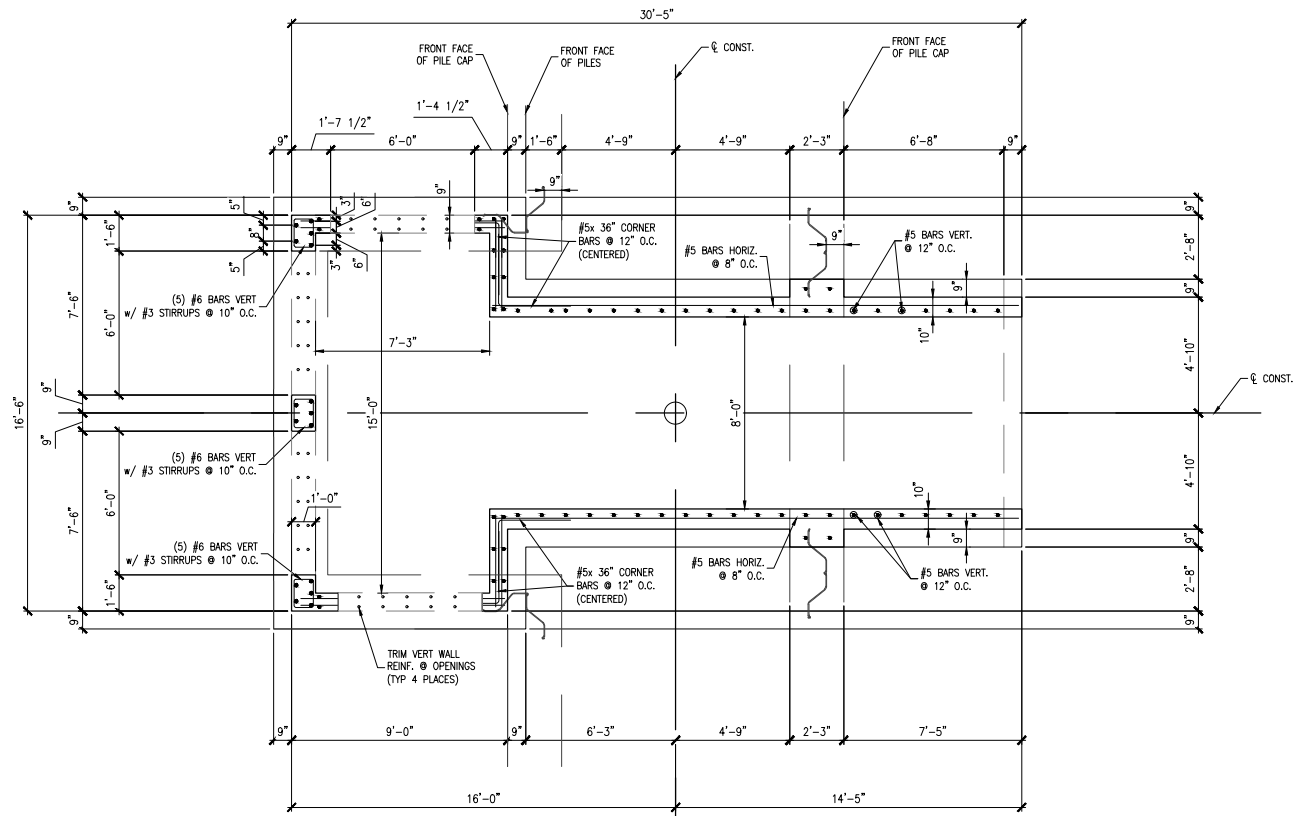
21. CONCRETE CONTROL JOINTS:

CRACK CONTROL JOINTS SHALL SPACED AT 16FT O.C. (MAX) TRANSVERSE ALONG THE WEIR SURFACE. WITHIN 4 HOURS OF CONCRETE POUR, SAW-CUT 1/4" X 1.5" INTO GREEN CONCRETE. AFTER CURE, SEAL EACH SAW-CUT WITH SIKAFLEX SELF-LEVELING SEALANT OR EQUAL.

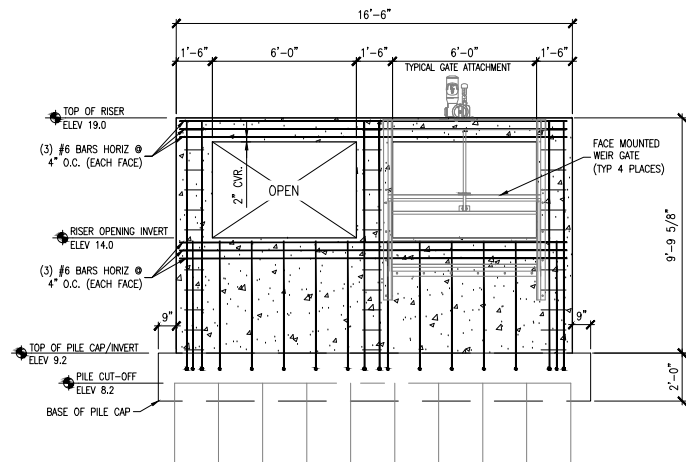
REVISIONS				<div>PREPARED BY: <div><div>C E I</div><div>Catalano Engineering, Inc. CIVIL – STRUCTURAL – MARINE 120 SOUTH EDISON AVE. TAMPA, FL 33606 (813) 254-1265 CERTIFICATE NO. 6828</div></div></div>	<div>PREPARED FOR: <div>DRMP 941 LAKE BALDWIN LANE ORLANDO, FL 32814</div></div>	NAME			APPROVED BY: JAMES CATALANO, PE PE No. 42507	CITY OF PALM COAST L-4 WEIR REPLACEMENT	CEI PROJECT NO.	SHEET NO.
NO.	DATE	DESCRIPTION	APPROVED			DESIGNED BY:	JR	2/1/21		19-011.01	S2	
						DRAWN BY:	CM	3/16/21				
						CHECKED BY:	JC	3/23/21				
						SUPERVISED BY:	JC					
						GENERAL NOTES						



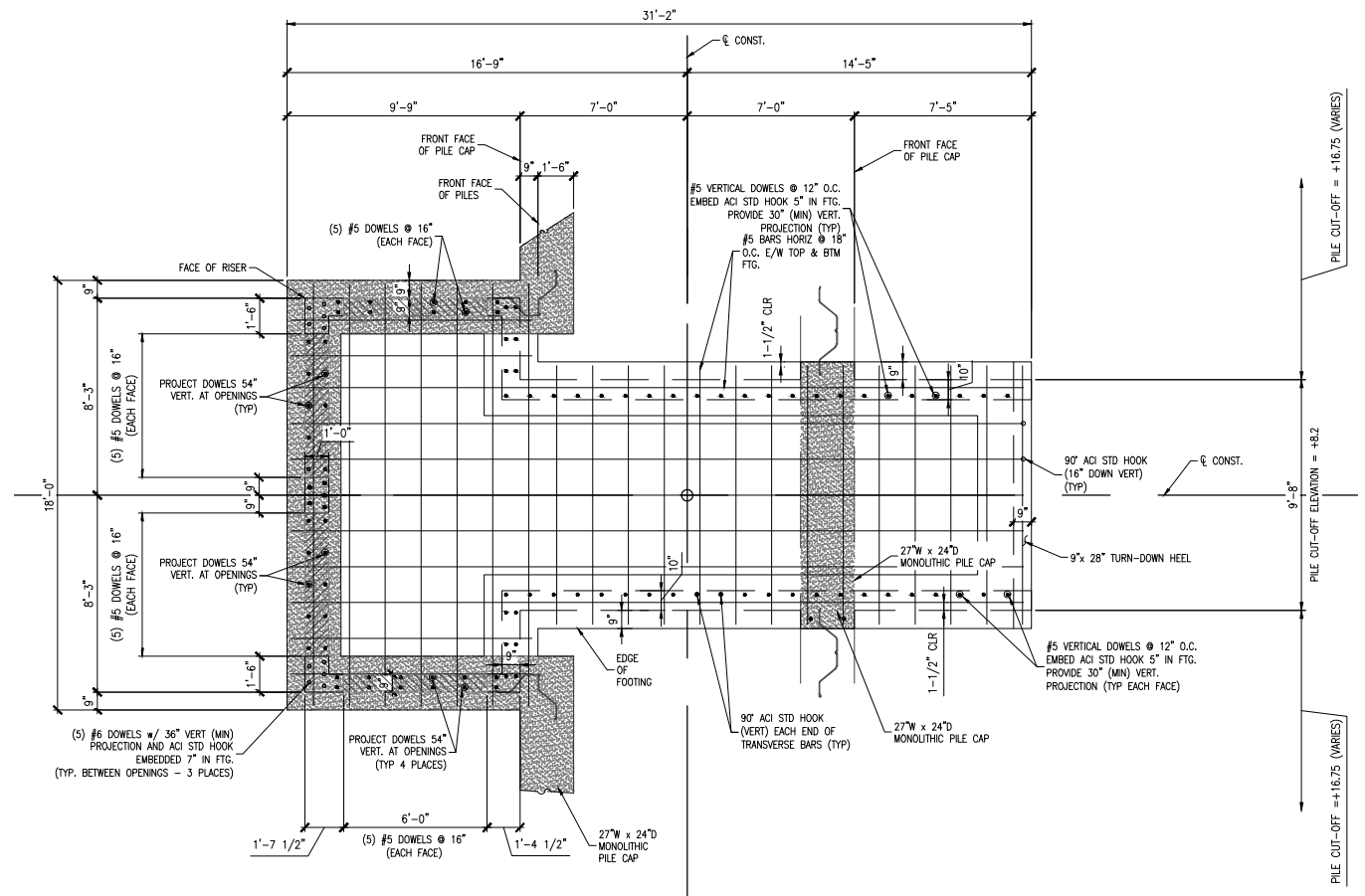
REVISIONS				PREPARED BY: <div><div>C E I</div><div>Catalano Engineering, Inc. CML - STRUCTURAL - MARINE 120 SOUTH EDISON AVE. TAMPA, FL 33606 (813) 254-1285 CERTIFICATE NO. 6828</div></div>	PREPARED FOR: <div>DRMP 941 LAKE BALDWIN LANE ORLANDO, FL 32814</div>	NAME			DATE	APPROVED BY: JAMES CATALANO, PE PE No. 42507	CITY OF PALM COAST L-4 WEIR REPLACEMENT	CEI PROJECT NO.	SHEET NO.							
NO.	DATE	DESCRIPTION	APPROVED			DESIGNED BY:	JR	2/1/21	DRAWN BY:			CM	3/16/21	CHECKED BY:	JC	3/23/21	SUPERVISED BY:	JC	PILE LAYOUT	19-011.01



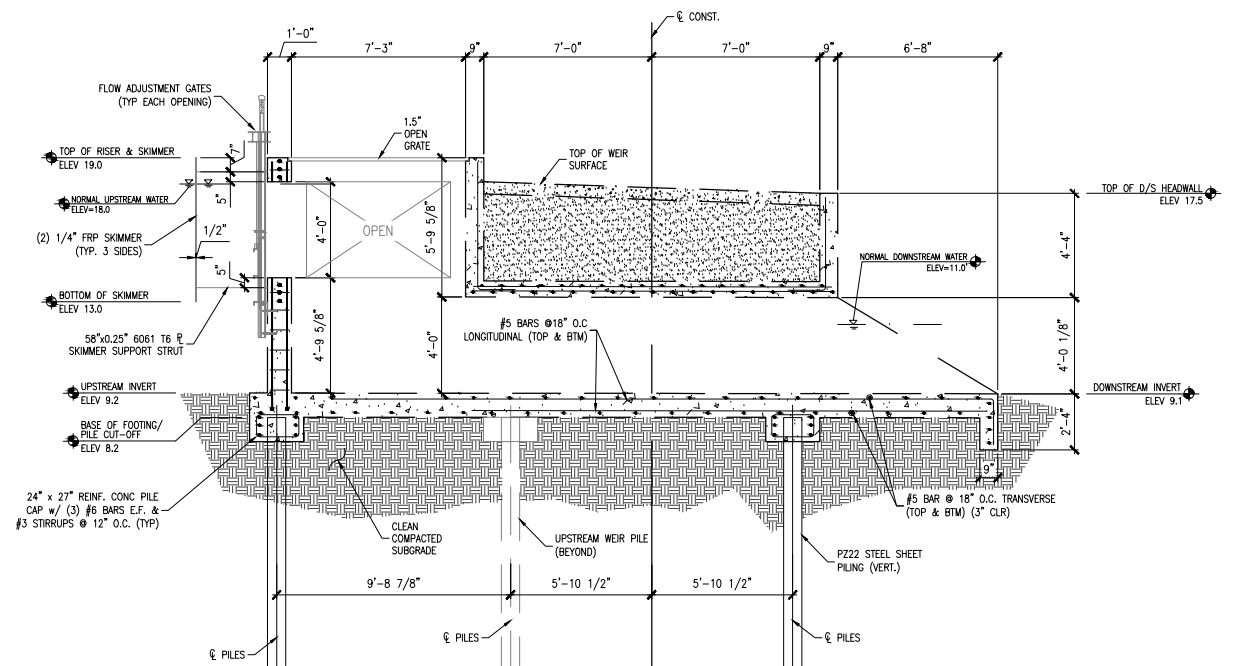
2 BOX CULVERT WALL PLAN
S4 1/8"=1'-0"



3 RISER - FRONT STRUCTURAL ELEVATION
S4 1/8"=1'-0"

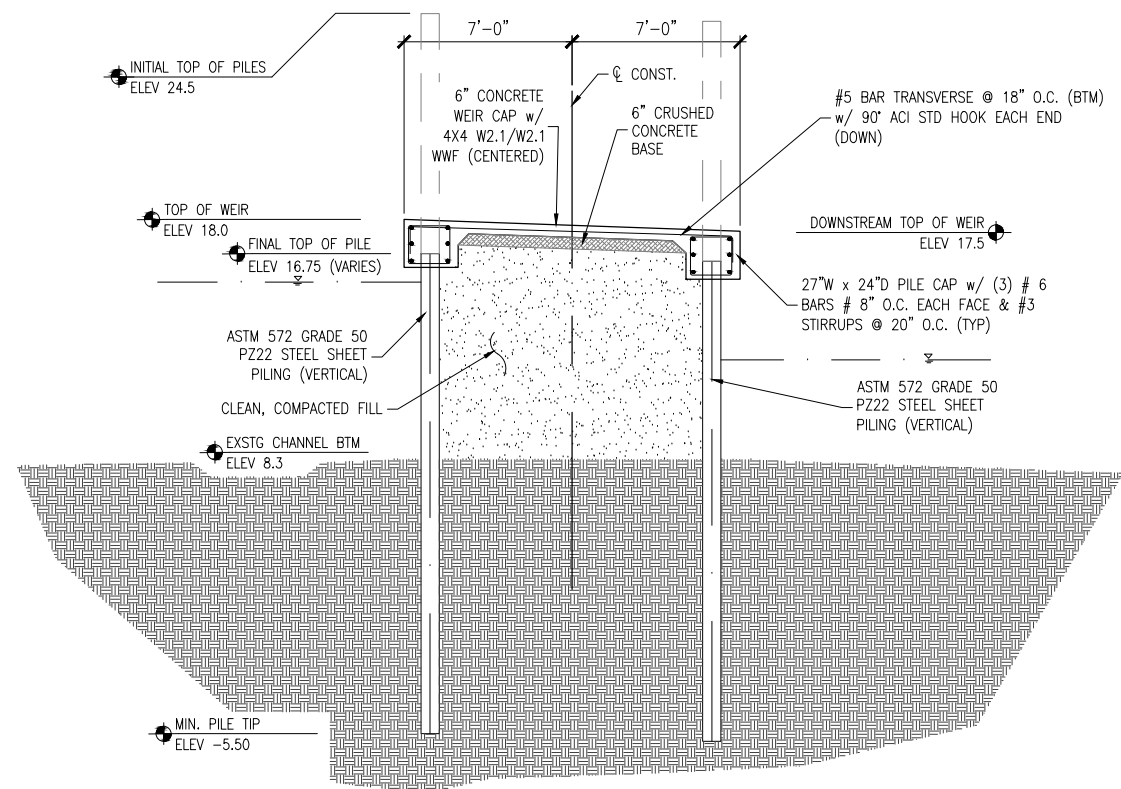


1 BOX CULVERT FOUNDATION PLAN
S4 1/8"=1'-0"

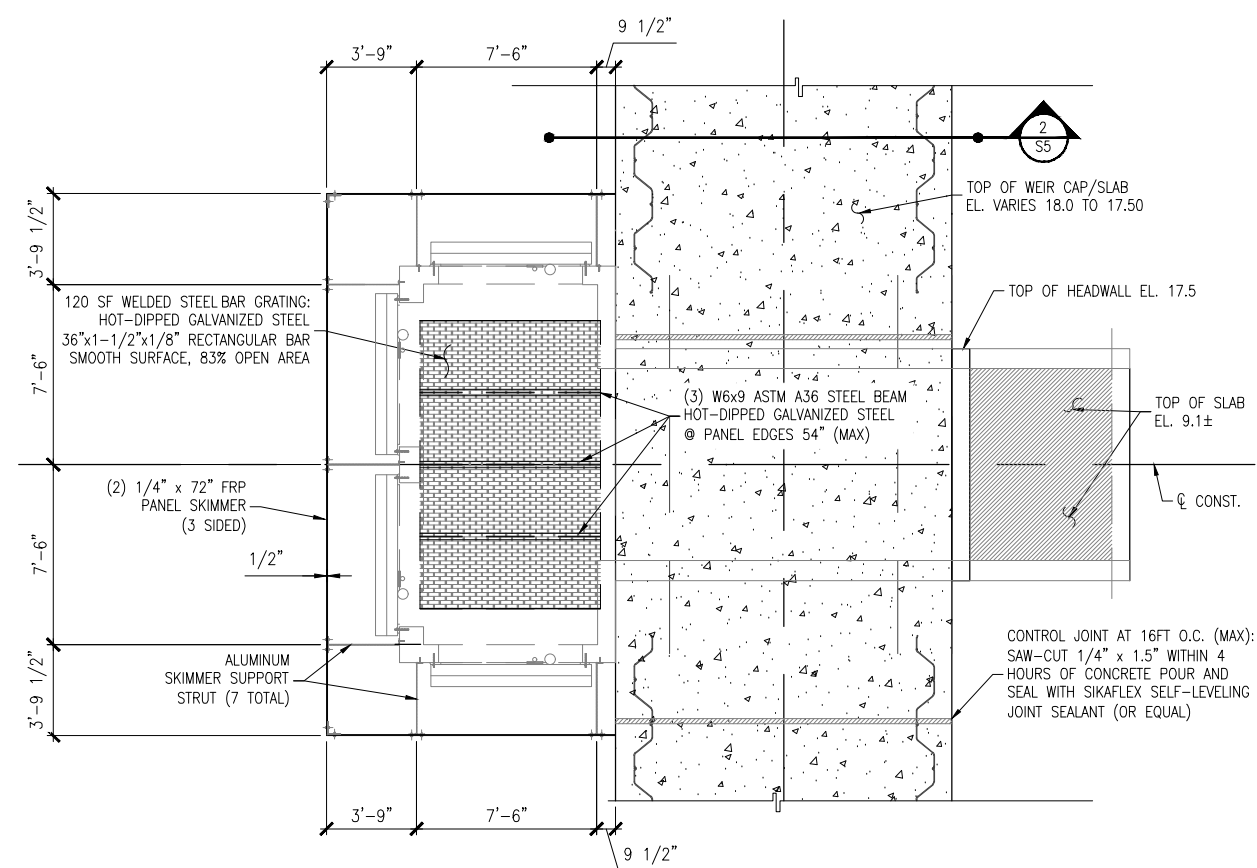


4 BOX CULVERT LONGITUDINAL SECTION
S4 1/8"=1'-0"

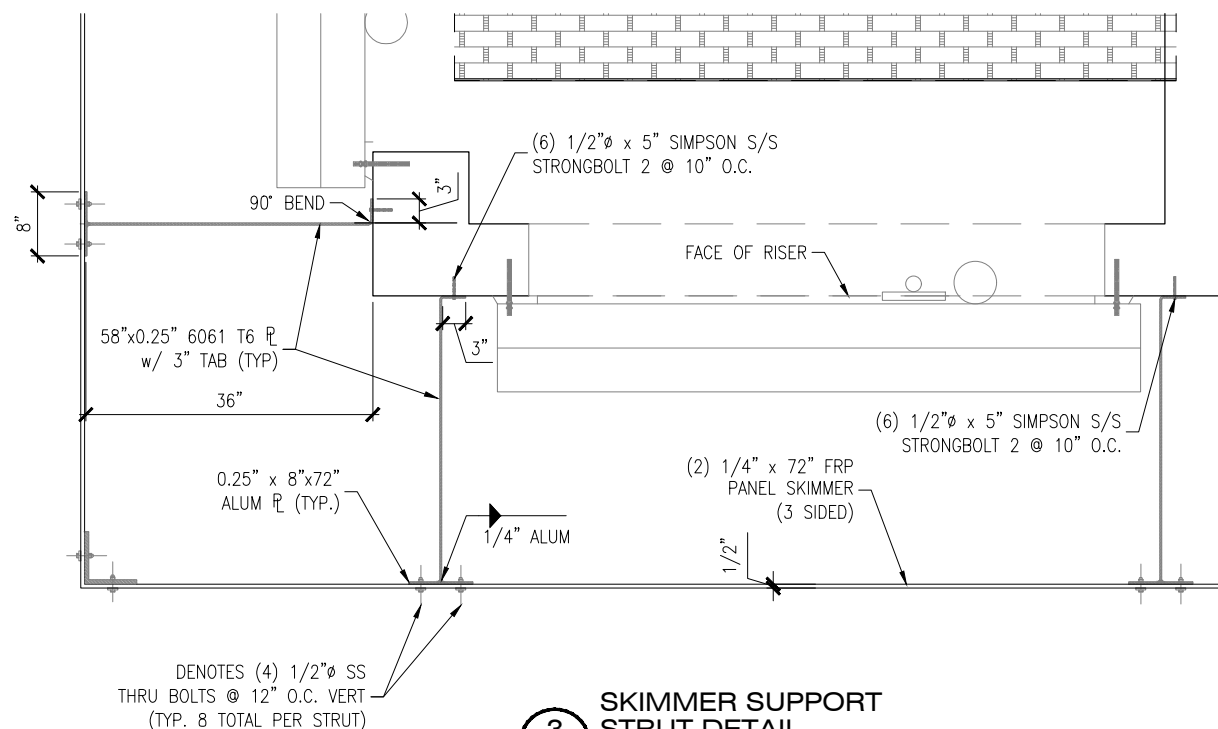
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NO.	DATE	DESCRIPTION	APPROVED			DESIGNED BY:	JR	2/1/21				
				Catalano Engineering, Inc. CIVIL - STRUCTURAL - MARINE 120 SOUTH EDISON AVE. TAMPA, FL 33606 (813) 254-1265 CERTIFICATE NO. 6828	DRMP 941 LAKE BALDWIN LANE ORLANDO, FL 32814	DRAWN BY:	CM	3/16/21	JAMES CATALANO, PE PE No. 42507	CONTROL STRUCTURE PLAN & SECTIONS	19-011.01	S4
						CHECKED BY:	JC	3/23/21				
						SUPERVISED BY:	JC					



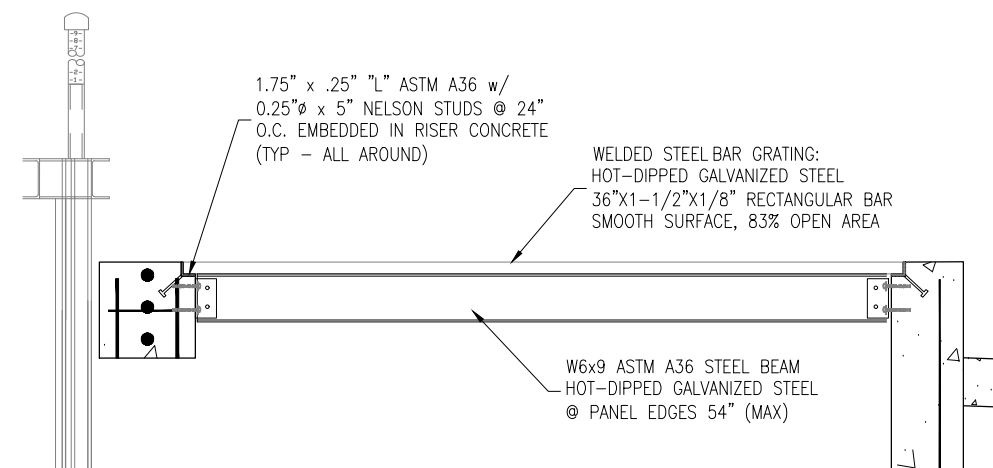
2 WEIR SECTION
S5 1/8"=1'-0"



1 WEIR PLAN AT BOX CULVERT
S5 1/8"=1'-0"




3 SKIMMER SUPPORT STRUT DETAIL
S5 1/2"=1'-0"



4 STEEL GRATE CONNECTION DETAIL
S5 1/2"=1'-0"

REVISIONS			
NO.	DATE	DESCRIPTION	APPROVED

PREPARED BY:

Catalano Engineering, Inc.
 CIVIL - STRUCTURAL - MARINE
 120 SOUTH EDISON AVE.
 TAMPA, FL 33606
 (813) 254-1265
 CERTIFICATE NO. 6828

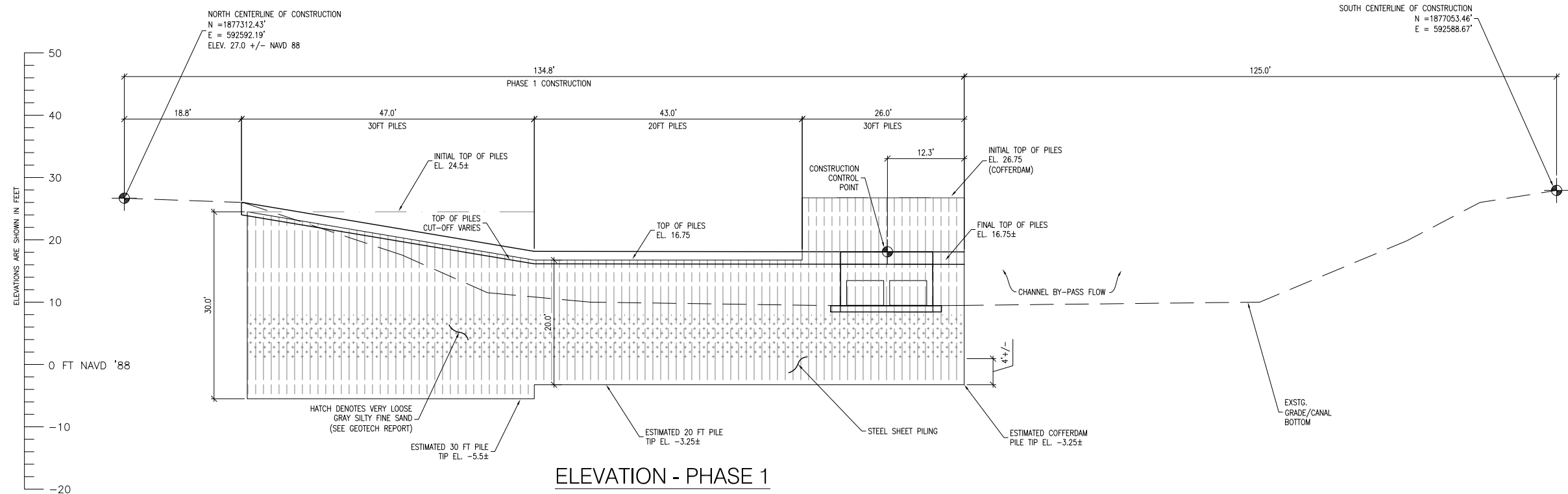
PREPARED FOR:
DRMP
941 LAKE BALDWIN LANE
ORLANDO, FL 32814

NAME	DATE
DESIGNED BY: JR	2/1/21
DRAWN BY: CM	3/16/21
CHECKED BY: JC	3/23/21
SUPERVISED BY: JC	

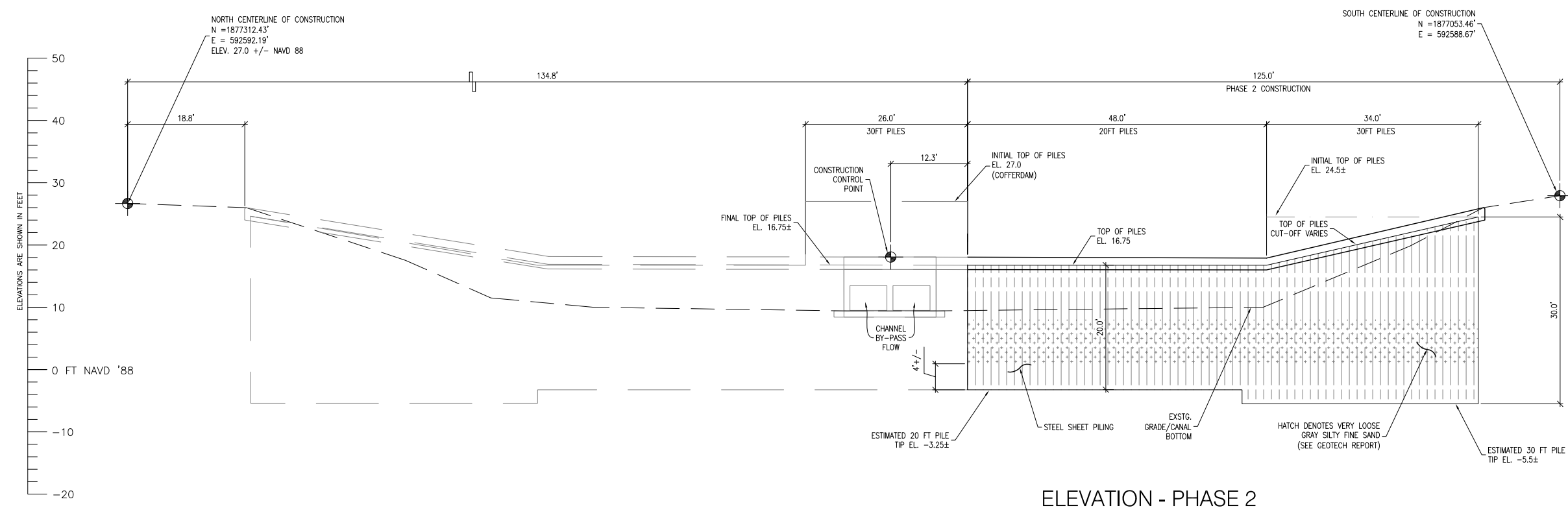
APPROVED BY:
 JAMES CATALANO, PE
 PE No. 42507

CITY OF PALM COAST
L-4 WEIR REPLACEMENT
CONTROL STRUCTURE DETAILS

CEI PROJECT NO.	SHEET NO.
19-011.01	S5




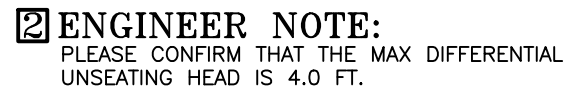
ELEVATION - PHASE 1



ELEVATION - PHASE 2

NOTE: ELEVATIONS ARE UPSTREAM OF THE WEIR, FACING EAST

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NO.	DATE	DESCRIPTION	APPROVED			DESIGNED BY:	JR	2/1/21		CONSTRUCTION PHASING PLAN	19-011.01	S6	
						DRAWN BY:	CM	3/16/21					
						CHECKED BY:	JC	3/23/21					
						SUPERVISED BY:	JC						



1	1 STEM (DOUBLE LEAD)	1.5 DIAMETER, S-STL W/ACME ROLLED THREADS 16 MICRO IN. RMS OR LESS FINISH
	6 YOKE	C8.0x3.0x4.15 LBS ALUMINUM CHANNEL
	11 STIFFENER	C5.0x2.25x2.21 LBS ALUMINUM CHANNEL
	30 OPERATOR	ELECTRIC MOTOR OPERATOR- AUMA MODEL SAR10.2-26A
	38 STEM GUIDE	2.5x2.5x1/4 ALUMINUM ANGLE, W/UHMW STEM GUIDE BUSHING
	73 VERT. STIFFENER	1/4 x 2.5 ALUMINUM FLAT BAR
	190 CENTER STIFFENER	1/4 x 4.0 ALUMINUM FLAT BAR
	2 GUIDE RAIL	EXTRUDED ALUMINUM, 5LB. PER FT. UNI FLANGE
	3 GATE HEAD	1/4" ALUMINUM PLATE
	*9 ANCHOR BLT	1/2"x7.0 S-STL ANCHOR ROD, W/2 NUTS
	15 GUIDE BEARING BAR	UHMW POLYETHYLENE ASTM D-4020 IN DOVETAIL SLOTS PROVIDING OPERATING COEFFICIENT OF 0.125 OR LESS BETWEEN SLIDE AND GATE GUIDE
	16 HORIZONTAL SPIGOT	4.0 x 2.5 x 3/8 ALUMINUM ANGLE
	21 P-SEAL	NEOPRENE RUBBER # 7274
	22 P-SEAL RTNR	S-STL FLAT BAR W/SLOTTED HOLES
	32 STEM COVER	CLEAR BUTYRATE PLASTIC WITH MYLAR STRIP INDICATOR CALIBRATED IN FEET AND INCHES WITH PVC END CAP

* ANCHOR BOLTS ARE DESIGNED FOR USE WITH HILTI HIT-RE 500-V3 ADHESIVE INJECTION SYSTEM OR EQUAL INSTALLED IN DRY CONCRETE (ADHESIVE BY CONTRACTOR)

**NOTE: FIELD COAT ALUMINUM IN CONTACT WITH CONCRETE
WITH BITUMASTIC 50, MIN. 15 MILS DRY OR EQUAL
APPLY IN FIELD W/GHI FURNISHED MATERIAL**

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Max Seating Head	=	4.0 FT	2	Max Unseating Head	=	4.0 FT	2
Max Operating Head	=	4.0 FT	2	Measured From	GATE INVERT		

FRAME OR FRAME COMPONENTS, PEDESTAL, WALL BRACKET, STEM GUIDE, AND OPERATOR MUST BE INSTALLED FLAT STRAIGHT AND PLUMB, SHIM AND BRACE AS NECESSARY.
SEE OPERATION & MAINTENANCE MANUAL FOR ADDITIONAL INSTALLATION INFORMATION.

PARALLEL $\pm 1/8"$
COPLANER $\pm 1/8"$
FLAT & STRAIGHT $\pm 1/16"$
SQUARE $\pm 1/8"$

Drawn By: DH/JR	FL = 62#	Scale: NTS	Job #
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G.H. Drawing #:	10F1
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Contract Sht #:	C1
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