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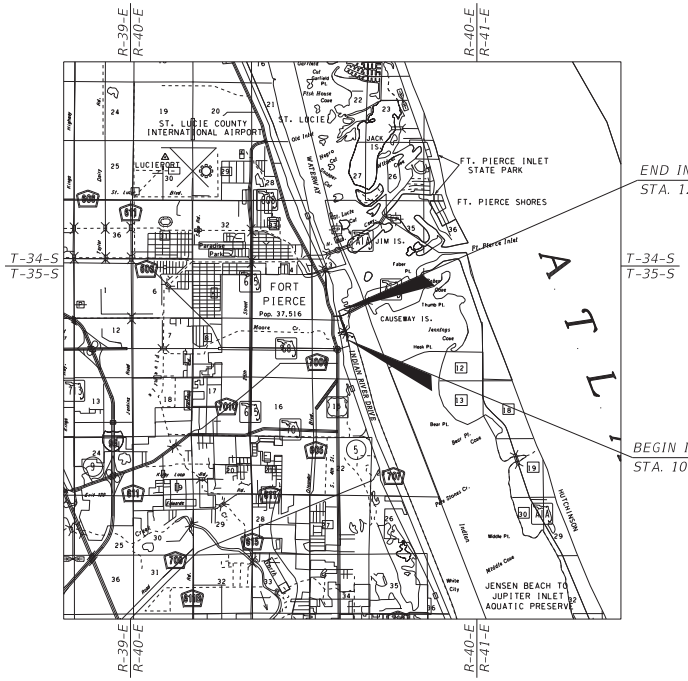
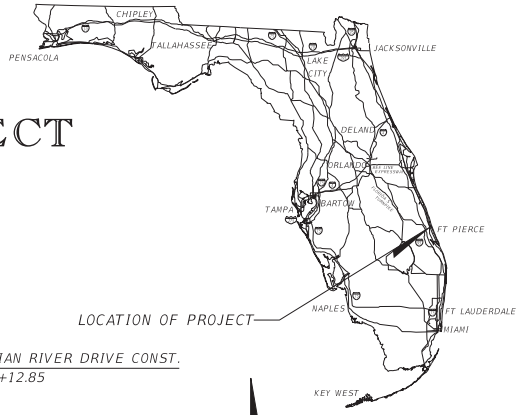
CONTRACT PLANS

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS PROJECT





END INDIAN RIVER DRIVE CONST.
STA. 122+12.85

BEGIN INDIAN RIVER DRIVE CONST.
STA. 100+61.93

PREPARED FOR:

CITY OF FORT PIERCE

PLANS PREPARED BY:

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
PROJECT NUMBER: 047922025
REGISTRY NO. 35106

GOVERNING STANDARDS AND SPECIFICATION
FLORIDA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS FY 2022-23
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED JANUARY 2022.
AS AMENDED BY CONTRACT DOCUMENTS.

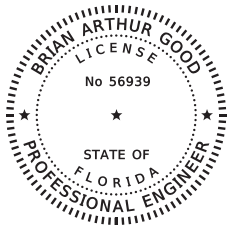
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

BID PLANS
DECEMBER 2024

ROADWAY PLANS
ENGINEER OF RECORD: BRIAN GOOD

P.E. NO.: 56939

SHEET NO.
1



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENT PLANS

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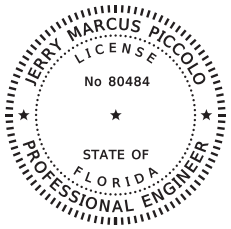

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Jerry M Piccolo

Digitally signed by Jerry M Piccolo
DN: CN=Jerry M Piccolo,
Date: 2025.05.05 10:24:10-04'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

JERRY MARCUS PICCOLO, P.E.
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WEST PALM BEACH, FL 33411
(561) 840-0227
REGISTRY No. 35106

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

INDIAN RIVER DRIVE CORRIDOR BRIDGE PLANS

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WR-7	TECHNICAL SPECIAL PROVISION (TSP) - T401

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SIGNATURE SHEET

SHEET NO. 2

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF FORT PIERCE, FLORIDA STANDARD CONTRACT DOCUMENTS AND SPECIFICATIONS FOR PUBLIC WORK PROJECTS, LATEST ISSUE AND FDOT STANDARD SPECIFICATIONS AND PLANS FOR ROAD CONSTRUCTION, LATEST ISSUE.

2. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST ISSUE.

3. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.

4. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER.

PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF PROPOSED PIPES, STRUCTURES, CONDUITS AND/OR SUB-GRADE SHALL BE PERFORMED FOURTEEN DAYS IN ADVANCE OF ITS CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY OWNERS AND THE CITY WITH A FOURTEEN DAY ADVANCE NOTICE OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. PAYMENT FOR PRE-TRENCHING, SURVEY, AND BACKFILLING SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

5. THE CONTRACTOR SHALL COORDINATE WITH UTILITIES TO ARRANGE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT. THE CONTRACTOR WILL RECEIVE NO DIRECT PAYMENT TO SUPPORT AND/OR PROTECT ANY AND ALL UTILITIES. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

7. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 1-800-432-4770.

8. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION PERMITS PRIOR TO START OF CONSTRUCTION.

9. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

10. THE CONTRACTOR SHALL CONTACT THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE IMMEDIATELY OF ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.

11. B.M. DATA IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ANY NAVD 88 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED.
IF IN DANGER OF BEING DAMAGE, NOTIFY:
GEODETIC INFORMATION CENTER
ATTN: MARK MAINTENANCE SECTION N/CG-162
6001 EXECUTIVE BLVD.
ROCKVILLE MARYLAND 20852

12. EXISTING SECTION CORNERS AND ¼ SECTION CORNERS, AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESET AFTER CONSTRUCTION USING REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA.

13. STORM SEWER PIPE LENGTHS SHOWN ARE APPROXIMATE, AND MAY BE ADJUSTED AS REQUIRED UPON APPROVAL BY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT.

14. INSTALLATION OF ALL STORM SEWERS, INLETS, MANHOLES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AS INDICATED ON THE DRAWINGS. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III PIPE.

15. ALL CATCH BASINS AND PIPE INVERTS SHALL BE AS INDICATED ON THE DRAWINGS. ALL PROPOSED DRAINAGE STRUCTURES ARE TO INCLUDE A 2 FT SUMP BELOW THE LOWEST IDENTIFIED PIPE INVERT, UNLESS EXPLICITY IDENTIFIED BOTTOM ELEVATION.

16. CONTRACTOR SHALL ADJUST ALL UTILITY LIDS AND COVERS TO FINISHED GRADE AS REQUIRED.

17. ALL COMPLETED DRAINAGE STRUCTURES SHALL BE PROTECTED FROM CONTAMINATION BY SILT AND CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL PLACE PLYWOOD ON, OR FILTER FABRIC BETWEEN FRAME AND INLET GRATE UNTIL CONSTRUCTION OPERATIONS ARE COMPLETED. ALL DRAINAGE STRUCTURES (EXISTING AND PROPOSED) WITHIN PROJECT LIMITS SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

18. ALL ROAD CROSSINGS ARE OPEN CUT UNLESS OTHERWISE NOTED ON THE DRAWINGS.

19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS, SIDEWALKS, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE CITY OF FORT PIERCE FIELD ENGINEER. MATERIAL SHALL BE CONSISTENT WITH FDOT STANDARD SPECIFICATIONS.

20. THE CONTRACTOR SHALL NOT ENCROACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, ACCIDENTALLY OR PURPOSELY, CAUSED TO ANY IRRIGATION SYSTEMS, PRIVATE OR PUBLIC. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED, OR MODIFIED IRRIGATION PIPES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES AT NO ADDITIONAL COST.

22. REGARDING MAIL BOXES, WALLS, FENCES, SECURITY GATE TRACKING, OR OTHER PRIVATE PROPERTY OR IMPROVEMENTS THAT SHALL BE TEMPORARILY RELOCATED AND REPLACED, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE OWNER. ANY AND ALL COSTS ASSOCIATED WITH COORDINATING, REMOVING, AND REPLACING ANY PROPERTY ITEMS SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT INDEX 120 SERIES, MUTCD AND THESE PLANS. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES VEHICULAR AND PEDESTRIAN ACCESS TO ALL RESIDENCES AND/OR BUSINESS.

24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE CITY OF FORT PIERCE FIELD ENGINEER.

25. COMPLETE 'AS-BUILT' INFORMATION RELATIVE TO LOCATION, SIZE AND DEPTH OF NEW PIPES, MANHOLES, INLETS, ETC., SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND SUBMITTED (SIGNED AND SEALED BY A FLORIDA CERTIFIED P.LS.) TO THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND FDOT PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL RECORD INFORMATION ON EXISTING UTILITY CROSSINGS ENCOUNTERED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PIPES, INLETS, MANHOLE, ETC., SHALL BE RECORDED BY A FLORIDA REGISTERED SURVEYOR AND SHOWN ON THE RECORD DRAWINGS. THE COST OF SIGNED AND SEALED AS-BUILTS SHALL BE INCLUDED IN OVERALL BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS OF EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY OF FORT PIERCE. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., PRIOR TO BEGINNING WORK IN ANY AREA.

27. ALL DRAINAGE PIPES SHALL BE APPROVED BY CITY OF FORT PIERCE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL CONSTRUCT A FILTER FABRIC JACKET AT ALL PROPOSED STORM SEWER JOINTS AS PER FDOT STANDARD SPECIFICATION SECTION 430. COST OF FILTER FABRIC JACKET SHALL BE INCLUDED IN UNIT PIPE COSTS. ANY DRAINAGE PIPES WITHIN FDOT RIGHT OF WAY, PER FDOT STANDARD SPECIFICATIONS WILL INCLUDE VIDEO INSPECTIONS. VIDEOS SHALL BE PROVIDED TO THE DEPARTMENT SUCH THAT THEY HAVE ENOUGH TIME TO REVIEW PRIOR TO THE WALK THROUGH.

28. EXISTING DRAINAGE STRUCTURES AND CULVERTS WITHIN THE PROJECT LIMITS ARE TO BE REMOVED UNLESS OTHERWISE NOTED.

29. NO EXISTING BASE MATERIAL REMOVED IN EXCAVATION SHALL BE REUSED AS PROPOSED BASE MATERIAL.

30. STAGING AND MATERIAL STORAGE SHALL NOT BE CONDUCTED ON ABUTTING PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM THE OWNER OR WITHIN FDOT R/W. STAGING AND STORAGE SHALL BE CONDUCTED WITHIN PUBLIC R/W, AND/OR CONSTRUCTION EASEMENTS (ACCESS LICENSE AGREEMENTS).

31. EXISTING UTILITY CONTACT INFORMATION:

UTILITY COMPANY	CONTACT	PHONE NUMBER	ADDRESS
AT&T	MARK LINSCOTT	321-419-9875	6628 LAKESIDE RD WEST PALM BEACH, FL 33411
COMCAST CABLE	BOBBY MCROY JUDE RENE	561-325-2986 561-598-9407	1401 NORTH POINT PKWY WEST PALM BEACH, FL 33407
FPUA WATER/SEWER	LUGEY DAWSON	772-466-1600 EXT. 3428	1701 S 37TH ST FORT PIERCE, FL 34947
FPUA ELEC/GAS	ERIC MEYER	772-466-1600 EXT. 6305	1701 S 37TH ST FORT PIERCE, FL 34947
CENTURY LINK	CENTURYLINK TEAM	877-366-8344 EXT:2	1025 ELDORADO BLVD BROOMFIELD, CO 80021
INVESTIGATIONS TEAM		800-624-9675	400 INTERNATIONAL PKWY RICHARDSON, TX 75081
AT&T	KEVIN TALECKI MIKE GAMBOA	610-200-3365	2901 W BUSCH BLVD. SUITE 711 TAMPA, FL 33618
SPRINT	JON BAKER	352-409-5095	360 S LAKE DESTINY SUITE A ORLANDO, FL 32810

32. EROSION CONTROL MEASURES SHALL BE TAKEN BY CONTRACTOR DURING CONSTRUCTION AS PER FDOT STANDARDS:

A. SILT FENCE SHALL BE INSTALLED ALONG THE ENTIRE PERIMETER OF THE PROJECT ADJACENT TO ANY SOIL DISTURBING ACTIVITIES.

B. ALL DRAINAGE STRUCTURES ARE TO BE PROTECTED DURING CONSTRUCTION PER FDOT STANDARDS.

C. ALL FENCING, GRADING, SIGNING AND SODDING SHALL BE MAINTAINED DURING THE CONTRACT LIFE. ALL DAMAGED WORK SHALL BE RESTORED AT NO COST TO THE CITY.

33. ALL EXISTING MAILBOXES WITHIN LIMITS OF CONSTRUCTION SHALL BE RELOCATED IN ACCORDANCE WITH CITY AND POSTAL CODES.

34. NON-STRUCTURAL CONCRETE UTILIZED IN CURB AND GUTTER, SIDEWALK AND URBAN FLARED TURNOUT CONSTRUCTION SHALL CONSIST OF 3000 PSI FIBER REINFORCED MIX.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
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(772) 794-4100
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

GENERAL NOTES

SHEET NO. 3

SUMMARY OF PAY ITEMS

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY
	ROADWAY PAY ITEMS		
101-1	MOBILIZATION / DEMOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-2	PREVENTION, CONTROL, & ABATEMENT OR EROSION & WATER POLLUTION	LS	1
110-1-1	STANDARD CLEARING & GRUBBING	AC	5.2
120-1	REGULAR EXCAVATION	CY	4229
120-6	EMBANKMENT	CY	6547
160-4	TYPE "B" STABILIZATION	SY	13437
285-709	OPTIONAL BASE GROUP 9 (10" THICK)	SY	8465
327-70-1	MILLING EXISTING PAVEMENT (1.0" AVG DEPTH)	SY	247
334-1-53	SUPERPAVE ASPHALTIC CONCRETE (TYPE SP-9.5) (TRAFFIC C) (PG 76-22) (1")	TN	504
334-1-53A	SUPERPAVE ASPHALTIC CONCRETE (TYPE SP-12.5) (TRAFFIC C) (PG 76-22) (2")	TN	975
350-3-204	CEMENT CONCRETE PAVEMENT (STAMPED CROSSWALK) (6" THICK)	SY	80
400-0-11	CLASS NS CONCRETE (GRAVITY WALL) (SCHEME 1)	CY	18.2
400-0-12	CLASS NS CONCRETE (SEATWALL)	CY	41
400-0-13	CLASS NS CONCRETE (CONCRETE STEPS)	CY	2.8
425-1-201	CURB INLET (TYPE P-9) (<10')	EA	25
425-1-203	CURB INLET (TYPE J-9) (<10')	EA	2
425-1-211	CURB INLET (TYPE P-10) (<10')	EA	1
425-1-213	CURB INLET (TYPE J-10) (<10')	EA	1
425-1-331	CURB INLET (TYPE P-3) (<10')	EA	4
425-1-341	CURB INLET (TYPE P-4) (<10')	EA	3
425-1-521	DITCH BOTTOM INLET (TYPE C) (<10')	EA	7
425-1-711	VALLEY GUTTER INLET (<10') (P-BOTTOM)	EA	2
425-1-712	VALLEY GUTTER INLET (<10') (J-BOTTOM)	EA	1
425-2-41A	MANHOLE (P-7) (<10') (W/ CITY OF FORT PIERCE DECORATIVE COVER)	EA	13
425-2-71A	MANHOLE (J-7) (<10') (W/ CITY OF FORT PIERCE DECORATIVE COVER)	EA	4
425-5-1A	MANHOLE (UTILITIES) ADJUST (W/ CITY OF FORT PIERCE DECORATIVE COVER)	EA	7
425-6	VALVE BOX ADJUST	EA	12
425-11	MODIFY EXIST. DRAINAGE STRUCTURE	EA	3
430-175-115	PIPE CULVERT (15" RCP) (CL III)	LF	21
430-175-118	PIPE CULVERT (18" RCP) (CL III)	LF	1499
430-175-124	PIPE CULVERT (24" RCP) (CL III)	LF	1368
430-175-124A	PIPE CULVERT (24" CAP) (12 GAUGE) (ULTRA-FLO)	LF	182
430-175-215	PIPE CULVERT (12"x18" ERCP) (CL III)	LF	42
430-175-218	PIPE CULVERT (14"x23" ERCP) (CL III)	LF	200
430-175-224	PIPE CULVERT (19"x30" ERCP) (CL III)	LF	21
430-830	PLUG AND PRESSURE GROUT PIPE OUT OF SERVICE	CY	239
440-73-2	6" HDPE UNDERDRAIN PIPE	LF	797
515-1-2	PIPE HANDRAIL - GUIDERAIL W/ HANDRAIL (ALUMINUM)	LF	80
520-1-10	CONCRETE CURB & GUTTER (TYPE F)	LF	4781
520-2-4	CONCRETE CURB (TYPE D)	LF	1667
520-3	CONCRETE VALLEY GUTTER	LF	855
520-2-115	CONCRETE HEADER CURB	LF	1461
522-1	CONCRETE SIDEWALK (3,000 PSI MIN. W/ FIBER) (1.0 LB/SY) (4" THICK)	SY	1307
522-1A	CONCRETE SIDEWALK (W/ BRICK BANDING) (3,000 PSI MIN. W/ FIBER) (1.0 LB/SY) (4" THICK)	SY	3856
522-2	CONCRETE SIDEWALKS & DRIVEWAYS (3000 PSI W/ FIBER) (1.5 LB/SY) (6" THICK)	SY	495
526-1-1	ARCHITECTURAL PAVERS (ROADWAY) (PLAZA) (W/ 6" THICK CONC. SUB-SLAB)	SY	1045
526-1-2	ARCHITECTURAL PAVERS (SIDEWALK) (REMOVE & RESET)	SY	120
526-1-3	PERVIOUS PAVERS (F&I)	SY	2206
527-2A	DETECTABLE WARNING DOMES (F&I) (PAVERS)	SF	674
530-3-8	RIPRAP-RUBBLE (REMOVE EXISTING AND REINSTALL)	CY	26
751-38-13	CONCRETE BENCH (BOOMERANG BENCH)	EA	2
999-2A	RECORD / AS-BUILT DRAWINGS (ROADWAY & DRAINAGE)	LS	1

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY
	LANDSCAPE PAY ITEMS		
162-1-3	PREPARED SOIL LAYER (SUPPLEMENTAL TOP SOIL) (DEPTH VARIES)	CY	500
570-1-2	PERFORMANCE TURF (SOD)(FLORATAM)	SY	3200
570-1-2A	PERFORMANCE TURF (SOD)(BAHIA)	SY	225
570-1-2B	PERFORMANCE TURF (SOD)(ARACHIS GLABRATA 'ECCTURF' / PERENNIAL PEANUT)	SY	321
580-1-9	MULCH (FLORIMULCH) (4" THICK)	SY	154
580-4-555	ROYSTONEA REGIA / ROYAL PALM (17-20' G.W.)	EA	12
580-4-556	PHOENIX SYLVESTRIS / WILD DATE PALM (16'-18' HT)	EA	3
580-7-107	MUHLENBERGIA CAPILLARIS / PINK MUHLY (24" HT MIN.)	EA	1312
580-7-147	CLUSIA RODEA 'NANA' / CLUSIA NANA (18" HT MIN., 18" SPR MIN.)	EA	195
580-7-177	CHRYSOBALANUSICACO 'RED TIP' / RED TIP COCOPLUM (30" HT MIN., 36" SPR MIN.)	EA	175
580-7-257	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS (18" HT MIN., 18" SPR MIN.)	EA	2133
580-7-707	BOUGAINVILLEA 'HELEN JOHNSON' / HELEN JOHNSON COMPACT BOUGAINVILLEA (24" HT MIN., 24" SPR MIN.)	EA	222
580-7-727	CRINUM AUGUSTUM 'QUEENEMMA' / QUEEN EMMA CRINUM LILY (24" HT MIN., 30" SPR MIN.)	EA	55
580-7-747	TRACHELOSPERMUM JASMINOIDES / CONFEDERATE JASMINE (24"X24")	EA	1522
580-7-757	EVOLVULUS GLOMERATUS 'BLUE DAZE' / BRAZILIAN DWARF MORNING GLORY (24" HT MIN.)	EA	4931
581-1-1	RELOCATED ROYAL PALM	EA	36
590-70	IRRIGATION SYSTEM (COMPLETE) (F&I)	LS	1
	SIGNING AND MARKING PAY ITEMS		
700-1-11A	SINGLE POST SIGN (F&I) (GROUND MOUNT, UP TO 12 SF) (DECORATIVE SIGNS AND POLES)	AS	25
700-1-51A	SINGLE POST SIGN (RELOCATE) (GROUND MOUNT, UP TO 12 SF) (DECORATIVE SIGNS AND POLES)	AS	4
700-1-51B	SINGLE POST SIGN (RELOCATE) (GROUND MOUNT, 12-20 SF) (DECORATIVE SIGNS AND POLES)	AS	2
702-1	BLINKER BEAM PEDESTRIAN CROSSING SYSTEM	EA	2
706-1-3	RETROREFLECTIVE PAVEMENT MARKINGS	EA	145
711-11-121	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (WHITE) (6")	LF	5320
711-11-123	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (WHITE) (12")	LF	164
711-11-125	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (WHITE) (24")	LF	228
711-11-141	TRAFFIC STRIPE SKIP (THERMOPLASTIC) (WHITE) (6", 2'-4' SKIP)	LF	90
711-11-170	TRAFFIC MARKING (THERMOPLASTIC) (WHITE) (ARROW)	EA	3
711-11-221	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (YELLOW) (6")	LF	3071
711-11-224	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (YELLOW) (18")	LF	5
711-11-231	TRAFFIC STRIPE SKIP (THERMOPLASTIC) (YELLOW) (6", 2'-4' SKIP)	LF	96
711-11-231A	TRAFFIC STRIPE SKIP (THERMOPLASTIC) (YELLOW) (6", 10'-30' SKIP)	LF	450
713-103-101	PERMANENT TAPE (WHITE) (6") (BRIDGE)	LF	172
713-103-103	PERMANENT TAPE (WHITE) (12") (BRIDGE)	LF	64
713-103-202	PERMANENT TAPE (YELLOW) (6") (BRIDGE)	LF	172
	LIGHTING PAY ITEMS		
519-78	BOLLARD (LIGHTED) (F&I)	EA	16
519-79	BOLLARD (NONLIGHTED) (F&I)	EA	4
630-2-11	CONDUIT (F&I) (OPEN TRENCH) (2" PVC)	LF	4948
635-2-11	PULL & SPLICE BOX (13"X24') (F&I)	EA	47
715-500-1	POLE CABLE DISTRIBUTIONSYSTEM (CONVENTIONAL)	EA	47
715-516-315	LIGHT POLE COMPLETE (SPECIAL DESIGN) (POLE TOP MOUNT) (F&I) (W/ RECEPTACLE AND BANNER ARMS)	EA	45
715-546-815	LIGHT POLE COMPLETE (RELOCATE)	EA	1

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SUMMARY OF PAY ITEMS

SHEET NO. 4

SUMMARY OF PAY ITEMS CONTINUED

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY
	BRIDGE PAY ITEMS		
108-2	MONITOR EXISTING STRUCTURES - VIBRATION MONITORING	LS	1
110-3	REMOVAL OF EXISTING STRUCTURE/BRIDGE	SF	2760
400-2-10	CONCRETE CLASS II, APPROACH SLAB	CY	102.8
400-4-5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	CY	132.3
400-4-25	CONCRETE CLASS IV, MASS, SUBSTRUCTURE	CY	87.6
400-4-47	CONCRETE CLASS IV, CAST IN PLACE TOPPING WITH SHRINKAGE REDUCING ADMIXTURE	CY	126.3
400-7-1	BRIDGE DECK GROOVING	SY	147
400-148	PLAIN NEOPRENE BEARING PADS	CF	5.2
415-1-4	REINFORCING STEEL, BRIDGE SUPERSTRUCTURE	LB	19500
415-1-9	REINFORCING STEEL, APPROACH SLABS	LB	17500
415-2-5	STAINLESS REINFORCING STEEL, SUBSTRUCTURE	LB	22600
450-8-24	PRESTRESSED BEAM: FLORIDA SLAB BEAM, BEAM DEPTH 15" CARBON STEEL, WIDTH 58-60"	LF	526
455-34-405	PRESTRESSED CONCRETE PILING. INCLUDES 100% DYNAMIC TESTING. SIZE 18" SQ W/ FRP OR STAINLESS STEEL STRANDS AND REINFORCING	LF	2845
455-133-3	SHEET PILING STEEL (F&I), PERMANENT	SF	1086
458-1-11	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION. (F&I) POUREED JOINT WITH BACKER ROD	LF	121
521-5-3A	TEXAS RAILING, COMBINATION RAIL TEXAS CLASSIC, TYPE C411	LF	159
630-2-16	CONDUIT (F&I), EMBEDDED CONCRETE BARRIERS AND TRAFFIC RAILINGS	LF	750
635-3-13	JUNCTION BOX (F&I), EMBEDDED	EA	4
715-11A	LUMINAIRE COMPLETE (F&I)	LS	1
	SEAWALL REPAIR PAY ITEMS		
401-70-1	RESTOR SPALLED AREAS, EPOXY	CF	1
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	47
401-70-4A	RESTORE SPALLED AREAS, PORTALND CEMENT GROUT (WALL PANELS)	CF	27
411-1A	CRACK SEALING - STRUCTURES REHAB.	LF	30
563-4	ANTI-GRAFFITI COATING, NON-SCRIFICIAL	SF	1500
901-1A	57 STONE FILL	LS	1
	WATER/SEWER UTILITY PAY ITEMS		
999-2B	RECORD / AS-BUILT DRAWINGS (FPUA UTILITIES)	LS	1
1050-18-203	EXISTING 6" WATER MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	1,090
1050-18-204	EXISTING 8" WATER MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	100
1050-18-204A	EXISTING 12" WATER MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	50
1050-18-204B	EXISTING 8" FORCE MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	70
1050-18-204C	EXISTING 18" FORCE MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	770
1050-18-204D	EXISTING 15" GRAVITY SEWER (REMOVE)	LF	43
1050-18-322	EXISTING 2" FORCE MAIN (CAP & PRESSURE GROUT OR REMOVE)	LF	205
1050-31-206	UTILITY PIPE (F&I) (PVC) (WATER MAIN) (6")	LF	82
1050-31-208	UTILITY PIPE (F&I) (PVC) (WATER MAIN) (8")	LF	123
1050-31-208A	UTILITY PIPE (F&I) (PVC) (FORCE MAIN) (8")	LF	61
1050-31-212	UTILITY PIPE (F&I) (PVC) (WATER MAIN) (12")	LF	62
1050-31-216	UTILITY PIPE (F&I) (PVC) (WATER MAIN) (16")	LF	30
1050-31-218	UTILITY PIPE (F&I) (PVC) (FORCE MAIN) (18")	LF	759
1050-41-102	UTILITY PIPE (F&I) (PE) (FORCE MAIN) (2")	LF	77
1050-42-218	UTILITY PIPE (F&I) (HDPE) (FORCE MAIN) (18")	LF	106
1050-51-208	UTILITY PIPE (F&I) (DI) (WATER MAIN) (8")	LF	66
1050-51-218	UTILITY PIPE (F&I) (DI) (FORCE MAIN) (18")	LF	67
1050-51-308	UTILITY FITTING (F&I) (REDUCER) (DI) (8"X12") (WATER MAIN)	EA	1
1055-51-106	UTILITY FITTING (F&I) (ELBOW) (45 DEG.) (DI) (WATER MAIN) (6")	EA	7
1055-51-108	UTILITY FITTING (F&I) (ELBOW) (45 DEG.) (DI) (WATER MAIN) (8")	EA	5
1055-51-108A	UTILITY FITTING (F&I) (ELBOW) (90 DEG.) (DI) (WATER MAIN) (8")	EA	2

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY
1055-51-112	UTILITY FITTING (F&I) (ELBOW) (45 DEG.) (DI) (WATER MAIN) (12")	EA	4
1055-51-116	UTILITY FITTING (F&I) (ELBOW) (45 DEG.) (DI) (WATER MAIN) (16")	EA	4
1055-51-208	UTILITY FITTING (F&I) (ELBOW) (22.5 DEG.) (DI) (FORCE MAIN) (8")	EA	1
1055-51-218	UTILITY FITTING (F&I) (ELBOW) (22.5 DEG.) (DI) (FORCE MAIN) (18")	EA	1
1055-51-218A	UTILITY FITTING (F&I) (ELBOW) (45 DEG.) (DI) (FORCE MAIN) (18")	EA	22
1055-51-218B	UTILITY FITTING (F&I) (ELBOW) (90 DEG.) (DI) (FORCE MAIN) (18")	EA	6
1055-51-206	UTILITY FITTING (F&I) (TEE) DI) (WATER MAIN) (6"X6")	EA	1
1055-51-212	UTILITY FITTING (F&I) (TEE) DI) (WATER MAIN) (12"X12")	EA	1
1055-51-218A	UTILITY FITTING (F&I) (TEE) DI) (FORCE MAIN) (8"X18")	EA	1
1055-51-518	UTILITY FITTING (F&I) (CAP) (DI) (FORCE MAIN) (18")	EA	1
1055-51-618	UTILITY FITTING (F&I) (WYE) (DI) (FORCE MAIN) (18"X18")	EA	1
1060-11-222	UTILITY STRUCTURE AND MANHOLE (F&I) (BELOW GRADE) (ULTILITY CONFLICT MANHOLE W/ CITY OF FORT PIERCE DECORATIVE COVER)	EA	3
1060-15-202	UTILITY STRUCTURE AND MANHOLE (MODIFY) (W/ CITY OF FORT PIERCE DECORATIVE COVER)	EA	1
1060-28-30	UTILITY STRUCTURE (TEMPORARY FM SUPPORT STRUCTURE)	LS	1
1080-11-201	UTILITY FIXTURE (F&I) (WATER METER SERVICE)	EA	1
1080-11-201A	UTILITY FIXTURE (F&I) (DUAL WATER METER SERVICE)	EA	1
1080-11-203	UTILITY FIXTURE (F&I) (2"X13" SEALTITE SADDLE) (FM)	EA	1
1080-11-403	UTILITY FIXTURE (F&I) (6"X12" TAPPING SADDLE) (WM)	EA	2
1080-11-406A	UTILITY FIXTURE (F&I) (ARV) (WATER MAIN) (8")	EA	1
1080-11-406B	UTILITY FIXTURE (F&I) (ARV) (FORCE MAIN) (18")	EA	1
1080-11-410	UTILITY FIXTURE (F&I) (18"X18" HDPE/PVC TRANSITION COUPLING)	EA	4
1080-11-499	UTILITY FIXTURE (F&I) (TEMPORARY JUMPER CONNECTION)	EA	1
1080-21-102	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (FORCE MAIN) (2")	EA	1
1080-21-106	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (WATER MAIN) (6")	EA	2
1080-21-108	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (WATER MAIN) (8")	EA	1
1080-21-108A	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (FORCE MAIN) (8")	EA	1
1080-21-112	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (WATER MAIN) (12")	EA	1
1080-21-118	UTILITY FIXTURE (F&I) (VALVE ASSEMBLY) (FORCE MAIN) (18")	EA	3
1080-32-108	UTILITY FIXTURE (F&I) (SAMPLE POINT) (WATER MAIN)	EA	3
1644-113-08	FIRE HYDRANT ASSEMBLY (F&I)	EA	1
	ELECTRIC UTILITY PAY ITEMS		
630-2-91	CONDUIT (INSTALL) (OPEN TRENCH) (2" PVC)	LF	2000
630-2-91A	CONDUIT (INSTALL) (OPEN TRENCH) (4" PVC)	LF	2000
630-2-918	CONDUIT (INSTALL) (OPEN TRENCH) (6" PVC)	LF	600

REVISIONS

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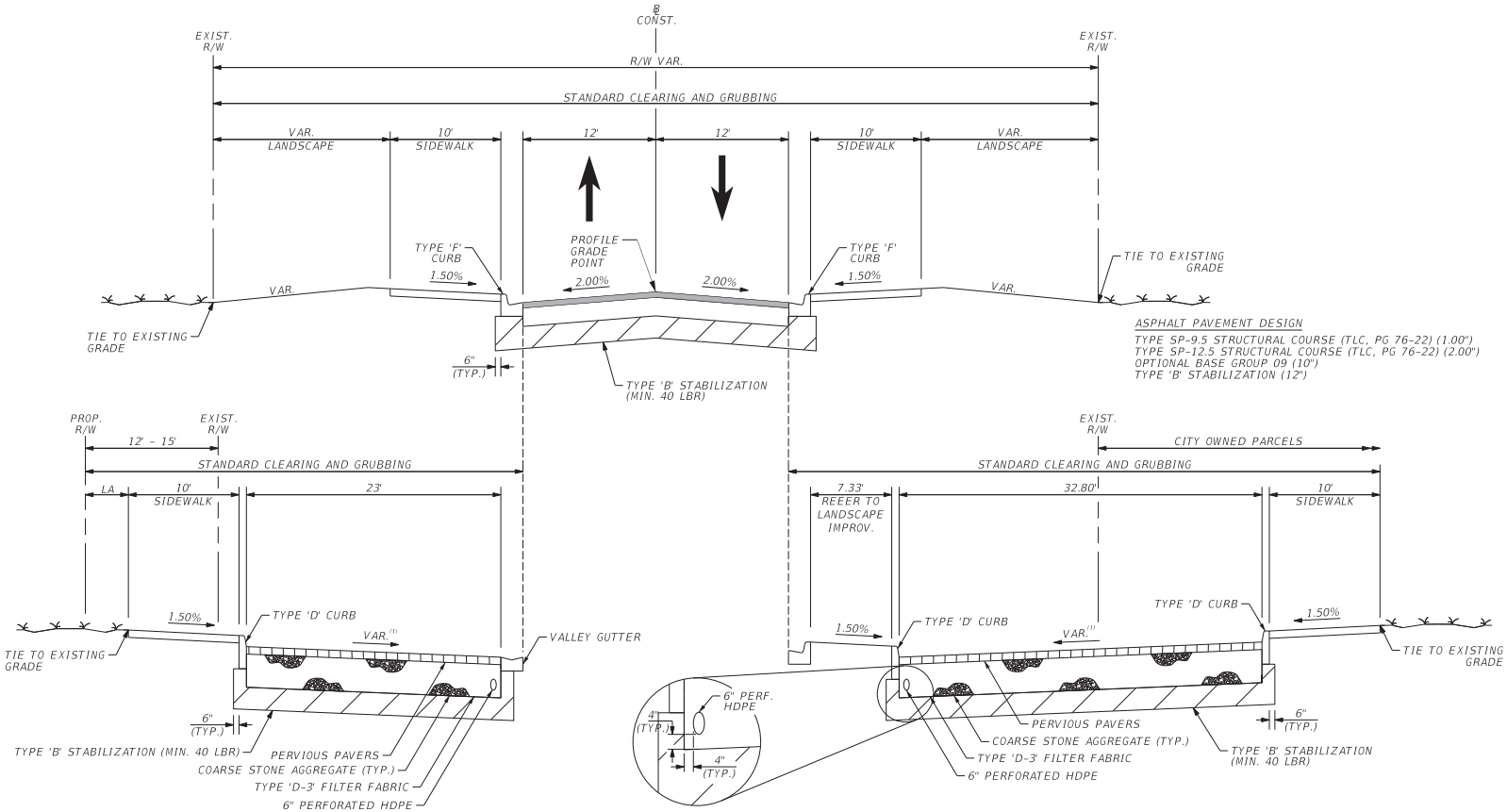
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SUMMARY OF PAY ITEMS

SHEET NO. 5

PAY ITEM FOOTNOTES

101-1	COST TO INCLUDE, BUT NOT LIMITED TO, MOWING EXISTING SOD AND MAINTENANCE OF EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS INCLUSIVE OF MOWING AND LITTER REMOVAL FOR THE PROJECT DURATION.
102-1	MAINTENANCE OF TRAFFIC COSTS SHALL INCLUDE BUT NOT LIMITED TO CONSTRUCTION SIGNS, BUSINESS SIGNS, TEMPORARY BARRICADES, VARIABLE MESSAGE SIGNS, TEMPORARY REFLECTIVE MARKERS, TEMPORARY PAVEMENT MARKINGS, INCIDENTAL TEMPORARY PAVEMENT, DUST CONTROL, ANY TEMPORARY DRAINAGE ELEMENTS BEYOND WHAT IS SPECIFIED IN THE CONTRACT DOCUMENTS, AND ALL ITEMS NECESSARY TO MEET THE MAINTENANCE OF TRAFFIC REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION AS PRESCRIBED IN SECTION 102-XXX OF THE FDOT STANDARD PLANS.
285-709	THE COST OF PRIME COAT SHALL BE INCLUDED IN THE PRICE OF THE BASE MATERIAL.
334-1-XXX	THE COST OF THE TACK COAT SHALL BE INCLUDED IN THE UNIT PRICE OF ASPHALT.
400-0-13 400-0-12 400-0-13	COST TO INCLUDE, BUT NOT BE LIMITED TO, REINFORCING STEEL, CAP STONE CAP AND ANTI-GRAFFITI COATING.
400-2-10 400-4-5 400-4-25 400-4-47 521-5-3A	THESE PAY ITEMS SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE NON-SACRIFICIAL ANTI-GRAFFITI COATING AS CALLED FOR IN THE CONTRACT PLANS.
415-2-5	CONTRACTOR IS ADVISED THAT THIS REINFORCING STEEL MAY HAVE A LONG LEAD TIME.
425-2-XX	COST TO INCLUDE, BUT NOT LIMITED TO, DECORATIVE COVER BRANDED WITH CITY OF FORT PIERCE LOGO.
430-830	COST TO INCLUDE, BUT NOT LIMITED TO, MASONRY PLUGS, DEWATERING, GROUTING AND VENT PORTS.
440-73-2	COST TO INCLUDE, BUT NOT LIMITED TO, UNDERDRAIN PIPE CLEANOUT FRAME &GRATE AND CONCRETE PAD.
455-34-405	THIS PAY ITEM SHALL INCLUDE 100% DYNAMIC TESTING, SIZE 18" SQ W/FRP OR STAINLESS STEEL STRANDS AND REINFORCING. CONTRACTOR IS ADVISED THAT THE STAINLESS STEEL REINFORCED PILES MAY HAVE LONGER LEAD TIME. THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING ACCESS TO THE ENGINEER TO CONNECT ALL NECESSARY DYNAMIC TESTING EQUIPEMENT WITHOUT REQUIRNG THE ENGINEER TO CLIMB THE HAMMER LEADS (LADDERS).
455-133-3	THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH INSTALLING THE STEEL SHEET PILE UTILIZING THE NON-VIBRATORY PRESS-IN METHOD. THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH COATING THE STEEL SHEET PILES AS DESCRIBED IN THE PLANS.
520-2-115	COST TO INCLUDE, BUT NOT LIMITED TO, RBNFORCING STEEL.
521-5-3A	THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH THE FULL INSTALLATION OF THE TEXAS RAILING, INCLUDING BUT NOT LIMITED TO, ALL ASSOCIATED REINFORCING STEEL FOLLOWING THE "DECORATE RAILING DETAILS" SHEETS. THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH THE FOUR BRONZE CITY CREST PLACUES INCLUDING, BUT NOT LIMITED TO, SHOP DRAWINGS, MOLDS, CASTINGS, FINISHES AND INSTALLATION.
522-1 522-2	COST TO INCLUDE, BUT NOT LIMITED TO, SYNTHETIC FIBER REINFORCEMENT.
522-1A	COST TO INCLUDE, BUT NOT LIMITED TO, SYNTHETIC FIBER REINFORCMENT, BRICK PAVERS, MORTAR, STEEL REINFORCEMENT AND SUB-GRADE COMPACTION.
526-1-1	COST TO INCLUDE, BUT NOT LIMITED TO, SYNTHETIC FIBER REINFORCEMENT CONC. SLAB, BRICK PAVERS, STEEL REINFORCEMENT, BEDDING SAND AND SUB-GRADE COMPACTION.
526-1-2	COST TO INCLUDE, BUT NOT LIMITED TO, REMOVING THE EXISTING CONCRETE PAVERS AND RESETTING THE PAVERS CONSISTENT WITH THE EXISTING INSTALLATION. COST TO INCLUDE BASE MATERIAL, CONC. EDGE RESTRAINT CURB, LEVELING SAND, JOINT SAND,
526-1-3	COST TO INCLUDE, BUT NOT LIMITED TO, PERVIOUS PAVERS, TRAFFIC COLORED PAVERS, STONE AGGREGATES, FILTER FABRIC, GEOGRID AND SUB-GRADE COMPACTION.
563-4	THIS PAY ITEM SHALL ALSO INCLUDE ALL COSTS ASSOCIATED WITH PREPARING THE CONCRETE SURFACE RECEIVING THE ANTI-GRAFITTI COATING.
527-2A	COST TO INCLUDE, BUT NOT LIMITED TO, CONCRETE PAVER BRICKS AND EQUIPMENT NECESSARY FOR INSTALLATION. PAVER BRICK TO BE BRICK RED IN COLOR.
570-1-2A	COST TO INCLUDE, BUT NOT LIMITED TO, ROUTINE WATERING OF NEW SOD FOR A PERIOD OF 90 DAYS FOLLOWING PLACEMENT.
590-70	COST TO INCLUDE, BUT NOT LIMITED TO, ALL MATERIAL AND LABOR REQUIRED TO PROVIDE A FULLY FUNCTIONING IRRIGATION SYSTEM.
630-2-11	COST TO INCLUDE, BUT NOT LIMITED TO, GROUND ROAD, GROUNDING WIRE, NYLON PULL STRING, AND LOCATE WIRE.
700-1-11A	COST TO INCLUDE, BUT NOT LIMITED TO, DECORATIVE POST, FOUNDATION SIGN AND APPURTENANCES IDENTIFIED IN THE PLANS. COST ALSO TO INCLUDE COST OF CITY OF FORT PIERCE LOGO.
702-1	COST TO INCLUDE, BUT NOT LIMITED TO, LED BLINKER SIGNS, INFRARED PEDESTRIAN DETECTOR BOLLARDS, SOLAR CONTROLLERS (SOLAR PANEL, BATTERY, ETC.) AND ALL APPURTENANCES NEEDED TO PROVIDE A FULLY FUNCTIONING SYSTEM.
715-516-115	COST TO INCLUDE, BUT NOT LIMITED TO, LIGHT POLES, FOUNDATIONS, FIXTURE, GFI RECEPTACLE, BANNER ARMS AND CONDUCTORS. CONTRACTOR TO COORDINATE WITH CITY REGARDING SELECTED LIGHT FIXTURE.
715-11A	THIS PAY ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING A COMPLETE, FUNCTIONAL, AND NEC COMPLIANT LED STRIP LIGHTING SYSTEM FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS. THE LED LIGHT SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO LED LIGHT STRIPS, CONDUCTORS, LIGHTING CONTROL SYSTEM, LIGHTING CONTROL MOUNTING SYSTEM, ATTACHEMENT HARDWARE, SERVICE DISCONNECT, AND UTILITY COORDINATION.
1050-18-XXXX	COST TO INCLUDE, BUT NOT LIMITED TO, REMOVAL AND/OR PRESSURE GROUTING EXISTING UTILITIES IDENTIFIED TO BE REMOVED AND/OR PRESSURE GROUTED. SHOULD THE CONTRACTOR ELECT TO PRESSURE GROUT THE IDENTIFIED EXISTING ABANDONED UTILITIES, THE UNIT COST SHALL INCLUDE THE INSTALLATION OF CAPS.
1050-31-XXX 1050-41-XXX 1050-42-XXX 1050-51-XXX	COST TO INCLUDE, BUT NOT LIMITED TO, JOINT RESTRAINTS, TESTING, FLUSHING AND APPURTENANCES.
1060-28-30	COST TO INCLUDE, BUT NOT LIMITED TO, ALL MATERIAL AND LABOR NECESSARY TO CONSTRUCT A TEMPORARY SUPPORT STRUCTURE TO PROVIDE FOR THE SPANNING OF MOORE'S CREEK WITH A TEMPORARY FORCE MAIN.
1644-113-08	COST TO INCLUDE ALL PIPE, VALVES, FITTINGS, ETC AS PER FPUA UTILITY DETAIL W-5.
630-2-91 630-2-91A 630-2-91B	COST TO INCLUDE INSTALLATION OF PVC CONDUIT AS DIRECTED BY FPUA TO AID IN THE RELOCATION OF EXISTING BURIED ELECTRICAL CONDUITS LOCATED WITHIN THE ROADWAY CORRIDOR. FPUA TO PROVIDE THE PVC CONDUIT FOR INSTALLATION.



STA. 103+17.66 TO STA. 104+52.46
STA. 108+92.49 TO STA. 110+84.15
STA. 112+22.15 TO STA. 113+69.11

STA. 112+16.45 TO STA. 114+63.55
STA. 118+24.76 TO STA. 119+71.26

INDIAN RIVER DRIVE

STA. 100+61.93 TO STA. 122+12.85

NOTES:

(1) CONTRACTOR TO REFER TO ROADWAY CROSS SECTIONS FOR CROSS-SLOPE GRADE DIRECTION.

POSTED SPEED = 25 MPH
DESIGN SPEED = 30 MPH

PERVIOUS PAVER PARKING DESIGN

⚠1 PERVIOUS PAVERS SHALL CONSIST OF BELGARD PERMEABLE PAVER BLOCK (OR APPROVED EQUAL) (3.125"x7.875"x3.937"), COLOR: HARVEST BLEND, PATTERN: 90 DEGREE HERRING BONE WITH SOLDIER COURSE BORDER
COARSE AGGREGATE (#8,9 GRADED STONE) (2")
COARSE AGGREGATE (#57 GRADED STONE) (4")
COARSE AGGREGATE (#3 GRADED STONE) (12")
FILTER FABRIC (FDOT TYPE D-3 FABRIC, TOP, BOTTOM & SIDES
BIAXIAL GEOGRID (TENAX MS 220)
TYPE 'B' STABILIZATION (LBR 40 MIN.) (12")

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
03/2025	BG	⚠1 REVISED PAVER MATERIAL			

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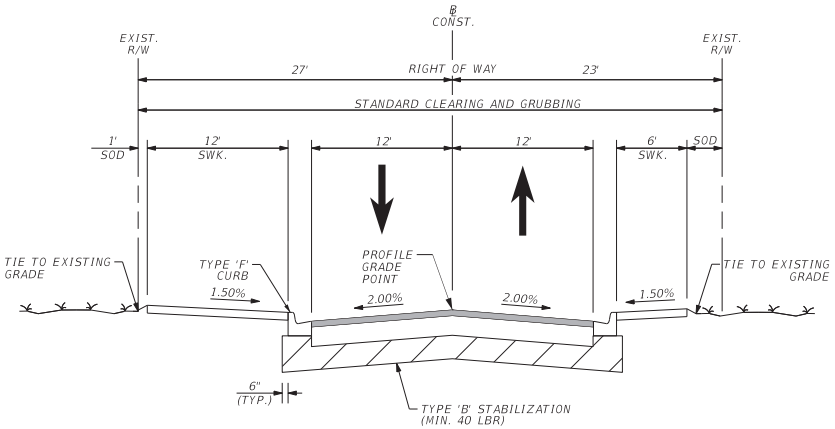
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

TYPICAL SECTION

SHEET NO. 6

rebecca.mulroney 3/19/2025 10:18:44 AM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\TYPSRD01.DGN



AE BACKUS AVENUE

STA. 201+02.32 T0 STA. 206+74.00

POSTED SPEED = 25 MPH
DESIGN SPEED = 30 MPH

MILLING

MILL EXISTING ASPHALT PAVEMENT (1.00" AVERAGE DEPTH)

RESURFACING

TYPE SP-9.5 STRUCTURAL COURSE (TLC, PG 76-22) (1.00")

ASPHALT PAVEMENT DESIGN

TYPE SP-9.5 STRUCTURAL COURSE (TLC, PG 76-22) (1.00")
TYPE SP-12.5 STRUCTURAL COURSE (TLC, PG 76-22) (2.00")
OPTIONAL BASE GROUP 09 (10")
TYPE 'B' STABILIZATION (12")

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

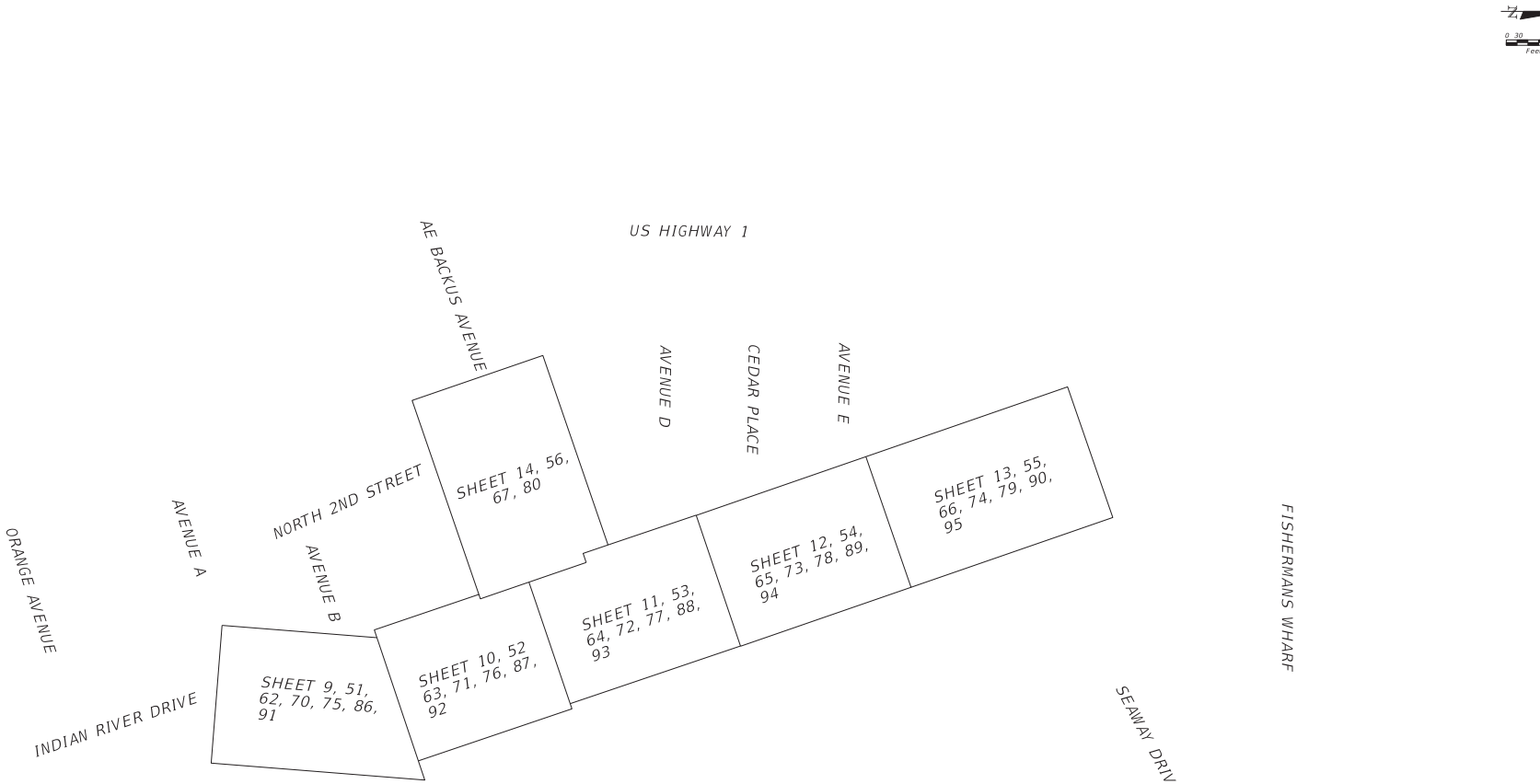
Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

TYPICAL SECTION

SHEET NO. 7



REVISIONS

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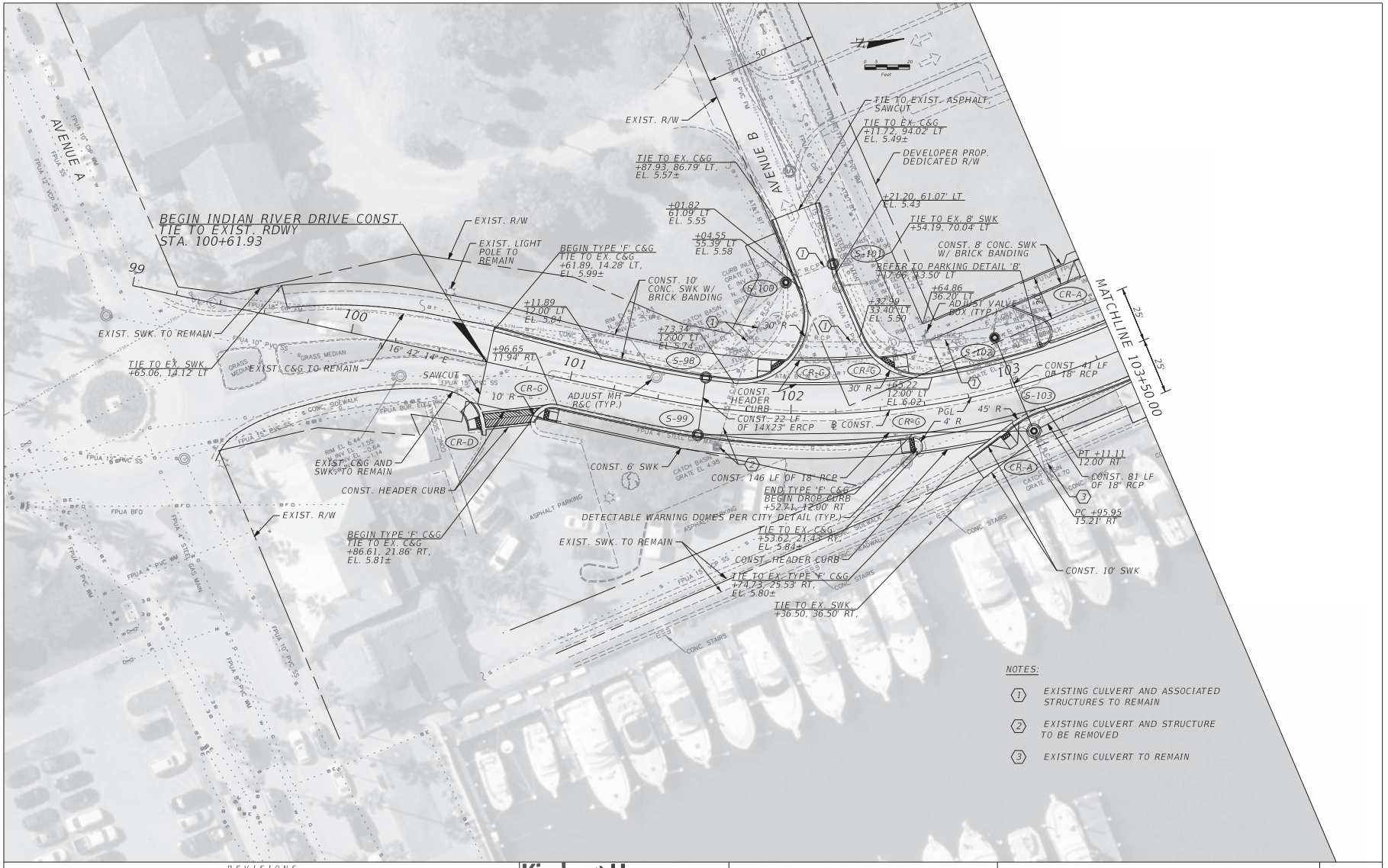
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

PROJECT LAYOUT

SHEET NO. 8

rebecca.mulroney 2/4/2025 3:06:36 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLAYRD01.dgn



REVISIONS					
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BRIAN A. GOOD, P.E.
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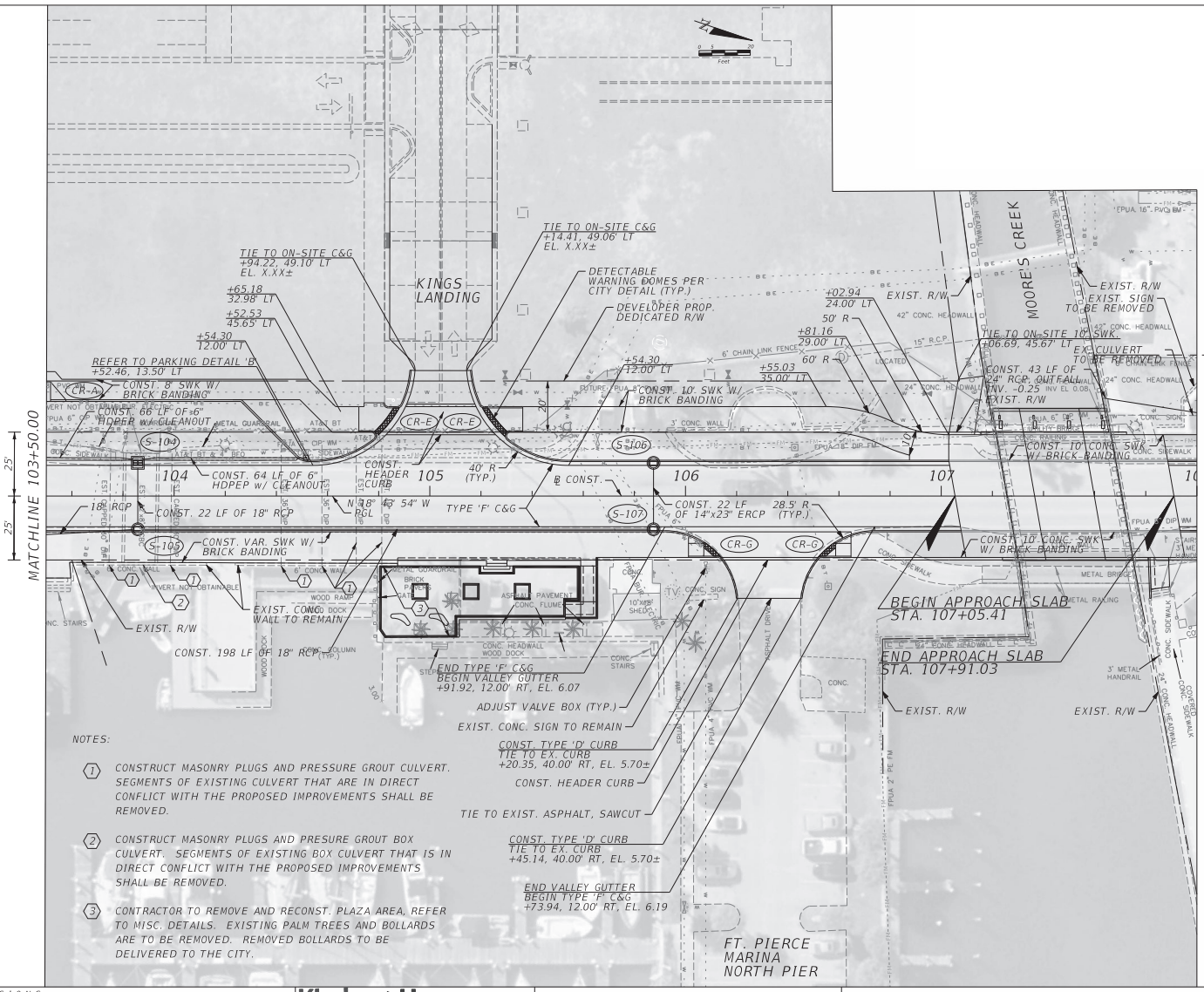
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PLAN SHEET

SHEET NO. 9

rebecca.mulroney 2/4/2025 3:13:03 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLANRD01.dgn



NOTES:

1. CONSTRUCT MASONRY PLUGS AND PRESSURE GROUT CULVERT. SEGMENTS OF EXISTING CULVERT THAT ARE IN DIRECT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE REMOVED.
2. CONSTRUCT MASONRY PLUGS AND PRESURE GROUT BOX CULVERT. SEGMENTS OF EXISTING BOX CULVERT THAT IS IN DIRECT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE REMOVED.
3. CONTRACTOR TO REMOVE AND RECONST. PLAZA AREA, REFER TO MISC. DETAILS. EXISTING PALM TREES AND BOLLARDS ARE TO BE REMOVED. REMOVED BOLLARDS TO BE DELIVERED TO THE CITY.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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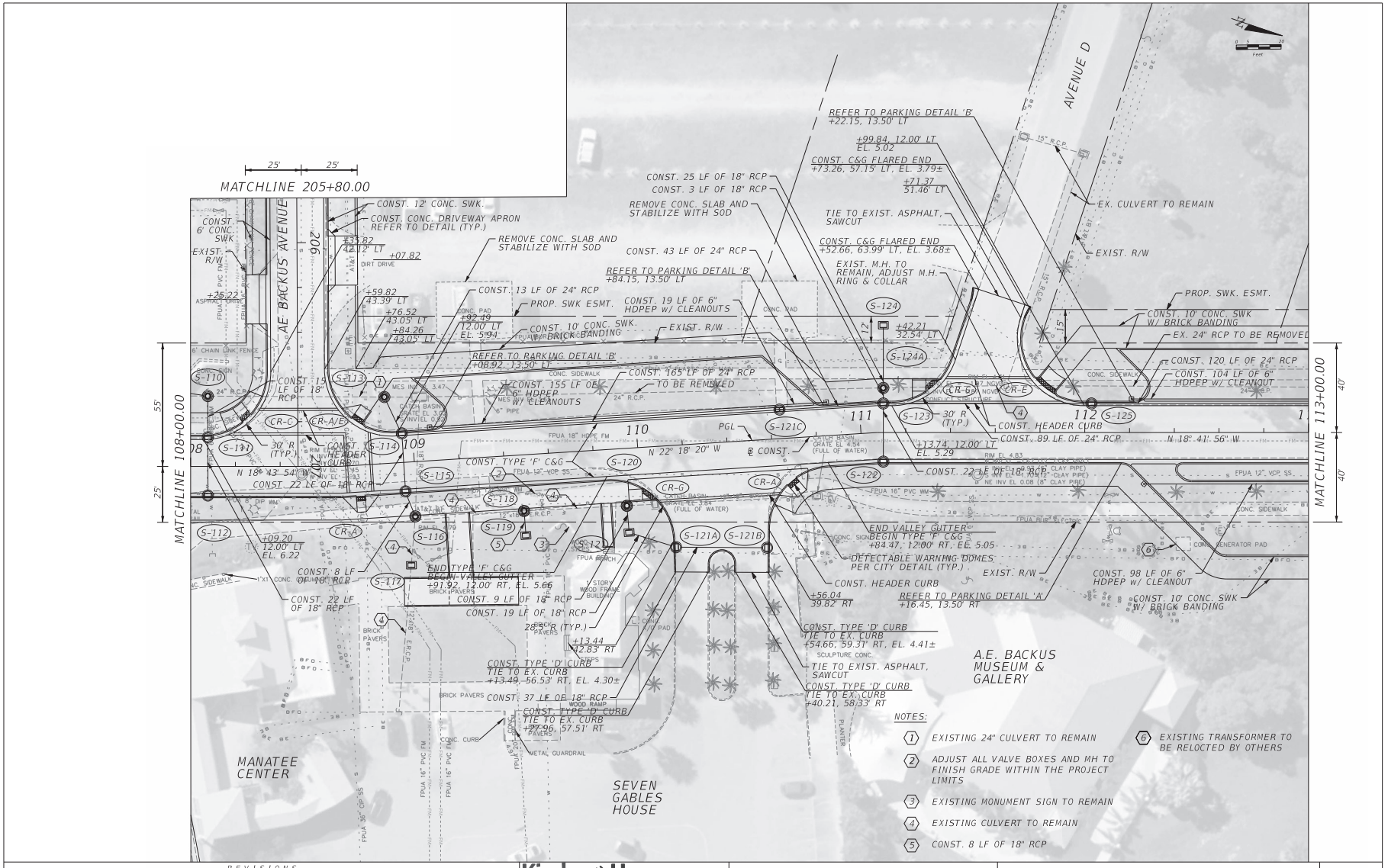
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PLAN SHEET

SHEET NO. 10



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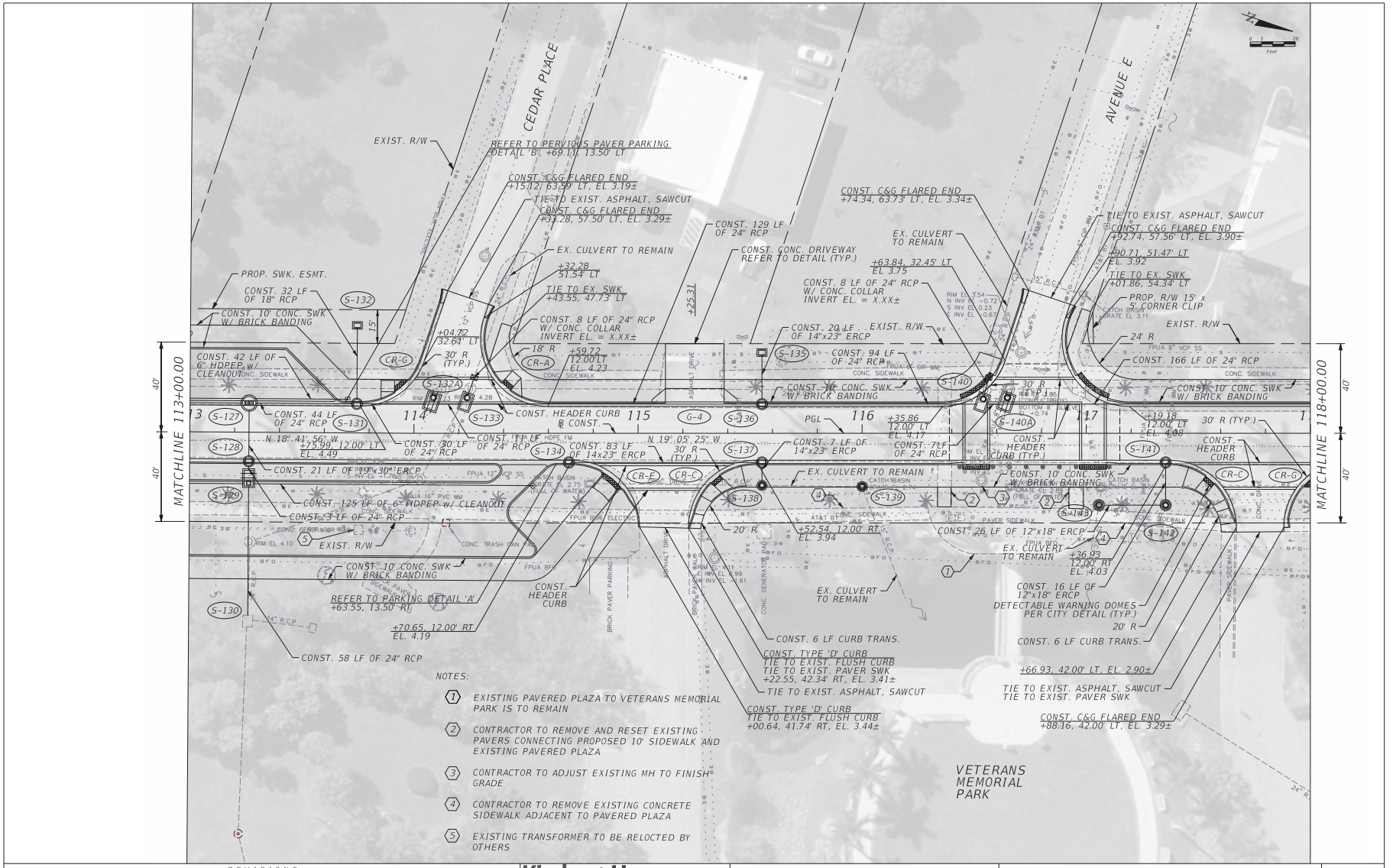
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PLAN SHEET

SHEET NO. 11

rebecca.mulroney 2/4/2025 3:14:08 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLANRD03.dgn



REVISIONS

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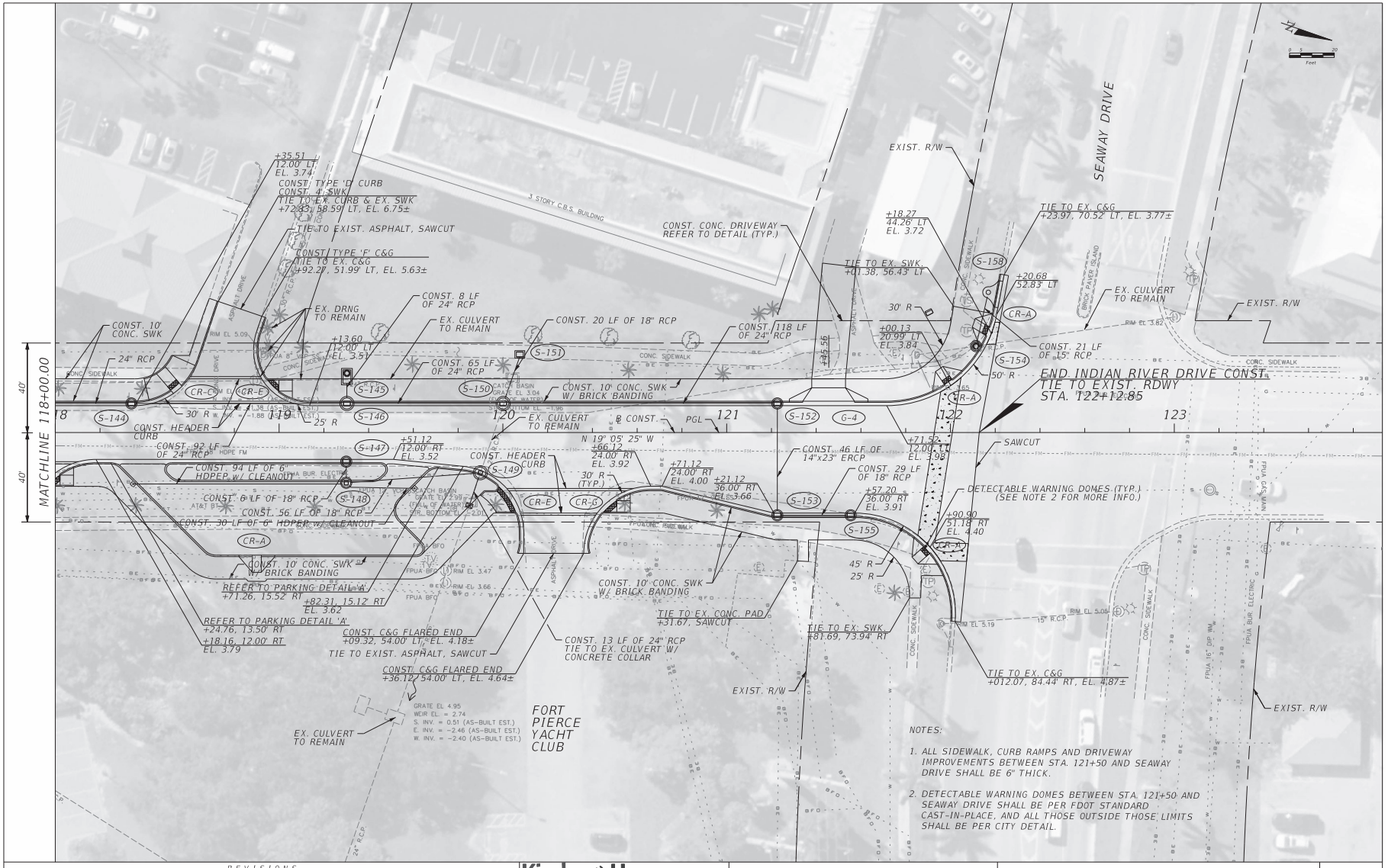
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PLAN SHEET

SHEET NO. 12

rebecca.mulroney 2/4/2025 3:14:44 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLANRD04.dgn



REVISIONS					
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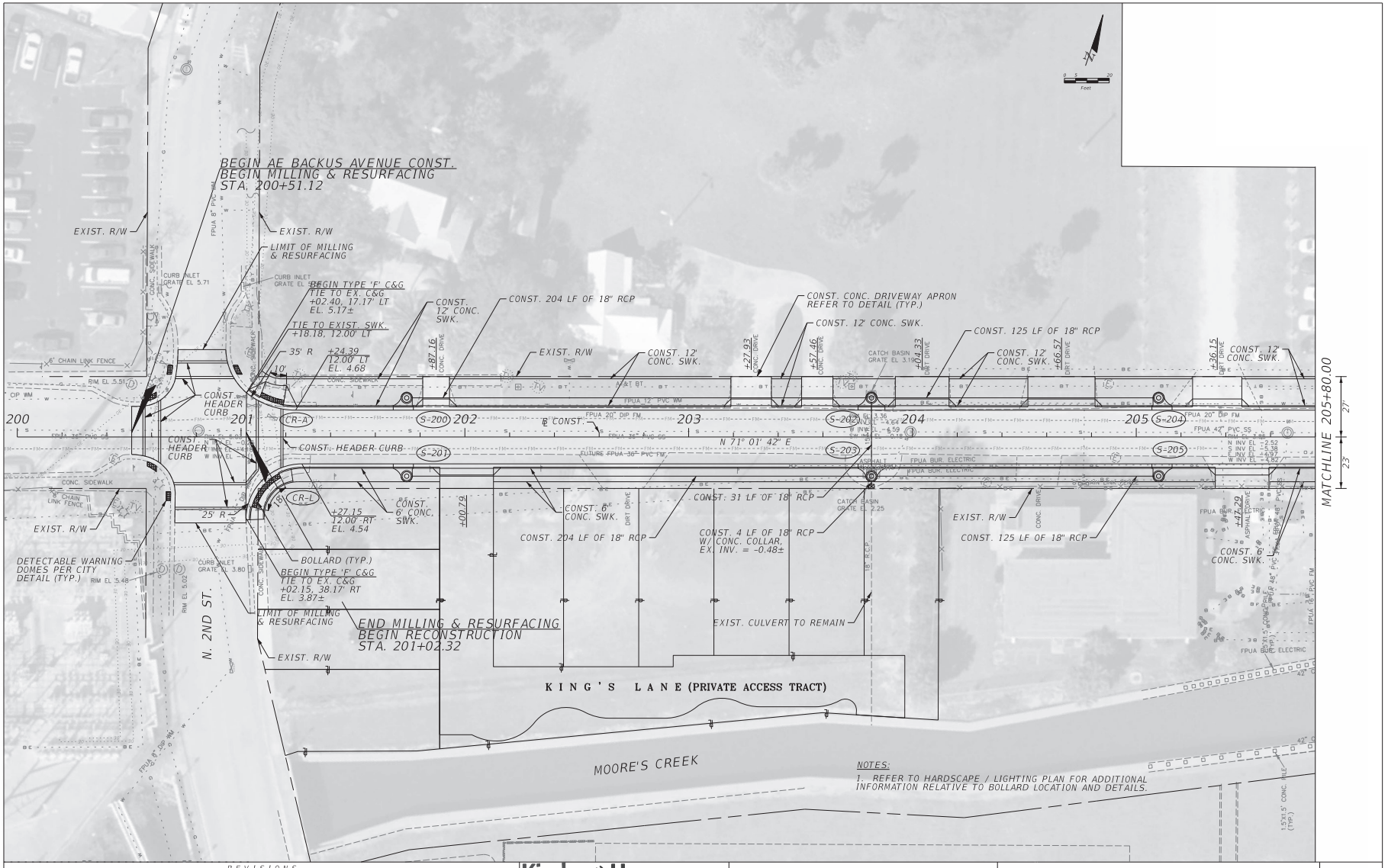
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PLAN SHEET

SHEET NO. 13

rebecca.mulroney 2/4/2025 3:15:19 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLANRD05.dgn



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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE PLAN SHEET

SHEET NO. 14

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S-98

STA. 101+60.00, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.70
E. INV. = 0.00

S-99

STA. 101+60.00, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.70
N. INV. = -0.10
W. INV. = -0.10

S-100

STA. 101+95.45, 58.55' LT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 5.95
N. INV. = CONTRACTOR TO VERIFY
S. INV. = CONTRACTOR TO VERIFY

S-101

STA. 102+19.77, 66.61' LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.40
S. INV. = CONTRACTOR TO VERIFY

S-102

STA. 102+97.95, 23.59' LT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.50
S. INV. = 1.42± (EX. 18" RCP)
E. INV. = 1.40

S-103

STA. 103+04.05, 21.23' LT
CONST. TYPE J-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.60
N. INV. = 0.30
S. INV. = -0.25
E. INV. = - 0.24± (EX. 18" RCP)
W. INV. = 1.30

S-104

STA. 103+85.80, LT
CONST. VALLEY GUTTER INLET
W/ P-BOTTOM
FDOT INDEX 425-010 (SEE DETAIL)
RIM EL. = 5.98
N. INV. = 3.50 (6" U.D.)
S. INV. = 3.50 (6" U.D.)
E. INV. = 2.20

S-105

STA. 103+85.80, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.98
N. INV. = 0.20
S. INV. = 0.20
W. INV. = 1.95

S-106

STA. 105+87.48, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.93
E. INV. = 0.60

S-107

STA. 105+87.48, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.93
S. INV. = 0.50
W. INV. = 0.50

S-108

OMITTED

S-109

OMITTED

S-110

STA. 108+07.70, 31.44' LT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.50
N. INV. = 0.06± (EX. 24" RCP)
S. INV. = 0.05
E. INV. = 0.20

S-111

STA. 108+07.70, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
RIM EL. = 6.23
E. INV. = 2.50
W. INV. = 0.30

S-112

STA. 108+07.70, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 6.23
W. INV. = 2.60

S-113

STA. 108+88.50, 29.70' LT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.54
S. INV. = 0.04± (EX. 24" RCP)
E. INV. = 0.60

S-114

STA. 108+95.26, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.96
N. INV. = 0.70
E. INV. = 0.70
W. INV. = 0.70

S-115

STA. 108+95.26, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.96
E. INV. = 0.75
W. INV. = 0.75

S-116

STA. 108+98.95, 24.44' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.48
N. INV. = 0.78± (EX. 12"x18" ERCP)
E. INV. = 0.93± (EX. 12"x18" ERCP)
W. INV. = 0.80

S-117

STA 108+95.82, 46.10' RT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 4.35
E. INV. = 1.00±
W. INV. = 1.00±

S-118

STA 109+47.57, 25.05' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.32
N. INV. = 1.00±
S. INV. = 1.00±
E. INV. = 1.00

S-119

STA 109+47.68, 36.00' RT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 4.30
W. INV. = 1.20

S-120

STA 109+93.56, 25.64' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 6.18
S. INV. = 1.20±
E. INV. = 1.20

S-121

STA 109+93.82, 37.00' RT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 4.50
W. INV. = 1.50

S-121A

STA 110+14.35, 45.49' RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 4.28
S. INV. = 1.60
N. INV. = 1.60

S-121B

STA 110+54.90, 48.29' RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 4.37
S. INV. = 1.70
N. INV. = 1.70

S-121C

STA 110+64.33 13.00' LT
CONST. VALLEY GUTTER INLET
W/ P-BOTTOM
FDOT INDEX 425-010, 425-024
GRATE EL. = 5.44
S. INV. = 0.85
N. INV. = 0.85
W. INV. = 2.90 (6" U.D.)
W. INV. = 2.90 (6" U.D.)

S-122

STA. 111+10.00, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 5.30
W. INV. = 1.60

S-123

STA. 112+03.00, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
RIM EL. = 5.30
N. INV. = 0.90
S. INV. = 0.90
E. INV. = 1.50
W. INV. = 2.80 (6" U.D.)
W. INV. = 0.90 (18" RCP)

S-124

STA 111+10.00, 48.00' LT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 3.60
E. INV. = 1.10

S-124A

STA 109+47.57, 25.05' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 5.77
N. INV. = 0.70± (EX. 24" RCP)
E. INV. = 1.00
W. INV. = 1.00

S-125

STA. 112+03.00, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
RIM EL. = 5.01
N. INV. = 1.00
S. INV. = 1.00

S-126

OMITTED

S-127

STA. 113+26.39, LT
CONST. VALLEY GUTTER INLET
W/ J-BOTTOM
FDOT INDEX 425-010, 425-024
RIM EL. = 4.63
N. INV. = -2.25
S. INV. = 0.00
E. INV. = -2.25
W. INV. = 2.10 (6" U.D.)
W. INV. = 2.10 (6" U.D.)

S-128

STA. 113+26.39, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 4.63
E. INV. = -2.25
W. INV. = -2.25

S-129

STA. 113+26.39, 22.00' RT
CONST. TYPE J-10 INLET (4'x7' BOTTOM)
UTILITY CONFLICT STRUCTURE
FDOT INDEX 425-010, 425-025,
FPUA DETAIL M-8
EOP EL. = 4.63
N. INV. = 2.00 (6" U.D.)
S. INV. = 2.00 (6" U.D.)
E. INV. = -2.25
W. INV. = -2.25

S-130

STA. 113+26.50, 84.28' RT
MODIFY EX. STRUCTURE
RIM EL. = 4.55±
N, INV. = 0.07± (EX. 24" RCP)
E. INV. = -2.30± (EX. 24" CMP)
W. INV. = -2.25

S-131

STA. 113+74.45, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
RIM EL. = 4.49
N. INV. = -2.25
S. INV. = -2.25
W. INV. = -1.75

S-132

STA 113+74.45, 48.00' LT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 3.10
E. INV. = 0.10

S-132A

STA. 114+08.60, 15.90' LT
CONST. TYPE J-7 MH
(5'x7' BOTTOM) UTILITY
CONFLICT STRUCTURE
FDOT INDEX 425-010, 425-025,
FPUA DETAIL M-8
RIM EL. = 4.35
N. INV. = -2.25
S. INV. = -2.25
BOTTOM EL. = -3.50

S-133

STA. 114+23.72, 15.90' LT
CONST. TYPE J-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.25
N. INV. = -2.00
S. INV. = -2.25
W. INV. = -2.25 (EX. 24" RCP)

S-134

STA. 114+89.15, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 4.13
N. INV. = 1.10

S-135

STA 115+55.30, 36.00' LT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 3.50
E. INV. = -1.40

S-136

STA. 115+55.30, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
RIM EL. = 3.93
N. INV. = -1.50
S. INV. = -1.50
W. INV. = -1.50

S-137

STA. 115+55.30, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.93
S. INV. = 1.00
E. INV. = 1.00

S-138

STA. 115+55.30, 23.30' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.44
N. INV. = 0.35± (EX. 15" RCP)
W. INV. = 0.90

S-139

STA. 116+00.00, 23.80' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.58
S. INV. = 0.24± (EX. 15" RCP)
E. INV. = 0.24± (EX. 15" RCP)

S-140

STA. 116+54.04, 15.27' LT
CONST. TYPE J-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.52
N. INV. = -1.75
S. INV. = -1.65
W. INV. = -1.65± (EX. 24" RCP)

S-140A

STA. 116+64.84, 15.90' LT
CONST. TYPE J-7 MH
(5'x7' BOTTOM) UTILITY
CONFLICT STRUCTURE
FDOT INDEX 425-010, 425-025,
FPUA DETAIL M-8
RIM EL. = 4.43
N. INV. = -1.70
S. INV. = -1.70
BOTTOM EL. = -3.00

S-141

STA. 117+35.43, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 4.03
E. INV. = 1.25

REVISIONS

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INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

DRAINAGE STRUCTURES

SHEET NO.
15

S-142

STA. 117+35.43, 32.07' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 3.75
S. INV. = 1.00
W. INV. = 1.00

S-143

STA. 117+05.62, 32.07' RT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.00
N. INV. = 0.70
E. INV. = 1.00 (EX. 15" RCP)

S-144

STA. 118+34.00, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.74
N. INV. = -2.00
S. INV. = -2.00

S-145

STA. 119+30.31, 26.50' LT
CONST. TYPE J-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.60
S. INV. = -1.50 (EX. 24" RCP)
N. INV. = -1.50 (EX. 24" RCP)
E. INV. = -1.75

S-146

STA. 119+30.31, LT
CONST. TYPE J-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.46
N. INV. = -2.10
S. INV. = -2.10
W. INV. = -1.85

S-147

STA. 119+30.00, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.46
E. INV. = -0.75

S-148

STA. 119+30.00, 22.00' RT
CONST. TYPE P-10 INLET
FDOT INDEX 425-010, 425-025
EOP EL. = 3.92
N. INV. = -1.00
N. INV. = 1.40 (6" U.D.)
S. INV. = 1.40 (6" U.D.)
W. INV. = -1.00

S-149

STA. 119+90.30, 17.05' LT
CONST. TYPE J-10 INLET
FDOT INDEX 425-010, 425-025
EOP EL. = 3.77
S. INV. = -1.50
E. INV. = -2.00
W. INV. = -2.00± (EX. 24" RCP)

S-150

STA. 120+00.00, LT
CONST. TYPE J-9 MH
FDOT INDEX 425-010, 425-024
EOP EL. = 3.67
N. INV. = -1.75
S. INV. = -2.00
E. INV. = -2.00± (EX. 24" RCP)
W. INV. = -0.10

S-151

STA 120+07.56, 34.92' LT
CONST. TYPE 'C' DBI
FDOT INDEX 425-052
GRATE EL. = 3.10
E. INV. = 0.10

S-152

STA. 121+22.62, LT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.87
S. INV. = -1.90
E. INV. = -1.90

S-153

STA. 121+22.62, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.66
W. INV. = -1.80

S-154

STA. 122+11.40, 38.62' LT
CONST. TYPE P-7 MH
FDOT INDEX 425-001, 425-010
RIM EL. = 4.16
N. INV. = CONTRACTOR TO VERIFY
W. INV. = 0.10

S-155

STA. 121+55.40, RT
CONST. TYPE P-9 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.87
W. INV. = -1.20

S-156

STA. 113+58.54, 329.63' RT
MODIFY EX. STRUCTURE
RIM EL. = 6.55±
E. INV. = -0.50
W. INV. = -0.54± (EX. 24" CMP)
BOTTOM = -0.90

S-157

STA. 118+42.13, 455.10' RT
MODIFY EX. STRUCTURE
RIM EL. = 4.77±
E. INV. = -0.90
W. INV. = -2.81± (EX. 24" RCP)
BOTTOM = -2.57±

S-158

STA. 122+16.92, LT
CONST. TYPE P-4 INLET
FDOT INDEX 425-010, 425-020
EOP EL. = 3.67
W. INV. = 0.00

S-200

STA. 201+74.00, LT
CONST. TYPE P-3 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.79
E. INV. = 0.25

S-201

STA. 201+74.00, RT
CONST. TYPE P-3 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.79
E. INV. = 0.25

S-202

STA. 203+81.60, LT
CONST. TYPE P-4 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.39
E. INV. = - 0.15
W. INV. = - 0.15
S. INV. = - 0.15

S-203

STA. 203+81.60, RT
CONST. TYPE P-4 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.39
N. INV. = - 0.25
S. INV. = - 0.50
E. INV. = - 0.15
W. INV. = - 0.15

S-204

STA. 205+10.00, LT
CONST. TYPE P-3 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.88
W. INV. = 0.35

S-205

STA. 205+10.00, RT
CONST. TYPE P-3 INLET
FDOT INDEX 425-010, 425-024
EOP EL. = 3.88
W. INV. = 0.35

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

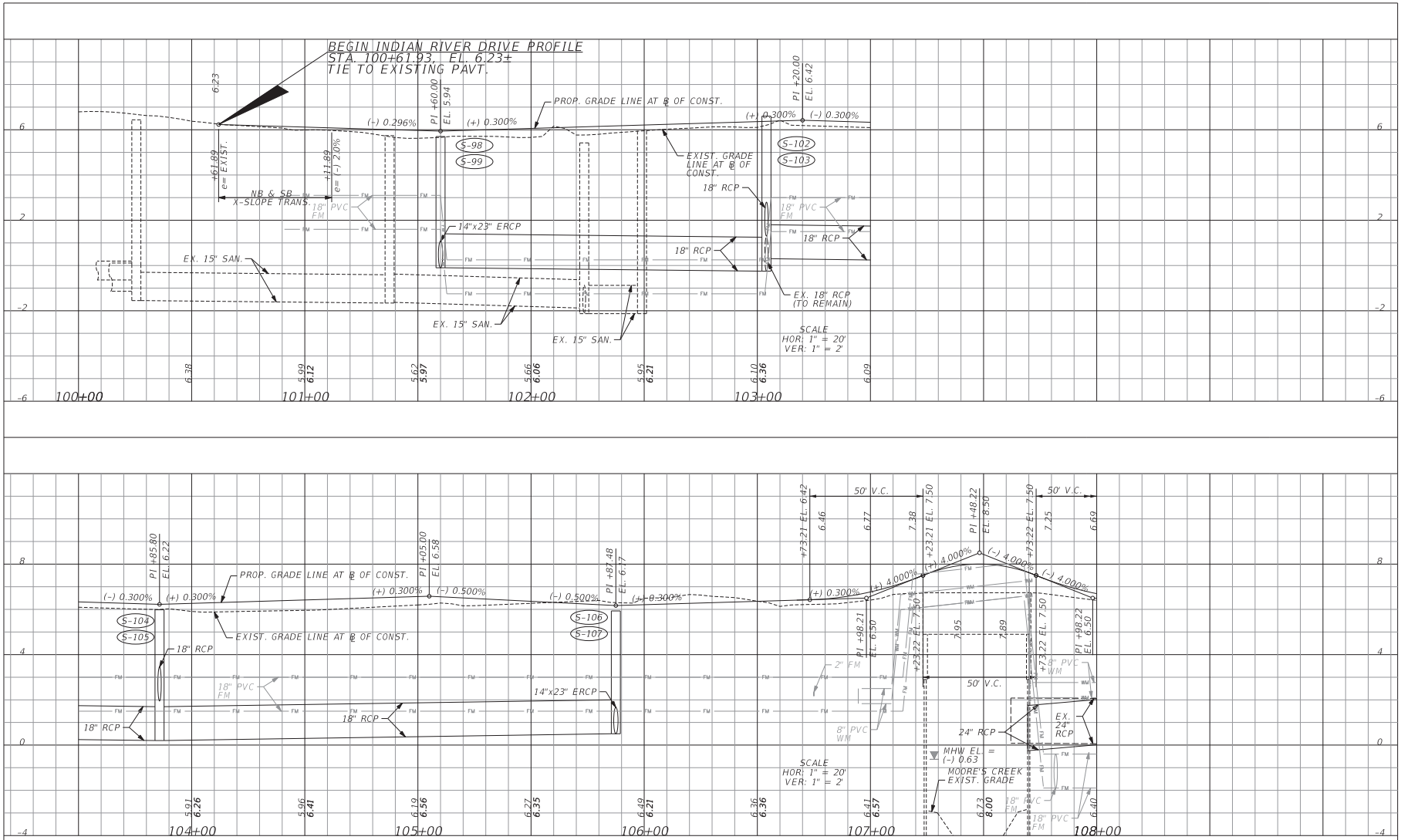
Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

DRAINAGE STRUCTURES

SHEET NO.
16



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P.E. LICENSE NUMBER 56939
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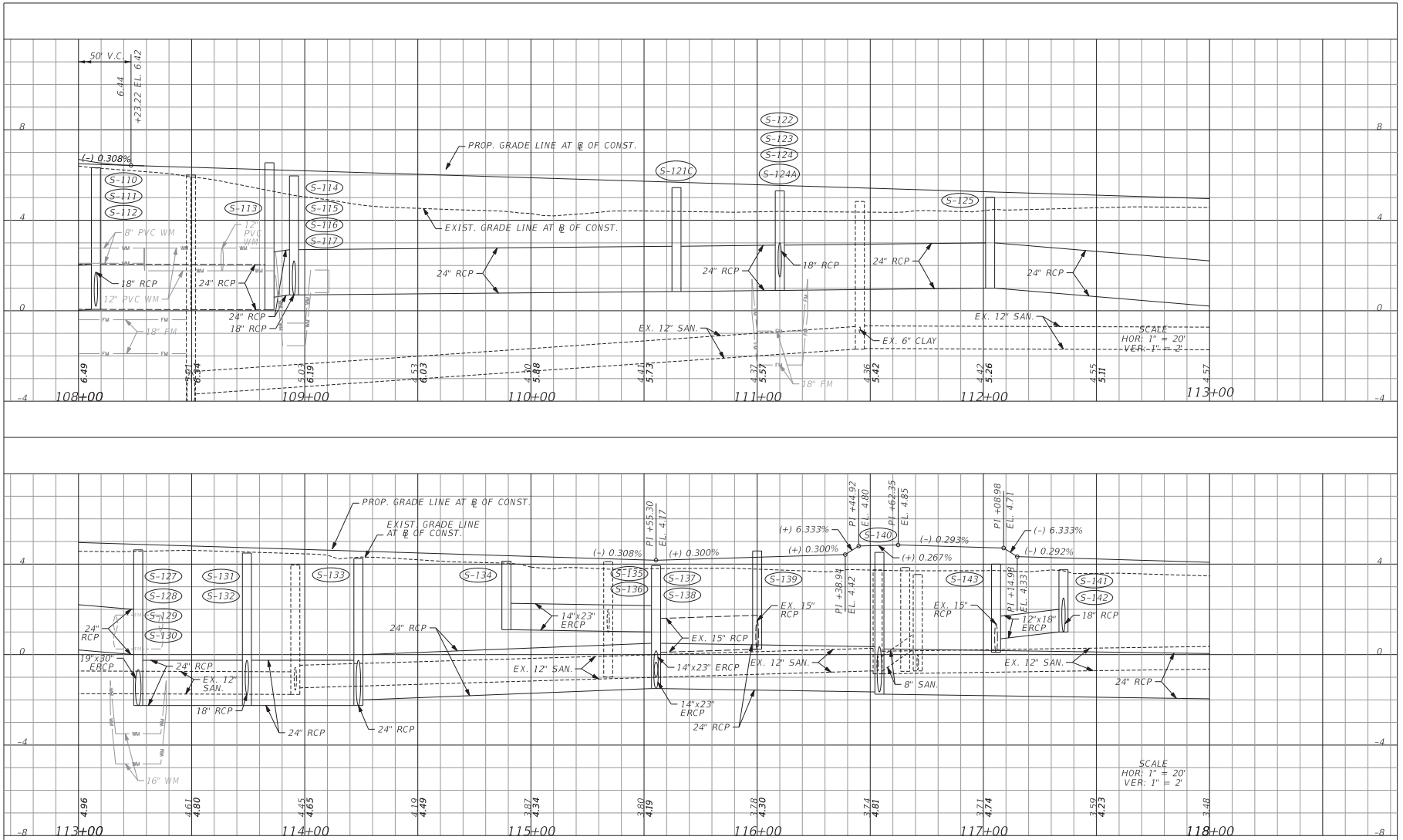
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PROFILE SHEET

SHEET NO. 17



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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PROFILE SHEET

SHEET NO. 18

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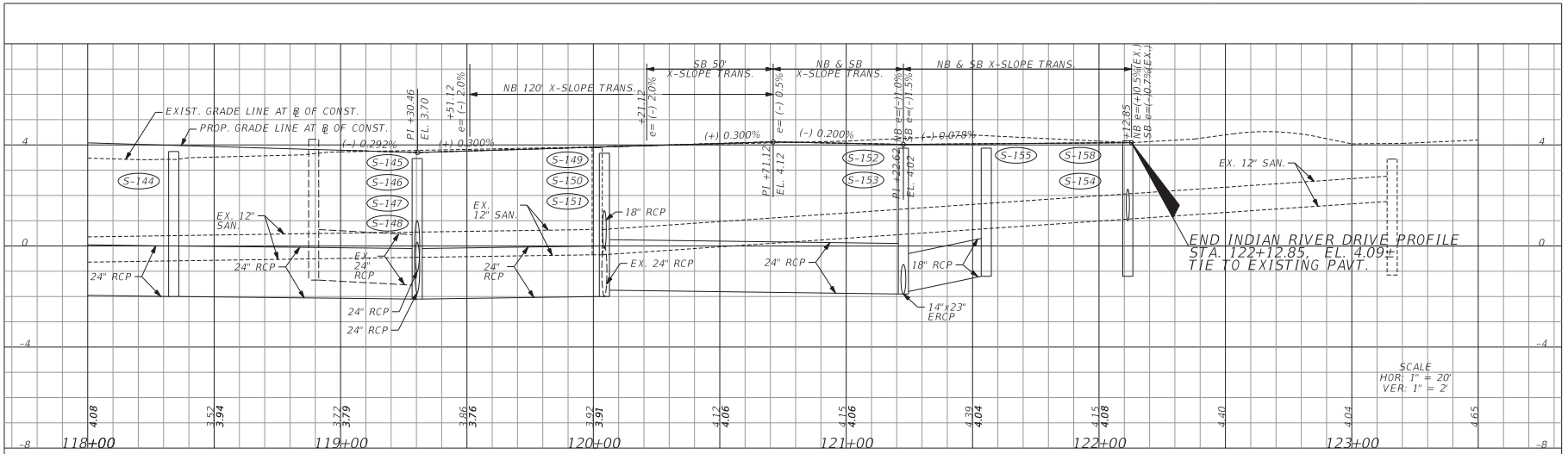

REVISIONS					
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE PROFILE SHEET

SHEET NO. 19

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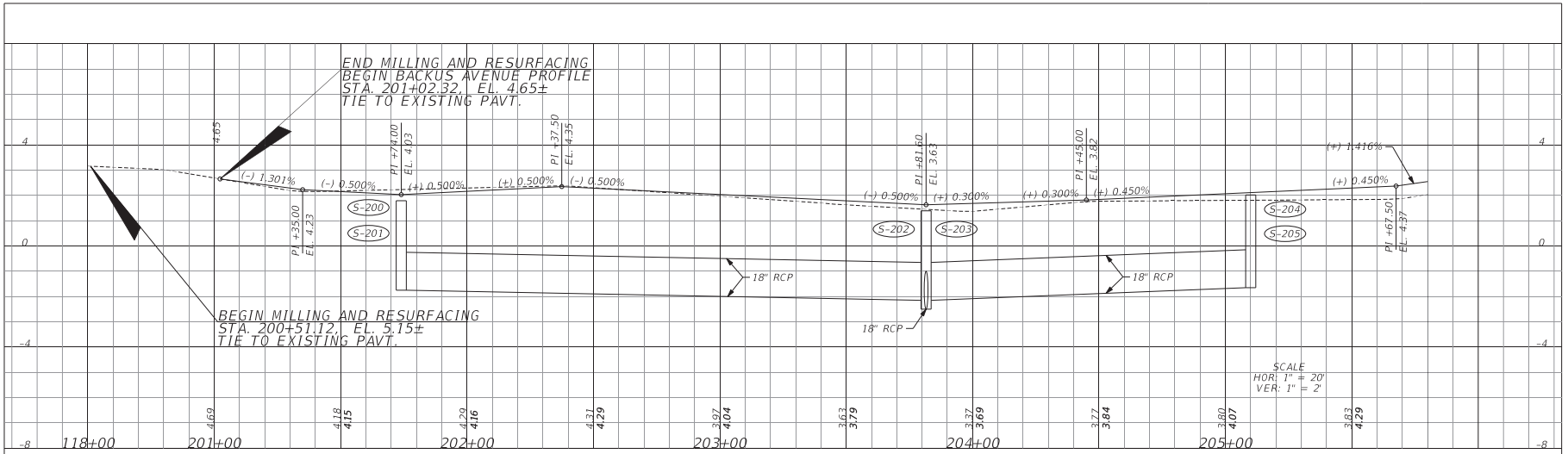

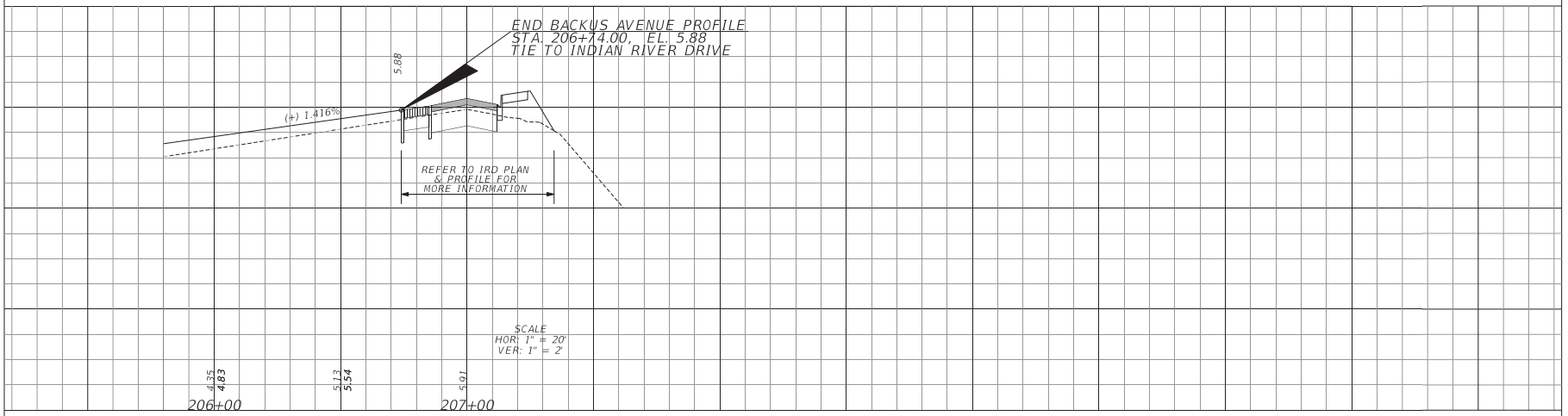

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE PROFILE SHEET

SHEET NO. 20

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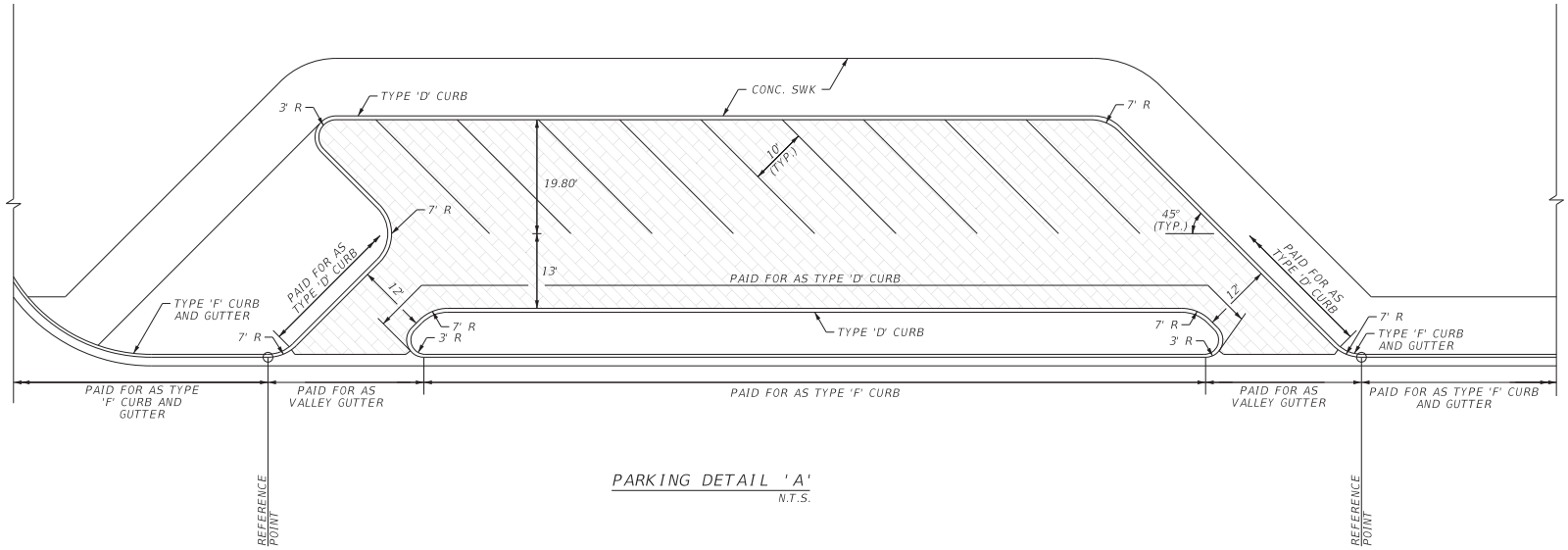
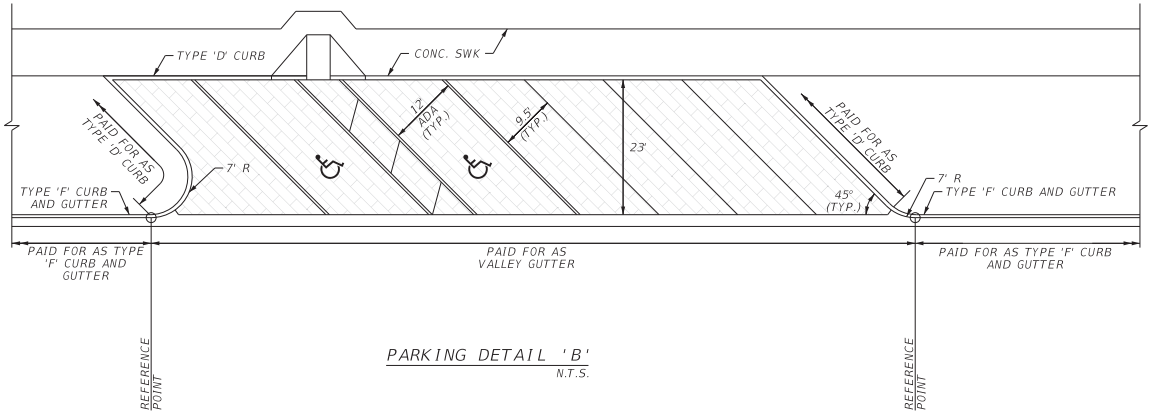


PARKING DETAIL 'A'
N.T.S.



PARKING DETAIL 'B'
N.T.S.

REVISIONS					
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P.E. LICENSE NUMBER 56939
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 21

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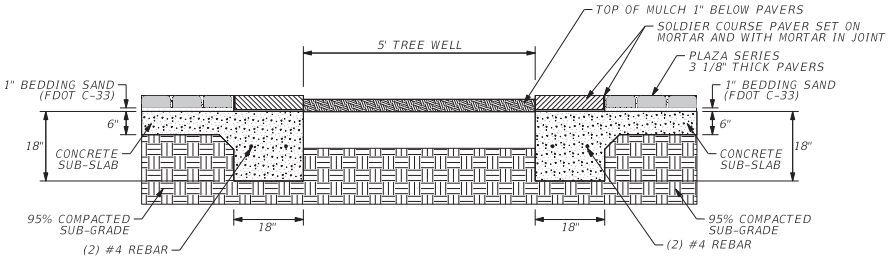
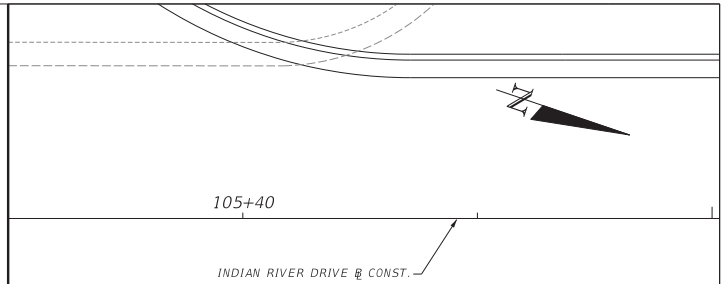
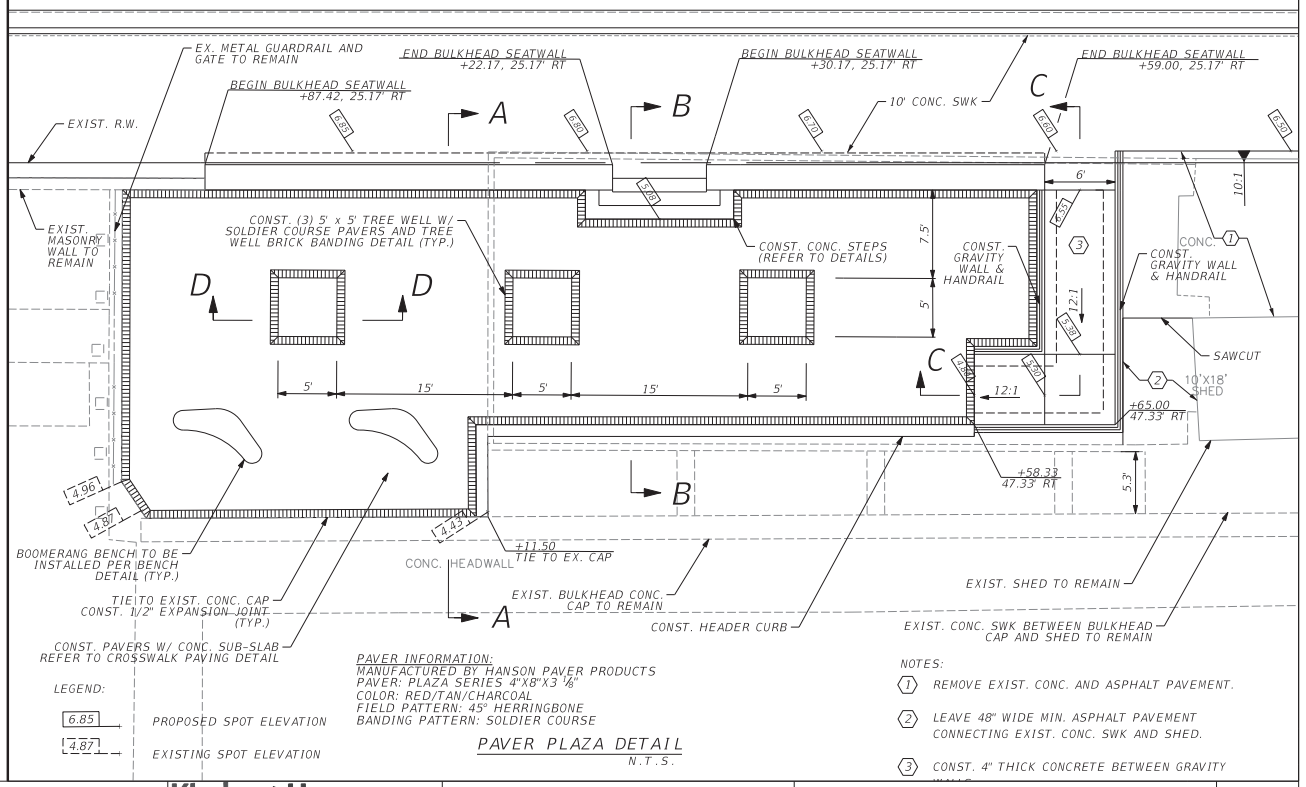


TYPICAL TREE WELL THICKENED EDGE – SECTION D – D

N.T.S.





LEGEND:

6.85 PROPOSED SPOT ELEVATION

4.87 EXISTING SPOT ELEVATION

PAVER INFORMATION:
MANUFACTURED BY HANSON PAVER PRODUCTS
PAVER: PLAZA SERIES 4"X8"X3 1/8"
COLOR: RED/TAN/CHARCOAL
FIELD PATTERN: 45° HERRINGBONE
BANDING PATTERN: SOLDIER COURSE

PAVER PLAZA DETAIL

N.T.S.

NOTES:

1. REMOVE EXIST. CONC. AND ASPHALT PAVEMENT.
2. LEAVE 48" WIDE MIN. ASPHALT PAVEMENT CONNECTING EXIST. CONC. SWK AND SHED.
3. CONST. 4" THICK CONCRETE BETWEEN GRAVITY

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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P.E. LICENSE NUMBER 56939
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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 22

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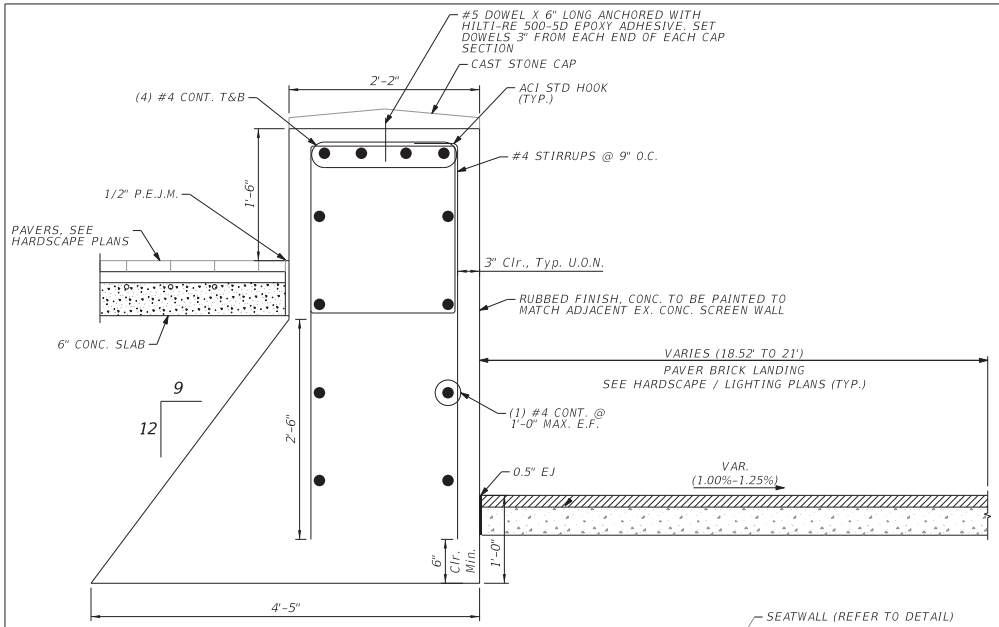
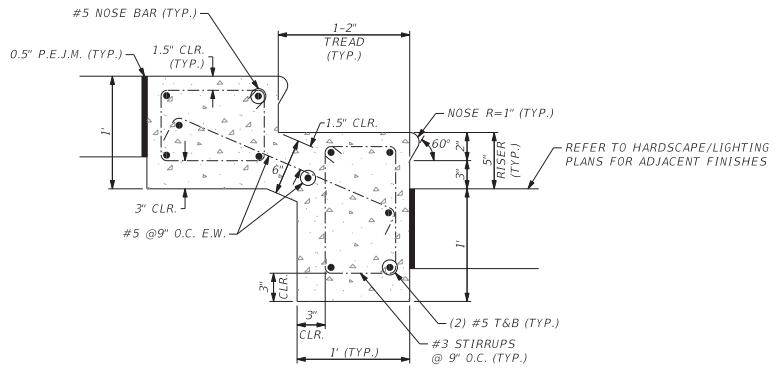


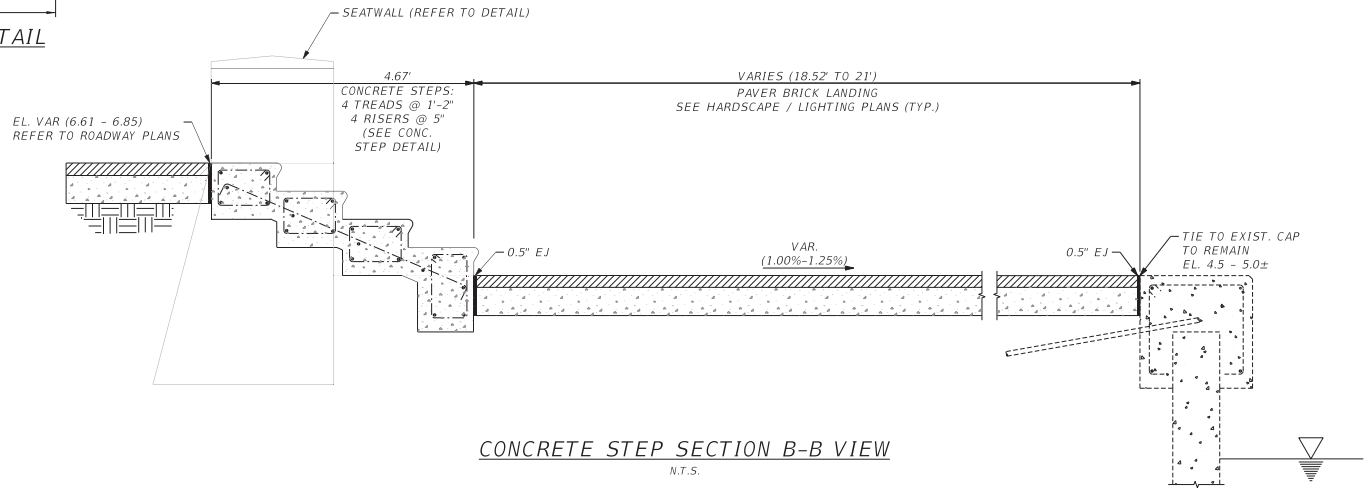
SEATWALL DETAIL

N.T.S.



TYPICAL CONCRETE STEP DETAIL

N.T.S.



CONCRETE STEP SECTION B-B VIEW

N.T.S.

REVISIONS					
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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 23

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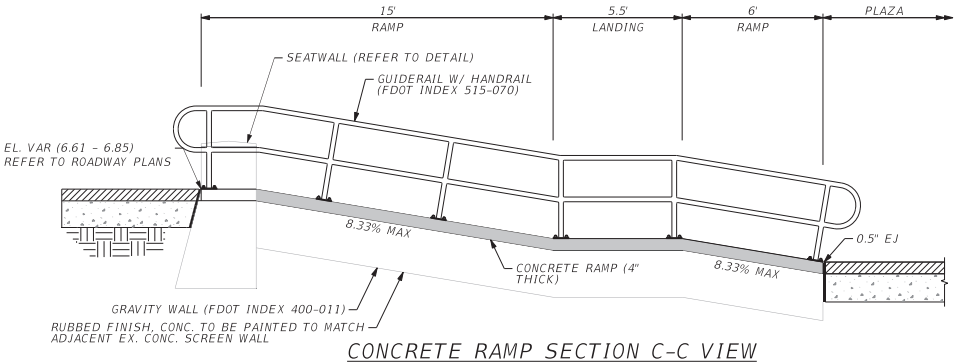
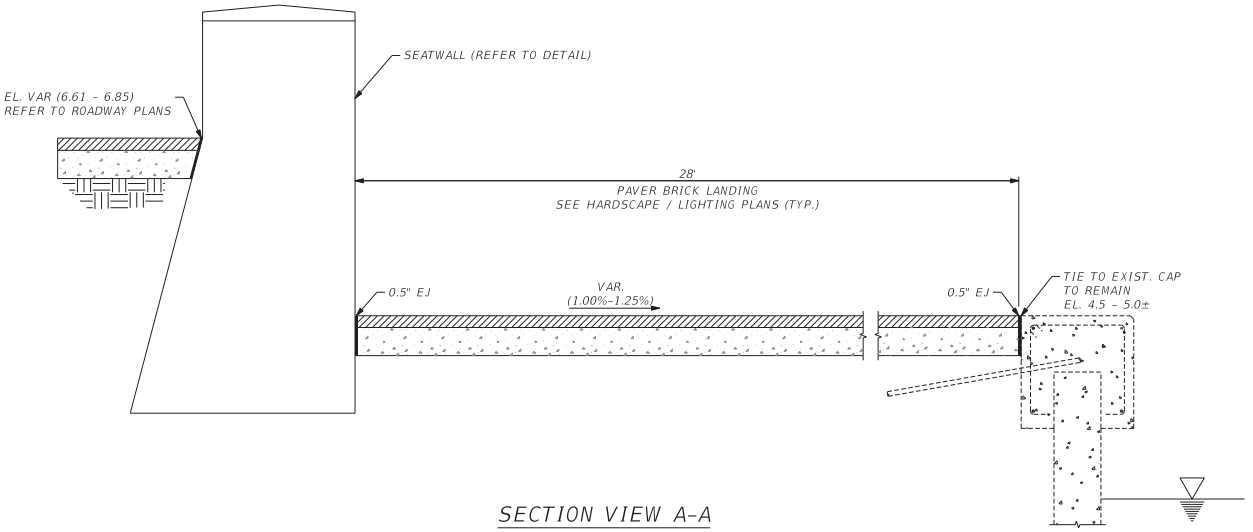


CONCRETE RAMP SECTION C-C VIEW

N.T.S.



SECTION VIEW A-A

N.T.S.

REVISIONS					
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO.
23A

rebecca.mulroney 2/4/2025 3:17:03 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\SPDTLA01.DGN

Product Information — Boomerang Bench DF5330

Size:	97 11/16" x 39 1/8" x 17 1/2"
Weight:	1950 lbs.
Material:	Reinforced Concrete, Wood
Reinforcing:	Steel Rebar
Features:	*Lifting strap slots *Anchoring Kit TF9047 included

Anchoring is required

[redacted]

CONCRETE FINISH OPTION

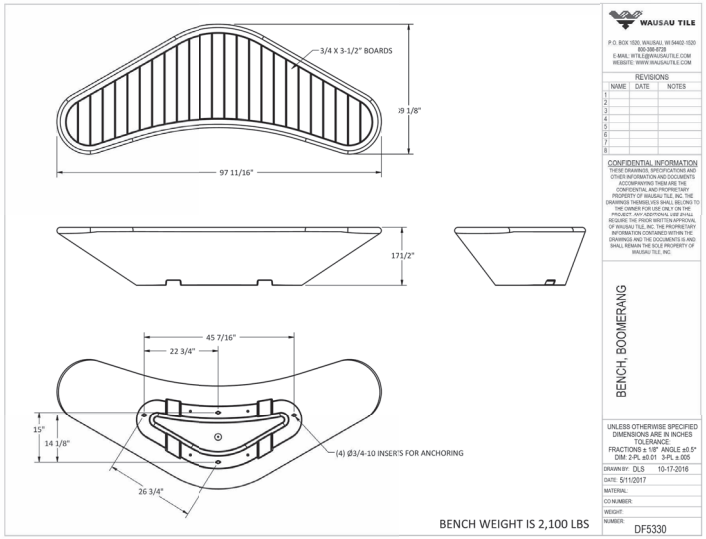
STANDARD COLOR PALETTE: CHARCOAL

WOOD FINISH OPTION

RECYCLED PLASTIC LUMBER: SAND

WAUSAU TILE

P: 800.388.8728 | E: wtile@wausautile.com | WAUSAUTILE.COM
P.O. box 1520, Wausau, WI 54402-1520



BENCH WEIGHT IS 2,100 LBS

WAUSAU TILE
P.O. BOX 1520, WAUSAU, WI 54402-1520
800-388-8728
E-MAIL: WTILE@WAUSAUTILE.COM
WEBSITE: WWW.WAUSAUTILE.COM

REVISIONS

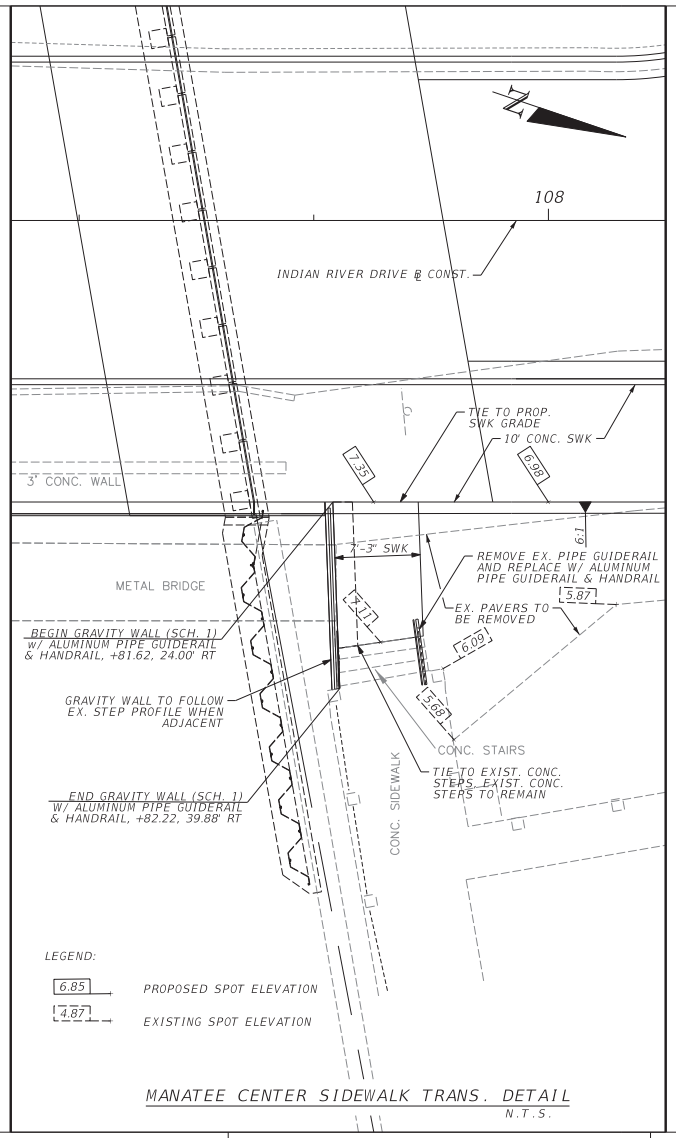
	NAME	DATE	NOTES
1			
2			
3			
4			
5			
6			
7			
8			

CONFIDENTIAL INFORMATION
THESE DRAWINGS, SPECIFICATIONS AND OTHER INFORMATION AND DOCUMENTS ACCOMPANYING THEM ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF WAUSAU TILE, INC. THE DRAWINGS THEMSELVES SHALL BELONG TO THE OWNER FOR USE ONLY ON THE PROJECT DESCRIBED HEREIN. THEY SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF WAUSAU TILE, INC. THE PROPRIETARY INFORMATION CONTAINED WITHIN THE DRAWINGS AND THE DOCUMENTS IS AND SHALL REMAIN THE SOLE PROPERTY OF WAUSAU TILE, INC.

BENCH, BOOMERANG

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCE:
FRACTIONS ± 1/8" ANGLE ±0.5°
DIM: 2-PL ±0.01 3-PL ±.005

DRAWN BY:	DLS 10-17-2016
DATE:	5/11/2017
MATERIAL:	
CO NUMBER:	
WEIGHT:	
NUMBER:	DF5330



MANATEE CENTER SIDEWALK TRANS. DETAIL
N.T.S.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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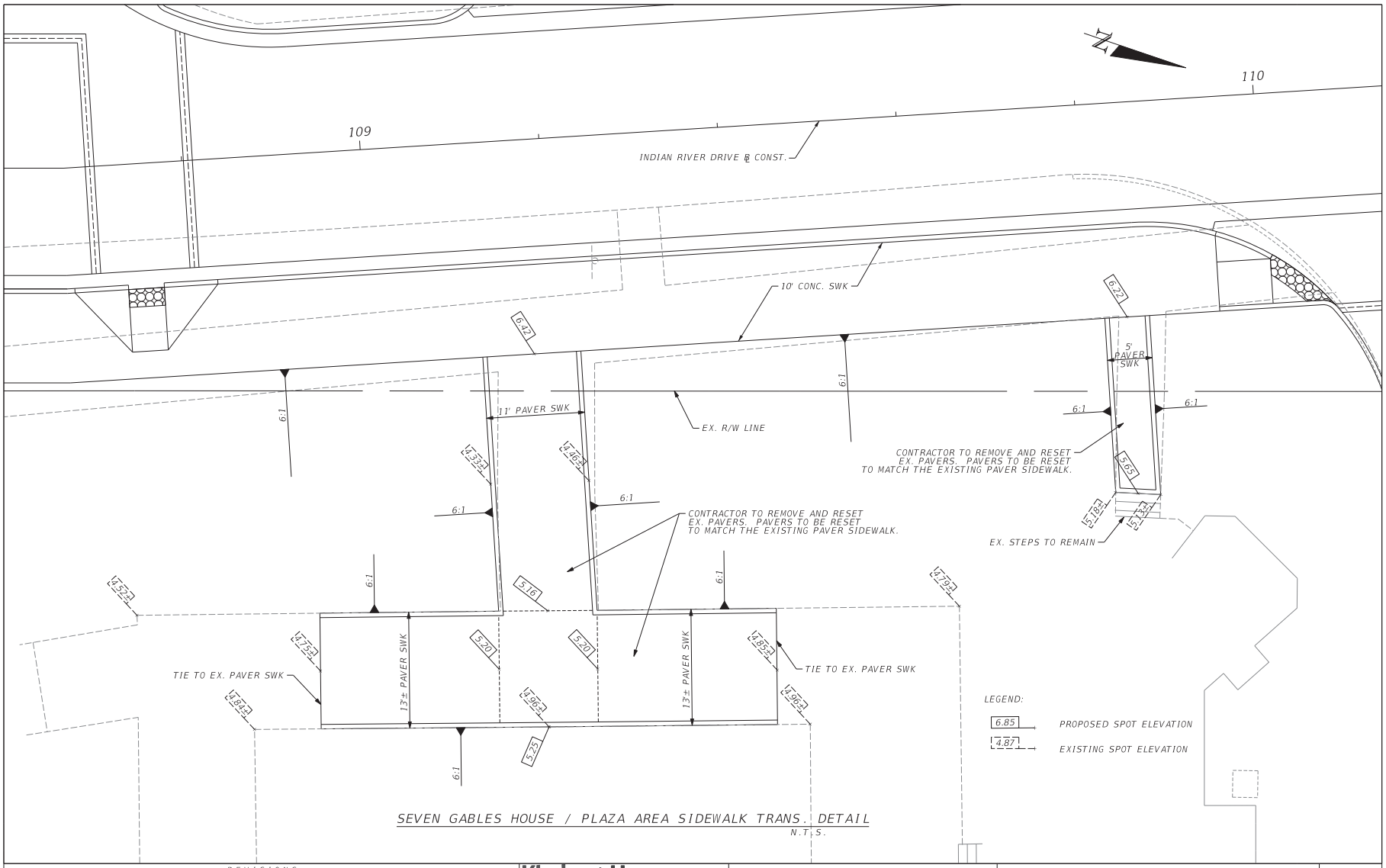
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 24



SEVEN GABLES HOUSE / PLAZA AREA SIDEWALK TRANS. DETAIL

N.T.S.

REVISIONS

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO.

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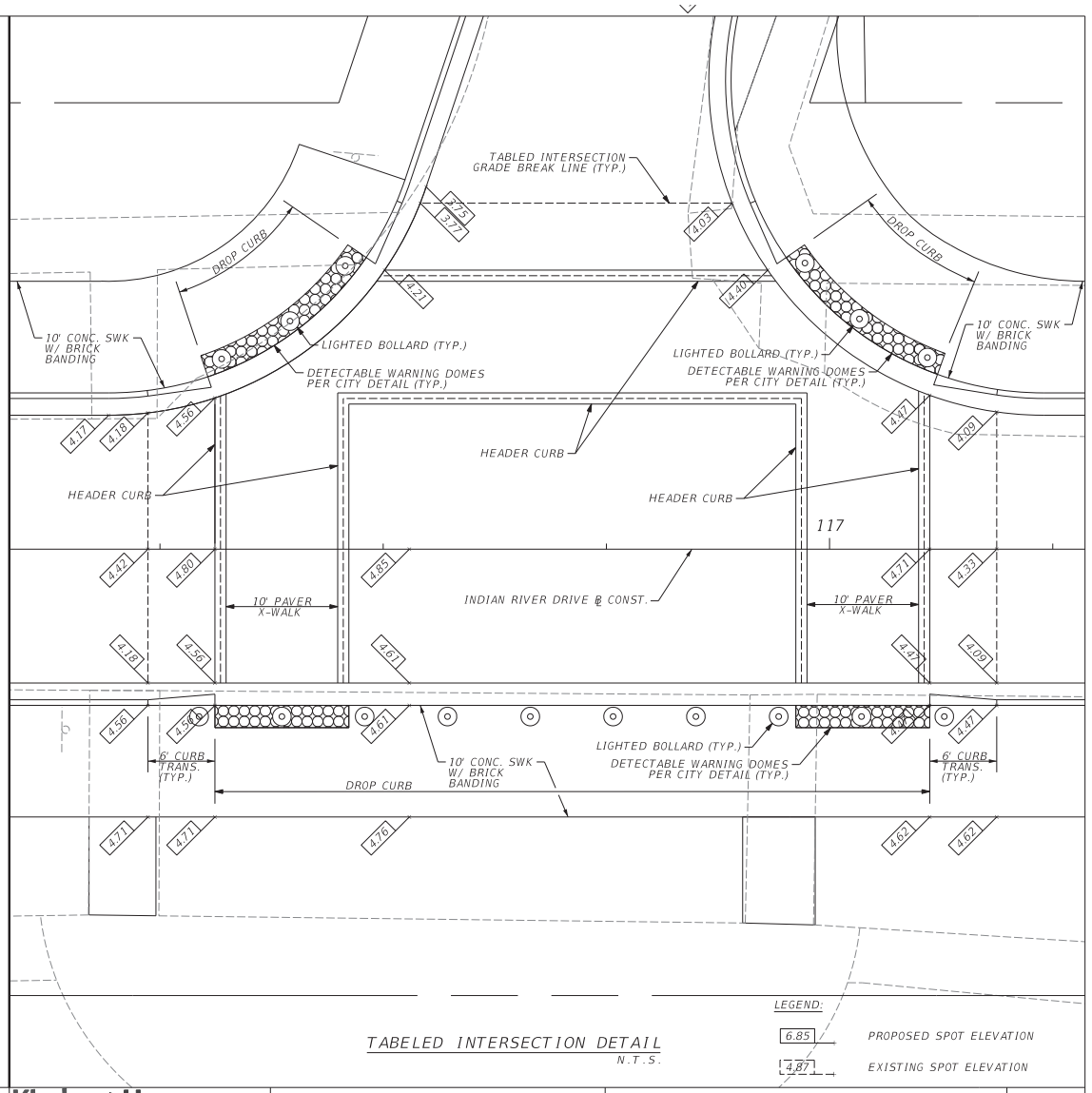

TABELED INTERSECTION DETAIL
N.T.S.

LEGEND:

6.85	PROPOSED SPOT ELEVATION
4.87	EXISTING SPOT ELEVATION

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 24B

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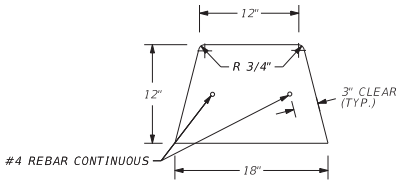

TYPE 'HEADER' CURB

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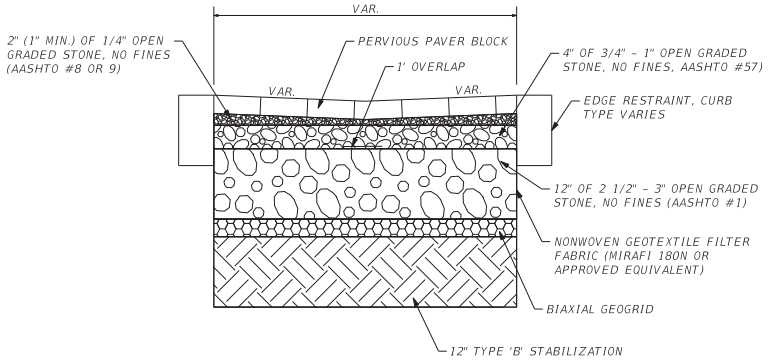
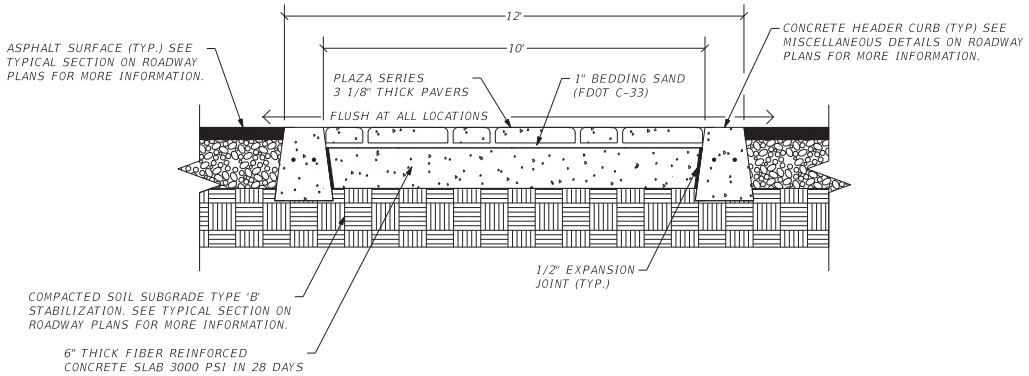


NOTES:

1. PERVIOUS PAVERS SHALL CONSIST OF BELGARD PERMEABLE PAVER BLOCK (OR APPROVED EQUAL) (4"x8"x3.15"), COLOR: HARVEST BLEND, PATTERN: 90 DEGREE HERRING BONE WITH SOLDIER COURSE BORDER.
2. MATERIAL AND LABOR COST ASSOCIATED IWTH BIAXIAL GEOGRID TO BE INCLUDE IN PERVIOUS PAVER BLOCK UNIT PRICE.
2. REFER TO PAVING, GRADING & DRAINAGE PLAN FOR ADDITIONAL INFORMATION.

PERVIOUS PAVER DETAIL

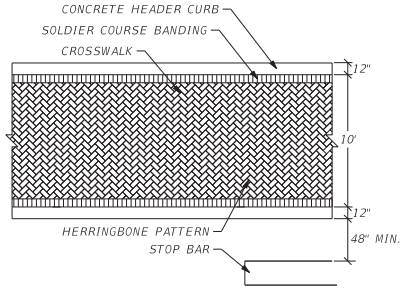
N.T.S.



-SAND-SWEEP JOINTS USING POLYMERIC SAND JOINING MATERIAL JOINTS SHALL NOT EXCEED 1/8"
-SEAL WITH PROTECTIVE SEALANT OR MANUFACTURER'S APPROVED EQUAL

CROSSWALK PAVING DETAIL - SECTION

N.T.S.



PAVER INFORMATION:
MANUFACTURED BY HANSON PAVER PRODUCTS
PAVER: PLAZA SERIES 4"X8"X3 1/8"
COLOR: RED/TAN/CHARCOAL (INDIVIDUAL BRICK COLOR)
FIELD PATTERN: 45° HERRINGBONE
BANDING PATTERN: SOLDIER COURSE (COLOR: RED)

CROSSWALK PAVING DETAIL - PLAN

N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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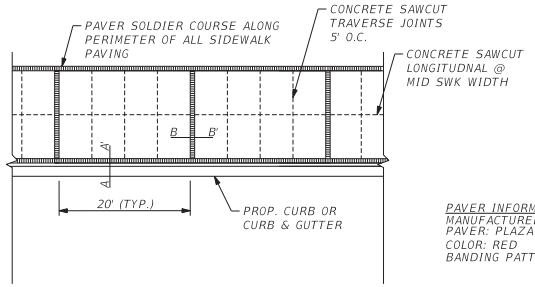
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

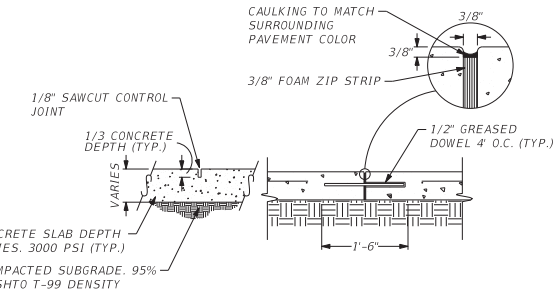
SHEET NO. 25



PAVER INFORMATION:
MANUFACTURED BY HANSON PAVER PRODUCTS
PAVER: PLAZA SERIES 4"X8"X3 1/8"
COLOR: RED
BANDING PATTERN: SOLDIER COURSE

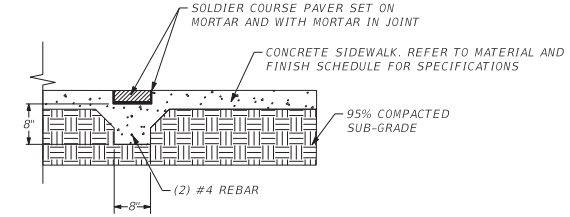
TYPICAL SIDEWALK BRICK BANDING CONFIGURATION

N.T.S.



SAW CUT / EXPANSION JOINT

N.T.S.



TYPICAL SIDEWALK BRICK BANDING- SECTION B – B'

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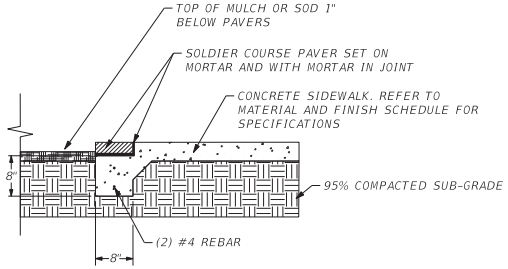
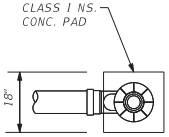
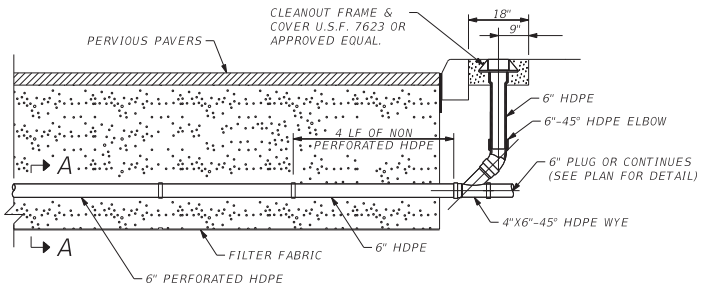


TYPICAL SIDEWALK BRICK BANDING – SECTION A – A'

N.T.S.



PLAN



SECTION

ROCK DRAIN AND PIPE CLEANOUT DETAIL

N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 26

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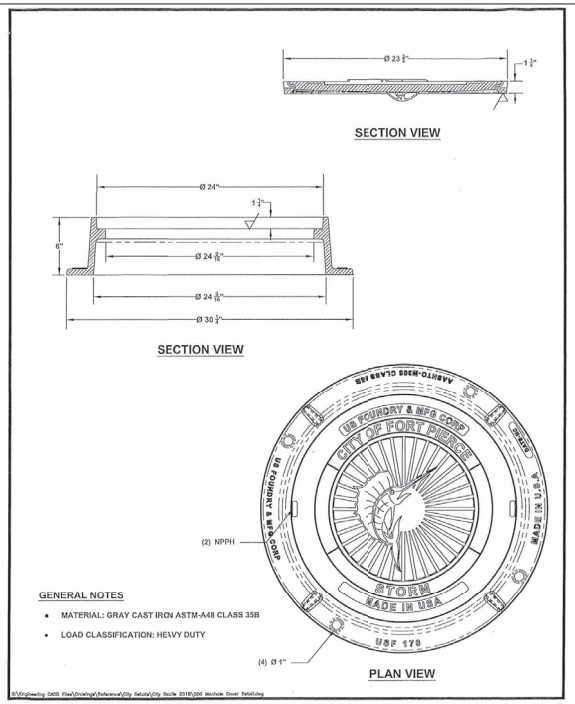

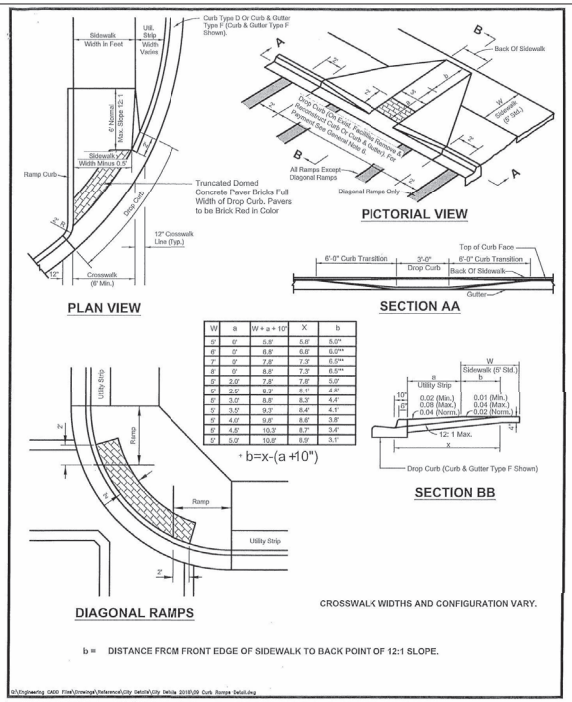

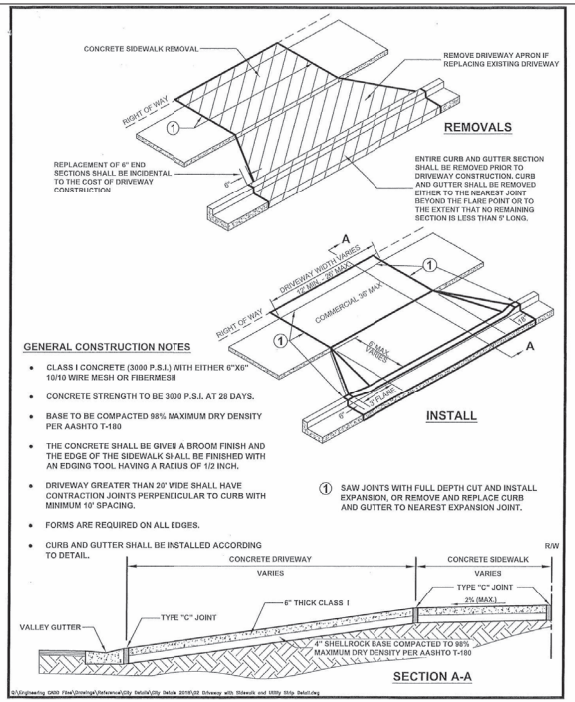

FORT PIERCE FLORIDA	MANHOLE COVER DETAIL	DATE: APRIL 2022 SCALE: N.T.S. DRAWN: D.SUMMER	SHEET ?

FORT PIERCE FLORIDA	CURB RAMP DETAIL	DATE: JUNE 2018 SCALE: N.T.S. DRAWN: D.SUMMER	SHEET 9

FORT PIERCE FLORIDA	DRIVEWAY WITH SIDEWALK AND UTILITY STRIP DETAIL	DATE: FEBRUARY 2018 SCALE: N.T.S. DRAWN: D.SUMMER	SHEET 2

SUMMARY OF TURNOUTS

STATION	SIDE	WIDTH (FT)	COMMENTS
INDIAN RIVER DRIVE			
115+25.31	LT	19.40	PER FDOT STD. INDEX
121+45.56	LT	15.15	PER FDOT STD. INDEX

SUMMARY OF TURNOUTS

STATION	SIDE	WIDTH (FT)	COMMENTS
BACKUS AVENUE			
202+00.79	RT	24.00	PER CITY STD. DETAIL, 3'x3' FLARE
201+87.16	LT	12.00	PER CITY STD. DETAIL, 3'x3' FLARE
203+27.93	LT	18.10	PER CITY STD. DETAIL, 3'x3' FLARE
203+57.46	LT	14.00	PER CITY STD. DETAIL, 3'x3' FLARE
204+04.33	LT	24.00	PER CITY STD. DETAIL, 3'x3' FLARE
204+66.57	LT	30.00	PER CITY STD. DETAIL, 3'x3' FLARE
204+36.15	LT	22.00	PER CITY STD. DETAIL, 3'x3' FLARE
204+47.29	RT	24.00	PER CITY STD. DETAIL, 3'x3' FLARE
206+07.82	LT	22.00	PER CITY STD. DETAIL, 3'x3' FLARE
206+25.22	RT	22.00	PER CITY STD. DETAIL, 3'x3' FLARE

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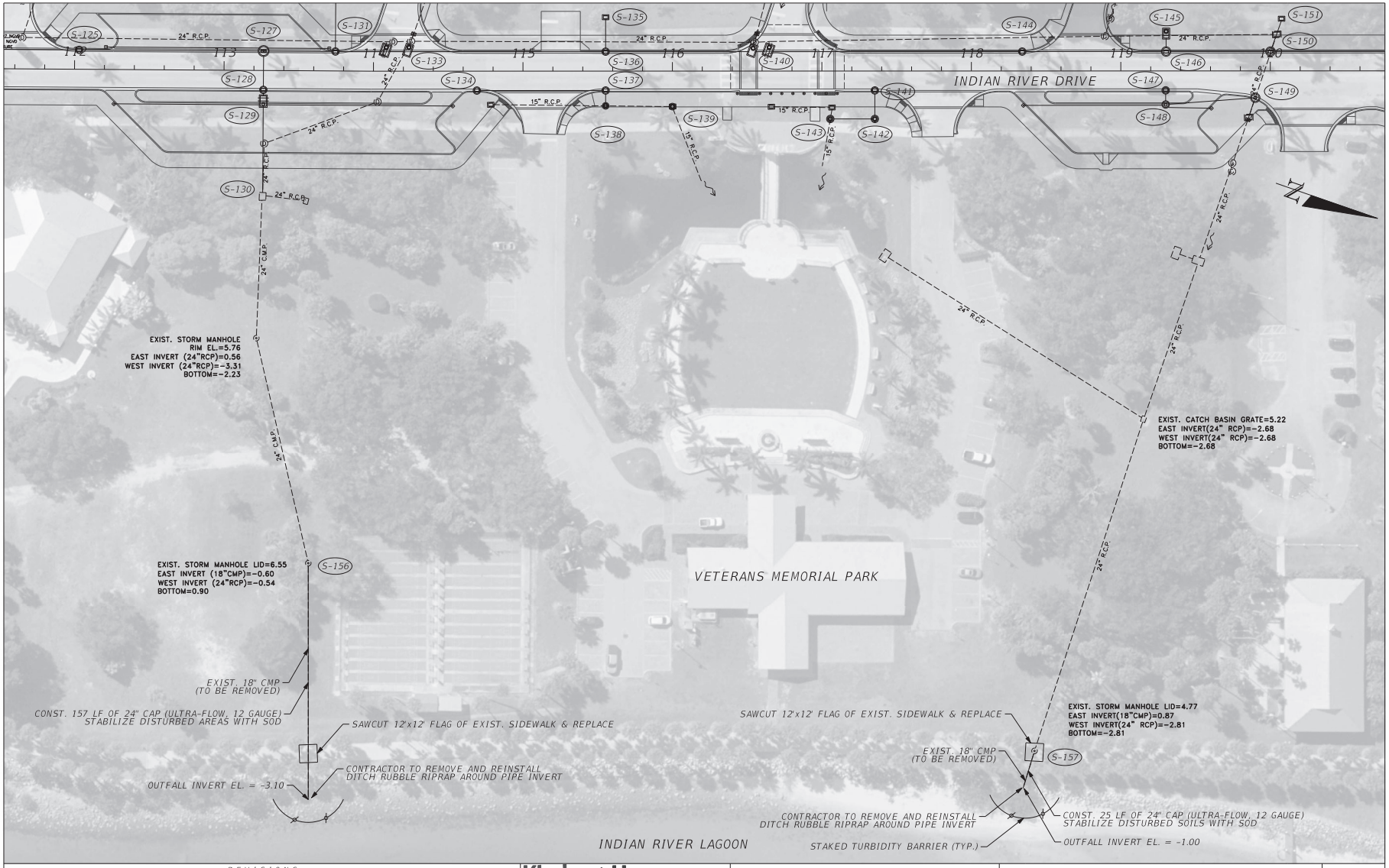
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 27



REVISIONS					
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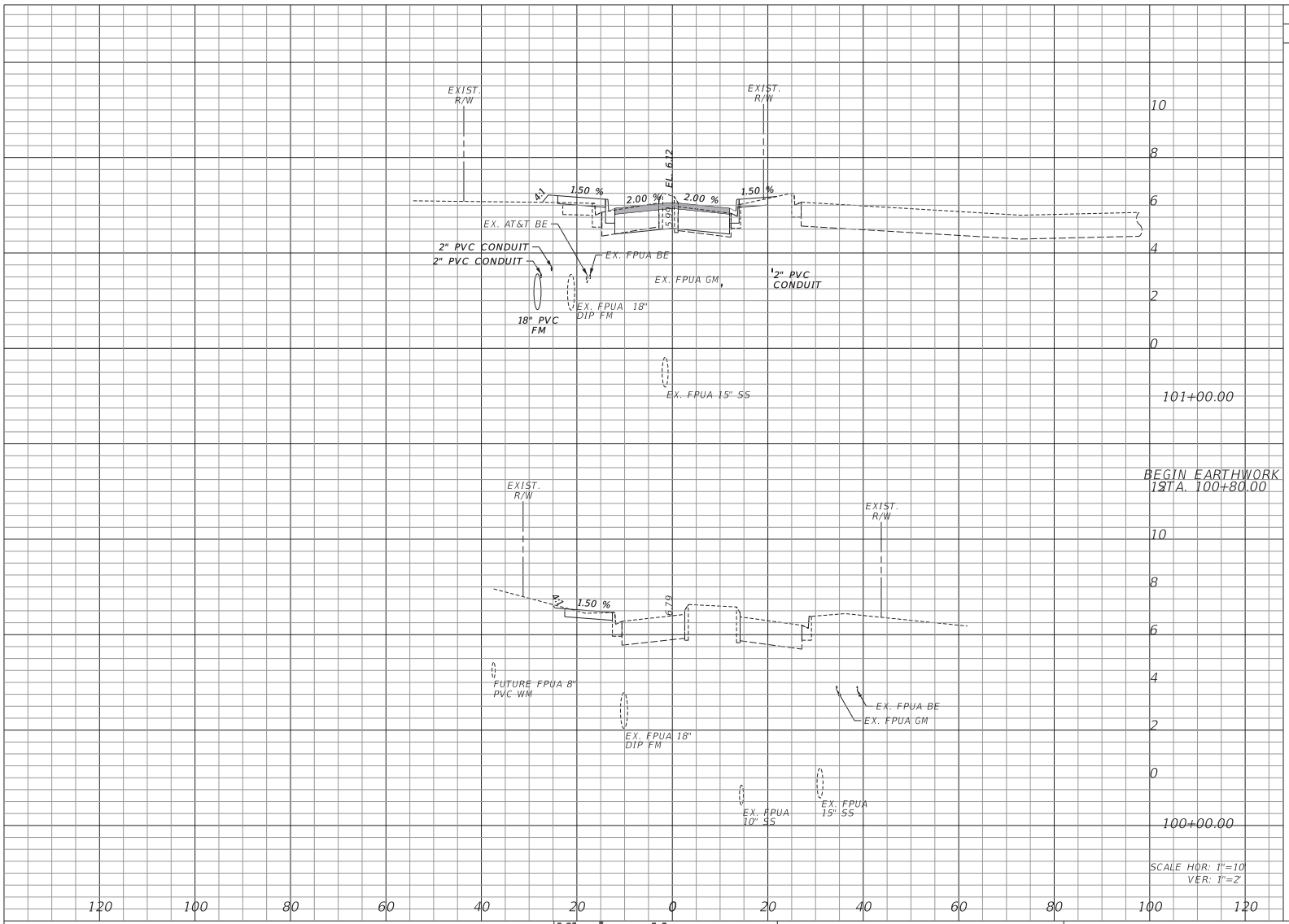
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

MISCELLANEOUS DETAILS

SHEET NO. 28

rebecca.mulroney 2/4/2025 3:18:28 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_ROADWAY\PLANDR01.dgn



Regular Exc.		Embankment	
A	V	A	V
28.77	0.00	32.00	0.00

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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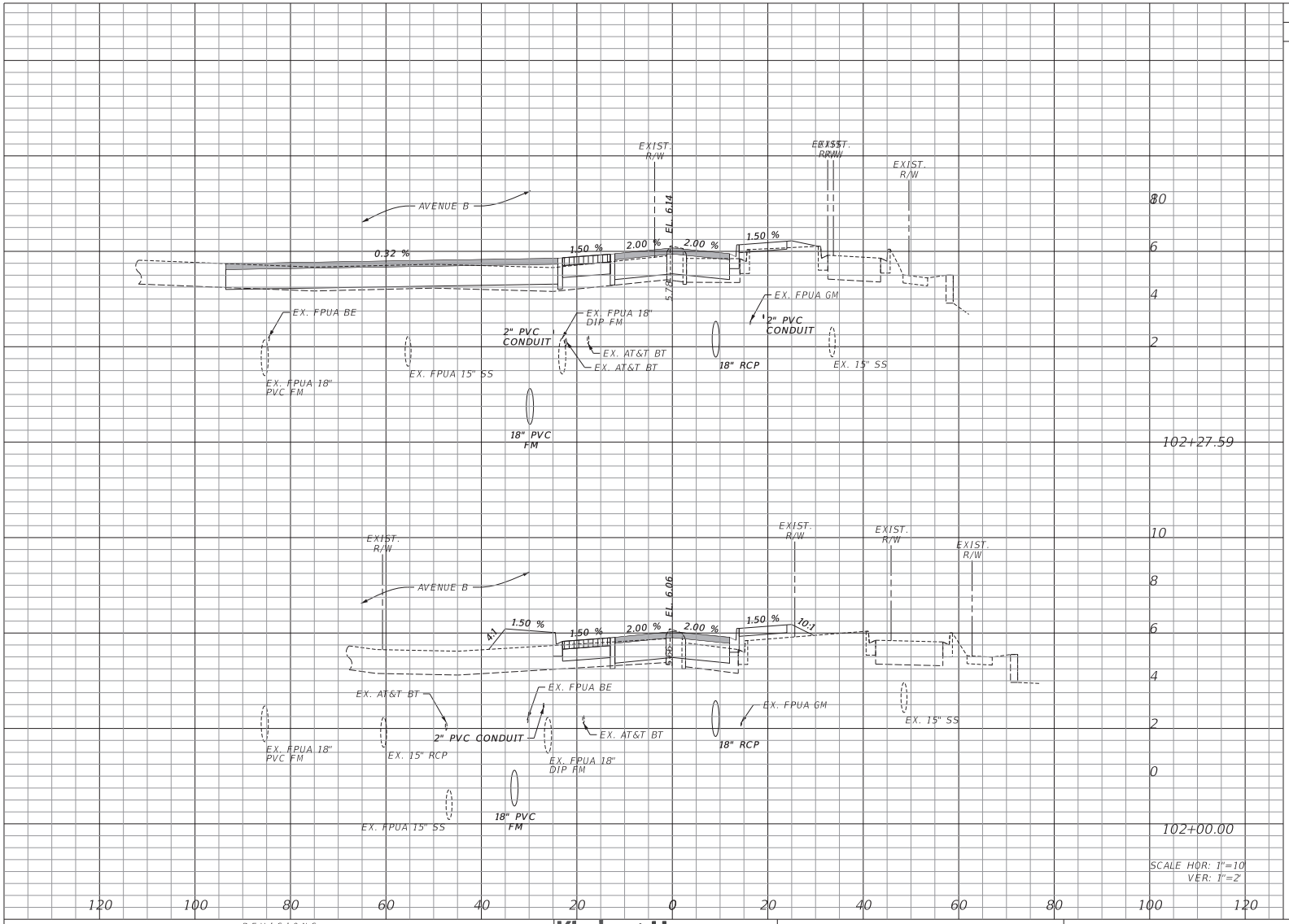
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 29

rebecca.mulroney 2/4/2025 3:19:27 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
61.26	45.85	79.26	66.50
28.48	106.02	50.89	153.50

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 30

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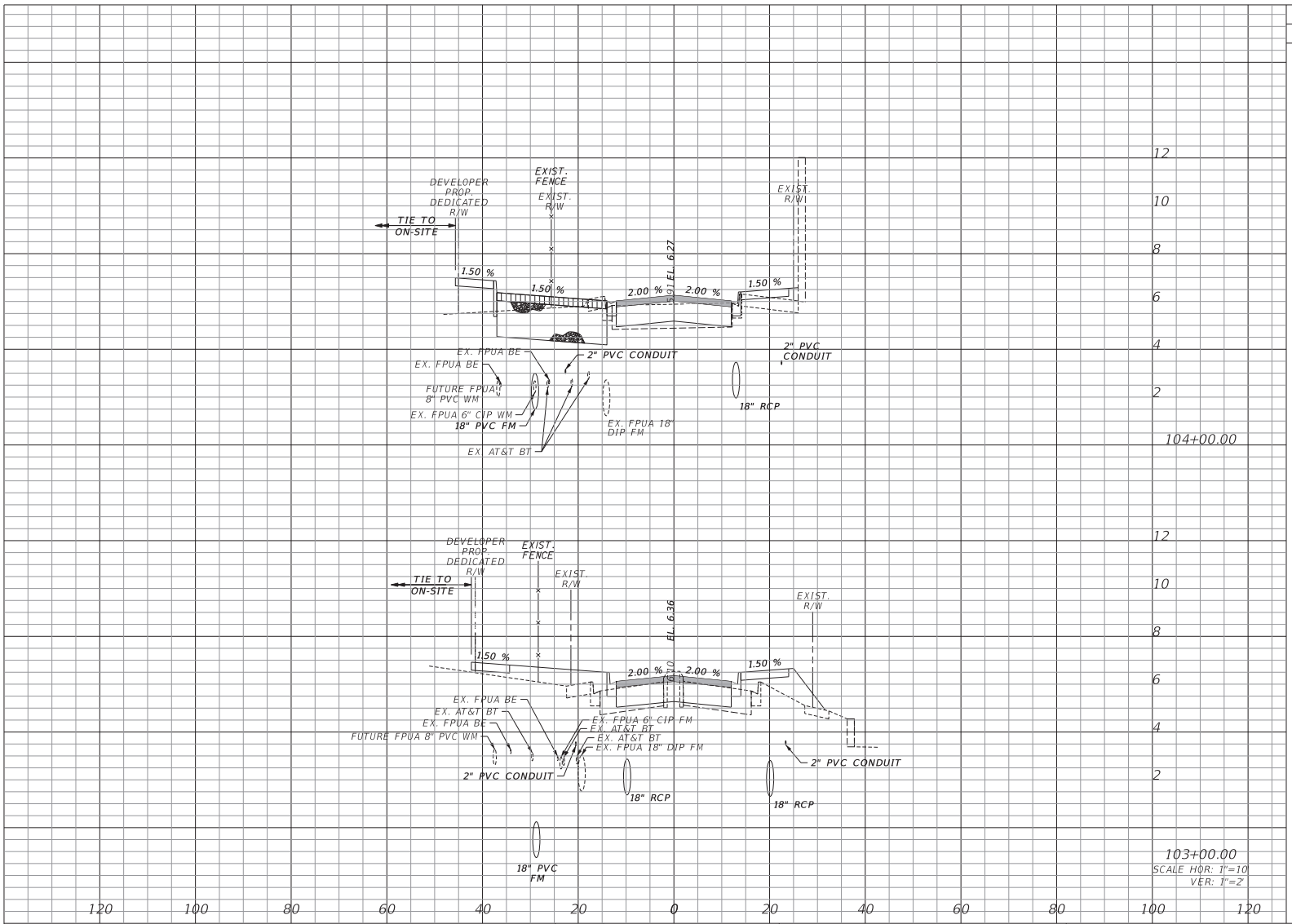

Regular Exc.		Embankment	
A	V	A	V
55.37	144.74	82.56	251.63
22.79	112.70	53.32	177.78

REVISIONS

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 31

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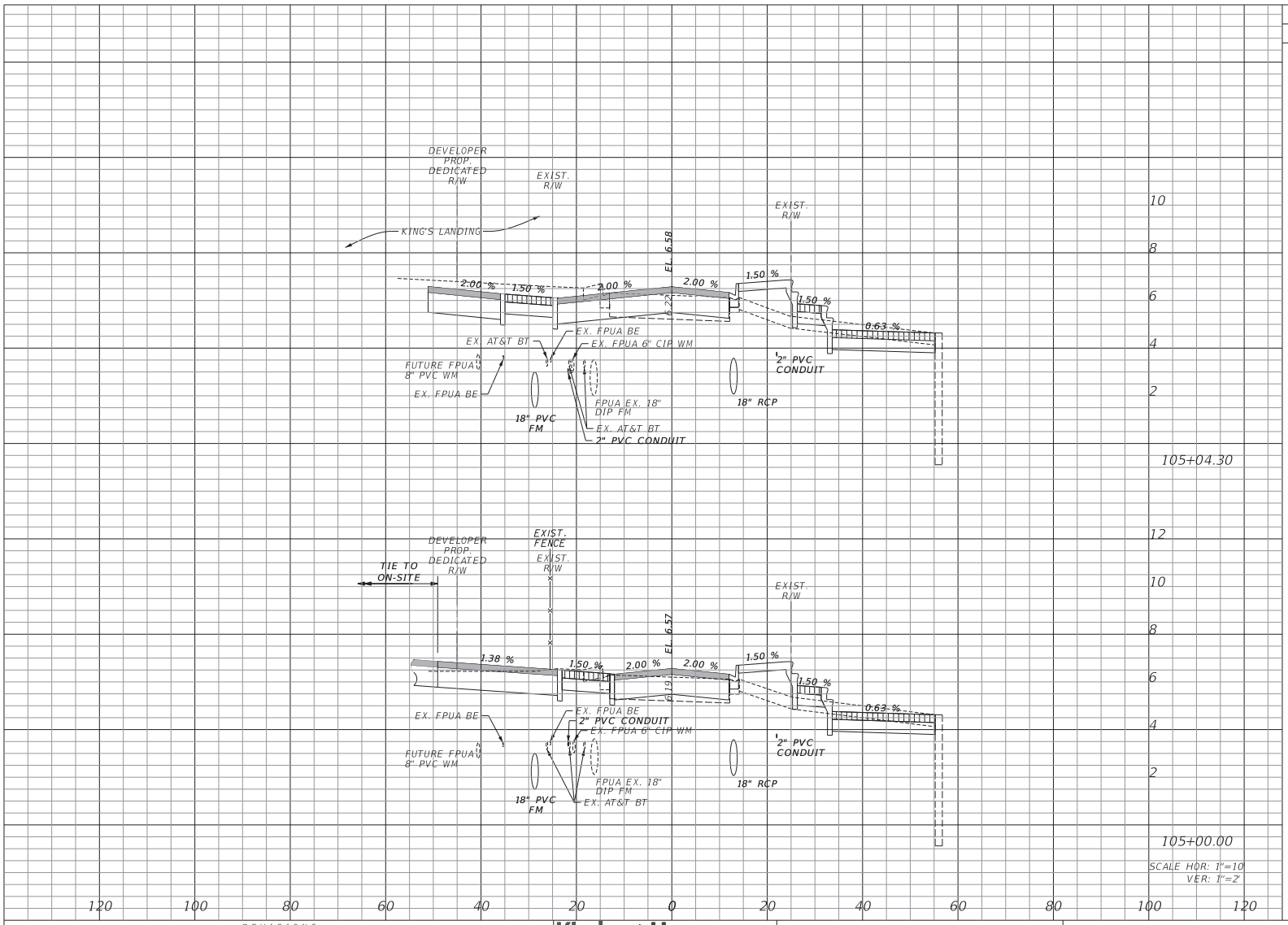

Regular Exc.		Embankment	
A	V	A	V
100.41	14.36	98.11	15.43
79.91	250.52	95.69	330.09

REVISIONS

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 32

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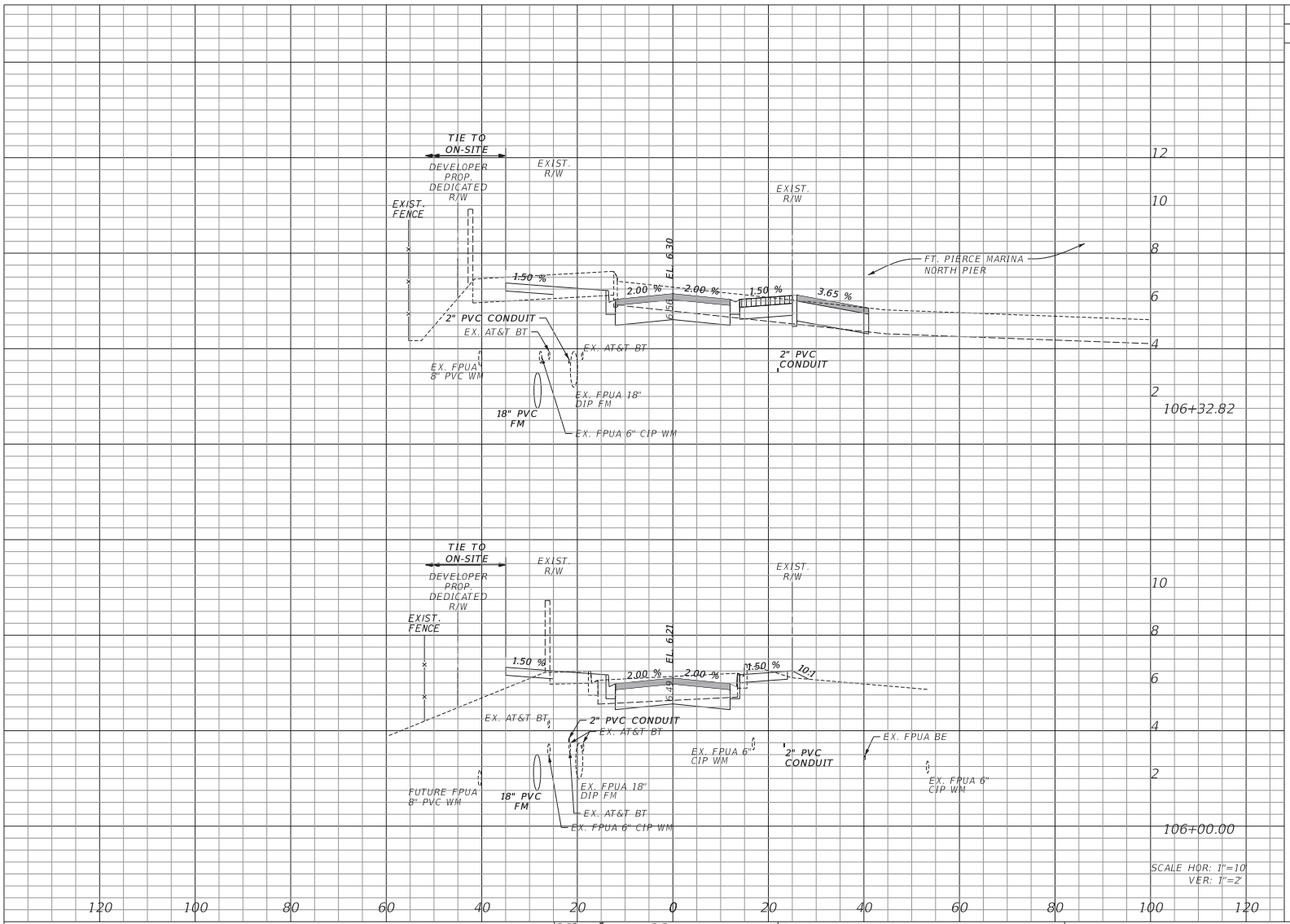

Regular Exc.		Embankment	
A	V	A	V
78.74	69.54	55.20	55.83
35.67	241.16	36.66	238.84

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 33

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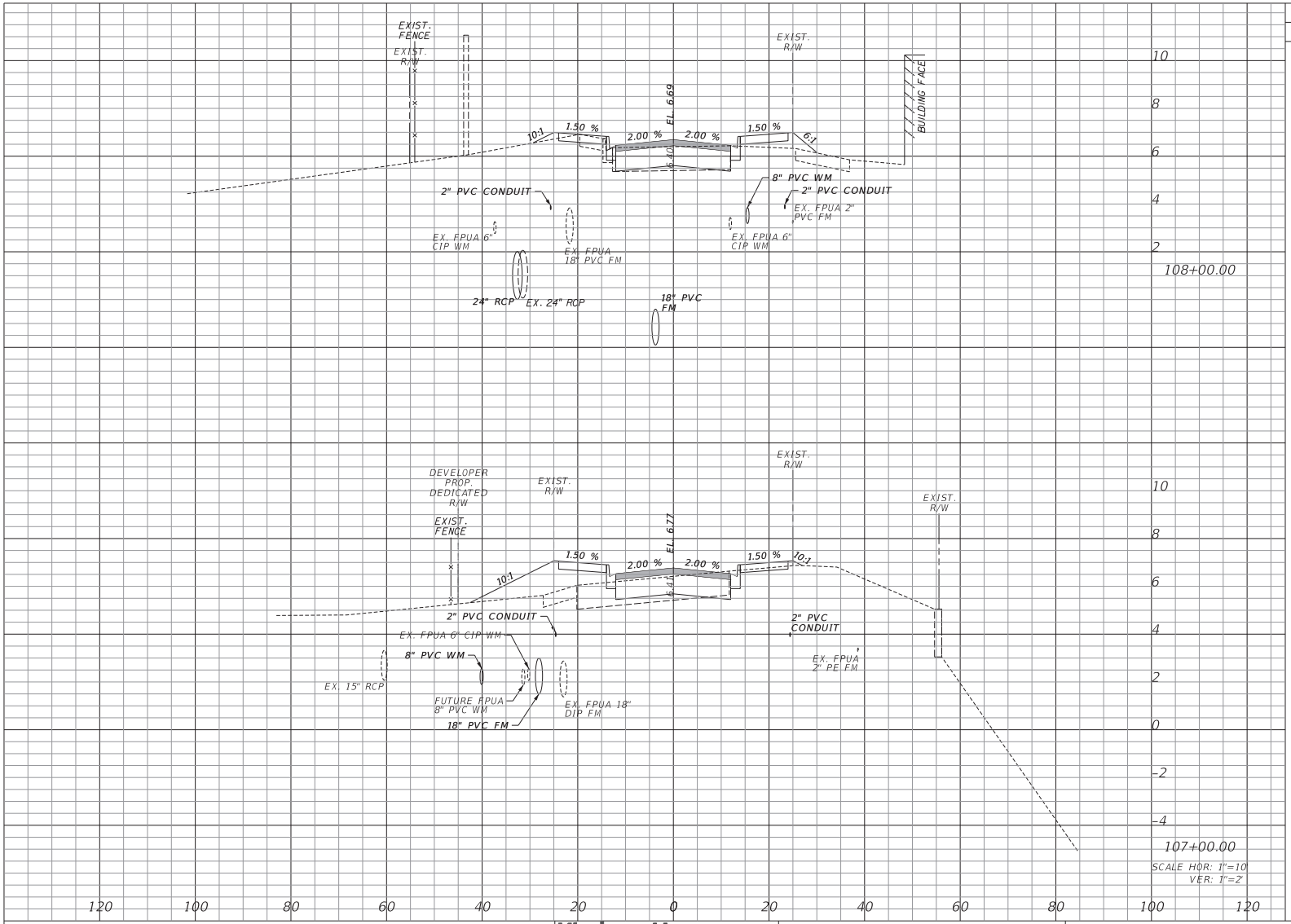

Regular Exc.		Embankment	
A	V	A	V
26.47	92.83	36.36	159.78
23.66	127.39	49.92	130.78

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 34

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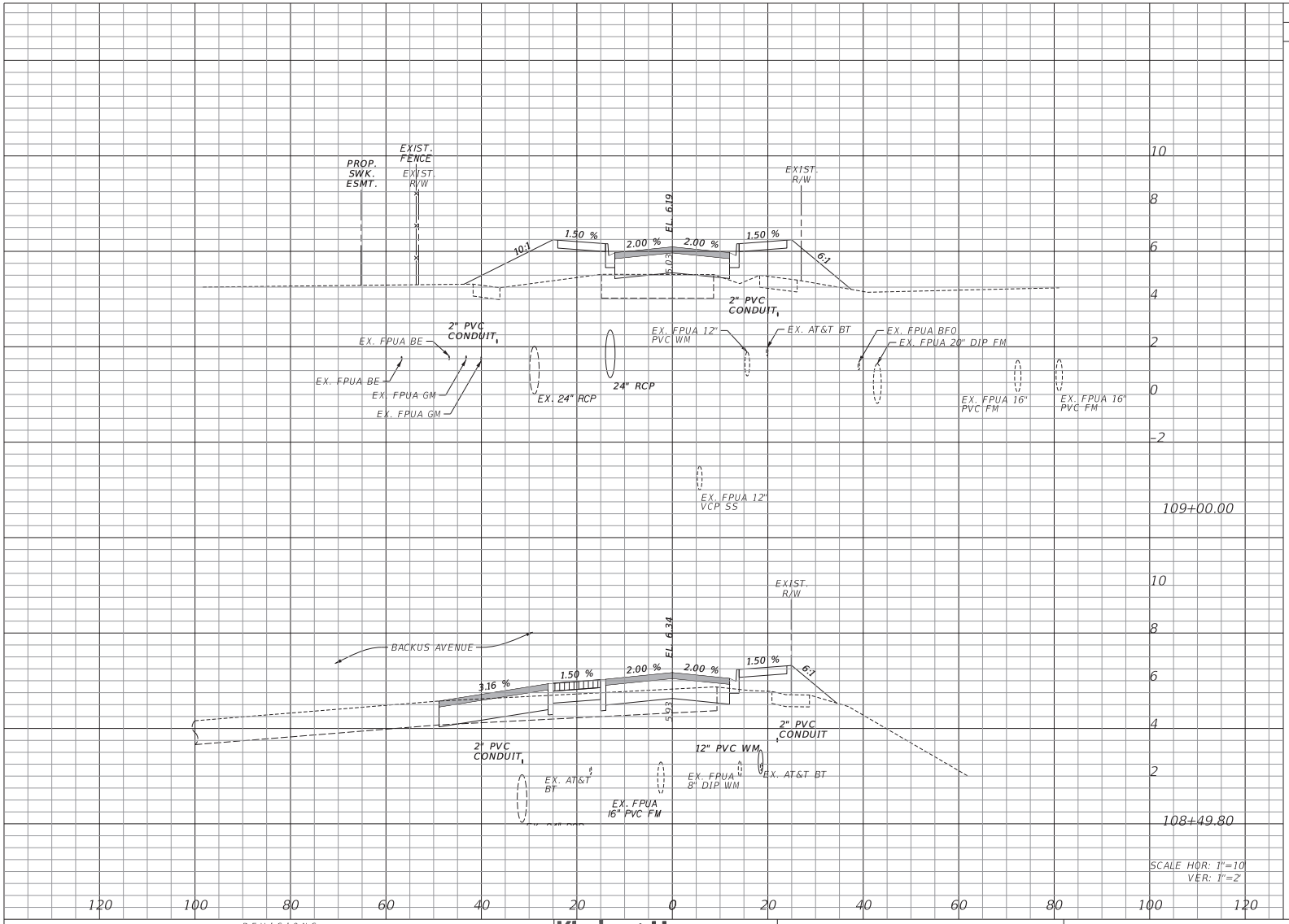

Regular Exc.		Embankment	
A	V	A	V
	35.74		152.17
1.08		85.43	
	58.87		105.71
37.37		78.26	

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 35

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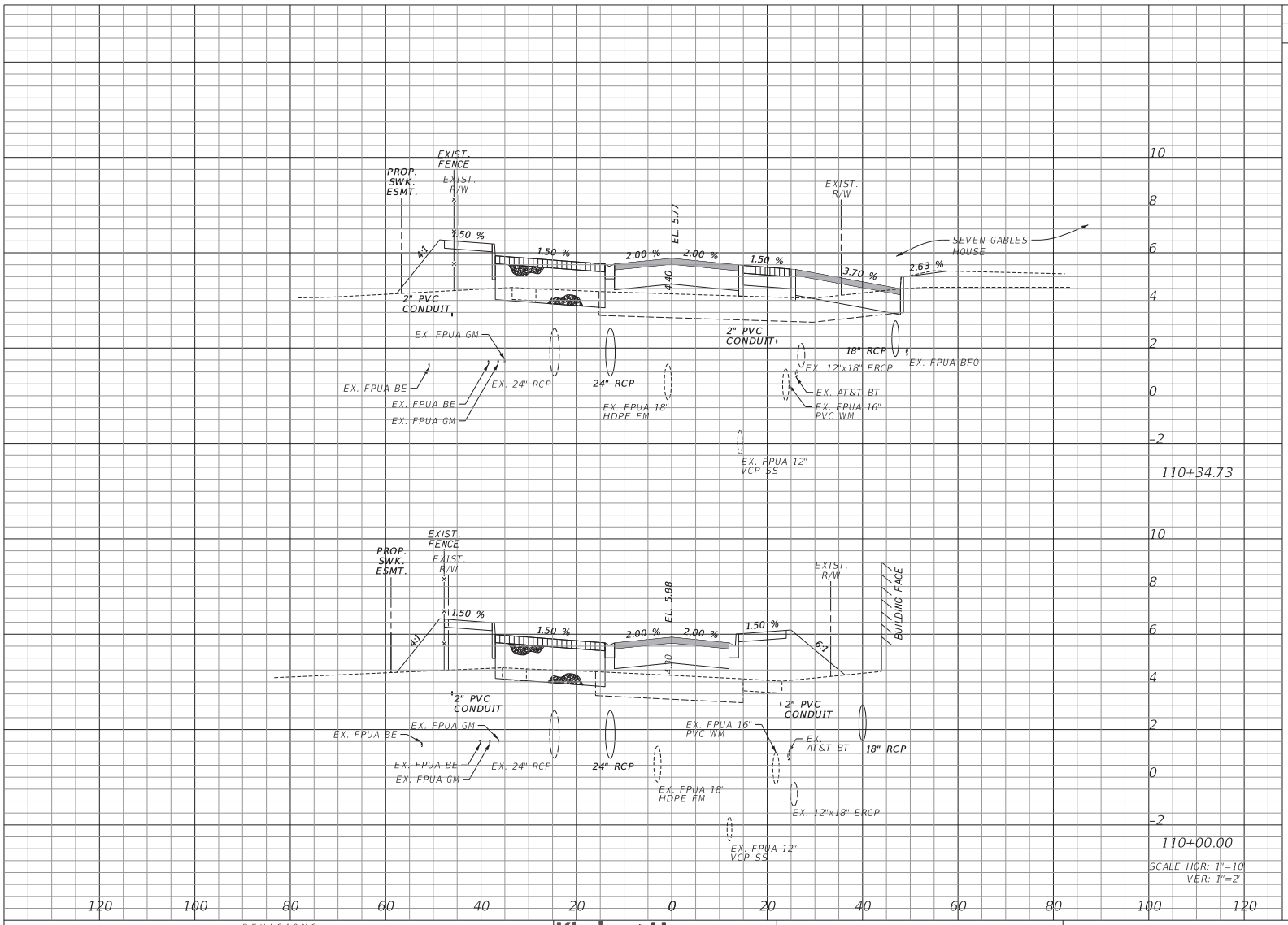

Regular Exc.		Embankment	
A	V	A	V
24.43	23.60	149.96	189.30
12.27	24.72	144.37	425.56

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 36

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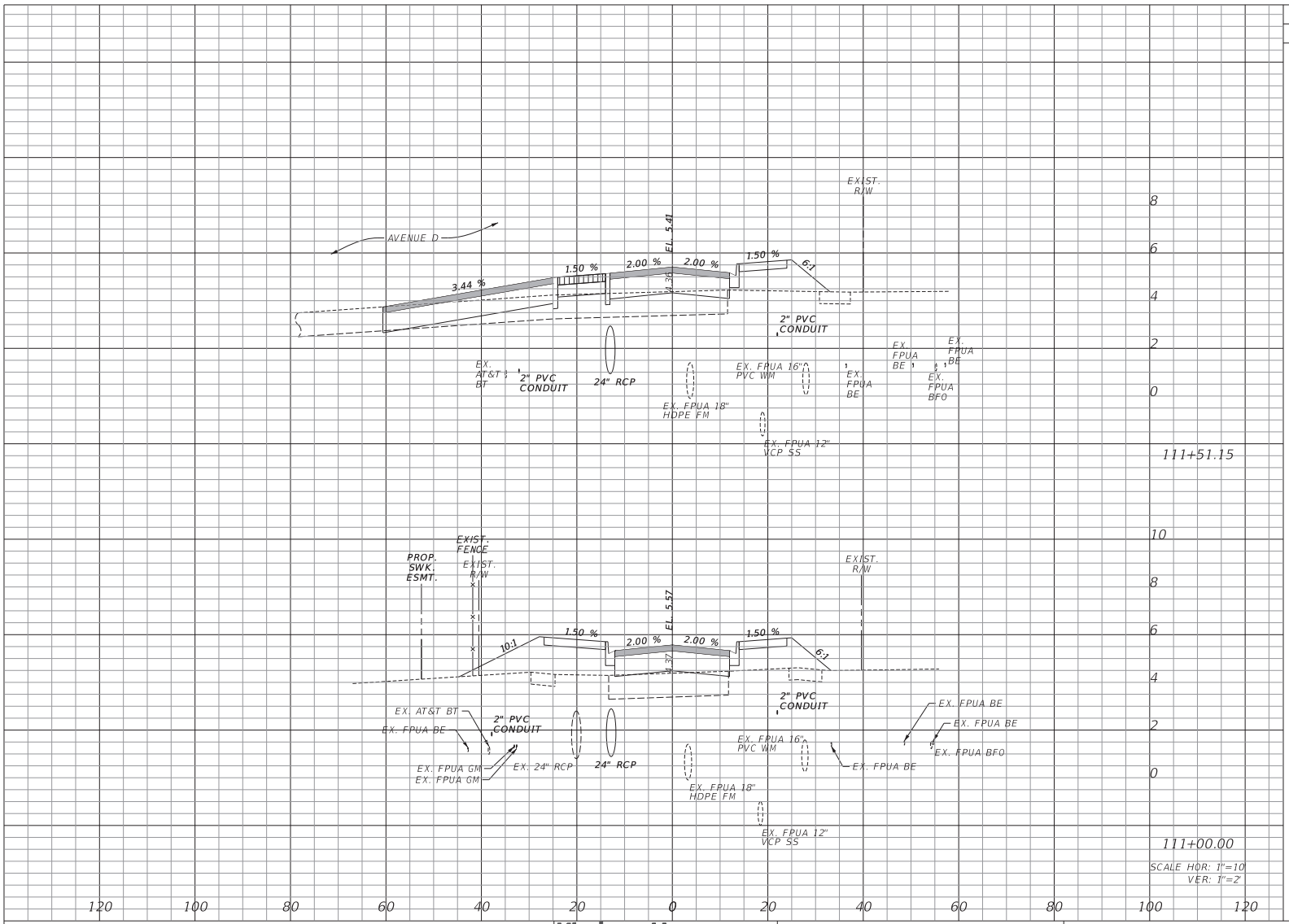

Regular Exc.		Embankment	
A	V	A	V
31.42	30.73	93.42	159.29
1.02	30.76	74.76	271.62

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 37

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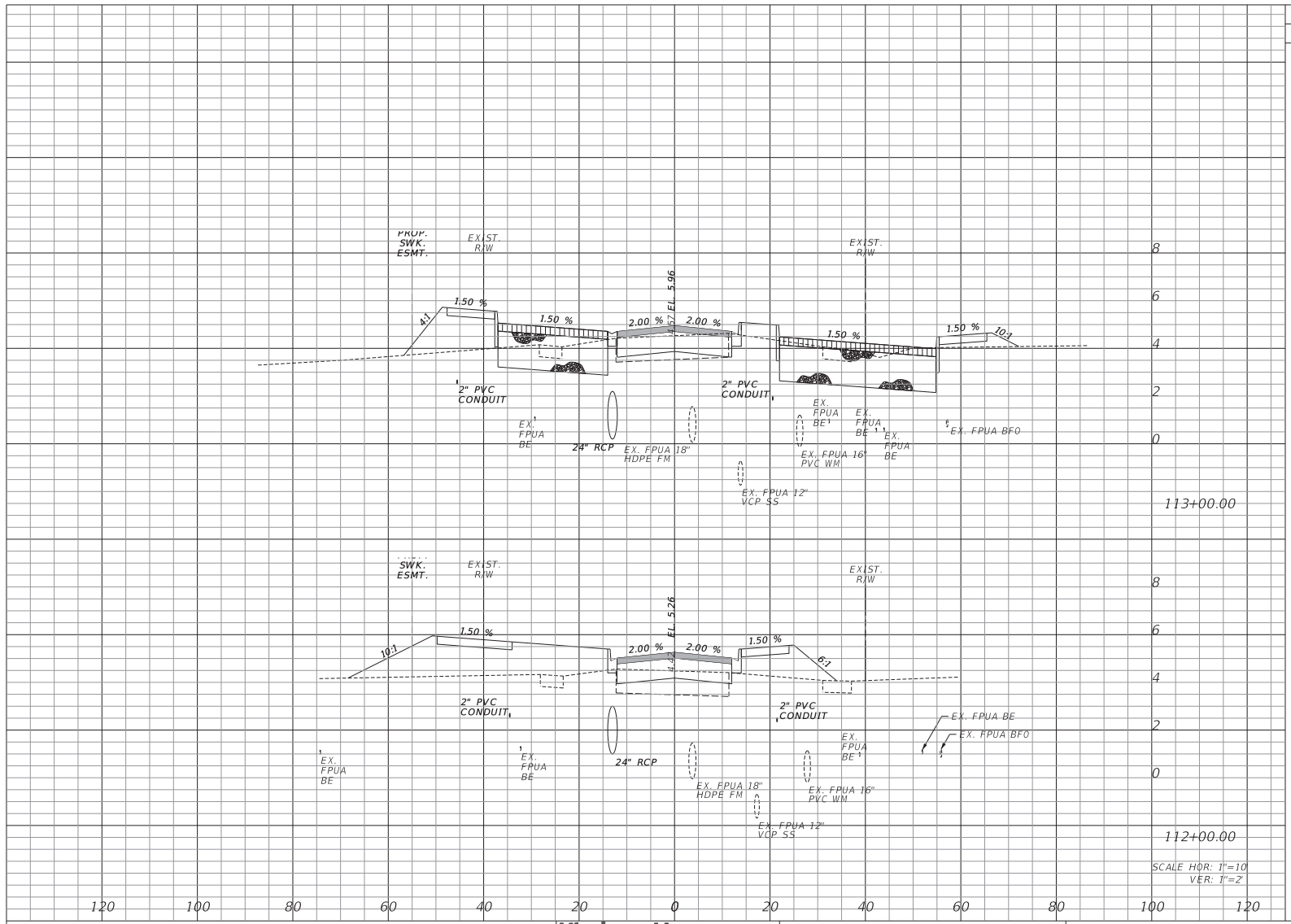

Regular Exc.		Embankment	
A	V	A	V
98.85	202.26	165.67	500.83
10.37	37.81	104.78	179.31

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 38

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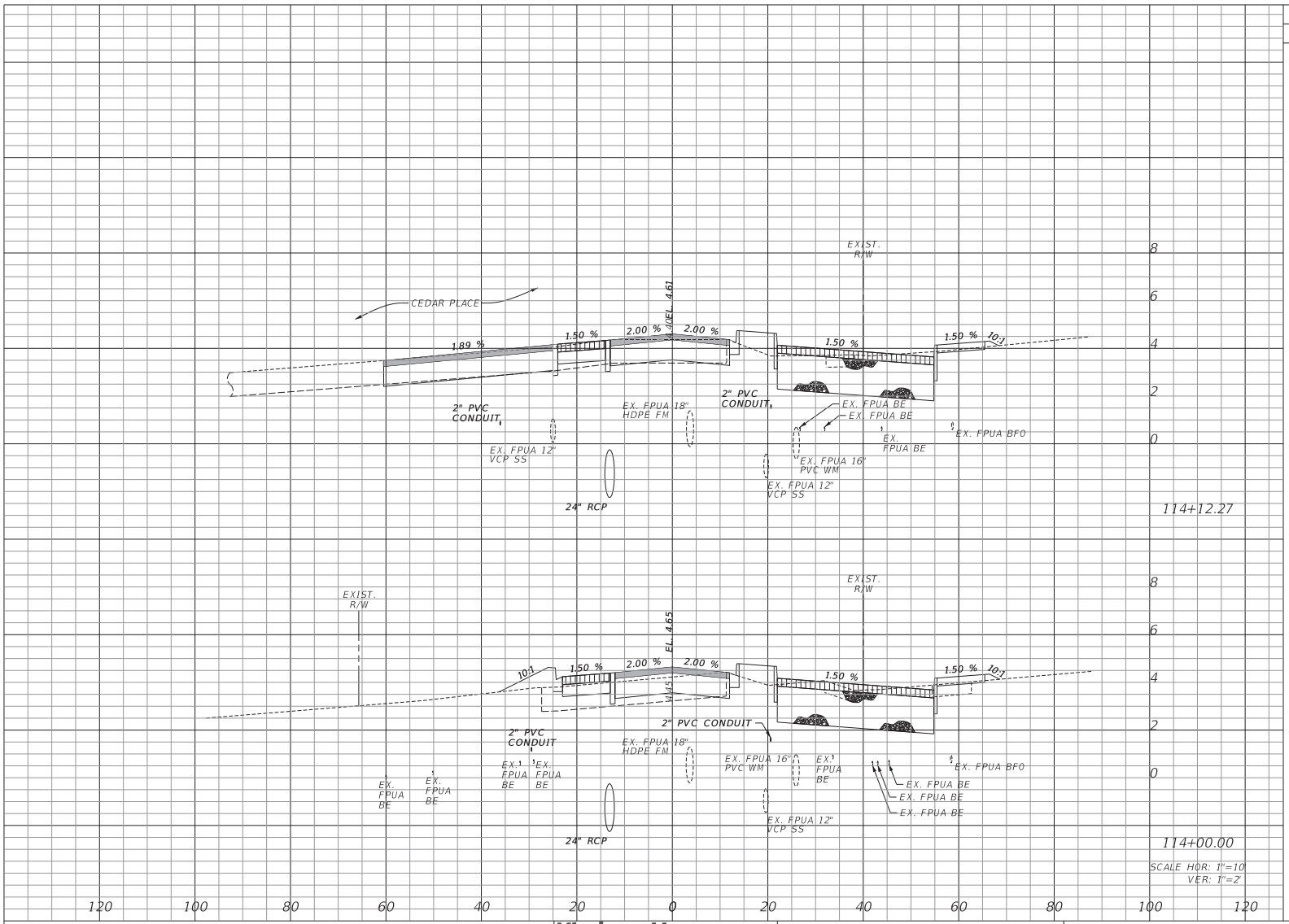

Regular Exc.		Embankment	
A	V	A	V
129.81	48.84	147.13	58.86
85.14	340.72	111.91	514.04

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 39

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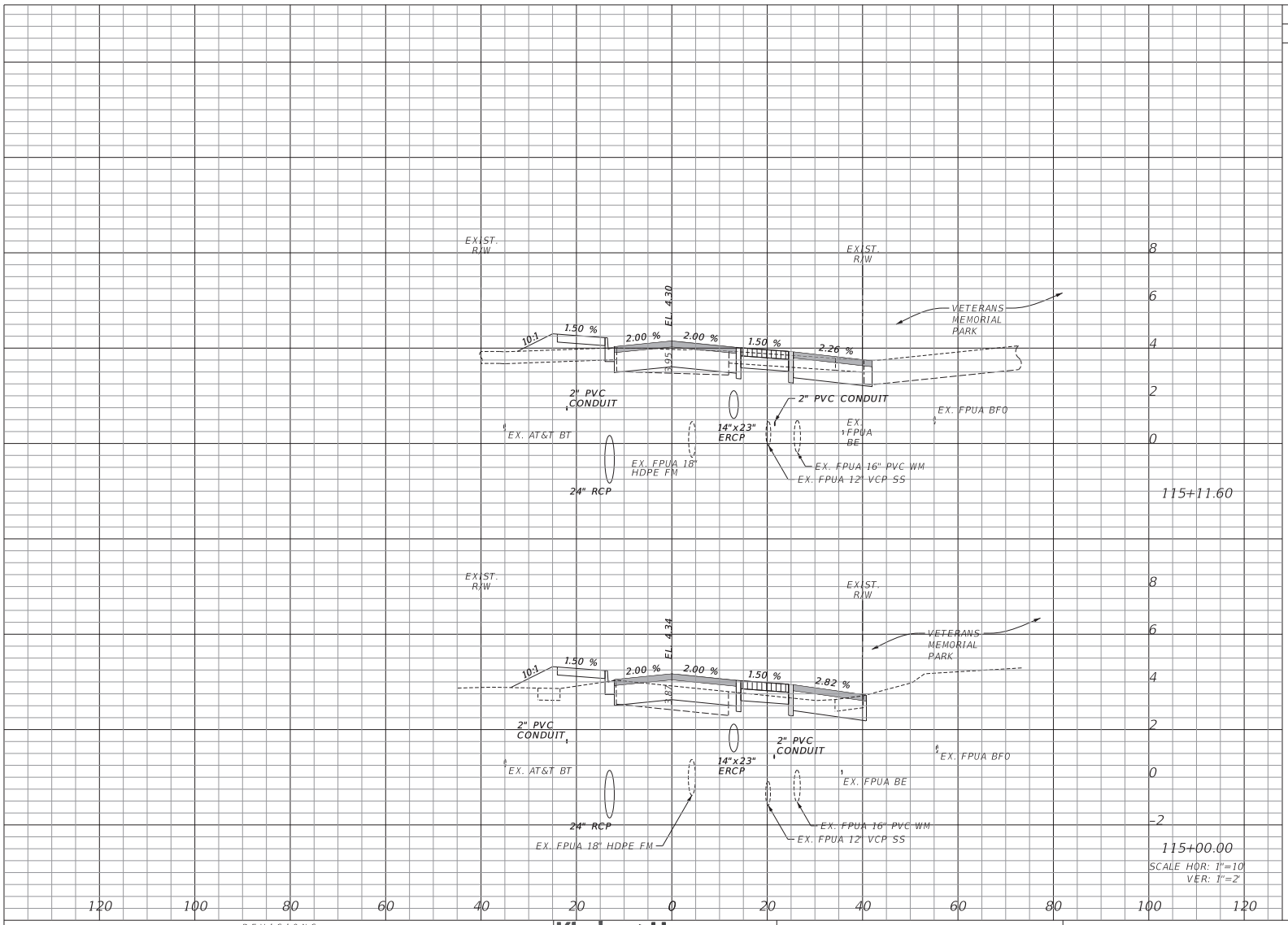

Regular Exc.		Embankment	
A	V	A	V
48.48	17.72	63.24	27.55
34.03	266.18	65.03	344.68

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 40

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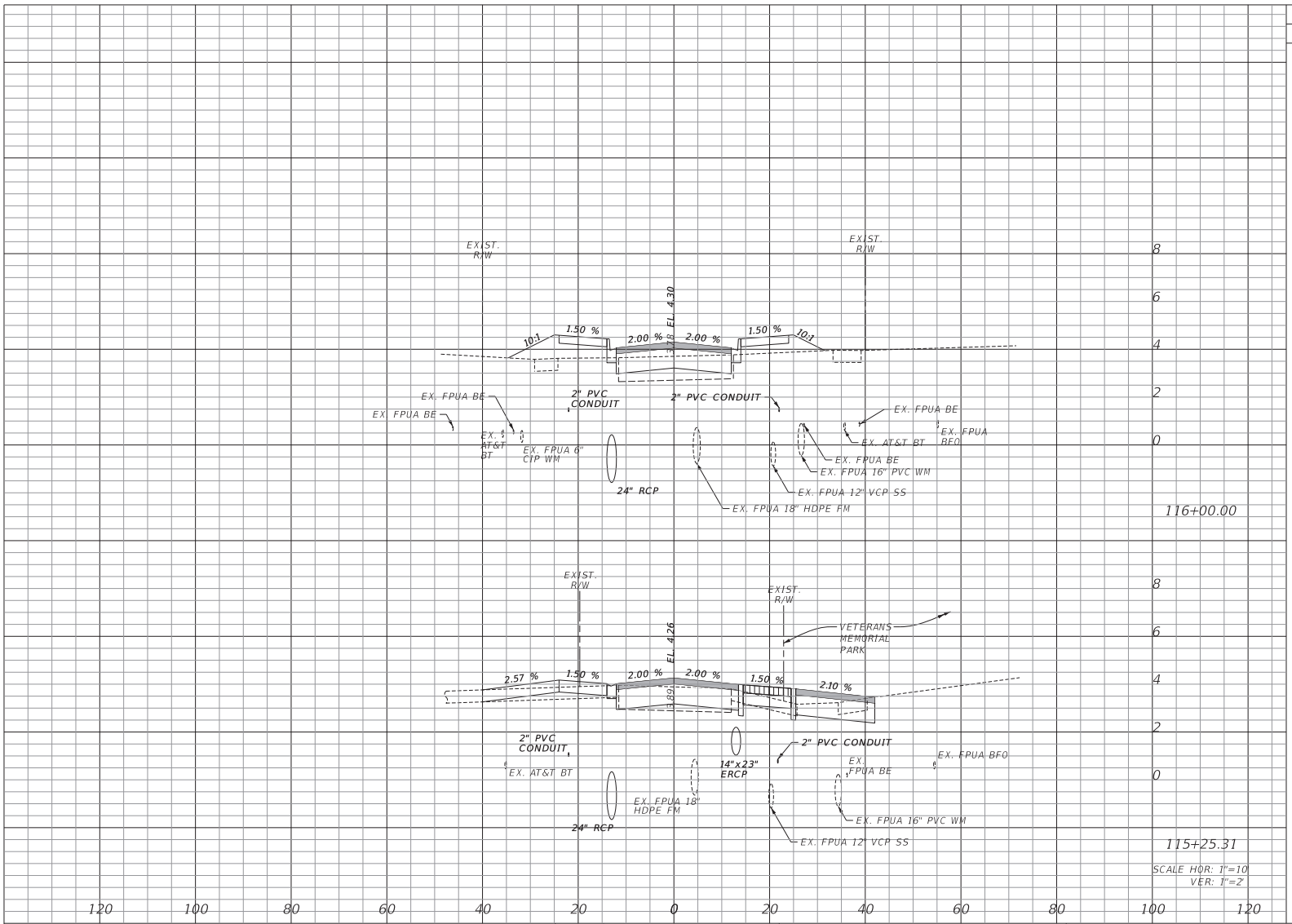

Regular Exc.		Embankment	
A	V	A	V
15.66	88.76	46.74	159.70
48.51	24.62	68.72	33.50

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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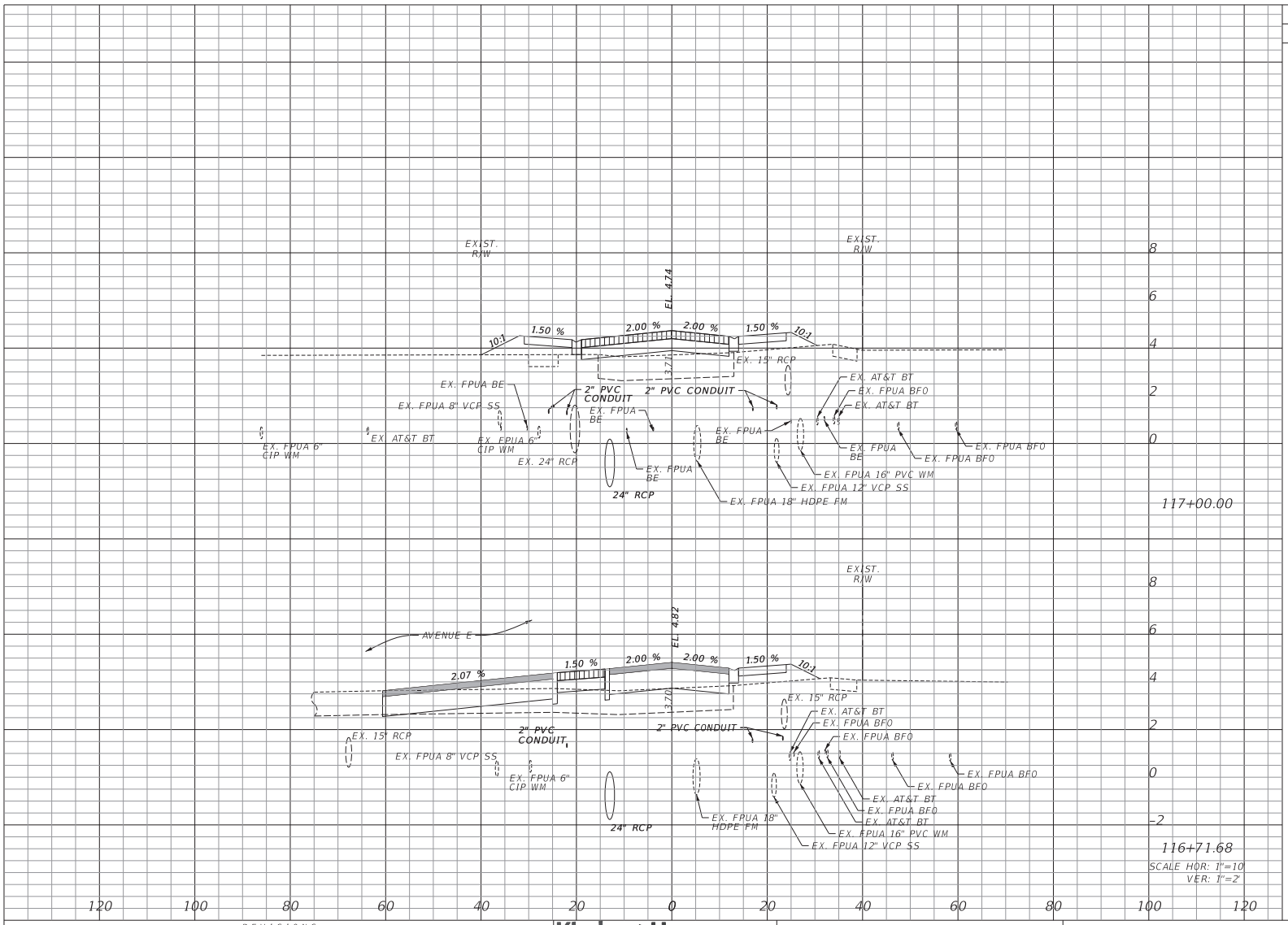
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 41

rebecca.mulroney 2/4/2025 3:19:36 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
1.29	17.27	43.46	67.21
31.65	62.80	84.71	174.50

REVISIONS

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 42

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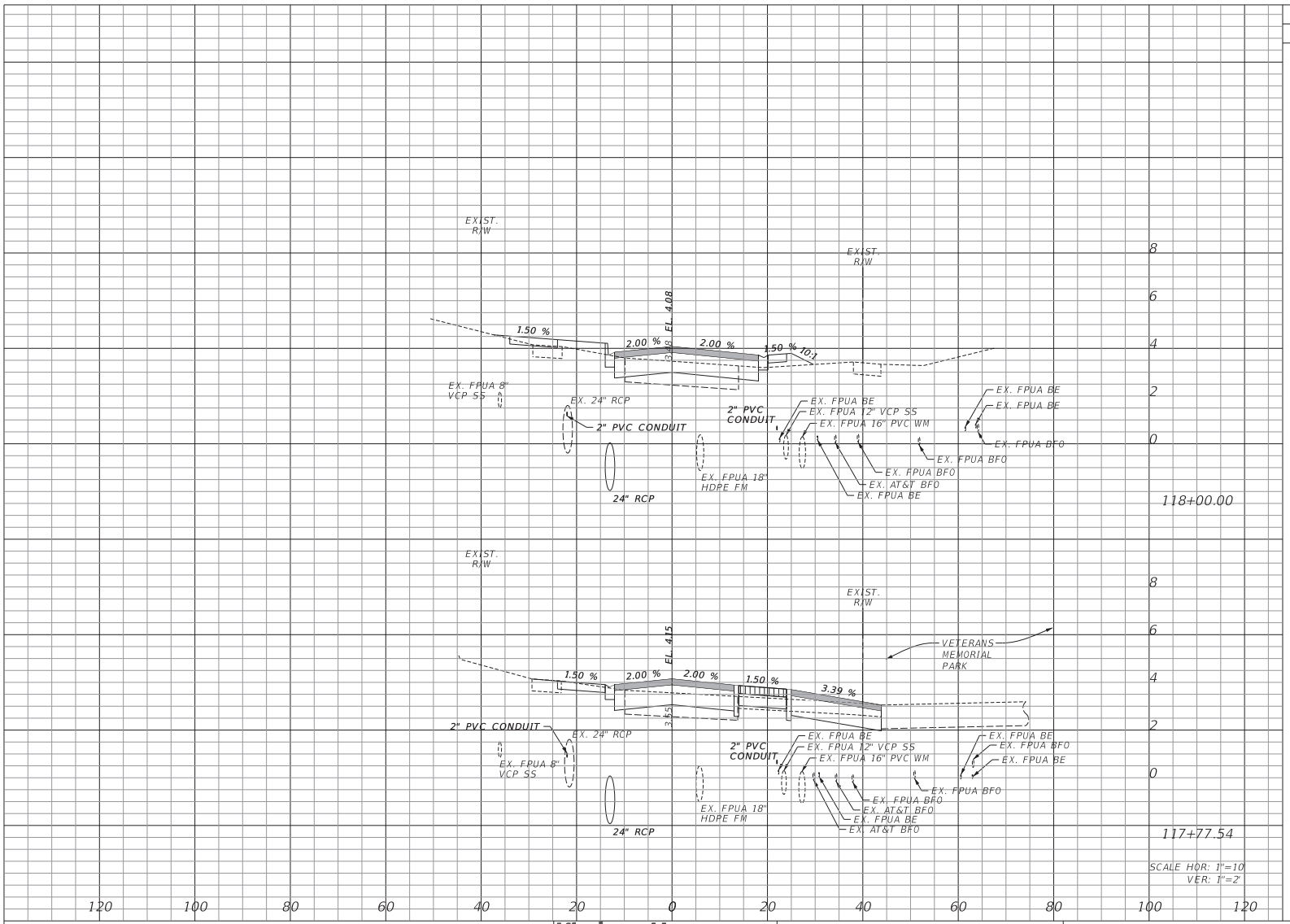


Regular Exc.		Embankment	
A	V	A	V
19.52	25.53	42.29	43.61
41.85	61.95	62.57	152.25

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

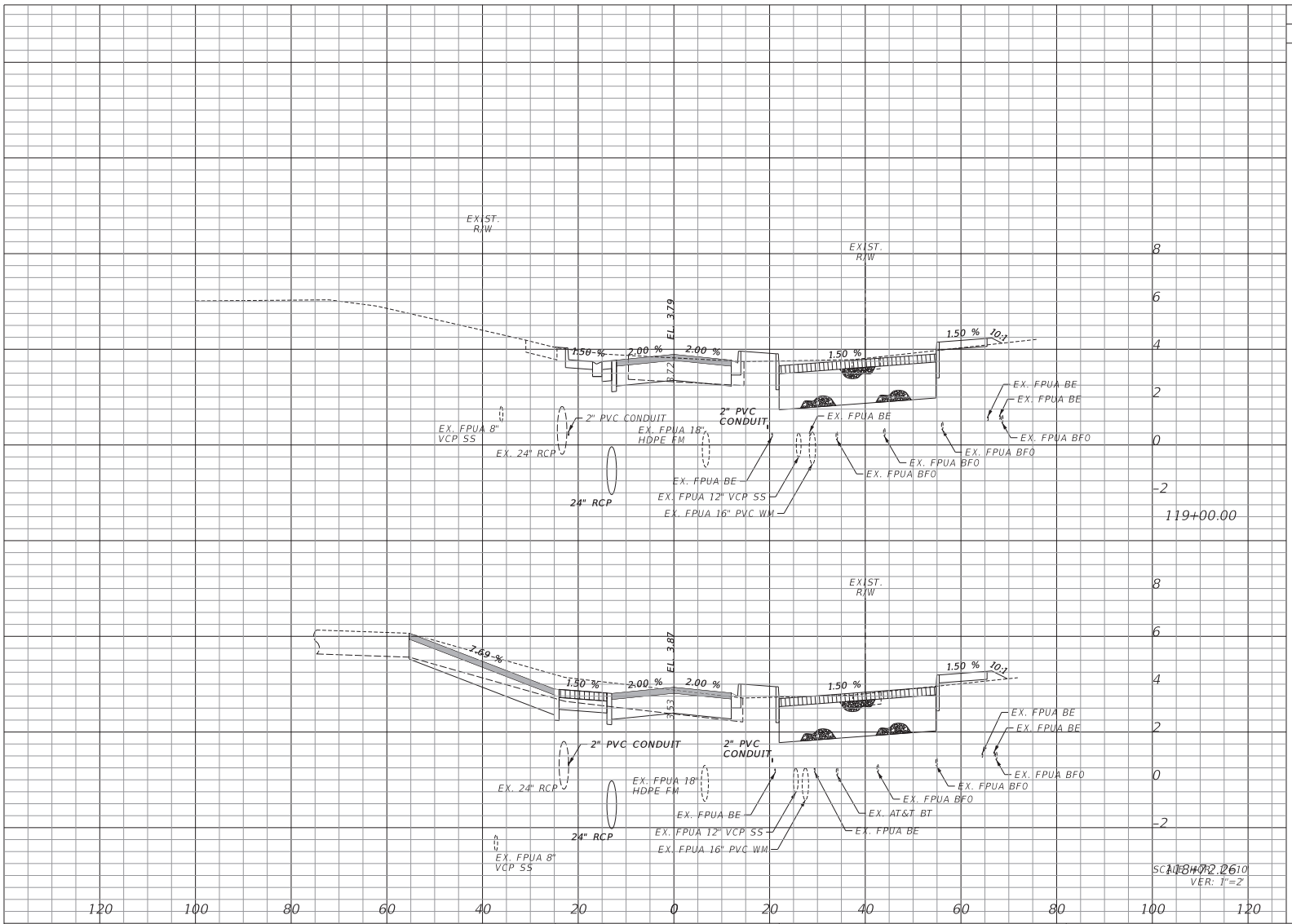
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 43

rebecca.mulroney 2/4/2025 3:19:37 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
101.80	128.65	107.15	126.79
148.67	225.07	139.69	243.53

SCALE: HOR: 1"=20'
VER: 1"=2'

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
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REGISTRY No. 35106

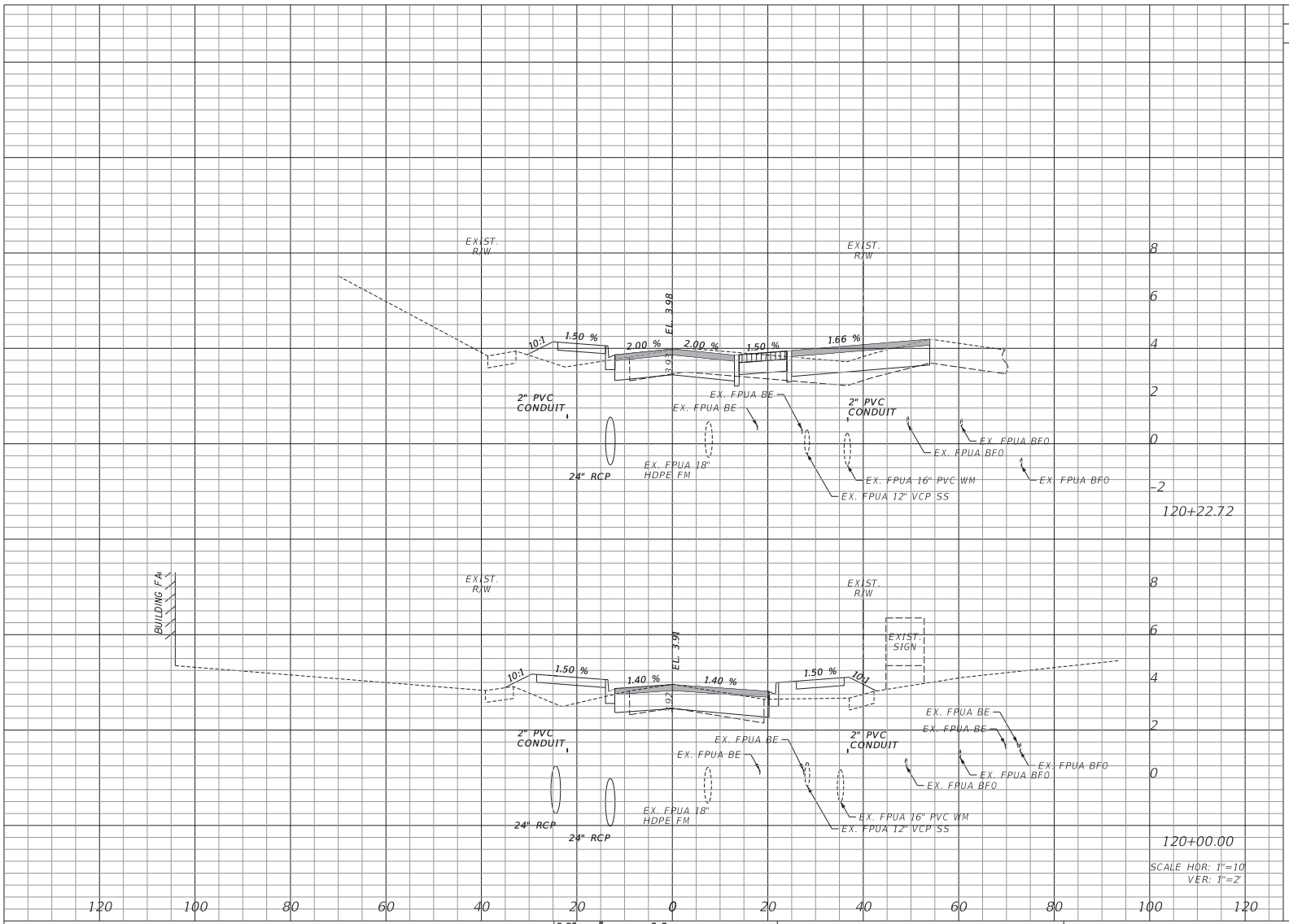
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 44

rebecca.mulroney 2/4/2025 3:19:38 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
58.37	37.16	79.32	58.52
29.94	243.96	59.77	309.11

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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REGISTRY No. 35106

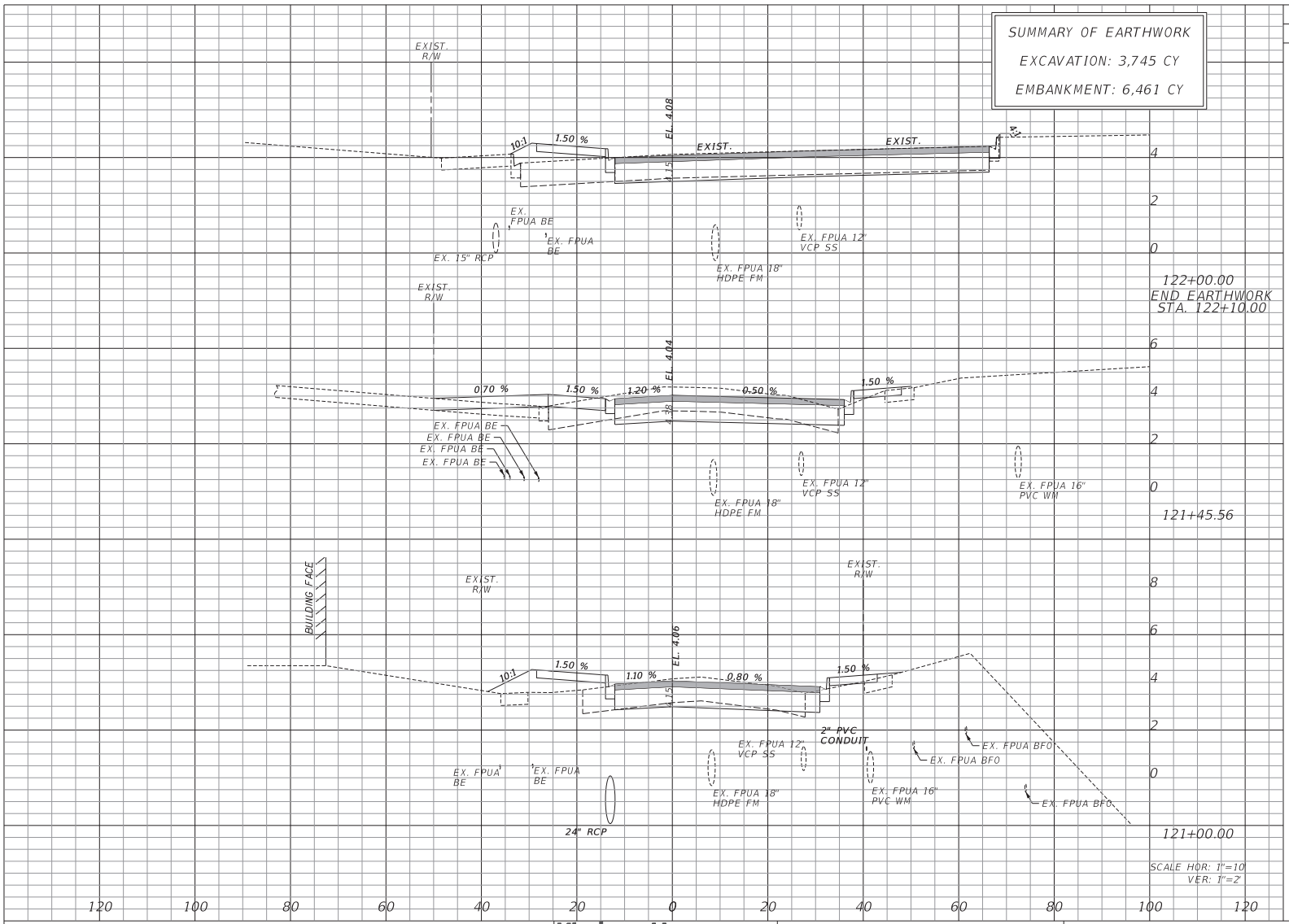
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 45

rebecca.mulroney 2/4/2025 3:19:38 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
	162.48		170.81
88.65		95.14	
	102.85		115.20
72.52		74.29	
	154.20		202.60
49.38		62.25	

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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445 24TH STREET, SUITE 200
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(772) 794-4100
REGISTRY No. 35106

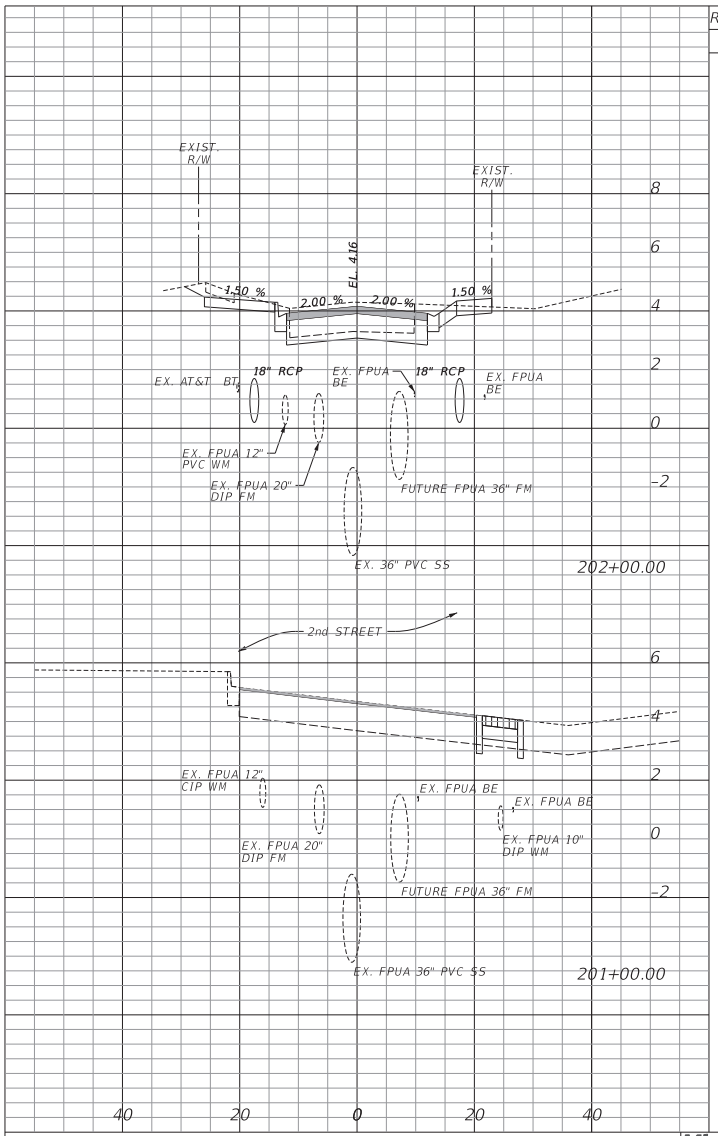
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

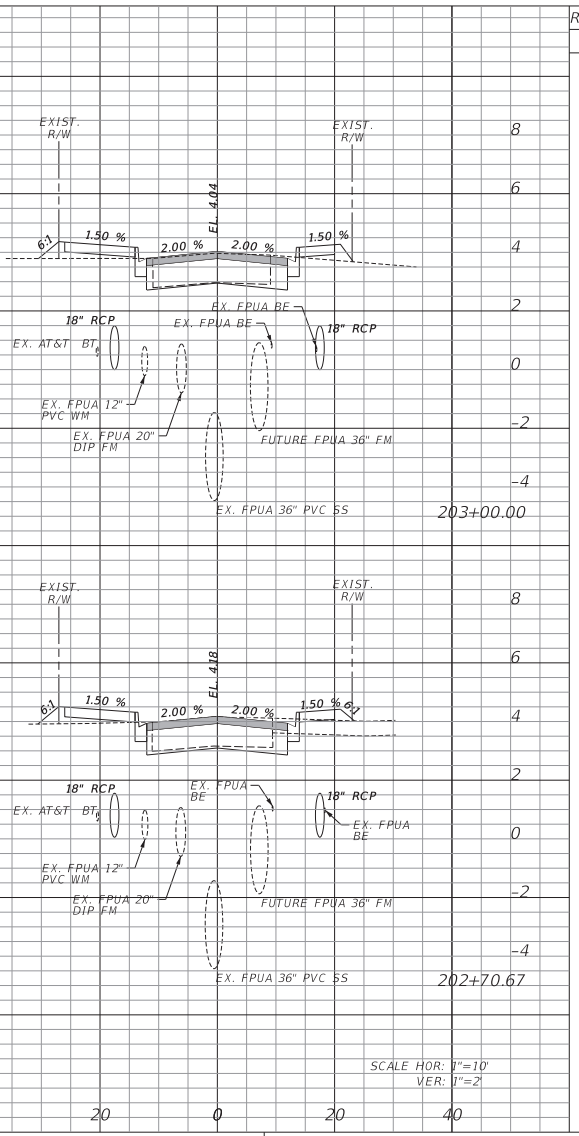
INDIAN RIVER DRIVE CROSS SECTIONS

SHEET NO. 46

rebecca.mulroney 2/4/2025 3:19:39 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - TRD.DGN



Regular Exc.		Embankment	
A	V	A	V
42.3	0.0	0.4	0.0



Regular Exc.		Embankment	
A	V	A	V
28.2	31.7	5.0	4.9
30.1	94.7	4.0	5.8

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 696

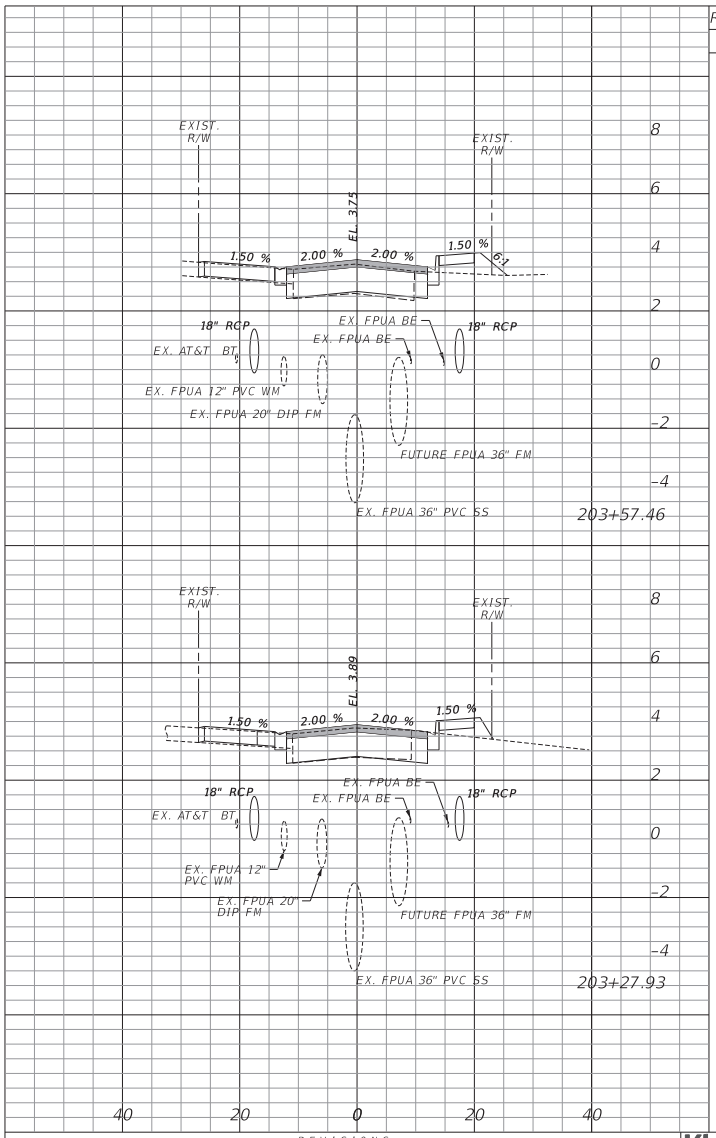
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

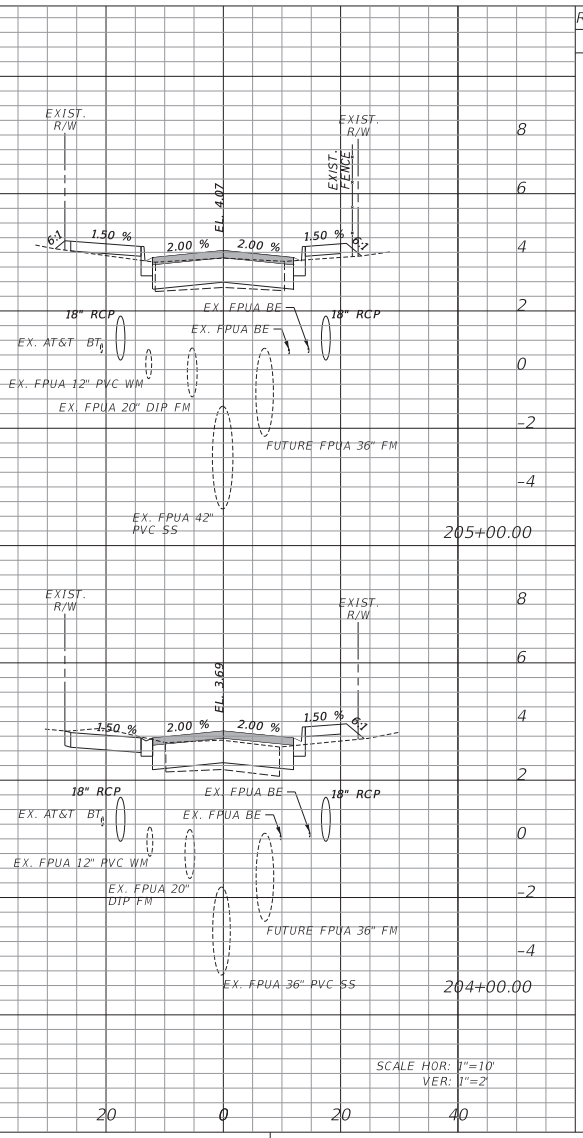
AE BACKUS AVENUE CROSS SECTIONS

SHEET NO. 47

rebecca.mulroney 2/4/2025 3:19:48 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - Backus.DGN



Regular Exc.		Embankment	
A	V	A	V
30.3	34.3	4.3	3.8
32.4	31.3	2.7	4.0



Regular Exc.		Embankment	
A	V	A	V
23.0	83.9	3.2	12.6
22.3	41.4	3.6	6.2

SCALE HOR: 1"=10'
VER: 1"=2'

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 696

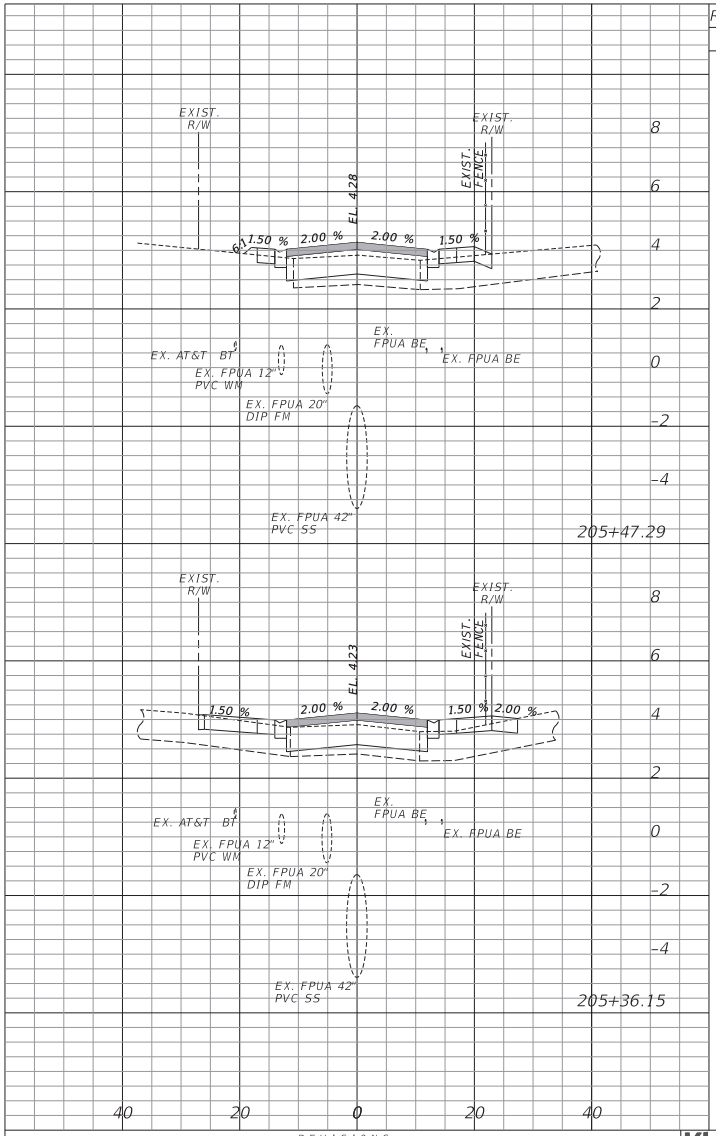
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

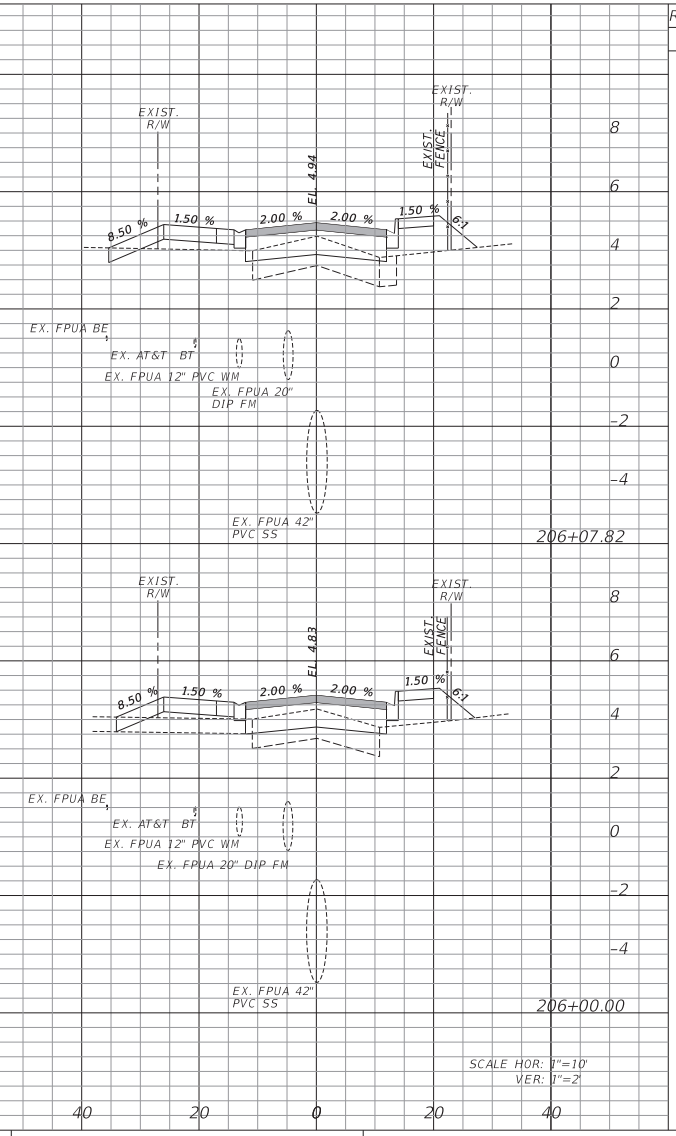
AE BACKUS AVENUE CROSS SECTIONS

SHEET NO.
48

rebecca.mulroney 2/4/2025 3:19:48 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - Backus.DGN



Regular Exc.		Embankment	
A	V	A	V
20.5	9.7	0.4	0.1
26.4	33.1	0.0	2.2



Regular Exc.		Embankment	
A	V	A	V
11.3	3.5	15.2	4.0
12.8	32.5	12.1	12.2

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 696

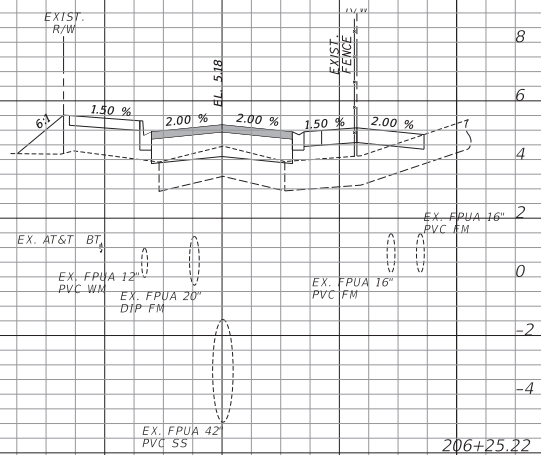
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE CROSS SECTIONS

SHEET NO. 49

rebecca.mulroney 2/4/2025 3:19:49 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - Backus.DGN



END EARTHWORK
STA. 206+60.00

206+25.22

Regular Exc.		Embankment	
A	V	A	V
5.8	5.5	24.6	12.8

Regular Exc.		Embankment	
A	V	A	V

SUMMARY OF EARTHWORK

EXCAVATION: 484 CY

EMBANKMENT: 86 CY

SCALE HOR: 1"=10'
VER: 1"=2'

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
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VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 696

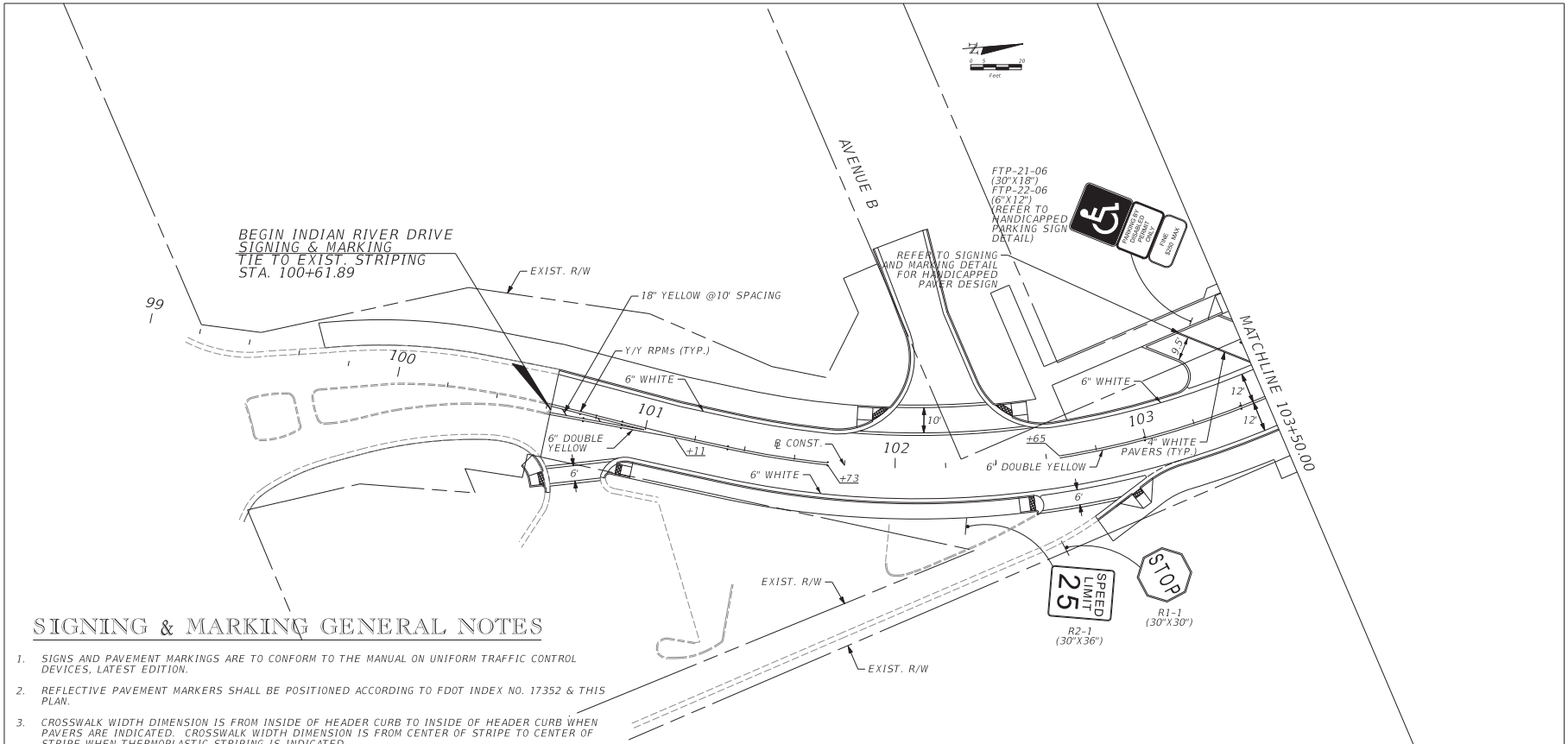
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE CROSS SECTIONS

SHEET NO. 50

rebecca.mulroney 2/4/2025 3:19:50 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\RDXSRD01 - Backus.DGN



SIGNING & MARKING GENERAL NOTES

1. SIGNS AND PAVEMENT MARKINGS ARE TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. REFLECTIVE PAVEMENT MARKERS SHALL BE POSITIONED ACCORDING TO FDOT INDEX NO. 17352 & THIS PLAN.
3. CROSSWALK WIDTH DIMENSION IS FROM INSIDE OF HEADER CURB TO INSIDE OF HEADER CURB WHEN PAVERS ARE INDICATED. CROSSWALK WIDTH DIMENSION IS FROM CENTER OF STRIPE TO CENTER OF STRIPE WHEN THERMOPLASTIC STRIPING IS INDICATED.
4. ALL PAVEMENT MARKINGS TO BE PLACED ON ASHPALTIC CONCRETE ARE TO CONSIST OF 90 MIL ALKYD THERMOPLASTIC. ALL PAVEMENT MARKINGS TO BE PLACED WITHIN PERVIOUS PAVERS ARE TO CONSIST OF INSET OR CUT-IN COLOR DESIGNATED PAVERS.
5. ALL SIGNS SHALL BE MADE OF REFLECTIVE SHEETING ON 0.080-GAUGE ALUMINUM SIGN BLANKS.
6. SIGN POLES AND ACCESSORIES SHALL BE CAPITAL STREETSCAPES, INC., 972-641-4911, OR APPROVED EQUAL. ALL SIGNS SHALL BE DESIGNED AND INSTALLED TO MEET 150 MPH WIND LOADS.
7. REGULATORY SIGNS
   BASE - BASE45 BK
   POLE - 4" FLUTED, BLACK
   FINIAL - ACORN4 BK
   BRACKET - ARM-A AND SCROLL-A STREET SIGN ARM
   REGULATORY SIGN TRIM - TRAFFIC SIGN TRIM TO MATCH SIGN PANEL, REAR OF SIGN SHALL BE PAINTED TO MATCH TRIM COLOR

   NOTE: CONTRACTOR TO REUSE AND MAINTAIN DECORATIVE POLES AND SIGNS TO MATCH EXISTING SIGNAGE THROUGHOUT THE CITY OF FORT PIERCE. COORDINATE W/ CITY REGARDING CITY LOGO ON SIGNS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

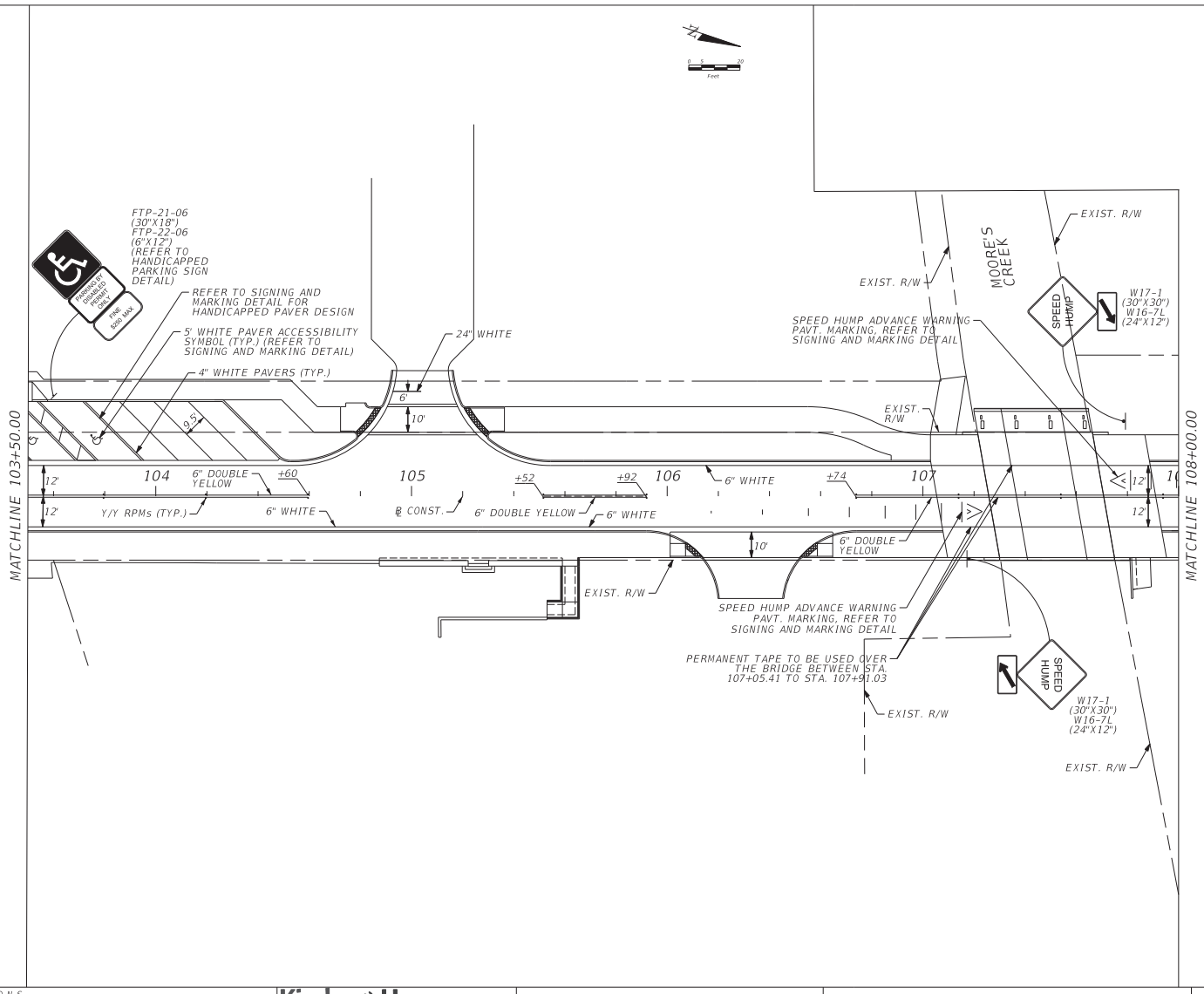
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE SIGNING AND MARKING

SHEET NO. 51

rebecca.mulroney 2/4/2025 3:19:53 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP01.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
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(772) 794-4100
REGISTRY No. 35106

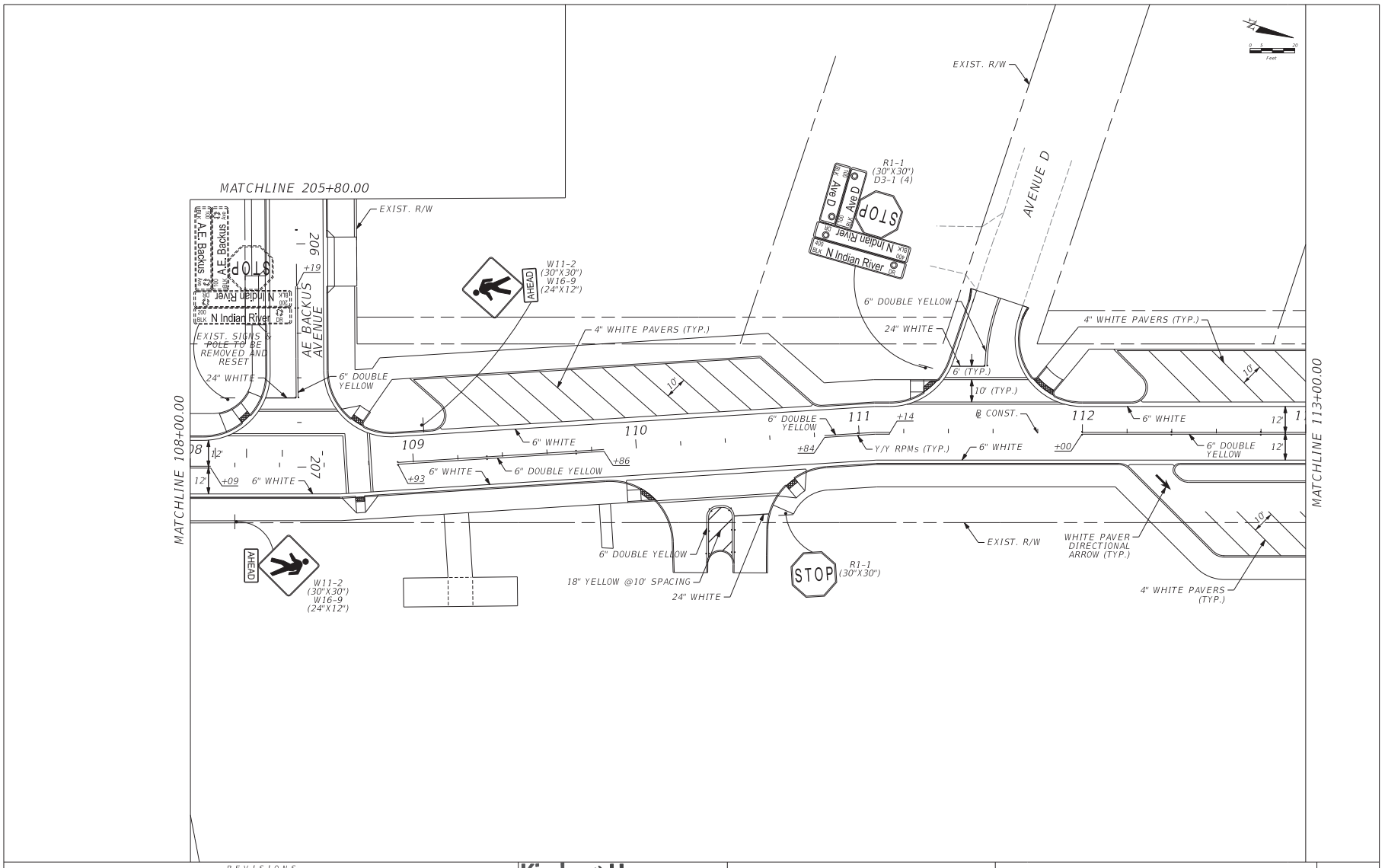
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE SIGNING AND MARKING

SHEET NO. 52

rebecca.mulroney 2/4/2025 3:19:55 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP02.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

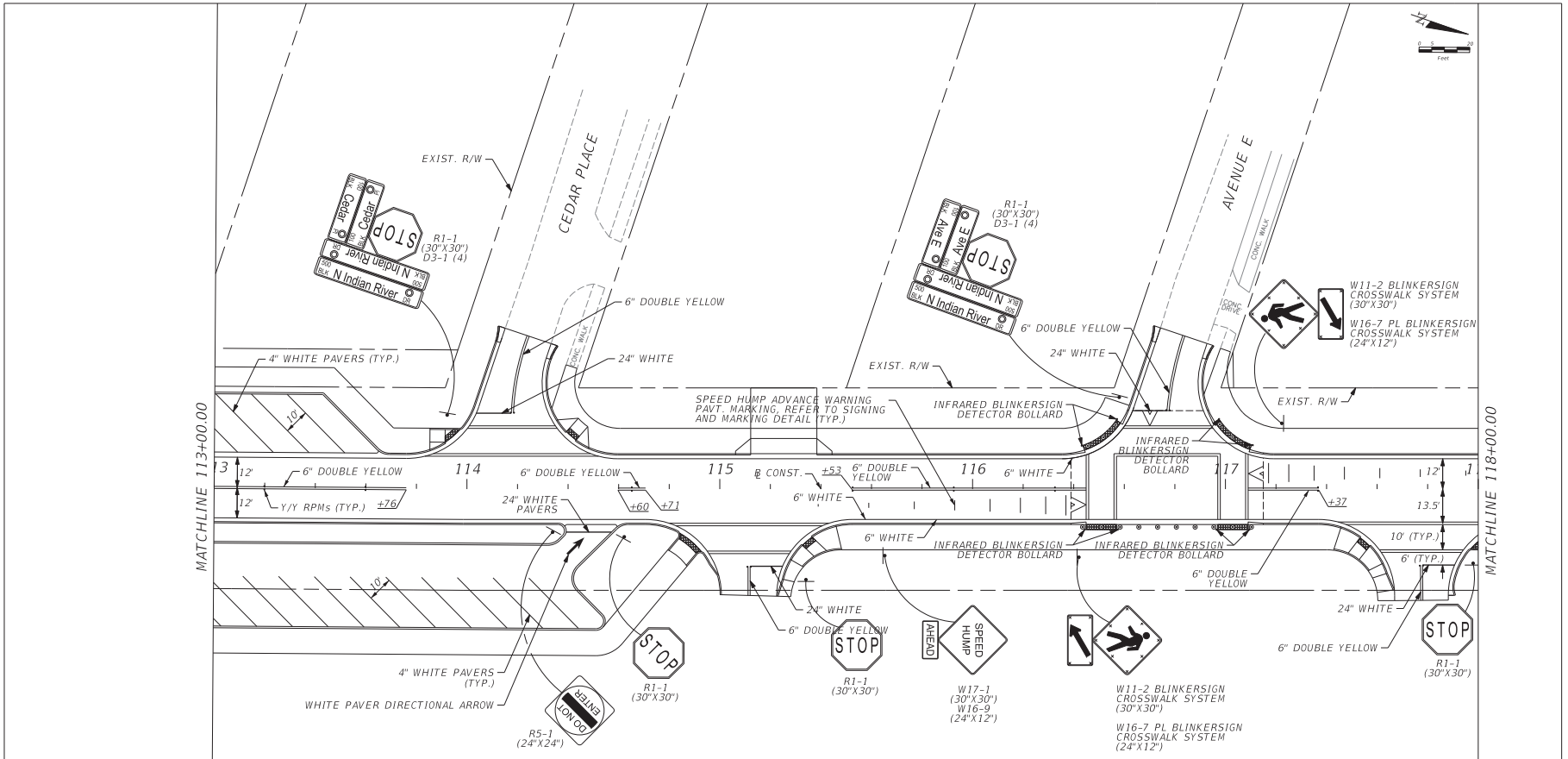
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE SIGNING AND MARKING

SHEET NO. 53

rebecca.mulroney 2/4/2025 3:19:58 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP03.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

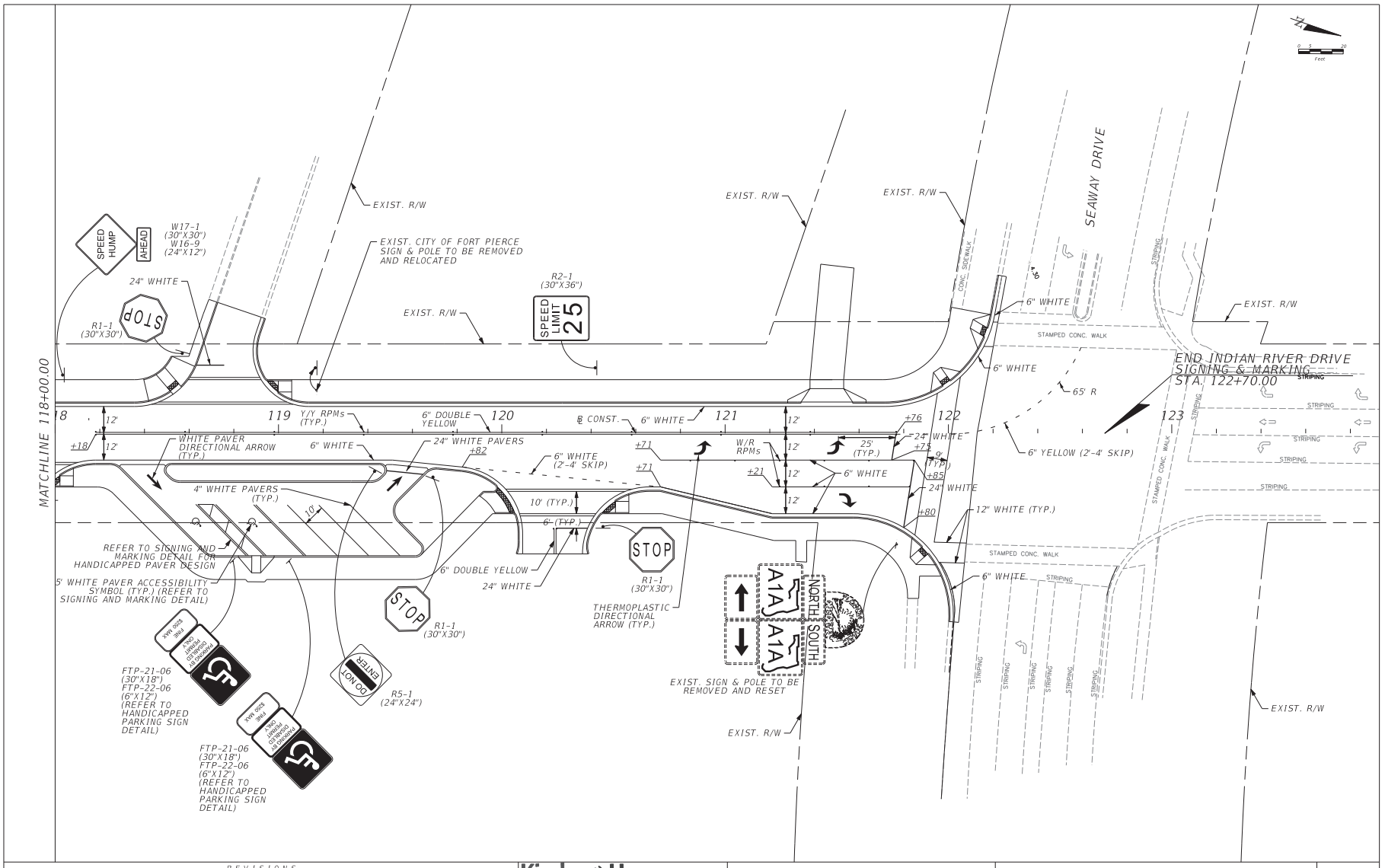
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE SIGNING AND MARKING

SHEET NO. 54

rebecca.mulroney 2/4/2025 3:20:00 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP04.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

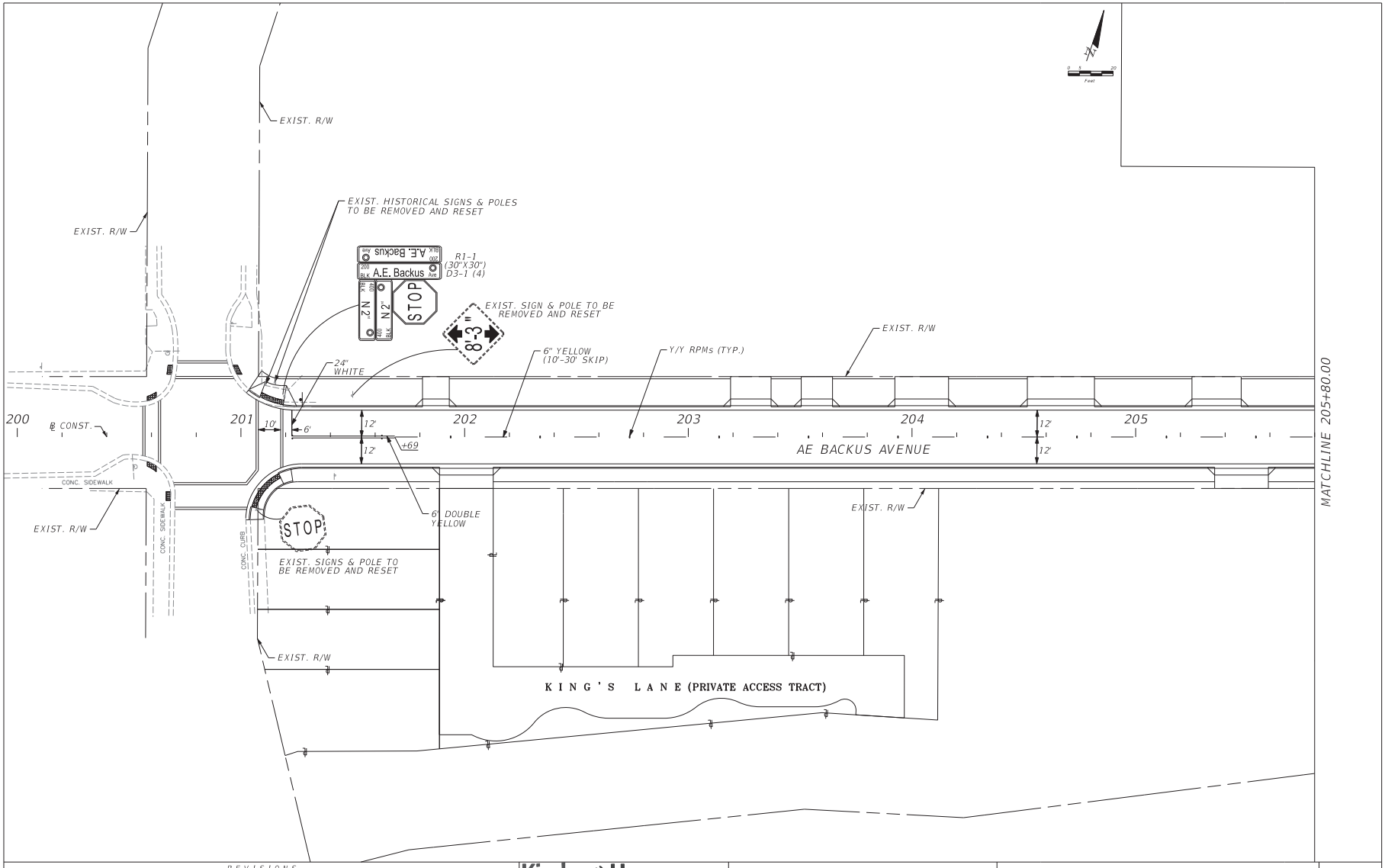
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE SIGNING AND MARKING

SHEET NO. 55

rebecca.mulroney 2/4/2025 3:20:02 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP05.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

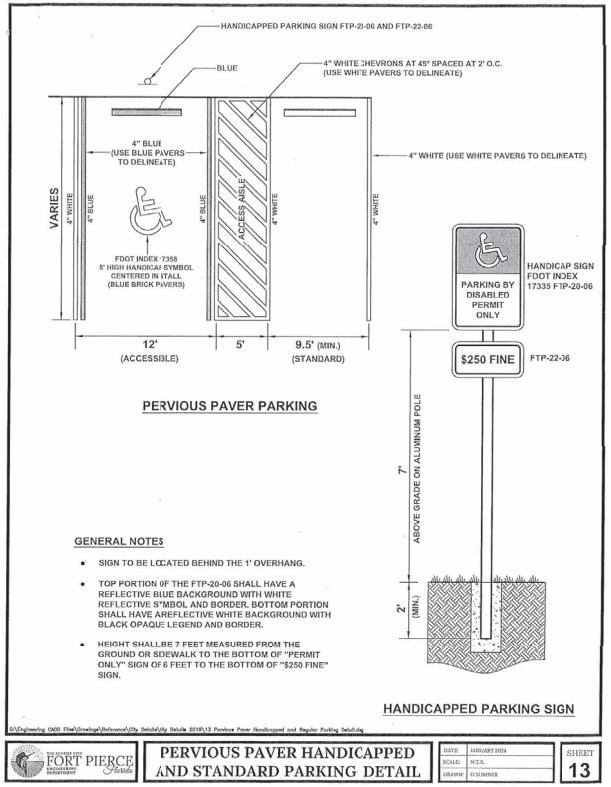
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

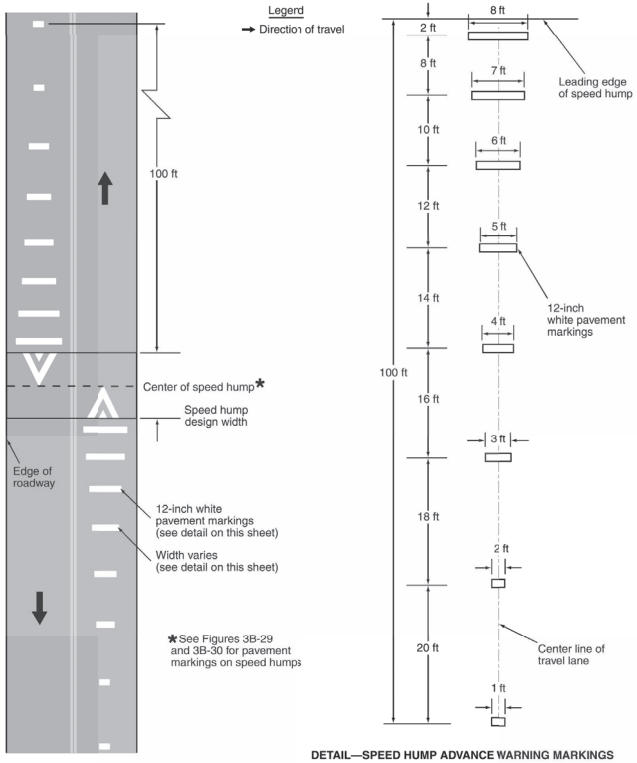
AE BACKUS AVENUE SIGNING AND MARKING

SHEET NO. 56

rebecca.mulroney 2/4/2025 3:20:04 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_SIGNING\PLANSP06.dgn



FORT PIERCE Florida	PERVIOUS PAVER HANDICAPPED AND STANDARD PARKING DETAIL	DATE: JANUARY 2024 SCALE: N.T.S. DRAWN: D.SUMMER	SHEET 13



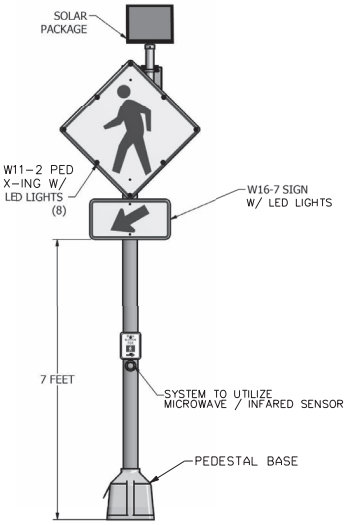
DETAIL—SPEED HUMP ADVANCE WARNING MARKINGS

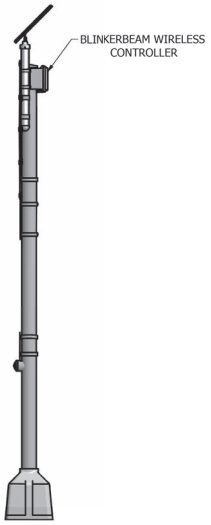
ADVANCED WARNING MARKINGS FOR SPEED HUMPS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

CITY OF FORT PIERCE *INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS*	*SIGNING AND MARKING DETAILS*	*SHEET NO.* *57*





BLINKER BEAM PEDESTRIAN CROSSING SYSTEM

N.T.S.

NOTE:

1) PEDESTRIAN CROSSING SYSTEM SHALL INCLUDE IDENTIFIED LED SIGNS, PEDESTRIAN PRESENCE MICROWAVE / INFRARED DETECTOR, SOLAR CONTROLLER WITH WIRELESS RADIO AND ALL ASSOCIATED HARDWARE AND APPURTENANCES NECESSARY TO PROVIDE A FULLY FUNCTIONING SYSTEM.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

SIGNING AND MARKING
DETAILS

SHEET NO.
57A

rebecca.mulroney 2/4/2025 3:20:43 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\SPDTSP01.DGN

SIGN NAME	name	QTY	1	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	3'-6"	WIDTH	0"		
HEIGHT	0'-9"	RADII	1"		
LEGEND	White	COLOR	White		
COLOR	Blue				

SYMBOL(S)	ANGLE	X	Y	WID	HT
Logo	0	37	4.5	4	4

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH

BORDER
R=1"

Panel Style: IRD Corridor Improvements.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

| | | | |

SIGN NAME	name	QTY	2	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	3'-6"	WIDTH	0"		
HEIGHT	0'-9"	RADII	1"		
LEGEND	White	COLOR	White		
COLOR	Blue				

SYMBOL(S)	ANGLE	X	Y	WID	HT
Logo	0	37	4.5	4	4

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH

BORDER
R=1"

Panel Style: IRD Corridor Improvements.ssi
M.U.T.C.D.: 2009 Edition

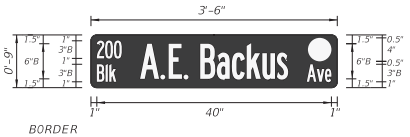
NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

| | | | |

SIGN NAME	name	QTY	1	SIGN NO.	STATION(S)
PANEL		BORDER			none
WIDTH	3'-6"	WIDTH	0"		
HEIGHT	0'-9"	RADII	1"		
LEGEND	White	COLOR	White		
COLOR	Blue				

SYMBOL(S)	ANGLE	X	Y	WID	HT
Logo	0	37	4.5	4	4

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH



BORDER
R=1"

Panel Style: IRD Corridor Improvements.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY	2	0	0		L																										
SPACE	1	2.4	3.9		4.3																										
COPY	B	l	k		L																										
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COPY	A	.	E	.	B	a	c	k	u	s		L																			
SPACE	8.4	11.8	13.2	15.8	18.6	21.4	24	26.5	29.2	31.7		25.3																			
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SIGN NAME		QTY		SIGN NO.	STATION(S)
PANEL		BORDER			
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NO.	NO. OF POSTS	EDGE OF LANE CLEARANCE	COLUMN SIZE	AVERAGE LENGTH

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

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SIGN NAME		QTY		SIGN NO.	STATION(S)
PANEL		BORDER			
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

SIGNING AND MARKING DETAILS

SHEET NO.
59A

1. SITE DESCRIPTION:

A. CONSTRUCTION ACTIVITY: INDIAN RIVER DRIVE CORRIDOR PROJECT TO INCLUDE THE CONSTRUCTION OF PIPE CULVERTS AND DRAINAGE BASINS TO PROMOTE POSITIVE DRAINAGE.

B. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL TAKE PLACE DURING MUCH OF THE ANTICIPATED CONSTRUCTION PERIOD OF THIS PROJECT. THE FOLLOWING SOIL DISTURBING ACTIVITIES ARE LISTED IN THE APPROXIMATE ORDER IN WHICH THEY ARE ANTICIPATED TO OCCUR.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S)
2. CLEARING AND GRUBBING
3. EXCAVATION OF SOILS & CONSTRUCTION OF PROPOSED DRAINAGE IMPROVEMENTS
4. FINAL GRADING AND SODDING

C. TOTAL PROJECT AREA: 5.07 AC
TOTAL AREA TO BE DISTURBED: 5.07 AC

D. RUNOFF DATA:
THE FOLLOWING IS A LIST OF THE DRAINAGE BASIN, THE AREA OF THE BASIN AND THE RUNOFF COEFFICIENT BEFORE, DURING, AND AFTER CONSTRUCTION.

BASIN	AREA (AC.)	BEFORE CONSTRUCTION	DURING CONSTRUCTION	AFTER CONSTRUCTION
INDIAN RIVER DRIVE	5.07	0.68	0.71	0.75

E. SITE MAP: SEE KEY SHEET

F. RECEIVING WATERS: INDIAN RIVER

2. CONTROLS

A). EROSION AND SEDIMENT CONTROLS: THE SOIL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED BY THE CONTRACTOR TO MINIMIZE THE AMOUNT OF SOIL DISTURBED, PREVENT OFFSITE RUNOFF FROM DISCHARGING ACROSS DISTURBED AREAS, AND REMOVE ON-SITE SEDIMENT PRIOR TO DISCHARGE OF RUNOFF FROM THE SITE.

ALL ITEMS REPRESENTED IN THE FOLLOWING DISCUSSION ARE TREATED IN DETAIL IN THE "FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION OR WILL BE IMPLEMENTED BY THE CONTRACTOR IN A MANNER APPROPRIATE TO ENVIRONMENTALLY SENSITIVE CONSTRUCTION PRACTICES. THE CONTRACTOR WILL GENERATE SITE SPECIFIC EROSION CONTROL PLAN INCLUDING AN IMPLEMENTATION SCHEDULE FOR EACH PHASE OF CONSTRUCTION OPERATIONS OR ACTIVITIES. 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 SUBUNIT.

(A) STABILIZATION PRACTICES: DURING CONSTRUCTION THE CONTRACTOR WILL PROVIDE TEMPORARY SEEDING FOR AREAS WHICH HAVE BEEN CLEARED AND NOT REWORKED WITHIN 14 CALENDAR DAYS. THE ENTIRE CLEARED AND UNPAVED PORTION OF THE PROJECT WILL BE SODDED OR MULCHED AND SEEDED UPON COMPLETION. BARE SOIL AREAS WILL BE KEPT TO A MINIMUM. STABILIZATION PRACTICES WILL INCLUDE:

PERMANENT SODDING
LIMITING STEEP SLOPES
MINIMIZING THE AREA OF DISTURBED SOILS AT ANY GIVEN TIME
PRESERVATION OF NATURAL VEGETATION
SOIL RETAINING MEASURES
DUST CONTROL

(B) STRUCTURAL PRACTICES WILL INCLUDE:

STAKED SILT FENCES (LF)
STORM DRAIN INLET PROTECTION
FLOATING TURBIDITY BARRIER
STAKED TURBIDITY BARRIER
TEMPORARY SHEETING

(C) PHASING OF CONTROLS

PHASE I – INSTALLATION OF ENVIRONMENTAL CONTROL FEATURES

A. ENVIRONMENTAL CONTROL FEATURES AS PROVIDED IN PLANS QUANTITIES ARE TO BE INSTALLED THROUGHOUT THE CLEARING AND GRUBBING LIMITS OF ENVIRONMENTALLY SENSITIVE AREAS AS SHOWN IN PLANS (PRIOR TO CLEARING AND GRUBBING).

B. THE CONTRACTOR WILL BE REQUIRED TO PREPARE A SITE SPECIFIC EROSION CONTROL PLAN ALONG WITH A SPECIFIC CONSTRUCTION SCHEDULE FOR IMPLEMENTATION. THE CONTRACTOR WILL ALSO BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS.

PHASE II – CLEARING AND GRUBBING

CLEARING AND GRUBBING SHALL BE DONE AS INDICATED ON THE TYPICAL SECTIONS OR AS NOTED IN THE PLANS.

PHASE III – DRAINAGE SYSTEM OR ENVIRONMENTAL CONTROL FEATURES

A. ENVIRONMENTAL CONTROL FEATURES AS PROVIDED IN PLANS QUANTITIES ARE TO BE INSTALLED IN ALL AREAS OF EXCAVATION OR FILL FOR DRAINAGE SYSTEM OR STRUCTURE CONSTRUCTION PRIOR TO SUCH EXCAVATION OR FILL. ALL STREAMS OR DITCHES ARE TO BE PROTECTED FROM EROSION OR SILTATION BY THE METHODS DETAILED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). INLET ENTRANCES ARE ALSO TO BE PROTECTED FROM SILTATION AS DETAILED IN THE SWPPP. THESE INCLUDE STAKED SYNTHETIC BALES, SEDIMENT BASINS, TURBIDITY BARRIERS, SILT FENCE BARRIERS AND OTHERS, AS APPROPRIATE.

B. THE CONTRACTOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VOILATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND). TESTING WILL TAKE PLACE TO SUBSTANTIATE THE INTENT OF THE PROJECT PERMITS THROUGHOUT THE DURATION OF THE PROJECT. IF THE WATER QUALITY STANDARD IS VIOLATED, SEDIMENT AND EROSION CONTROL MEASURES WILL BE REEVALUATED AND RE-INSTALLED AS DIRECTED BY THE ENGINEER.

PHASE IV – PERMANENT ENVIRONMENTAL CONTROLS

TEMPORARY ENVIRONMENTAL CONTROLS WILL BE REMOVED AFTER NEW ROADWAYS HAVE BEEN OPENED, AND PERMANENT EROSION, SEDIMENT AND STORM WATER CONTROL ARE IN PLACE AND FUNCTIONING. FINAL CLEAN UP WILL TAKE PLACE AND ANY TEMPORARY SURFACE WATER DIVERSIONS OR CONTROL FEATURES WILL BE CONNECTED TO THE PERMITTED STORMWATER MANAGEMENT SYSTEM.

REVISIONS

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

EROSION CONTROL GENERAL NOTES

SHEET NO. 60

B). OTHER CONTROLS

A) WASTE DISPOSAL: THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES. ALL FERTILIZER, HYDROCARBON, OR OTHER CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD

B) OFF-SITE VEHICLE TRACKING: WILL BE CONTROLLED BY THE FOLLOWING METHODS:
- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- EXCESS DIRT ON ROADS TO BE REMOVED DAILY
- SOIL TRACKING PREVENTION DEVICE TYPE A (INDEX 106)

C) SANITARY WASTE: ANY FIELD OFFICES WILL HAVE PORTABLE TOILET FACILITIES OR THE CONTRACTOR WILL OBTAIN PERMITS FOR SEWAGE TREATMENT IN ACCORDANCE WITH 10D-6 F.A.C. "STANDARDS FOR ON-SITE SEWAGE DISPOSAL SYSTEMS".

D) FERTILIZERS AND PESTICIDES: FERTILIZERS WILL BE USED ON THIS PROJECT IN ACCORDANCE WITH "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" SECTION 982. TO AVOID NUTRIENT LOADING TO SURFACE WATERS, FERTILIZERS USED ON THIS PROJECT WILL NOT BE APPLIED WITHIN FIFTY (50) FEET OF ANY SURFACE WATERS WITHIN THE PROJECT LIMITS.

C). PERMITS

THE FOLLOWING PERMITS HAVE BEEN OBTAINED FOR THE PROJECT:

SFWMD - ENVIRONMENTAL RESOURCE PERMIT

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE FOLLOWING PERMITS.

FDEP - NPDES PERMIT
SFWMD - TEMPORARY DEWATERING PERMIT

ADDITIONAL PERMIT FEES ARE TO BE INCLUDED IN THE COST OF MOBILIZATION 101-1A

3. MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES THROUGHOUT THE CONSTRUCTION PHASE OF THE PROJECT. MAINTENANCE SHALL BE CONDUCTED IN ACCORDANCE WITH "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" SECTION 104 AND "FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS" OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES, AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES UNTIL ACCEPTANCE OF THE COMPLETED PROJECT BY THE COUNTY.

MAINTENANCE AND REPAIR REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE COST OF PAY ITEM 104-1.

THE FOLLOWING PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS:

GENERAL:

THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH NPDES PERMIT NO. FLR 100000. ALL CONTROL MEASURES WILL BE MAINTAINED BY THE CONTRACTOR.

ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

STRUCTURAL PRACTICES CONTROLS:

BUILT-UP SEDIMENT WILL BE REMOVED FROM SILT FENCE AND STAKED TURBIDITY BARRIERS NOT LATER THAN WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.

TEMPORARY AND PERMANENT SEEDING, SODDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

SOIL TRACKING PREVENTION DEVICE, TYPE A SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

FLOATING TURBIDITY BARRIER WILL BE MAINTAINED WITH RESPECT TO DEPTH OF SEDIMENT AND ENSURE THAT THE FABRIC IS ATTACHED SECURELY TO THE FLOATS AND ANCHORED PROPERLY AT THE BOTTOM FOR PROPER SEDIMENT CONTROL.

4. INSPECTION

ALL EROSION AND WATER POLLUTION ABATEMENT AND CONTROL MEASURES WILL BE INSPECTED DAILY BY THE CONTRACTOR.

INSPECTIONS ARE TO BE PERFORMED BY QUALIFIED PERSONNEL WHO HAVE COMPLETED THE FLORIDA STORM WATER, EROSION AND SEDIMENT CONTROL TRAINING AND CERTIFICATION PROGRAM FOR INSPECTORS AND CONTRACTORS WHO HAVE PASSED THE EXAMINATION.

INSPECTION AREAS: LOCATIONS OR AREAS TO BE INSPECTED INCLUDE BUT ARE NOT LIMITED TO:

- DISCHARGE POINTS TO WATERS OF THE UNITED STATES
- DISCHARGE POINTS TO MS4 FACILITIES
- AREAS NOT MEETING THE "FINAL STABILIZATION" CRITERIA
- MATERIALS STORAGE/STOCKPILES
- SEDIMENTATION FACILITIES
- STRUCTURAL FACILITIES
- VEHICLE ENTRANCES/EXITS
- ON-SITE STORMWATER MANAGEMENT SYSTEMS

THE CONTRACTOR SHALL USE THE CONSTRUCTION INSPECTION REPORT FORM 650-040-03 FOR DAILY INSPECTIONS.

THE CONTRACTOR'S DAILY INSPECTIONS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE COST OF PAY ITEM 104-1.

TRACKING AND REPORTING

THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE INSPECTION REPORT FORM 650-040-03 EVERY 7 DAYS AND AFTER ANY 0.50 INCH (OR MORE) RAINFALL EVENT. A COPY OF THE INSPECTION REPORT SHALL BE SUBMITTED TO THE ENGINEER WEEKLY.

5. QUANTITIES

SEE CONSTRUCTION PLANS SUMMARY OF QUANTITIES SHEETS FOR EROSION CONTROL QUANTITY TABULATION.

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

EROSION CONTROL GENERAL NOTES

SHEET NO. 61

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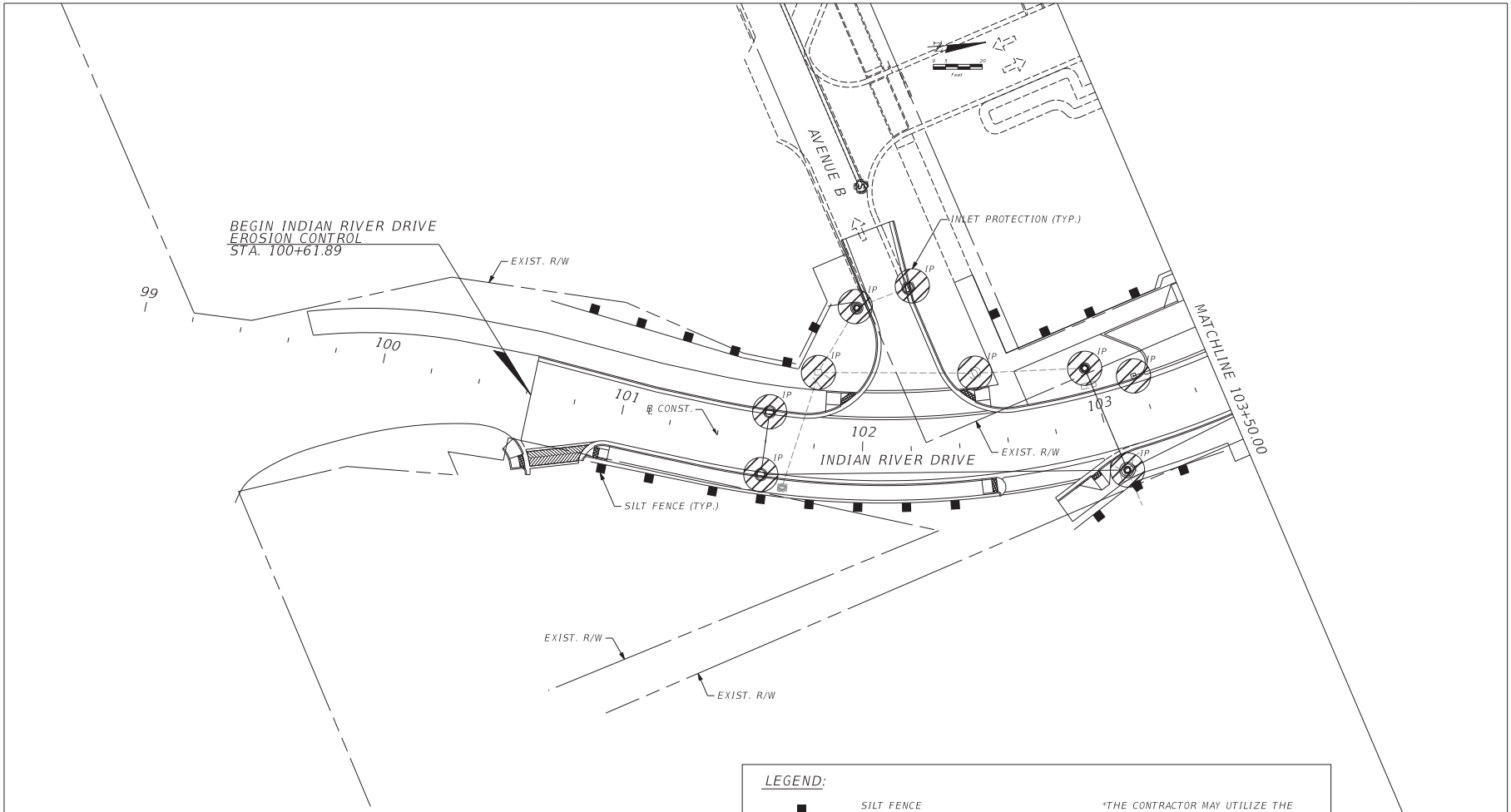

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE EROSION CONTROL

SHEET NO. 62

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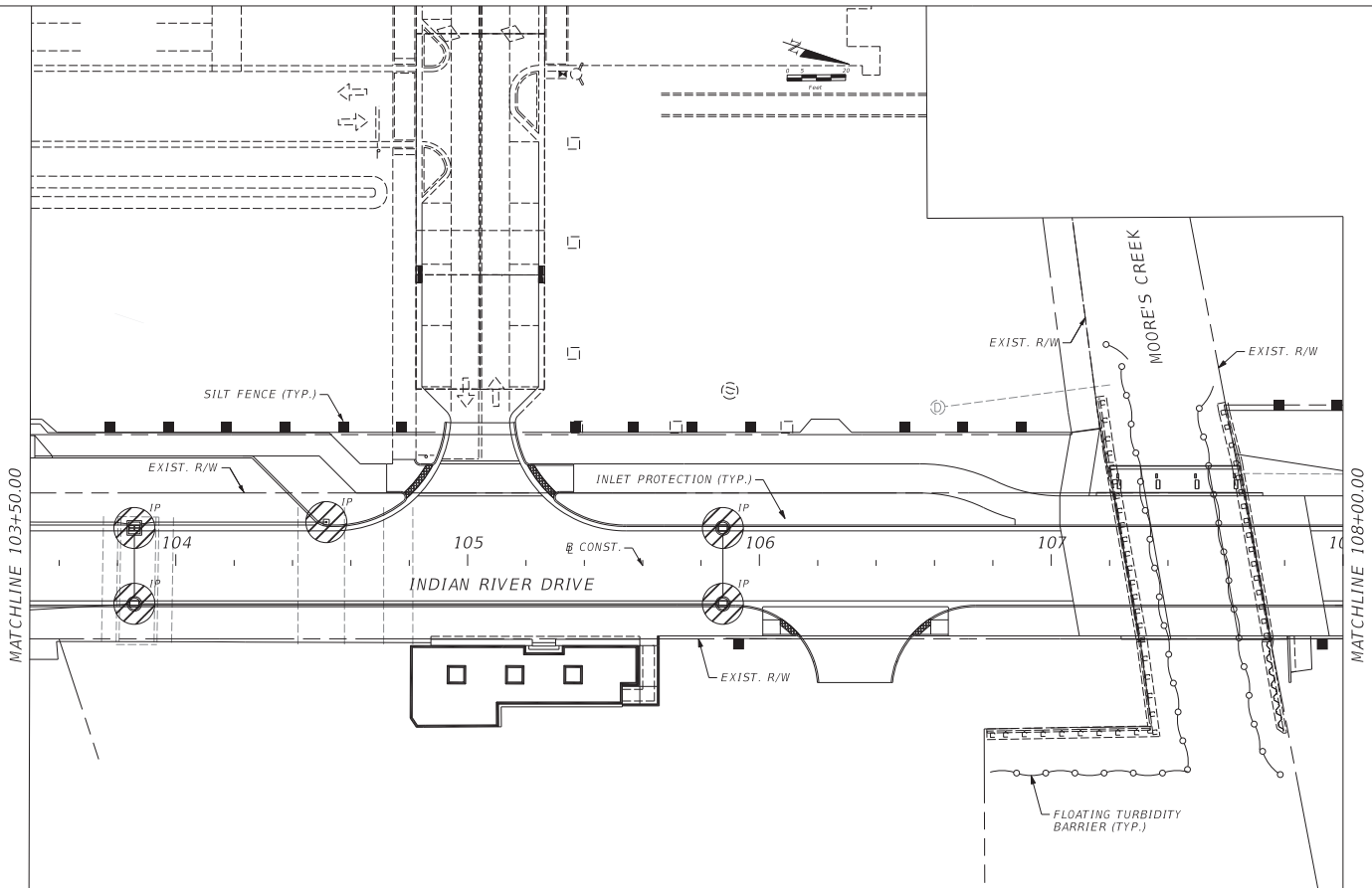

LEGEND:

- SILT FENCE
- *SEDIMENT CONTROL INLET PROTECTION
- FLOATING TURBIDITY BARRIER
- STAKED TURBIDITY BARRIER

*THE CONTRACTOR MAY UTILIZE THE FOLLOWING INLET PROTECTION METHODS AS APPROPRIATE:
1. GRAVEL CURB INLET FILTER
2. SILT FENCE INLET PROTECTION
3. CURB INLET SEDIMENT BARRIER
4. CURB & GUTTER SEDIMENT BARRIER
5. GRAVEL BAG CURB SEDIMENT BARRIERS

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CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE EROSION CONTROL

SHEET NO. 63

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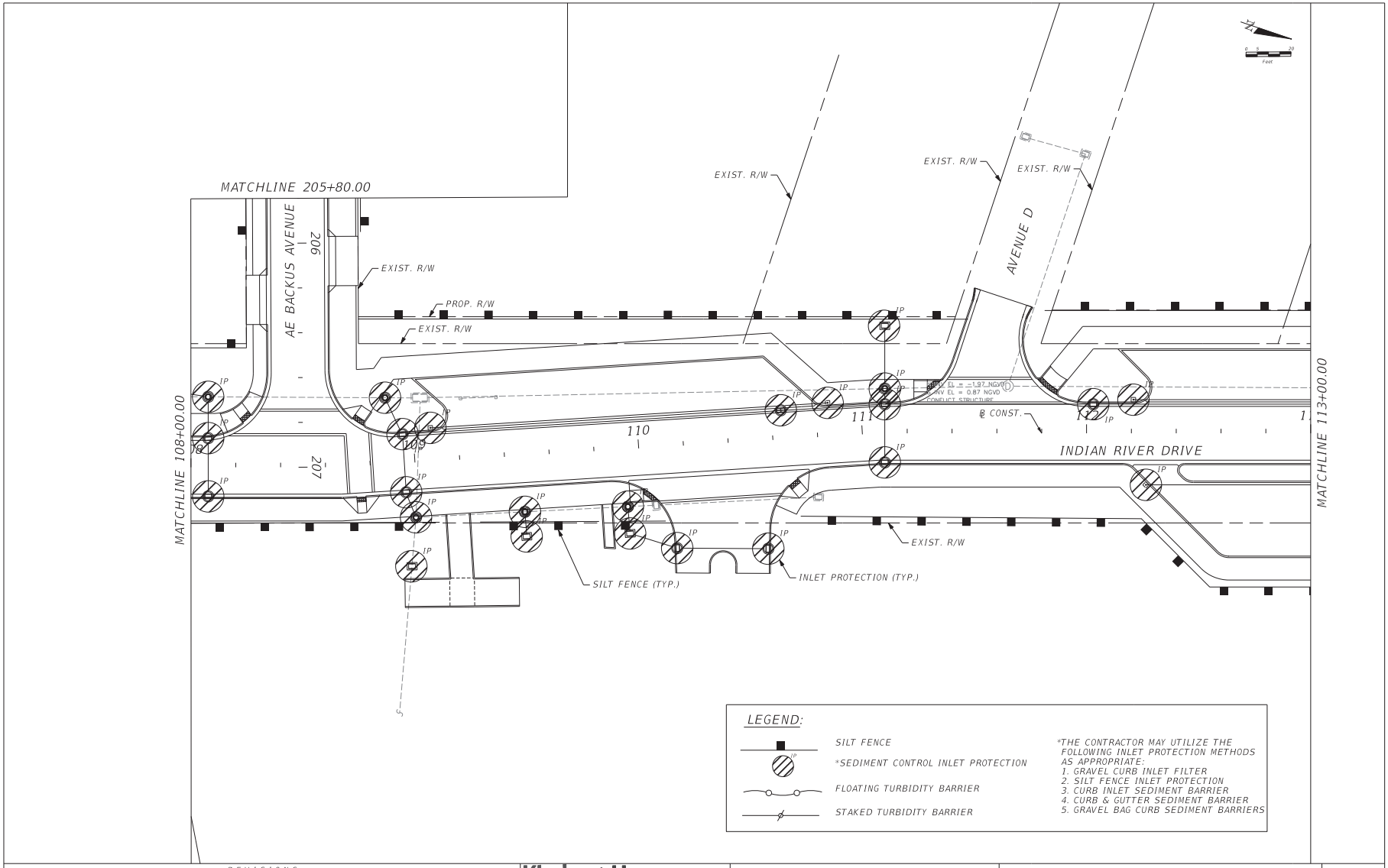

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INDIAN RIVER DRIVE EROSION CONTROL

SHEET NO. 64

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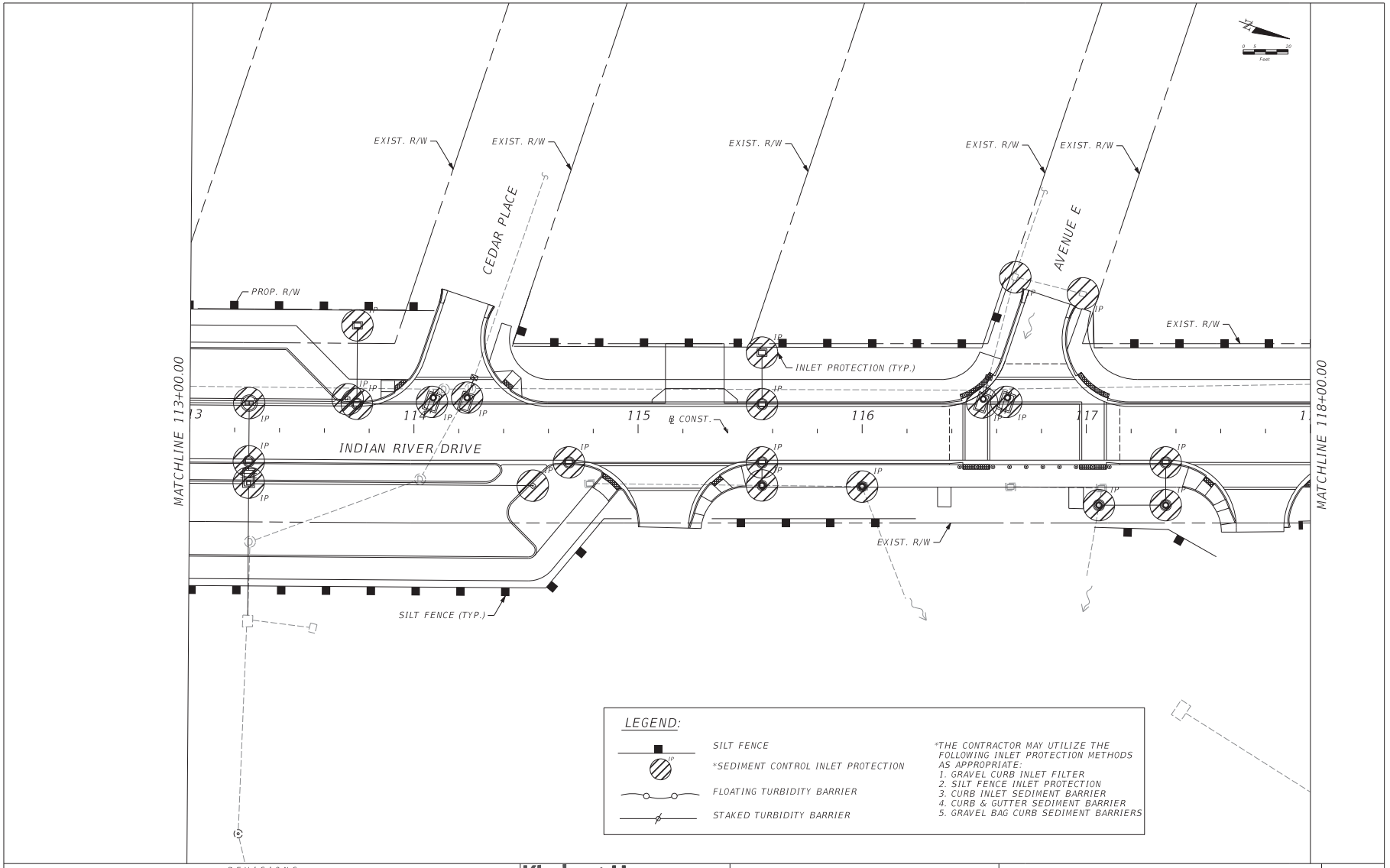

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INDIAN RIVER DRIVE EROSION CONTROL

SHEET NO. 65

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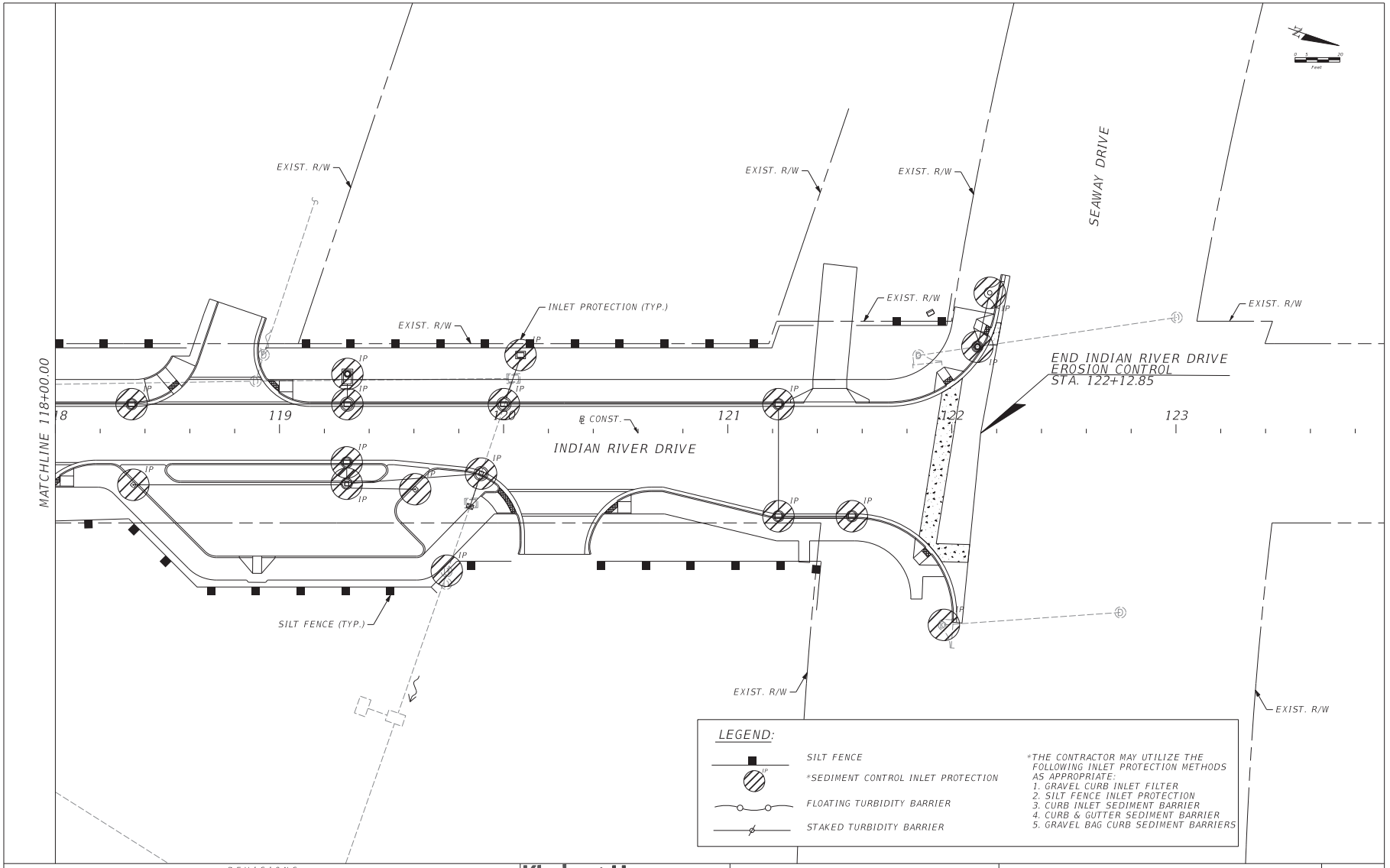

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CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE
EROSION CONTROL

SHEET NO.
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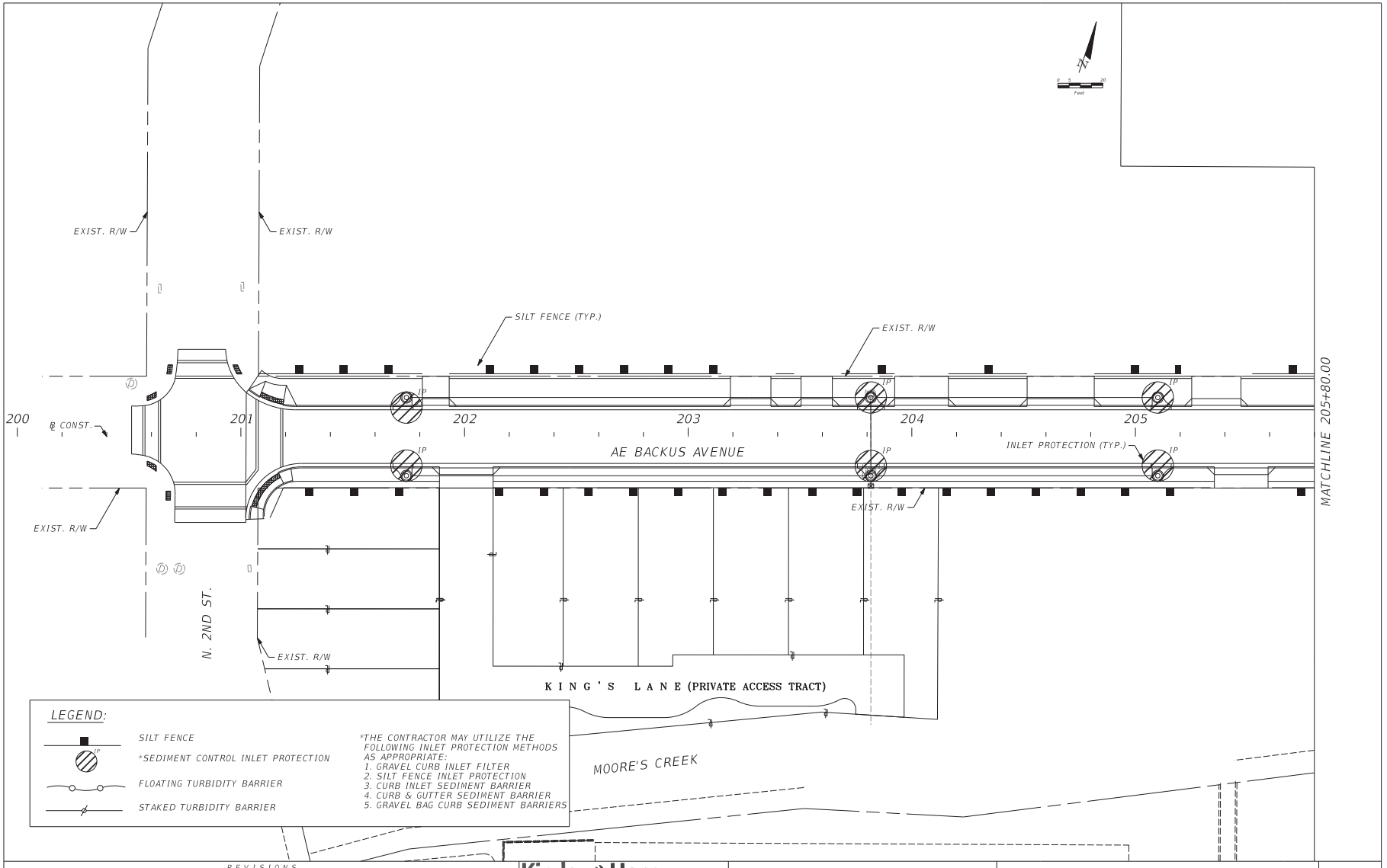

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE EROSION CONTROL

SHEET NO. 67

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LANDSCAPE NOTES

1. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
2. ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BUR LAPPED AS INDICATED IN THE PLANT LIST.
3. ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING PER SPECIFICATIONS TO MAINTAIN HEALTHY PLANT CONDITIONS.
8. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
9. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE BY THE CITY. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
10. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY.
11. ALL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH FLORIMULCH FROM A LOCAL SOURCE HARVESTED IN A SUSTAINABLE MANNER TO A MINIMUM DEPTH OF FOUR INCHES. REFER TO SECTION H BELOW.

GENERAL LANDSCAPE SPECIFICATIONS

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.
2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. MATERIALS

1. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON THE SITE OR AS OTHERWISE DETERMINED BY THE OWNER. UPON SAMPLES' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

C. WATER

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. THE CONTRACTOR SHALL SUBMIT THE CITY'S PROJECT MANAGER A WATERING PLAN TO BE FOLLOWED UNTIL PROJECT ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

D. MULCH

MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 4 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). MULCH SHALL CONSIST OF FLORIMULCH.

E. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.

F. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

G. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

HARDSCAPE / LANDSCAPE GENERAL NOTES

SHEET NO. 68

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GENERAL LANDSCAPE SPECIFICATIONS CONTINUED

H. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

I. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

J. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL – 811 – TO LOCATE UTILITIES.
3. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
4. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
5. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
6. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.

K. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND ECOTRUF SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A COVERAGE ACCEPTABLE TO THE OWNER.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE FINE GRADED AND UNTIL PRESENTING AN EVEN FINISH TO THE REQUIRED GRADE.
3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
4. SODDING
   A. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETY TYPE, AND FREE FROM WEEDS, FUNGI, INSECTS AND DISEASES OF ANY KIND.
   B. SOD SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. IMMEDIATELY FOLLOWING SOD INSTALLATION, THE AREAS SHALL THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY TO FILL THE VOIDS BETWEEN THE SOD ROLLS, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY APPLIED AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY AND AS RECOMMENDED BY GROWER.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL ECOTRUF SHALL BE STORED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE:
   A. THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED AREA OF ECOTURF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED ECOTRUF SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
   B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ECOTRUF UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

L. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. THE CONTRACTOR SHALL PROVIDE PLANT MATERIAL MAINTENANCE FOR A PERIOD OF NO LESS THAN 90 DAYS.

M. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

N. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER. REPLACED PLANTS SHALL BE WARRANTIED FOR A PERIOD OF ONE CALENDAR YEAR AFTER INSTALLATION.
4. THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

HARDSCAPE / LANDSCAPE GENERAL NOTES

SHEET NO. 69

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GENERAL LANDSCAPE SPECIFICATIONS CONTINUED

I. TOP SOIL

SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

A. SOIL MIXTURE SHALL CONSIST OF 60% COARSE SAND, 40% FLORIDA PEAT AS DESCRIBED BELOW.

B. SOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING SHALL BE FERTILE, FRIABLE, AND REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEED AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONE LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL HAVE A PH BETWEEN 5.5 AND 7.0 SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

C. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE ORTONA MINED SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TEST FOR PEAT AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL.

D. CONTRACTOR SHALL SUBMIT SAMPLES OF SOIL MIXTURE FOR LANDSCAPE ARCHITECT REVIEW UNDER FORMAL SUBMITTAL AND SUBSEQUENTLY TO OWNER'S REPRESENTATIVE THEREAFTER FOR APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

E. FLORIDA MUCK / FLORIDA MUCKY PEAT MAY BE PROVIDED AS A SUBSTITUTE FOR THE 20% FLORIDA PEAT, CONTINGENT UPON PRELIMINARY TEST RESULTS AND AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING THE SUBMITTAL PROCESS. ANY CHANGES IN THE PERCENTAGES OR PARENT MATERIALS REQUIRED TO PROVIDE THE SPECIFIED MIXTURE AS DETERMINED BY THE LANDSCAPE ARCHITECT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

F. CONTRACTOR SHALL PROVIDE PH TEST RESULTS FOR ALL MIX COMPONENTS AND FINAL MIX.

G. CONTRACTOR SHALL PROVIDE PENETROMETER ON-SITE AT ALL TIMES FOR COMPACTION INSPECTION AT THE DISCRETION OF THE LANDSCAPE ARCHITECT.

H. PENETROMETER CRITERIA / SPECIFICATIONS SHALL RANGE FROM APPROX. 75 PSI TO LESS THAN 300 PSI OR AS DETERMINED BY THE LANDSCAPE ARCHITECT.

I. FINAL MIX SHALL BE TESTED TO HAVE A SATURATED WEIGHT OF NO MORE THAN 85 POUNDS PER CUBIC FOOT WHEN COMPACTED TO 85% STANDARD PROCTOR. FERTILIZER PRODUCT DATA AND RATE SCHEDULE SHALL BE SUBMITTED CONCURRENTLY WITH THE SOIL SUBMITTAL FOR EVALUATION BY THE LANDSCAPE ARCHITECT.

J. PALM TREE RELOCATION

A. GENERAL REQUIREMENTS

ALL PALMS TO BE RELOCATED SHALL BE TAGGED AND COORDINATED WITH CONTRACTOR HIRED ARBORIST PRIOR TO RELOCATION. PRIOR TO DIGGING, THE SOIL SHOULD BE MOISTENTED TO HELP KEEP THE PALM ROOTBALL INTACT. THE CONTRACTOR SHALL CROP THE EXISTING PALMS' LEAVES WHILE PROTECTING THE BUD OF THE PALM TO REDUCE LEAF TRANSPIRATION AND CONSERVE WATER TO PROMOTE NEW ROOT GROWTH. PALMS MAY BE DUG BY HAND OR WITH MECHANICAL TREE SPADES AND SHALL MAINTAIN A MINIMUM OF 6' ROOT BALL (FOR ROYAL PALMS) WHEN MEASURED FROM THE LOWEST PART OF THE TRUNK, OUT TO THE EDGE OF THE ROOT BALL.

B. RELOCATION REQUIREMENTS

PALMS SHALL BE LIFTED BY NYLON SLINGS WRAPPED AROUND THE TRUNK. NEVER USE CHAIN, CABLES, OR ROPES DIRECTLY ON THE TRUNK. DURING TRANSPORT, PALMS SHALL BE WELL SUPPORTED ALONG THEIR ENTIRE LENGTH AS UNSUPPORTED CROWNS MAY CRACK OR DAMAGE THE BUD. ANY TREE BARS ON TRAILERS SHALL BE WRAPPED TO CUSHION THE PALM DURNING TRANSPORT. ROOT BALLS SHALL BE WRAPPED IN HEAVY DUTY BLACK PLASTIC WRAP TO KEEP THE ROOT BALL CYLINDRICAL. FORMING A CONICAL OR POINTED ROOTBALL IS NOT RECOMMENDED.

C. REGENERATION REQUIREMENTS

REGENERATION OF ROOTS OF HARVESTED ROYAL PALMS IS PREFERRED. PALMS ARE TO BE HELD IN A NURSERY CONDITION FOR ROOT REGENERATION AND SHALL BE PLACED AT AN ANGLE ON A HEAVY DUTY TREE RACK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TREE RACK STRUCUTRUALLY CAPABLE OF SUPPORTING THE RELOCATED PALMS, AND SUBSEQUENT WIND LOADING AS APPLICABLE. THE TREE RACK SHALL INCLUDE IRRIGATION AS OUTLINED BELOW. PALMS MAY BE HELD IN THE RACK FOR A MINIMUM OF SIX WEEKS AND UP TO TWELVE WEEKS.

AFTER THE TREE RACK, THE PALM SHOULD BE KEPT WRAPPED AND MOVED TO A PLANTING HOLE IN THE SOIL, WITH THE WRAPPED PORTION OF THE PALM PLACED IN THE GROUND UP TO THE TOP OF THE WRAP. IF AN ADEQUATE FALL ZONE IS AVAILABLE AROUND THE PLANTED PALMS, STAKING IS NOT REQUIRED. OTHERWISE, CONTRACTOR SHALL UTILIZE STAKING IN ACCORDANCE WITH THE LANDSCAPE PLAN DETAILS. PALMS MAY REMAIN IN THIS CONDITION FOR UP TO NINE MONTHS PRIOR TO FINAL PLANTING AND TO FINALIZE THE REGENERATION PROCESS.

UPON COMPLETION OF THE REGENERATION PROCESS (PREFERRED), OR UPON DELIVERY OF THE HARVESTED PALMS, PALMS SHALL BE PLANTED IN ACCORDANCE WITH THE LANSDACPE PLAN LOCATIONS, DETAILS, AND SPECIFICATIONS.

J. PALM TREE RELOCATION CONTINUED

D. IRRIGATION REQUIREMENTS

THE CONTRACTOR SHALL FURNISH AND INSTALL PIPING, VALVES, WATER SOURCE, AND NECESSARY ACCESSORIES FOR TEMPORARY IRRIGATION TO ALL HARVESTED PALMS AND PALMS IN THE TREE RACK. THE TREE RACK SHALL INCLUDE OVERHEAD SPRAY IRRIGATION AND SHALL BE WATERED TWICE DAILEY WHILE ON THE TREE RACK.

UPON FINAL PLANTING, EACH PALM SHALL BE IRRIGATED APPROXIMATELY SIX GALLONS PER WATERING. WATERING SHALL OCCUR ACCORDING TO THE FOLLOWING SCHEDULE: DAILY FOR TWO MONTHS AFTER TRANSPLANT, EVERY OTHER DAY FOR SIX MONTHS, TWICE A WEEK UNTIL ESTABLISHED. APPLY IRRIGATION IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL. DO NOT WATER IF THE ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.

E. WARRANTY REQUIREMENTS

CONTRACTORS BID SHALL INCLUDE WARRANTY FOR FAILED TRANSPLANTED PALMS. TIME OF 1 YEAR WARRANTY STARTS AT TIME OF PROJECT ACCEPTANCE.

IF DAMAGE TO ANY PALM SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE DURING THE RELOCATION OR CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF THE PALM AT NO COST TO THE OWNER.

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

HARDSCAPE / LANDSCAPE GENERAL NOTES

SHEET NO. 69A

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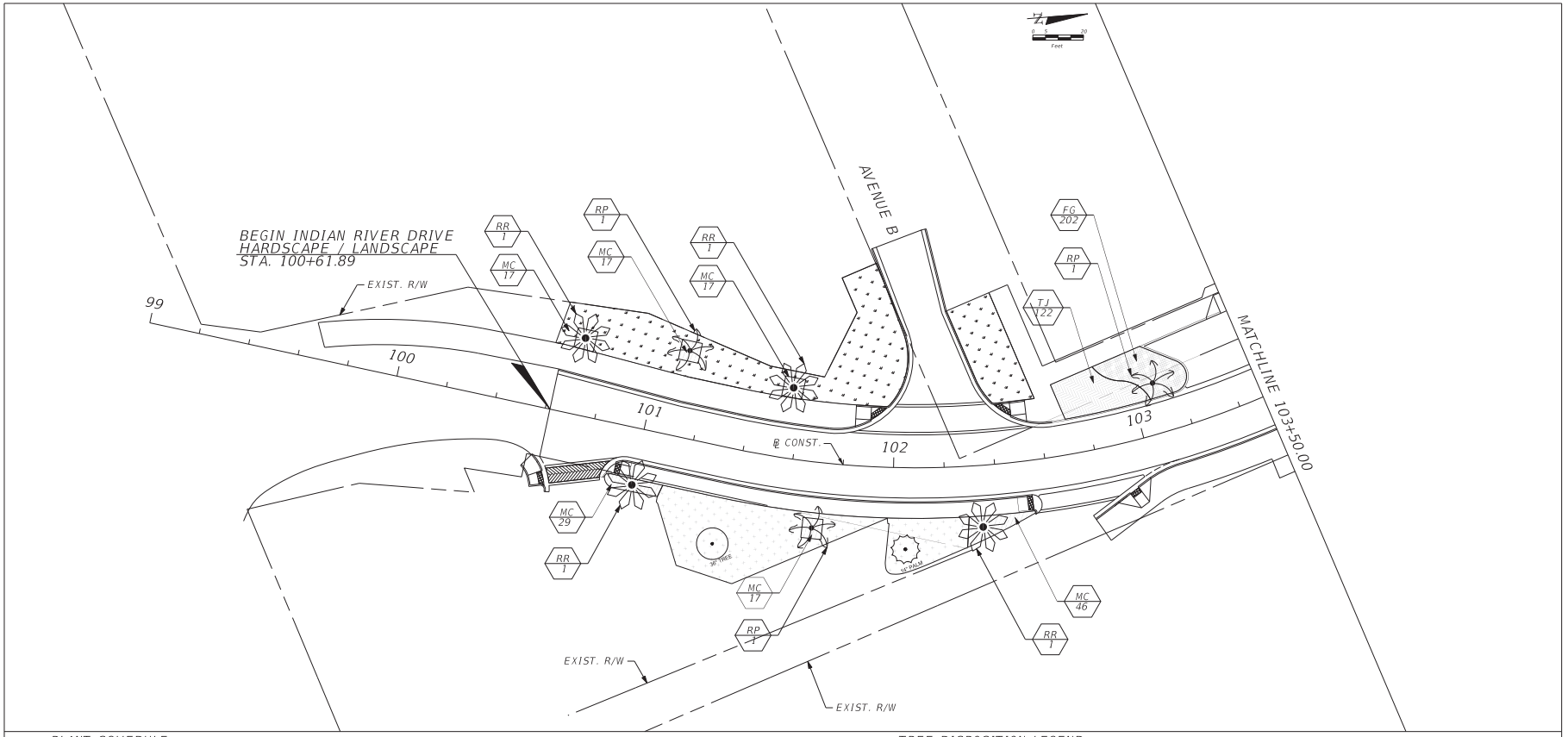

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME / COMMON NAME	REMARKS
	RR	ROYSTONEA REGIA / ROYAL PALM	17'-20' HT. GW., F.G.
	RP	RELOCATED ROYSTONEA REGIA / RELOCATED ROYAL PALM	VARIES
	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM' / FLORATAM ST. AUGUSTINE	SOD
	MC	MUHLENBERGIA CAPILLARIS / PINK MUHLY	24" HT., 24" O.C., CONT.
	FG	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS FULL TO GROUND	18" HT., 18" SPR, 18" O.C., CONT.
	TJ	TRACHELOSPERMUM JASMINOIDES / CONFEDERATE JASMINE	24"X24", 24" O.C., CONT.
	AE	ARACHIS GLABRATA 'ECOTURF' / PERENNIAL PEANUT	SOD

TREE DISPOSITION LEGEND

SYMBOL	
	TREE TO BE REMOVED
	TREE TO BE RELOCATED
	TREE TO REMAIN
	PALM TO REMAIN
	PALM TO BE REMOVED
	PALM TO BE RELOCATED
	TREE PROTECTION FENCE

REVISIONS

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE LANDSCAPE

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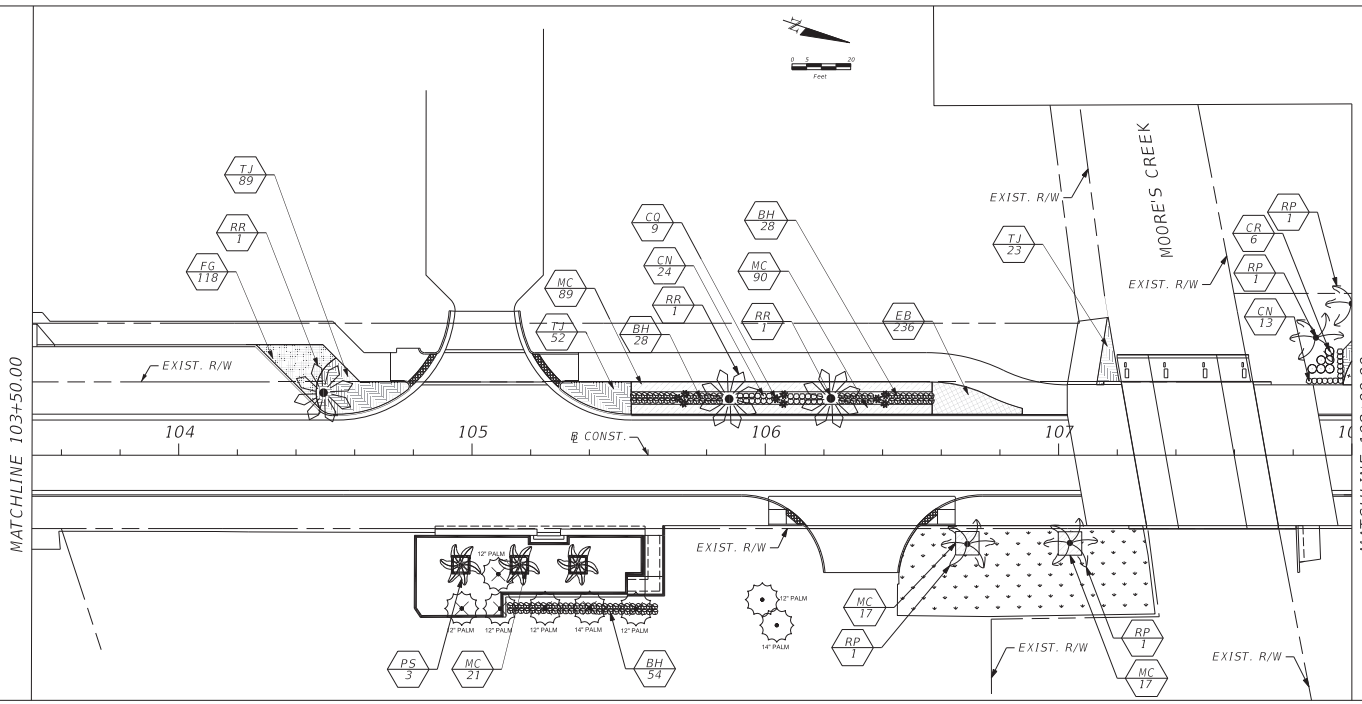

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME / COMMON NAME	REMARKS
	RR	ROYSTONEA REGIA / ROYAL PALM	17'-20' HT. GW., F.G.
	RP	RELOCATED ROYSTONEA REGIA / RELOCATED ROYAL PALM	VARIES
	PS	PHOENIX SYLVESTRIS / WILD DATE PALM	16'-18' HT.
	CN	CLUSIA ROSEA NANA / CLUSIA NANA	MAINTAINED AT 24" HT., 18" HT. MIN, 18" SPR MIN., 18" O.C., CONT.
	CR	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCPLUM	30" HT. MIN., 36" SPR MIN., 30" O.C., CONT.
	BH	BOUGAINVILLEA X 'HELEN JOHNSON' / HELEN JOHNSON COMPACT BOUGANVILLEA	24" HT. MIN., 24" SPR MIN., 24" O.C., CONT.
	CQ	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	24" HT. MIN., 30" SPR MIN.,
	MC	MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS	24" HT. MIN., 24" O.C., CONT.
	EB	EVOLVULUS GLOMERATUS 'BLUE DAZE' / BRAZILIAN DWARF MORNING GLORY	12" HT. MIN., 18" SPR, 12" O.C., CONT.
	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM' / FLORATAM ST. AUGUSTINE	SOD
	FG	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS FULL TO GROUND	18" HT. MIN., 18" SPR, 18" O.C., CONT.
	TJ	TRACHELOSPERMUM JASMINOIDES / CONFEDERATE JASMINE	24"X24", 24" O.C., CONT.
	AE	ARACHIS GLABRATA 'ECOTURF' / PERENNIAL PEANUT	SOD

TREE DISPOSITION LEGEND

SYMBOL	
	TREE TO BE REMOVED
	TREE TO BE RELOCATED
	TREE TO REMAIN
	PALM TO REMAIN
	PALM TO BE REMOVED
	PALM TO BE RELOCATED
	TREE PROTECTION FENCE

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
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VERO BEACH, FL 32960
(772) 794-4100
REGISTRY No. 35106

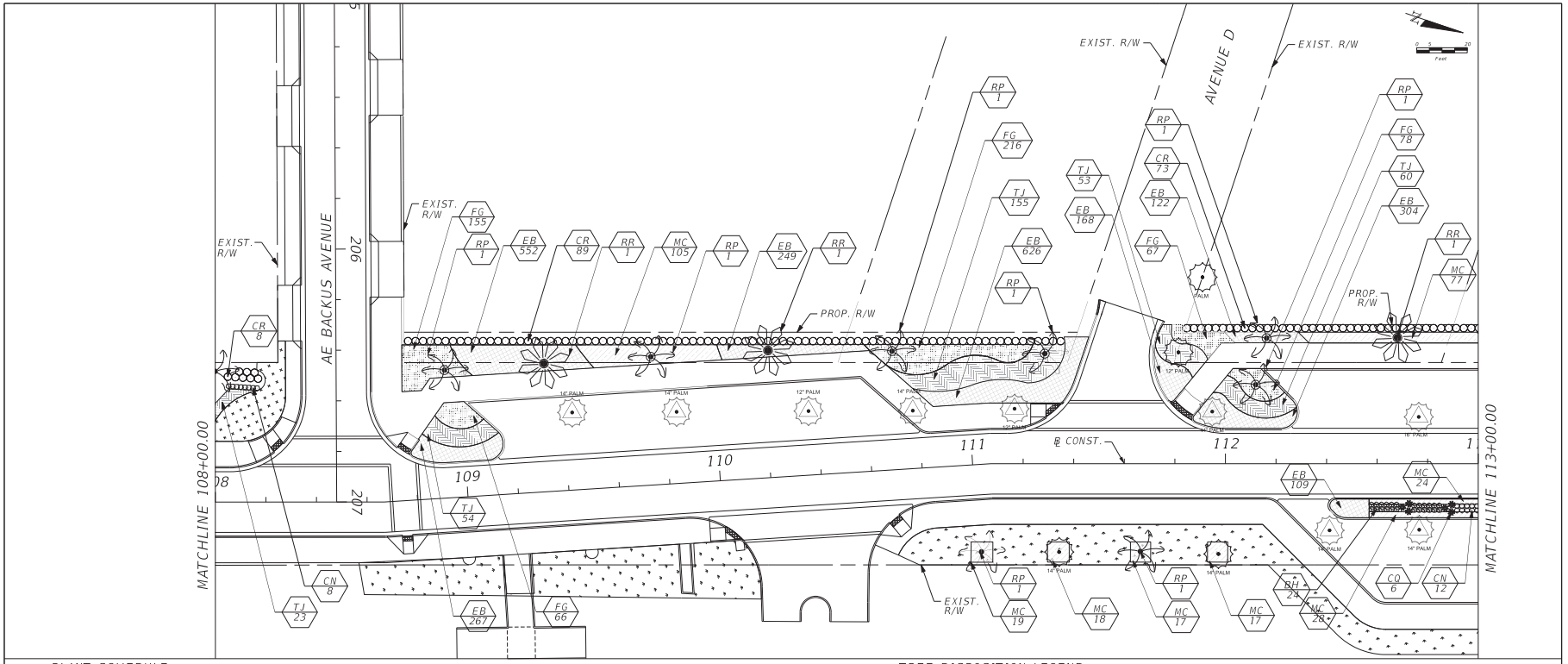
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE LANDSCAPE

SHEET NO. 71

rebecca.mulroney 2/4/2025 3:21:50 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_LANDSCAPE\PLANLA02.dgn



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME / COMMON NAME	REMARKS
	RR	ROYSTONEA REGIA / ROYAL PALM	17'-20' HT. GW., F.G.
	RP	RELOCATED ROYSTONEA REGIA / RELOCATED ROYAL PALM	VARIES
	CN	CLUSIA ROSEA NANA / CLUSIA NANA	MAINTAINED AT 24" HT., 18" HT. MIN, 18" SPR MIN., 18" O.C., CONT.
	CR	CHRYSOBALANUS ICACO 'RED TIP' / RED TIP COCPLUM	30" HT. MIN., 36" SPR MIN., 30" O.C., CONT.
	BH	BOUGAINVILLEA X 'HELEN JOHNSON' / HELEN JOHNSON COMPACT BOUGAINVILLEA	24" HT. MIN., 24" SPR MIN., 24" O.C., CONT.
	CQ	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	24" HT. MIN., 30" SPR MIN.
	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM' / FLORATAM ST. AUGUSTINE	SOD
	AE	ARACHIS GLABRATA 'ECOTURF' / PERENNIAL PEANUT	SOD
	FG	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS FULL TO GROUND	18" HT., 18" SPR, 18" O.C., CONT.
	TJ	TRACHELOSPERMUM JASMINOIDES / CONFEDERATE JASMINE	24"X24", 24" O.C., CONT.
	EB	EVOLVULUS GLOMERATUS 'BLUE DAZE' / BRAZILIAN DWARF MORNING GLORY	12" HT. MIN., 18" SPR, 12" O.C., CONT.
	MC	MUHLENBERGIA CAPILLARIS / PINK MUHLY	24" HT., 24" O.C., CONT.

TREE DISPOSITION LEGEND

SYMBOL

- TREE TO BE REMOVED
- TREE TO BE RELOCATED
- TREE TO REMAIN
- PALM TO REMAIN
- PALM TO BE REMOVED
- PALM TO BE RELOCATED
- TREE PROTECTION FENCE

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE LANDSCAPE

SHEET NO. 72

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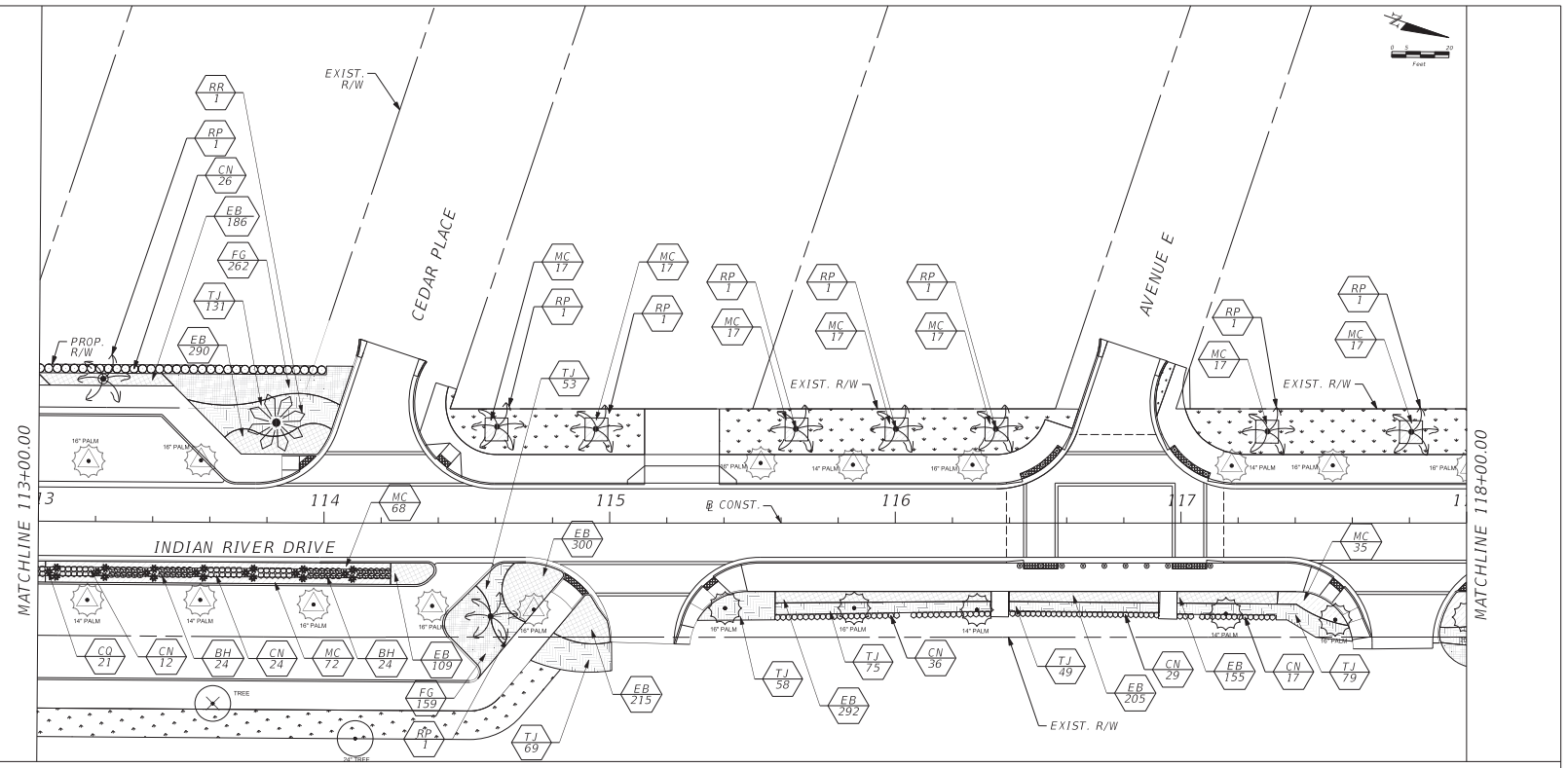

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME / COMMON NAME	REMARKS
	RP	RELOCATED ROYSTONEA REGIA / RELOCATED ROYAL PALM	VARIES
	CN	CLUSIA ROSEA NANA / CLUSIA NANA	MAINTAINED AT 24" HT., 18" HT. MIN, 18" SPR MIN., 18" O.C., CONT.
	BH	BOUGAINVILLEA X 'HELEN JOHNSON' / HELEN JOHNSON COMPACT BOUGAINVILLEA	24" HT. MIN., 24" SPR MIN., 24" O.C., CONT.
	CQ	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	24" HT. MIN., 30" SPR MIN.
	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM' / FLORATAM ST. AUGUSTINE	SOD
	FG	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS FULL TO GROUND	18" HT., 18" SPR, 18" O.C., CONT.
	TJ	TRACHELOSPERMUM JASMINOIDES / CONFEDERATE JASMINE	24"X24", 24" O.C., CONT.
	EB	EVOLVULUS GLOMERATUS 'BLUE DAZE' / BRAZILIAN DWARF MORNING GLORY	12" HT. MIN., 18" SPR, 12" O.C., CONT.
	MC	MUHLENBERGIA CAPILLARIS / PINK MUHLY	24" HT., 24" O.C., CONT.

TREE DISPOSITION LEGEND

SYMBOL	
	TREE TO BE REMOVED
	TREE TO BE RELOCATED
	TREE TO REMAIN
	PALM TO REMAIN
	PALM TO BE REMOVED
	PALM TO BE RELOCATED
	TREE PROTECTION FENCE

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE LANDSCAPE

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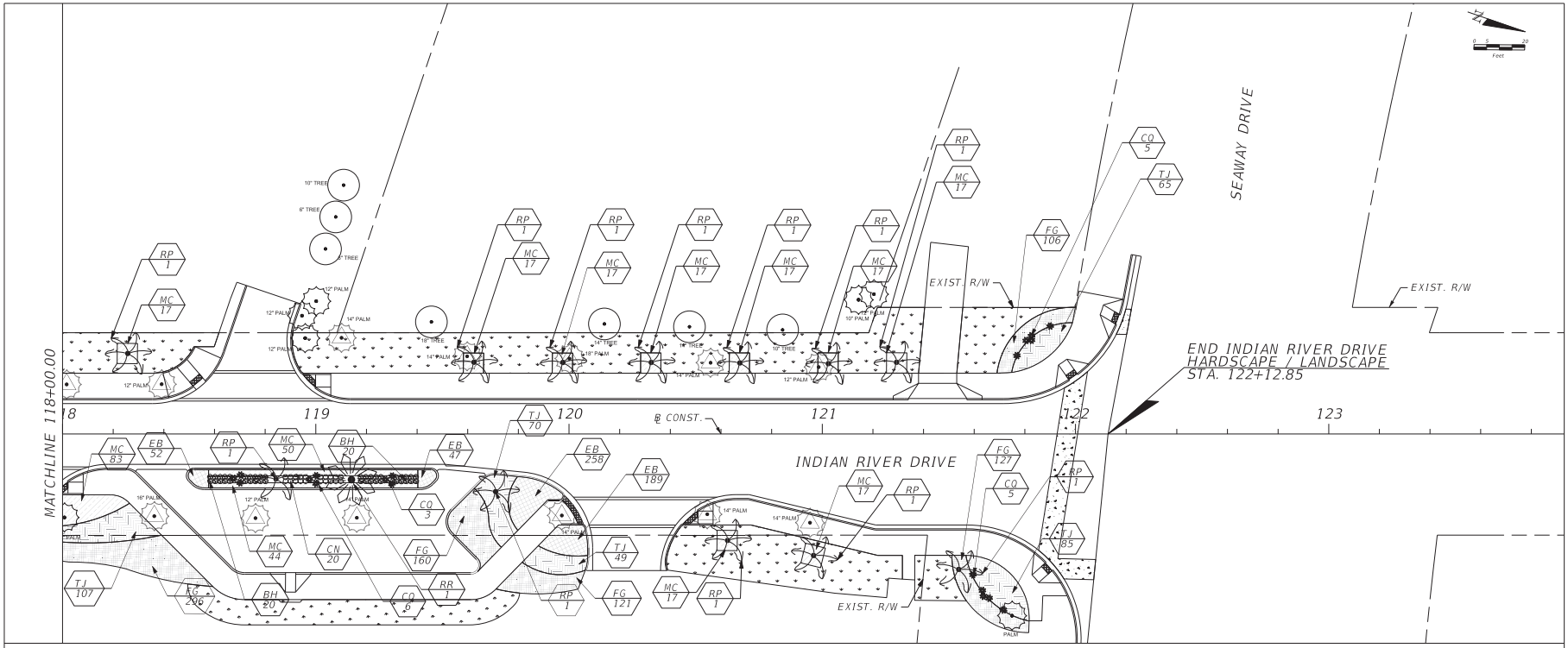

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME / COMMON NAME	REMARKS
	RR	ROYSTONEA REGIA / ROYAL PALM	17'-20' HT. GW., F.G.
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	BH	BOUGAINVILLEA X 'HELEN JOHNSON' / HELEN JOHNSON COMPACT BOUGAINVILLEA	24" HT. MIN., 24" SPR MIN., 24" O.C., CONT.
	CQ	CRINUM AUGUSTUM 'QUEEN EMMA' / QUEEN EMMA CRINUM LILY	24" HT. MIN., 30" SPR MIN.
	SOD	STENOTAPHRUM SECUNDATUM 'FLORATAM' / FLORATAM ST. AUGUSTINE	SOD
	FG	FICUS MICROCARPA 'GREEN ISLAND' / GREEN ISLAND FICUS FULL TO GROUND	18" HT., 18" SPR, 18" O.C., CONT.
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TREE DISPOSITION LEGEND

SYMBOL	
	TREE TO BE REMOVED
	TREE TO BE RELOCATED
	TREE TO REMAIN
	PALM TO REMAIN
	PALM TO BE REMOVED
	PALM TO BE RELOCATED
	TREE PROTECTION FENCE

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE LANDSCAPE

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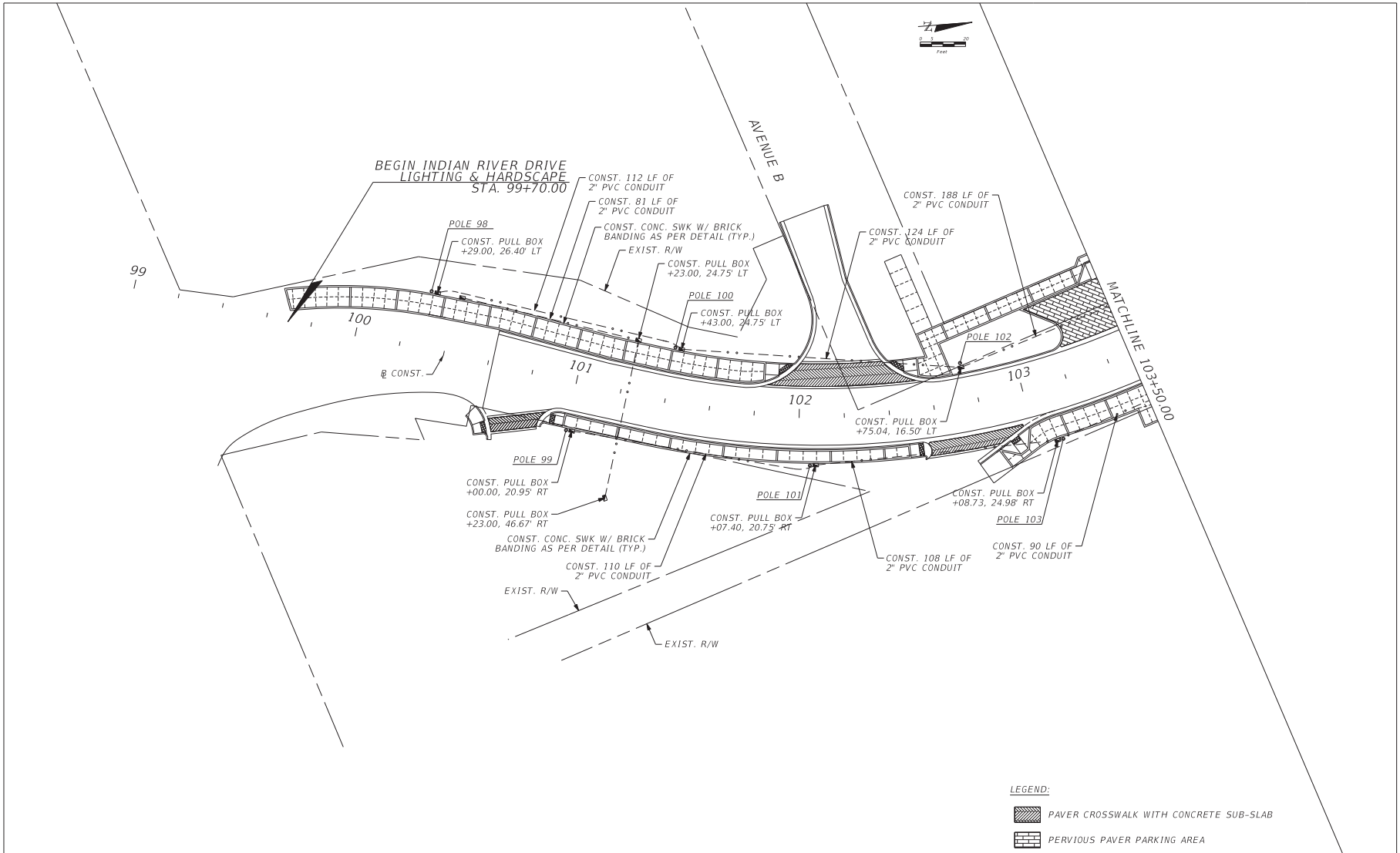

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE HARDSCAPE / LIGHTING

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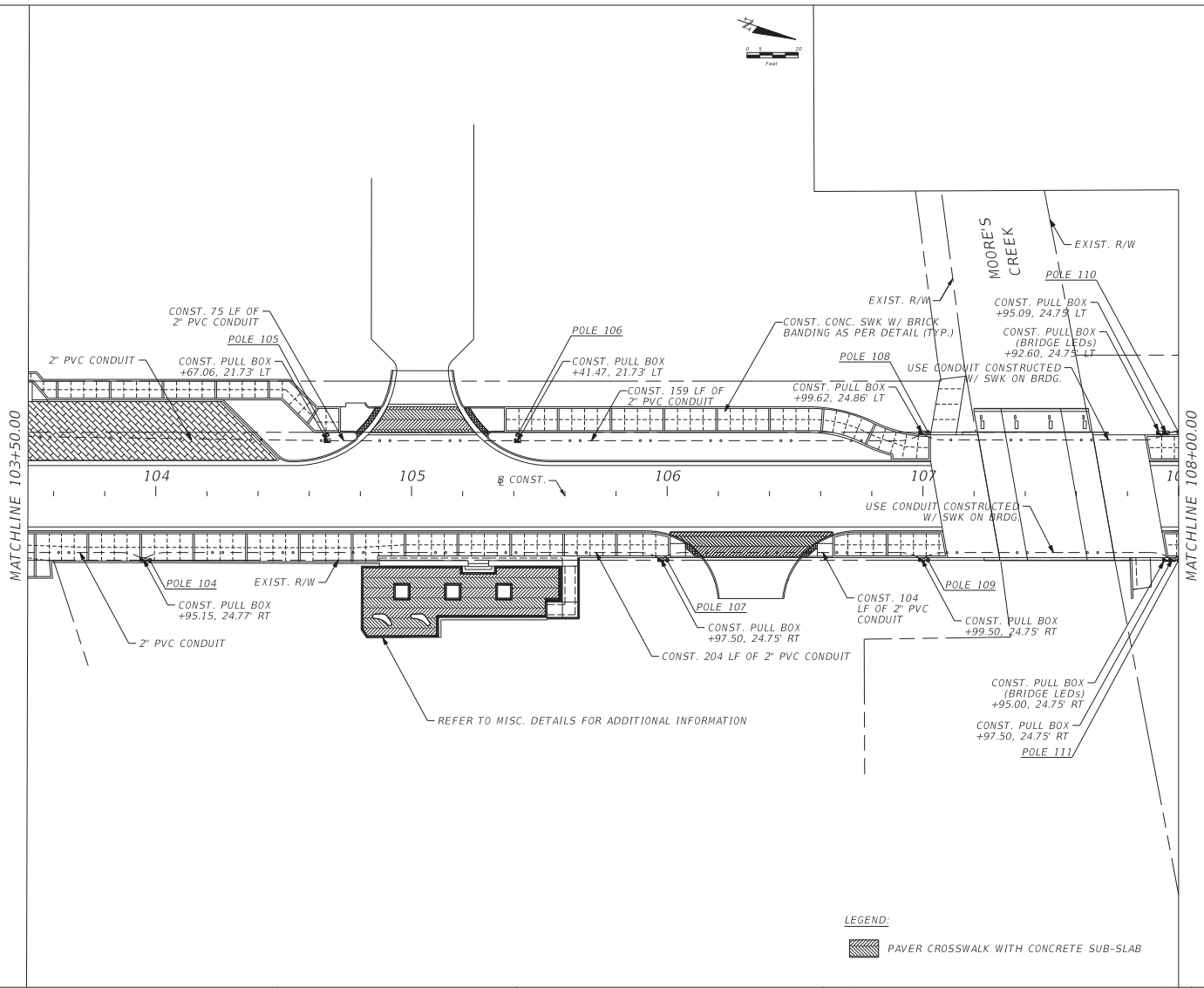

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE HARDSCAPE / LIGHTING

SHEET NO. 76

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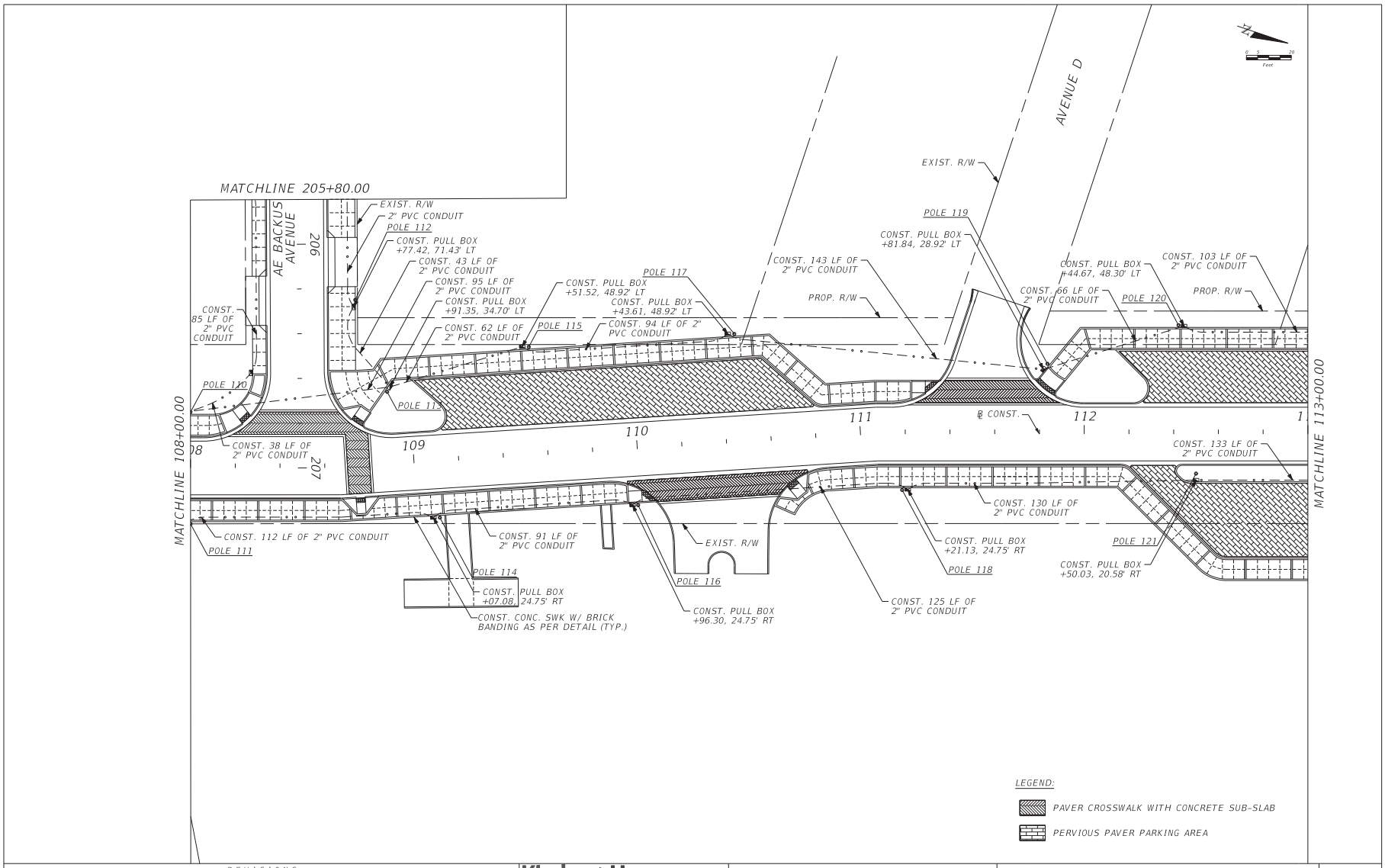

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE HARDSCAPE / LIGHTING

SHEET NO. 77

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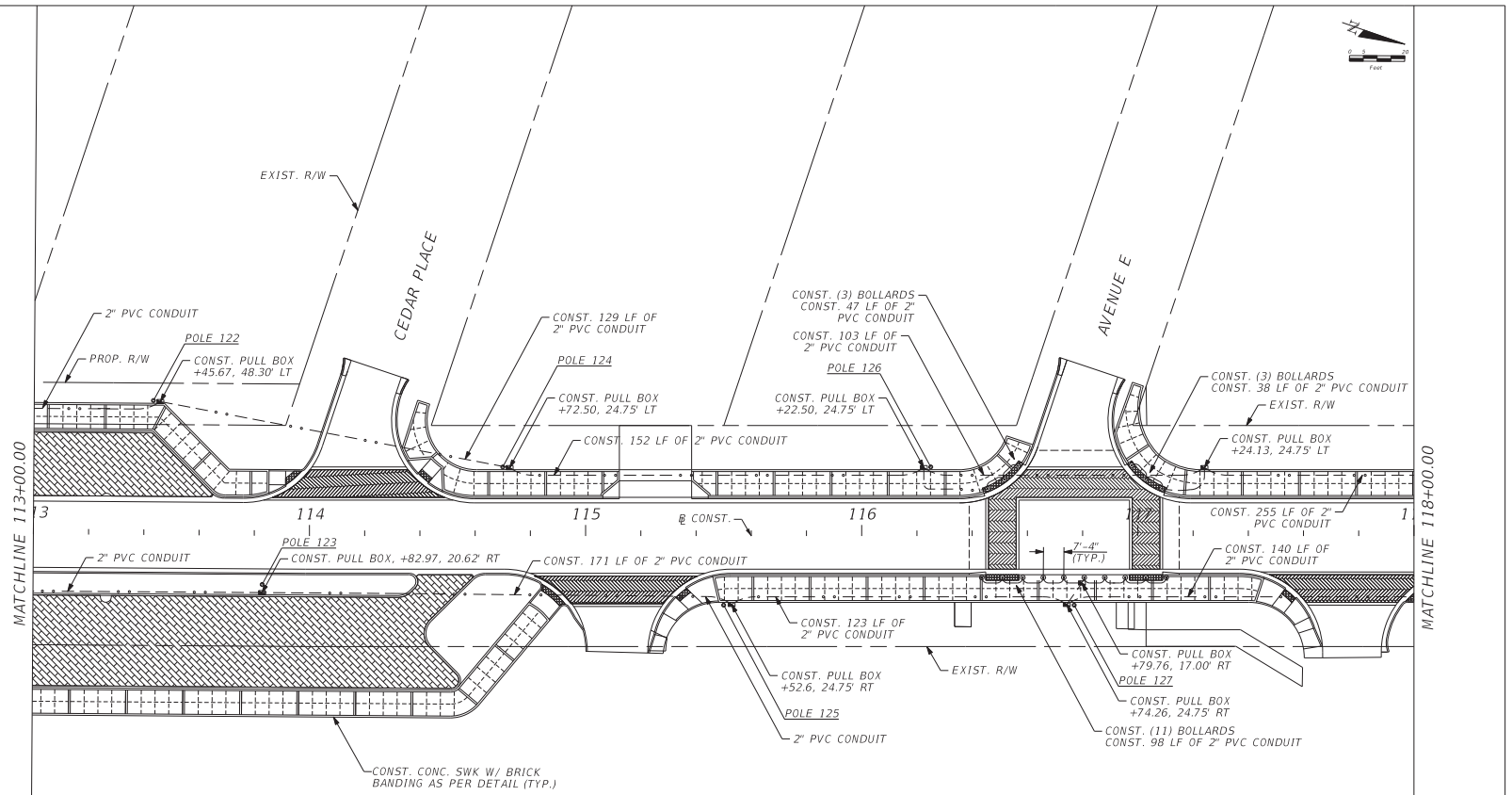

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE HARDSCAPE / LIGHTING

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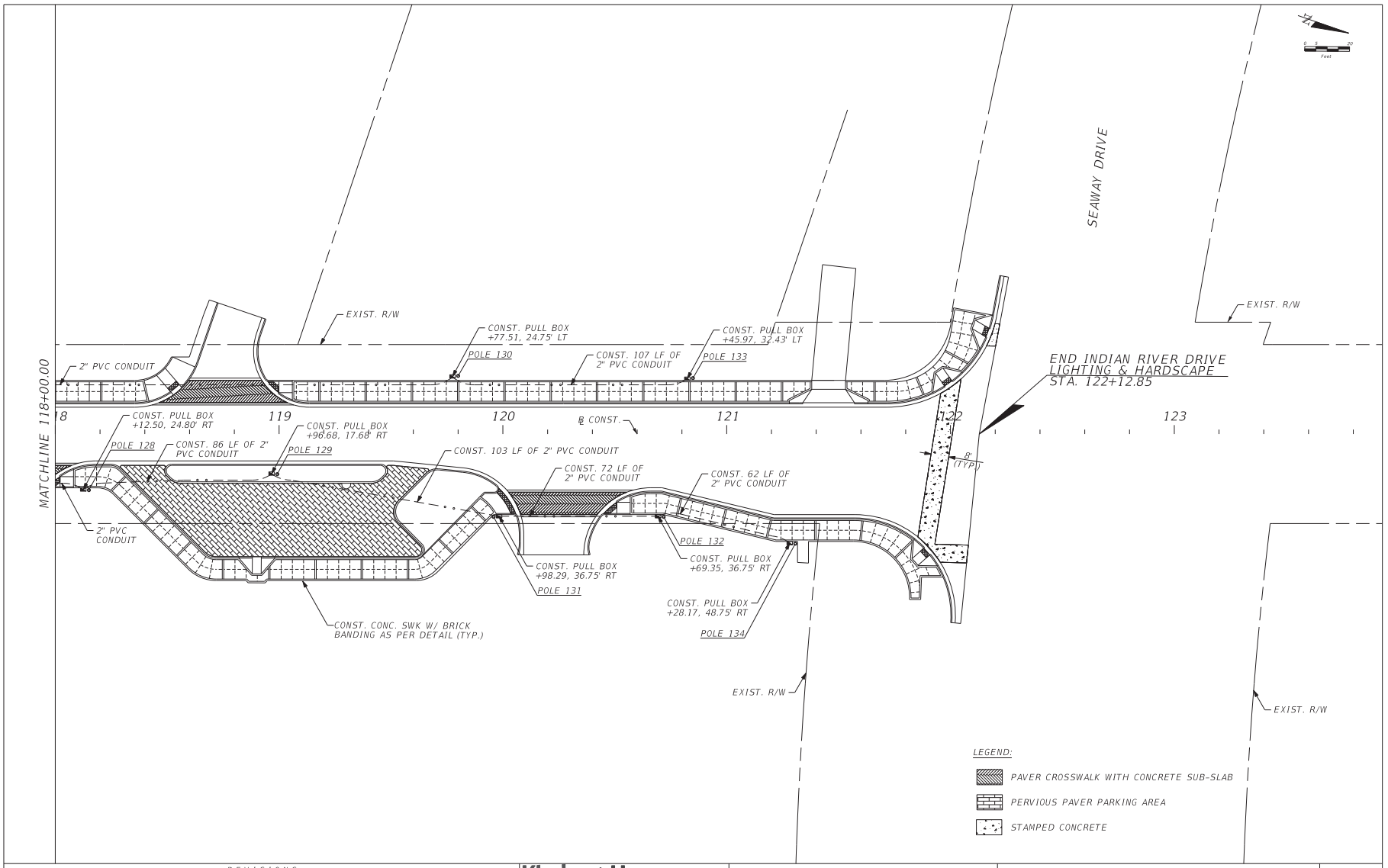

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE HARDSCAPE / LIGHTING

SHEET NO. 79

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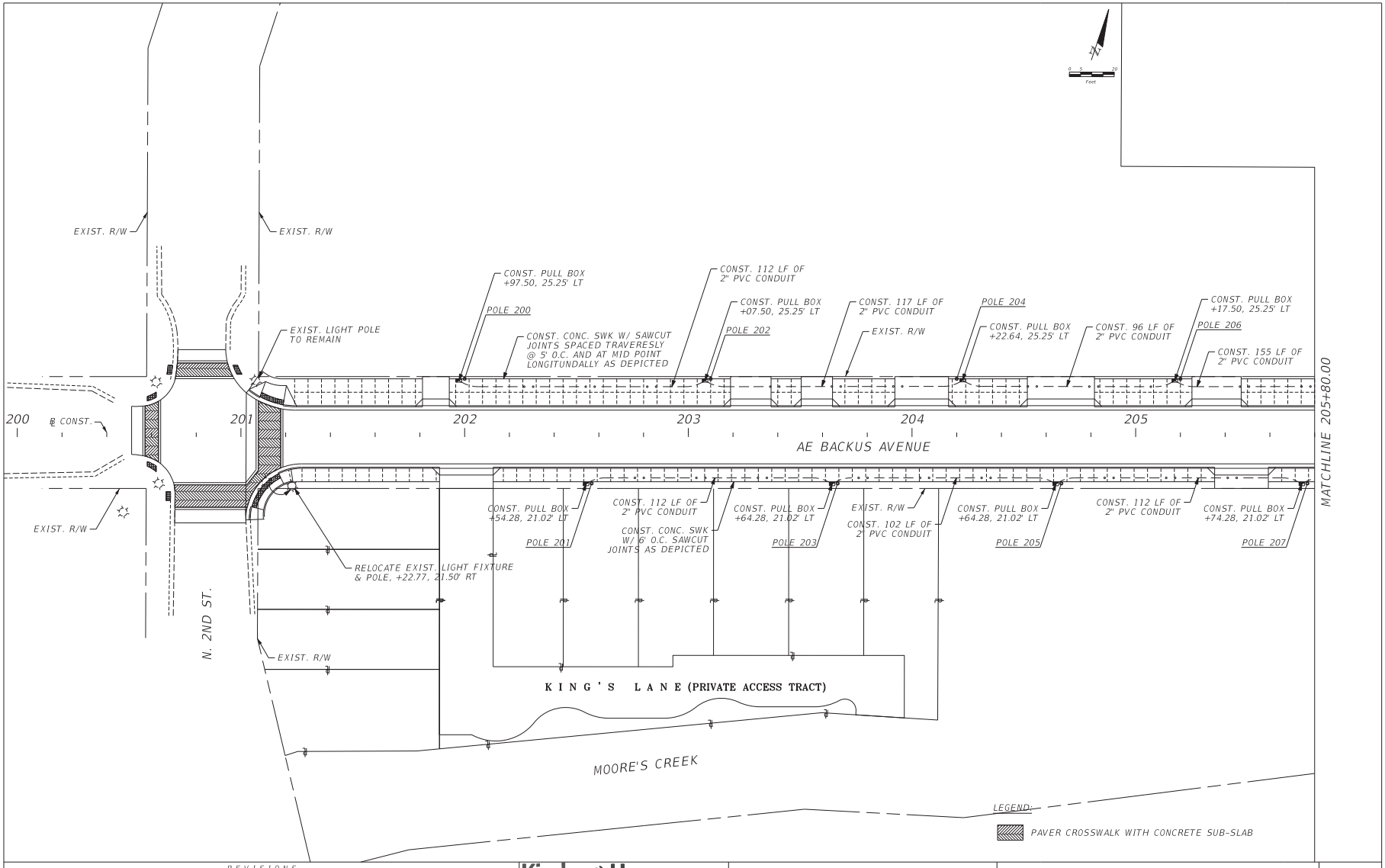

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

AE BACKUS AVENUE HARDSCAPE / LIGHTING

SHEET NO. 80

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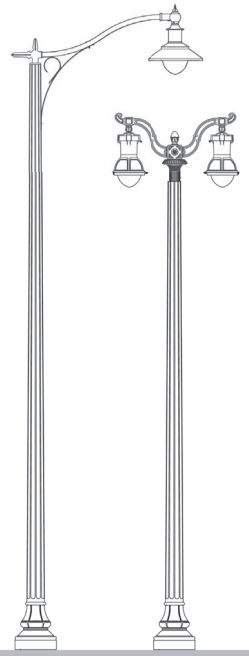
The Americana Series

THE WASHINGTON

The Washington design has a long history. Originally installed around the Capital Hill & White House grounds in 1910, it is now widely used throughout the DC area and has become extremely popular across the country. StressCrete is proud to introduce a spun concrete 10 fluted version of this historic design. It is available in heights from 5' to 30' as well as a lighted and nonlighted bollard.



Specification Details*

Description	Catalog Number	"A" Pole Height Above Grade	"D" Tip Dimension	"C" Stepped Section Height	"E" Flare	"B" Direct Burial Length & "F" Dia.	Pole Weight Direct Burial	Pole Weight Base Plate
Washington 10'	KWC10	10' 0"	5 3/4"	20 1/2"	18"	4' 6" x 10"	860 lbs	655 lbs
Washington 13'	KWC13	13' 0"	5 1/4"	20 1/2"	18"	4' 6" x 10"	925 lbs	720 lbs
Washington 15'	KWC15	15' 0"	5"	20 1/2"	18"	4' 6" x 10"	1100 lbs	895 lbs
Washington 18'	KWH18	18' 0"	6 3/4"	24"	21"	5' 0" x 12"	1660 lbs	1390 lbs
Washington 20'	KWH20	20' 0"	6 3/8"	24"	21"	5' 0" x 12"	1750 lbs	1480 lbs
Washington 25'	KWH25	25' 0"	5 3/4"	24"	21"	5' 0" x 12"	1900 lbs	1630 lbs
Washington 30'	KWH30	30' 0"	5"	24"	21"	5' 0" x 12"	2140 lbs	1870 lbs

* Bollard specification details can be found on our website

How to Catalog for Washington Concrete Pole

Pole Style: KWC, KWH
Finish: E – Ethed Finish
Footing Details: DB – Direct Buried; FBP – Flush Baseplate; SBP – Stub Baseplate
Coating: NA – Non Acrylic; A – Acrylic; AG – Anti Graffiti Coating***

KWH	30'	E	40	DB	140 30/30	GFI	NA

Height: 5' - 30'; 15'

Color:** 1 – Midnight Lace; 1* – Eclipse Black; 3 – Salt & Pepper; 4 – Pearl Gray; 9 – Saluki bronze

Tenon (Post Top Mount): Specify Tenon Size. For example 140 30/30 = 2 7/8" OD & 3" long

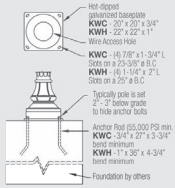
Options*: DR – Duplex Receptacle; GFI – Ground Fault Duplex Receptacle; SR – 1 Outlet; LRN – Ladder Rest; BPC – Base Plate Cover; AB – Anchor Bolts; BA – Banner Arms; FH – Flag Holders

* Consult website for full listings. ** See decorcolors on page 2 for full selection of colors.
***Anti Graffiti Coating is extra, consult factory for more details.

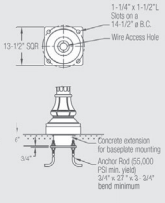
Footing Details

Direct Buried
(Simple and Cost Effective)
1. Auger the setting hole.
2. Set pole in hole and plumb straight.
3. Backfill* with required backfill tamping every 4" to 6".

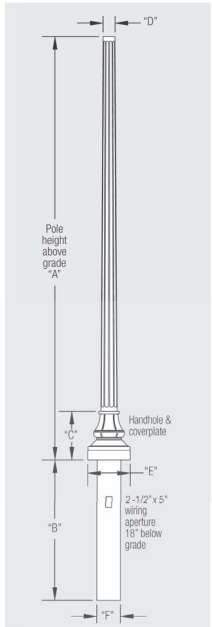
Baseplate Option 1: FBP



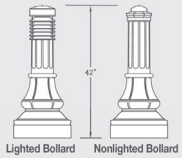
Baseplate Option 2: SBP



*Generally the excavated material can be usedfor backfill, in some situations better backfill may be required.



Typical Pole Cross Section



Lighted Bollard Nonlighted Bollard

www.scgrp.com

LIGHTING NOTES:

A. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.
B. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE.
C. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
D. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.
E. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.
F. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IECE.
G. CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/CITY OF FORT PIERCE.
H. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
I. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.
J. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
K. ALL ELECTRICAL POWER WIRING FOR THE SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
L. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED ON PANELS SCHEDULES TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST DEVICE. LOADS FOR DETERMINING CONDUCTOR SIZE SHALL BE BASED ON ACTUAL CONNECTED LOAD OR 80% OF BREAKER SIZE, WHICHEVER IS GREATER. CONTACT ENGINEER OF RECORD FOR ALL RUNS IN EXCESS OF 100 FT. FOR DETERMINATION OF WIRE SIZE. FOR BID PURPOSES, INCREASE WIRE BY ONE (1) WIRE SIZE FOR RUNS 100 FT. TO 200 FT. AND TWO (2) WIRE SIZES FOR RUNS OVER 200 FT.
M. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS.
N. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
O. ANY CONFLICTS AND DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

REVISIONS					
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Kimley»Horn
BRIAN A. GOOD, P.E.
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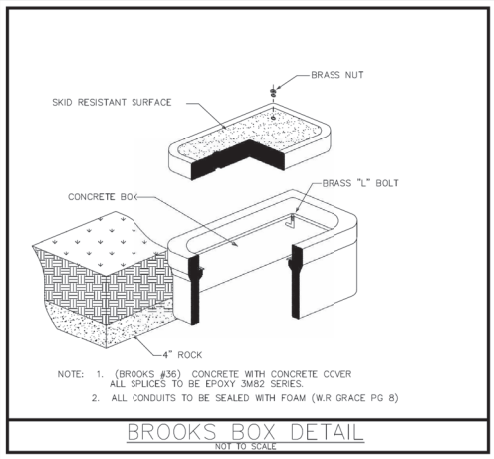
CITY OF FORT PIERCE

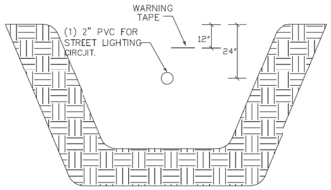
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

LIGHTING DETAILS

SHEET NO. 81



BROOKS BOX DETAIL
NOT TO SCALE



TRENCHING DETAIL
NOT TO SCALE

LIGHTING SUMMARY
AE BACKUS AVENUE

POLE No.	STATION	OFFSET	SIDE
200	202+00.00	26.00	LT
201	202+56.76	20.75	RT
202	203+10.01	26.00	LT
203	203+66.76	20.75	RT
204	204+20.00	26.00	LT
205	204+66.76	20.75	RT
206	205+20.01	26.00	LT
207	205+76.76	20.75	RT
BOLLARD	201+13.47	16.92	LT
BOLLARD	201+06.86	28.48	RT
BOLLARD	201+10.06	23.14	RT
BOLLARD	201+14.63	18.91	RT

LIGHTING SUMMARY
INDIAN RIVER DRIVE

POLE No.	STATION	OFFSET	SIDE
98	100+26.92	26.64	LT
99	101+00.00	20.95	RT
100	101+40.00	25.00	LT
101	102+05.00	21.00	RT
102	102+75.00	18.50	LT
103	103+11.11	25.00	RT
104	103+97.68	25.02	RT
105	104+67.06	23.98	LT
106	105+41.47	23.98	LT
107	106+00.00	25.00	RT
108	107+00.00	18.50	LT
109	107+02.00	25.00	RT
110	108+00.00	25.00	LT
111	108+24.78	51.92	RT
112	108+75.35	74.53	LT
113	108+90.00	32.59	LT
114	109+10.00	25.00	RT
115	109+35.71	17.66	LT
116	109+95.80	25.00	RT
117	110+46.53	48.67	LT
118	111+15.62	25.00	RT
119	111+83.56	31.40	LT
120	112+42.17	48.67	LT
121	112+50.01	17.67	RT
122	113+41.17	48.67	LT
123	113+82.97	17.65	RT
124	114+70.00	25.00	LT
125	115+50.00	25.00	RT
126	116+25.00	25.00	LT
127	116+76.95	25.00	LT
128	118+15.00	25.06	RT
129	118+99.18	17.93	RT
130	119+80.01	26.00	LT
131	119+95.83	37.00	RT
132	120+71.85	37.00	RT
133	120+84.91	25.00	LT
134	121+30.67	49.00	RT
LIGHTED BOLLARD	116+45.52	17.05	LT
LIGHTED BOLLARD	116+51.65	20.43	LT
LIGHTED BOLLARD	116+56.60	25.39	LT
LIGHTED BOLLARD	116+43.50	15.00	RT
LIGHTED BOLLARD	116+50.92	15.00	RT
LIGHTED BOLLARD	116+58.34	15.00	RT
LIGHTED BOLLARD	116+65.76	15.00	RT
LIGHTED BOLLARD	116+73.18	15.00	RT
LIGHTED BOLLARD	116+80.60	15.00	RT
LIGHTED BOLLARD	116+88.02	15.00	RT
LIGHTED BOLLARD	116+95.44	15.00	RT
LIGHTED BOLLARD	117+02.86	15.00	RT
LIGHTED BOLLARD	117+10.28	15.00	RT
LIGHTED BOLLARD	116+97.79	25.64	LT
LIGHTED BOLLARD	117+02.68	20.63	LT
LIGHTED BOLLARD	117+08.77	17.17	LT

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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LIGHTING DETAILS

SHEET NO.
82

IRRIGATION GENERAL NOTES

2.10 AUTOMATIC CONTROL VALVE

THE AUTOMATIC REMOTE CONTROL VALVES SHALL BE AS SPECIFIED ON THE PLANS, OR APPROVED EQUAL.

2.10 GATE VALVES

A. GATE VALVES FOR 3/4" THROUGH 2-1/2" SHALL BE OF BRASS OR BRONZE CONSTRUCTION, SOLID WEDGE, IPS THREADS, NON-RISING STEM WITH WHEEL OPERATING HANDLE, FOR A CONTINUOUS WORKING PRESSURE OF 150 PSI.

GATE VALVES FOR 3" AND LARGER: IRON BODY, BRASS OR BRONZE MOUNTED AWWA GATE VALVES, WITH A CLEAR WATERWAY EQUAL TO THE FULL NOMINAL3.09

CONTROL WIRE

A. CONTROL WIRING BETWEEN THE CONTROLLER AND ELECTRIC VALVES SHALL BE BURIED IN MAIN LINE TRENCHES OR IN SEPARATE TRENCHES. ELECTRICAL CONNECTION AT VALVE WILL ALLOW FOR PIGTAIL SO SOLENOID CAN BE REMOVED FROM VALVE WITH SUFFICIENT SLACK TO ALLOW ENDS TO BE PULLED 12" ABOVE GROUND FOR EXAMINATION AND CLEANING.

B. AN EXPANSION LOOP SHALL BE PROVIDED AT EVERY VALVE AT 100' O.C. EXPANSION LOOP SHALL BE FORMED BY WRAPPING WIRE AT LEAST EIGHT TIMES AROUND A 3/4" PIPE AND WITHDRAWING PIPE.

C. THE WIRE SHALL BE BUNDLED AND TAPED EVERY TEN FEET. THE WIRE SHALL BE LAID IN THE TRENCH PRIOR TO INSTALLING THE PIPE BEING CAREFUL TO INSTALL WIRE BENEATH AND 6" TO THE SIDE OF THE MAIN PIPE LINE.

D. ELECTRICAL CONNECTIONS TO ELECTRIC CONTROL VALVES SHALL BE MADE WITH RAINBIRD PEN-TITE OR TECHDEL GT-3-GEL – TITE CONNECTORS OR EQUAL.

POWER CONNECTIONS: ELECTRICAL CONNECTIONS TO POWER AND SIGNAL WIRES SHALL BE MADE USING 3M 82-A2 POWER CABLE SPLICE KITS.

E. DIAMETER OF THE VALVE, RUBBER GASKET FOR A CONTINUOUS WORKING PRESSURE OF 150P PSI. VALVE SHALL BE EQUIPPED WITH A SQUARE OPERATING NUT.

2.11 VALVE BOXES

A. FOR GATE VALVES, USE AMETEK #10-181-014 BOX WITH #10-181-015 LOCKING LID, OR AS PER THE DRAWINGS.

B. FOR CONTROL VALVES 3/4" THROUGH 2". THE DRIP VALVE ASSEMBLIES, USE AMETEK #10-181-014 BOX WITH #10-181-015 LOCKING LID, OR SIZED AS NECESSARY TO EFFECTIVELY HOUSE THE EQUIPMENT

C. FOR CONTROL WIRING SPLICES, USE AMETEK #10-181-014 BOX WITH #10-181-015 LOCKING LID, OR AS PER THE DRAWINGS.

2.12 IRRIGATION WIRING

A. WIRING USED FOR CONNECTING THE ELECTRIC CONTROL VALVES TO THE CONTROLLERS SHALL BE TYPE UF, 600 VOLT, SINGLE STRAND, SOLID COPPER WITH PVC INSULATION 4/64" THICK. SIZE SHALL BE 14 GAUGE, RED FOR "HOT" OR LEAD WIRES, AND COMMON WIRE TO BE 14 GAUGE, WHITE IN COLOR.

B. CONTRACTOR SHALL PERFORM AN OHM TEST ON GROUND TO ASSURE ADEQUATE PROTECTION AGAINST SURGES AND INDIRECT LIGHTNING STRIKES.

2.13 MISCELLANEOUS MATERIALS

A. DRAINAGE BACKFILL: CLEANED GRAVEL OR CRUSHED STONE, GRADED FROM 1" MAXIMUM TO 3/4" MINIMUM.

B. METALIZED UNDERGROUND TAPE: THE DETECTABLE, UNDERGROUND UTILITY MARKING TAPE SHALL CONSIST OF A MINIMUM: 5 MIL (0.005") OVERALL THICKNESS; FIVE-PLY COMPOSITION; ULTRA-HIGH MOLECULAR WEIGHT, 100% VIRGIN POLYETHYLENE; ACID, ALKALINE AND CORROSION RESISTANT; WITH NO LESS THAN 150 POUNDS OF TENSILE BREAK STRENGTH PER 6" WIDTH; COLOR-CODE IMPREGNATED WITH COLOR STABLE, LEAD-FREE, ORGANIC PIGMENTS SUITABLE FOR DIRECT BURIAL. TAPES UTILIZING REPROCESSED PLASTICS OR RESINS SHALL NOT BE ACCEPTABLE. THE DETECTABLE, UNDERGROUND UTILITY MARKING TAPE SHALL HAVE A 35 GAUGE (0.0035") SOLID ALUMINUM FOIL CORE ENCAPSULATED WITHIN A 2.55 MIL (0.00255") POLYETHYLENE BACKING AND A 0.6 MIL (0.006") PET COVER COATING. THE LAMINATE ON EACH SIDE SHALL CONSIST OF A 0.75 MIL (0.00075") LAYER OF HOT LPDE, POLY-FUSING THE "SANDWICH" WITHOUT USE OF ADHESIVES.

2.14 AUTOMATIC CONTROL SYSTEM

AN INDEPENDENT STATION CONTROLLER: FURNISH A SOLID STATE CONTROLLER, AS SPECIFIED ON THE PLANS. EACH STATION SHALL BE CAPABLE OF TIMING FROM ZERO (0) MINUTE TO 99 MINUTES PER STATION IN ONE (1) MINUTE INCREMENTS.

EACH STATION SHALL BE CAPABLE OF OPERATING TWO (2) 7VA ELECTRIC VALVE-IN-HEAD SOLENOIDS.

THE STAND-ALONE CONTROLLER SHALL HAVE TWO (2) POSSIBLE PROGRAMS.

THE STAND-ALONE CONTROLLER SHALL PROVIDE GLOBAL PERCENTAGE INCREASE/DECREASE (WATER BUDGET) FOR ALL STATIONS SIMULTANEOUSLY, FROM TEN (10) TO TWO HUNDRED (200) PERCENT, IN TEN (10) PERCENT INCREMENTS.

ALL STATIONS SHALL BE ABLE TO BE TURNED ON/OFF MANUALLY BUY OPERATING TIMING MECHANISM OR BY MANUAL SWITCH AT STATION OUTPUT.

THE STAND-ALONE CONTROLLER SHALL INCORPORATE AN INTEGRAL MOV SURGE PROTECTION INTO THE TERMINAL BLOCK FOR EACH OF ITS 24 VAC FIELD WIRE OUTPUTS. CONTROLLER POWER INPUT WIRES WILL ALSO INCORPORATE SURGE PROTECTION.

THE CONTROL PANEL SHALL PROVIDE CONTINUOUS DISPLAY TIME. IT SHALL HAVE ALPHANUMERIC DISPLAYS OF DESCRIPTIVE ENGLISH MENUS AND LEGEND IDENTIFIERS WITH CURSOR SELECTION OF FUNCTION AND PRECISION VALUE ADJUSTMENT BY ROTARY DIAL INPUT.

THE STAND-ALONE CONTROLLER SHALL BE UL LISTED AND FCC APPROVED.

THE STAND-ALONE CONTROLLER SHALL HAVE 117 VAC, 60 HZ INPUT, 26.5 VAC, 60 HZ OUTPUT FOR OPERATING 24 VAC SOLENOIDS.

THE STAND-ALONE CONTROLLER CABINET SHALL BE A LOCKABLE AND WEATHER-RESISTANT OUTDOOR CABINET. MOUNT AS NOTED ON PLANS.

THE CONTROLLER SHALL BE EQUIPPED WITH LIGHTENING PROTECTION, BY THE CONTRACTOR, ON BOTH THE PRIMARY (120V) AND EACH SECONDARY (24V) CIRCUIT. THE CONTROLLER CIRCUITS SHALL BE GROUNDED TO A COPPER CLAD GROUNDING ROD LOCATED AT EACH CONTROLLER.

THE CONTROLLER SHALL BE EQUIPPED FOR A WATER CONSERVATION DEVICE. AS SPECIFIED.

PART III: EXECUTION

3.01 INSPECTION

THE CONTRACTOR SHALL EXAMINE THE AREAS AND CONDITIONS UNDER WHICH LANDSCAPE IRRIGATION SYSTEM IS TO BE INSTALLED AND NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OF CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. THE CONTRACTOR SHALL PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE LANDSCAPE ARCHITECT.

3.02 PREPARATION

THE CONTRACTOR SHALL PROVIDE SLEEVES TO ACCOMMODATE PIPING UNDER WALKS OR PAVING. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND INSTALL TO ACCURATE LEVELS PRIOR TO PAVING WORK. CUTTING AND PATCHING OF PAVING AND CONCRETE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL MAINTAIN ALL WARNING SIGNS, SHORING, BARRICADES, FLARES AND RED LANTERNS, AS REQUIRED BY ANY LOCAL CODES, ORDINANCES OR PERMITS.

3.03 TRENCHING AND BACKFILLING

A. EXCAVATION: THE CONTRACTOR SHALL STAKE OUT THE LOCATION OF EACH RUN OF PIPE, SPRINKLER HEADS, SPRINKLER VALVES AND ISOLATION VALVES PRIOR TO TRENCHING. EXCAVATION SHALL BE OPEN VERTICAL CONSTRUCTION SUFFICIENTLY WIDE TO PROVIDE FREE WORKING SPACE AROUND THE WORK INSTALLED AND TO PROVIDE AMPLE SPACE OR BACKFILLING AND TAMPING. TRENCHES FOR PIPE SHALL BE CUT TO REQUIRED GRADE LINES, AND COMPACTED TO PROVIDE ACCURATE GRADE AND UNIFORM BEARING FOR THE FULL LENGTH OF THE LINE. THE BOTTOM OF THE TRENCHES SHALL BE FREE OF ROCK OR OTHER SHARP EDGED OBJECTS. MINIMUM COVER SHALL BE AS FOLLOWS:

PIPE AND WIRE DEPTH

PRESSURE MAINLINE	18" AT TOP OF PIPE FROM FINISH GRADE
LATERAL PIPING (ROTOR)	12" AT TOP OF PIPE FROM FINISH GRADE
LATERAL PIPING (POP-UP)	12" AT TOP OF PIPE FROM FINISH GRADE
CONTROL WIRING	SIDE OF MAIN LINE

B. MINIMUM CLEARANCES: ALL PIPELINES SHALL HAVE A MINIMUM CLEARANCE OF SIX INCHES FROM EACH OTHER AND FROM LINES OF OTHER CRAFTS. PARALLEL LINES SHALL NOT BE INSTALLED DIRECTLY OVER ONE ANOTHER. NO LATERAL LINE SHALL BE INSTALLED IN THE MAIN-LINE TRENCH.

3.04 INSTALLATION OF PIPING

A. PVC PIPE AND JOINTS: THE CONTRACTOR SHALL NOT INSTALL SOLVENT WILD PIPE WHEN AIR TEMPERATURE IS BELOW 40ø F. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

1. ONLY THE SOLVENT RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED. ALL PVC PIPE AND FITTINGS SHALL BE INSTALLED AS OUTLINED AND INSTRUCTED BY THE PIPE MANUFACTURER, AND IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE PIPE MANUFACTURER FOR ANY FIELD ASSISTANCE THAT MAY BE NECESSARY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION.

3.05 BACKFILLING PROCEDURES

INITIAL BACKFILL ON PVC LINES SHALL BE PULVERIZED NATIVE SOIL, FREE OF FOREIGN MATTER. WITHIN RADIUS OF 4" OF THE PIPE SHALL BE CLEAN SOIL OR SAND. PLANT LOCATIONS SHALL TAKE PRECEDENCE OVER SPRINKLER AND PIPE LOCATIONS. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF TREES AND SHRUBS WITH THE ROUTING OF LINES AND FINAL HEAD LOCATIONS.

A. BACKFILL AND COMPACTION: THE CONTRACTOR SHALL LEAVE TRENCHES SLIGHTLY MOUNDED TO ALLOW FOR SETTLEMENT AFTER THE BACKFILLING IS COMPLETED. THE CONTRACTOR SHALL CLEAN THE SITE OF THE WORK CONTINUOUSLY OF EXCESS WASTE MATERIALS AS THE BACKFILLING PROGRESSES, AND LEAVE IN A NEAT CONDITION. NO TRENCHES SHALL BE LEFT OPEN FOR A PERIOD OF MORE THAN 48 HOURS. PROTECT OPEN TRENCHES AS REQUIRED.

THE CONTRACTOR SHALL CAREFULLY BACKFILL EXCAVATED MATERIALS APPROVED FOR BACKFILLING, CONSISTING OF EARTH, LOAM, SAND, AND OTHER APPROVED MATERIALS, FREE OF ROCK AND DEBRIS OVER 1" IN SIZE. BACKFILL SHALL BE COMPACTED TO ORIGINAL DENSITY OF SURROUNDING SOIL WITHOUT DIPS, SUNKEN AREAS, OR IRREGULARITIES.

THE CONTRACTOR SHALL CONFORM TO DOT REQUIREMENTS FOR METHODS AND REQUIRED COMPACTION PERCENTAGES, FOR ROADS AND PAVING.

THE CONTRACTOR SHALL HAND PLACE THE FIRST 6" OF BACKFILL (OR TO TOP OF PIPE) AND HAVE IT WALKED ON SO AS TO SECURE THE POSITION OF THE PIPE AND WIRE.

NO WHEEL ROLLING WILL BE ALLOWED. THE CONTRACTOR SHALL REMOVE ROCK OR DEBRIS EXTRACTED FROM BACKFILL MATERIALS AND DISPOSE OF OFFSITE. THE CONTRACTOR SHALL FILL ANY VOIDS LEFT IN BACKFILL WITH APPROVED BACKFILL MATERIALS.

B. EXISTING LAWNS: WHERE TRENCHING IS REQUIRED ACROSS EXISTING LAWNS, UNIFORMLY CUT STRIPS OF SOD 6" WIDER THAN TRENCH. THE CONTRACTOR SHALL REMOVE SOD IN ROLLS OF SUITABLE SIZE FOR HANDLING AND KEEP MOISTENED UNTIL REPLANTED. THE CONTRACTOR SHALL REPLANT SOD WITHIN 48 HOURS AFTER REMOVAL, ROLL AND WATER GENEROUSLY. THE CONTRACTOR SHALL RESOD ANY AREAS NOT IN HEALTHY CONDITION EQUAL TO ADJOINING LAWNS 10 DAYS AFTER REPLANTING.

C. SEEDED AREA: TRENCHING WILL BE REQUIRED ACROSS EXISTING SEEDED AREAS, PRIMARILY ROADWAY EDGING. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF SEEDING, SECTION 02930 FOR THE RESEEDING OF THE DISTURBED TRENCH AREA.

D. PAVEMENTS: JACK AND BORE OR DIRECTIONAL BORE PIPING UNDER PAVING MATERIALS AS PER LOCAL REGULATORY CODES. NO CUTTING AND PATCHING OF PAVEMENT WILL BE PERMITTED.

3.06 VALVES

A. ISOLATION VALVES: SHALL BE SIZED CORRESPONDING TO ADJACENT PIPE SIZE. SPECIFIED VALVE BOXES SHALL BE INSTALLED FLUSH WITH FINISH GRADE IN SUCH A MANNER THAT SURFACE FORCES APPLIED TO THEIR EXPOSED AREA WILL NOT BE TRANSMITTED TO THE PIPING IN WHICH THE VALVE IS INSTALLED NOR ANY OTHER PIPING, WIRING OR OTHER LINES IN THE VICINITY OF SAID VALVES.

B. GATE VALVES: INSTALL WHERE SHOWN, IN VALVE BOXES.

REVISIONS					
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE
IRRIGATION GENERAL NOTES

SHEET NO. 84

rebecca.mulroney 2/4/2025 3:26:08 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\GNNTIR01.dgn

C. ELECTRIC CONTROL VALVES: SHALL BE INSTALLED IN SPECIFIED VALVE BOXES. THE VALVE SHALL HAVE 6" OF 3/4" PEA GRAVEL INSTALLED BELOW THE BOTTOM OF THE VALVE. IF THE VALVE BOX DOES NOT EXTEND TO THE BASE OF THE VALVE, A VALVE BOX EXTENSION SHALL BE INSTALLED. ELECTRIC CONTROL VALVES SHALL BE INSTALLED WHERE SHOWN AND GROUPED TOGETHER WHERE PRACTICAL. THE CONTRACTOR SHALL PLACE NO CLOSER THAN 24" TO WALK EDGES, BIKEWAY EDGES, BUILDINGS AND WALLS. THE CONTRACTOR SHALL ADJUST THE VALVE TO PROVIDE FLOW RATE OR RATED OPERATING PRESSURE REQUIRED FOR EACH SPRINKLER CIRCUIT.

3.07 CONDUIT AND SLEEVES

A. CONDUIT AND SLEEVES FOR CONTROL WIRING AND MAIN/LATERAL PIPE: THE CONTRACTOR SHALL PROVIDE AND INSTALL WHERE NECESSARY. CONTRACTOR SHALL COORDINATE LOCATIONS OF PREVIOUSLY INSTALLED SLEEVING WITH THE GENERAL SITE CONTRACTOR.

THE CONTRACTOR SHALL COORDINATE INSTALLATION OF SLEEVES WITH WORK OF OTHER DISCIPLINES.

3.08 CONTROLS

A. THE CONTRACTOR SHALL CONNECT ELECTRIC CONTROL VALVES TO CONTROLLERS IN A CLOCKWISE SEQUENCE TO CORRESPOND WITH STATION SETTINGS BEGINNING WITH STATIONS 1, 2, 3, ETC. AUTOMATIC CONTROLLERS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AS NOTED ON THE DRAWINGS. ALL ZONES WILL BE LABELED ON THE CONTROLLER.

B. CONTROLLERS SHALL BE EQUIPPED WITH LIGHTNING PROTECTION AND GROUNDED TO A STANDARD 5/8" COPPER CLAD STEEL GROUND ROD DRIVEN A MINIMUM OF 8' INTO THE GROUND AND CLAMPED.

C. THE ELECTRICAL SERVICE TO THE CONTROLLERS SHALL BE PERFORMED BY AN ELECTRICAL SUBCONTRACTOR IN COMPLIANCE WITH NEC REQUIREMENTS.

3.09 CONTROL WIRE

A. CONTROL WIRING BETWEEN THE CONTROLLER AND ELECTRIC VALVES SHALL BE BURIED IN MAIN LINE TRENCHES OR IN SEPARATE TRENCHES. ELECTRICAL CONNECTION AT VALVE WILL ALLOW FOR PIGTAIL SO SOLENOID CAN BE REMOVED FROM VALVE WITH SUFFICIENT SLACK TO ALLOW ENDS TO BE PULLED 12" ABOVE GROUND FOR EXAMINATION AND CLEANING.

B. AN EXPANSION LOOP SHALL BE PROVIDED AT EVERY VALVE AT 100' O.C. EXPANSION LOOP SHALL BE FORMED BY WRAPPING WIRE AT LEAST EIGHT TIMES AROUND A 3/4" PIPE AND WITHDRAWING PIPE.

C. THE WIRE SHALL BE BUNDLED AND TAPED EVERY TEN FEET. THE WIRE SHALL BE LAID IN THE TRENCH PRIOR TO INSTALLING THE PIPE BEING CAREFUL TO INSTALL WIRE BENEATH AND 6" TO THE SIDE OF THE MAIN PIPE LINE.

D. ELECTRICAL CONNECTIONS TO ELECTRIC CONTROL VALVES SHALL BE MADE WITH RAINBIRD PEN-TITE OR TECHDEL GT-3-GEL - TITE CONNECTORS OR EQUAL.

POWER CONNECTIONS: ELECTRICAL CONNECTIONS TO POWER AND SIGNAL WIRES SHALL BE MADE USING 3M 82-A2 POWER CABLE SPLICE KITS.

3.10 SPRINKLER HEADS

A. GENERAL PROVISIONS:

1. SPRINKLER HEADS SHALL BE INSTALLED AS DESIGNATED ON THE SHOP DRAWINGS. HEADS SHALL BE INSTALLED ON FLEXIBLE PVC. TOP TO BE FLUSH WITH FINISH GRADE OR TOP OF CURB.

2. SPACING OF HEADS SHALL NOT EXCEED THE MAXIMUM INDICATED ON THE SHOP DRAWINGS (UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT). IN NO CASE SHALL THE SPACING EXCEED THE MAXIMUM RECOMMENDED BY THE MANUFACTURER.

B. HEAD TYPES:

1. POP-UP- ROTARY SPRINKLER HEADS: SHALL BE INSTALLED ON FLEX JOINT AND BE SET WITH TOP OF HEAD FLUSH WITH FINISH GRADE. HEADS INSTALLED AT CURB SHALL HAVE 6" TO 10" BETWEEN PERIMETER OF HEAD AND CONCRETE. HEADS PLACED AT EDGE OF PAVEMENT HAVING NO CURB SHALL BE INSTALLED 24" FROM EDGE OF PAVEMENT.

2. SPRAY POP-UP SPRINKLER HEADS: SHALL BE INSTALLED ON FLEXIBLE PVC AND BE SET WITH TOP OF HEAD FLUSH WITH FINISHED GRADE. SPRINKLER HEADS PLACED ADJACENT TO CURBS WILL BE INSTALLED 9" FROM CONCRETE. SPRINKLER HEADS PLACED ADJACENT TO PAVEMENT HAVING NO CURB SHALL BE INSTALLED 24" FROM THE EDGE OF PAVEMENT.

3.11 COMPLETION

A. FLUSHING: BEFORE SPRINKLER HEADS ARE SET, THE CONTRACTOR SHALL FLUSH THE LINES THOROUGHLY TO MAKE SURE THERE IS NO FOREIGN MATTER IN THE LINES.

THE CONTRACTOR SHALL FLUSH THE MAIN LINES FROM DEAD END FITTINGS FOR A MINIMUM OF FIVE MINUTES UNDER A FULL HEAD OF PRESSURE.

B. TESTING: THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND OWNER FORTY-EIGHT (48) HOURS IN ADVANCE OF TESTING.

PRIOR TO BACKFILLING OF MAIN LINE FITTINGS, CONTRACTOR SHALL FILL THE MAIN LINE PIPING WITH WATER, IN THE PRESENCE OF THE OWNER/LANDSCAPE ARCHITECT, TAKING CARE TO PURGE THE AIR FROM IT BY OPERATING ALL THE SPRINKLER CONTROL VALVES ONE OR MORE TIMES AND/OR SUCH OTHER MEANS AS MAY BE NECESSARY. A SMALL, HIGH PRESSURE PUMP OR OTHER MEANS OF MAINTAINING A CONTINUOUS WATER SUPPLY SHALL BE CONNECTED TO THE MAIN LINE AND SET SO AS TO MAINTAIN 100 PSI IN THE MAIN LINE SYSTEM FOR TWO (2) HOURS WITHOUT INTERRUPTION. WHEN THIS HAS BEEN ACCOMPLISHED AND WHILE THE PRESSURE IN THE SYSTEM IS STILL 100 PSI, LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD C-600. PRESSURE READINGS SHALL BE NOTED AND MAKE UP WATER USAGE SHALL BE RECORDED. SHOULD THE RATE OF MAKE UP WATER USAGE INDICATE SIGNIFICANT LEAKAGE, THE SOURCE OF SUCH LEAKAGE SHALL BE FOUND AND CORRECTED AND THE SYSTEM THEN RETESTED UNTIL THE OWNER/LANDSCAPE ARCHITECT IS SATISFIED THAT THE SYSTEM IS REASONABLY SOUND. LATERAL LINE TESTING SHALL BE CONDUCTED DURING THE OPERATING TESTING OF THE SYSTEM BY CHECKING VISUALLY THE GROUND SURFACE UNTIL NO LEAKS IN THIS PORTION OF THE SYSTEM ARE EVIDENT. LEAKS SHALL BE REPAIRED OR PAID FOR BY THE CONTRACTOR AT ANY TIME THEY APPEAR DURING THE WARRANTY PERIOD.

C. ADJUSTMENT AND COVERAGE OF SYSTEM: COORDINATE PRESSURE TESTING WITH ADJUSTMENTS AND COVERAGE TEST OF SYSTEM SO BOTH MAY OCCUR AT THE SAME TIME. THE CONTRACTOR SHALL BALANCE AND ADJUST THE VARIOUS COMPONENTS OF THE SYSTEM SO THAT THE OVERALL OPERATION OF THE SYSTEM IS MOST EFFICIENT. THIS INCLUDES A SYNCHRONIZATION OF THE CONTROLLERS, ADJUSTMENTS TO PRESSURE REGULATORS, PRESSURE RELIEF VALVES, PART CIRCLE SPRINKLER HEADS, AND INDIVIDUAL STATION ADJUSTMENTS ON THE CONTROLLERS.

3.12 WARRANTY

A. THE CONTRACTOR SHALL FULLY WARRANT THE LANDSCAPE IRRIGATION SYSTEM FOR A PERIOD OF ONE (1) YEAR AFTER THE WRITTEN FINAL ACCEPTANCE AND WILL RECEIVE A WRITTEN CONFIRMATION FROM THE LANDSCAPE ARCHITECT THAT THE WARRANTY PERIOD IS IN EFFECT.

B. DURING THE WARRANTY PERIOD, THE CONTRACTOR WILL ENFORCE ALL MANUFACTURER'S AND SUPPLIER'S WARRANTIES AS IF MADE BY THE CONTRACTOR HIMSELF. ANY MALFUNCTIONS, DEFICIENCIES, BREAKS, DAMAGES, DISREPAIR, OR OTHER DISORDER DUE TO MATERIALS, WORKMANSHIP, OR INSTALLATION BY THE CONTRACTOR AND HIS SUPPLIERS SHALL BE IMMEDIATELY AND PROPERLY CORRECTED TO THE PROPER ORDER AS DIRECTED BY THE OWNER AND/OR LANDSCAPE ARCHITECT.

C. ANY DAMAGES CAUSED BY SYSTEM MALFUNCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO SHALL MAKE FULL AND IMMEDIATE RESTORATION FOR SAID DAMAGES.

3.13 WELL SPECIFICATION

WS-A. REFERENCE: GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL, SPECIAL AND SUPPLEMENTARY CONDITIONS AND DIVISION ONE GENERAL REQUIREMENTS, APPLY TO WORK SPECIFIED IN THIS SECTION.

WS-B. DESCRIPTION OF WORK:

A. FURNISH ALL MATERIALS, EQUIPMENT, LABOR, SUPERVISION AND ALL RELATED ITEMS NECESSARY TO COMPLETE THIS PHASE OF THE WORK AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED HEREIN.

B. CAPACITY. PROVIDE WELLS WITH MINIMUM CONTINUING PRODUCING CAPACITY AS FOLLOWS: 70 GPM & 95 GPM

C. EXTENT: WATER WELL WORK IS SHOWN ON DRAWINGS.

D. WORK: INCLUDES FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, SUPERVISORS AND ALL RELATED ITEMS NECESSARY TO COMPLETE THIS PHASE OF WORK, AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN.

E. WATER WELL: WORK IS BASED ON FOLLOWING CRITERIA:

1. TYPE AND SIZE OF WELL WILL BE SUCH AS TO ASSURE A CONSTANT FLOW OF WATER AS INDICATED ON IRRIGATION PLANS.

2. WATER SHALL BE SAND FREE WITH THE MINIMUM AMOUNT OF IRON OR TANNING POSSIBLE IN A GIVEN GEOGRAPHIC LOCATION.

3. DRIVEN STEEL CASE WELLS SHALL BE DRIVEN TO A DEPTH INTO BEST ROCK FORMATION - WATER BEARING STRATUS.

4. ROTARY DRILLED WELL: PVC CASED SHALL BE DRILLED A MINIMUM OF 5 INCHES LARGER THAN THE CASING DIAMETER. DEPTH AS REQUIRED TO OBTAIN THE BEST WATER QUALITY AVAILABLE IN A GIVEN GEOGRAPHIC LOCATION.

5. A MINIMUM OF 20 FEET OF SLOTTED STAINLESS STEEL MESH SHALL EXTEND FROM BOTTOM OF EASING AND SHALL BE GRAVEL PACKED. (TREMI-PIPED).

6. CASING SHALL BE GROUTED TO MEET ALL STATE WELL DRILLING CODES.

7. APPLICATIONS AND PERMITS FOR DRILLING AND DEVELOPING WELLS.

A. DRILLING FOR FINAL WATER WELL DEPTH

B. DEVELOPMENT OF WELLS

C. TESTING AND DISINFECTION

D. SETTING OF PUMPS AND COORDINATION TO PROVIDE POWER FOR PUMPS

F. SITE INSPECTION: CONTRACTOR SHALL ACQUAINT HIMSELF WITH ALL SITE CONDITIONS. SUBMISSION OF HIS PROPOSAL SHALL BE CONSIDERED EVIDENCE THAT THE EXAMINATION HAS BEEN CONDUCTED. SHOULD UTILITIES NOT SHOWN ON THE PLANS BE FOUND DURING EXCAVATIONS, CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE FOR INSTRUCTIONS AS TO FURTHER ACTION. FAILURE TO DO SO WILL MAKE CONTRACTOR LIABLE FOR ANY AND ALL DAMAGE THERETO ARISING FROM HIS OPERATIONS SUBSEQUENT TO DISCOVERY OF SUCH UTILITIES NOT SHOWN IN PLANS.

WS-C QUALITY ASSURANCE:

A. PROTECTING WATER QUALITY: TAKE PRECAUTIONS TO PREVENT CONTAMINATED WATER OR WATER HAVING UNDESIRABLE PHYSICAL OR CHEMICAL CHARACTERISTICS FROM ENTERING STRATUM FROM WHICH WELL IS TO DRAW IS SUPPLY. PREVENT CONTAMINATED WATER, GASOLINE, ETC., FROM ENTERING WELL EITHER THROUGH OPENING OR BY SEEPAGE THROUGH GROUND SURFACE.

B. CONTAMINATION: IF WELL BECOMES CONTAMINATED OR WATER HAVING UNDESIRABLE PHYSICAL OR CHEMICAL CHARACTERISTICS ENTERS WELL DUE TO NEGLECT, PROVIDE CASINGS, SEALS STERILIZING AGENTS OR OTHER MATERIALS TO ELIMINATE CONTAMINATION OR SHUT OFF UNDESIRABLE WATER. PROVIDE REMEDIAL WORK AT NO COST TO THE OWNER.

C. EXERCISE CARE: IN PERFORMANCE OF WORK TO PREVENT BREAKDOWN OR CAVING IN OF STRATA OVERLYING THAT FROM WHICH WATER IS TO BE DRAWN. DEVELOP, PUMP OR BAIL WELL UNTIL WATER PUMPED FROM WELL IS SUBSTANTIALLY FREE FROM SAND.

D. PROTECT WORK: TO PREVENT EITHER TAMPERING WITH WELL OR ENTRANCE OF FOREIGN MATTER. UPON COMPLETION, PROVIDE TEMPORARY WELL CAP.

E. DRILLER'S REQUIREMENTS: EXPERIENCED FOREMAN OR DRILLER TO BE CONSTANTLY IN CONTROL OF WELL SITE AND WHO HAS AUTHORITY TO TAKE ORDERS FROM OWNER'S REPRESENTATIVE AND, UPON REQUEST, FURNISH WELL DRILLING INFORMATION DESIRED BY OWNER'S REPRESENTATIVE.

F. ABANDONMENT OF DRILLING: IF IT BECOMES NECESSARY TO ABANDON DRILLINGS OPERATIONS BEFORE COMPLETION OF WATER PRODUCING WELL, FOLLOW REGULATIONS FOR ABANDONMENT OF WELL AS REQUIRED BY LOCAL AUTHORITIES HAVING JURISDICTION. SHOULD ABANDONMENT OF DRILLING BE NECESSARY DUE TO POOR WORKMANSHIP OR NEGLIGENCE ON PART OF THE CONTRACTOR, NO COMPENSATIONS WILL BE ALLOWED. SHOULD ABANDONMENT OF DRILLING NECESSARY DUE TO INADEQUATE SUPPLY OF GOOD QUALITY WATER, OR FOR SUCH OTHER REASON THAT OWNER'S REPRESENTATIVE DEEMS TO BE NO FAULT OF THE CONTRACTOR, COMPENSATION FOR WORK WILL BE BASED O UNIT PRICES IN CONTRACT.

WS-D SUBMITTALS:

A. SHOP DRAWINGS: SUBMIT IN ACCORDANCE WITH GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S PRODUCT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. INCLUDE OTHER DATA AS MAY BE REQUIRED TO SHOW COMPLIANCE WITH THESE SPECIFICATIONS. DISTRIBUTE AN ADDITIONAL COPY OF EACH INSTALLATION INSTRUCTION TO THE INSTALLER.

B. SAMPLES, RECORDS AND REPORTS: TAKE SAMPLES OF SUB-STRATA FORMATION AT TEN-FOOT INTERVALS AND AT CHANGES IN FORMATION THROUGHOUT ENTIRE DEPTH OF WELL. FURNISH SAMPLES OF WATER-BEARING FORMATION TO QUALIFIED TESTING LABORATORY AND WELL SCREEN MANUFACTURER FOR MECHANICAL SLEEVE ANALYSIS.

C. PROVIDE OWNER'S REPRESENTATIVE THE FOLLOWING INFORMATION FOR RECORD PURPOSES:
8. CASINGS - DIAMETER, THICKNESS, WEIGHT PER FOOT OF LENGTH, DEPTH BELOW GRADE
9. SCREEN - DIAMETER, OPENING SIZE
10. PUMPING TEST - STATIC WATER LEVEL, MAXIMUM SAFE YIELD, DRAWN DOWN AT MAXIMUM YIELD
11. LOG - FORMATION LOG INDICATION STRATA ENCOUNTERED
12. ALIGNMENT - CERTIFICATION THAT WELL IS ALIGNED AND PLUMB WITHIN SPECIFIED TOLERANCES

D. SALT CONTENT: IF WELL DRILLER HAS KNOWLEDGE THAT SALT CONTENT MAY BE PRESENT AT 2" PILOT WELL WILL BE DRILLED NOT TO EXCEED 700 P.P.M. SALT CONTENT.

E. SUBMIT MANUFACTURER'S SPECIFICATIONS: INSTALLATION AND START-UP INSTRUCTIONS, CHARACTERISTICS PERFORMANCE CURVES WITH SELECTION POINTS CLEARLY INDICATED, SHOP DRAWINGS, WIRING DIAGRAMS, AND MAINTENANCE DATA INCLUDING SPARE PARTS LISTS, FOR EACH TYPES IN EACH OF THE FOLLOWING.

WS-E WARRANTY: PROVIDE WARRANTY COVERING ALL MATERIAL, WORKMANSHIP AND PERFORMANCE OF WELL FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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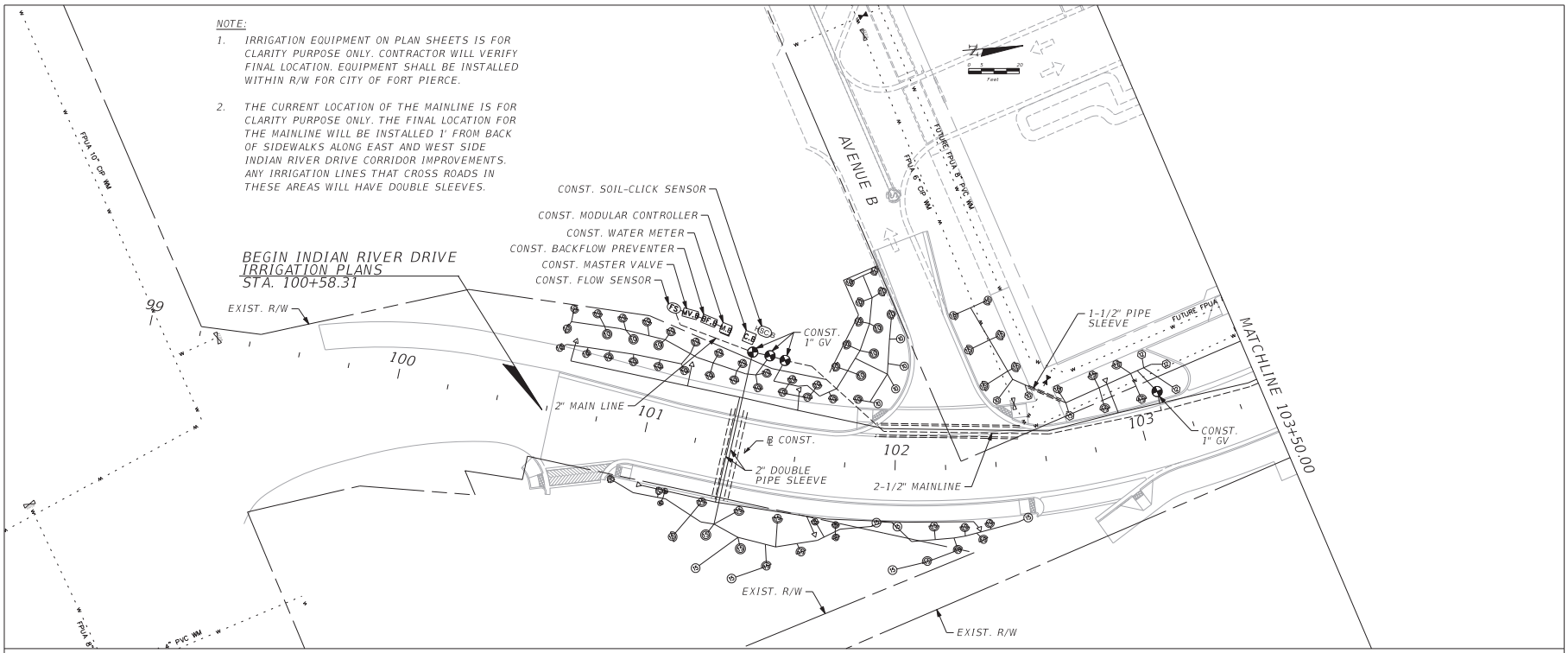
(772) 794-4100
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE IRRIGATION GENERAL NOTES

SHEET NO. 85



IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
2Q 2H 4Q 4H 6Q 6H	HUNTER PROS-06-PRS30 SR SERIES TURF SPRAY, 30 PSI REGULATED 6IN. POP-UP. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.	30
ES LCS RCS CS SS	HUNTER PROS-06-PRS30 STRIP SERIES TURF SPRAY, 30 PSI REGULATED 6IN. POP-UP. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.	30
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Q T H F	HUNTER PROS-06-PRS30 15 SERIES TURF SPRAY, 30 PSI REGULATED 6IN. POP-UP. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.	30
4 6 8 10 12 15 17	HUNTER PROS-06-PRS30 ADJ SERIES TURF SPRAY, 30 PSI REGULATED 6IN. POP-UP. CO-MOLDED WIPER SEAL WITH UV RESISTANT MATERIAL.	30
25 50 10 20	HUNTER PCB FLOOD BUBBLER, 1/2IN. FIPT.	30

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	HUNTER PGV-101G 1IN. PLASTIC ELECTRIC REMOTE CONTROL VALVE, FOR RESIDENTIAL/LIGHT COMMERCIAL USE. FEMALE NPT INLET/OUTLET. GLOBE CONFIGURATION, WITH FLOW CONTROL.
MV	HUNTER ICV-G-FS 1-1/2" 1IN., 1-1/2IN., 2IN., AND 3IN. PLASTIC ELECTRIC MASTER VALVE, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH FILTER SENTRY.
BF	FEBCO 825YA 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER
C	HUNTER I2C-3200-PL 32 STATION OUTDOOR MODULAR CONTROLLER. WITH THREE ICM-800 MODULE. COMMERCIAL USE. PLASTIC CABINET.
FS	HUNTER HFS-150 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 1-1/2IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.
HSC	HUNTER SOIL-CLICK SENSOR
M	WATER METER 1-1/2"

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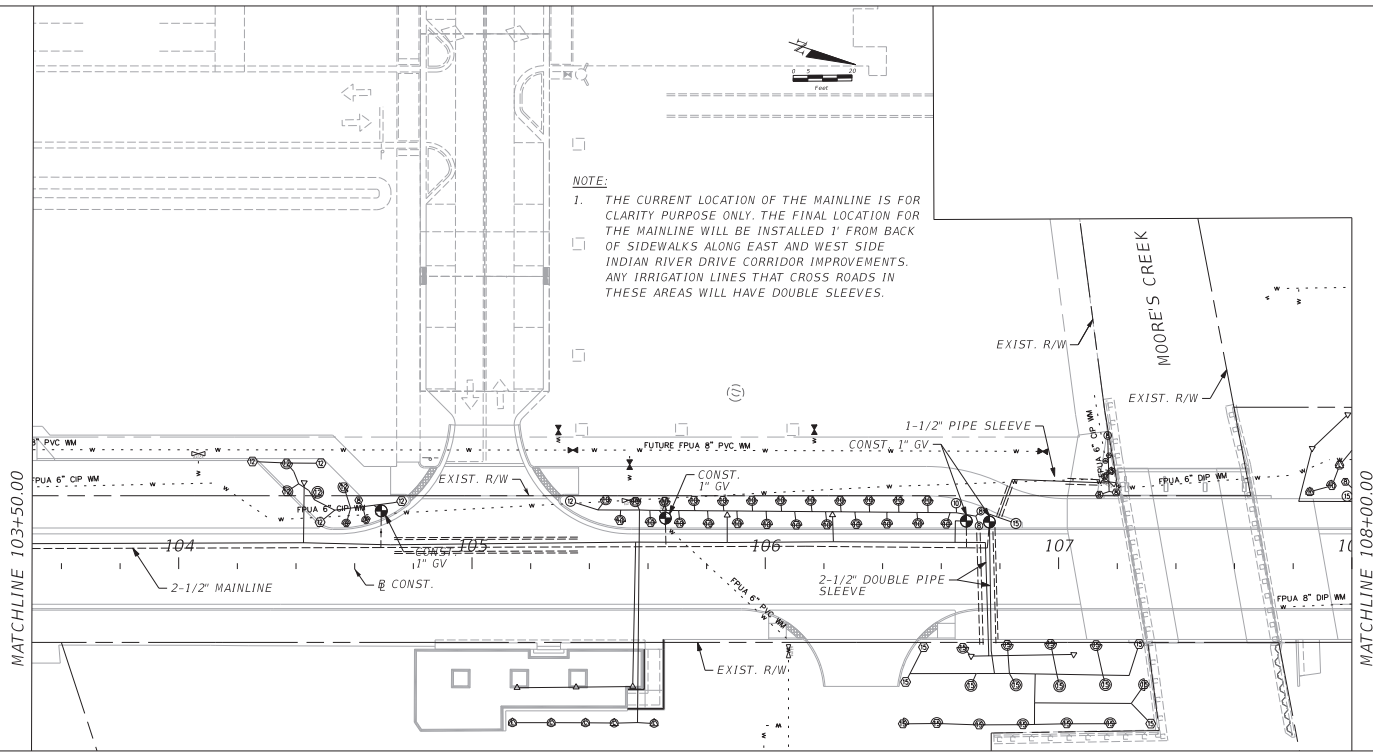
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE IRRIGATION

SHEET NO. 86



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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE IRRIGATION

SHEET NO. 87

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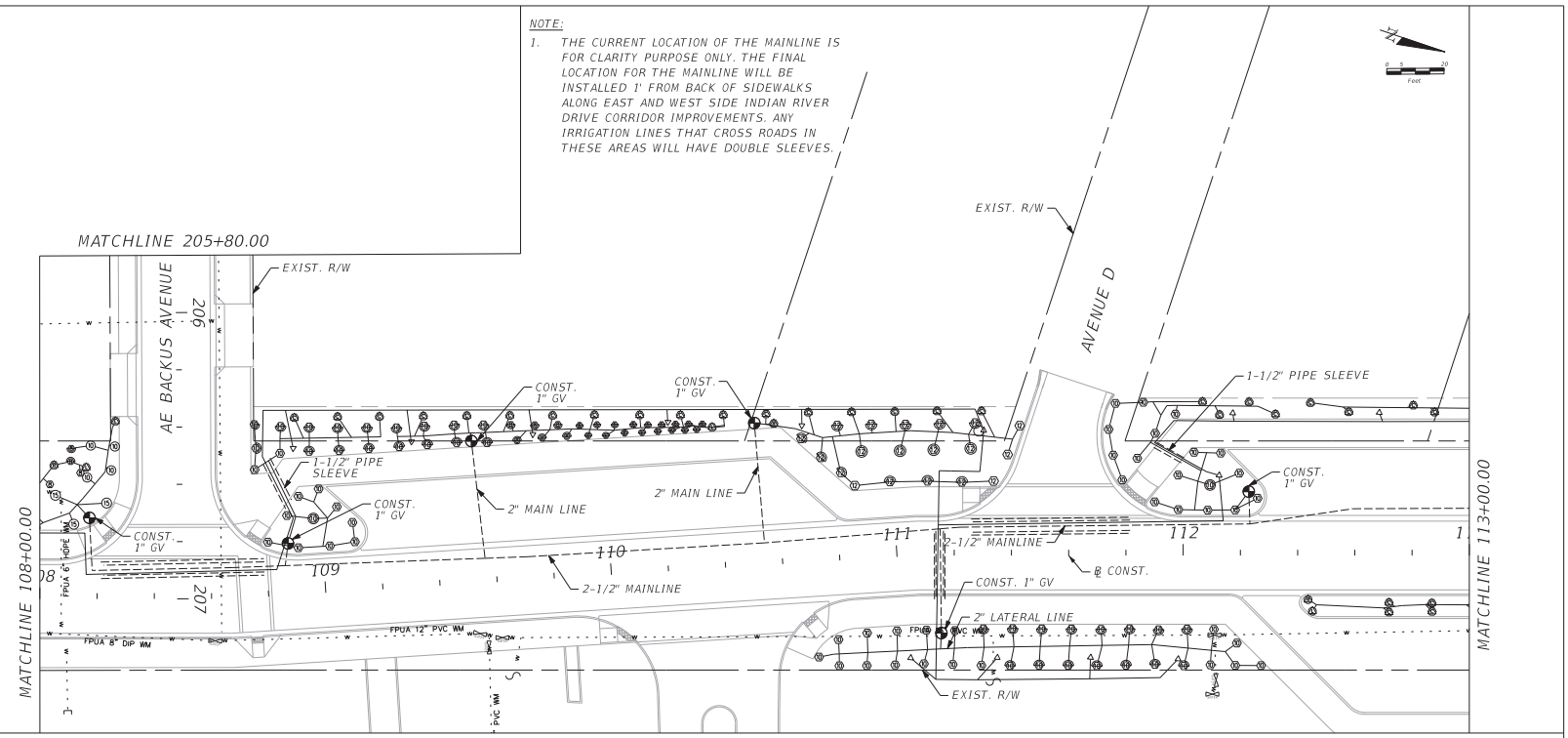
NOTE:

1. THE CURRENT LOCATION OF THE MAINLINE IS FOR CLARITY PURPOSE ONLY. THE FINAL LOCATION FOR THE MAINLINE WILL BE INSTALLED 1' FROM BACK OF SIDEWALKS ALONG EAST AND WEST SIDE INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS. ANY IRRIGATION LINES THAT CROSS ROADS IN THESE AREAS WILL HAVE DOUBLE SLEEVES.



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M	WATER METER 1-1/2"

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE IRRIGATION

SHEET NO. 88

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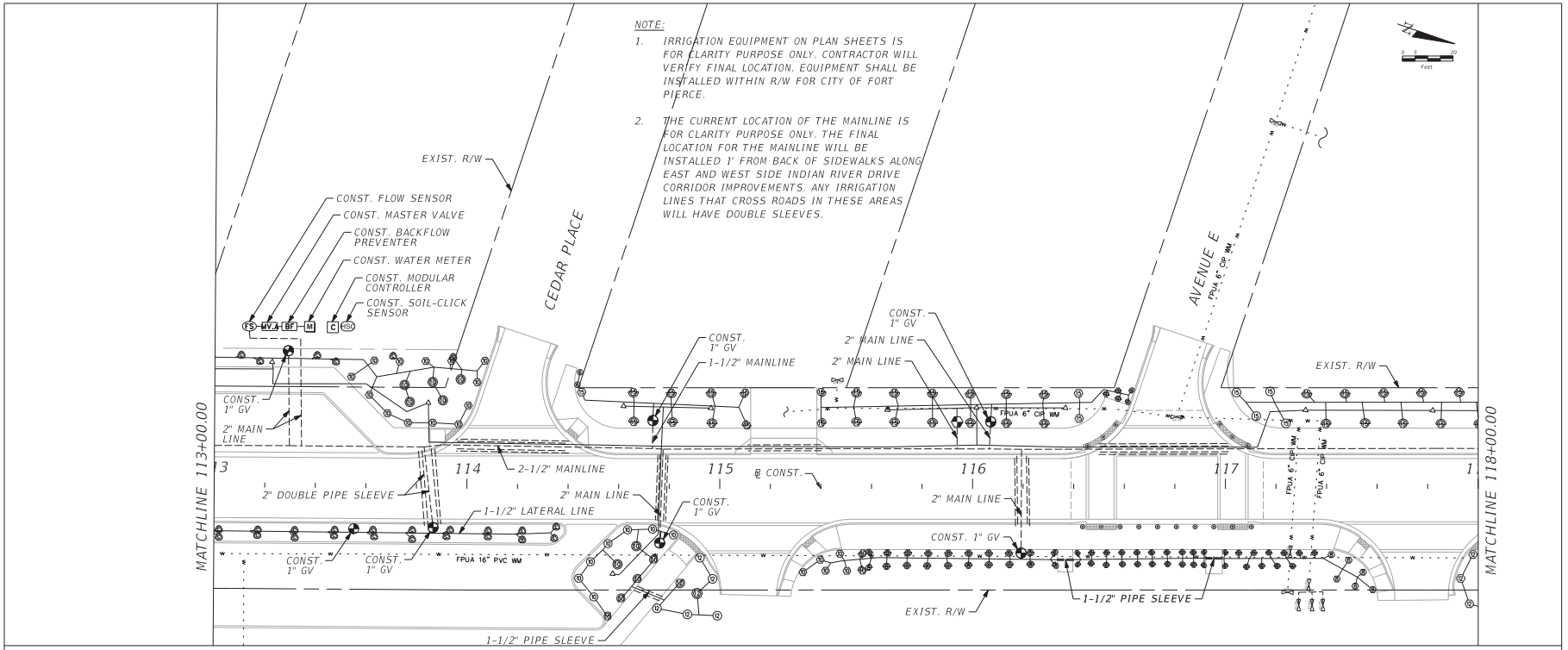

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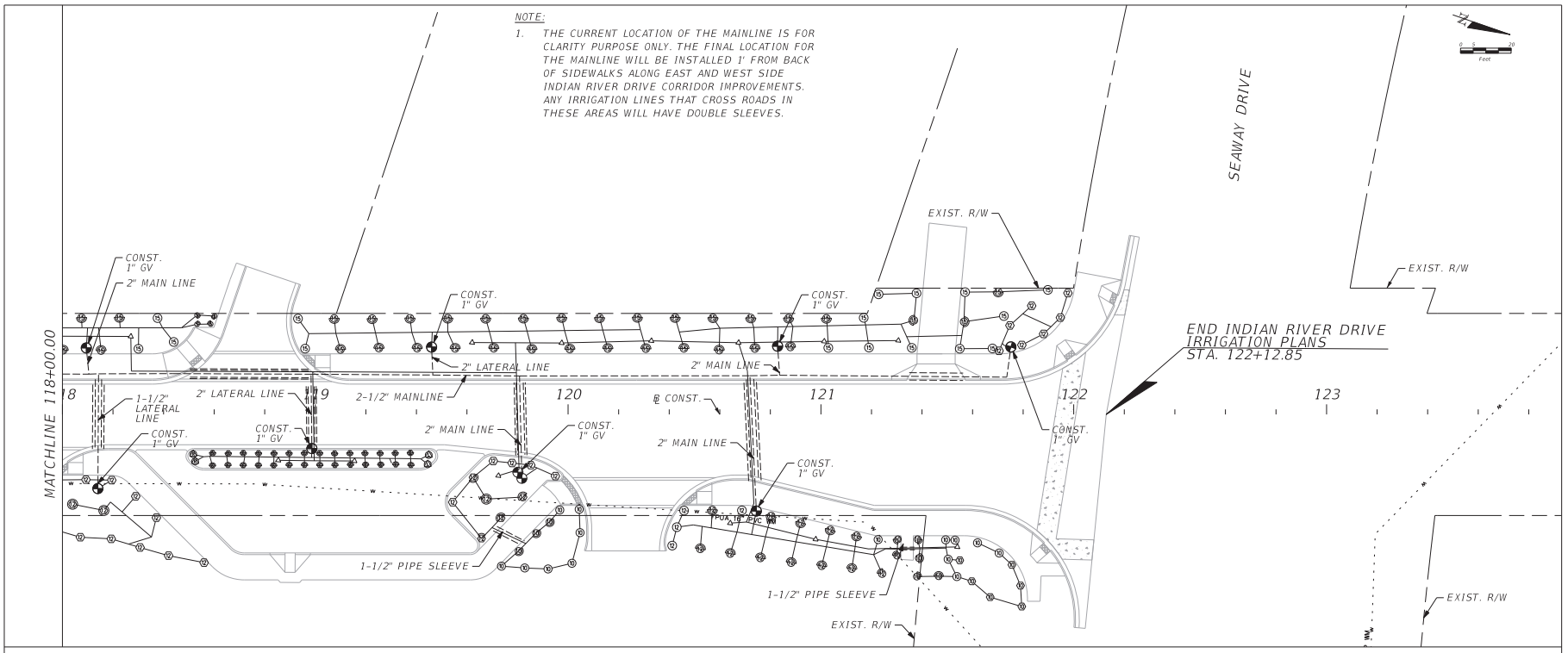
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE IRRIGATION

SHEET NO. 89

rebecca.mulroney 2/4/2025 3:26:37 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_IRRIGATION\PLANIR04.dgn



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INDIAN RIVER DRIVE IRRIGATION

SHEET NO. 90

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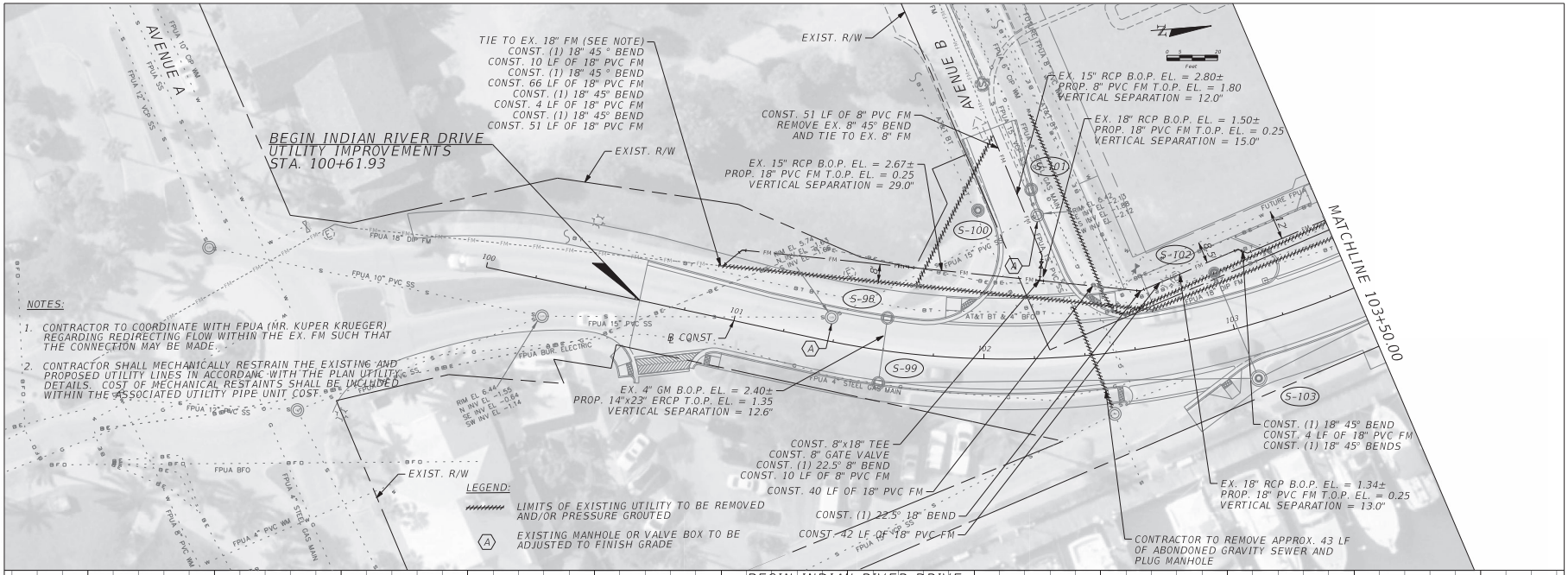

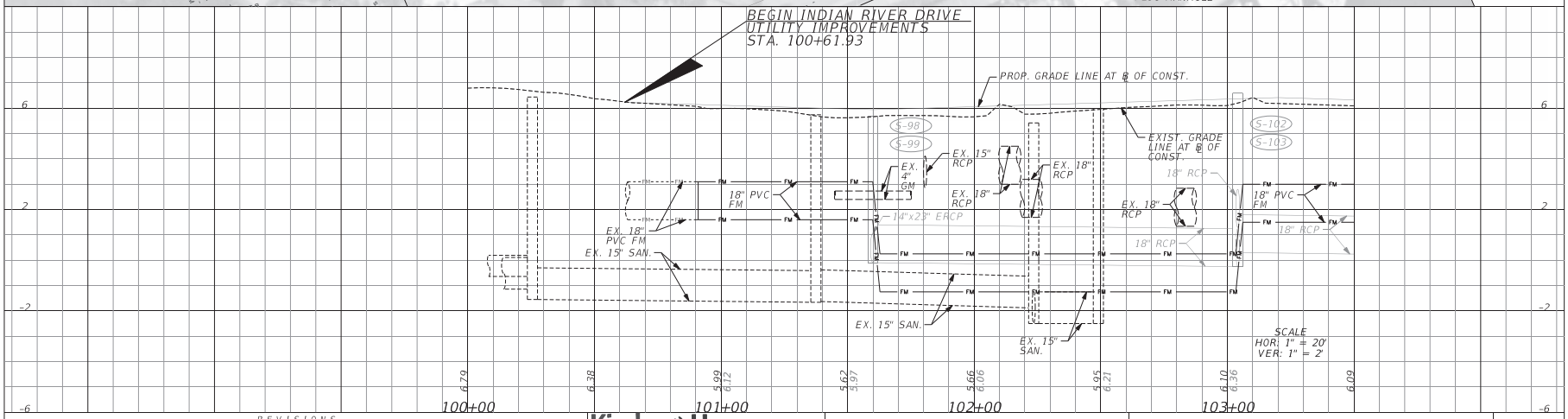

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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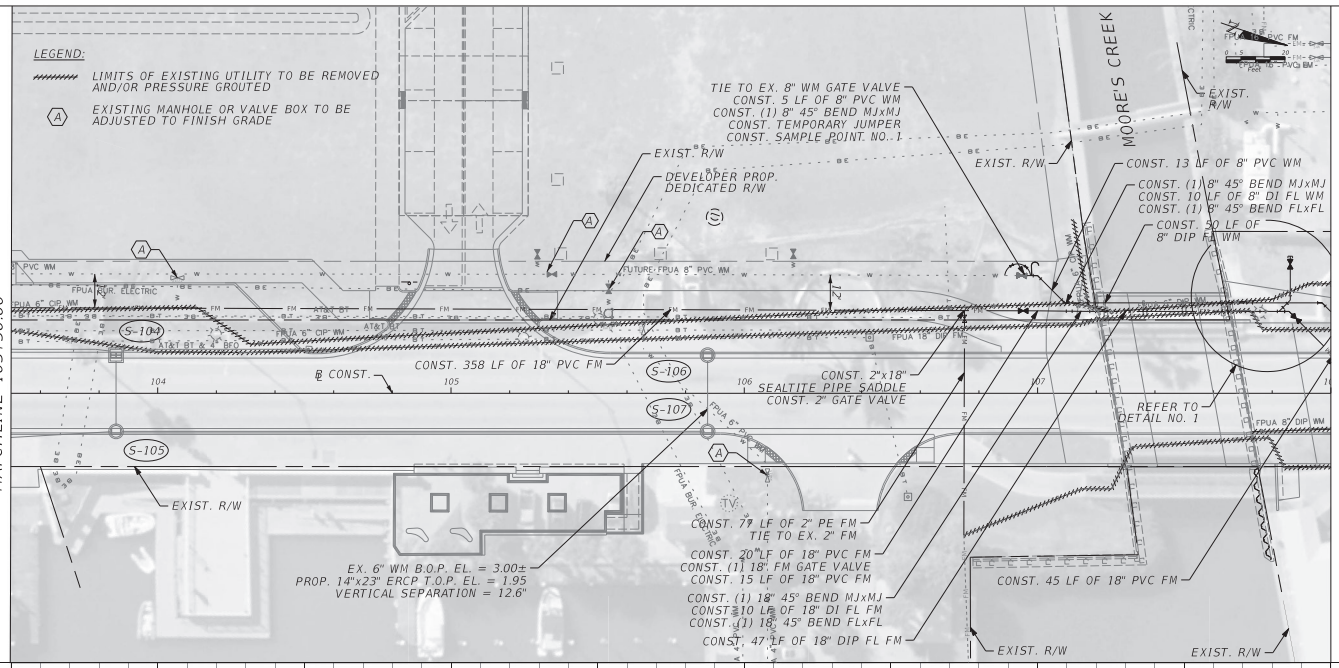
CITY OF FORT PIERCE

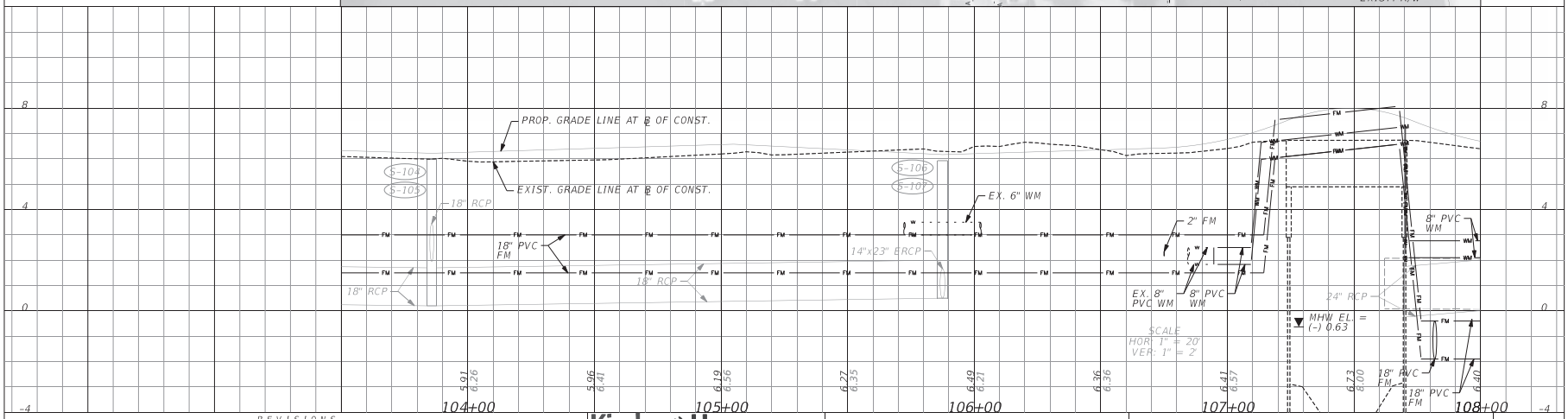
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE UTILITY PLAN & PROFILE

SHEET NO. 91

rebecca.mulroney 2/4/2025 3:26:49 PM K:\VRB_Roadway\047922025 - Indian River Drive Corridor Improvements\CADD\RDWY\PLANS_UTILITY\PLANUT01.dgn





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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE UTILITY PLAN & PROFILE

SHEET NO. 92

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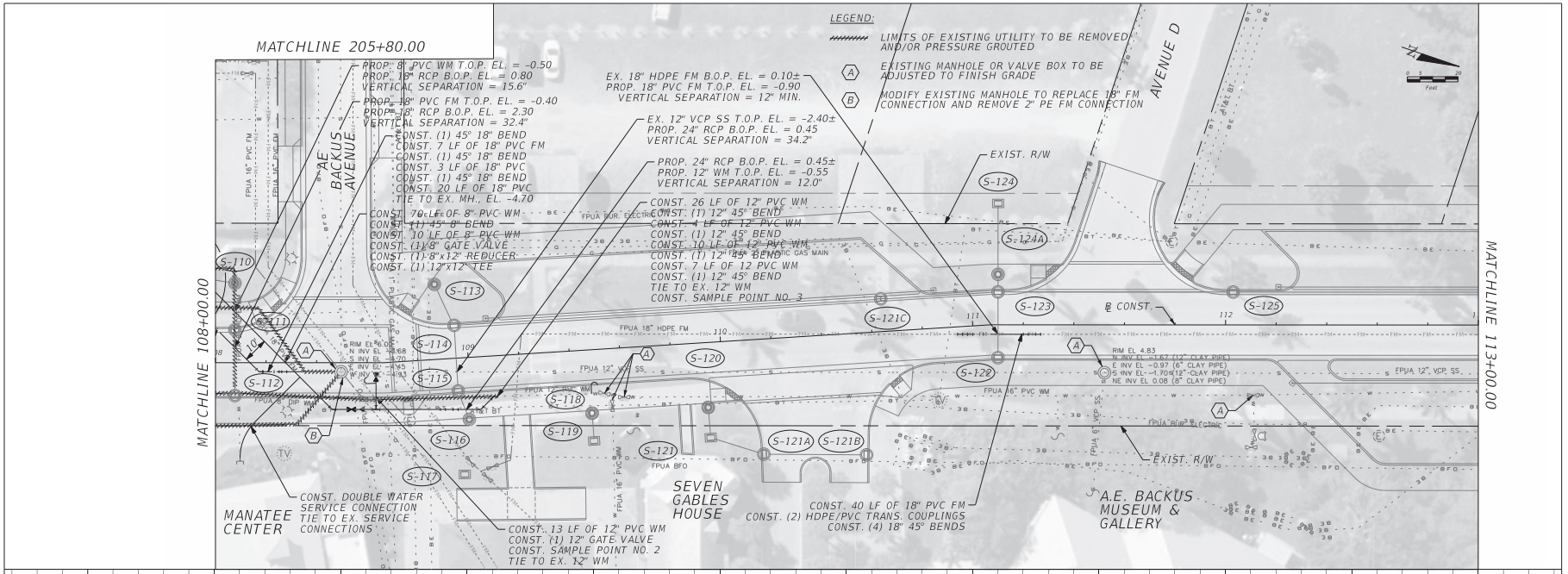
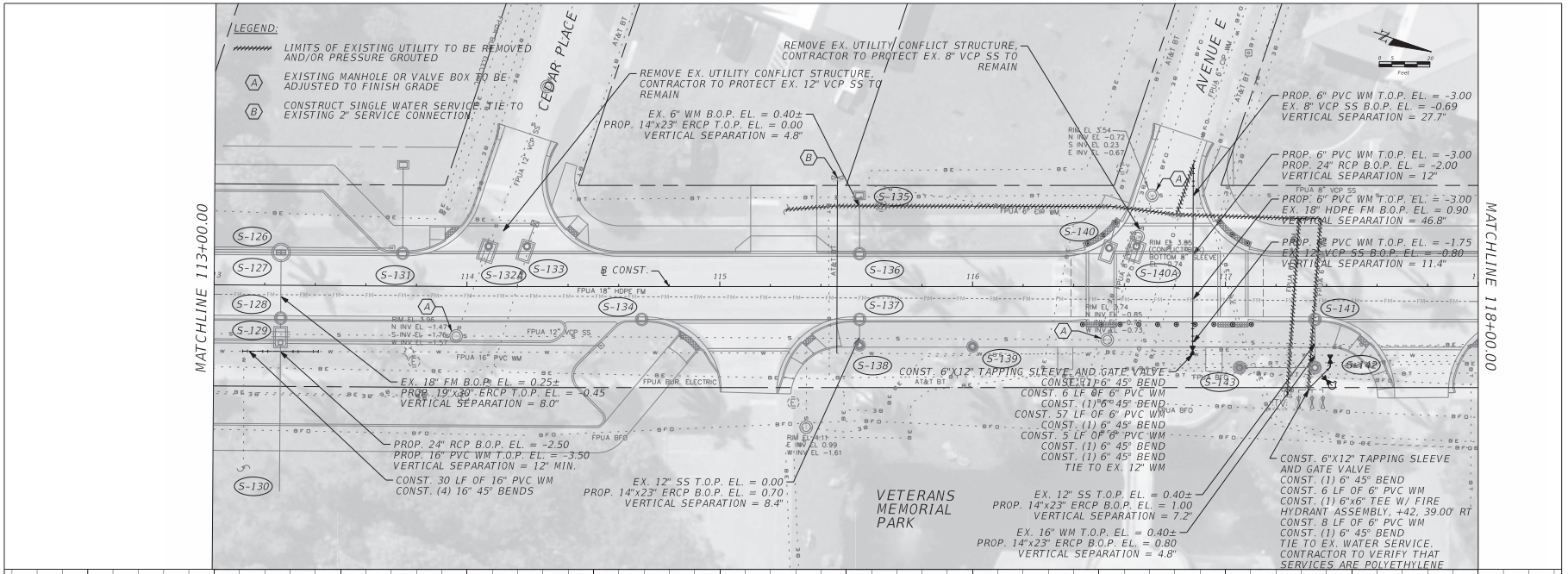
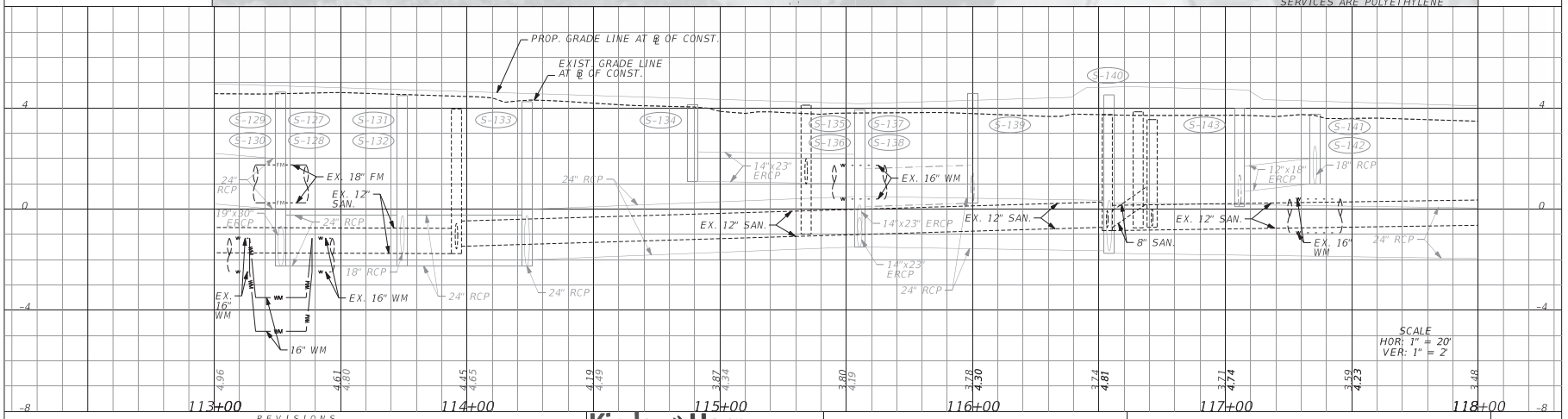

MATCHLINE 205+80.00
MATCHLINE 108+00.00
MATCHLINE 113+00.00
LEGEND:
LIMITS OF EXISTING UTILITY TO BE REMOVED AND/OR PRESSURE GROUTED
EXISTING MANHOLE OR VALVE BOX TO BE ADJUSTED TO FINISH GRADE
MODIFY EXISTING MANHOLE TO REPLACE 18" FM CONNECTION AND REMOVE 2" PE FM CONNECTION
AVENUE D
AE BACKUS AVENUE
EXIST. R/W
PROP. 8" PVC WM T.O.P. EL. = -0.50
PROP. 18" RCP B.O.P. EL. = 0.80
VERTICAL SEPARATION = 15.6"
PROP. 18" PVC FM T.O.P. EL. = -0.40
PROP. 18" RCP B.O.P. EL. = 2.30
VERTICAL SEPARATION = 32.4"
CONST. (1) 45° 18" BEND
CONST. 7 LF OF 18" PVC FM
CONST. (1) 45° 18" BEND
CONST. 3 LF OF 18" PVC
CONST. (1) 45° 18" BEND
CONST. 20 LF OF 18" PVC
TIE TO EX. MH., EL. -4.70
CONST. 70 LF OF 8" PVC WM
CONST. (1) 45° 8" BEND
CONST. 10 LF OF 8" PVC WM
CONST. (1) 8" GATE VALVE
CONST. (1) 8"x12" REDUCER
CONST. (1) 12"x12" TEE
EX. 18" HDPE FM B.O.P. EL. = 0.10±
PROP. 18" PVC FM T.O.P. EL. = -0.90
VERTICAL SEPARATION = 12" MIN.
EX. 12" VCP SS T.O.P. EL. = -2.40±
PROP. 24" RCP B.O.P. EL. = 0.45
VERTICAL SEPARATION = 34.2"
PROP. 24" RCP B.O.P. EL. = 0.45±
PROP. 12" WM T.O.P. EL. = -0.55
VERTICAL SEPARATION = 12.0"
CONST. 26 LF OF 12" PVC WM
CONST. (1) 12" 45° BEND
CONST. 4 LF OF 12" PVC WM
CONST. (1) 12" 45° BEND
CONST. 10 LF OF 12" PVC WM
CONST. (1) 12" 45° BEND
CONST. 7 LF OF 12 PVC WM
CONST. (1) 12" 45° BEND
TIE TO EX. 12" WM
CONST. SAMPLE POINT NO. 3
CONST. DOUBLE WATER SERVICE CONNECTION TIE TO EX. SERVICE CONNECTIONS
CONST. 13 LF OF 12" PVC WM
CONST. (1) 12" GATE VALVE
CONST. SAMPLE POINT NO. 2
TIE TO EX. 12" WM
CONST. 40 LF OF 18" PVC FM
CONST. (2) HDPE/PVC TRANS. COUPLINGS
CONST. (4) 18" 45° BENDS
MANATEE CENTER
SEVEN GABLES HOUSE
A.E. BACKUS MUSEUM & GALLERY
S-110
S-111
S-112
S-113
S-114
S-115
S-116
S-117
S-118
S-119
S-120
S-121
S-121A
S-121B
S-121C
S-122
S-123
S-124
S-124A
S-125
FPUA 18" HDPE FM
FPUA 12" VCP SS
FPUA 16" PVC WM
FPUA 8" PVC FM
FPUA 12" PVC WM
FPUA 16" PVC FM
FPUA BFO
FPUA FGUA GAS MAIN
FPUA FPL
FPUA 6" VCP SS
FPUA 8" PVC WM
FPUA 12" WM
FPUA 18" PVC FM
FPUA 8" PVC FM
FPUA 16" PVC FM
FPUA 12" PVC WM
FPUA 12" VCP SS
FPUA 8" PVC WM
FPUA 16" PVC WM
FPUA 18" PVC FM
FPUA 8" PVC FM
FPUA 12" PVC WM
FPUA 16" PVC F





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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE UTILITY PLAN & PROFILE

SHEET NO. 94

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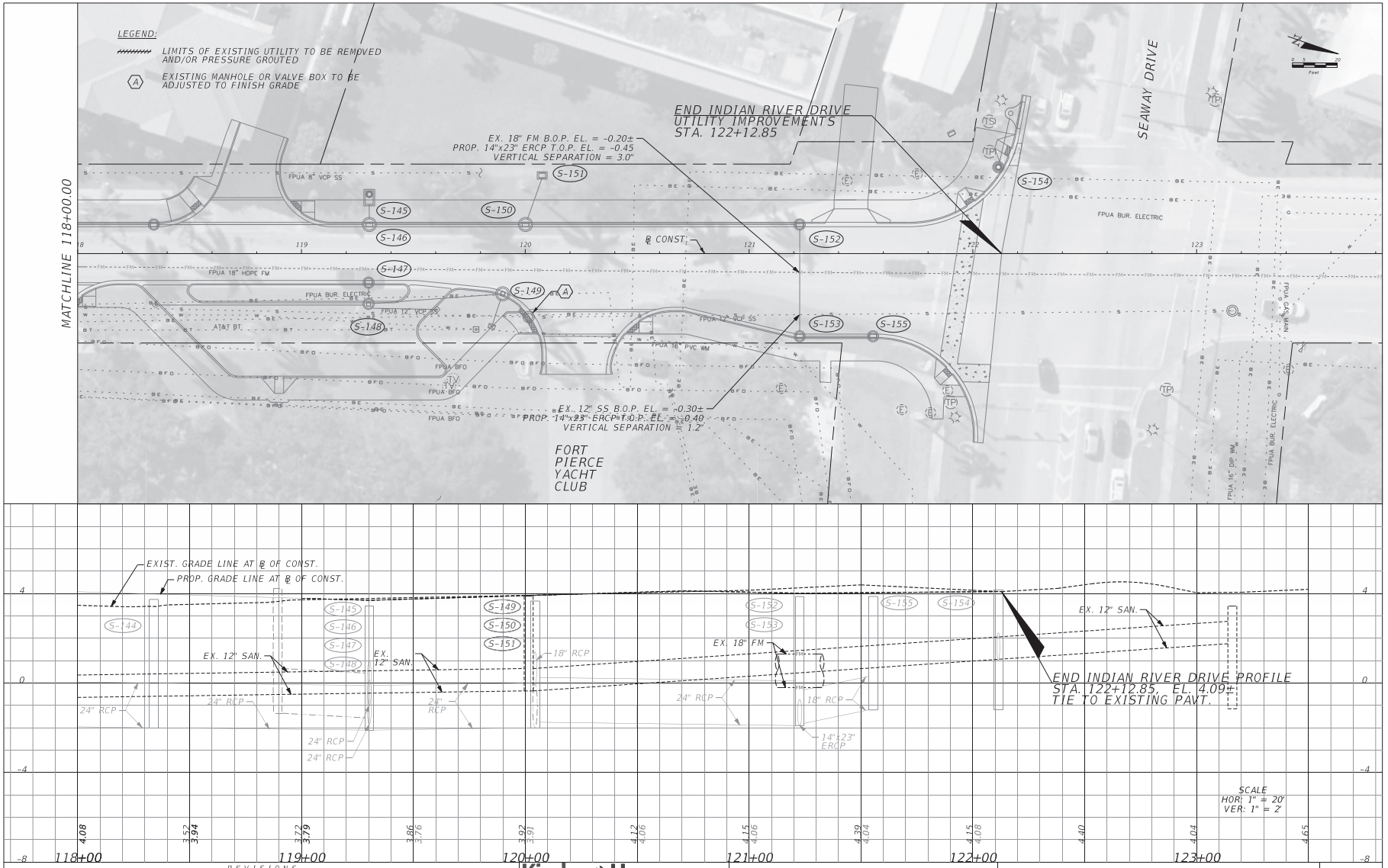

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

INDIAN RIVER DRIVE UTILITY PLAN & PROFILE

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RESTRAINED LENGTH IN FEET EACH SIDE OF BEND									
PIPE DIAMETER (INCHES)	D.I.P.				P.V.C.				
	90°	45°	22 1/2°	11 1/4°	90°	45°	22 1/2°	11 1/4°	
3"	30'	15'	10'	5'	40'	20'	10'	5'	
4"	35'	15'	10'	5'	55'	25'	15'	10'	
6"	55'	25'	10'	5'	80'	35'	20'	10'	
8"	65'	30'	15'	10'	90'	40'	20'	10'	
10"	80'	35'	20'	10'	110'	50'	25'	15'	
12"'	95'	40'	20'	10'	130'	55'	30'	15'	
16"	120'	50	25'	15'	165'	70'	35'	20'	
20"	150'	65'	30'	15'	200'	85'	40'	20'	
24"	180'	70'	35'	20'	210'	90'	45'	25'	
30"	190'	80'	40'	20'	250'	105'	50'	25'	
36"	220'	95'	45'	25'	0	0	0	0	
42"	245'	105'	50'	25'	0	0	0	0	
48"	260'	120'	60'	30'	0	0	0	0	
RESTRAINED LENGTHS FOR DEAD ENDS AND BRANCHES FROM TEES SHALL BE THE SAME AS FOR 90° BENDS									

RESTRAINED LENGTH INFEET EACH SIDE FOR REDUCER										
PIPE DIAMETER (INCHES)										
	3"	4"	6"	8'	10"	12"	16"	20"	24"	30'
3"	0	0	0	)	0	0	0	0	0	0
4"	40'	0	0	)	0	0	0	0	0	0
6"	50'	45'	0	)	0	0	0	0	0	0
8"	75'	70'	40'	)	0	0	0	0	0	0
10"	95'	90'	70'	40'	0	0	0	0	0	0
12"'	120'	115'	100'	75'	40'	0	0	0	0	0
16"	160'	155'	140'	125'	100'	70'	0	0	0	0
20"	200'	195'	185'	170'	150'	130'	75'	0	0	0
24"	160'	155'	150'	140'	135'	120'	90'	50'	0	0
30"	195'	190'	185'	180'	170'	160'	120'	105'	70'	0
36"	225'	220'	215'	210'	205'	195'	180'	150'	125'	70'
42"	245'	240'	235'	230'	225'	220'	205'	180'	155'	105'
48"	255'	250'	245'	240'	235'	230'	215'	195'	175'	125'
RESTRAINED LENGTHS FOR LARGER DIAMETER PIPES										

ALL IN-LINE VALVES SHALL BE TREATED AS DEAD END WITH RESTRAINED PIPE JOINTS UP AND DOWN

UTILITY RESTRAINED PIPE LENGTHS AND SCHEDULE NOTES:

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS UTILITY DETAILS

SHEET NO. 96

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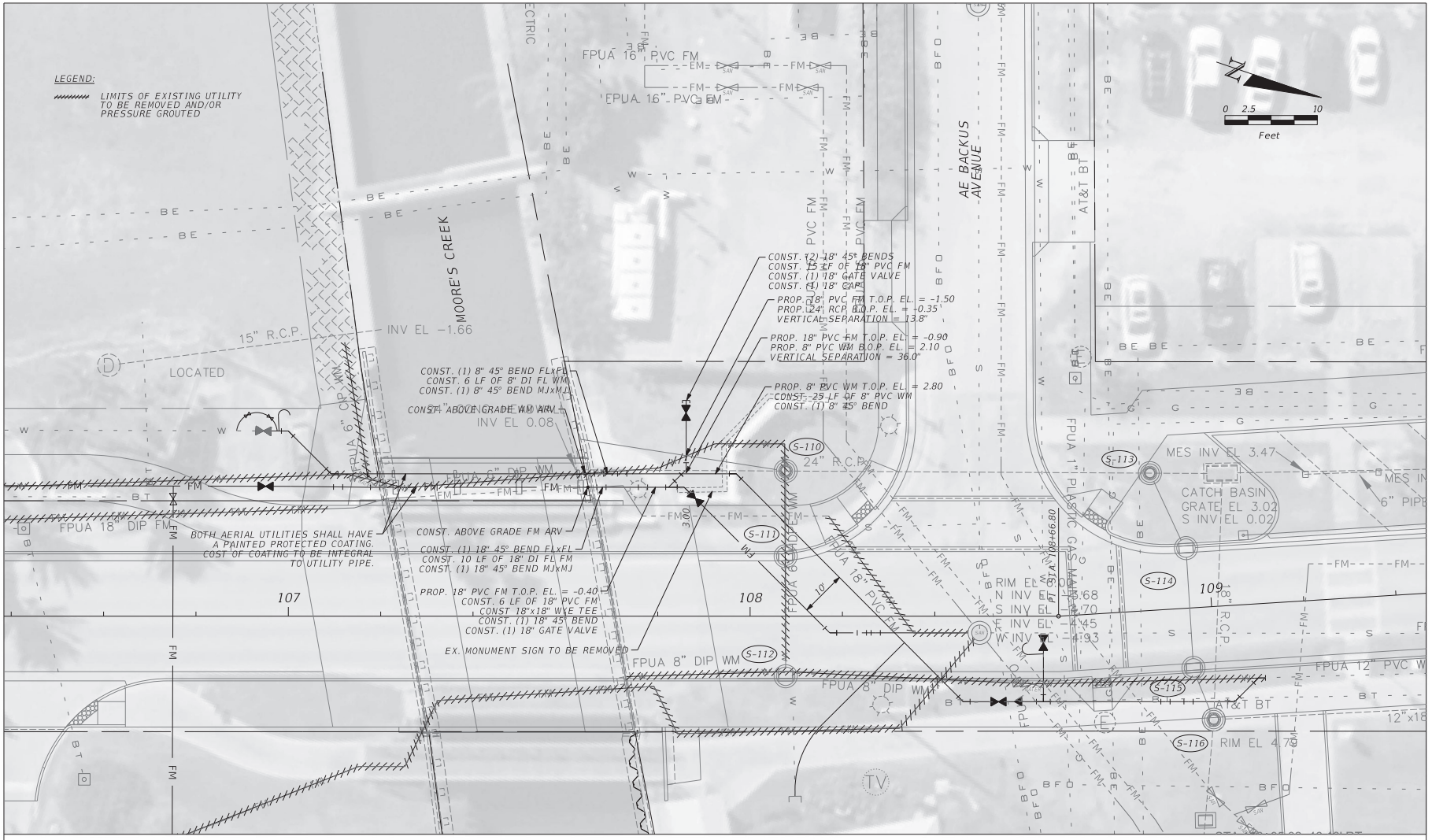

UTILITY DETAIL NO. 1

N.T.S.

REVISIONS					
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS UTILITY DETAILS

SHEET NO. 97

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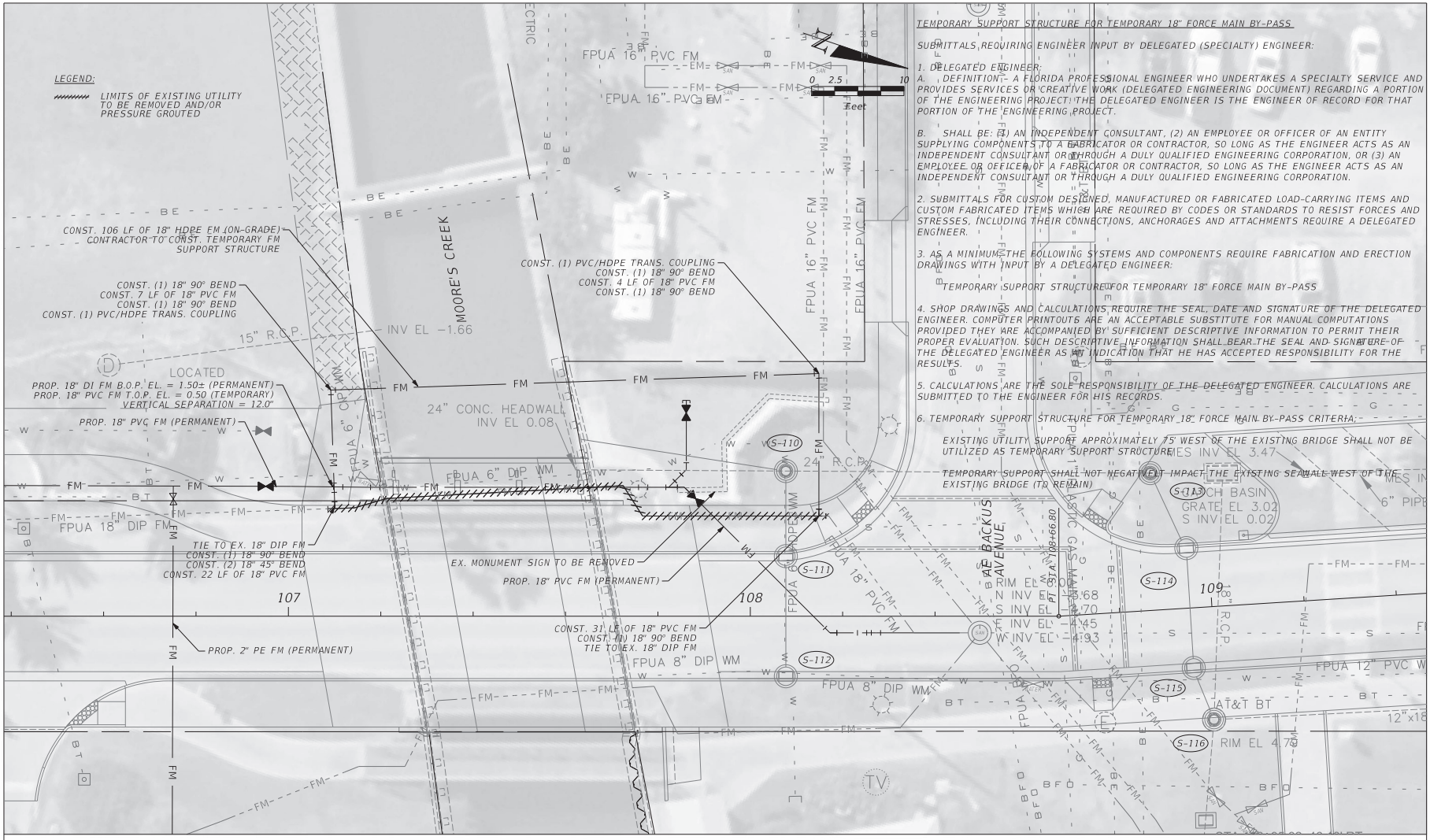

TEMPORARY SUPPORT STRUCTURE FOR TEMPORARY 18" FORCE MAIN BY-PASS

SUBMITTALS REQUIRING ENGINEER INPUT BY DELEGATED (SPECIALTY) ENGINEER:

1. DELEGATED ENGINEER:

A. DEFINITION - A FLORIDA PROFESSIONAL ENGINEER WHO UNDERTAKES A SPECIALTY SERVICE AND PROVIDES SERVICES OR CREATIVE WORK (DELEGATED ENGINEERING DOCUMENT) REGARDING A PORTION OF THE ENGINEERING PROJECT; THE DELEGATED ENGINEER IS THE ENGINEER OF RECORD FOR THAT PORTION OF THE ENGINEERING PROJECT.

B. SHALL BE: (1) AN INDEPENDENT CONSULTANT, (2) AN EMPLOYEE OR OFFICER OF AN ENTITY SUPPLYING COMPONENTS TO A FABRICATOR OR CONTRACTOR, SO LONG AS THE ENGINEER ACTS AS AN INDEPENDENT CONSULTANT OR THROUGH A DULY QUALIFIED ENGINEERING CORPORATION, OR (3) AN EMPLOYEE OR OFFICER OF A FABRICATOR OR CONTRACTOR, SO LONG AS THE ENGINEER ACTS AS AN INDEPENDENT CONSULTANT OR THROUGH A DULY QUALIFIED ENGINEERING CORPORATION.

2. SUBMITTALS FOR CUSTOM DESIGNED, MANUFACTURED OR FABRICATED LOAD-CARRYING ITEMS AND CUSTOM FABRICATED ITEMS WHICH ARE REQUIRED BY CODES OR STANDARDS TO RESIST FORCES AND STRESSES, INCLUDING THEIR CONNECTIONS, ANCHORAGES AND ATTACHMENTS REQUIRE A DELEGATED ENGINEER.

3. AS A MINIMUM, THE FOLLOWING SYSTEMS AND COMPONENTS REQUIRE FABRICATION AND ERECTION DRAWINGS WITH INPUT BY A DELEGATED ENGINEER:

TEMPORARY SUPPORT STRUCTURE FOR TEMPORARY 18" FORCE MAIN BY-PASS

4. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BEAR THE SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THAT HE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS.

5. CALCULATIONS ARE THE SOLE RESPONSIBILITY OF THE DELEGATED ENGINEER. CALCULATIONS ARE SUBMITTED TO THE ENGINEER FOR HIS RECORDS.

6. TEMPORARY SUPPORT STRUCTURE FOR TEMPORARY 18" FORCE MAIN BY-PASS CRITERIA:

EXISTING UTILITY SUPPORT APPROXIMATELY 75' WEST OF THE EXISTING BRIDGE SHALL NOT BE UTILIZED AS TEMPORARY SUPPORT STRUCTURE.

TEMPORARY SUPPORT SHALL NOT NEGATIVELY IMPACT THE EXISTING SEAWALL WEST OF THE EXISTING BRIDGE (TO REMAIN)

UTILITY DETAIL NO. 2 - TEMPORARY FORCE MAIN SERVICE

N.T.S.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

MISCELLANEOUS UTILITY DETAILS

SHEET NO. 98

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FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. WATER MAINS WHERE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL CONFORM TO AWWA C-900 OR C-905, PRESSURE CLASS 150, DR (18). WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO AWWA C-901 OR C-906, STANDARD CODE DESIGNATION PE3408, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
3. WATER MAIN, WHERE SPECIFIED IS DUCTILE IRON PIPE , SHALL CONFORM TO ANSI/AWWA C151/A2 51 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
4. POLYVINYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE. ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE AND THIN WIRE.
5. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C-110/A21.10, CLASS 250 MIN., CEMENT LINED AND FACTORY COATED
6. GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNDY KEN-SEAL, AMERICAN OR APPROVED EQUAL. VALVES SHALL CONFORM TO AWWA C-500.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY, COUNTY, FDOT, IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL IF THE FPUA ENGINEER AND CITY/COUNTY/FDOT ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY FPUA ENGINEERING AND CITY/COUNTY/FDOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPUA, AND CITY/COUNTY/FDOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/COUNTY/FDOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTEITED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AWWA C-651 FOR DISINFECTION.

WATER DISTRIBUTION	G-1 NOTES
12-09 REVISIONS COMPUTED BY / DRAWN BY / CHECKED BY / APPD.	WATER/WASTEWATER ENGINEERING
DETAIL NOTES 20X60(2).DWG SCALE N.T.S. DATE 2010 SHEET 1 OF 3	FT. PIERCE UTILITIES AUTHORITY

FORT PIERCE UTILITIES AUTHORITY WASTEWATER CONSTRUCTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
2. GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE SDR-26, GREEN OR WHITE IN COLOR, GRAVITY SEWER MAIN SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3034.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR STABILIZED TRENCH BOTTOM. WHERE REQUIRED, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPUA ENGINEERING AND THE CITY, COUNTY, FDOT, IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THEN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICE (SE) WYES, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
7. SANITARY 10 FEET AND PREFERABLY 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANCE FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPUA/CITY COUNTY/FDOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FORM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL FPUA/CITY/COUNTY/FDOT ENGINEER.
11. TRAFFIC CONTROL, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYVINYL CHLORIDE CONFORMING TO AWWA C-900, AND SHALL BE CLASS 150, DR-18.
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
15. FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANSI/AWWA C-110/A21.10 CLASS 250 MIN. AND FACTORY EPOXY COATED.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THHN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPUA SPECIFICATIONS.
17. MINIMUM COVER SHALL BE 36 INCHES. PIPES WITH COVER LESS THAN 30 INCHES SHALL REQUIRE PRIOR APPROVAL OF THE UTILITIES ENGINEER AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
18. EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY 3M CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPUA ENGINEER.
19. ALL MANHOES SHALL HAVE SEWER RAIN GUARDS INSTALLED AS REQUIRED BY FPUA ENGINEER.
20. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

WASTEWATER CONSTRUCTION NOTES FPUA REQUIREMENTS	G-2 CONSTRUCTION NOTES
12-09 REVISIONS COMPUTED BY / DRAWN BY / CHECKED BY / APPD.	WATER/WASTEWATER ENGINEERING
DETAIL NOTES 20X60(2).DWG SCALE N.T.S. DATE 2010 SHEET 1 OF 1	FT. PIERCE UTILITIES AUTHORITY

STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.

WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) CENTERED ON THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.

ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). AT NEW CROSSINGS PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.

2. A MINIMUM 3-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN N PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 3-FOOT, AND PREFERABLE 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN "ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

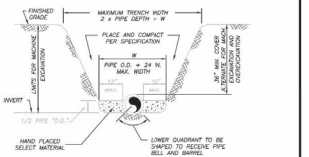
A MINIMUM 1-FOOT, AND PREFERABLE 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FOOT WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER.

WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

3. ALL DIP SHALL BE PRESSURE CLASS 250 MIN.. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

STANDARD SEPARATION STATEMENT FOR WATER/SEWER CONFLICT	G-3 WATER/SEWER CONFLICT
12-09 REVISIONS COMPUTED BY / DRAWN BY / CHECKED BY / APPD.	WATER/WASTEWATER ENGINEERING
DETAIL NOTES 20X60(2).DWG SCALE N.T.S. DATE 2010 SHEET 1 OF 1	FT. PIERCE UTILITIES AUTHORITY

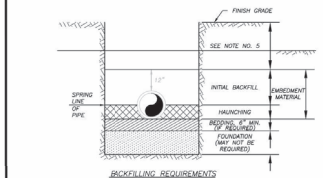


NOTES:

1) THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
2) INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 100% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-99.

TYPICAL TRENCH DETAIL
N.T.S.

TYPICAL TRENCH DETAIL	M-1
12-09 CONCRETE SLAB / REVISIONS / BY / APP'D.	WATER/WASTEWATER ENGINEERING
MISC. DETAILS 20X60(2).DWG	FT. PIERCE UTILITIES AUTHORITY
2010	

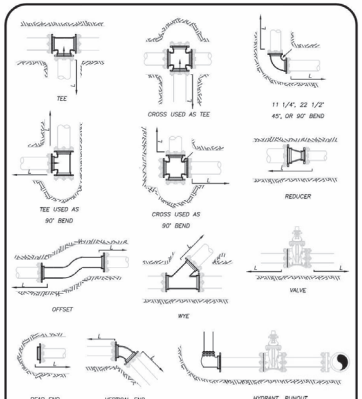


BACKFILLING REQUIREMENTS
N.T.S.

NOTES:

1) IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
2) BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIAL SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
3) HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4) INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE. THE SOIL SHALL BE COMPACTED TO 100% MAX. DENSITY.(AASHTO T-99)
5) BACKFILL SHALL IE COMPACTED TO 100% OF MAX. DENSITY AS PER AASHTO T-99, TO A POINT 30" BLOW PROPOSED PROFILE GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-180.
6) DENSITY TEST SHAL BE PERFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTORS EXPENSE.
7) CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL TRENCH SAFETY REGULATIONS.

BACKFILLING REQUIREMENTS	M-2
12-09 CONCRETE SLAB / REVISIONS / BY / APP'D.	WATER/WASTEWATER ENGINEERING
MISC. DETAILS 20X60(2).DWG	FT. PIERCE UTILITIES AUTHORITY
2010	



MECHANICAL JOINT ANCHORING REQUIREMENTS
N.T.S.

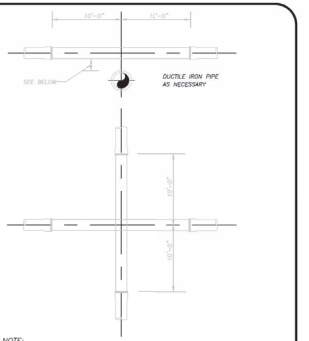
MECHANICAL JOINT ANCHORING REQUIREMENTS	M-3
12-09 CONCRETE SLAB / REVISIONS / BY / APP'D.	WATER/WASTEWATER ENGINEERING
MISC. DETAILS 20X60(2).DWG	FT. PIERCE UTILITIES AUTHORITY
2010	

MECHANICAL JOINT RESTRAINT NOTES

NOTES:

1) THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI, AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.
2) REQUIRED RESTRAINED LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINED LENGTH (L) OF THE BEND OR FITTING IN QUESTION.
3) EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.

MECHANICAL JOINT RESTRAINT NOTES	M-4
12-09 CONCRETE SLAB / REVISIONS / BY / APP'D.	WATER/WASTEWATER ENGINEERING
MISC. DETAILS 20X60(2).DWG	FT. PIERCE UTILITIES AUTHORITY
2010	



NOTE:

PLEASE REFER TO FORT PIERCE UTILITIES STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS.

UTILITY CROSSING DETAIL
N.T.S.

UTILITY CROSSING DETAIL	M-5
12-09 CONCRETE SLAB / REVISIONS / BY / APP'D.	WATER/WASTEWATER ENGINEERING
MISC. DETAILS 20X60(2).DWG	FT. PIERCE UTILITIES AUTHORITY
2010	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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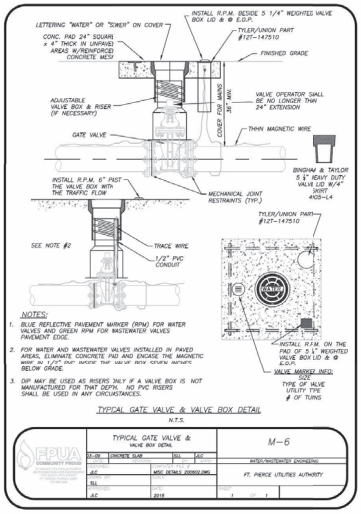
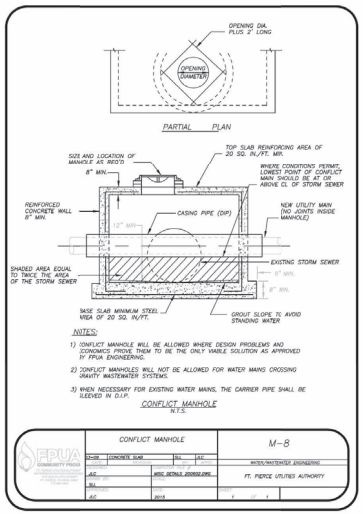
CITY OF FORT PIERCE

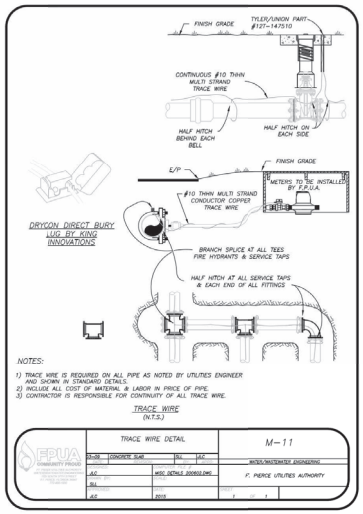
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

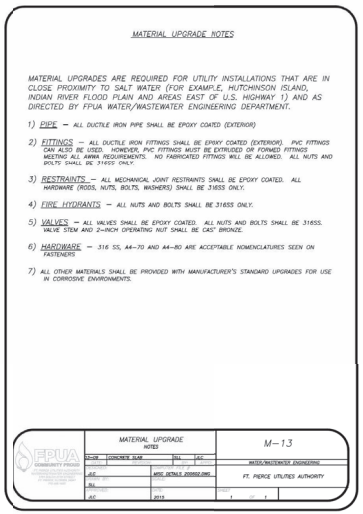
FPUA UTILITY DETAILS

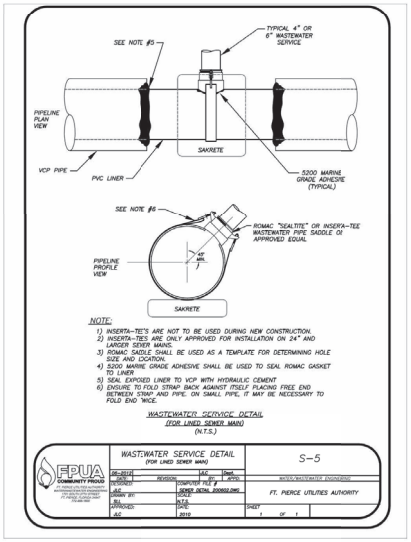
SHEET NO. 99

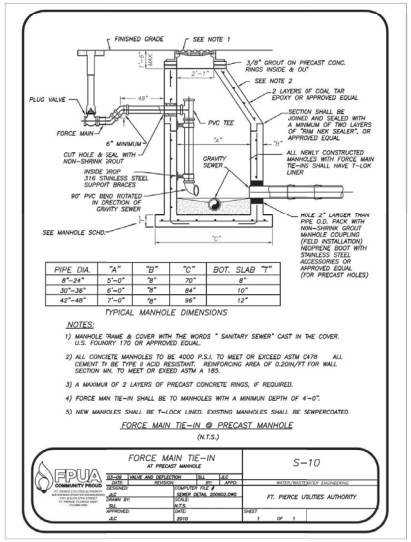




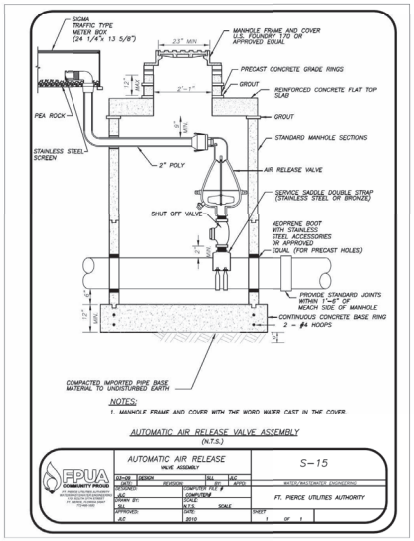


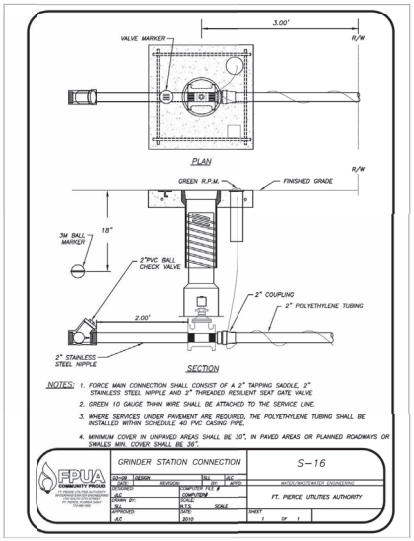






PIPE DIA.	"A"	"B"	"C"	BOT. SLAB "T"
8"-24"	5'-0"	9"	70"	8"
30"-36"	6'-0"	9"	84"	10"
42"-48"	7'-0"	9"	96"	12"





REVISIONS

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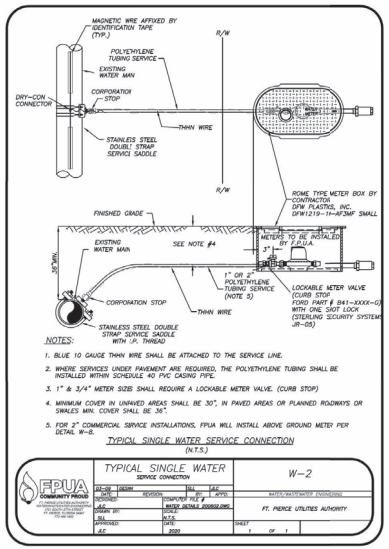
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

FPUA UTILITY DETAILS

SHEET NO. 100

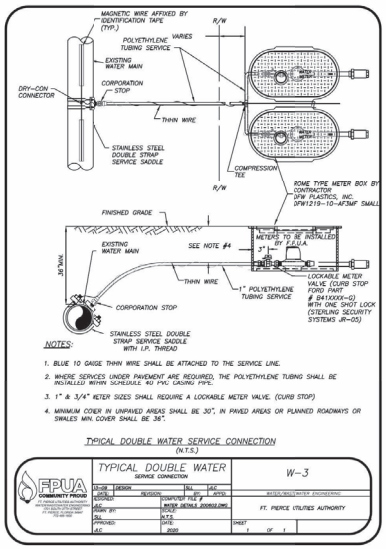


NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".
5. FOR 2" COMMERCIAL SERVICE INSTALLATIONS, FPUA WILL INSTALL ABOVE GROUND METER PER DETAIL W-8.

TYPICAL SINGLE WATER SERVICE CONNECTION
(N.T.S.)

FPUA COMMUNITY PROUD	TYPICAL SINGLE WATER SERVICE CONNECTION		W-2
03-08 DESIGN	REVISION	BY	APVD.	WATER/WASTEWATER ENGINEERING
AJC DRAWN BY: SLJ APPROVED: AJC	COMPUTER FILE #: WATER DETAILS 200602.DWG SCALE: N.T.S. DATE: 2020			FT. PIERCE UTILITIES AUTHORITY
			SHEET 1 OF 1	

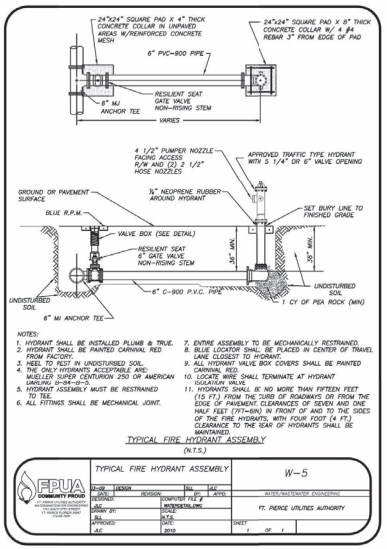


NOTES:

1. BLUE 10 GAUGE THHN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
2. WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
3. 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE. (CURB STOP)
4. MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".

TYPICAL DOUBLE WATER SERVICE CONNECTION
(N.T.S.)

FPUA COMMUNITY PROUD	TYPICAL DOUBLE WATER SERVICE CONNECTION		W-3
03-08 DESIGN	REVISION	BY	APVD.	WATER/WASTEWATER ENGINEERING
AJC DRAWN BY: SLJ APPROVED: AJC	COMPUTER FILE #: WATER DETAILS 200602.DWG SCALE: N.T.S. DATE: 2020			FT. PIERCE UTILITIES AUTHORITY
			SHEET 1 OF 1	

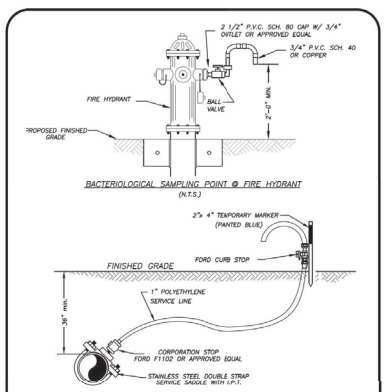


NOTES:

1. HYDRANT SHALL BE INSTALLED PLUMB & TRUE.
2. HYDRANT SHALL BE PAINTED CARNIVAL RED FROM FACTORY.
3. HEEL TO REST IN UNDISTURBED SOIL.
4. THE ONLY HYDRANTS ACCEPTABLE ARE: MUELLER SUPER CENTURION 250 OR AMERICAN LMFU B-84-2-S.
5. HYDRANT ASSEMBLY MUST BE RESTRAINED TO TEE.
6. ALL FITTINGS SHALL BE MECHANICAL JOINT.
7. ENTIRE ASSEMBLY TO BE MECHANICALLY RESTRAINED.
8. BLUE LOCATOR SHALL BE PLACED IN CENTER OF TRAVEL LANE CLOSEST TO HYDRANT.
9. ALL HYDRANT VALVE BOX COVERS SHALL BE PAINTED CARNIVAL RED.
10. LOCATE WIRE SHALL TERMINATE AT HYDRANT DUCATRON VALVE.
11. HYDRANTS SHALL BE NO MORE THAN FIFTEEN FEET (15 FT.) FROM THE CURB OF ROADWAYS OR FROM THE EDGE OF PAVEMENT. CLEARANCES OF SEVEN AND ONE HALF FEET (7FT-6IN) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANTS, WITH FOUR FOOT (4 FT.) CLEARANCE TO THE REAR OF HYDRANTS SHALL BE MAINTAINED.

TYPICAL FIRE HYDRANT ASSEMBLY
(N.T.S.)

FPUA COMMUNITY PROUD	TYPICAL FIRE HYDRANT ASSEMBLY		W-5
03-08 DESIGN	REVISION	BY	APVD.	WATER/WASTEWATER ENGINEERING
AJC DRAWN BY: SLJ APPROVED: AJC	COMPUTER FILE #: WATERDETAILS.DWG SCALE: N.T.S. DATE: 2010			FT. PIERCE UTILITIES AUTHORITY
			SHEET 1 OF 1	



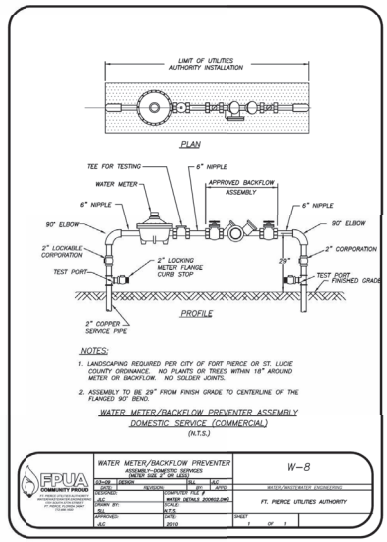
BACTERIOLOGICAL SAMPLING POINT @ FIRE HYDRANT
(N.T.S.)

BACTERIOLOGICAL SAMPLING POINT @ WATER MAIN
(N.T.S.)

NOTE:

AFTER TESTING REMOVE 1" P.E. LINE AND CAP WITH BRASS PLUG AT CORPORATION STOP.

FPUA COMMUNITY PROUD	BACTERIOLOGICAL SAMPLING POINT DETAIL		W-6
03-08 DESIGN	02-13 REVISION	SLJ BY	AJC APVD.	WATER/WASTEWATER ENGINEERING
AJC DRAWN BY: SLJ APPROVED: AJC	COMPUTER FILE #: WATERDETAILS.DWG SCALE: N.T.S. DATE: 2010			FT. PIERCE UTILITIES AUTHORITY
			SHEET 1 OF 1	



NOTES:

1. LANDSCAPING REQUIRED PER CITY OF FORT PIERCE OR ST. LUCIE COUNTY ORDINANCE. NO PLANTS OR TREES WITHIN 18" AROUND METER OR BACKFLOW. NO SOLDER JOINTS.
2. ASSEMBLY TO BE 29" FROM FINISH GRADE TO CENTERLINE OF THE FLANGED 90° BEND.

WATER METER/BACKFLOW PREVENTER ASSEMBLY
DOMESTIC SERVICE (COMMERCIAL)
(N.T.S.)

FPUA COMMUNITY PROUD	WATER METER/BACKFLOW PREVENTER ASSEMBLY-DOMESTIC SERVICES (METER SIZE 2" OR LESS)		W-8
03-08 DESIGN	REVISION	SLJ BY	AJC APVD.	WATER/WASTEWATER ENGINEERING
AJC DRAWN BY: SLJ APPROVED: AJC	COMPUTER FILE #: WATER DETAILS 200602.DWG SCALE: N.T.S. DATE: 2010			FT. PIERCE UTILITIES AUTHORITY
			SHEET 1 OF 1	

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

FPUA UTILITY DETAILS

SHEET NO. 101

GENERAL NOTES

A. Design Specifications

1. FDOT Structures Manual dated January 2024 and subsequent Structures Design Bulletins.
2. American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor (LRFD) Bridge Design Specifications, 9th Edition, 2020 Customary US Units.

B. Governing Standards and Construction Specifications

Florida Department of Transportation, FY 2022-23 Standard Plans and revised Index Drawings as appended herein, and Florida Department of Transportation January 2022 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

C. Vertical Datum

Vertical Datum used on the project is NAVD 88.

D. Environment

Bridge Number	Superstructure	Substructure
945275	EA	EA

SA = Slightly Aggressive, MA = Moderately Aggressive, EA = Extrememly Aggressive

E. Design Methodology

1. Load Resistance and Factor Design (LRFD) method using Strength, Service and Fatigue Limit States.

2. Operational Importance Factor - ηI = 1.0

F. Structural Analysis Program - LEAP Bridge Concrete V22

F. Design Loadings

1. Live Loads:
HL-93 with Dynamic Load Allowance

2. Dead Loads:

Texas Railing	350 plf
Reinforced Concrete	150 pcf

Design does include an allowance for 15 psf for Future Wearing Surface.

3. Utilities: A utility allowance of 1400 plf has been included in the design.

4. Wind Loads: 170 mph, Saint Lucie County, FL

G. Materials

1. Reinforcing Steel:
Approach Slab: Grade 60 Carbon steel per Specifications Section 931
Superstructure: Grade 60 Carbon steel per Specifications Section 931
Substructure: Grade 60 Stainless steel per Specifications Section 931
- All substructure reinforcing steel accessories (chairs, tie wire, etc.) shall be either stainless steel or plastic.

2. Concrete

Concrete Class	Compressive Strength (psi)	Location of Concrete in Structure
II (Bridge Deck)	4500 psi	Traffic Railings & Approach Slabs
IV with Shrinkage Reducing Admixtures	5500 psi	Cast-In-Place Superstructure & Sidewalks
IV	5500 psi	Cast-In-Place Substructure
V	6500 psi	Precast/Prestressed Concrete Piles
VI	8500 psi	Precast/Prestressed Concrete Flat Slabs

3. Concrete Cover

Cast-In-Place Superstructure (Except Top of Deck)	2"
Cast-In-Place Superstructure Top of Deck	2"
Precast Prestressed Florida Slab Beams	2"
Cast-In-Place Substructure (Cast Against Earth)	4½"
Cast-In-Place Substructure (Formed Surfaces)	4"

Concrete cover dimensions shown in the plans do not include placement and fabrication tolerances unless shown as "minimum cover". See Specifications Section 415 for allowable tolerances. All dimensions pertaining to the location of reinforcing steel are to centerline of bar except where clear dimension is noted to face of concrete.

H. Concrete Surface Finish

A non-sacrificial Anti-Graffiti coating, Graffiti Gard IV low luster Tex-cote or approved equal, shall be applied to the portions of the structure shown on the Surface Finish Detail on sheet "General Notes (2 of 2)". Cape Code Blue shall be applied to the Beams and sides of Arch, Antique Ivory shall be applied to the railings, top of seawall cap, and side of seawall cap.

I. Plan Dimensions

All dimensions in these plans are measured in feet either horizontally or vertically unless otherwise noted.

J. Utilities

For plan locations of existing utilities, see Plan and Elevation sheets. Locations of utilities, including under deck lighting, shown in the plans are approximate.

K. Bridge Name and Number

Place the following bridge name and number on the traffic railings in accordance with the Traffic Railing Standard Plans:

Bridge Name	Bridge Number
Moores Creek	945275

L. Screeding Deck Slabs

Screed the riding surface of the Bridge Deck and Approach Slabs to achieve the Finish Grade Elevations shown in the plans. Account for the theoretical deflections due to self weight, deck casting sequence, deck forming systems, construction loads, overlays and temporary shoring, etc. as required.

Br. No. 945275

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

BRIDGE GENERAL NOTES (1 OF 2)

SHEET NO. B-1

GENERAL NOTES (Continued)

M. Joints in Concrete

Construction joints will be permitted only at the locations indicated in the Plans. Additional construction joints or alterations to those shown shall require approval of the Engineer.

N. Existing Bridge Construction Considerations

Dimension Verification: Unless otherwise noted, the dimensions, elevations and intersecting angles shown are based on the information as detailed in the Original Construction Plans of the existing bridges and may not represent as-built conditions. It is the Contractor's responsibility to verify this data before beginning construction and notify the Engineer of any discrepancies.

O. Traffic Control Plans

For Traffic Control see the General Notes Sheet in the Roadway Plans.

P. Steel Sheet Pile Wall Notes

1. Prior to the removal of any existing concrete sheet pile wall on the north side of of Moores Creek, the steel sheet pile wall system shall be installed waterward of the existing wall.

2. The steel sheet pile wall system (both premanent and temporary) shall be driven and extracted (if applicable) using a non-impact, non-vibratory, press-in method (Giken or approved equal). Steel sheet piles shall be installed in accordance with the press-in method per Manufacturer's Recommendations. The vibrations recorded shall not exceed 0.50 in/sec at the nearest structure. The Contractor shall take action to reduce vibrations to an acceptable limit.

3. Where rock or strong material is encountered, the Contractor shall use non-impact and non-vibratory means to penetrate. Contractor is responsible to provide all equipement necissary to penetrate hard layers and achieve minimum tip elevation as shown in the plans.
4. Steel sheet piles shall be coated with the coal tar epoxy following specifications section 560 and 926. Coating shall be on both sides of the steel sheet pile wall from top of sheet pile down to depth of five feet below existing mudline.
5. Steel sheet piles shall have a minimum section as shown below and conform to ASTM A572 Grade 60.
6. Minimum steel sheet pile properties:

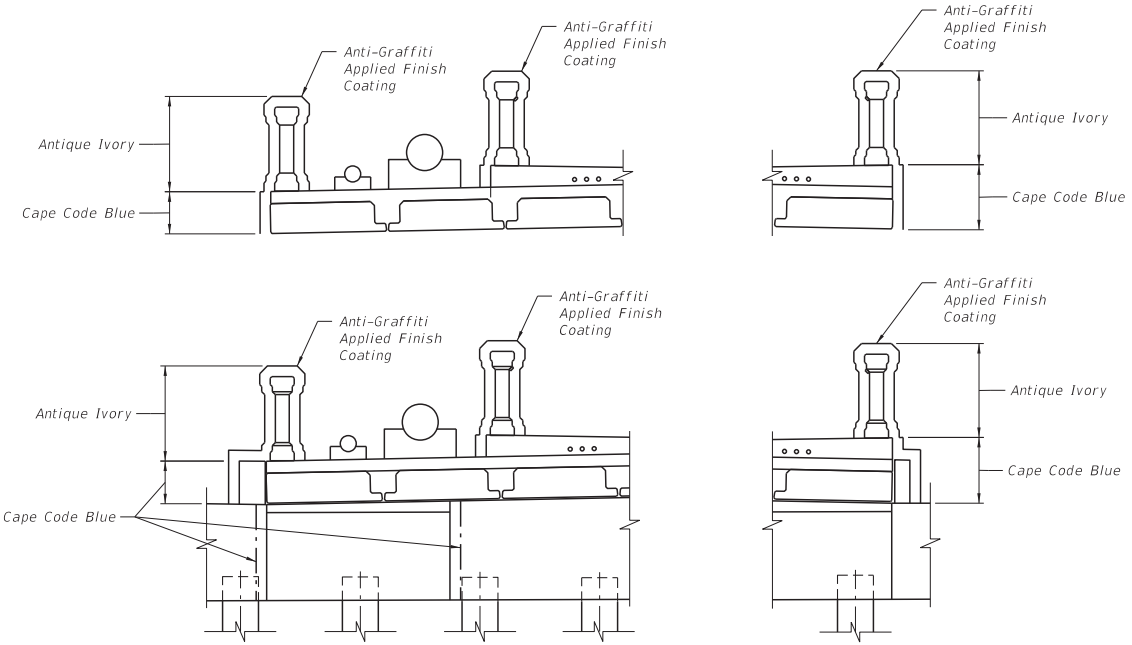
S_{min} = 34.8 in^3/ft
I_{min} = 288.4 in^4/ft

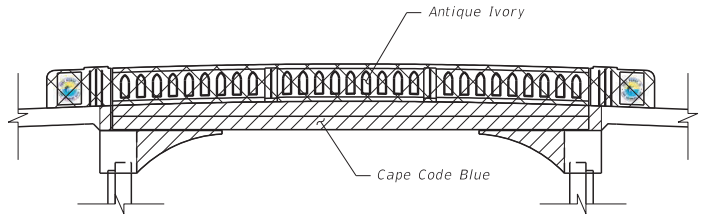
7. Minimum tip eleveation for steel sheet piles is Elevation -30.0.

ABBREVIATIONS:

CIP	=	Cast in Place
C.T.F.I.F	=	Cut to Fit in Field
EF	=	Each Face
FFBW	=	Front Face of Backwall
FF	=	Far Face
NF	=	Near Face
PC/PS	=	Precast/Prestressed
PGP	=	Profile Grade Point
PEJM	=	Premolded Expansion Joint Material
U.O.N.	=	Unless Otherwise Noted

Note: For additional standard abbreviations and symbols see FDOT Standard Plan Abbrev.





SURFACE FINISH DETAIL

Br. No. 945275

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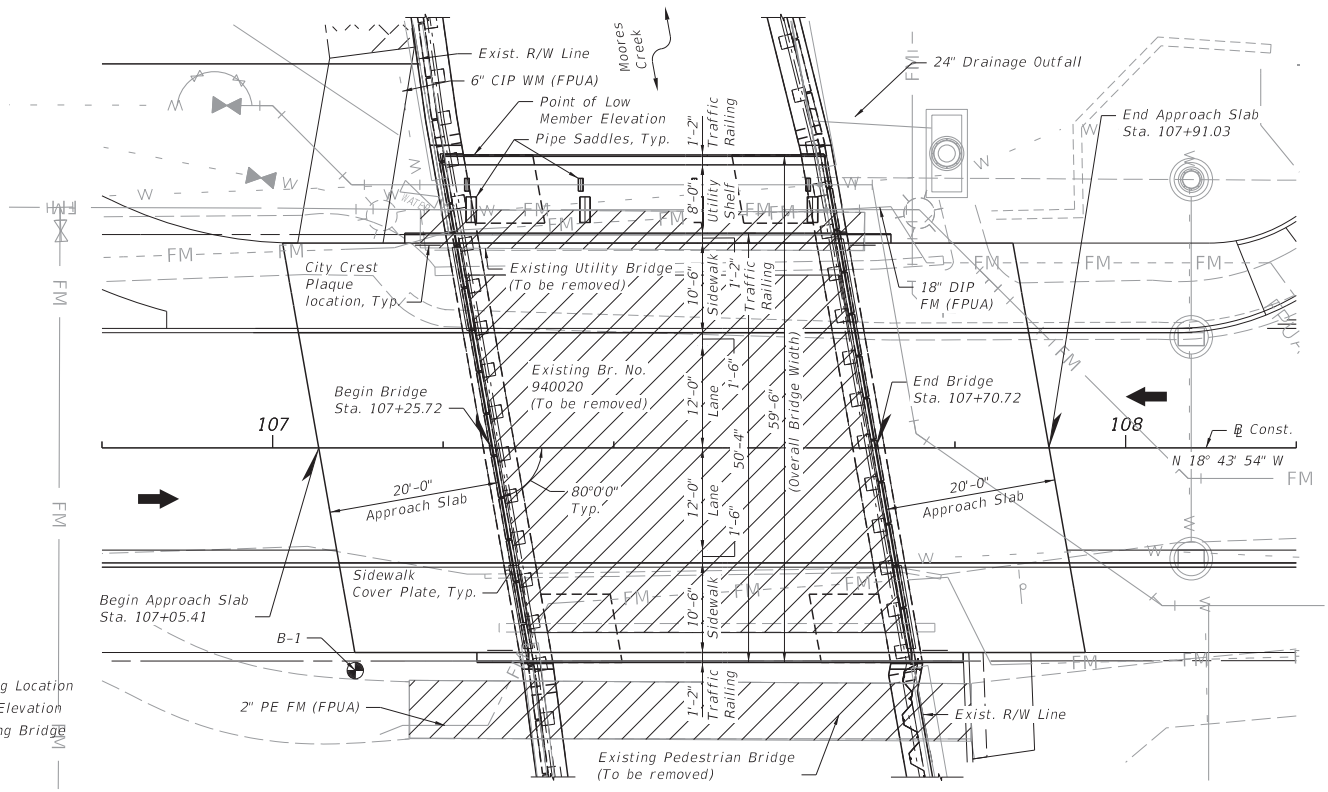
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

BRIDGE GENERAL NOTES (2 OF 2)

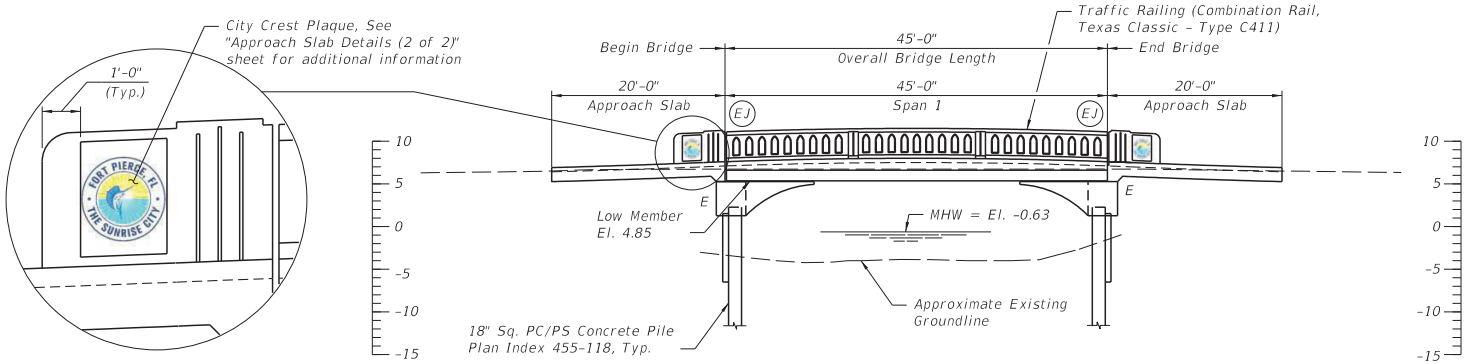
SHEET NO.
B-2



PLAN

Legend

- (EJ) – Indicates Expansion Joint
- E – Indicates Expansion Bearing
- – Indicates Approximate Boring Location
- MHW – Indicates Mean High Water Elevation
- – Indicates Removal of Existing Bridge



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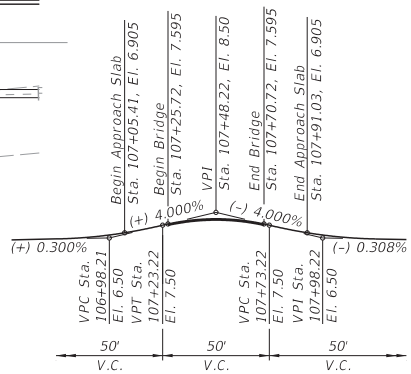

Vertical Curve Data

Br. No. 945275

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

PLAN AND ELEVATION

SHEET NO. B-3

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TYPICAL SECTION

Br. No. 945275

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INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

BRIDGE TYPICAL SECTION

SHEET NO.
B-4

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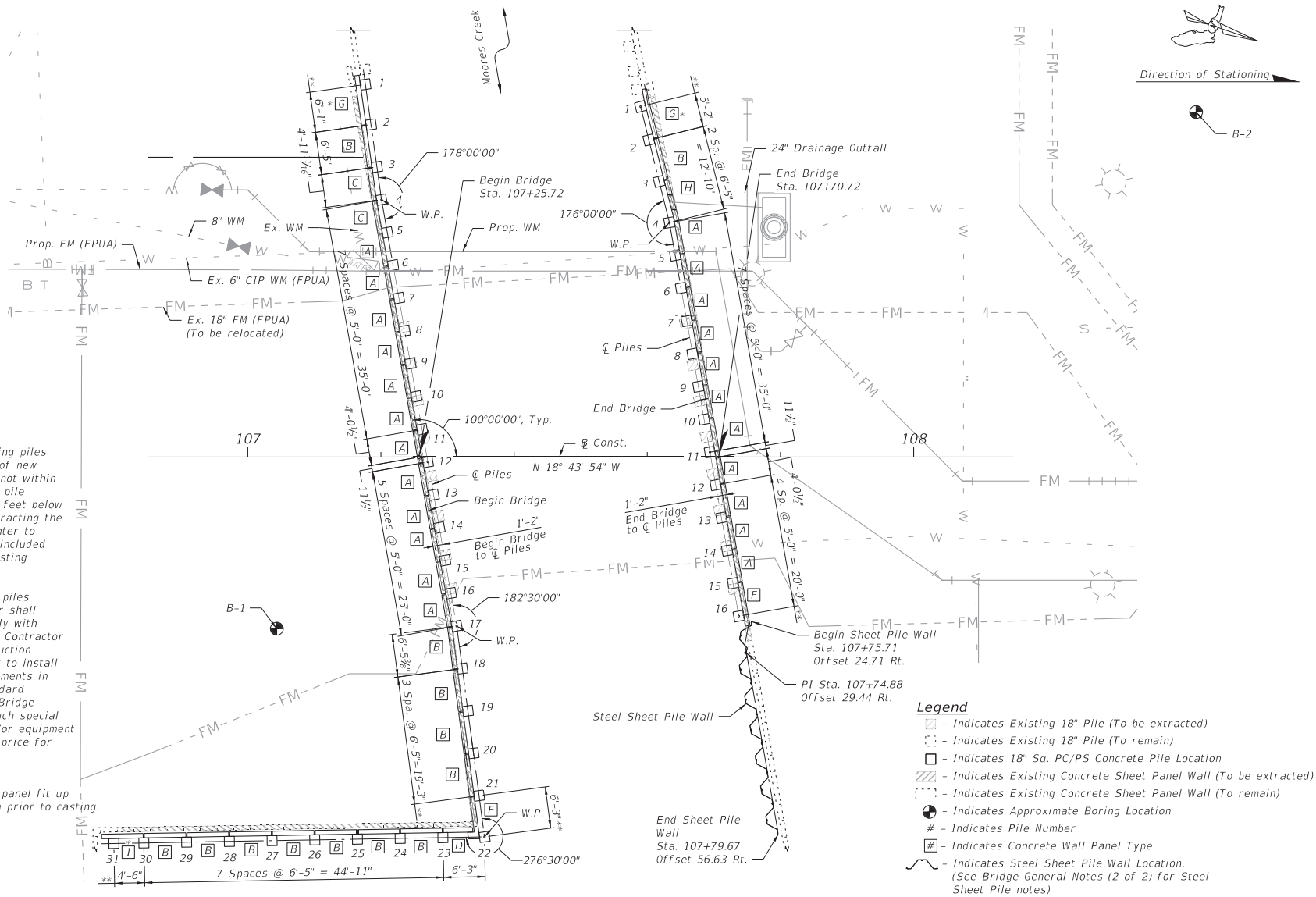

Notes:

1. Remove and extract all existing piles within 3'-0" center to center of new pile locations. Existing piles not within 3'-0" center to center of new pile locations are to be cut off 2 feet below the mud line. The cost of extracting the existing piles within 3'-0" center to center of new piles shall be included in the cost of removal of existing structure.

2. After extracting the existing piles depicted above the Contractor shall back fill the holes immediately with A-3 sand using a tremie. The Contractor shall consider special construction procedures and/or equipment to install the piles to meet the requirements in Section 455-5.15 of the Standard Specifications for Road and Bridge Construction. The cost for such special construction procedures and/or equipment shall be included in the unit price for concrete pile.

* – Contractor to field confirm panel fit up with exisitng wall to remain prior to casting.

** – Measured along ℄ Piles.

Legend

- Indicates Existing 18" Pile (To be extracted)
- Indicates Existing 18" Pile (To remain)
- Indicates 18" Sq. PC/PS Concrete Pile Location
- Indicates Existing Concrete Sheet Panel Wall (To be extracted)
- Indicates Existing Concrete Sheet Panel Wall (To remain)
- Indicates Approximate Boring Location
- # – Indicates Pile Number
- # – Indicates Concrete Wall Panel Type
- Indicates Steel Sheet Pile Wall Location. (See Bridge General Notes (2 of 2) for Steel Sheet Pile notes)

PLAN

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

FOUNDATION LAYOUT

SHEET NO. B-5

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PILE DATA TABLE

INSTALLATION CRITERIA								DESIGN CRITERIA							
PIER or BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	PRODUCTION PILE ORDER LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT
End Bent 1 (1-4)	18	33	N/A	-35.0	55	N/A	N/A	20	N/A	N/A	4.7	N/A	-8.0	0.75	N/A
End Bent 1 (5-17)	18	135	N/A	-36.0	65	N/A	N/A	96	N/A	N/A	4.7	N/A	-8.0	0.75	N/A
End Bent 1 (18-31)	18	33	N/A	-35.0	55	N/A	N/A	20	N/A	N/A	4.7	N/A	-8.0	0.75	N/A
End Bent 2 (1-3)	18	33	N/A	-35.0	55	N/A	N/A	20	N/A	N/A	4.7	N/A	-8.0	0.75	N/A
End Bent 2 (4-16)	18	135	N/A	-36.0	65	N/A	N/A	96	N/A	N/A	4.7	N/A	-8.0	0.75	N/A

$$\frac{\text{Factored Design Load} + \text{Net Scour Resistance} + \text{Down Drag}}{\emptyset} \leq \text{Nominal Bearing Resistance}$$

UPLIFT RESISTANCE – The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires uplift capacity).

TOTAL SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION – Estimated elevation of scour due to the 100 year storm event.

PILE INSTALLATION NOTES:

1. Contractor to verify location of all utilities prior to any pile installation activities.
2. Minimum Tip Elevation is required for lateral stability.
3. No jetting will be allowed without the approval of the Engineer.
4. At each Bent, pile driving is to commence at the center of the Bent and proceed outward.

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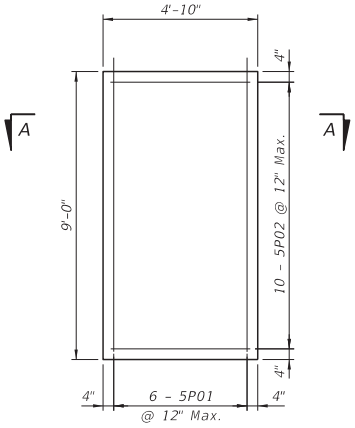
CITY OF FORT PIERCE

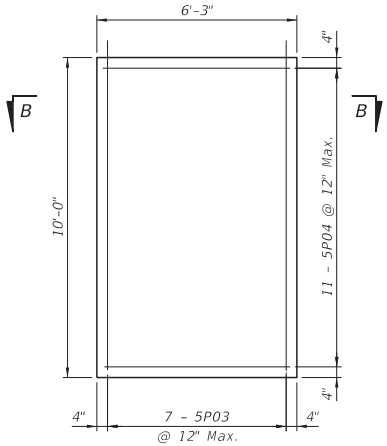
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

PILE DATA TABLE

SHEET NO. B-6



TYPE A - CONCRETE WALL PANEL



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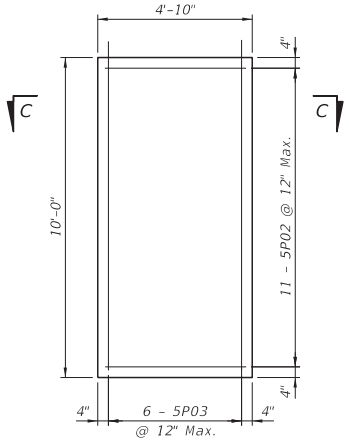

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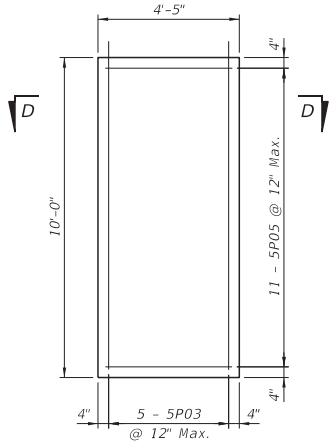

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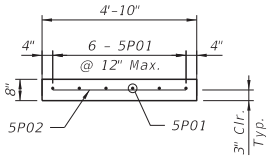

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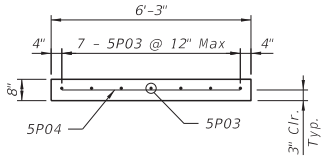

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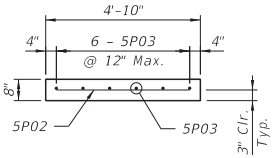

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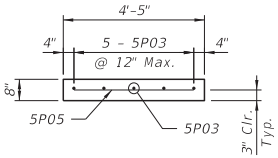

SECTION D-D

BR. NO. 945275

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

WALL PANEL DETAILS (1 OF 4)

SHEET NO.
B-7

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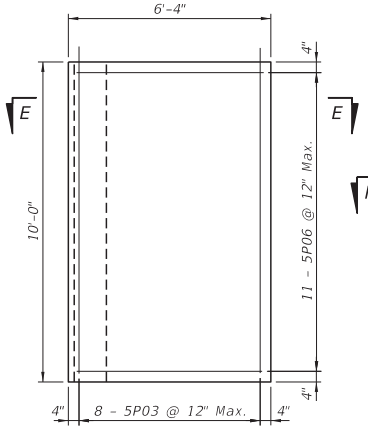

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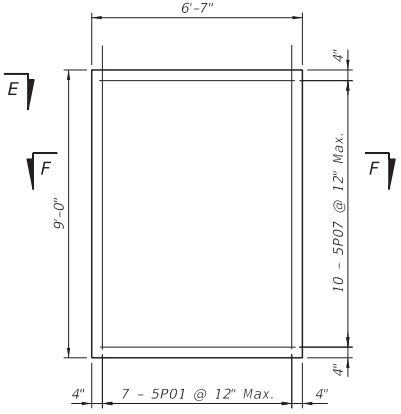

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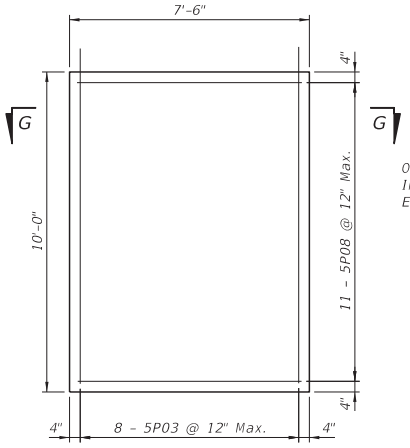

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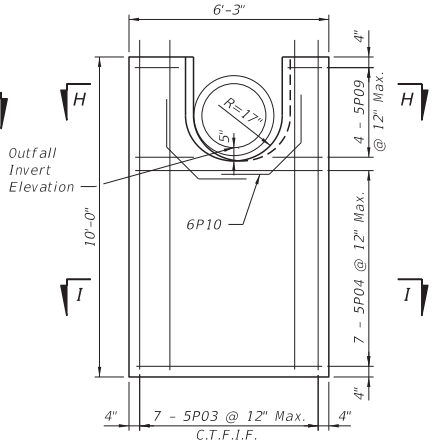

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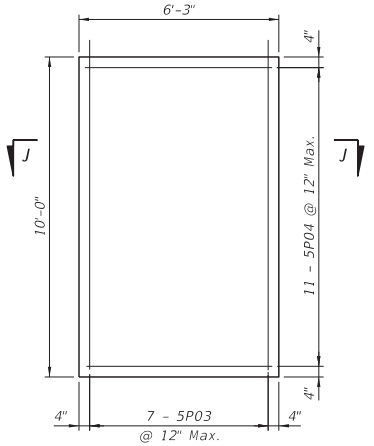
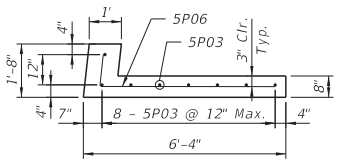
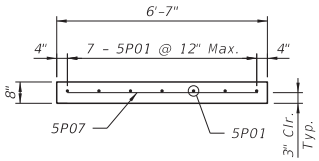


TYPE I - CONCRETE WALL PANEL

Type I Wall Panel Notes
1. Prior to casting type I wall Panel, Contractor shall review existing south seawall (to Remain) and confirm wall panel fit up. Contractor shall adjust Type I wall panel geometry as needed to ensure fit up with south seawall (to remain).



SECTION E-E



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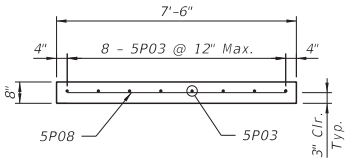

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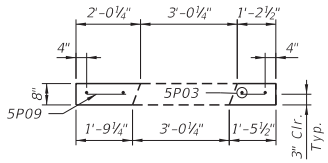

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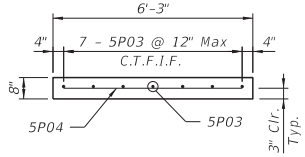

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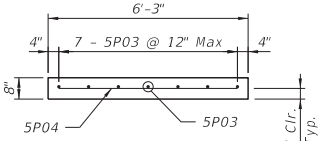

SECTION J-J

Br. No. 945275

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

WALL PANEL DETAILS (2 OF 4)

SHEET NO.
B-8

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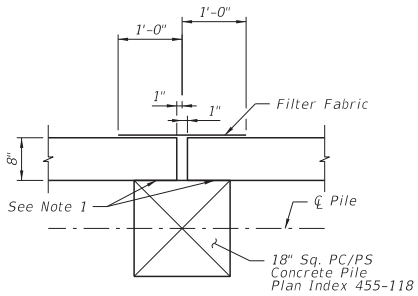
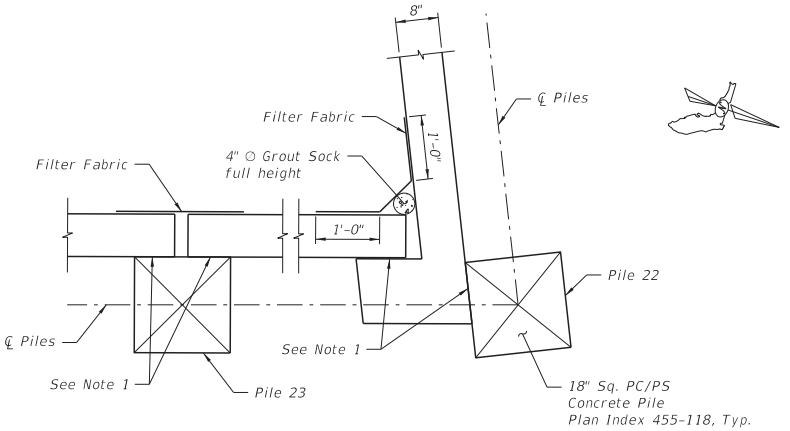
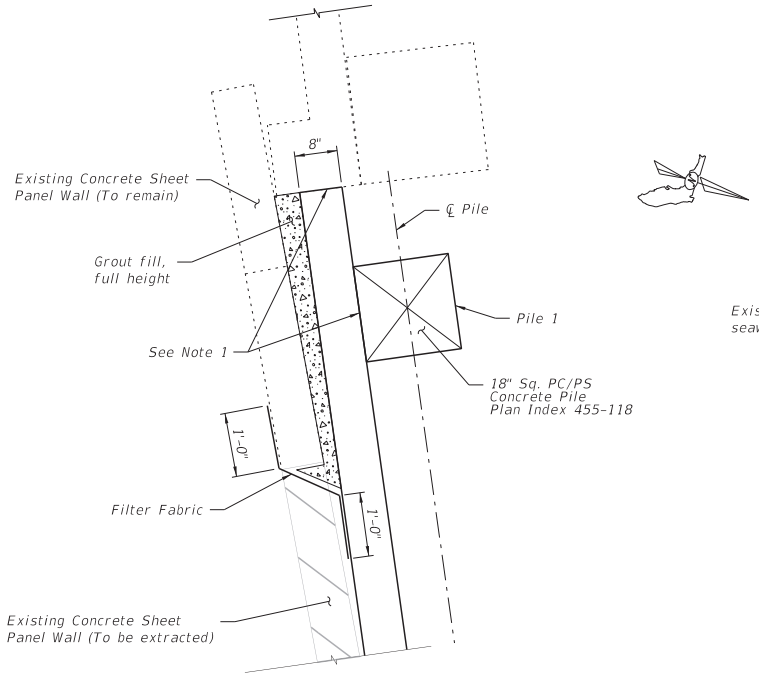


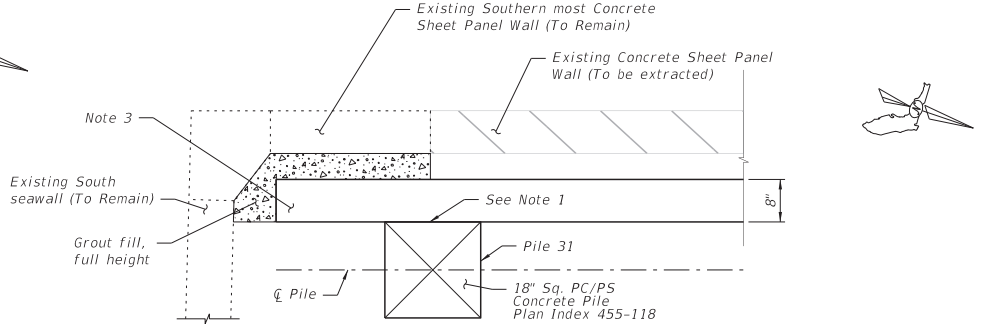
TYPICAL CONCRETE WALL PANEL JOINT DETAIL



END BENT 1 - EAST WALL CORNER DETAIL



END BENT 1 - WEST WALL END DETAIL



END BENT 1 - SOUTHEAST WALL END DETAIL

Notes:

1. Provide positive contact for full height of panels between posts as necessary using grout, grout socks, or other methods approved by the Engineer.
2. Dimension can vary from 0" min. to 2" max. for pile post placement tolerance.
3. Prior to casting wall panel, Contractor shall review existing south seawall (to Remain) and confirm wall panel fit up. Contractor shall adjust wall panel geometry as needed to ensure fit up with south seawall (to remain).

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
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(561) 845-0665
REGISTRY No. 35106

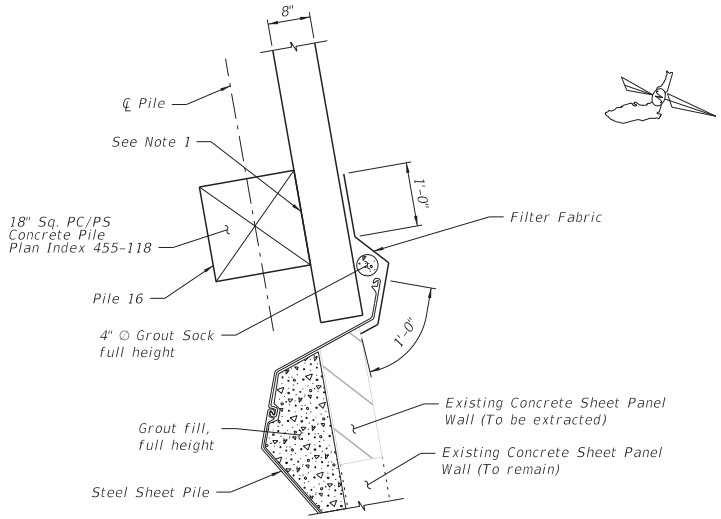
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

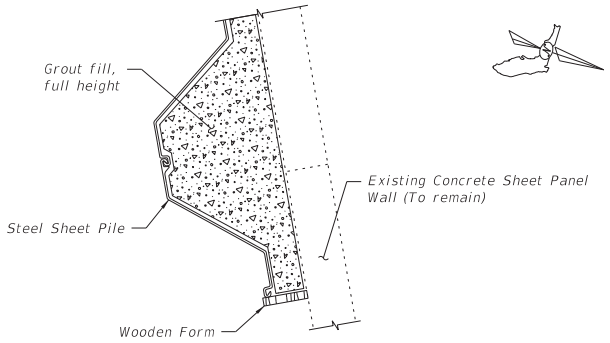
WALL PANEL DETAILS (3 OF 4)

SHEET NO.
B-9

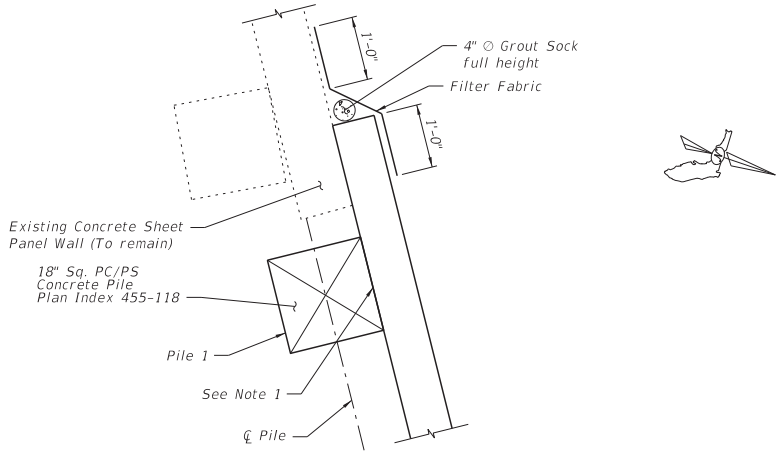
Jerry.Piccolo 11/14/2024 2:09:00 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1WallPanelDet_03.dgn



END BENT 2 - EAST WALL TRANSITION DETAIL



END BENT 2 - STEEL SHEET PILE DETAIL



END BENT 2 - WEST CONCRETE WALL PANEL END DETAIL

Notes:

1. Provide positive contact for full height of panels between posts as necessary using grout, grout socks, or other methods approved by the Engineer.
2. Dimension can vary from 0" min. to 2" max. for pile post placement tolerance.

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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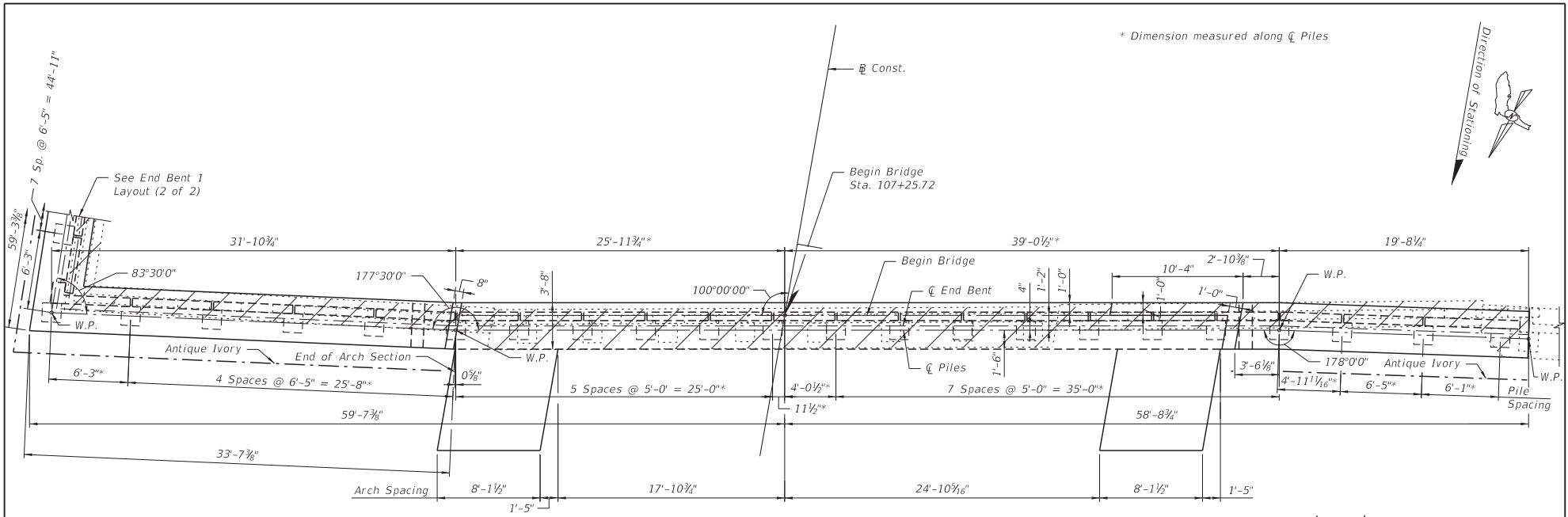
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

WALL PANEL DETAILS (4 OF 4)

SHEET NO.
B-10



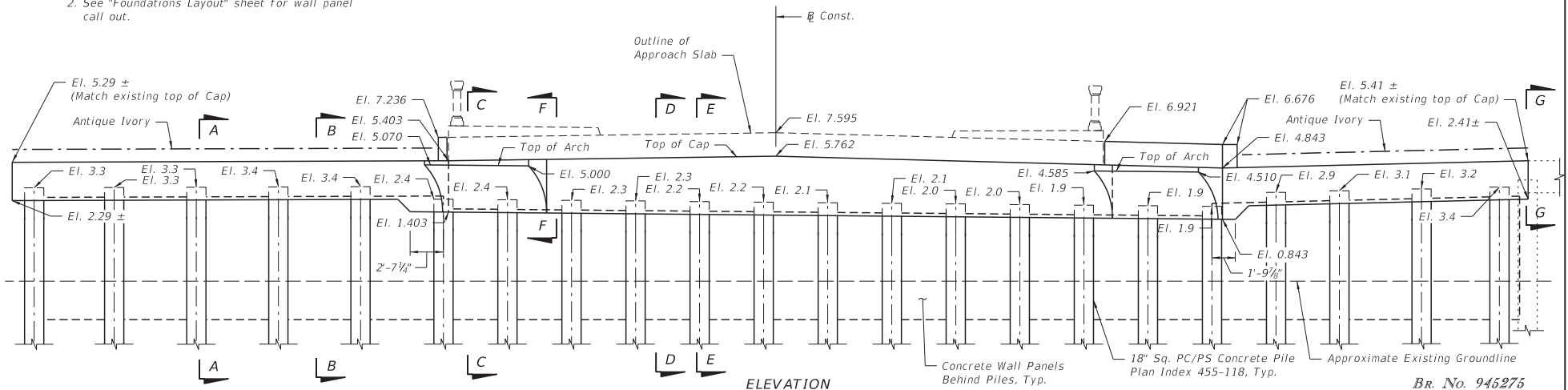
PLAN

Notes:

1. For Sections A-A, B-B, C-C, D-D, E-E, F-F, and G-G see "End Bent 1 Details (4 of 4)" sheet.
2. See "Foundations Layout" sheet for wall panel call out.

Legend

– Indicates removal of existing End Bent and Wall System



ELEVATION

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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JERRY MARCUS PICCOLO, P.E.
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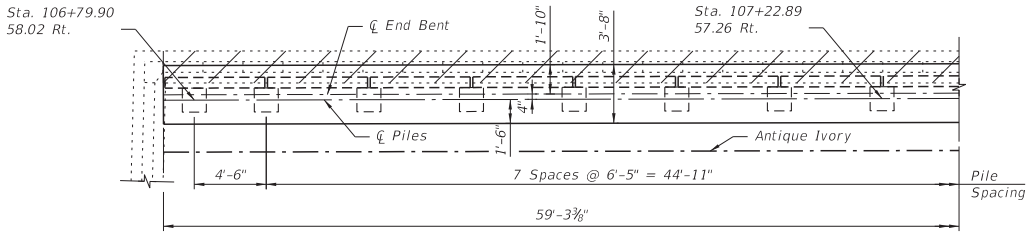
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 1 LAYOUT (1 OF 2)

SHEET NO.
B-11

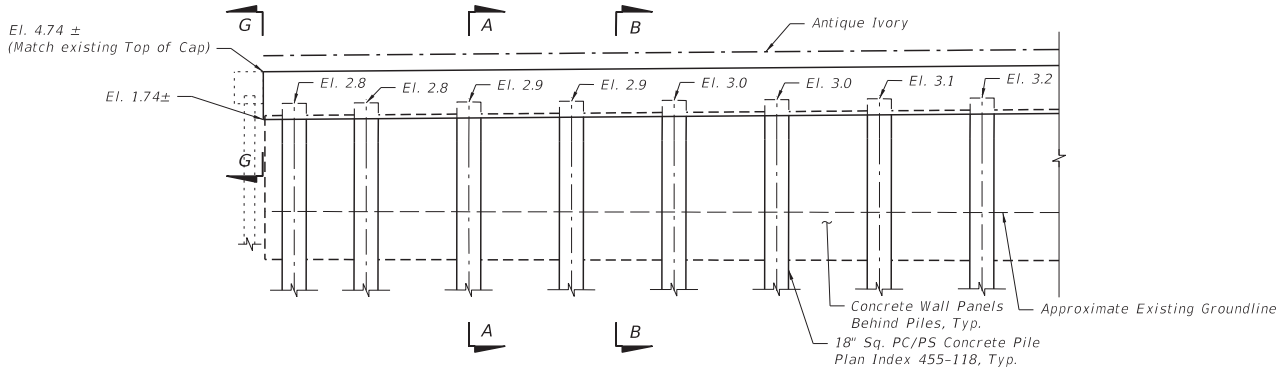
Jerry.Piccolo 11/14/2024 2:09:03 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent1_01.dgn



PLAN

Legend

– Indicates removal of existing End Bent and Wall System



ELEVATION

Notes:

1. For Sections A-A, B-B, and G-G see "End Bent 1 Details (4 of 4)" sheet.
2. See "Foundations Layout" sheet for wall panel call out.

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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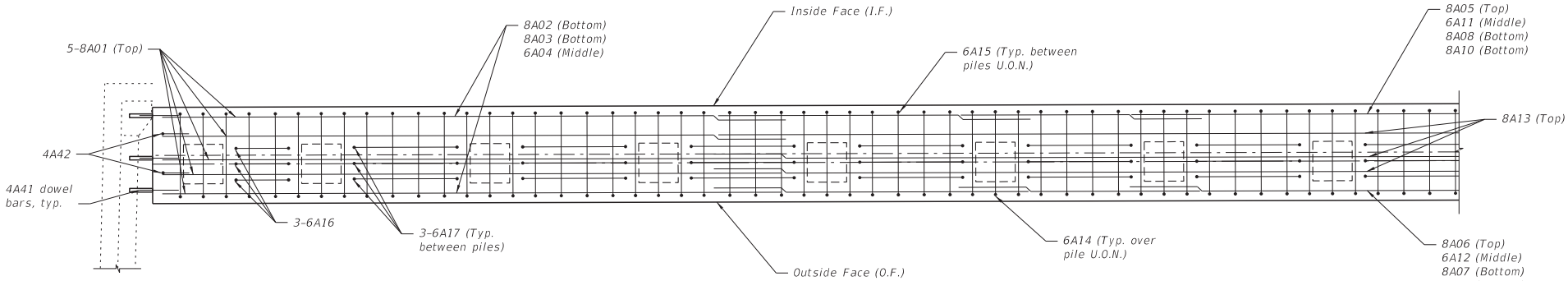
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 1 LAYOUT (2 OF 2)

SHEET NO.
B-12

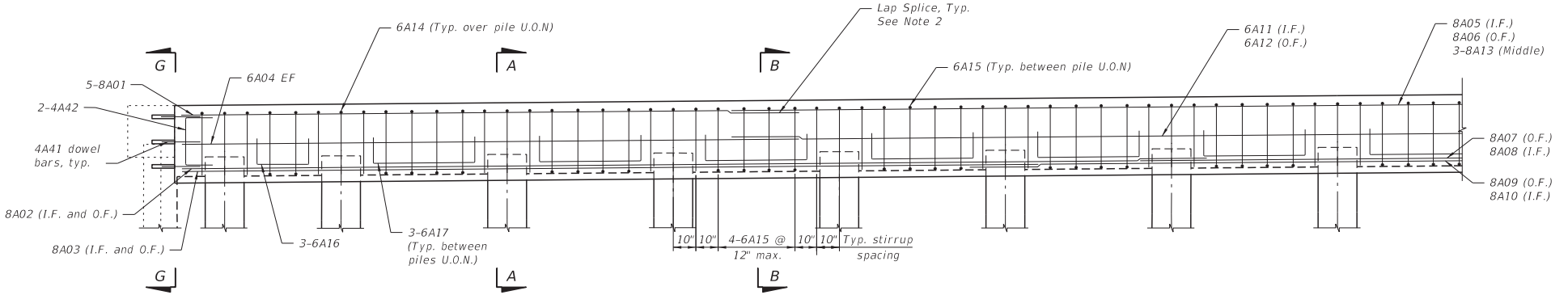


PLAN

Notes:

1. For Sections A-A, B-B, and G-G see "End Bent 1 Details (4 of 4)" sheet.
2. All lap splices shall meet the below minimum splices lengths:

   #4 bars - 18"
   #6 bars - 24"
   #8 bars - 36"



ELEVATION

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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JERRY MARCUS PICCOLO, P.E.
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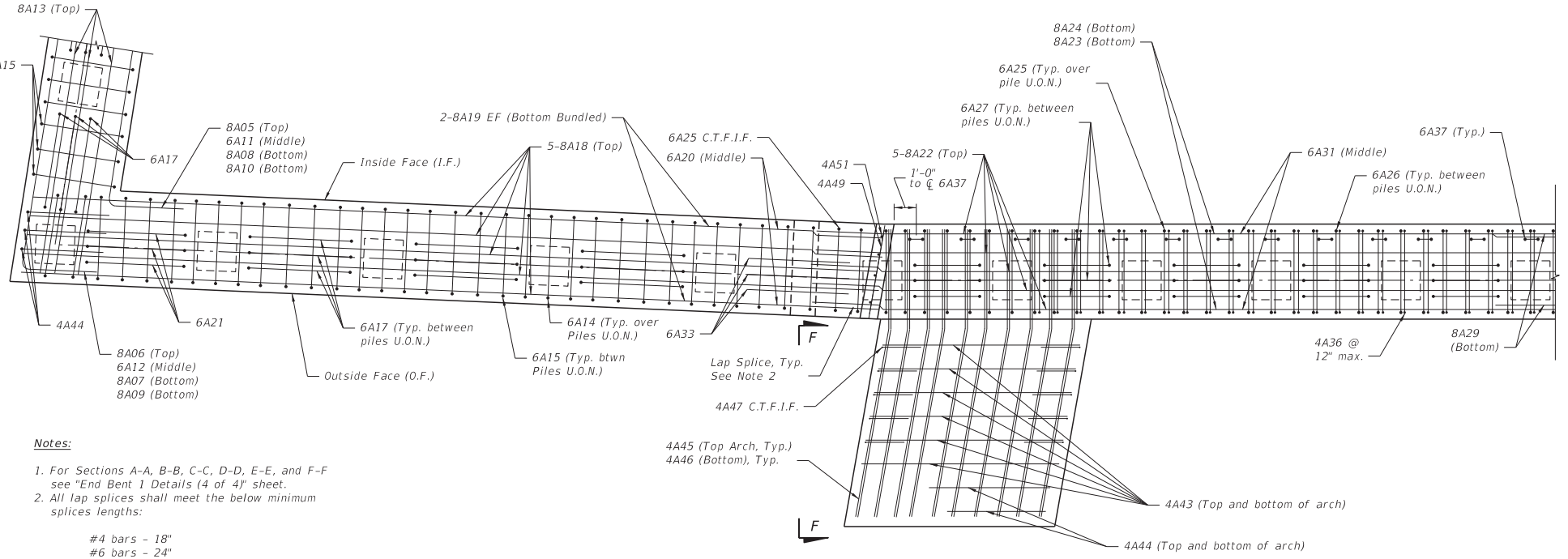
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 1 DETAILS (1 OF 4)

SHEET NO.
B-13

Jerry.Piccolo 11/14/2024 2:09:05 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent1Det_01.dgn

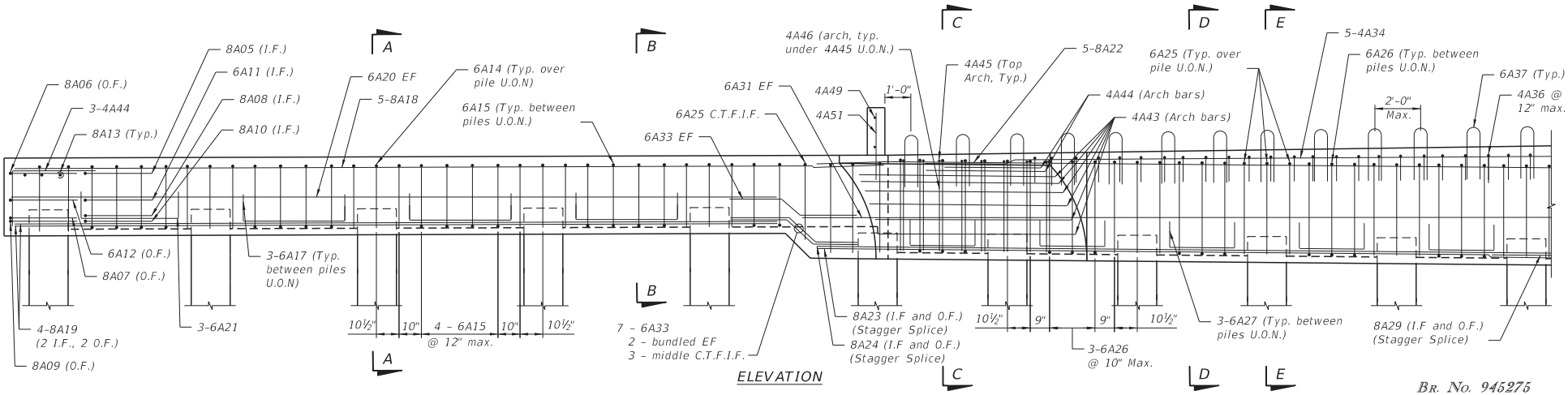


PLAN

Notes:

1. For Sections A-A, B-B, C-C, D-D, E-E, and F-F see "End Bent 1 Details (4 of 4)" sheet.
2. All lap splices shall meet the below minimum splices lengths:

   #4 bars - 18"
   #6 bars - 24"
   #8 bars - 36"



ELEVATION

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
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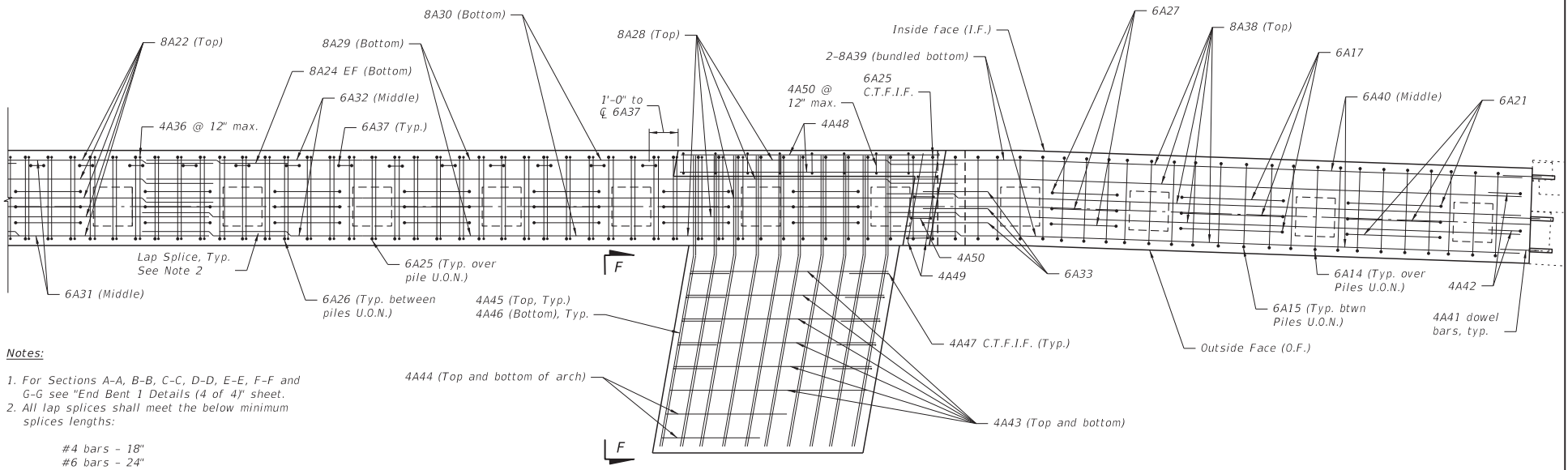
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

END BENT 1 DETAILS (2 OF 4)

SHEET NO. B-14

Jerry.Piccolo 11/14/2024 2:09:06 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent1Det_02.dgn

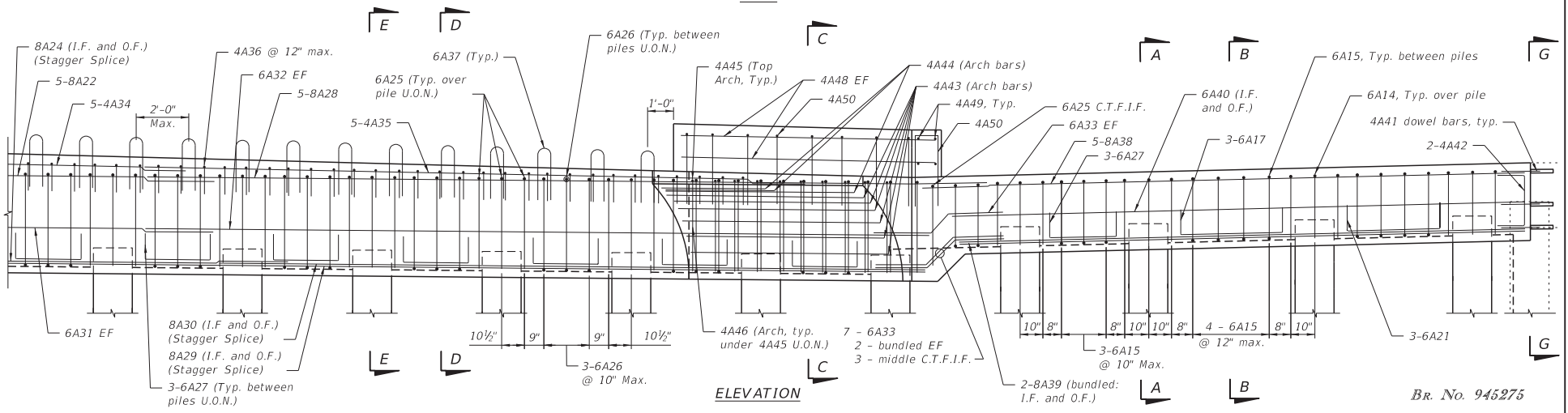


PLAN

Notes:

1. For Sections A-A, B-B, C-C, D-D, E-E, F-F and G-G see "End Bent 1 Details (4 of 4)" sheet.
2. All lap splices shall meet the below minimum splices lengths:

   #4 bars - 18"
   #6 bars - 24"
   #8 bars - 36"



ELEVATION

BR. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
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CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

END BENT 1 DETAILS (3 OF 4)

SHEET NO. B-15

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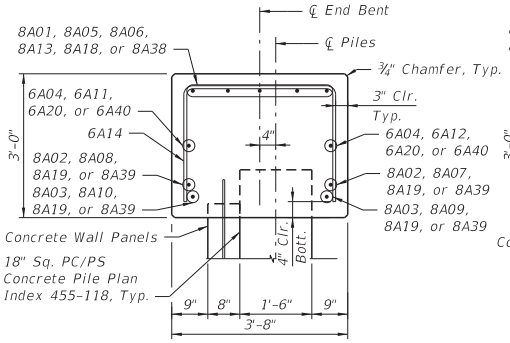
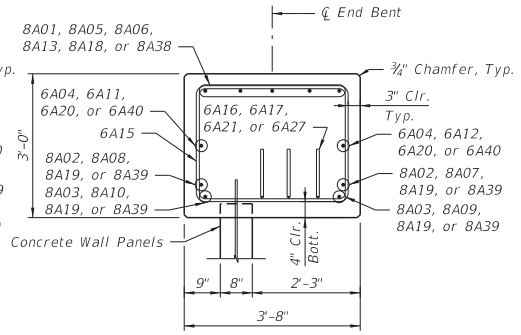
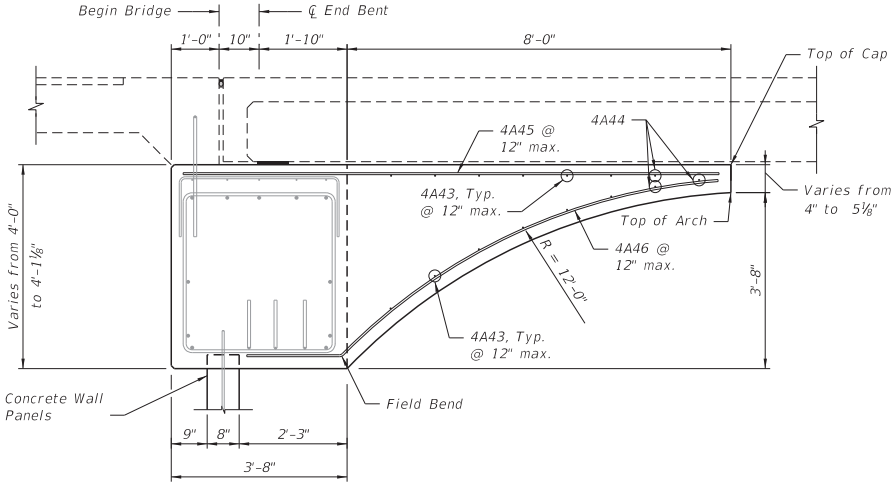


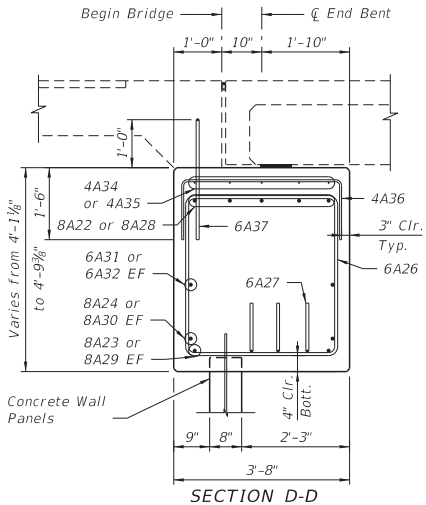
SECTION A-A



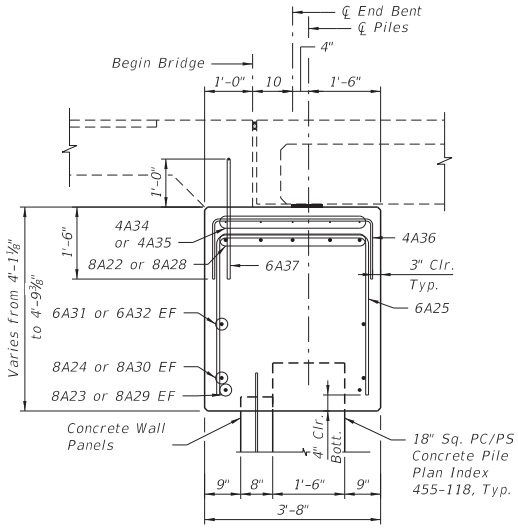
SECTION B-B



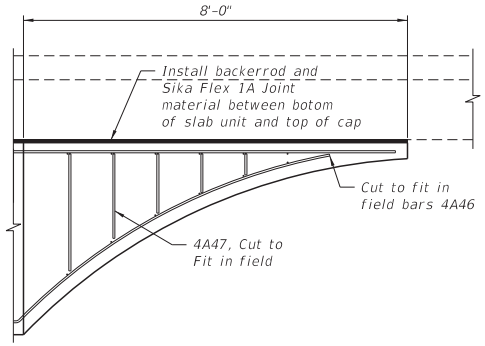
SECTION C-C



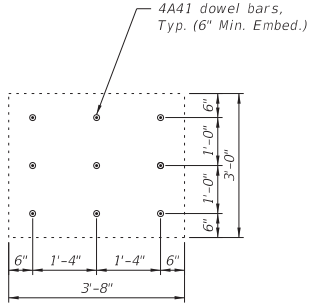
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

BR. NO. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
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CITY OF FORT PIERCE

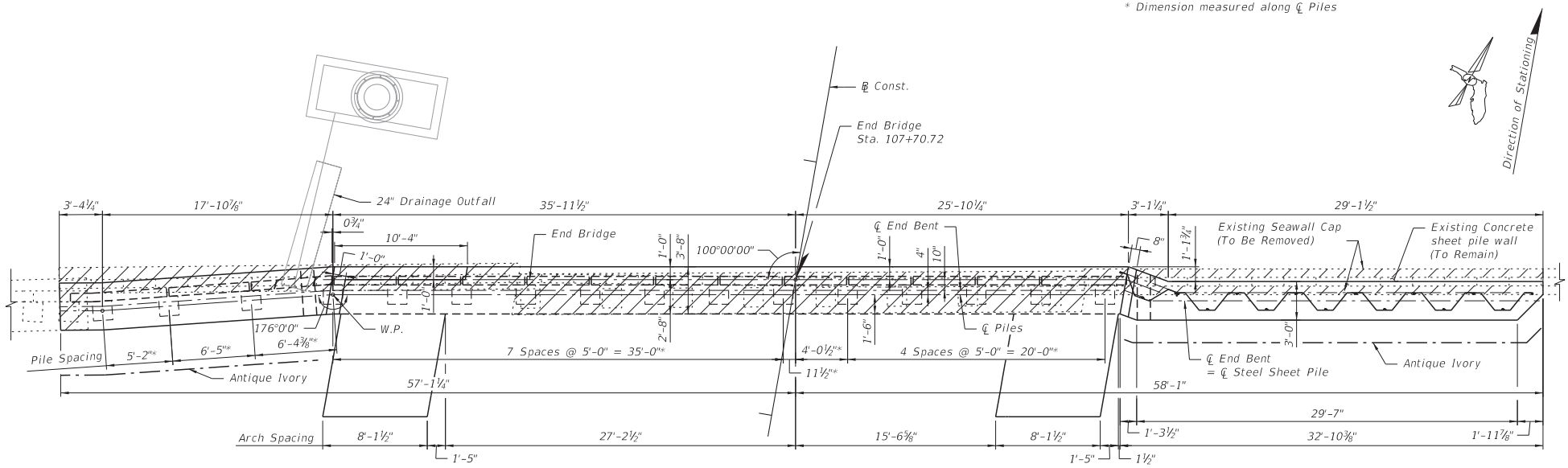
INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 1 DETAILS (4 OF 4)

SHEET NO.
B-16

Jerry.Piccolo 11/14/2024 2:09:09 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent1Det_04.dgn

* Dimension measured along ℄ Piles



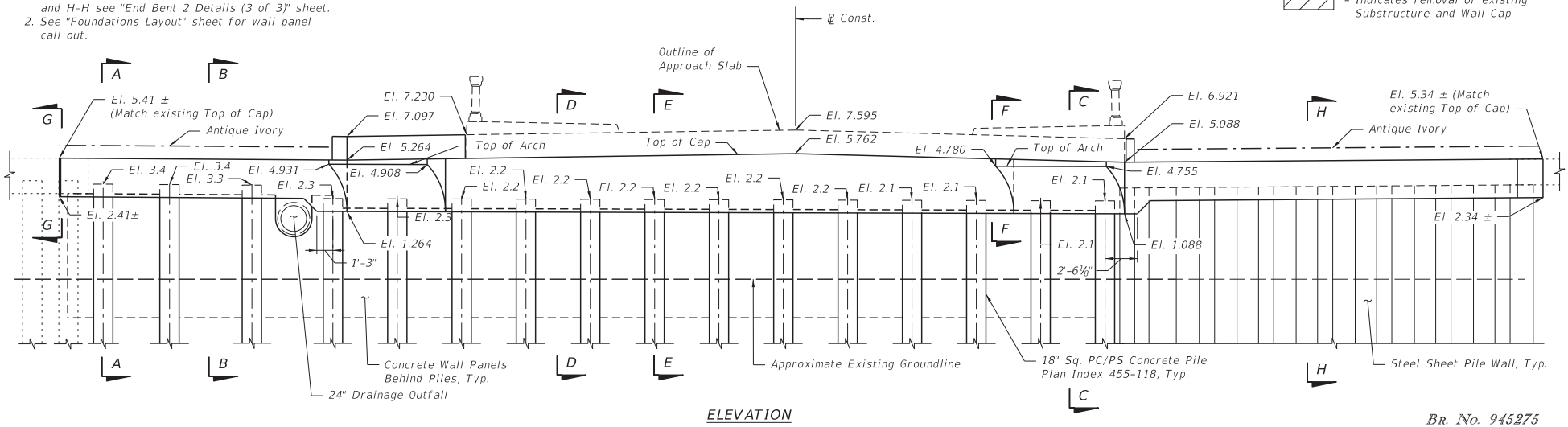
PLAN

Notes:

1. For Sections A-A, B-B, C-C, D-D, E-E, F-F, G-G, and H-H see "End Bent 2 Details (3 of 3)" sheet.
2. See "Foundations Layout" sheet for wall panel call out.

Legend

– Indicates removal of existing Substructure and Wall Cap



ELEVATION

Br. No. 945275

REVISIONS					
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JERRY MARCUS PICCOLO, P.E.
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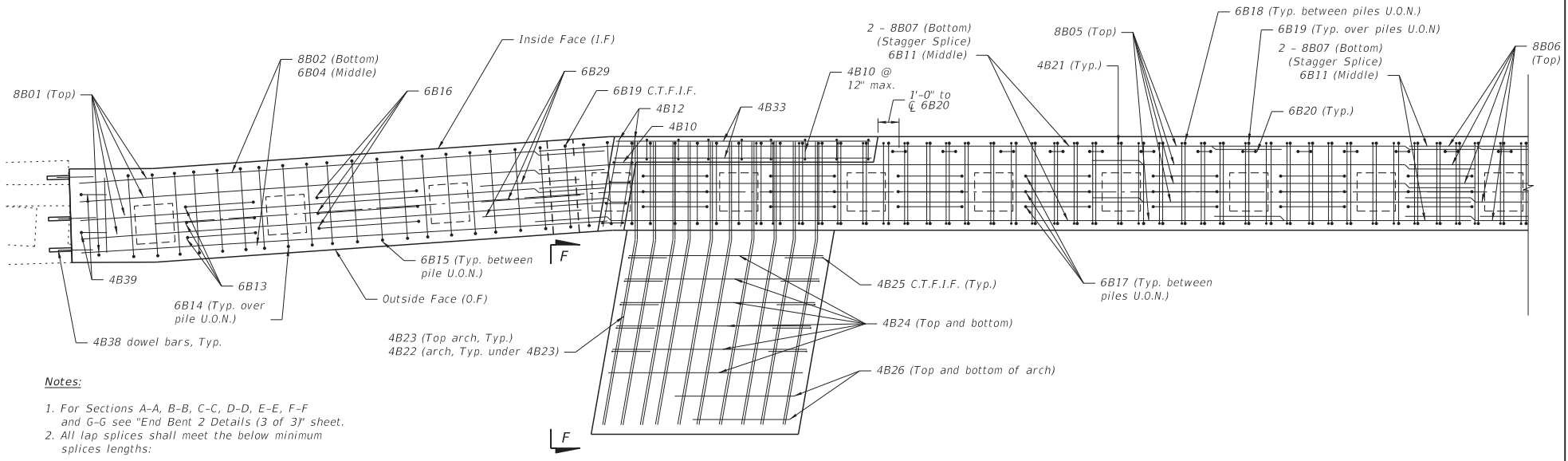
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 2 LAYOUT

SHEET NO.
B-17

Jerry.Piccolo 11/14/2024 2:09:11 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent2_01.dgn

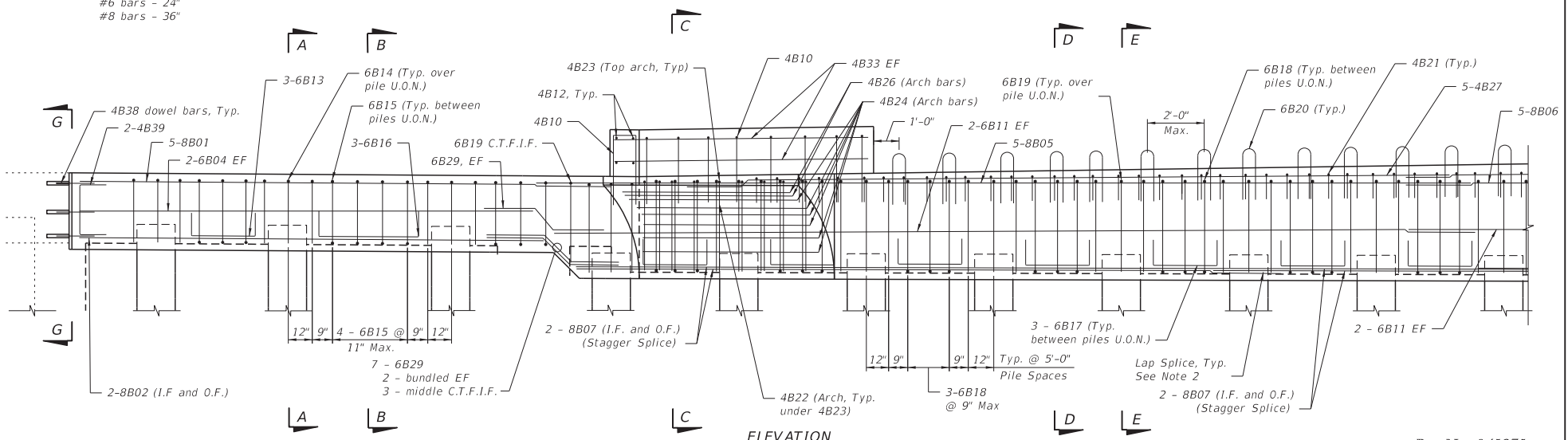


PLAN

Notes:

1. For Sections A-A, B-B, C-C, D-D, E-E, F-F and G-G see "End Bent 2 Details (3 of 3)" sheet.
2. All lap splices shall meet the below minimum splices lengths:

   #4 bars - 18"
   #6 bars - 24"
   #8 bars - 36"



ELEVATION

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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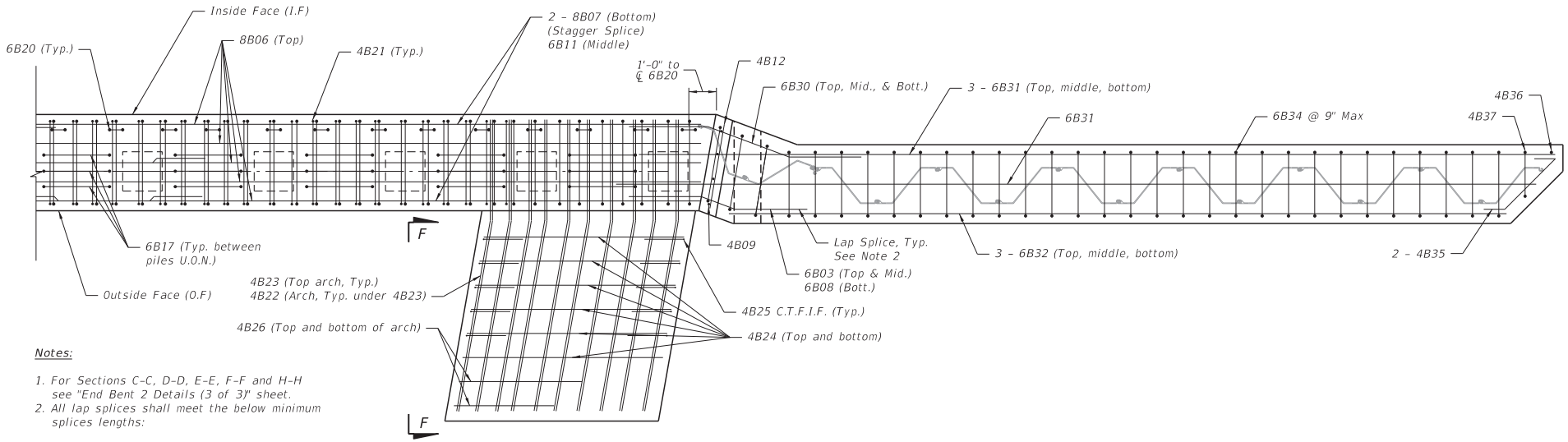
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 2 DETAILS (1 OF 3)

SHEET NO.
B-18

Jerry.Piccolo 11/14/2024 2:09:12 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent2Det_01.dgn

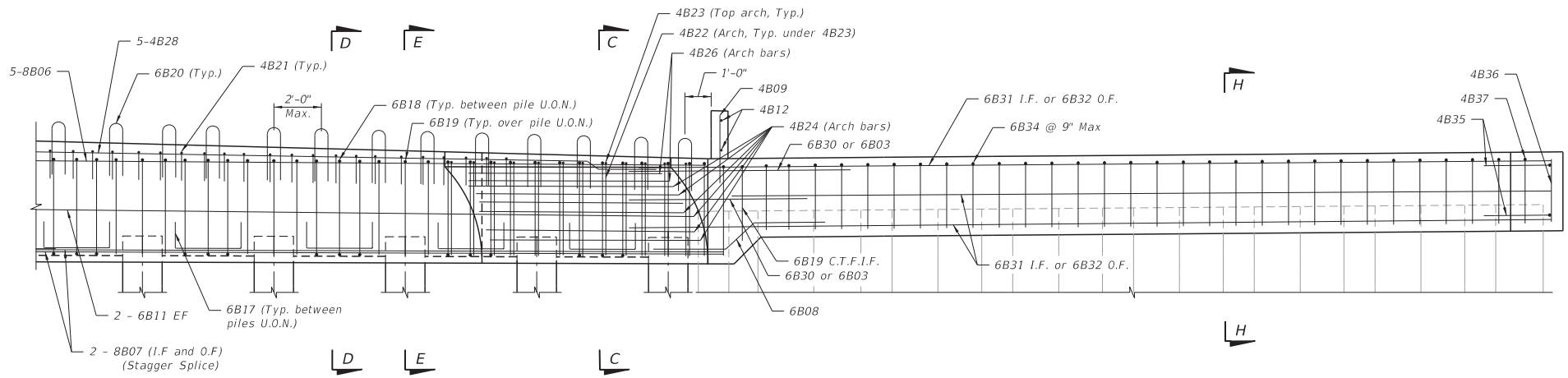


Notes:

1. For Sections C-C, D-D, E-E, F-F and H-H see "End Bent 2 Details (3 of 3)" sheet.
2. All lap splices shall meet the below minimum splices lengths:

   #4 bars - 18"
   #6 bars - 24"
   #8 bars - 36"

PLAN



ELEVATION

Br. No. 945275

REVISIONS					
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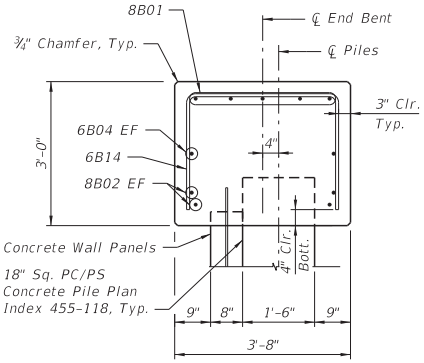
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

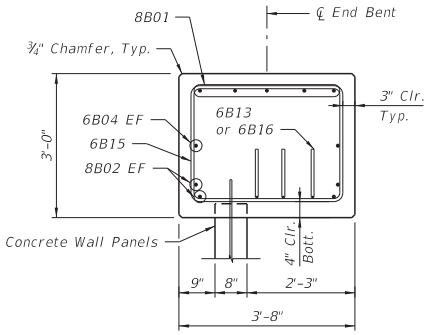
END BENT 2 DETAILS (2 OF 3)

SHEET NO.
B-19

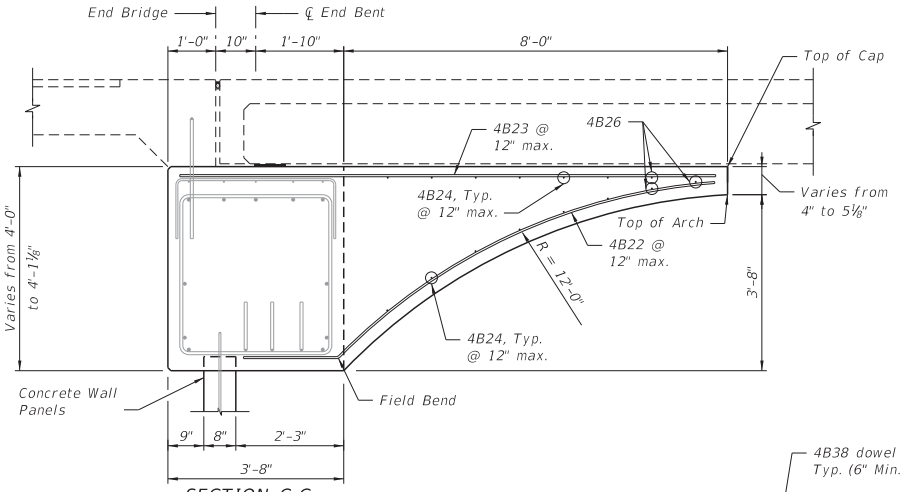
Jerry.Piccolo 11/14/2024 2:09:13 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1EndBent2Det_02.dgn



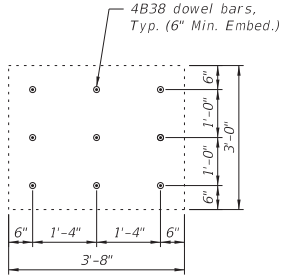
SECTION A-A



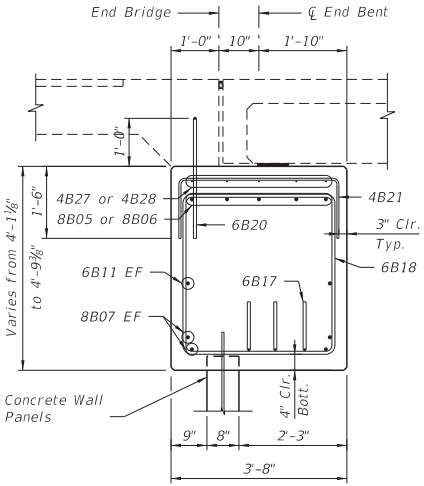
SECTION B-B



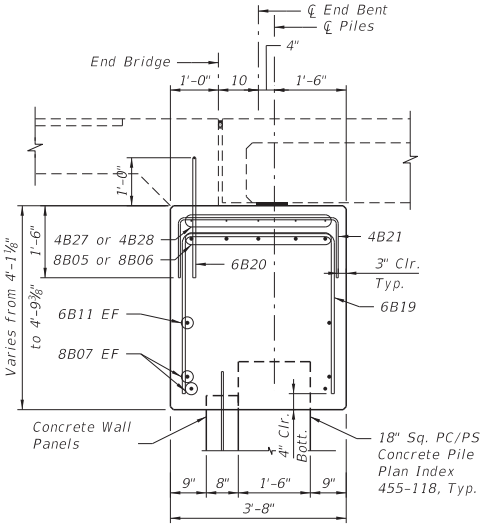
SECTION C-C



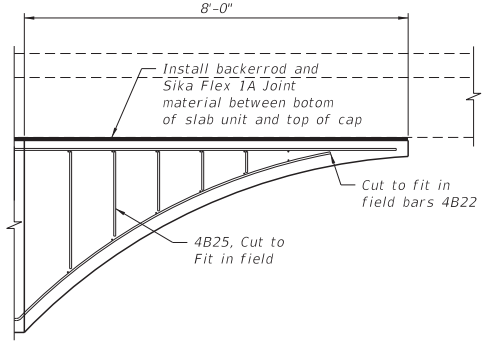
SECTION G-G



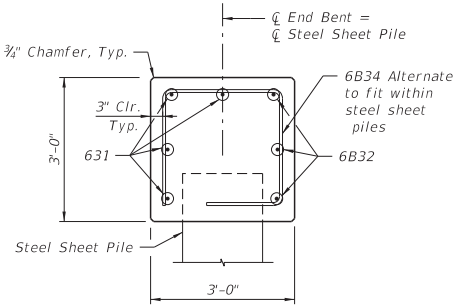
SECTION D-D



SECTION E-E



SECTION F-F



SECTION H-H

Br. No. 945275

REVISIONS					
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INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

END BENT 2 DETAILS (3 OF 3)

SHEET NO.
B-20

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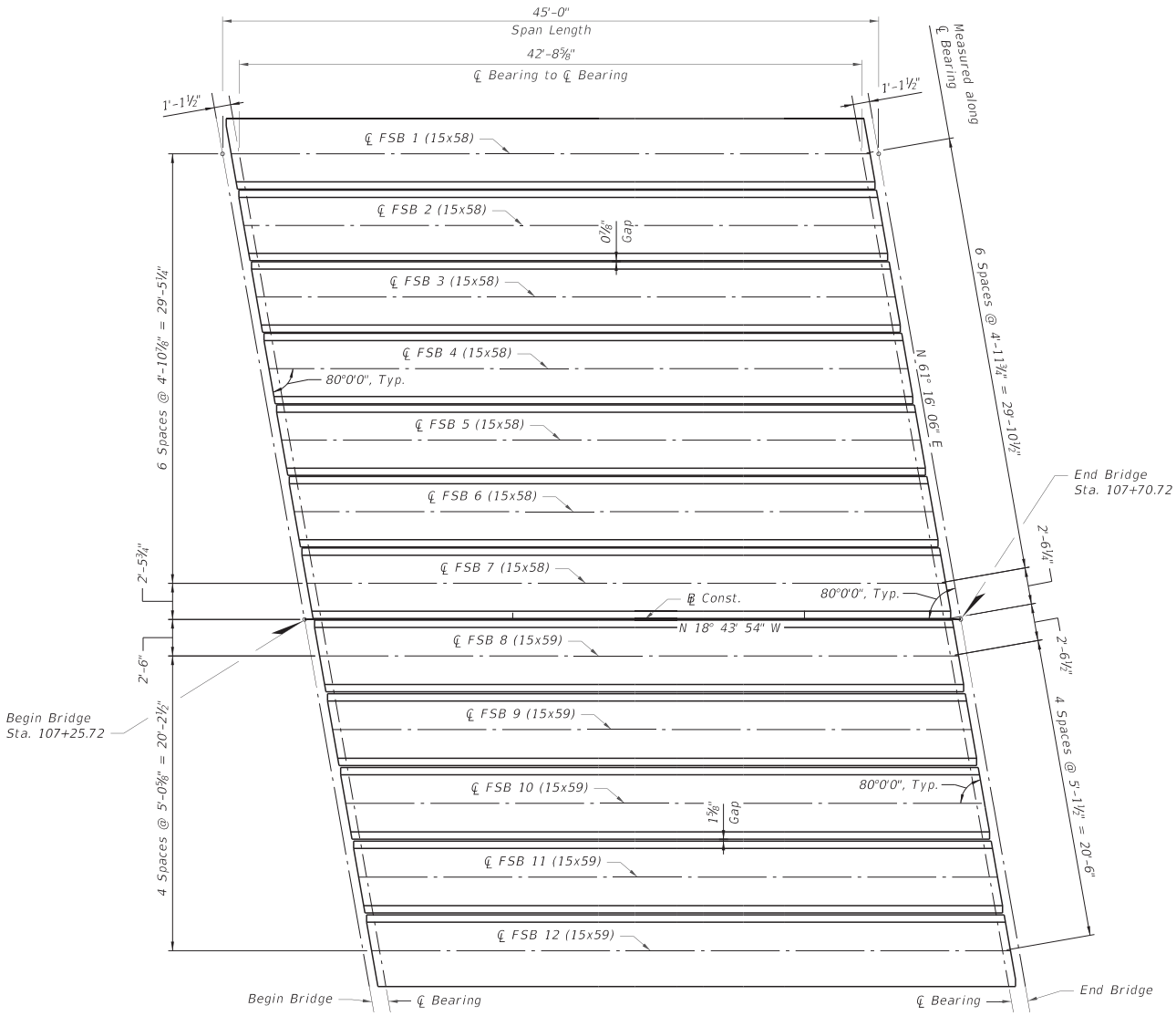

PLAN

Notes:
1. See "Plan and Elevation" sheet for vertical curve data.

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FRAMING PLAN

SHEET NO.
B-21

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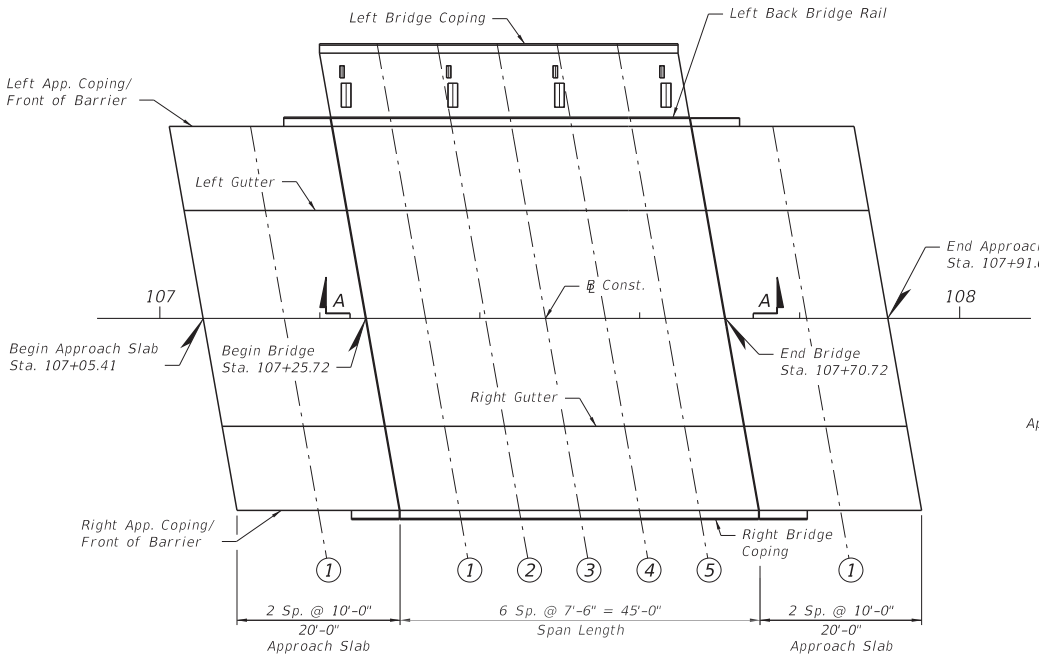
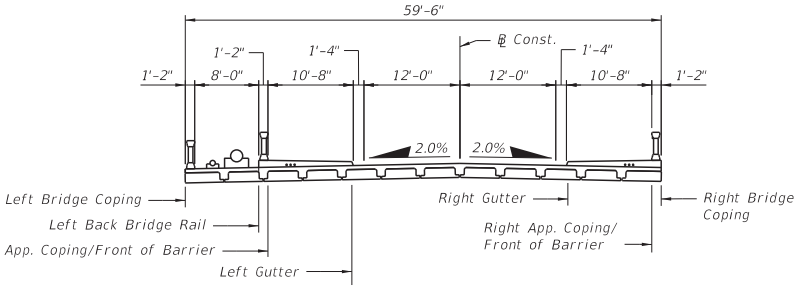
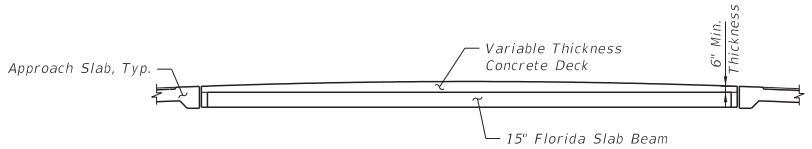


PLAN



TYPICAL SECTION SHOWING FINISH GRADE ELEVATIONS



SECTION A-A

LOCATION	Offset (ft)	Begin Approach Slab	①	Begin Bridge	①	②	③	④	⑤	End Bridge	①	End Approach Slab
Left Bridge Coping	34.333	N/A	N/A	6.676	6.959	7.166	7.284	7.312	7.249	7.097	N/A	N/A
Left Back Bridge Rail	25.167	N/A	N/A	6.921	7.194	7.383	7.481	7.489	7.407	7.236	N/A	N/A
Left App. Coping/Front of Barrier	24.000	6.318	6.597	6.952	7.224	7.410	7.506	7.512	7.427	7.253	6.887	6.545
Left Gutter	13.333	6.577	6.870	7.239	7.493	7.656	7.729	7.712	7.605	7.409	7.032	6.703
℄ Const.	0.000	6.905	7.215	7.595	7.820	7.955	8.000	7.955	7.820	7.595	7.215	6.905
Right Gutter	13.333	6.703	7.032	7.409	7.605	7.712	7.729	7.656	7.493	7.239	6.870	6.577
Right App. Coping/Front of Barrier	24.000	6.545	6.887	7.253	7.427	7.512	7.506	7.410	7.224	6.952	6.597	6.318
Right Bridge Coping	25.167	N/A	N/A	7.236	7.407	7.489	7.481	7.383	7.194	6.921	N/A	N/A

Notes:
1. Finish grade elevations are taken to the top of the riding surface. Finish Grade elevations are taken to top of concrete deck under the sidewalk concrete.
2. Contractor to subtract asphalt thickness from approach slab finish grade elevations to reach the top of approach slab concrete elevations

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INDIAN RIVER DRIVE
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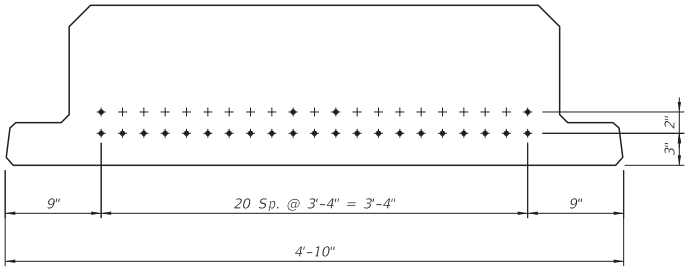
FINISH GRADE ELEVATIONS

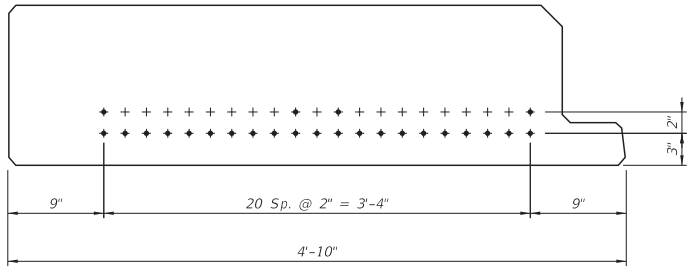
SHEET NO.
B-22

FLORIDA SLAB BEAM - TABLE OF VARIABLES

Table Date 11-01-20

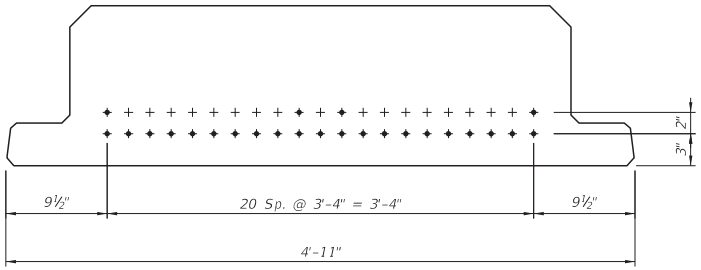
LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN.	PLAN VIEW CASE		ANGLE Ø		BEAM DIMENSIONS*			REINFORCING STEEL																	
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)										3C		4D1	4D2	4D3		5E1		5E2		6Y1	6Y2	4K	NO. OF BAR SPACES		BAR SPACING*	
				28 Day	Release	TYPE	END 1	END 2	END 1	END 2	DIM W	DIM L	DIM R	NO.	DIM C	DIM D	DIM D	NO.	DIM D	NO.	DIM E	NO.	DIM E	DIM Y	DIM Y	NO.	S1	S2	V1	V2
1	1	FSB 15x58	VI	8500	6800	1	2	2	80°	80°	4'-10"	43'-10"	¼"	45	4'-5½"	2'-5½"	2'-5½"	54	2'-5½"	–	–	88	4'-6½"	3'-6"	3'-6"	248	2	27	5"	9"
1	2-7	FSB 15x58	VI	8500	6800	1	2	2	80°	80°	4'-10"	43'-10"	¼"	45	4'-5½"	2'-5½"	2'-5½"	54	2'-5½"	88	4'-8"	–	–	3'-6"	3'-6"	248	2	27	5"	9"
1	8-11	FSB 15x59	VI	8500	6800	2	2	2	80°	80°	4'-11"	43'-10"	¼"	45	4'-6½"	2'-6"	2'-6"	54	2'-6"	88	4'-9"	–	–	3'-7"	3'-7"	248	2	27	5"	9"
1	12	FSB 15x59	VI	8500	6800	2	2	2	80°	80°	4'-11"	43'-10"	¼"	45	4'-6½"	2'-6"	2'-6"	54	2'-6"	–	–	88	4'-7½"	3'-7"	3'-7"	248	2	27	5"	9"

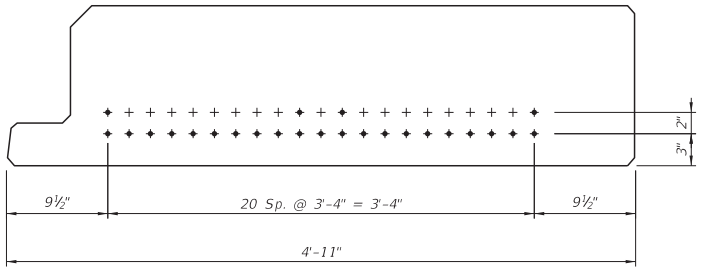




(Exterior - Beam 1)

TYPE ① 25 STRANDS





(Exterior - Beam 12)

TYPE ② 25 STRANDS

STRAND DESCRIPTION: Use 0.6 Diameter, Grade 270, Low Relaxation Carbon Steel Strands stressed at 44 kips each. Area per strand equals 0.217 sq. in.

STRAND PATTERNS

NOTE: Work this sheet with Standard Plans Index 450-450 through 450-453.

STRAND DEBONDING LEGEND

- – fully bonded strands.

NOTE: On beams with skewed ends the debonded length shall be measured along the debonded strand.

DIMENSION NOTES

* All longitudinal beam dimensions shown on this sheet with a single asterisk (*) are measured along the top of beam at the centerline. Dimension "R" is calculated at mid-height of the beam.

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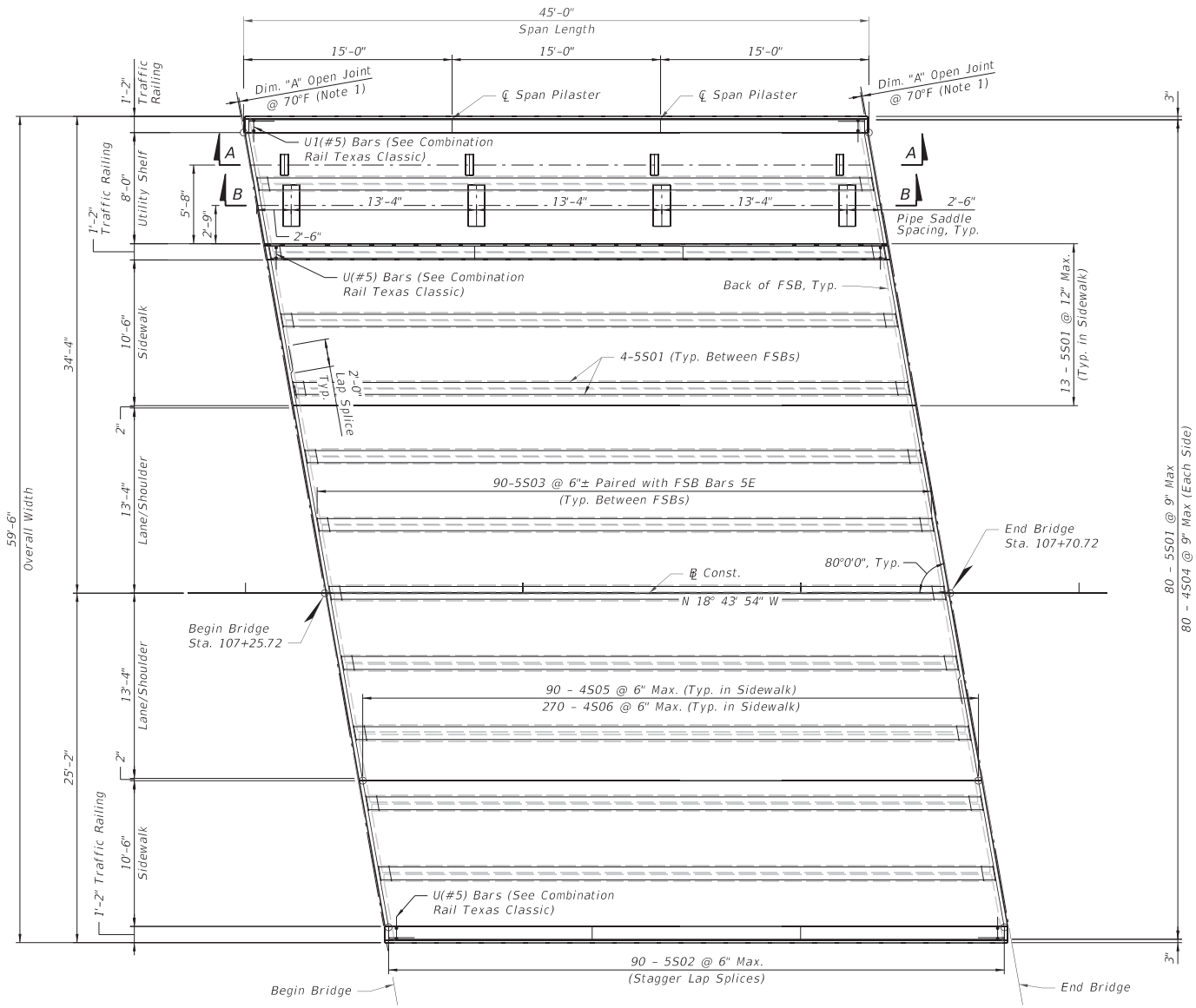
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

TABLE OF BEAM VARIABLES

SHEET NO. B-23



Notes:
1. For Dim. "A" see "Superstructure Details (3 of 3)" sheet.
2. Embed U(#5) and U1(#5) Bars 3" Min. into Deck.

PLAN

(Pipe saddle rebar not shown for clarity)

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INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SUPERSTRUCTURE PLAN

SHEET NO. B-24

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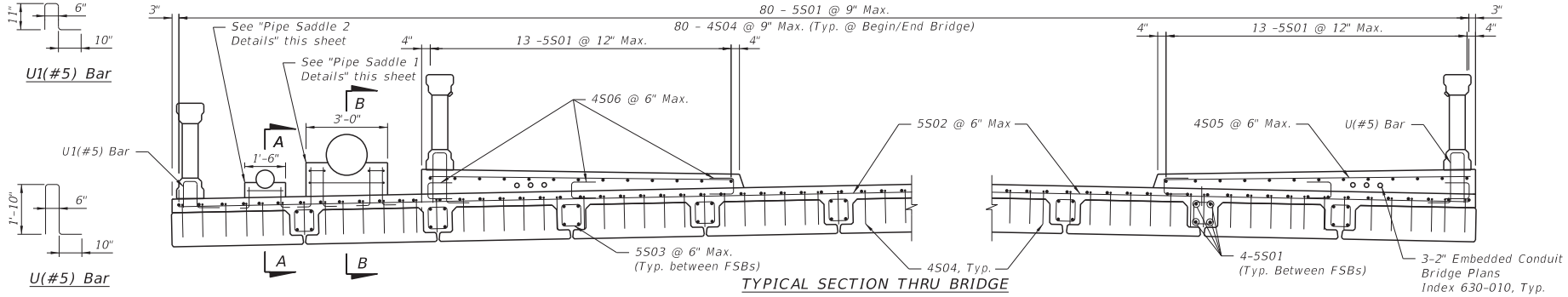
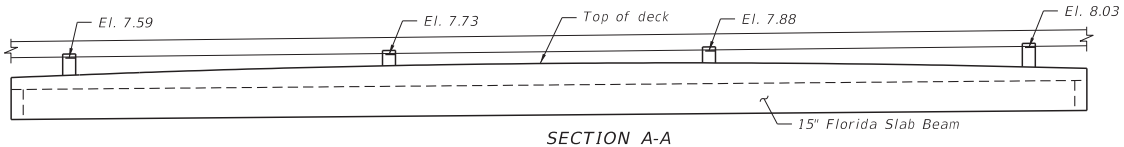
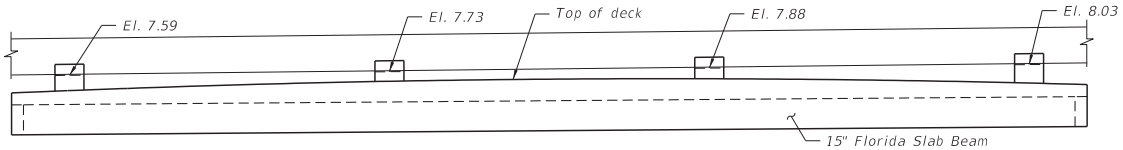


TYPICAL SECTION THRU BRIDGE



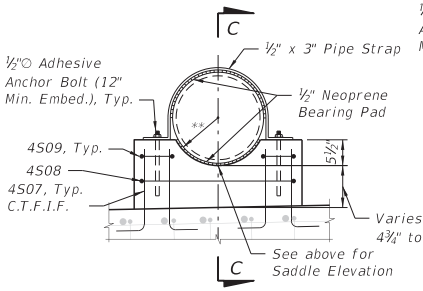
SECTION A-A

(Rebar and Pipe strap not shown for clarity)

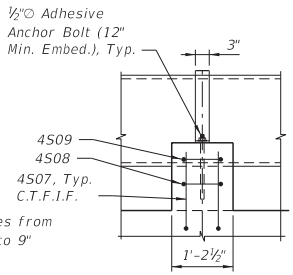


SECTION B-B

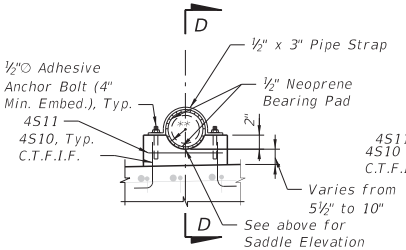
(Rebar and Pipe strap not shown for clarity)



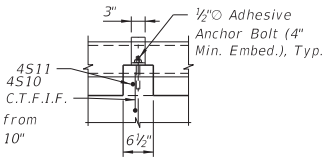
PIPE SADDLE 1 DETAILS



SECTION C-C



PIPE SADDLE 2 DETAILS



SECTION D-D

** Contractor to verify O.D. of force and water main prior to casting pipe saddles.

Pipe Saddle Notes:

1. Anchor Bolt shall be ASTM F1554 (Grade 55) threaded rod. Anchor bolt nuts & washers shall be ASTM A563 Grade A Heavy Hex & ASTM F436 Type 1. Anchor bolts, nuts, & washers shall be hot dipped galvanized per Specification Section 562.
2. Pipe strap shall be fabricated from ASTM A572 Grade 50 plate and be hot dipped galvanized per Specification Section 562.
3. Adhesive anchors shall be installed in accordance with Specification Section 416, Type HV Adhesive.
4. The cost of the pipe strap, anchor bolts, and neoprene bearing pads shall be included in the unit cost of the Superstructure concrete.

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CORRIDOR IMPROVEMENTS

SUPERSTRUCTURE DETAILS (1 OF 3)

SHEET NO.
B-25

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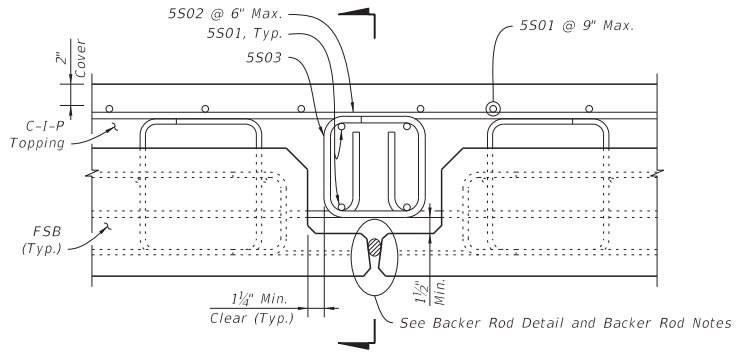
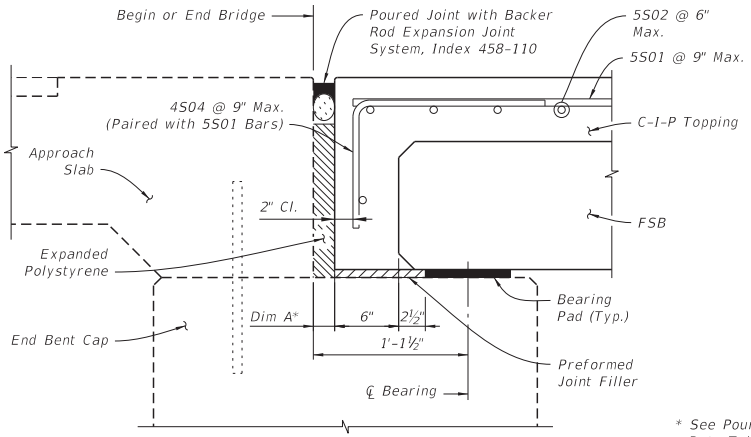
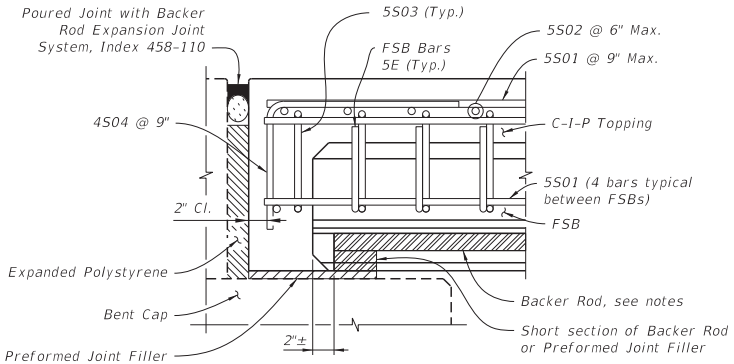


DETAIL AT POCKETS

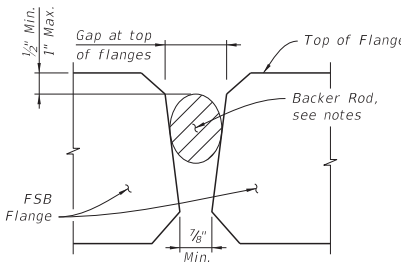


DETAIL AT BEGIN/END BRIDGE ALONG ℄ BEAM
(REINFORCING WITHIN FSB NOT SHOWN FOR CLARITY)

* See Poured Expansion Joint Data Table, Index 458-110.



SECTION ALONG ℄ POCKET AT SPAN ENDS
(SECTION AT BEGIN/END BRIDGE SHOWN)



BACKER ROD DETAIL

BACKER ROD NOTES:

1. Use a Backer Rod to form the bottom of the cast in place topping at the gap between adjacent FSBs. Use a Backer Rod meeting the requirements of ASTM C1330 or ASTM D5249, Types 1 or 3, with a minimum uncompressed diameter 50% larger than the field verified maximum width of the gap between adjacent FSBs. Measure gap at the top of the flanges as shown in the Backer Rod Detail.
2. Install the Backer Rod from the top down to the position shown in the Backer Rod Detail.
3. Secure the Backer Rod to prevent displacement during topping concrete placement and to be mortar tight using a compatible construction adhesive.
4. The Backer Rod may remain in place after topping concrete placement.

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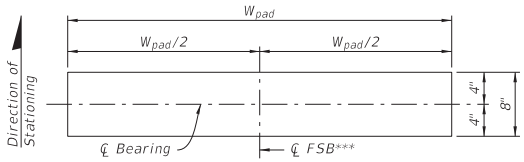
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SUPERSTRUCTURE DETAILS (2 OF 3)

SHEET NO. B-26

FSB BEARING PAD DATA TABLE	Table Date 11-01-20		
SPAN NO.	BEAM NO.	BEARING PAD MARK	W_{pad} (in)
1	1-7	1	46
1	8-12	2	47

NOTE:
Provide plain elastomeric Bearing Pads with a Shear Modulus G = 110 psi and in accordance with Specification 932.



PLAN

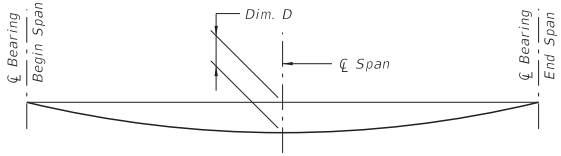
ELEVATION

BEARING PAD DETAIL

*** Ø = 90° Shown;
60° ≤ Ø < 90° Similar

CAMBER NOTE:

The values given in the table are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the topping casting. If the predicted cambers based on field measurements differ more than ± ½" from the theoretical "Net Beam Camber @ 120 Days" shown in the table, propose modified dimensions as required and submit to the Engineer for approval a minimum of 21 days prior to casting topping concrete.



DEAD LOAD DEFLECTION DIAGRAM

CAMBER AND DEFLECTION DATA TABLE FOR FLORIDA SLAB BEAMS			Table Date 11-01-20
LOCATION		NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS (in.)	DIM. D DEAD LOAD DEFLECTION DUE TO TOPPING CASTING @ 120 DAYS (in.)
SPAN NO.	BEAM NO.		
1	1-7	1¾"	¾"
1	8-12	1¾"	¾"

POURED EXPANSION JOINT DATA TABLE INDEX 458-110			Table Date 1-01-09
LOCATION	DIM. "A" @ 70°F	TOTAL DESIGN MOVEMENT	DIM. "A" ADJUSTMENT PER 10°F
End Bent 1	1"	0.138"	0.019"
End Bent 2	1"	0.138"	0.019"

NOTE:
Dim. "A" adjustment per 10°F shown is measured perpendicular to ℄ Expansion Joint. Work this table with Standard Plans Index 458-110.

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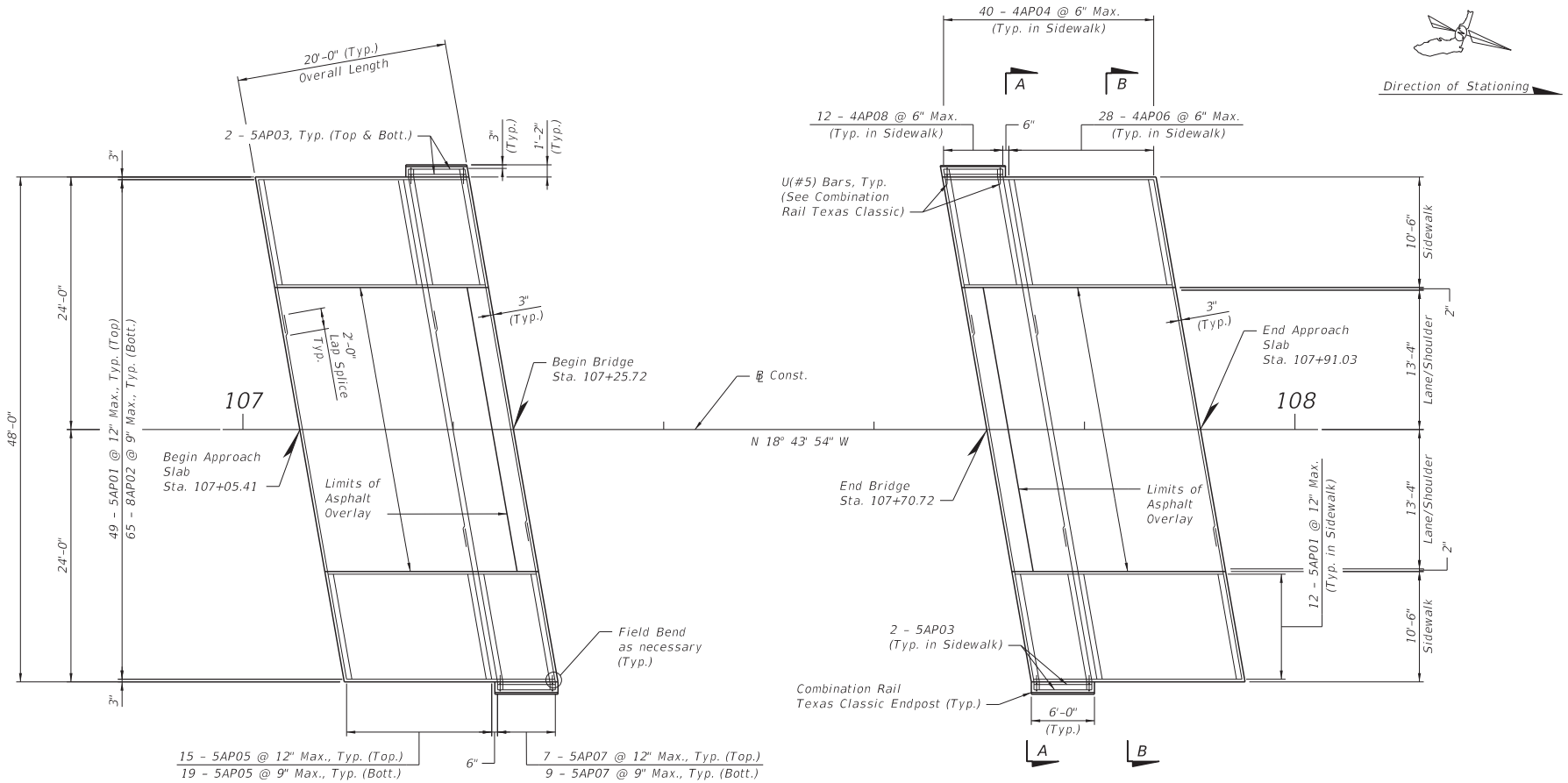
CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

SUPERSTRUCTURE DETAILS (3 OF 3)

SHEET NO. B-27



PLAN

Notes:
1. See "Decorative Railing Details (1 of 3)" through "Decorative Railing Details (3 of 3)" for Combination Rail Texas Classic Endpost Details.

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INDIAN RIVER DRIVE
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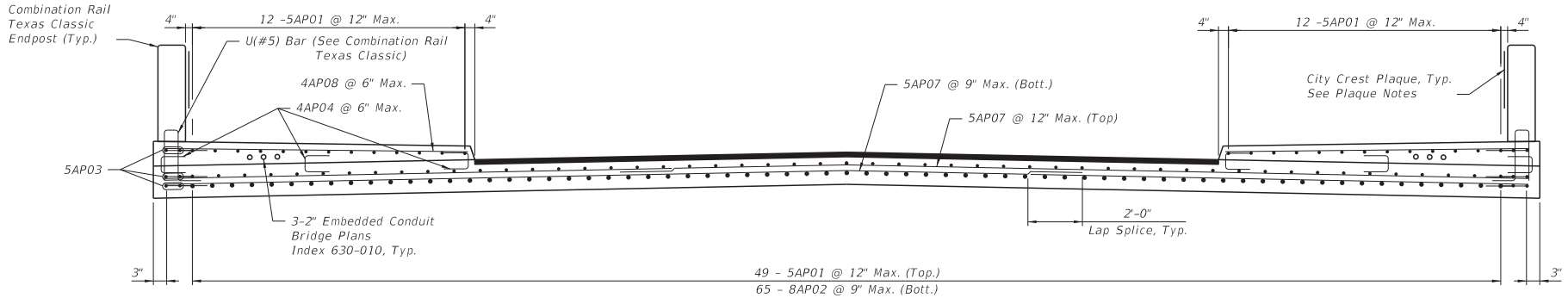
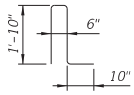
APPROACH SLAB DETAILS (1 OF 2)

SHEET NO.
B-28

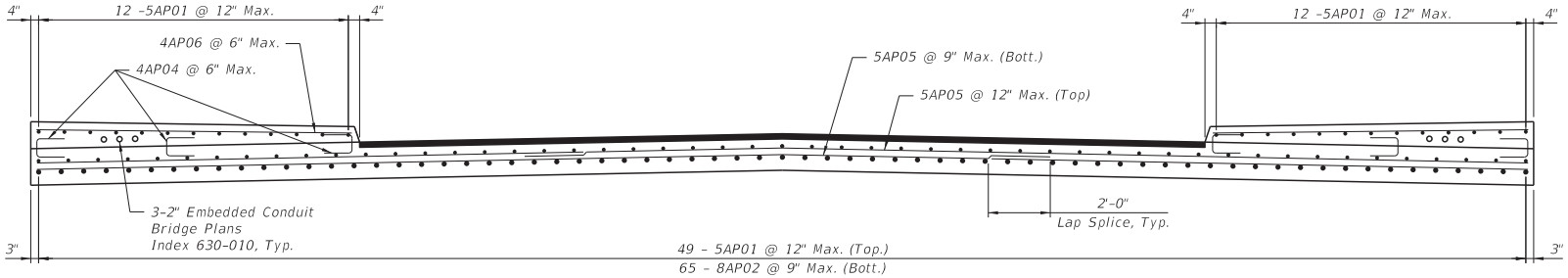
Jerry.Piccolo 11/14/2024 2:09:23 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1ApproachSlab01.dgn



SECTION A-A



U(#5) Bar



SECTION B-B

Notes:
1. See "Decorative Railing Details (1 of 3)" through "Decorative Railing Details (3 of 3)" for Combination Rail Texas Classic Endpost Details.

Plaque Notes:
1. A bronze plaque of the City Crest shall be installed at all four interior corners of the bridge (See Plan and Elevation sheet).
2. Each plaque shall be minimum 2.5-feet in diameter.
3. The plaques shall have a minimum of three studs welded or brazed to the back of each plaque. Each stud shall be ¾"∅ and extend a minimum of 3" behind the back of plaque.
4. Attach each bronze plaque utilizing Type HSHV anchor adhesive on the studs and back of plaque. Clean off all excess adhesive (squeeze out" after plaque is fully pressed against traffic railing.
5. Bronze crest shall be cast of architectural bronze having the following composition: Copper 85%, Tin 5%, Lead 5%, and Zinc 5%.
6. Contractor shall request vector file for City crest from City.
7. Prior to casting of hte City Crests, Contractor shall submit shop drawings of the City crest for review and approval.
8. All cost associated with the four City Crest plaques shall be included within Pay Item 521–5–3A Texas Railing, Combination Rail Texas Classic, Type C411.

BR. NO. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
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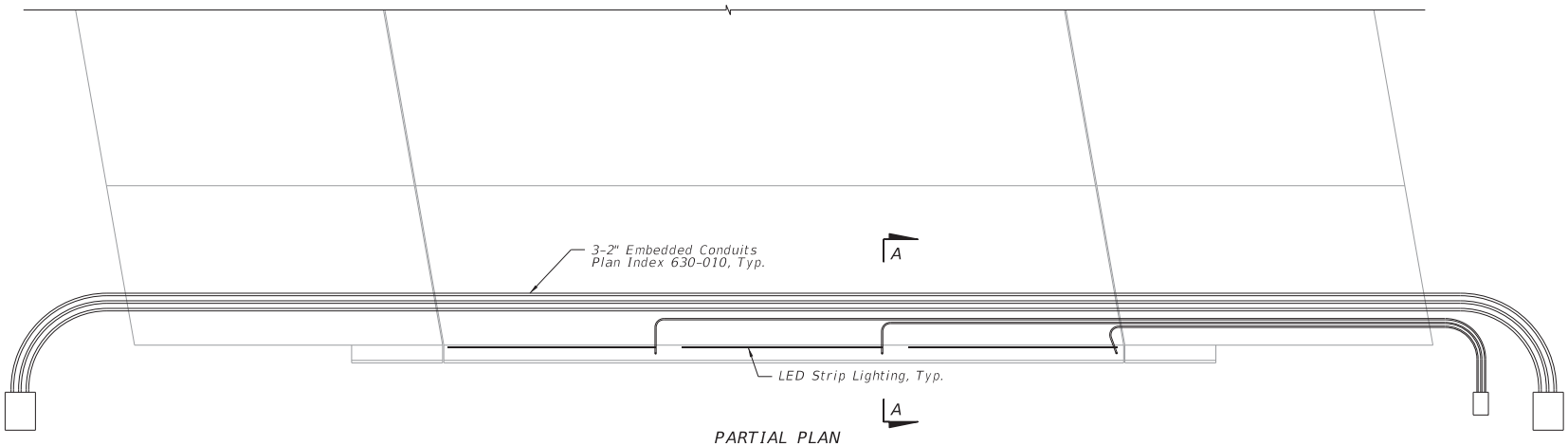
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

APPROACH SLAB DETAILS (2 OF 2)

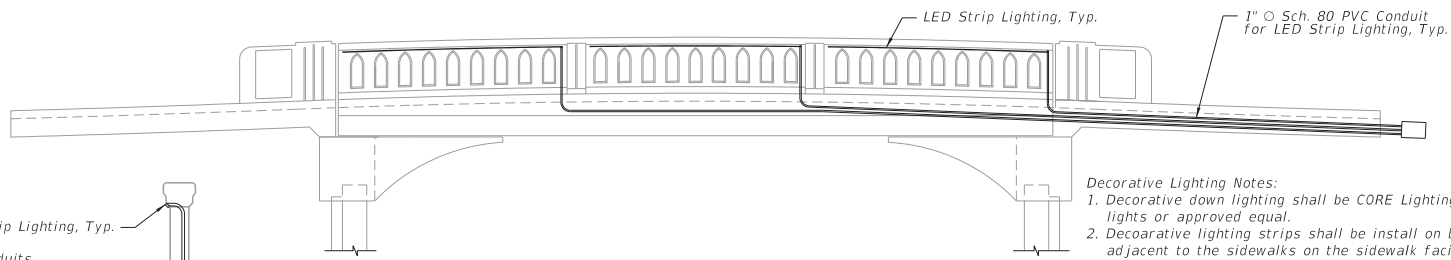
SHEET NO.
B–29



PARTIAL PLAN

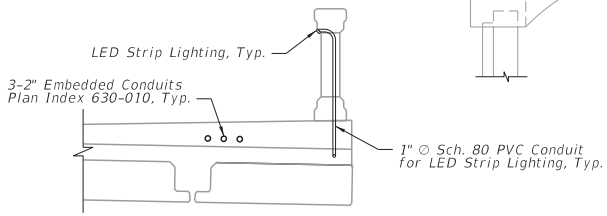
(East side of bridge shown, West side of bridge similar)

Notes:
1. Refer to lighting plans for pull box locations.



ELEVATION

(Embedded sidewalk conduits not shown for clarity)



SECTION A-A

Decorative Lighting Notes:
1. Decorative down lighting shall be CORE Lighting LNT-65RGB+W LED Strip lights or approved equal.
2. Decoarative lighting strips shall be install on both the east and west traffic railings adjacent to the sidewalks on the sidewalk facing side of the railing. No decorative lighting strips shall be installed on the western most traffic railing.
3. LED Down Lighting strips shall be mounted facing down within the Traffic Railing as shown on this sheet with 316 SS anchors.
4. LED Strip lights shall be mounted in a way that LEDs are not within drivers viewshed.
5. LED light system shall have color changing capability.
6. Pay Item 715-11A shall include all costs associated with furnishing and installing a complete, functional, and NEC compliant LED strip lighting system following the Manufacturer's Recommendations. The LED light system shall include but not be limited to LED light strips, conductors, lighting control system, lighting control mounting system, attachement hardware, service disconnect, and utility coordination.

Br. No. 945275

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

LIGHTING CONDUIT DETAILS

SHEET NO.
B-30

	MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø	
	SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG	
	LOCATION					END BENT 1															NO. REQUIRED = 1															
*	8	A01	25- 0		5	1			25- 0																										
*	8	A02	39- 1		2	1			39- 1																										
*	8	A03	32- 8		2	1			32- 8																										
*	6	A04	25- 0		2	1			25- 0																										
*	8	A05	37- 6		1	14			34- 6			3- 0																						83	
*	8	A06	40- 6		1	14			37- 6			3- 0																						83	
*	8	A07	26- 6		1	14			23- 6			3- 0																						83	
*	8	A08	22- 6		1	14			19- 6			3- 0																						83	
*	8	A09	32- 7		1	14			29- 7			3- 0																						83	
*	8	A10	29- 0		1	14			26- 0			3- 0																						83	
*	6	A11	37- 6		1	14			34- 6			3- 0																						83	
*	6	A12	40- 6		1	14			37- 6			3- 0																						83	
*	8	A13	33- 9		3	1			33- 9																										
*	6	A14	8- 0		53	11			3- 2			2- 5			2- 5																				
*	6	A15	13- 2		64	4	4	4	2- 5			3- 2																							
*	6	A16	4- 0		3	11			2- 0			1- 0			1- 0																				
*	6	A17	5-11		36	11			3-11			1- 0			1- 0																				
*	8	A18	33- 0		5	1			33- 0																										
*	8	A19	29- 6		4	1			29- 6																										
*	6	A20	29- 6		2	1			29- 6																										
*	6	A21	5- 9		6	11			3- 9			1- 0			1- 0																				
*	8	A22	37- 2		5	1			37- 2																										
*	8	A23	38- 8		2	1			38- 8																										
*	8	A24	38- 8		2	1			38- 8																										
*	6	A25	10- 0		42	11			3- 2			3- 5			3- 5																				
*	6	A26	15- 2		36	4	4	4	3- 5			3- 2																							
*	6	A27	4- 6		36	11			2- 6			1- 0			1- 0																				
*	8	A28	35- 0		5	1			35- 0																										
*	8	A29	28- 8		2	1			28- 8																										
*	8	A30	28- 8		2	1			28- 8																										
*	6	A31	37- 2		2	1			37- 2																										
*	6	A32	31- 6		2	1			31- 6																										
*	6	A33	5- 9		18	28			2- 6			2- 6			0- 6			0- 6																
*	4	A34	32- 6		5	1			32- 6																										
*	4	A35	26- 6		5	1			26- 6																										
*	4	A36	5- 2		75	11			3- 2			1- 0			1- 0																				
*	6	A37	4-10		26	23			2- 0			0- 3			2- 0																				
*	8	A38	23- 8		5	1			23- 8																										
*	8	A39	21-11		4	1			21-11																										
*	6	A40	21-11		2	1			21-11																										
*	4	A41	1- 6		18	1			1- 6																										
*	4	A42	4- 5		4	11			2- 5			1- 0			1- 0																				
*	4	A43	7- 8		24	1			7- 8																										
*	4	A44	5- 0		6	1			5- 0																										
*	4	A45	11- 2		20	1			11- 2																										
*	4	A46	11- 0		20	36			2- 0			12- 0																						43	***
*	4	A47	4- 6		20	10			1- 6			3- 0																							
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*	4	A49	3- 4		6	1			3- 4																										
*	4	A50	5- 8		12	11			0- 8			2- 6			2- 6																				
*	4	A51	2- 6		4	1			2- 6																										
**	4	X001	40- 0		1	1			40- 0																										
**	5	X002	40- 0		3	1			40- 0																										
**	6	X003	40- 0		3	1			40- 0																										
**	8	X004	40- 0		1	1			40- 0																										

* Indicates Stainless Reinforcing Steel (See General Notes sheet for more information).

** Indicates extra Stainless Reinforcing Steel that shall be ordered and delivered to the site. If not utilized, Engineer will assist contractor in determining location of placement.

*** Indicates Ø as a turn angle.

BR. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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P.E. LICENSE NUMBER 80484
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WEST PALM BEACH, FL 33411
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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

REINFORCING BAR LIST (1 OF 3)

SHEET NO.
B-31

	MARK		LENGTH		NO	TYP	STY			B			C			D			E			F			H			J			K			N	Ø	
	SIZE	DES	FT	IN	BARS	BAR	A	G		FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG	
	LOCATION END BENT 2																					NO. REQUIRED = 1														
*	8	B01	21-	0	5	1				21-	0																									
*	8	B02	18-	6	2	1				18-	6																									
*	6	B03	6-	5	2	28				2-	6		2-	6		1-	3		0-	6															
*	6	B04	17-	10	2	1				17-	10																									
*	8	B05	37-	0	5	1				37-	0																									
*	8	B06	31-	0	5	1				31-	0																									
*	8	B07	66-	6	4	41				38-	3		28-	3														3-	0					1		
*	6	B08	6-	10	1	28				2-	6		2-	6		1-	2		1-	4															
*	4	B09	2-	6	4	1				2-	6																									
*	4	B10	5-	6	12	11				0-	6		2-	6		2-	6																			
*	6	B11	66-	6	2	41				38-	3		28-	3														2-	0					1		
*	4	B12	3-	2	6	1				3-	2																									
*	6	B13	4-	8	3	11				2-	8		1-	0		1-	0																			
*	6	B14	8-	0	9	11				3-	2		2-	5		2-	5																			
*	6	B15	13-	2	10	4	4	4		2-	5		3-	2																						
*	6	B16	5-	11	3	11				3-	11		1-	0		1-	0																			
*	6	B17	4-	6	36	11				2-	6		1-	0		1-	0																			
*	6	B18	15-	2	36	4	4	4		3-	5		3-	2																						
*	6	B19	10-	0	43	11				3-	2		3-	5		3-	5																			
*	6	B20	4-	10	26	23				2-	0		0-	3		2-	0																			
*	4	B21	5-	2	59	11				3-	2		1-	0		1-	0																			
*	4	B22	11-	0	20	36				2-	0		12-	0																					43	***
*	4	B23	11-	2	20	1				11-	2																									
*	4	B24	7-	8	24	1				7-	8																									
*	4	B25	4-	6	20	10				1-	6		3-	0																						
*	4	B26	5-	0	6	1				5-	0																									
*	4	B27	30-	0	5	1				30-	0																									
*	4	B28	28-	6	5	1				28-	6																									
*	6	B29	6-	5	9	28				2-	6		2-	6		1-	0		1-	0															
*	6	B30	8-	3	3	28				2-	6		2-	6		3-	0		1-	2															
*	6	B31	35-	0	4	1				35-	0																									
*	6	B32	29-	4	3	1				29-	4																									
*	4	B33	9-	10	4	1				9-	10																									
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*	4	B39	4-	5	2	11				2-	5		1-	0		1-	0																			
	LOCATION WALL PANELS																					NO. REQUIRED = 1													
*	5	P01	9-	2	145	1				9-	2																									
*	5	P02	4-	2	252	1				4-	2																									
*	5	P03	10-	2	146	1				10-	2																									
*	5	P04	5-	7	161	1				5-	7																									
*	5	P05	3-	9	11	1				3-	9																									
*	5	P06	6-	5	11	14				5-	5		1-	0																					83	
*	5	P07	5-	11	10	1				5-	11																									
*	5	P08	6-	10	22	1				6-	10																									
*	5	P09	1-	1	8	1				1-	1																									
*	6	P10	4-	6	2	13				1-	6		1-	6		1-	6																	45	45	

* Indicates Stainless Reinforcing Steel (See General Notes sheet for more information).

*** Indicates Ø as a turn angle.

BR. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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P.E. LICENSE NUMBER 80484
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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

REINFORCING BAR LIST (2 OF 3)

SHEET NO.
B-32

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION SUPERSTRUCTURE											NO. REQUIRED = 1					
5	S01	44- 6	150	1			44- 6									
5	S02	62- 3	90	2			2- 0	60- 3							1	
5	S03	4- 0	990	4	4	4	0- 9	0- 9								
4	S04	3- 1	160	10			1-10	1- 3								
4	S05	11- 0	180	1			11- 0									
4	S06	2- 3	540	11			0- 7	0-10	0-10							
4	S07	1- 9	32	10			1- 3	0- 6								
4	S08	7- 9	4	4	4	4	2- 8	0-10								
4	S09	3- 3	8	4	4	4	0- 5	0-10								
4	S10	1- 10	8	10			1- 4	0- 6								
4	S11	1- 2	4	1			1- 2									
LOCATION APPROACH SLABS											NO. REQUIRED = 1					
5	AP01	19-10	146	1			19-10									
8	AP02	19-10	130	1			19-10									
5	AP03	7- 6	24	11			5- 6	1- 0	1- 0							
4	AP04	2- 8	480	11			1- 0	0-10	0-10							
5	AP05	50- 6	68	2			2- 0	48- 6							1	
4	AP06	10- 2	112	1			10- 2									
5	AP07	53- 0	32	2			2- 0	51- 0							1	
4	AP08	11- 2	48	1			11- 2									

END OF LIST

BR. NO. 945275

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

REINFORCING BAR LIST (3 OF 3)

SHEET NO.
B-33

Load Rating Summary Details for Prestressed Concrete Bridges (Flat Slab and Deck/Girder)

Table 2 - LRFR

Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength) or Stress (Service)					Shear (Strength)					Comments: Interior/exterior beam DF method if other than LRFD. Other appropriate comments
				LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	
Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.37	1.75	N/A	B	22'-6"	0.36	9.11	N/A	A	2'-6"	Beam 1 Controls for Moment and Shear
	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.37	2.27	N/A	B	22'-6"	0.36	11.88	N/A	A	2'-6"	Beam 1 Controls for Moment and Shear
	Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.38	1.12	N/A	B	22'-6"	N/A	N/A	N/A	N/A	N/A	Beam 12 Controls for Stress
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.38	1.67	100.49	B	22'-6"	0.36	8.33	499.92	A	2'-6"	Beam 12 Controls for Moment Beam 1 Controls for Shear

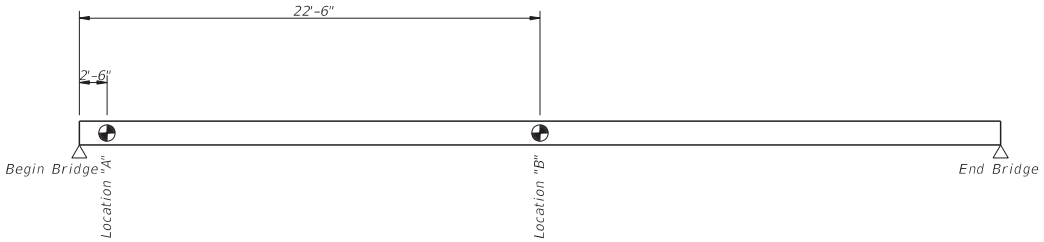
General Notes:
1. This table is based on the requirements established in the January 2024 "Structures Manual".

Table 2 Notes [Notes Date 07-01-15]:
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. Service III Design Inventory tensile stress limits = $3\sqrt{f'c}$ or $6\sqrt{f'c}$.
3. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? ☒ Yes ☐ No

Abbreviations:

Inv – Inventory

Op – Operating



RATING LOCATIONS

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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P.E. LICENSE NUMBER 80484
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WEST PALM BEACH, FL 33411
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REGISTRY No. 35106

CITY OF FORT PIERCE

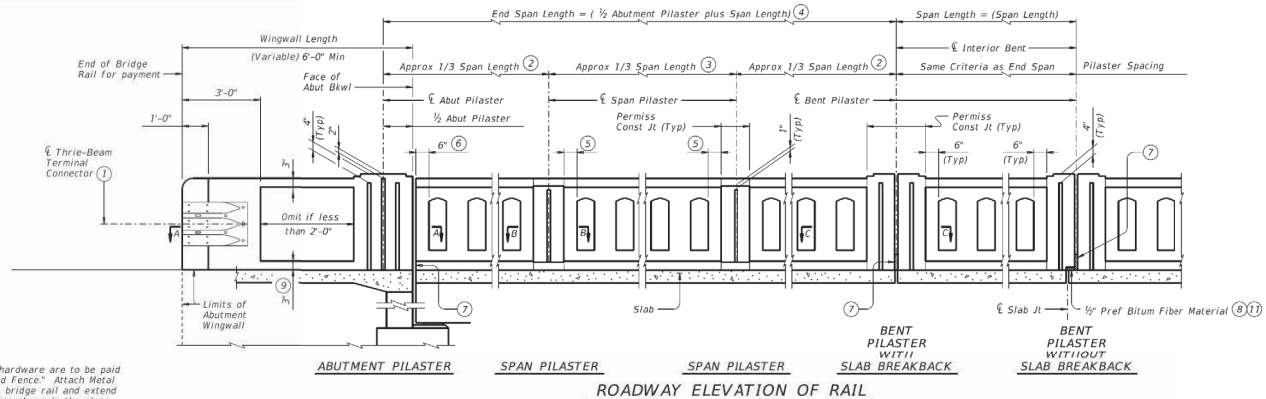
INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

LOAD RATING DATA TABLE

SHEET NO. B-34

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

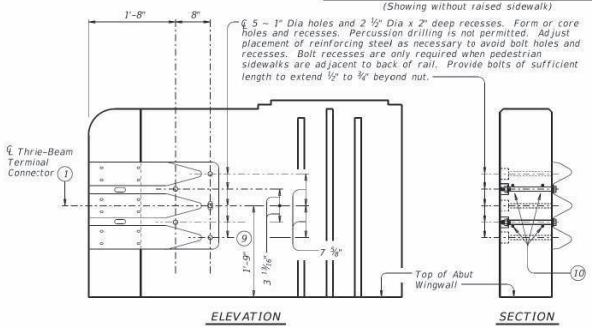
DATE:
FILE:



ROADWAY ELEVATION OF RAIL

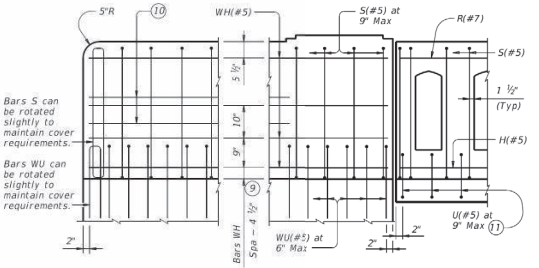
(Showing without raised sidewalk)

1. Terminal Connectors and associated hardware are to be paid for under the Item "Metal Beam Guard Fence." Attach Metal Beam Guard Fence Transitions to the bridge rail and extend along the embankment unless otherwise shown in the plans.
2. Number of windows in exterior bays are equal.
3. Number of windows in interior bay(s) are not less than the amount in exterior bays (Note 2).
4. Space Span Pilasters at 1/3 span length (Approx) when spans are 100 ft and less, as shown. Space Span Pilasters at 1/5 span length (Approx) for spans greater than 100 ft.
5. Dimension is the same for all posts adjacent to Span Pilasters in a span. Dimension may vary from span to span, Min = 3", Max = 7 ½".
6. Min = 6", Max = 1'-3".
7. Provide rail joints at ends of all spans the same width as Slab joint opening, except that Rail Joints over construction joints must be ¼" Min to ⅜" Max in width. Joints must be open if slab joint opening is not sealed. Joints over construction joints and over sealed deck joints must be plugged. Forming material used in joints may be left in place if it is light in color and compressible, such as the following materials: polystyrene, molded cork granules, sponge rubber sheet, etc. If forming material is not left in place, plug the bottom 6" with slab joint sealing compound to prevent drainage and staining.
8. Place Preformed Bituminous Fiber Material between slab and rail when rail extends over expansion joint. Shift Bars U as necessary.
9. Increase 2" for structures with overlay.
10. Place 4 additional Bars WH(#5) 3'-8" in length inside Bars S(#5) and centered 2'-0" from end of rail when Terminal Connections are required. Field bend as needed.
11. Shift U Bars from region below ½" Preformed Bituminous Fiber Material at joints.



TERMINAL CONNECTION DETAILS

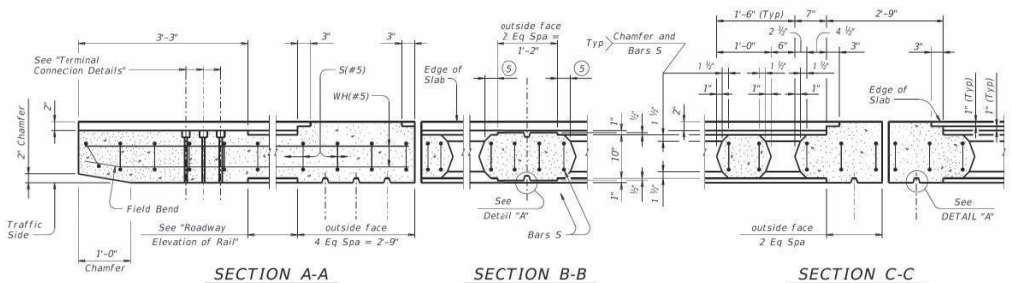
(Showing parapet with Pilaster on 6'-0" Wingwall)



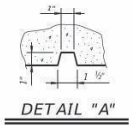
ELEVATION SHOWING TYPICAL REINFORCING PLACEMENT

(Showing without raised sidewalk)

The use of this railing is restricted to speeds of 45 mph or less.



SECTION A-A SECTION B-B SECTION C-C



DETAIL "A"

SHEET 1 OF 3

Texas Department of Transportation — Bridge Division Standard

COMBINATION RAIL TEXAS CLASSIC

TYPE C411

FILE: RL-C411-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT September 2019	CONT	SECT	JOB	HIGHWAY
REVISIONS 7-20: Bridge star change to one manufacturer.	DIST	COUNTY		SHEET NO.

Br. No. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CITY OF FORT PIERCE

INDIAN RIVER DRIVE CORRIDOR IMPROVEMENTS

DECORATIVE RAILING DETAILS (1 OF 3)

SHEET NO. B-35

Jerry.Piccolo 11/14/2024 2:09:30 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1TexasBarrier01.dgn

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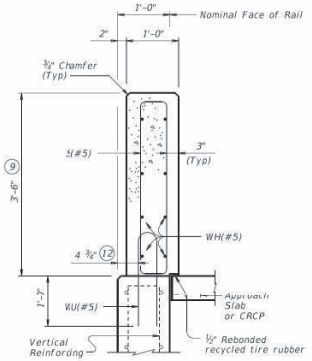
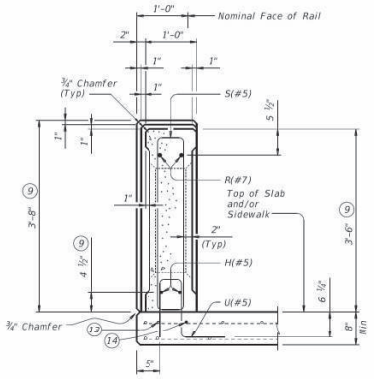
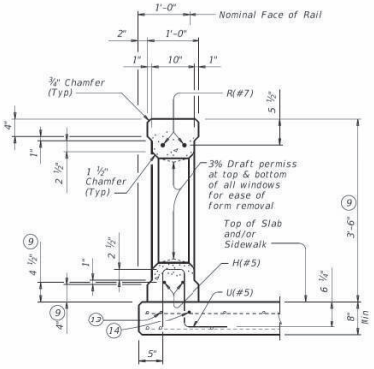
DATE:
FILE:



ON ABUTMENT WINGWALLS OR CIP RETAINING WALLS

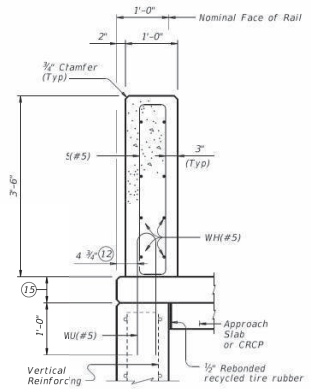


SECTION THRU POST ON BRIDGE SLAB
(Showing Pilaster)

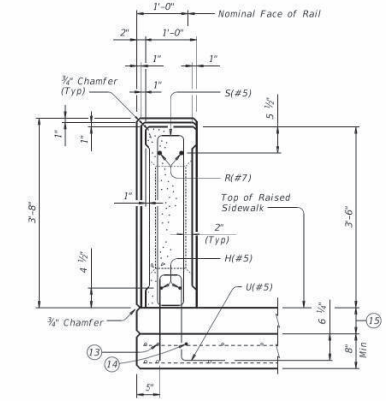


SECTION THRU WINDOW ON BRIDGE SLAB

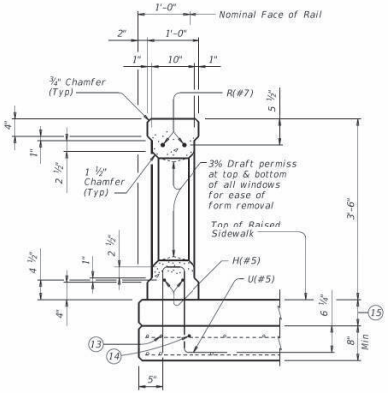
SECTIONS THRU RAIL WITHOUT RAISED SIDEWALK



ON ABUTMENT WINGWALLS OR CIP RETAINING WALLS



SECTION THRU POST ON BRIDGE SLAB
(Showing Pilaster)



SECTION THRU WINDOW ON BRIDGE SLAB

SECTIONS THRU RAIL WITH RAISED SIDEWALK

(9) Increase 2" for structures with overlay.

(12) 5 ¼" when vertical reinforcing has closer clear cover over horizontal reinforcing in abutment wingwalls or retaining walls on traffic side of wall.

(13) As an aid in supporting reinforcement, additional longitudinal bars may be used in the slab with the approval of the Engineer. Such bars must be furnished at the Contractor's expense.

(14) Top longitudinal slab bar may be adjusted laterally 3" plus or minus to tie reinforcing.

(15) Raised Sidewalk

SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

COMBINATION RAIL TEXAS CLASSIC

TYPE C411

FILE: RL-C411-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS 7-20: Bridge star change to one manufacturer.	DIST	COUNTY		SHEET NO.

BR. NO. 945275

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

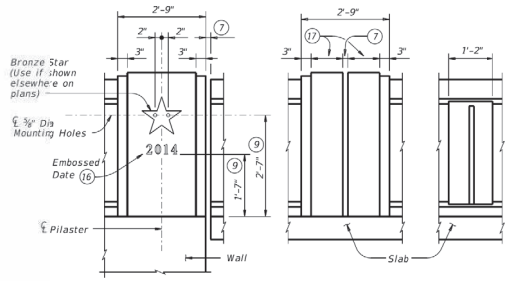
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

DECORATIVE RAILING DETAILS (2 OF 3)

SHEET NO.
B-36

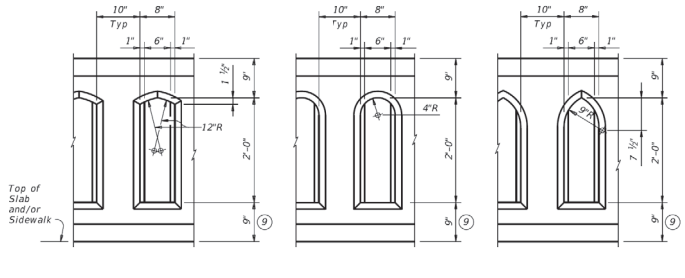
Jerry.Piccolo 11/14/2024 2:09:34 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\B1TexasBarrier02.dgn



ABUTMENT BENT SPAN

EXTERIOR PILASTER ELEVATIONS

(Showing without raised sidewalk)



TYPE A TYPE B TYPE C

WINDOW TYPES

CONSTRUCTION NOTES:

Attach Bronze Star with a Type III Class C, D, E, or F epoxy adhesive. Clamp star until epoxy achieves set. Remove any visible epoxy "squeeze out" from under star.

Face of rail and pilasters, parapet must be plumb unless otherwise approved.

Apply a one rub finish to all railing surfaces unless otherwise shown elsewhere on the plans.

MATERIAL NOTES:

Provide Class "C" concrete for railing. Provide Class "C" (HPC) concrete if shown elsewhere in the plans.

Provide Grade 60 reinforcing steel.

Epoxy coat or galvanize all reinforcing steel if slab bars are epoxy coated or galvanized.

Bronze Star must be cast of architectural bronze having the following composition: Copper 85 %, Tin 5 %, Lead 5 %, Zinc 5 %.

Provide bar laps, where required, as follows:

Uncoated or galvanized ~ #5 = 2'-0"
Uncoated or galvanized ~ #7 = 2'-11"
Epoxy coated ~ #5 = 3'-0"
Epoxy coated ~ #7 = 4'-4"

GENERAL NOTES:

This rail has been successfully evaluated by full-scale crash test to meet MASH TL-2 criteria. This rail can be used for speeds of 45 mph and less when a TL-2 or TL-3 rated guard fence transition is used. This rail is only approved for low speed use, speeds of 45 mph and less.

Do not use this railing on bridges with expansion joints providing more than 5" movement.

Rail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

Shop drawings will not be required for this rail.

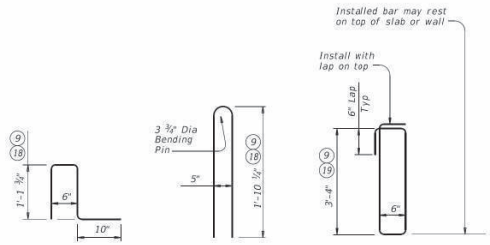
See Bridge Layout or other plan sheets for the following: dimensions with the number of span pilasters, dimensions with the number of windows, window type, inclusion of bronze stars, inclusion of construction year with abutment identity.

Submit erection drawings showing span number, span pilaster locations, number of windows between pilasters and spacing to first window (see Note 6) to the Engineer for approval.

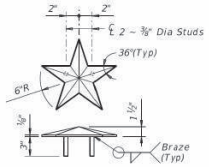
Average weight of railing with no overlay increase and no pilasters is 350 plf.

Cover dimensions are clear dimensions, unless noted otherwise.

Reinforcing bar dimensions shown are out-to-out of bar.



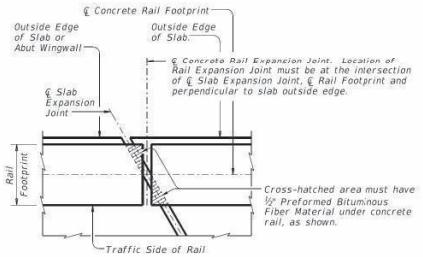
BARS U (#5) BARS WU (#5) BARS S (#5)



BRONZE STAR DETAIL 20

One known manufacturer is:

1. Southwell Company
Corpus Christi, Texas



PLAN OF RAIL AT EXPANSION JOINTS

Example showing Slab Expansion Joints without breakbacks.

(7) Provide rail joints at ends of all spans the same width as Slab joint opening, except that Rail Joints over construction joints must be ½" Min to ¾" Max in width. Joints must be open if slab joint opening is not sealed. Joints over construction joints and over sealed deck joints must be plugged. Forming material used in joints may be left in place if it is light in color and compressible, such as the following materials: polystyrene, molded cork granules, sponge rubber sheet, etc. If forming material is not left in place, plug the bottom 6" with slab joint sealing compound to prevent drainage and staining.

(9) Increase 2" for structures with overlay.

(16) Construction year (use if shown elsewhere on plans) 3" High "Plantin Bold" Typeface with ¼" recess. Placed at one Abutment only or as directed by the Engineer.

(17) Dimensions must be the same on each side of joint.

(18) For raised sidewalks, add sidewalk height to total bar height. Use sidewalk height at rail's location.

(19) Reduce by 2" or field bend over Preformed Bituminous Fiber Material to gain cover.

(20) Bronze Star dimensions of the final product can be slightly smaller due to shrinkage after casting.

SHEET 3 OF 3

Texas Department of Transportation — Bridge Division Standard

COMBINATION RAIL TEXAS CLASSIC

TYPE C411

FILE: RL-C411-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
CORRIDOR IMPROVEMENTS

DECORATIVE RAILING DETAILS (3 OF 3)

SHEET NO.
B-37

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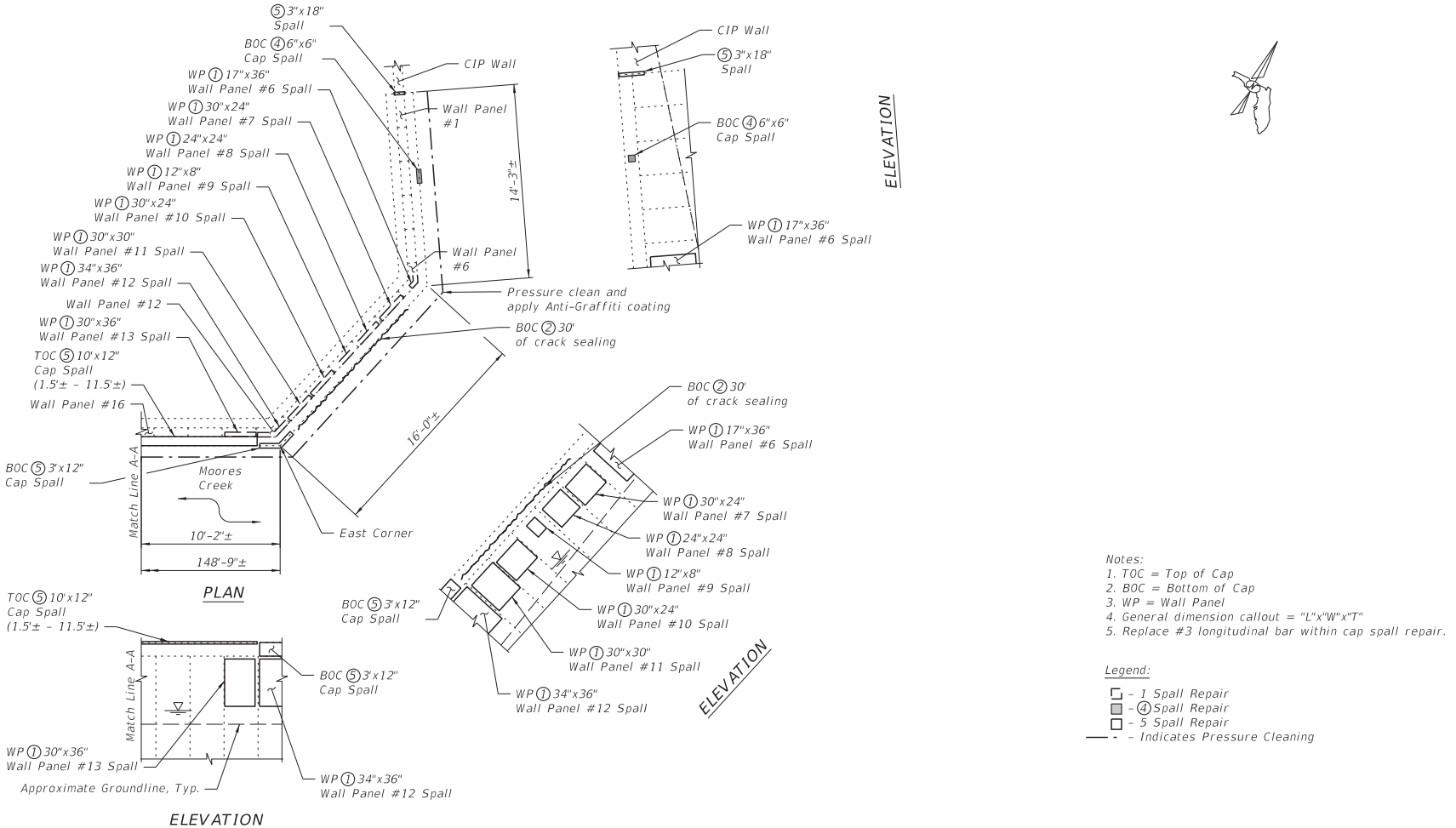

Notes:
1. TOC = Top of Cap
2. BOC = Bottom of Cap
3. WP = Wall Panel
4. General dimension callout = "L"x"W"x"T"
5. Replace #3 longitudinal bar within cap spall repair.

Legend:

- □ - 1 Spall Repair
- ▩ - ④ Spall Repair
- □ - 5 Spall Repair
- —·— - Indicates Pressure Cleaning

Work Identification

① Repair concrete spalls on wall panels as depicted above and on "Wall Panel Spall Repairs Detail" sheet (Pay Item 401-70-4A).
② Seal the cracks on the top and waterward faces of the seawall cap as depicted above (Pay Item 411-1A).
3. Pressure clean top and waterward of seawall cap above low tide line and coat with Anti-Graffiti coating (Pay Item 563-4).
④ Repair minor spalls on wall cap as depicted above and on the "Spall Repair Details" sheet (Pay Item 401-70-1).
⑤ Repair concrete spalls on wall cap as depicted above and on the "Spall Repair Details" sheet (Pay Item 401-70-4).

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JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE SEAWALL REPAIRS

SEAWALL - PLAN WITH WORK IDENTIFICATION (1 OF 3)

SHEET NO. WR-1

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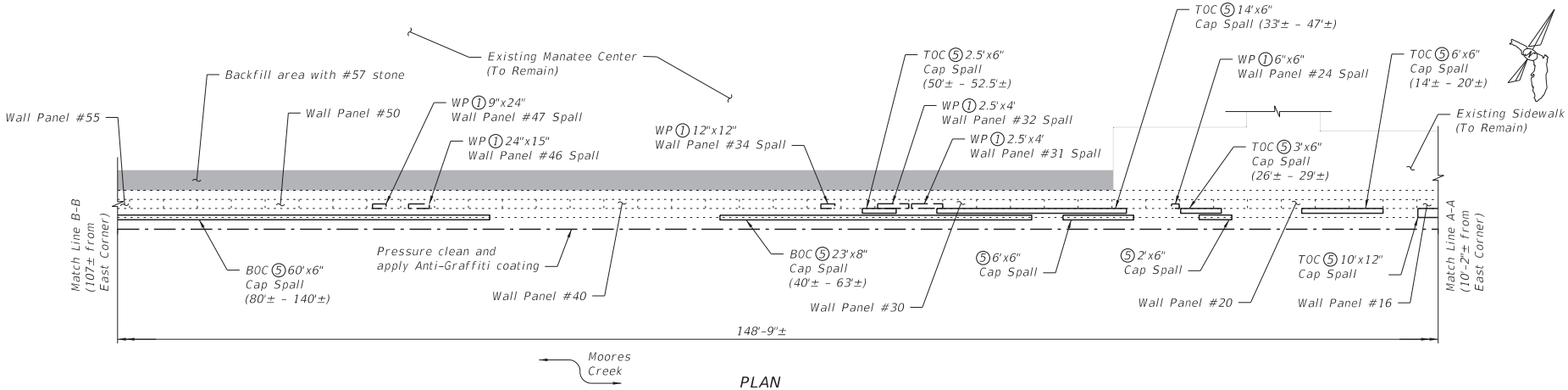
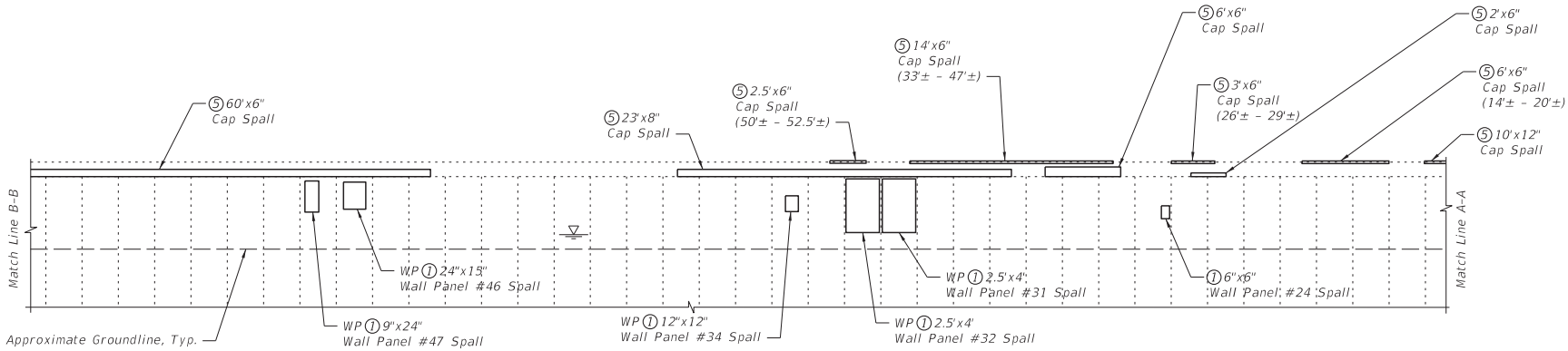


PLAN

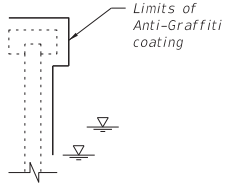


ELEVATION

Notes:
1. TOC = Top of Cap
2. BOC = Bottom of Cap
3. WP = Wall Panel
4. General dimension callout = "L"x"W"x"T"
5. Replace #3 longitudinal bar within cap spall repair.

Legend:

□ - ⑤ Spall Repair
▨ - Indicates facing to be cast
—·— - Indicates Pressure Cleaning



Anti-Graffiti Rapair Detail

Work Identification

① Repair concrete spalls on wall panels as depicted above and on "Wall Panel Spall Repairs Detail" sheet (Pay Item 401-70-4A).
2. Backfill depressed areas between back of seawall and concrete walkway with 57 stone. Place filter fabric below 57 stone. (Pay Item 901-1A).
3. Pressure clean top and waterward of seawall cap above low tide line and coat with Anti-Graffiti coating (Pay Item 563-4).
⑤ Repair concrete spalls on wall cap as depicted above and on the "Spall Repair Details" sheet (Pay Item 401-70-4).

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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
SEAWALL REPAIRS

SEAWALL - PLAN WITH
WORK IDENTIFICATION (2 OF 3)

SHEET NO.
WR-2

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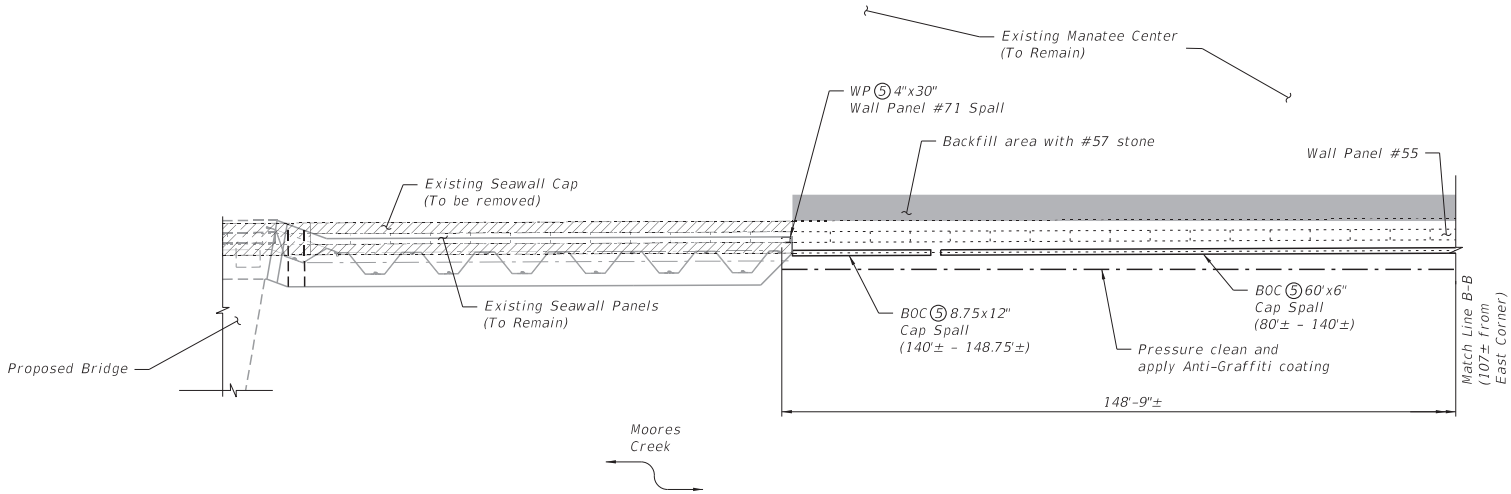
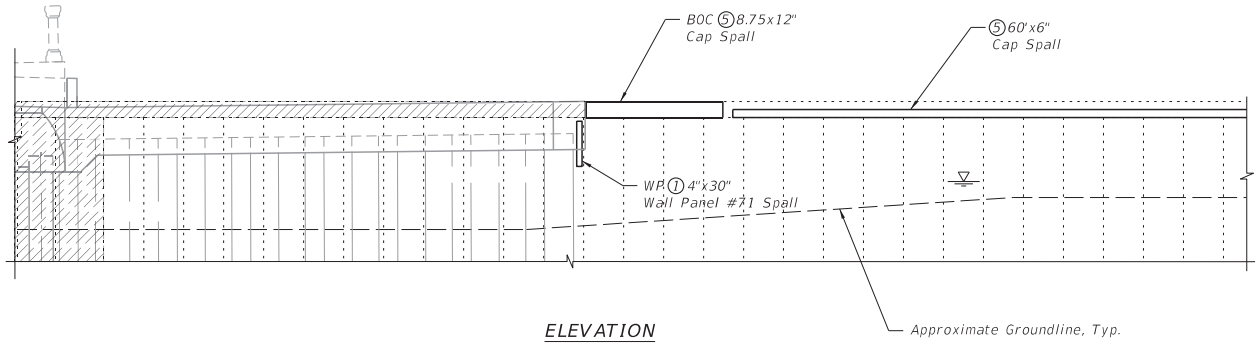


PLAN

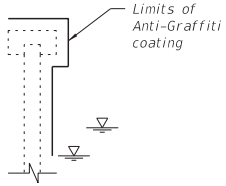


ELEVATION

Notes:
1. TOC = Top of Cap
2. BOC = Bottom of Cap
3. WP = Wall Panel
4. General dimension callout = "L"x"W"x"T"
5. Replace #3 longitudinal bar within cap spall repair.

Legend:

- ▨ - Indicates Removal of Existing Seawall
- □ - ⑤ Spall Repair
- ▨ - Indicates facing to be cast
- —·— - Indicates Pressure Cleaning



Anti-Graffiti Rapair Detail

Work Identification

① Repair concrete spalls on wall panels as depicted above and on "Wall Panel Spall Repairs Detail" sheet (Pay Item 401-70-4A).
2. Backfill depressed areas between back of seawall and concrete walkway with 57 stone. Place filter fabric below 57 stone. (Pay Item 901-1A).
3. Pressure clean top and waterward of seawall cap above low tide line and coat with Anti-Graffiti coating (Pay Item 563-4).
⑤ Repair concrete spalls on wall cap as depicted above and on the "Spall Repair Details" sheet (Pay Item 401-70-4).

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REGISTRY No. 35106

CITY OF FORT PIERCE

INDIAN RIVER DRIVE
SEAWALL REPAIRS

SEAWALL - PLAN WITH
WORK IDENTIFICATION (3 OF 3)

SHEET NO.
WR-3

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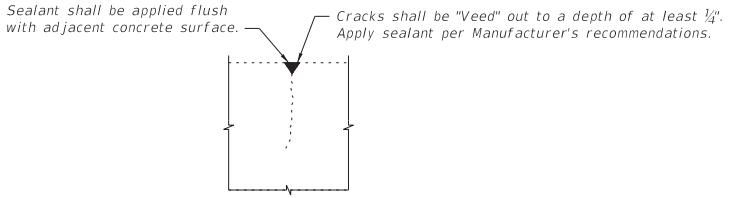


TYPE (2) CRACK REPAIR DETAIL

TYPE 2 CRACK REPAIR NOTES:

1. Seal cracks by polyurethane seal coat.

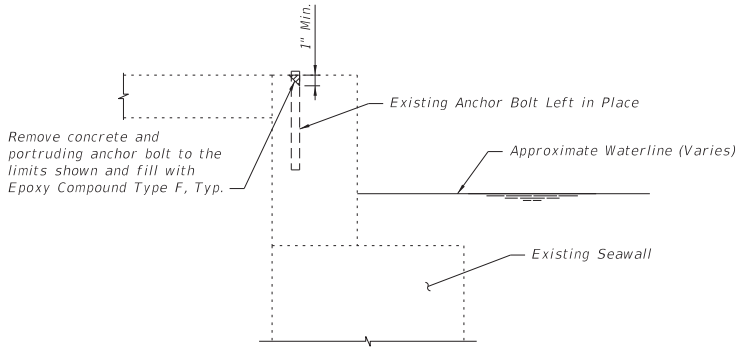
2. Color to match concrete as close as practicable.

3. Crack seal material shall be Sikaflex-1A or approved equal.

4. Where sealant is being applied in close proximity to tidal waters, time the installation to maximize dry curing time during low tide.

5. Contractor shall contain all debris resulting from crack sealing operations.

6. For crack widths greater than ⅜", pack the crack with seawall resurfacing mortar.



ANCHOR REPAIR DETAIL

Notes:

1. Sawcut existing anchor bolt or rebar and clean off any apparent surface rust prior to epoxy filling.

2. See FDOT Standard Specification Section 926 for epoxy material. Epoxy repair material shall be applied flush with adjacent concrete surface.

3. Contractor shall contain all debris resulting from sawcutting and epoxy filling operations.

4. All cost associated with anchor and rebar repairs shall be included in Pay Item 401-70-1.

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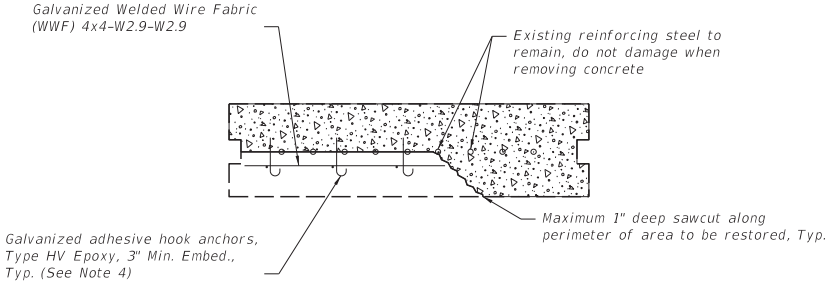
CITY OF FORT PIERCE

INDIAN RIVER DRIVE
SEAWALL REPAIRS

CRACK REPAIR DETAILS

SHEET NO.
WR-4

Jerry.Piccolo 11/14/2024 2:09:47 PM K:\WPB_Structures\047922025_Indian River Drive\047922025\struct\BW\BWMiscStrDet01.dgn



TYPE (1) WALL PANEL SPALL REPAIR

TYPE (1) WALL PANEL REPAIR NOTES:

1. Repair concrete spall areas in accordance with "Technical Special Provision (TSP) – T401" excluding paragraph three of T401-3 Surface Preparation and Section T401-2 Materials.
2. Exercise extreme caution when removing concrete adjacent to existing reinforcement. Do not damage or break the bond between sound concrete and bottom longitudinal reinforcing steel. When removing damaged concrete in the vicinity of existing reinforcement, utilize hand tools or chipping equipment 10 lbs or less. Any existing reinforcement damaged by the Contractor actions shall be replaced or repaired by the Contractor to the satisfaction of the Engineer at no expense to the Owner.
3. Repair material shall be Sikacrete 211 SCC Plus or approved equal in accordance with Specification Section 930 for ultra high performance repair material. Repair material shall be a self consolidating cementitious material with resistivity less than 50,000 Ω-cm.
4. When installing adhesive hook anchors between bottom vertical bars, install centered between bars.
5. Clean all exposed portions of reinforcement to near white metal SSPC SP-10. Apply corrosion inhibitor in accordance with anode Manufacturer's recommendations.
6. Prior to installing the formwork, surface preparation, welded wire fabric, hooked anchors, and embedded anodes shall be reviewed and approved by the Engineer.
7. In locations where repair could come in contact with tidal events, rinse the area with potable water prior to placement of material and maximize curing time while unsubmerged at low tide.
8. Adhesive hook anchors shall be installed in accordance with Specification Section 416.
9. Contractor shall contain all debris resulting from Type (1) repairs. No debris is permitted in the waterway.
10. All costs associated with the wall panel repairs shall be included in Pay Item 401-70-4A.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
SEAWALL REPAIRS

WALL PANEL SPALL REPAIR DETAILS

SHEET NO.
WR-5

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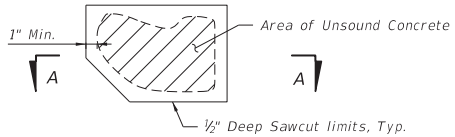
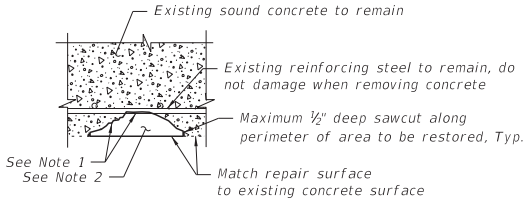


TYPE ④ - SPALL REPAIR



SECTION A-A

TYPE ④ SPALL REPAIR NOTES

1. Surface Preparation
   Remove deteriorated concrete to sound material by scarification or by chipping with light duty pneumatic or electric concrete chippers (30 lbs or less in general, 15 lbs or less adjacent to prestressing strands, reinforcing steel, and structural limits of construction). Provide an aggregate-fractured surface with a minimum surface profile amplitude of 1/4 inch by use of a scabbler or other appropriate means. Blast clean all reinforcing bars exposed after concrete removal in accordance with SSPC SP-10 "Near-White Blast Cleaning." Blast clean existing concrete surfaces that will be in contact with freshly placed repair material and clean to remove loose material and dust immediately before application of repair material.

2. Repair material shall be Type F Epoxy in accordance with Specification Section 926 applied in accordance with Manufacturer's recommendations.

3. Type ④ Spall Repairs are paid for under pay item 401-70-1.

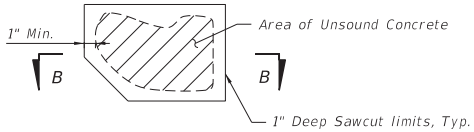
4. Exercise special care when removing unsound concrete to not damage existing reinforcing steel or other embedded anchorages or break the bond between the steel and sound concrete to remain.

5. Any existing reinforcing steel damaged by the Contractor's actions in the process of removing unsound concrete or cleaning reinforcing steel shall be repaired to the satisfaction of the Engineer at the Contractor's expense.

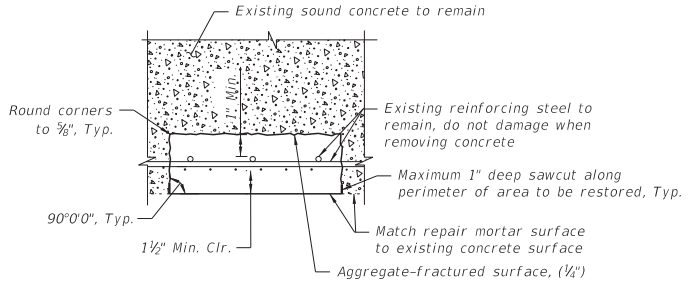
6. Detail applies to both horizontal and vertical repairs.

7. For locations of deficiencies, see bridge "Plan with Work Identification" sheets.

8. The Contractor shall contain all debris resulting from Type ④ repairs and disposed off site.



TYPE ⑤ - SPALL REPAIR



SECTION B-B

TYPE ⑤ SPALL REPAIR NOTES

1. Repair concrete spall areas in accordance with "Technical Special Provision (TSP) - T401". See note 2 for repair material.

2. Repair Material shall be SikaCrete 211 or approved equal in accordance with Specification 930 for Ultra High Performance Repair Material.

3. Type ⑤ Spall Repairs shall be paid for under pay item 401-70-4.

4. Any existing reinforcing steel damaged by the Contractor's actions in the process of removing unsound concrete or cleaning reinforcing steel shall be repaired to the satisfaction of the Engineer at the Contractor's expense.

5. Detail applies to both horizontal and vertical repairs.

6. For locations of deficiencies, see seawall "Plan with Work Identification" sheets.

7. The Contractor shall contain all debris resulting from Type ⑤ repairs and disposed off site. No debris will be permitted in the waterway.

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CITY OF FORT PIERCE

INDIAN RIVER DRIVE
SEAWALL REPAIRS

SPALL REPAIR DETAILS

SHEET NO.
WR-6

TECHNICAL SPECIAL PROVISION (TSP) - T401

T401-1 DESCRIPTION

Replace deteriorated concrete by placing new Portland Cement Mortar as specified in this Section and in accordance with the manufacturer's recommendations. Perform surface preparation and application to all areas as shown on the plans or as directed by the Engineer. No concrete removal will be performed without the Engineer's approval.

T401-2 MATERIALS

Mortar/concrete will be a cementitious repair mortar suitable for pumping, unless otherwise required in the Contract Documents. The selected material will achieve a minimum compressive strength of 4,500 psi at seven days, 5,000 psi at 28 days and a chloride ion permeability (AASHTO T-277) of less than 1500 Coulombs.

For horizontal or vertical spalls with a minimum depth of 1 inch, use repair mortar that includes an aggregate in accordance with the manufacturer's recommendations. For spalls near the tidal zone that may be submerged during cure, add anti-washout admixture.

Provide proposed repair material and method of application, including manufacturer's technical specifications and formulation. Do not place patch materials in lifts. For vertical and overhead applications, place the material using form and pump methods unless otherwise approved based on specific condition of deficiencies. For horizontal applications, place the material using form and pour methods unless otherwise approved based on specific condition of deficiencies.

Materials will be applied in accordance with this Technical Special Provision and manufacturer's recommendations.

T401-3 SURFACE PREPARATION

Remove deteriorated concrete to sound material (or limits described on the plans) by scarification or by chipping with light duty pneumatic or electric concrete chippers (30 lbs or less in general, 15 lbs or less adjacent to prestressing strands, reinforcing steel, and structural limits of construction). Remove concrete that is contaminated with grease or oil.

Provide an aggregate-fractured surface with a minimum surface profile amplitude of 1/4 inch by use of a scabbler or other appropriate means.
Blast clean all reinforcing bars exposed after concrete removal in accordance with SSPC SP-10 "Near-White Blast Cleaning." Replace bars that have lost 25% or more of their original diameter with new bars spliced in place within the original cover, lapping rebar to develop the full strength of the bar as detailed on the plans and, if necessary, providing additional chipping. Dual bars of equivalent or greater section may be used.

Where the bond between existing concrete and reinforcing steel has been destroyed, or where the steel is exposed, remove the concrete adjacent to the bar to a depth that will permit modified concrete to bond to the entire periphery of the exposed bar. A clearance of 3/4 inches to 1 inch behind the bar is required for this purpose. Prevent cutting, stretching, or damaging of exposed reinforcing steel. Any reinforcement damaged during this operation shall be repaired or replaced by the Contractor at no additional cost.

Blast clean existing concrete surfaces that will be in contact with freshly placed repair material and clean to remove loose material and dust immediately before application of repair material.

T401-4 MIXING

Provide a Mix Plan for quantities of bag mix in excess of 1 cubic yard at a single location for the Engineer's approval including: manufacturer's specifications, method of mixing, means of application, and placement procedure to provide a homogenous pour free of cold joints. Use clean mixers and accurately proportioned ingredients. Mix the materials at the site. Ensure that the material, as discharged from the mixer, is uniform in composition and consistency

T401-5 PLACING AND FINISHING

T401-5.1 Typical Spall Repair: A concrete bonding agent, compatible with the repair material and approved, will be applied to the exposed reinforcing steel before the placement of new repair material, and, if recommended by the material manufacturer, to the existing concrete. The compound will be applied and cured in accordance with approved manufacturer's instructions. The bonding agent will contain corrosion inhibitors. Provide measures for dewatering areas near the waterline, or provide alternate suitable repair materials for use underwater.

Repair areas of unsound concrete with the following modifications for spalls greater than 1 inch deep. Cut the upper perimeter of sound concrete to an angle sloping slightly upward to avoid entrapping air and water. Form area to be repaired to original neat lines. Forms will withstand the anticipated head pressure of the repair material and a minimum pressure of 10 psi. Place formwork and formwork supports by stainless steel inserts where required. Stainless steel inserts shall be located in sound concrete and may remain in place. Stainless steel inserts to remain in place will be recessed and patched.

The Contractor will employ a qualified Specialty Engineer to design all forming systems (including method of support and attachment). Prior to placement of formwork, submit detailed plans and design calculations for approval which have been signed and sealed by a qualified Specialty Engineer.

Apply form release agent, compatible to the repair material, to the interior surfaces of form. Pump material into forms with proper venting to ensure complete filling of voids, starting with a port at the bottom of the form. Perform external form vibration as necessary to insure proper consolidation. Cap vents when steady flow of material is ensured then fill until an immediate increase of 3 to 5 psi is detected. See plans for additional details. At the Engineer's discretion, gravity fed pours may be allowed in some cases for uniform deficiency shapes where quality control can be assured after trial installations.

When the depth of concrete removal exceeds 2", install welded wire fabric and adhesive hooks, as detailed on the plans.

Match repair surface to surrounding concrete surfaces. All exposed edges will be chamfered 3/4 inches unless otherwise noted or directed by the Engineer. Provide V-grooves, construction joints, and drip notches to match any existing. Open construction joints are not permitted. Cure as required to prevent shrinkage cracking.

T401-6 QUALITY CONTROL

Include the work under this Technical Special Provision in the Contractor Quality Control General Requirements set forth in Section 105.

The Contractor will secure the services of a manufacturer representative to visit the construction site to train inspection and contractor personnel in the application of the cementitious mortar repair system prior to application. The representative will also observe initial application and testing to confirm that application is performed in accordance with the manufacturer instructions. At a minimum, manufacturer representative will be available to the Contractor and the Engineer for technical advice and inspection of the application during the duration of cementitious mortar repairs. Upon completion of the project, the manufacturer will provide a statement indicating that the material has been mixed per manufacturer requirements.

T401-7 LIMITATIONS

Make 4 to 6 extra test cylinders (as requested by the Engineer) and test for compressive strength gain determinations. The Engineer will determine the time of testing. Cure test cylinders in air for the full curing period required before testing. Do not place repair material at ambient temperatures below 45°F, or above 85°F, or more stringent temperature ranges provided by the manufacturer unless adequate protection is provided against adverse effects of extreme temperature conditions.

Coarse aggregate to extend repair material (when bagged mix is used) will be maintained at a clean, dry, location where protected from the elements to avoid material contamination. Quantity of aggregate for grout extension will be as recommended by material manufacturer. Use either prepackaged coarse aggregate (included within the repair material bag mix) or from a Department approved source.

T401-8 METHOD OF MEASUREMENT

The quantity to be paid for will be the volume of Latex Modified Mortar, Styrene-Butadiene in cubic feet authorized, furnished, installed, and accepted to restore spalled areas. The method used in determining the volume will be the surface area in square feet multiplied by the average depth of such areas.

T401-8 METHOD OF MEASUREMENT

Price and payment will be full compensation for all work specified in this Technical Special Provision.

Pay Item No. 401 70 4 Restore Spalled Areas, Portland Cement Grout per cubic foot.

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INDIAN RIVER DRIVE
SEAWALL REPAIRS

TECHNICAL SPECIAL PROVISION (TSP) - T401

SHEET NO.
WR-7