Exhibit 7

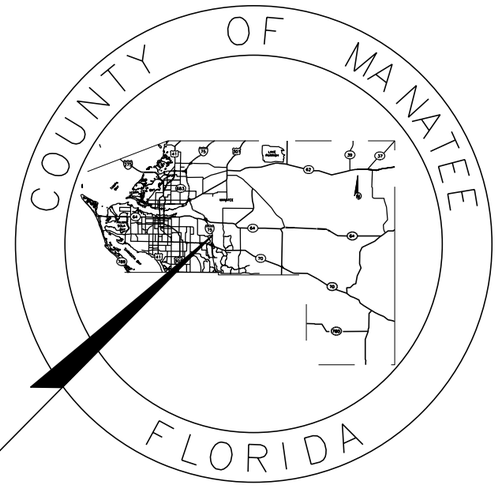
CONTRACT PLANS COMPONENTS

SIGNING AND PAVEMENT MARKING
SIGNALIZATION
LIGHTING
STRUCTURES
UTILITY RELOCATION
OFFSITE MITIGATION

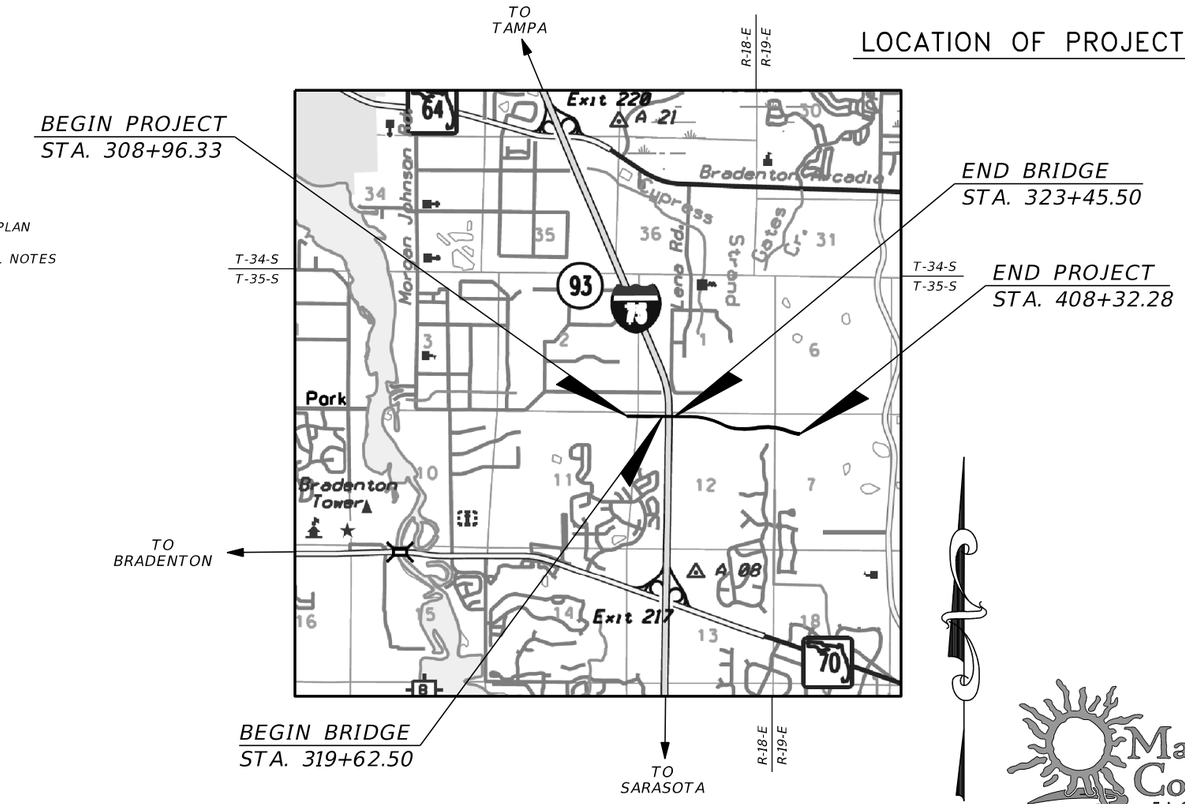
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

MANATEE COUNTY
PROJECT NUMBER 6045662
44TH AVENUE EAST
PHASE 2
WEST OF I-75 TO LAKEWOOD RANCH BOULEVARD



LOCATION OF PROJECT



INDEX OF ROADWAY PLANS

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GR-2 - GR-6	POND SOIL SURVEY
CTL-1 - CTL-3**	PROJECT CONTROL SHEETS

* These sheets to be included for information only.

** This sheet is included in the Index of Roadway Plans only to indicate that it is part of the Roadway Plans. This sheet is contained in a separate digitally signed and sealed document.

90% SUBMITTAL
02/2022

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2022-23 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

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

APPLICABLE IRs: N/A

Standard Plans for Bridge Construction are included in the Structures Plans Component

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2022 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

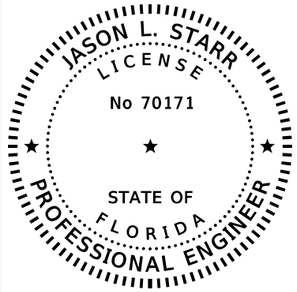
ROADWAY PLANS
ENGINEER OF RECORD:
JASON L. STARR, P.E.
P.E. NO.: 70171
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
VENDOR NO. 47-0680568

MANATEE CO. PROJECT MANAGER:
ERIC S. SHROYER, P.E.

Manatee County FLORIDA

FISCAL YEAR	SHEET NO.
21	1

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



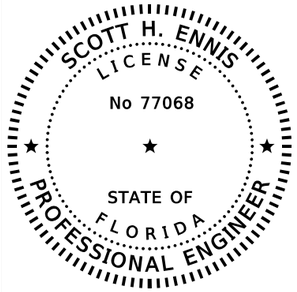
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
JASON L. STARR, PE NO. 70171

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

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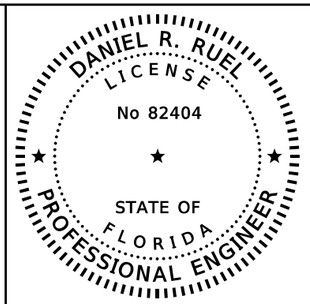
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
SCOTT H. ENNIS, PE NO. 77068

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52 - 85	DRAINAGE STRUCTURES
86 - 94	POND PLAN SHEET
95 - 103	WETLAND IMPACT SHEETS
161 - 165	STORMWATER POLLUTION PREVENTION PLAN
166 - 175	EROSION CONTROL PLAN



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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FL 33637
DANIEL R. RUEL, P.E. NO. 82404

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

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
GR-1	ROADWAY SOIL SURVEY
GR-2 - GR-6	POND SOIL SURVEY

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNATURE SHEET

SHEET NO.: 2

3:25:25 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SIGNRD02.DGN

ROADWAY PLANS

ITEM NO.	ITEM	UNIT	QUANTITY
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10-3	SEDIMENT BARRIER	LF	8,344
104-11	FLOATING TURBIDITY BARRIER	LF	551
104-12	STAKED TURBIDITY BARRIER- NYLON REINFORCED PVC	LF	196
104-15	SOIL TRACKING PREVENTION DEVICE	EA	3
104-18	INLET PROTECTION SYSTEM	EA	112
107-1	LITTER REMOVAL	AC	400
107-2	MOWING	AC	400
110-1-1	CLEARING AND GRUBBING (55.42 AC)	LS	1
120-1	REGULAR EXCAVATION	CY	73,043
120-6	EMBANKMENT	CY	759,523
160-4	TYPE B STABILIZATION	SY	71,025
285-703	OPTIONAL BASE (BASE GROUP 03)	SY	1,051
285-709	OPTIONAL BASE (BASE GROUP 09)	SY	60,010
327-70-6	MILLING EXIST ASPH PAVT, 1 1/2" AVG DEPTH	SY	11,216
334-1-13	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C	TN	9,995
337-7-83	ASPHALT FRICTION COURSE, TRAFFIC C, FC-12.5, PG 76-22	TN	5,865
339-1	MISCELLANEOUS ASPHALT PAVEMENT	TN	133
350-30 13	CONCRETE PAVEMENT FOR ROUNDABOUT APRON, 12" DEPTH	SY	439
425-1-351	INLETS, CURB, TYPE P-5, < 10'	EA	43
425-1-361	INLETS, CURB, TYPE P-6, < 10'	EA	13
425-1-451	INLETS, CURB, TYPE J-5, < 10'	EA	4
425-1-461	INLETS, CURB, TYPE J-6, < 10'	EA	1
425-1-521	INLETS, DT BOT, TYPE C, < 10'	EA	3
425-1-529	INLETS, DT BOT, TYPE C, MODIFY	EA	2
425-1-549	INLETS, DT BOT, TYPE D, MODIFY	EA	1
425-1-881	INLETS, BARRIER WALL, RIGID, CURB & GUTTER, <=10'	EA	25
425-2-41	MANHOLES, P-7, < 10'	EA	10
425-2-71	MANHOLES, J-7, < 10'	EA	8
425-2-72	MANHOLES, J-7, > 10'	EA	2
430-175-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" S/CD	LF	4,408
430-175-124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" S/CD	LF	2,230
430-175-130	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 30" S/CD	LF	2,487
430-175-136	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 36" S/CD	LF	1,173
430-175-142	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 42" S/CD	LF	1060
430-175-148	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 48" S/CD	LF	416
430-175-154	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 54" S/CD	LF	349
430-175-215	PIPE CULVERT,OPTIONAL MATERIAL,OTHER-ELIP/ARCH, 15"S/CD	LF	29
430-175-236	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 36"S/CD	LF	232
430-175-242	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 42"S/CD	LF	448
430-175-248	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 48"S/CD	LF	485
430-530-100	STRAIGHT CONCRETE ENDWALLS, 30", SINGLE, 0 DEGREES, ROUND	EA	2
430-536-100	STRAIGHT CONCRETE ENDWALLS, 36", SINGLE, 0 DEGREES, ROUND	EA	1
430-536-120	STRAIGHT CONCRETE ENDWALLS, 36", SINGLE, 30 DEGREES, ROUND	EA	3
430-548-102	STRAIGHT CONCRETE ENDWALLS, 48" SINGLE, 0 DEGREES, ELLIPTICAL	EA	3
430-982-125	MITERED END SECTION, OPTIONAL ROUND, 18" CD	EA	3
430-982-133	MITERED END SECTION, OPTIONAL ROUND, 30" CD	EA	2
430-982-140	MITERED END SECTION, OPTIONAL ROUND, 42" CD	EA	2
430-982-143	MITERED END SECTION, OPTIONAL ROUND, 60" CD	EA	1
430-982-623	MITERED END SECTION, OPTIONAL - ELLIPTICAL / ARCH, 15" CD	EA	1
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	12,786
520-2-2	CONCRETE CURB & GUTTER, TYPE AB	LF	18,489
520-2-4	CONCRETE CURB & GUTTER, TYPE D	LF	363
520-2-8	CONCRETE CURB & GUTTER, TYPE RA	LF	430
520-3	VALLEY GUTTER- CONCRETE	LF	295
521-72-43	SHOULDER CONCRETE BARRIER, CURB AND GUTTER BARRIER	LF	6,377
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	17,353
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	109
527-2	DETECTABLE WARNINGS	SF	384
530-3-4	RIPRAP, RUBBLE, F&I, DITCH LINING	TN	27266
530-74	BEDDING STONE	TN	18837
536-1-1	GUARDRAIL -ROADWAY, GENERAL TL-3	LF	3,713
536-6	PIPE RAIL FOR GUARDRAIL	LF	3,713
536-85-20	GUARDRAIL END TREATMENT- TRAILING ANCHORAGE	EA	4
536-85-24	GUARDRAIL END TREATMENT- PARALLEL APPROACH TERMINAL	EA	4
548-12	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	129,727
548-12	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER [LENA ROAD]	SF	129,727
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	LF	4,200
550-60-212	FENCE GATE, TYPE B, SINGLE, 6.1 - 12.0' OPENING	EA	4
570-1-2	PERFORMANCE TURF (SOD)	SY	212,069

SIGNING & PAVEMENT MARKING PLANS

ITEM NO.	ITEM	UNIT	QUANTITY
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	51
700-1-12	SINGLE POST SIGN, F&I GROUND MOUNT, 13-20 SF	AS	3
700-1-13	SINGLE POST SIGN, F&I GROUND MOUNT, 21-30 SF	AS	3
700-1-50	SINGLE POST SIGN, RELOCATE	AS	3
700-1-60	SINGLE POST SIGN, REMOVE	AS	8
700-2-14	MULTI-POST SIGN, F&I, GROUND MOUNT, 31-50 SF	AS	1
704-1-2	TUBULAR MARKER, DURABLE, 36" YELLOW POST	EA	2
705-10-1	OBJECT MARKER, TYPE 1	EA	7
706-1-3	RAISED PAVEMENT MARKER	EA	1060
710-11-190	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ISLAND NOSE	SF	13.000
710-11-290	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE	SF	165
710-90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	LS	1
711-11-102	THERMOPLASTIC, STANDARD, WHITE, SOLID, 8" FOR INTERCHANGE AND URBAN ISLAND	GM	0.282
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	757
711-11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID FOR DIAGONAL OR CHEVRON, 18"	LF	277
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE	LF	135
711-11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0
711-11-144	THERMOPLASTIC, STANDARD, WHITE, 2-2 DOTTED EXTENSION LINE, 12" FOR ROUNDABOUT	GM	0
711-11-160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	8
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	44.000
711-11-180	THERMOPLASTIC, STANDARD, WHITE, YIELD LINE	LF	224.000
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	38.000
711-11-241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.192
711-14-125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	308
711-14-160	THERMOPLASTIC, PREFORMED, WHITE, BIKE MESSAGE	EA	29
711-14-170	THERMOPLASTIC, PREFORMED, WHITE, BIKE ARROW	EA	29
711-16-101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6"	GM	8.255
711-16-131	THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6",10-30 SKIP OR 3-9 LANE DROP	GM	3.425
711-16-201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6"	GM	4.16
713-103-101	PERMANENT TAPE, WHITE, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.333
713-103-131	PERMANENT TAPE, WHITE, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	0.167
713-103-201	PERMANENT TAPE, YELLOW, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.167
713-103-331	PERMANENT TAPE, BLACK, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	0.167

SIGNALIZATION PLANS

ITEM NO.	ITEM	UNIT	QUANTITY
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	9,685
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	800
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVE GROUND	LF	40
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED CONCRETE BARRIERS AND TRAFFIC RAILINGS	LF	3,735
633-1-123	FIBER OPTIC CABLE, F&I, UNDERGROUND,49-96 FIBERS	LF	13,320
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	160
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	2
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA	14
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL	LF	805
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	2
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	16
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA	1
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA	2
641-2-13	PRESTRESSED CONCRETE POLE, F&I, TYPE P-III	EA	1
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	1
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1
676-3-10	SMALL EQUIPMENT ENCLOSURE, FURNISH AND INSTALL, LESS THAN 10"W X 13"H X 11" D	EA	1

LIGHTING PLANS

ITEM NO.	ITEM	UNIT	QUANTITY
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	12,480
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	110
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED CONCRETE BARRIERS AND TRAFFIC RAILINGS	LF	16,150
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	75
635-3-13	JUNCTION BOX, F&I, EMBEDDED	EA	38
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	43,434
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 4 - 2	LF	1,000
715-4-12	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 35' MOUNTING HEIGHT	EA	8
715-4-13	LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT	EA	86
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	2
715-11-111	LUMINAIRE, FURNISH & INSTALL, ROADWAY, COBRAHEAD	EA	19
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	93

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SUMMARY OF PAY ITEMS (1)

SHEET NO.: 3

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

STRUCTURES			
ITEM NO.	ITEM	UNIT	QUANTITY
400-2-4	CONC CLASS II, BRIDGE SUPERSTRUCTURE	CY	1111
400-2-10	CONCRETE CLASS II, APPROACH SLABS	CY	238
400-4-5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	CY	186
400-4-25	CONCRETE CLASS IV, MASS, SUBSTRUCTURE	CY	478
400-7-1	BRIDGE DECK GROOVING	SY	2717
400-9-1	BRIDGE DECK PLANING	SY	2717
400-147	COMPOSITE NEOPRENE PADS	CF	28
415-1-4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	LB	295571
415-1-5	REINFORCING STEEL - BRIDGE SUBSTRUCTURE	LB	148608
415-1-9	REINFORCING STEEL - APPROACH SLABS	LB	42748
455-34-5	PRESTRESSED CONCRETE PILING, 24" SQ	LF	3870
455-143-5	TEST PILES-PRESTRESSED CONCRETE,24" SQ	LF	275
458-1-12	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I STRIP SEAL	LF	199.000
459-71	PILES, POLYETHYLENE SHEETING	SY	468
460-2-2	STRUCTURAL STEEL, LOW ALLOY	LB	1529182
520-70	CONCRETE TRAFFIC SEPARATOR, SPECIAL-VARIABLE WIDTH	SY	831
521-5-13	CONCRETE TRAFFIC RAILING- BRIDGE, 36" SINGLE-SLOPE	LF	880
521-6-11	CONCRETE PARAPET, PEDESTRIAN/BICYCLE, 27" HEIGHT	LF	880
524-2-2	CONCRETE SLOPE PAVEMENT, NON REINFORCED, 4"	SY	86
550-10-354	FENCING, TYPE R, 8.1-10.0', WITH PARTIAL ENCLOSURE, TYPE R ONLY	LF	880.000
630-2-16	CONDUIT, FURNISH & INSTALL, EMBEDDED- RAILINGS	LF	2655.000
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA	6.000

UTILITY PLANS (WASTEWATER FORCE MAIN)			
ITEM NO.	ITEM	UNIT	QUANTITY
MC-01-01	MOBILIZATION, WASTEWATER	LS	1
MC-01-02	12" DUCTILE IRON PIPE (RESTRAINED JOINT), WASTEWATER	LF	77
MC-01-03	36" DUCTILE IRON PIPE (RESTRAINED JOINT), WASTEWATER	LF	84
MC-01-04	6" POLYVINYL CHLORIDE PIPE (RESTRAINED JOINT), WASTEWATER	LF	16
MC-01-05	12" POLYVINYL CHLORIDE PIPE (RESTRAINED JOINT), WASTEWATER	LF	4750
MC-01-06	20" POLYVINYL CHLORIDE PIPE (RESTRAINED JOINT), WASTEWATER	LF	266
MC-01-07	36" POLYVINYL CHLORIDE PIPE (RESTRAINED JOINT), WASTEWATER	LF	4739
MC-01-08	REMOVE 20" DI WASTEWATER FORCE MAIN	LF	240
MC-01-09	6" PLUG & FILL, WASTEWATER FORCE MAIN	LF	465
MC-01-10	12" PLUG & FILL, WASTEWATER FORCE MAIN	LF	5000
MC-01-11	20" PLUG & FILL, WASTEWATER FORCE MAIN	LF	110
MC-01-12	36" PLUG & FILL, WASTEWATER FORCE MAIN	LF	5000
MC-01-13	36" STEEL CASING, WASTEWATER	LF	206
MC-01-14	12" DUCTILE IRON ELBOW (RESTRAINED JOINT), WASTEWATER	EA	22
MC-01-15	20" DUCTILE IRON ELBOW (RESTRAINED JOINT), WASTEWATER	EA	17
MC-01-16	36" DUCTILE IRON ELBOW (RESTRAINED JOINT), WASTEWATER	EA	20
MC-01-17	12" DUCTILE IRON UNION (RESTRAINED JOINT), WASTEWATER	EA	2
MC-01-18	20" DUCTILE IRON UNION (RESTRAINED JOINT), WASTEWATER	EA	4
MC-01-19	36" DUCTILE IRON UNION (RESTRAINED JOINT), WASTEWATER	EA	2
MC-01-20	6" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), WASTEWATER	EA	2
MC-01-21	12" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), WASTEWATER	EA	11
MC-01-22	20" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), WASTEWATER	EA	6
MC-01-23	36" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), WASTEWATER	EA	6
MC-01-24	36" X 6" DUCTILE IRON TEE (RESTRAINED JOINT), WASTEWATER	EA	1
MC-01-25	36" X 20" DUCTILE IRON TEE (RESTRAINED JOINT), WASTEWATER	EA	1
MC-01-26	20" PVC/HDPE ADAPTER UNION	EA	1
MC-01-27	6" GATE VALVE (RESTRAINED JOINT), WASTEWATER	LF	1
MC-01-28	12" GATE VALVE (RESTRAINED JOINT), WASTEWATER	EA	3
MC-01-29	20" GATE VALVE (RESTRAINED JOINT), WASTEWATER	EA	1
MC-01-30	36" GATE VALVE (RESTRAINED JOINT), WASTEWATER	EA	3
MC-01-31	12" LINESTOP, WASTEWATER	EA	2
MC-01-32	20" LINESTOP, WASTEWATER	EA	4
MC-01-33	36" LINESTOP, WASTEWATER	EA	2
MC-01-34	EXISTING ARV W/ ENCLOSURE, REMOVE, WASTEWATER	EA	1
MC-01-35	ARV WITH ENCLOSURE, WASTEWATER	EA	9
MC-01-36	RECORD DRAWINGS, WASTEWATER	LS	1

UTILITY PLANS (RECLAIMED WATER MAIN)			
ITEM NO.	ITEM	UNIT	QUANTITY
MC-02-01	MOBILIZATION, RECLAIMED WATER	LS	1
MC-02-02	30" DUCTILE IRON PIPE (RESTRAINED JOINT), RECLAIMED WATER	LF	4548
MC-02-03	12" POLYVINYL CHLORIDE PIPE (RESTRAINED JOINT), RECLAIMED WATER	LF	11
MC-02-04	REMOVE 30" DI RECLAIMED WATER MAIN	LF	145
MC-02-05	12" PLUG & FILL, RECLAIMED WATER MAIN	LF	645
MC-02-06	30" PLUG & FILL, RECLAIMED WATER MAIN	LF	4120
MC-02-07	12" DUCTILE IRON ELBOW (RESTRAINED JOINT), RECLAIMED WATER	EA	1
MC-02-08	30" DUCTILE IRON ELBOW (RESTRAINED JOINT), RECLAIMED WATER	EA	24
MC-02-09	12" DUCTILE IRON UNION (RESTRAINED JOINT), RECLAIMED WATER	EA	1
MC-02-10	30" DUCTILE IRON UNION (RESTRAINED JOINT), RECLAIMED WATER	EA	4
MC-02-11	12" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), RECLAIMED WATER	EA	2
MC-02-12	30" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), RECLAIMED WATER	EA	9
MC-02-13	30" X 12" DUCTILE IRON TEE (RESTRAINED JOINT), RECLAIMED WATER	EA	1
MC-02-14	12" GATE VALVE (RESTRAINED JOINT), RECLAIMED WATER	EA	1
MC-02-15	30" GATE VALVE (RESTRAINED JOINT), RECLAIMED WATER	EA	2
MC-02-16	30" LINESTOP, RECLAIMED WATER	EA	3
MC-02-17	ARV WITH ENCLOSURE, RECLAIMED WATER	EA	2
MC-02-18	EXISTING VALVE, ADJUST/MODIFY, RECLAIMED WATER	EA	5
MC-02-19	RECLAIMED WATER SERVICE REPLACEMENT/CONNECTION	EA	4
MC-02-20	RECORD DRAWINGS, RECLAIMED WATER	LS	1

UTILITY PLANS (POTABLE WATER MAIN)			
ITEM NO.	ITEM	UNIT	QUANTITY
MC-03-01	MOBILIZATION, POTABLE WATER	LS	1
MC-03-02	12" DUCTILE IRON PIPE (RESTRAINED JOINT), POTABLE WATER	LF	138
MC-03-03	EXISTING VALVE, ADJUST/MODIFY, POTABLE WATER	EA	3
MC-03-04	EXISTING SERVICE, REMOVE/ABANDON, POTABLE WATER	EA	1
MC-03-05	12" DUCTILE IRON ELBOW (RESTRAINED JOINT), POTABLE WATER	EA	4
MC-03-06	12" DUCTILE IRON UNION (RESTRAINED JOINT), POTABLE WATER	EA	2
MC-03-07	12" DUCTILE IRON PLUG / CAP (RESTRAINED JOINT), POTABLE WATER	EA	2
MC-03-08	12" PLUG & FILL, POTABLE WATER MAIN	LF	138
MC-03-09	SAMPLE POINT, POTABLE WATER	EA	2
MC-03-10	RECORD DRAWINGS, POTABLE WATER	LS	1

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SUMMARY OF PAY ITEMS (2)

SHEET NO.: 4

EX (66) DITCH BOTTOM INLET
GRATE EL = 27.31
INV 18" PIPE (S) = 21.44

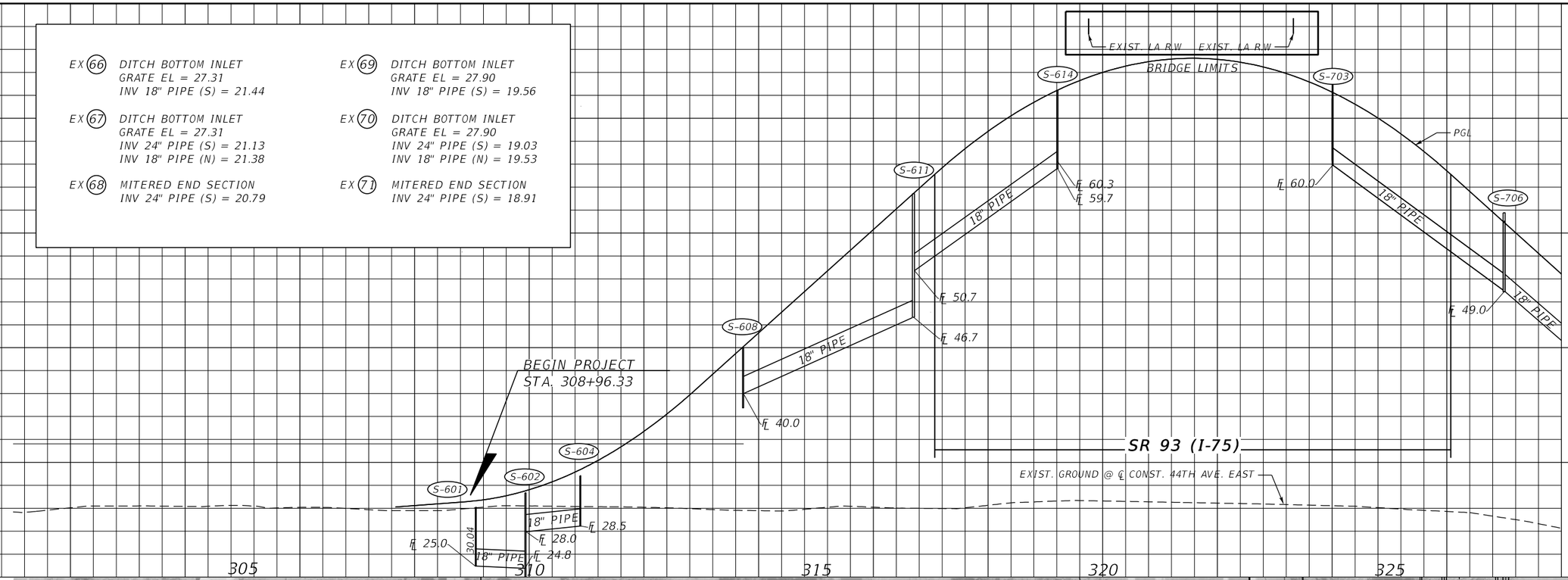
EX (67) DITCH BOTTOM INLET
GRATE EL = 27.31
INV 24" PIPE (S) = 21.13
INV 18" PIPE (N) = 21.38

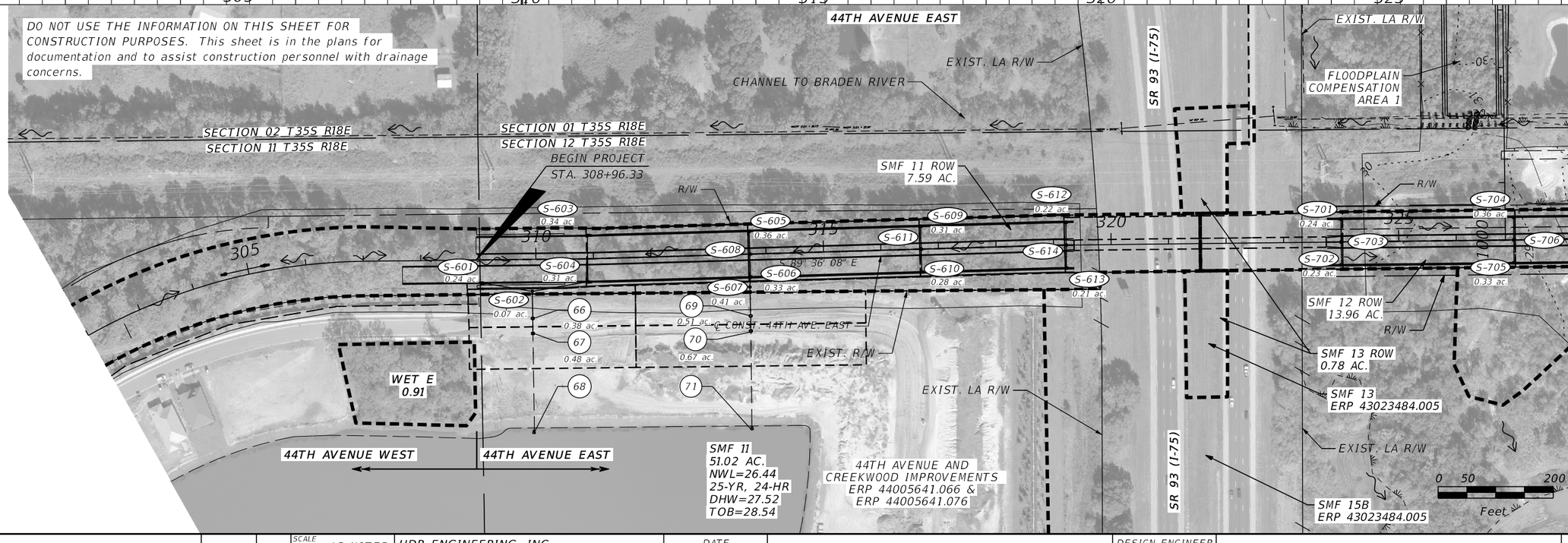
EX (68) MITERED END SECTION
INV 24" PIPE (S) = 20.79

EX (69) DITCH BOTTOM INLET
GRATE EL = 27.90
INV 18" PIPE (S) = 19.56

EX (70) DITCH BOTTOM INLET
GRATE EL = 27.90
INV 24" PIPE (S) = 19.03
INV 18" PIPE (N) = 19.53

EX (71) MITERED END SECTION
INV 24" PIPE (S) = 18.91





No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ALZ
DRAWN BY: JHC
CHECKED BY: ALZ

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

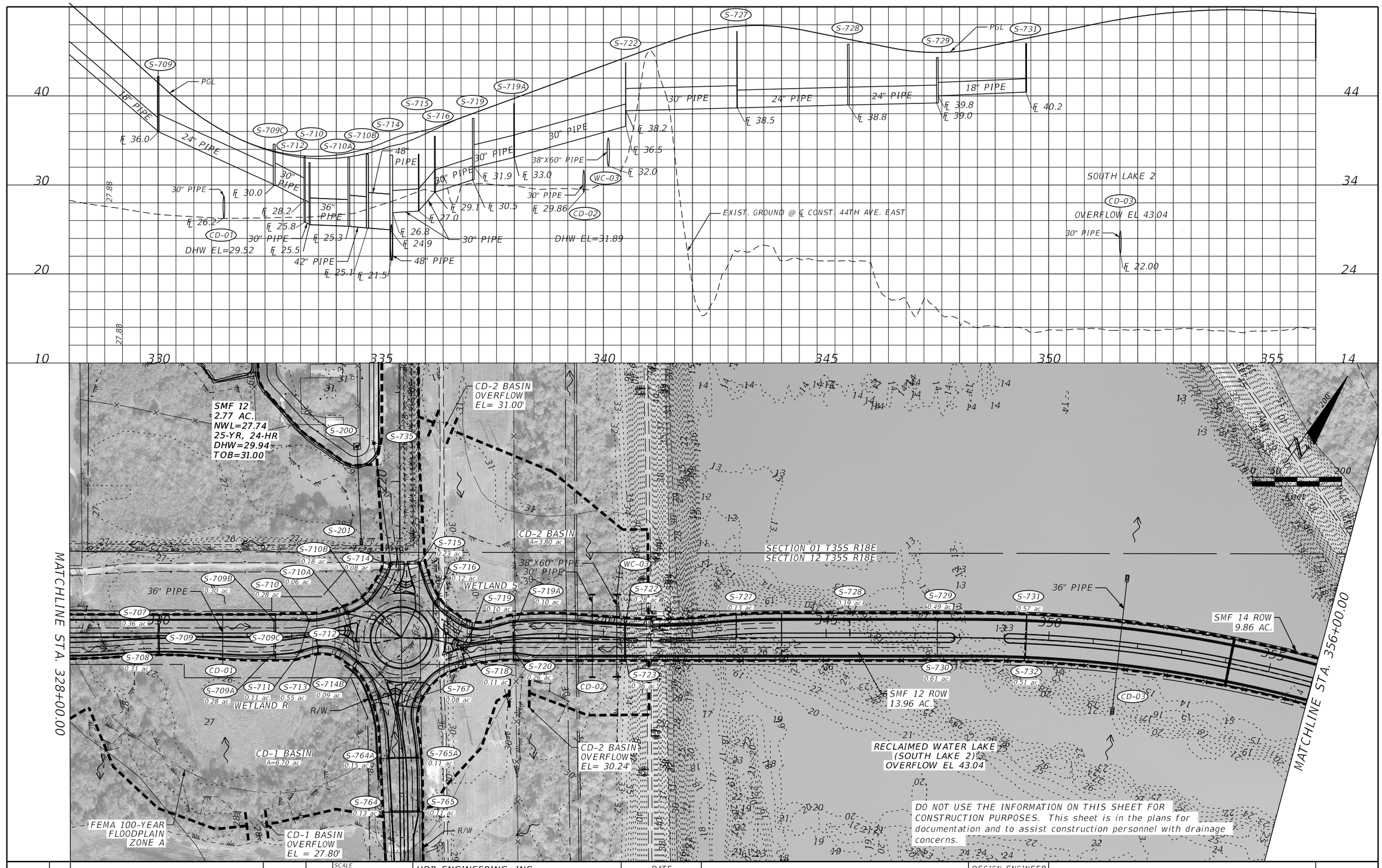
DESIGN ENGINEER: SCOTT ENNIS
FL. LICENSE NO.: 77068

DRAINAGE MAP (1)

SHEET NO.: 5

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: JG
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT ENNIS
FL. LICENSE NO.: 77068

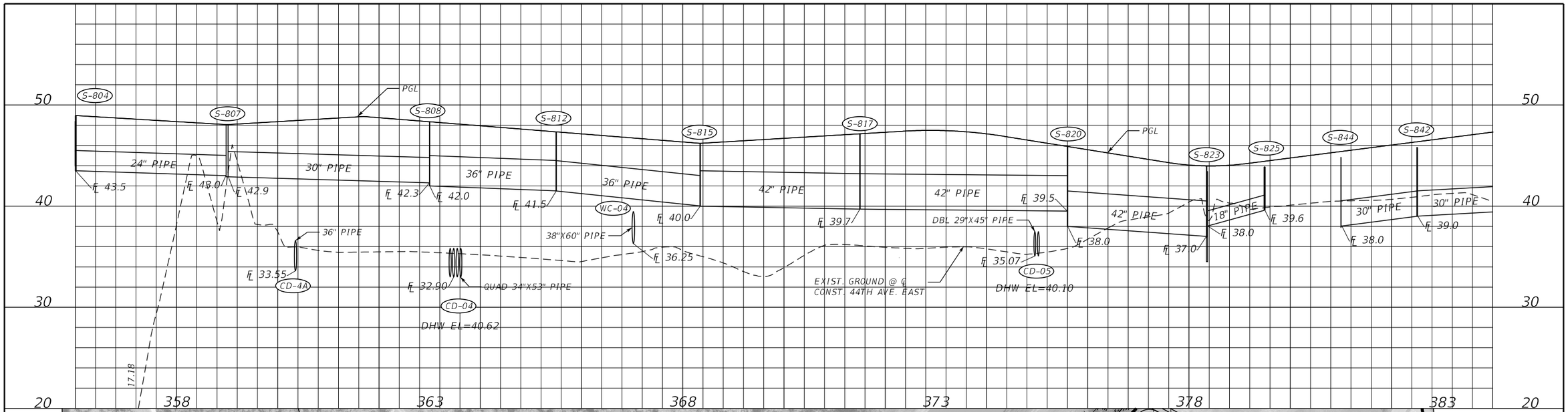
DRAINAGE MAP (2)

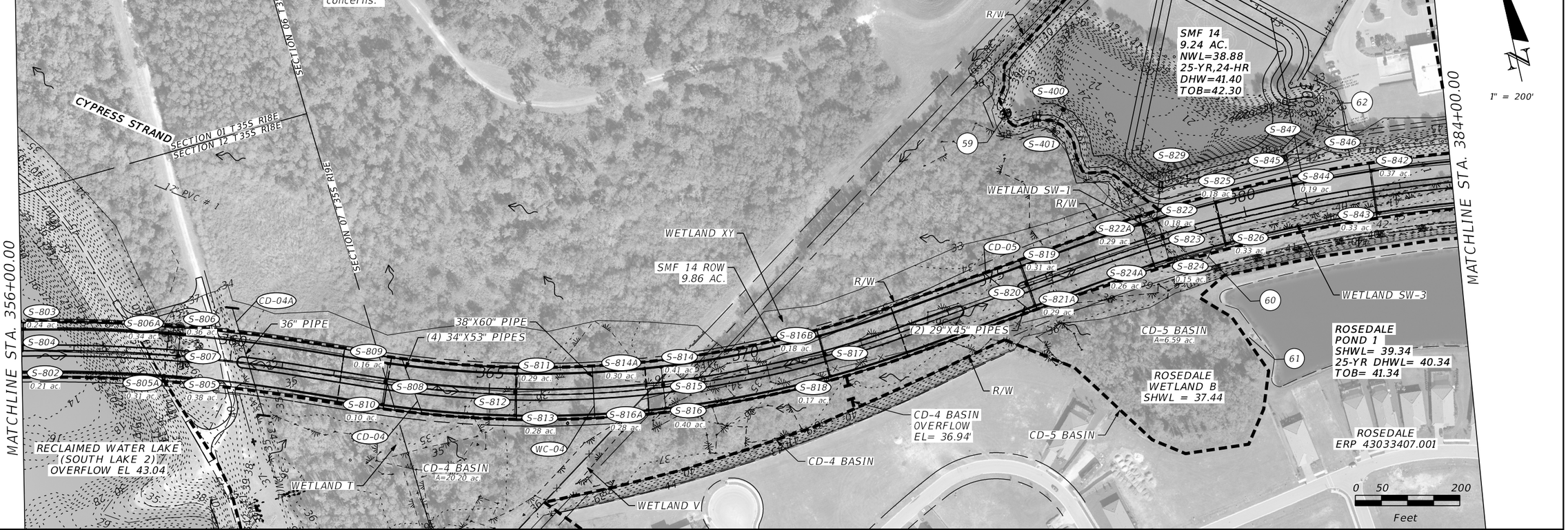
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No.	REVISIONS	DATE	BY

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CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT ENNIS
FL. LICENSE NO.: 77068

DRAINAGE MAP (3)

SHEET NO.: 7

1:24:46 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRMPRD03.DGN

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END PGL
STA. 394+14.35

END PROJECT
END MILLING & RESURFACING (EB)
STA. 408+32.28
END MILLING & RESURFACING (WB)
STA. 408+25.62

50
40
30
20
386
391
396
401
406

S-838
S-836
S-834
S-832
PGL
43.26
43.26
47.69
47.69
30" PIPE
24" PIPE
24" PIPE
24" PIPE
℄ 40.0
℄ 40.4
℄ 40.6
℄ 40.8
EXIST. GROUND @ ℄ CONST. 44TH AVE. EAST

MATCHLINE STA. 384+00.00

LAKE 2
NWL = 40.79
25-YR DHWL = 42.23
TOB = 43.24
OUTFALLS TO SMF14

CS AND PIPES
NOT SURVEYED
APPROX.
LOCATION

63

SMF 14 ROW
9.86 AC.

LAKEWOOD RANCH
BUSINESS PARK
ERP 43016872.026

SOLUTIONS LANE

END PROJECT
STA. 394+14.35

R/W
S-838
0.02 ac.
S-836
0.30 ac.
S-834
0.22 ac.
S-832
0.58 ac.
S-837
0.54 ac.
S-835
0.18 ac.
S-831
0.69 ac.
R/W

ROSEDALE
WETLAND A
SHWL = 40.64

WETLAND Z

CD-5 BASIN

ROSEDALE
POND 2
SHWL = 40.64
25-YR DHWL = 42.04
TOB = 43.04

ROSEDALE
ERP 43033407.001

64

HIGHLAND LINKS STREET

ROSEDALE
POND 3
SHWL = 40.64
25-YR DHWL = 42.11
TOB = 43.11

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N

1" = 200'

0 50 200

Feet

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: JG
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT ENNIS
FL. LICENSE NO.: 77068

DRAINAGE MAP (4)

SHEET NO.: 8

1:25:01 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRMPRD03.DGN

END PGL
STA. 201+05.00

END PGL
STA. 225+71.00

EXIST. GROUND @ ℄ CONST. LENA RD

S-900 S-902 S-754 S-758 S-760 S-760A S-762 S-764 S-764A S-767 S-714B S-710A S-710B S-714 S-735 S-740

38"X60" PIPE
18" PIPE
24" PIPE
24" PIPE
24" PIPE
24" PIPE
30" PIPE
36" PIPE
36" PIPE
36" PIPE
36" PIPE
42" PIPE
48" PIPE
48" PIPE
54" PIPE

FL 29.40 FL 29.10 FL 29.80 FL 29.60 FL 28.90 FL 29.30 FL 28.70 FL 28.50 FL 28.30 FL 28.10 FL 27.90 FL 27.30 FL 26.50 FL 25.10 FL 25.30 FL 24.90 FL 21.50 FL 21.20 FL 20.80

EXIST. GROUND @ ℄ CONST. LENA RD
DBL 5'X7' CBC

40 30 20 10 330 335 340 345 350 355 44 34 24 14

MATCHLINE STA. 330+00.00

1" = 200'

S-900 0.16 ac. S-901 0.13 ac. S-902 0.04 ac. S-903 S-500 S-501 S-754 0.21 ac. S-755 0.22 ac. S-758 0.12 ac. S-759 0.13 ac. S-760 0.09 ac. S-760A 0.17 ac. S-761 0.09 ac. S-761A 0.18 ac. S-762 0.13 ac. S-763 0.13 ac. S-764 0.13 ac. S-765 0.11 ac. S-765A 0.11 ac. S-764A 0.15 ac. S-767 0.08 ac. S-718 0.11 ac. S-720 0.26 ac. S-719 0.10 ac. S-716 0.12 ac. S-716 0.23 ac. S-714 0.08 ac. S-708 0.33 ac. S-709 S-707 0.36 ac. S-709C S-709A 0.21 ac. S-709B 0.23 ac. S-711 0.55 ac. S-712 S-710 0.35 ac. S-713 0.55 ac. S-710A 0.06 ac. S-710B 0.18 ac. S-714B 0.09 ac. S-200 S-741 S-201 S-735 S-740

SMF 15 ROW
0.35 AC.

38"X60"
PIPE

CD-05 WC-02 WC-01

SMF 15
0.17 AC.
NWL=29.00
25-YR, 24-HR
DHW=30.31
TOB=31.40

SMF 12 ROW
13.96 AC.

FEMA 100-YEAR
FLOODPLAIN
ZONE A

CD-1 BASIN
OVERFLOW
EL = 27.80'

CD-1 BASIN

WETLAND R

CD-01

36" PIPE

RAW

CD-2 BASIN
OVERFLOW
EL= 30.24'

CD-2 BASIN

WETLAND S

CD-2 BASIN
OVERFLOW
EL= 31.00'

FLOODPLAIN
COMPENSATION
AREA 2

SMF 12
2.77 AC.
NWL=27.74
25-YR, 24-HR
DHW=29.94
TOB=31.00

58 57

0 50 200
Feet

MATCHLINE STA. 339+50.00

LENA ROAD

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY SE
DRAWN BY JG
CHECKED BY SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER SCOTT ENNIS
FL. LICENSE NO. 77068

DRAINAGE MAP (5)

SHEET NO. 9

1:25:16 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRMPRD03.DGN

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STRUCTURE NO.	STATION	DESIGN FLOOD		BASE FLOOD		OVERTOPPING FLOOD				GREATEST FLOOD			
		2% PROB.	50 YR.FREQ.	1% PROB.	100 YR.FREQ.								
		DISCHARGE	STAGE	DISCHARGE	STAGE	DISCHARGE	STAGE	PROB. %	FREQ. YR.	DISCHARGE	STAGE	PROB. %	FREQ. YR.
CD-01	331+45.00	34.78	29.30	38.48	30.10	-	-	-	-	49.12	30.73	0.2	500
CD-02	339+75.00	8.29	31.54	11.99	31.89	-	-	-	-	17.91	32.36	0.2	500
CD-4A	363+52.87	12.53	35.42	12.63	35.43	-	-	-	-	17.02	35.76	0.2	500
CD-04	363+52.87	96.18	34.89	114.73	35.02	-	-	-	-	185.13	35.74	0.2	500
CD-05	375+21.78	65.15	37.55	78.48	37.71	-	-	-	-	120.27	39.78	0.2	500
CD-06	206+40.00	255.60	29.89	302.40	29.99	-	-	-	-	514.10	31.57	0.2	500

NOTE:

THE HYDRAULIC DATA IS SHOWN FOR INFORMATIONAL PURPOSES ONLY, TO INDICATE THE FLOOD DISCHARGES AND WATER SURFACE ELEVATIONS WHICH MAY BE ANTICIPATED IN ANY GIVEN YEAR. THIS DATA WAS GENERATED USING HIGHLY VARIABLE FACTORS DETERMINED BY A STUDY OF THE WATERSHED. MANY JUDGEMENTS AND ASSUMPTIONS ARE REQUIRED TO ESTABLISH THESE FACTORS. THE RESULTANT HYDRAULIC DATA IS SENSITIVE TO CHANGES, PARTICULARLY OF ANTECEDENT CONDITIONS, URBANIZATION, CHANNELIZATION, AND LAND USE. USERS OF THIS DATA ARE CAUTIONED AGAINST THE ASSUMPTION OF PRECISION WHICH CAN NOT BE ATTAINED. DISCHARGES ARE IN CUBIC FEET PER SECOND (CFS) AND STAGES ARE IN FEET, NAVD 88.

DEFINITIONS:

DESIGN FLOOD: THE FLOOD SELECTED BY F.D.O.T. TO BE UTILIZED TO ASSURE A STANDARD LEVEL OF HYDRAULIC PERFORMANCE.

BASE FLOOD: THE FLOOD HAVING A 1% CHANCE OF BEING EXCEEDED IN ANY YEAR. (100 YR. FREQUENCY)

OVERTOPPING FLOOD: THE FLOOD WHERE FLOW OCCURS (A) OVER THE HIGHWAY (B) OVER A WATERSHED DIVIDE OR (C) THRU EMERGENCY RELIEF STRUCTURES.

GREATEST FLOOD: THE MOST SEVERE FLOOD WHICH CAN BE PREDICTED WHERE OVERTOPPING IS NOT PRACTICABLE, NORMALLY ONE WITH A 0.2% CHANCE OF BEING EXCEEDED IN ANY YEAR. (500 YR. FREQUENCY)

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

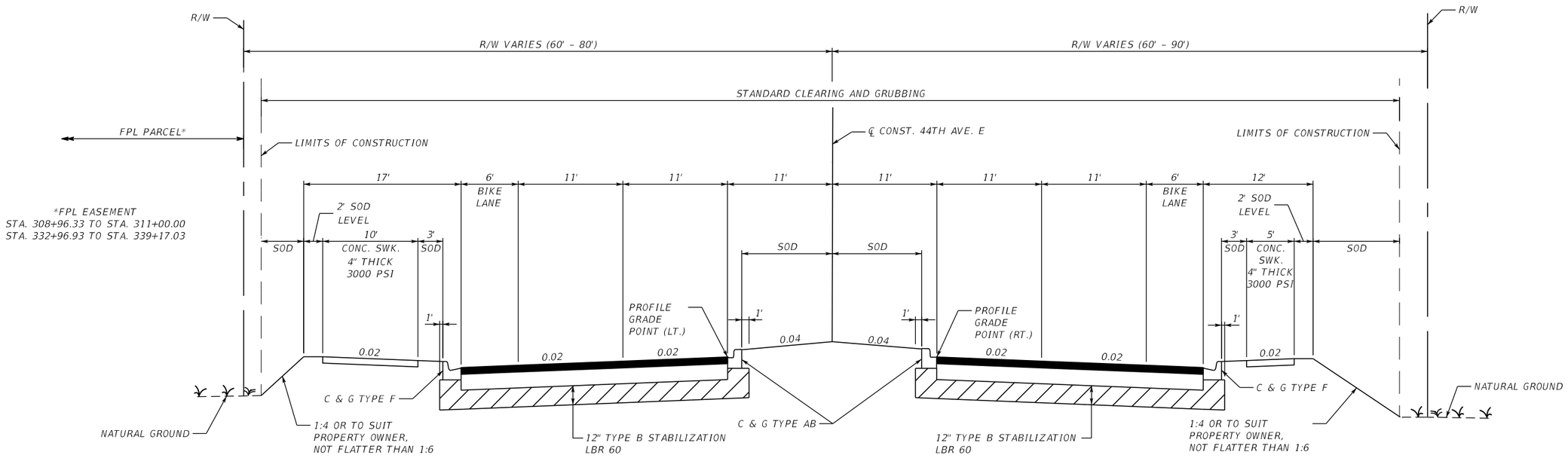
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

FLOOD DATA

SHEET NO.: 10

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TYPICAL SECTION (1)
44TH AVENUE EAST
STA. 308+96.33 TO STA. 311+00.00 (WB)
STA. 307+67.68 TO STA. 311+00.34 (EB)
STA. 330+83.29 TO STA. 339+46.87 (EB)
STA. 332+96.93 TO STA. 339+46.87 (WB)
STA. 359+40.54 TO STA. 362+61.16 (WB)
STA. 359+53.86 TO STA. 362+61.16 (EB)
STA. 376+73.45 TO STA. 393+64.17 (EB)
STA. 377+34.35 TO STA. 393+83.02 (WB)

MILLING AND RESURFACING
STA. 393+64.17 TO STA. 408+32.28 (EB)
STA. 393+83.02 TO STA. 408+25.62 (WB)

FRICTION COURSE ONLY
STA. 302+65.00 TO STA. 307+67.68 (EB)

MILLING AND RESURFACING
MILL 1-1/2" AVERAGE DEPTH
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

NEW CONSTRUCTION
OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

DRIVEWAY PAVEMENT
OPTIONAL BASE GROUP 3 (5.5") WITH
1.5" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C)

TRAFFIC DATA
ESTIMATED DESIGN YEAR = 2040 AADT = 32,200
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH

NOTE:
CONSTRUCTED CROSS SLOPE OF SIDEWALK SHALL NOT EXCEED 2.0%

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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MANATEE COUNTY PUBLIC WORKS

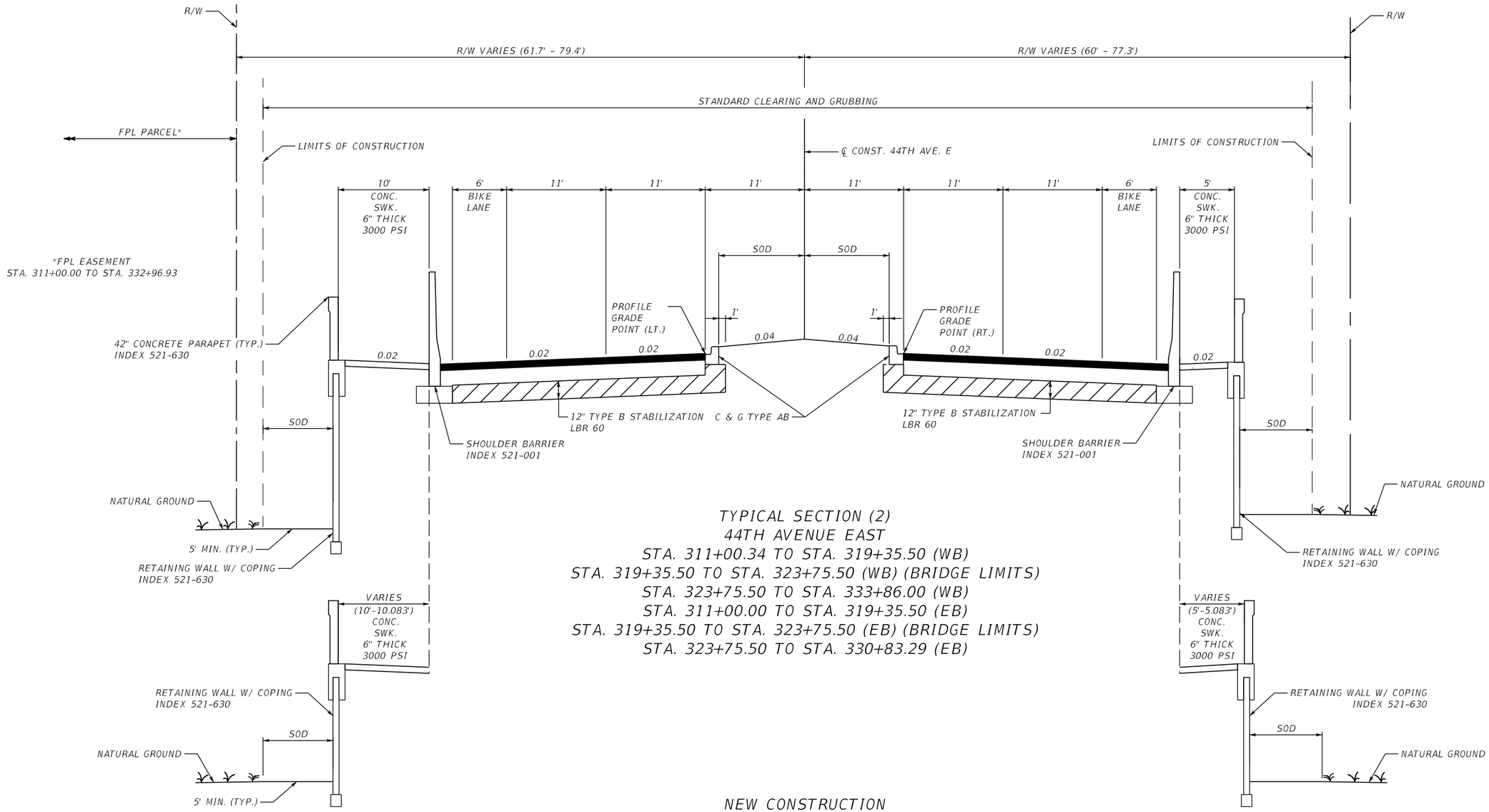
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TYPICAL SECTION (1)

SHEET NO.: 11

1:27:35 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

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TYPICAL SECTION (2)
44TH AVENUE EAST
STA. 311+00.34 TO STA. 319+35.50 (WB)
STA. 319+35.50 TO STA. 323+75.50 (WB) (BRIDGE LIMITS)
STA. 323+75.50 TO STA. 333+86.00 (WB)
STA. 311+00.00 TO STA. 319+35.50 (EB)
STA. 319+35.50 TO STA. 323+75.50 (EB) (BRIDGE LIMITS)
STA. 323+75.50 TO STA. 330+83.29 (EB)

SIDEWALK TRANSITION
STA. 319+02.18 TO STA. 319+35.50
STA. 323+75.50 TO STA. 324+00.50

NEW CONSTRUCTION
OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

SIDEWALK TRANSITION
STA. 319+02.18 TO STA. 319+35.50
STA. 323+75.50 TO STA. 324+00.50

TRAFFIC DATA
ESTIMATED DESIGN YEAR = 2040 AADT = 32,200
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH

NOTE:
CONSTRUCTED CROSS SLOPE OF SIDEWALK SHALL NOT EXCEED 2.0%

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

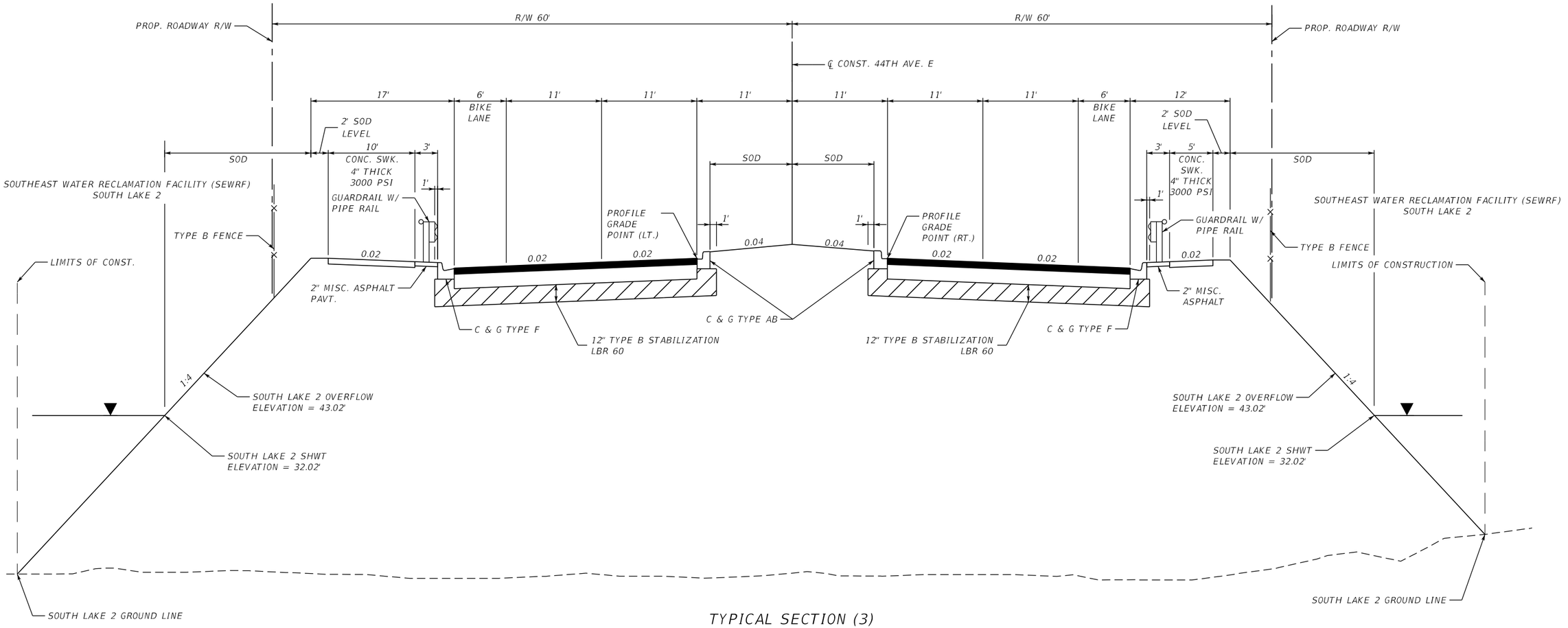
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TYPICAL SECTION (2)

SHEET NO.: 12

1:27:32 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

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



TYPICAL SECTION (3)
44TH AVENUE EAST
STA. 339+46.87 TO STA. 359+53.99 (EB)
STA. 339+46.87 TO STA. 359+42.60 (WB)

NEW CONSTRUCTION

OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

TRAFFIC DATA

ESTIMATED DESIGN YEAR = 2040 AADT = 32,200
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH

CONSTRUCTED CROSS SLOPE OF SIDEWALK SHALL NOT EXCEED 2.0%

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

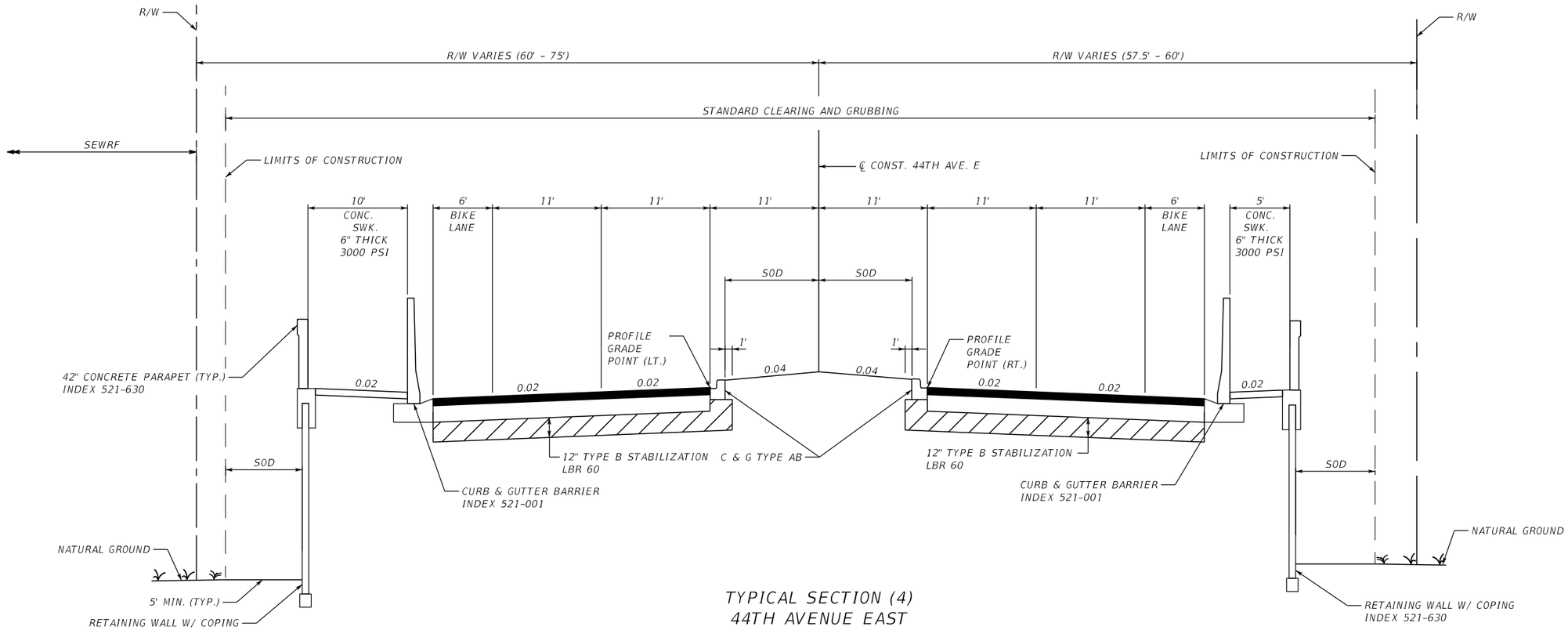
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TYPICAL SECTION (3)

SHEET NO.: 13

1:27:37 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

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



TYPICAL SECTION (4)
44TH AVENUE EAST
STA. 362+61.16 TO STA. 377+34.35 (WB)
STA. 362+61.16 TO STA. 376+73.45 (EB)

NEW CONSTRUCTION

OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

TRAFFIC DATA

ESTIMATED DESIGN YEAR = 2040 AADT = 32,200
DESIGN SPEED = 45 MPH
POSTED SPEED = 45 MPH

NOTE:
CONSTRUCTED CROSS SLOPE OF SIDEWALK SHALL NOT EXCEED 2.0%

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

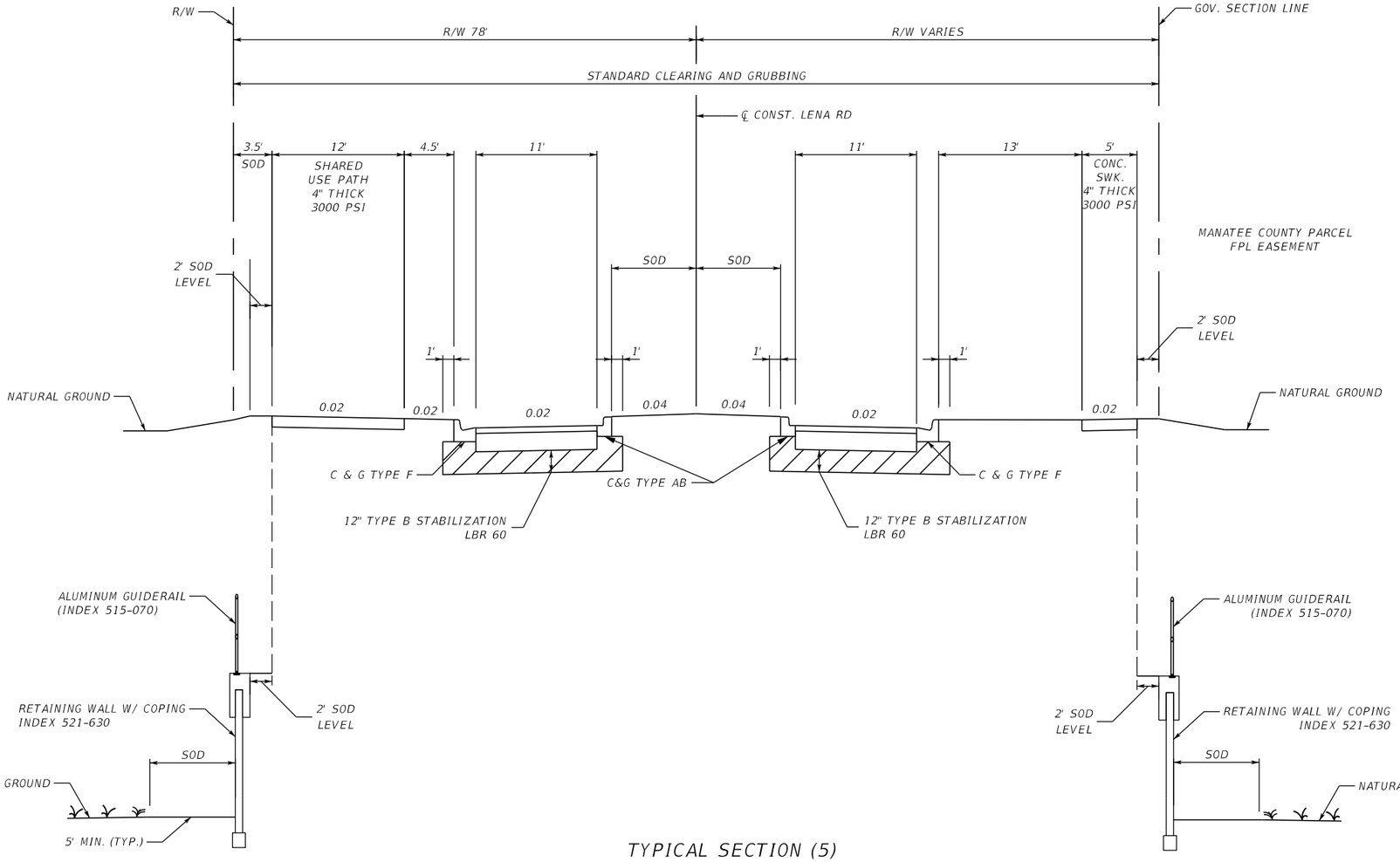
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

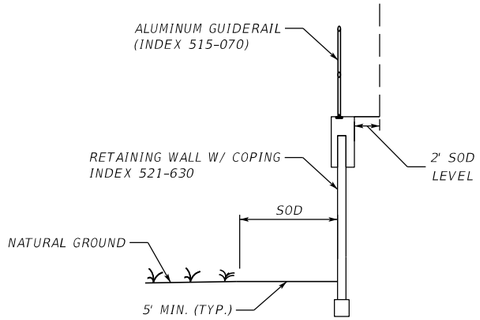
TYPICAL SECTION (4)

SHEET NO.: 14

1:27:40 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

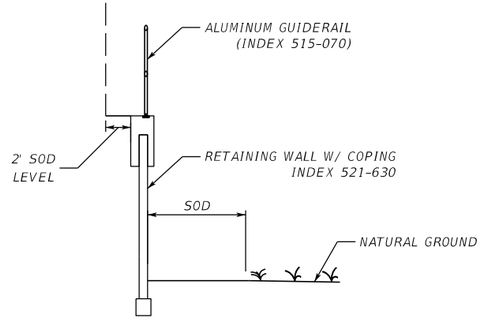
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.





RETAINING WALL
STA. 204+08.00 TO STA. 207+40.50
STA. 209+10.00 TO STA. 212+30.00

TYPICAL SECTION (5)
LENA ROAD
STA. 201+05.00 TO STA. 218+20.00



RETAINING WALL
STA. 206+10.00 TO STA. 207+30.00

NEW CONSTRUCTION

OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

TRAFFIC DATA

ESTIMATED DESIGN YEAR = 2045 AADT = 7100
DESIGN SPEED = 35 MPH
POSTED SPEED = 30 MPH

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

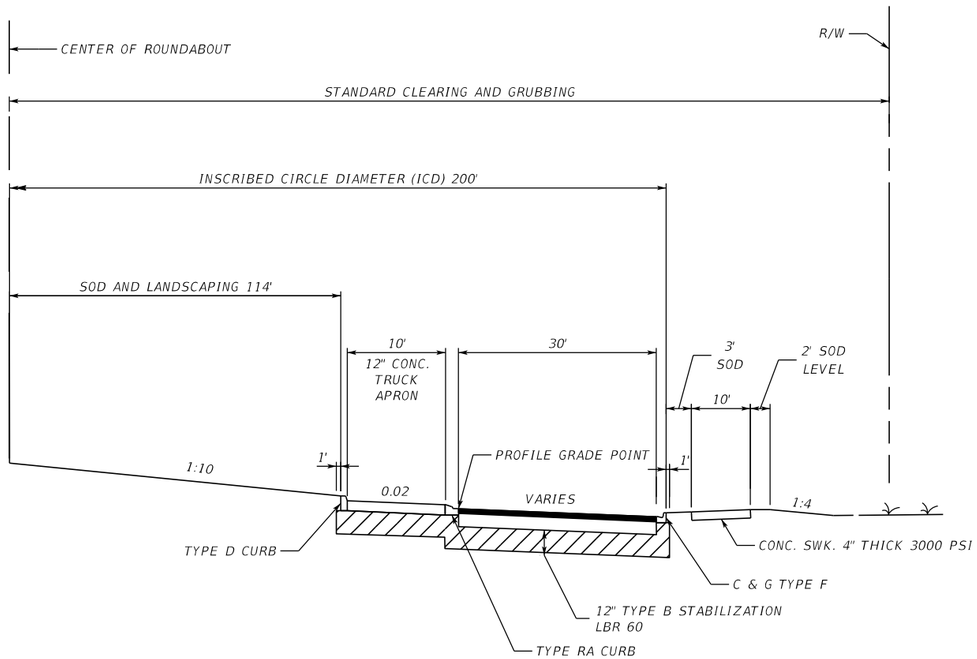
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TYPICAL SECTION (5)

SHEET NO.: 15

1:27:42 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

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



TYPICAL SECTION (6)
ROUNDABOUT

NEW CONSTRUCTION

OPTIONAL BASE GROUP 9 (10") WITH
3" STRUCTURAL COURSE TYPE SP 12.5 (TRAFFIC C) AND
1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22)

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TYPICAL SECTION (6)

SHEET NO.: 16

1:27:30 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYPSRD02.DGN

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

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL TYPE												CURB INLETS					MANHOLES			DITCH BOTTOM INLETS				CROSS DRAIN MITERED END SECTION					STRAIGHT CONC. ENDWALL				SOD	CLASS II CONC. (DITCH PAVT.)	REMARKS
						ROUND								OTHER																ROUND				OTHER	30" / ROUND	36" / ROUND	36" / ROUND	48" / OTHER			
						18"	24"	30"	36"	42"	48"	54"	60"	15"	36"	42"	48"	P-5 <10'	J-5 <10'	P-6 <10'	J-6 <10'	C&G BARRIER WALL INLET	P-7 <10'	J-7 <10'	J-7 >10'	C MOD.	D <10'	D <10'	D MOD.	18"	24"	30"	36"	15"	0 DEG	0 DEG	30 DEG	0 DEG	SY	CY	
P	S-601	309+06.00	RT	INLET,PIPE	1	86														1																			
F																																								
P	S-602	309+93.33	RT	INLET,PIPE	1	4																				1														W/ CONC. COLLAR
F																																							
P	S-603	310+99.32	LT	INLET,PIPE	1	77												1																					
F																																								
P	S-604	311+00.00	RT	INLET,PIPE	1	96												1																					
F																																								
P	S-605	313+72.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-606	313+72.00	RT	INLET, PIPE	1	15																1																	
F																																								
P	S-607	313+70.41	LT	INLET, PIPE	1	4																				1														W/ CONC. COLLAR
F																																							
P	S-608	313+72.00	LT	MH, PIPE	1	37																		1															
F																																								
P	S-609	316+70.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-610	316+70.00	RT	INLET, PIPE	1	37																1																	
F																																								
P	S-611	316+70.00	LT	MH, PIPE	1	295																		1															
F																																								
P	S-612	319+22.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-613	319+22.00	RT	INLET, PIPE	1	37																1																	
F																																								
P	S-614	319+22.00	LT	MH, PIPE	1	250																		1															
F																																								
P	S-701	324+00.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-702	324+00.00	RT	INLET, PIPE	1	37																1																	
F																																								
P	S-703	324+00.00	LT	MH, PIPE	1	297																		1															
F																																								
P	S-704	327+00.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-705	327+00.00	RT	INLET, PIPE	1	37																1																	
F																																								
P	S-706	327+00.00	LT	MH, PIPE	1	297																		1															
F																																								
P	S-707	330+00.00	LT	INLET, PIPE	1	33																1																	
F																																								
P	S-708	330+00.00	RT	INLET, PIPE	1	33																1																	
F																																								
P	S-709	330+00.00	LT	MH, PIPE	1		257																	1															
F																																								
P	CD - 1	331+45.00	RT	ENDWALL, PIPE	1				125																											1				
F																																								
P	S-709A	332+60.00	RT	INLET, PIPE	1	35												1																					
F																																								
P	S-709B	332+60.00	LT	INLET, PIPE	1	37																1																	
F																																								
P	S-709C	332+60.00	LT	MH, PIPE	1			66																1															
F																																								
P	S-710	333+39.00	LT	INLET, PIPE	1				83											1																			
F																																								
P	S-710A	334+26.00	LT	INLET, PIPE	1					43																														
F																																								
P	S-710B	217+28.67	LT	INLET, PIPE	1						95																													CL CONST. LENA RD
F																																							
P	S-711	333+20.00	RT	INLET, PIPE	1	34														1																			
F																																								
P	S-712	333+29.00	LT	MH, PIPE	1			31																1															
F																																								
P	S-713	333+60.00	RT	INLET, PIPE	1	38												1																					
F																																								
P	S-714	218+14.00	LT	INLET, PIPE	1						269								1																				CL CONST. LENA RD
F																																							
P	S-714B	334+48.66	RT	INLET, PIPE	1				107												1																		
F																																								
P	S-715	218+14.00	RT	INLET, PIPE	1			58																	1													CL CONST. LENA RD
F																																							
P	S-716	217+25.38	RT	INLET, PIPE	1			91										1																				CL CONST. LENA RD
F																																							
P	S-717	336+33.74	LT	MH, PIPE	1			75																	1													
F																																								
P	S-718	336+82.60	RT	INLET, PIPE	1	46												1																					
F																																								
P	S-719	337+07.17	LT	INLET, PIPE	1			101										1																					
F																																								
P	S-719A	338+00.00	LT	INLET, PIPE	1			91										1																					
F																																								
P	S-720	338+00.00	RT	INLET, PIPE	1	67												1																					
F																																								
P	CD - 2	339+75.00	LT	ENDWALL, PIPE	1			186																													1			
F																																								
P	CD - 2	339+75.00	RT	ENDWALL	1																															1			
F																																								
SHEET TOTALS		PLAN QUANTITY				2114	257	699	315	43	364							9	1	3	1	13	8	2			2								2	1				
		FINAL QUANTITY																																						

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

SUMMARY OF DRAINAGE STRUCTURES (1 OF 3)

SHEET NO.: 17

9:37:36 AM 2/24/2022 PW:\

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL TYPE												CURB INLETS					MANHOLES			DITCH BOTTOM INLETS				CROSS DRAIN MITERED END SECTION					STRAIGHT CONC. ENDWALL				SOD	CLASS II CONC. (DITCH PAVT.)	REMARKS
						ROUND								OTHER												C		D		ROUND				OTHER	30" / ROUND	36" / ROUND	36" / ROUND	48" / OTHER			
						18"	24"	30"	36"	42"	48"	54"	60"	15"	36"	42"	48"	P-5 <10'	J-5 <10'	P-6 <10'	J-6 <10'	C & G BARRIER WALL INLET	P-7 <10'	J-7 <10'	J-7 >10'	MOD.	<10'	<10'	MOD.	18"	30"	42"	60"	15"	0 DEG	0 DEG	30 DEG	0 DEG	SY	CY	
P	WC-03	340+30.00	LT	ENDWALL PIPE	1												185																				1			
F																																									
P	WC-03	340+30.00	RT	ENDWALL	1																																	1			
F																																									
P	S-722	340+50.00	LT	INLET, PIPE	1			247										1																							
F																																									
P	S-723	340+50.00	RT	INLET, PIPE	1	66												1																							
F																																									
P	S-727	343+00.00	LT	INLET, PIPE	1			247										1																							
F																																									
P	S-728	345+50.00	LT	INLET, PIPE	1		247											1																							
F																																									
P	S-729	347+50.00	LT	INLET, PIPE	1		197													1																					
F																																									
P	S-730	347+50.00	RT	INLET, PIPE	1	77														1																					
F																																									
P	S-732	349+50.00	LT	INLET, PIPE	1	199												1																							
F																																									
P	S-733	350+50.00	RT	INLET, PIPE	1	77												1																							
F																																									
P	S-735	220+85.94	LT	MH, PIPE	1							349													1															CL CONST. LENA RD
F																																									
P	S-740	224+39.61	LT	MH, PIPE, MES	1								27												1															
F																																									
P	CD - 3	351+60.00	LT	MES, PIPE	1		294																												1						
F																																									
P	CD - 3	351+60.00	RT	MES	1																														1						
F																																									
P	WC-01	205+83.25	RT	ENDWALL, PIPE	1												115																					1			CL CONST. LENA RD
F																																									
P	WC-02	206+72.00	RT	PIPE	1												85	1																							CL CONST. LENA RD
F																																									
P	S-754	206+80.00	LT	INLET, PIPE	1		133											1																							CL CONST. LENA RD
F																																									
P	S-755	206+80.00	RT	INLET, PIPE	1	26												1																							CL CONST. LENA RD
F																																									
P	S-758	208+20.00	LT	INLET, PIPE	1		94											1																							CL CONST. LENA RD
F																																									
P	S-759	208+20.00	RT	INLET, PIPE	1	39												1																							CL CONST. LENA RD
F																																									
P	S-760	209+20.00	LT	INLET, PIPE	1		66											1																							CL CONST. LENA RD
F																																									
P	S-761	209+20.00	RT	INLET, PIPE	1	39												1																							CL CONST. LENA RD
F																																									
P	S-760A	209+90.00	LT	INLET, PIPE	1		130													1																					CL CONST. LENA RD
F																																									
P	S-761A	209+90.00	RT	INLET, PIPE	1	39														1																					CL CONST. LENA RD
F																																									
P	S-762	211+20.00	LT	INLET, PIPE	1			141										1																							CL CONST. LENA RD
F																																									
P	S-763	211+20.00	RT	INLET, PIPE	1	39												1																							CL CONST. LENA RD
F																																									
P	S-764	212+60.00	LT	INLET, PIPE	1				117										1																						CL CONST. LENA RD
F																																									
P	S-765	212+60.00	RT	INLET, PIPE	1	57												1																							CL CONST. LENA RD
F																																									
P	S-764A	213+80.00	LT	INLET, PIPE	1				119										1																						CL CONST. LENA RD
F																																									
P	S-765A	213+80.00	RT	INLET, PIPE	1	60												1																							CL CONST. LENA RD
F																																									
P	S-767	215+00.00	LT	INLET, PIPE	1				128										1																						CL CONST. LENA RD
F																																									
P	S-802	356+00.00	RT	INLET, PIPE	1	37												1																							
F																																									
P	S-803	356+00.00	LT	INLET, PIPE	1	37												1																							
F																																									
P	S-804	356+00.00	LT	MH, PIPE	1		297																	1																	
F																																									
P	S-805A	358+75.00	RT	INLET, PIPE	1	22												1																							
F																																									
P	S-806A	358+75.00	LT	INLET, PIPE	1	22												1																							
F																																									
P	S-805	359+00.00	RT	INLET, PIPE	1															1																					
F																																									
P	S-806	359+00.00	LT	INLET, PIPE	1															1																					
F																																									
P	S-807	359+00.00	LT	MH, PIPE	1			396																1																	
F																																									
P	CD-4A	360+78.37	RT	ENDWALL, PIPE	1				215																												1					
F																																									
P	CD-4A	359+92.42	LT	ENDWALL	1																																1					
F																																									
P	S-808	363+00.00	RT	MH, PIPE	1																				1															
F																																									
P	S-809	363+00.00	LT	INLET, PIPE	1	34																1																			
F																																									
P	S-810	363+00.00	RT	INLET, PIPE	1	41																1																			
F																																									
SHEET TOTALS		PLAN QUANTITY				911	1458	1031	579	0	0	349	27	0	0	0	385	21	3	6	0	2	2	1	2	0	0	0	0	0	0	2	1	0	0	0	2	3	0	0.00	
		FINAL QUANTITY																																							

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

SUMMARY OF DRAINAGE STRUCTURES (2 OF 3)

SHEET NO.: 18

9:37:37 AM 2/24/2022 PW:\

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL TYPE												CURB INLETS					MANHOLES			DITCH BOTTOM INLETS				CROSS DRAIN MITERED END SECTION					STRAIGHT CONC. ENDWALL				SOD	CLASS II CONC. (DITCH PAVT.)	REMARKS
						ROUND								OTHER																ROUND				OTHER	30" / ROUND	36" / ROUND	36" / ROUND	48" / OTHER			
						18"	24"	30"	36"	42"	48"	54"	60"	15"	36"	42"	48"	P-5 <10'	J-5 <10'	P-6 <10'	J-6 <10'	C&G BARRIER WALL INLET	P-7 <10'	J-7 <10'	J-7 >10'	C MOD	C <10'	D <10'	D MOD.	18"	30"	42"	60"	15"	0 DEG	0 DEG	30 DEG	0 DEG	SY	CY	
P	CD- 4	363+80.00	RT	PIPE	4											448																							
F																																							
P	S-811	365+50.00	LT	INLET, PIPE	1	31																1																	
F																																							
P	S-812	365+50.00	LT	MH, PIPE	1				279															1															
F																																							
P	S-813	365+50.00	RT	INLET, PIPE	1	41																1																	
F																																							
P	WC-04	367+00.00	LT	PIPE	1												100																						
F																																							
P	S-814A	368+34.35	LT	INLET, PIPE	1	30																1																	
F																																							
P	S-816A	368+34.35	RT	INLET, PIPE	1	30																1																	
F																																							
P	S-814	368+34.35	LT	INLET, PIPE	1	31																1																	
F																																							
P	S-815	368+34.35	RT	MH, PIPE	1					310														1															
F																																							
P	S-816	370+00.00	RT	INLET, PIPE	1	41																1																	
F																																							
P	S-816B	371+50.00	LT	INLET, PIPE	1	31																1																	
F																																							
P	S-817	371+50.00	LT	MH, PIPE	1					405														1															
F																																							
P	S-818	371+50.00	RT	INLET, PIPE	1	41																1																	
F																																							
P	CD-05	375+21.78	LT	PIPE	2										232																							
F																																							
P	S-819	375+60.00	LT	INLET, PIPE	1	31																1																	
F																																							
P	S-820	375+60.00	LT	MH, PIPE	1					271														1															
F																																							
P	S-821A	375+60.00	LT	INLET, PIPE	1	41																1																	
F																																							
P	S-822A	378+00.00	LT	INLET, PIPE	1	31																																	
F																																							
P	S-824A	378+00.00	RT	INLET, PIPE	1	31																																	
F																																							
P	S-822	378+34.35	LT	INLET, PIPE, MES	1						52									1																			
F																																							
P	S-823	378+34.35	LT	MH, PIPE	1					31														1															
F																																							
P	S-824	378+34.35	RT	INLET, PIP E	1	41														1																			
F																																							
P	S-825	379+55.00	LT	INLET, PIPE	1	113												1																					
F																																							
P	S-826	379+50.00	RT	INLET, PIPE	1	77												1																					
F																																							
P	S-831	391+54.97	RT	INLET, PIPE	1	114														1																			
F																																							
P	S-832	391+20.00	LT	INLET, PIPE	1		118													1																			
F																																							
P	S-834	390+00.00	LT	INLET, PIPE	1		147											1																					
F																																							
P	S-835	390+00.00	RT	INLET, PIPE	1	89												1																					
F																																							
P	S-836	388+50.00	LT	INLET, PIPE	1		250											1																					
F																																							
P	S-837	388+50.00	RT	INLET, PIPE	1	80												1																					
F																																							
P	S-838	387+00.00	LT	INLET, PIPE	1			352										1																					
F																																							
P	S-842	382+50.00	LT	INLET, PIPE	1			149										1																					
F																																							
P	S-843	382+50.00	RT	INLET, PIPE	1	77												1																					
F																																							
P	S-844	381+00.00	LT	INLET, PIPE, MES	1			44										1															1						
F																																							
P	S-846	381+97.00	LT	INLET, PIPE, MES	1	57																				1					1							
F																																							
P	S-400	3000+69.34	LT	INLET, PIPE, MES	1	37																				1					1							BL CONST. SMF 14
F																																							
P	S-900	202+60.00	LT	INLET, PIPE	1	39												1																					CL CONST. LENA RD
F																																							
P	S-901	202+60.00	RT	INLET, PIPE	1	137												1																					CL CONST. LENA RD
F																																							
P	S-902	204+00.00	RT	INLET, PIPE, MES	1	112												1														1							CL CONST. LENA RD
F																																							
P	S-500	205+50.28	RT	INLET, PIPE, MES	1									29													1							1					CL CONST. LENA RD
F																																							
P	S-200	220+78.81	LT	INLET, PIPE, MES	1			212																							1		1						
F																																							
SHEET TOTALS		PLAN QUANTITY				1383	515	757	279	1017	52			29	232	448	100	13		4		10		5		2	1		1	3	2			1						
		FINAL QUANTITY																																					
GRAND TOTALS		PLAN QUANTITY				4408	2230	2487	1173	1060	416	349	27	29	232	448	485	43	4	13	1	25	10	8	2	2	3		1	3	2	2	1	1	2	1	3	3			
		FINAL QUANTITY																																					

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

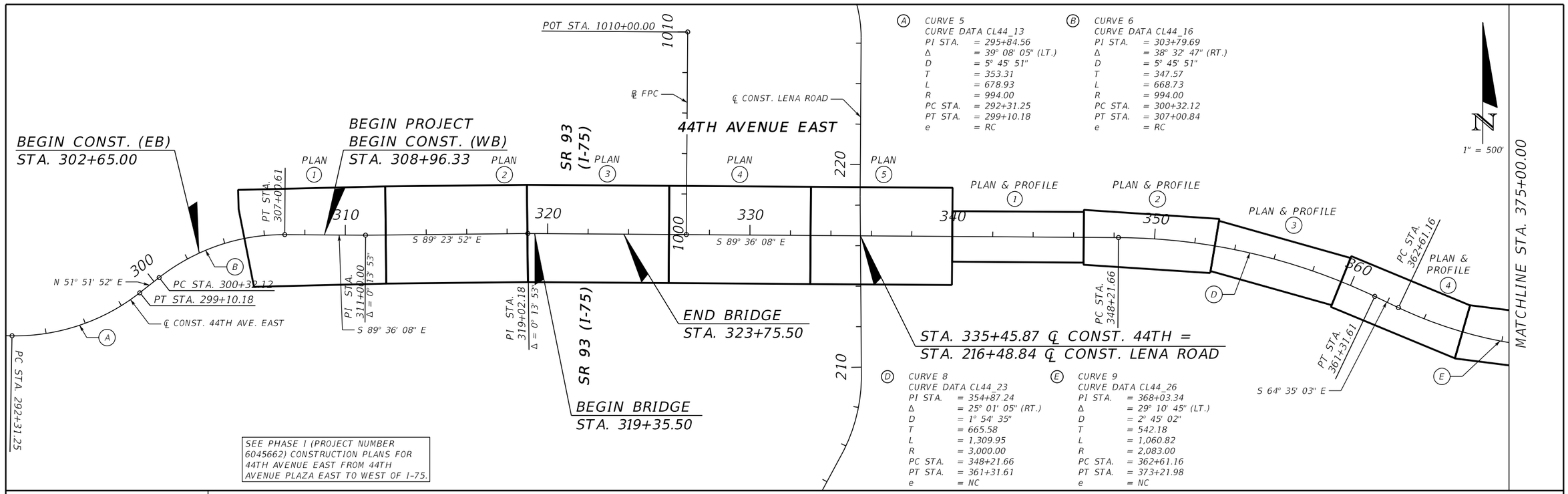
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

SUMMARY OF DRAINAGE STRUCTURES (3 OF 3)

SHEET NO.: 19

9:37:37 AM 2/24/2022 PW:\

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



A CURVE 5
CURVE DATA CL44_13

PI STA.	= 295+84.56
Δ	= 39° 08' 05" (LT.)
D	= 5° 45' 51"
T	= 353.31
L	= 678.93
R	= 994.00
PC STA.	= 292+31.25
PT STA.	= 299+10.18
e	= RC

B CURVE 6
CURVE DATA CL44_16

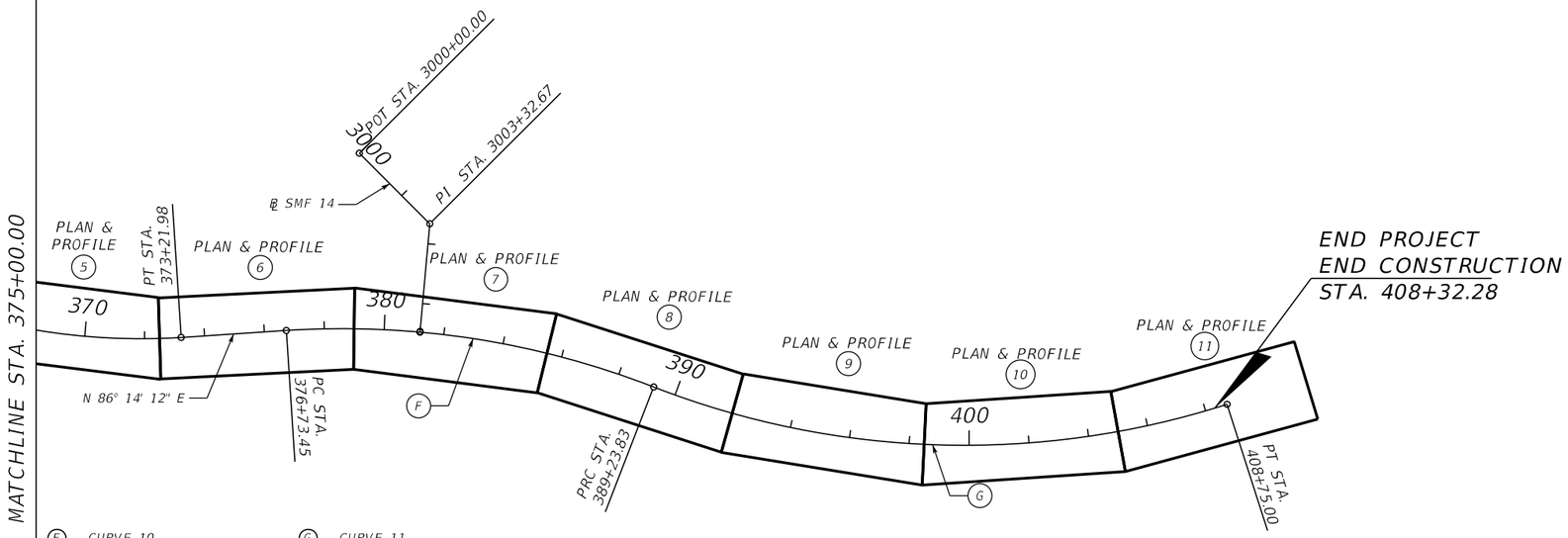
PI STA.	= 303+79.69
Δ	= 38° 32' 47" (RT.)
D	= 5° 45' 51"
T	= 347.57
L	= 668.73
R	= 994.00
PC STA.	= 300+32.12
PT STA.	= 307+00.84
e	= RC

D CURVE 8
CURVE DATA CL44_23

PI STA.	= 354+87.24
Δ	= 25° 01' 05" (RT.)
D	= 1° 54' 35"
T	= 665.58
L	= 1,309.95
R	= 3,000.00
PC STA.	= 348+21.66
PT STA.	= 361+31.61
e	= NC

E CURVE 9
CURVE DATA CL44_26

PI STA.	= 368+03.34
Δ	= 29° 10' 45" (LT.)
D	= 2° 45' 02"
T	= 542.18
L	= 1,060.82
R	= 2,083.00
PC STA.	= 362+61.16
PT STA.	= 373+21.98
e	= NC



F CURVE 10
CURVE DATA CL44_29

PI STA.	= 383+08.76
Δ	= 25° 00' 21" (RT.)
D	= 1° 59' 59"
T	= 635.31
L	= 1,250.38
R	= 2,865.00
PC STA.	= 376+73.45
PT STA.	= 389+23.83
e	= NC

G CURVE 11
CURVE DATA CL44_30

PI STA.	= 399+38.96
Δ	= 39° 01' 14" (LT.)
D	= 1° 59' 59"
T	= 1,015.13
L	= 1,951.17
R	= 2,865.00
PC STA.	= 389+23.83
PT STA.	= 408+75.00
e	= NC

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

PROJECT LAYOUT (1)

SHEET NO.: 20

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

1:28:21 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLAYRD02.DGN

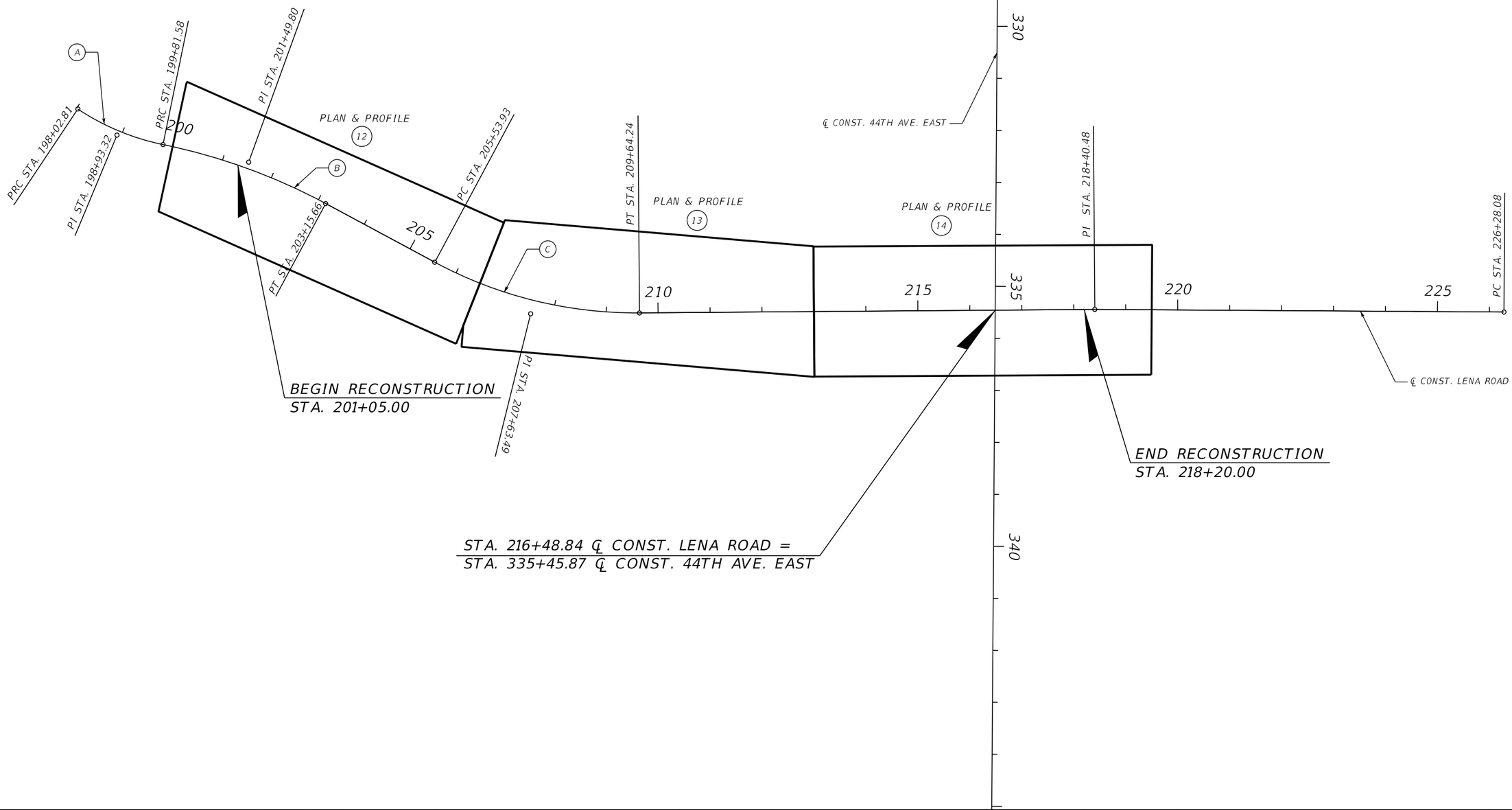
LENA ROAD

(A) CURVE DATA C3
PI STA. = 198+93.32
Δ = 22° 04' 33" (LT)
D = 12° 20' 54"
T = 90.51
L = 178.78
R = 464.00
PC STA. = 198+02.81
PT STA. = 199+81.58
e = NC

(B) CURVE DATA C4
PI STA. = 201+49.80
Δ = 16° 38' 40" (RT)
D = 4° 58' 56"
T = 168.22
L = 334.07
R = 1,150.00
PC STA. = 199+81.58
PT STA. = 203+15.66
e = NC

(C) CURVE DATA C5
PI STA. = 207+63.49
Δ = 28° 42' 16" (LT)
D = 6° 59' 45"
T = 209.56
L = 410.31
R = 819.00
PC STA. = 205+53.93
PT STA. = 209+64.24
e = NC

N
1" = 200'



BEGIN RECONSTRUCTION
STA. 201+05.00

END RECONSTRUCTION
STA. 218+20.00

STA. 216+48.84 ℄ CONST. LENA ROAD =
STA. 335+45.87 ℄ CONST. 44TH AVE. EAST

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

PROJECT LAYOUT (2)

SHEET NO.: 21

1:28:24 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLAYRD02.DGN

CURVE AND COORDINATE DATA

BASELINE	CURVE NUMBER	CONTROL POINT	STATION	COORDINATES NORTH	COORDINATES EAST	Δ	D	T	L	R	BEARING BACK	BEARING AHEAD
℄ Const. 44th Ave. East	CURVE 5	PC	292+31.25	1136553.67	504476.23	39°08'05" (LT.)	5°45'51"	353.31	678.93	994.00	S 89°00'03" E	N 51°51'52" E
		PI	295+84.56	1136547.50	504829.48							
		PT	299+10.18	1136765.68	505107.38							
	CURVE 6	PC	300+32.12	1136840.98	505203.29	38°31'59" (RT.)	5°45'51"	347.44	668.49	994.00	N 51°51'52" E	S 89°36'08" E
		PI	303+79.56	1137055.53	505476.57							
		PT	307+00.61	1137053.12	505824.00							
		PI	311+00.00	1137050.35	506223.38						S 89°36'08" E	N 89°23'52" E
		PI	319+02.18	1137058.78	507025.52						N 89°23'52" E	S 89°36'08" E
	CURVE 8	PC	348+21.66	1137038.51	509944.93	25°01'05" (RT.)	1°54'35"	665.58	1309.95	3000.00	S 89°36'08" E	S 64°35'03" E
		PI	354+87.24	1137033.89	510610.49							
		PT	361+31.61	1136748.23	511211.66							
	CURVE 9	PC	362+61.16	1136692.63	511328.67	29°10'45" (RT.)	2°45'02"	542.18	1060.82	2083.00	S 64°35'03" E	N 86°14'12" E
		PI	368+03.34	1136459.94	511818.38							
		PT	373+21.98	1136495.52	512359.38							
	CURVE 10	PC	376+73.45	1136518.59	512710.10	25°00'21" (RT.)	1°59'59"	635.31	1250.38	2865.00	N 86°14'12" E	S 68°45'27" E
		PI	383+08.76	1136560.29	513344.04							
		PRC	389+23.83	1136330.11	513936.18							
	CURVE 11	PRC	389+23.83	1136330.11	513936.18	39°01'14" (LT.)	1°59'59"	1015.13	1951.17	2865.00	S 68°45'27" E	N 72°13'19" E
		PI	399+38.96	1135962.31	514882.34							
		PT	408+75.00	1136272.26	515848.99							
℄ Const. Lena Rd.	CURVE C3	PRC	198+02.81	1135281.85	508282.22	22°04'33" (LT.)	12°20'54"	90.51	178.78	464.00	N 18°07'46" W	N 33°41'17" E
		PI	198+93.32	1135357.17	508332.42							
		PRC	199+81.58	1135445.82	508350.64							
	CURVE C4	PRC	199+81.58	1135445.82	508350.64	16°38'40" (RT.)	4°58'56"	168.22	334.07	1150.00	N 33°41'17" E	N 11°36'45" E
		PI	201+49.80	1135610.60	508384.50							
		PT	203+15.66	1135758.78	508464.14							
	CURVE C5	PC	205+53.93	1135968.66	508576.95	28°42'16" (LT.)	6°59'45"	209.56	410.31	819.00	N 11°36'45" E	N 28°15'24" E
		PI	207+63.49	1136153.24	508676.15							
		PT	209+64.24	1136362.79	508674.52							
		PI	218+40.48	1137239.00	508667.67						N 28°15'24" E	N 0°26'52" W
BL FPC		POB	1000+00.00	1137053.34	507808.80							N 0°23'52" E
		POE	1010+00.00	1138053.32	507815.75						N 0°23'52" E	
BL SMF 12		POB	2000+00.00	1137974.98	507955.83							S 89°36'08" E
	CURVE C5	PC	2001+52.84	1137973.92	508108.67	89°58'26" (RT.)	10°29'37"	545.75	857.41	546.00	S 89°36'08" E	S 0°22'18" W
		PI	2006+98.60	1137970.13	508654.41							
		PT	2010+10.25	1137424.39	508650.87							
		PI	2011+95.65	1137238.99	508649.67						S 0°22'18" W	S 0°26'52" E
		PI	2013+87.15	1137047.49	508651.17						S 0°26'52" E	S 89°33'08" W
		POE	2013+92.15	1137047.45	508646.17						S 89°33'08" W	
BL SMF 14		POB	3000+00.00	1137110.35	512953.88							S 44°56'35" E
		PI	3003+32.67	1136874.88	513188.88						S 44°56'35" E	S 5°10'01" W
		PI	3006+95.90	1136513.13	513156.16						S 5°10'01" W	N 5°10'01" E
		POE	3006+98.40	1136515.62	513156.39						N 5°10'01" E	

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CURVE & COORDINATE DATA

SHEET NO.: 22

1:28:41 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\CTLSRD02.DGN

PROJECT NOTES:

1. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED.
2. THE REMOVAL OF ANY DRAINAGE STRUCTURE OR PIPE WITHIN 5.0 FEET OF ANY UTILITY THAT IS IN SERVICE SHALL BE ACCOMPLISHED SO AS NOT TO DAMAGE THE UTILITY.
3. ANY PORTION OF THE EXISTING RIGHT OF WAY THAT IS DISTURBED OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE REDRESSED AND SODDED AT THE CONTRACTOR'S EXPENSE.
4. NO STOCKPILE OF MATERIAL IS PERMITTED WITHIN THE PROJECT LIMITS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
5. ALL BOTTOM PROFILE ELEVATIONS AND CROSS SECTIONS FOR TREATMENT/ATTENUATION SWALES SHALL BE CONSTRUCTED TO WITHIN ±0.1 FEET OF THE VALUES SHOWN ON THE PLANS.
6. EXISTING DRIVEWAYS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE REPLACED AT THE SAME LOCATION AND WIDTH, UNLESS OTHERWISE SHOWN IN THE PLANS. REFER TO MANATEE COUNTY STANDARD 101.1 FOR URBAN DRIVEWAY CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING DRAINAGE INVERT ELEVATIONS THAT WILL REMAIN PART OF THE PROPOSED DRAINAGE SYSTEM. ANY DIFFERENCE FROM PLAN ELEVATION SHALL BE REPORTED TO THE ENGINEER.
8. EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.
9. ALL STATIONS AND OFFSETS REFER TO THE ℄ OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. THE COUNTY RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING ON ALL MATERIAL DELIVERED TO THE PROJECT AND TO REJECT ALL MATERIALS NOT MEETING ACCEPTABLE STANDARDS.
11. ANY DAMAGE TO COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY, PAYMENT SHALL NOT BE MADE FOR THIS WORK.
12. OVERALL CLEANUP SHALL BE ACCOMPLISHED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR MOBILIZATION.
13. DRIVEWAY LOCATION AND WIDTH MAY BE FIELD ADJUSTED DURING CONSTRUCTION BY THE CONTRACTOR IN COORDINATION WITH REQUESTS FROM PROPERTY OWNERS, AND COUNTY COORDINATION.
14. CONTRACTOR SHALL INSTALL SOIL TRACKING PREVENTION DEVICES AT ALL POINTS OF CONSTRUCTION VEHICLE INGRESS/EGRESS.
15. SEE COUNTY HIGHWAY & TRAFFIC STANDARD MANUAL ROAD CONNECTION DETAIL 403.3 AT ALL WIDENING AND CONNECTIONS TO EXISTING PAVEMENT.
16. BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT
17. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
18. UTILIZE SPECIAL STEEL POST FOR GUARDRAIL MOUNTING ON CONCRETE STRUCTURES PER INDEX 536-001.
19. ALL CONSTRUCTION WITHIN MANATEE COUNTY RIGHT-OF-WAY IS TO BE PER MANATEE COUNTY PUBLIC WORKS STANDARDS.

DRAINAGE STRUCTURE NOTES:

1. THE CONTRACTOR IS TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL DRAINAGE STRUCTURES AND PIPES PRIOR TO ORDERING, CASTING OR PLACING PROPOSED DRAINAGE STRUCTURES AND PIPES.
2. ALL STORMDRAIN MANHOLES SHALL USE MANATEE COUNTY ACCESS COVER, PER MANATEE COUNTY STANDARD NO. 203.1.
3. ANY STORMDRAIN INLETS REQUIRING AN ACCESS COVER SHALL BE IN ACCORDANCE WITH MANATEE COUNTY STANDARD NO. 203.2.
4. ALL PROPOSED STORM SEWER PIPE SHALL BE RCP CLASS II UNLESS NOTED OTHERWISE.

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SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

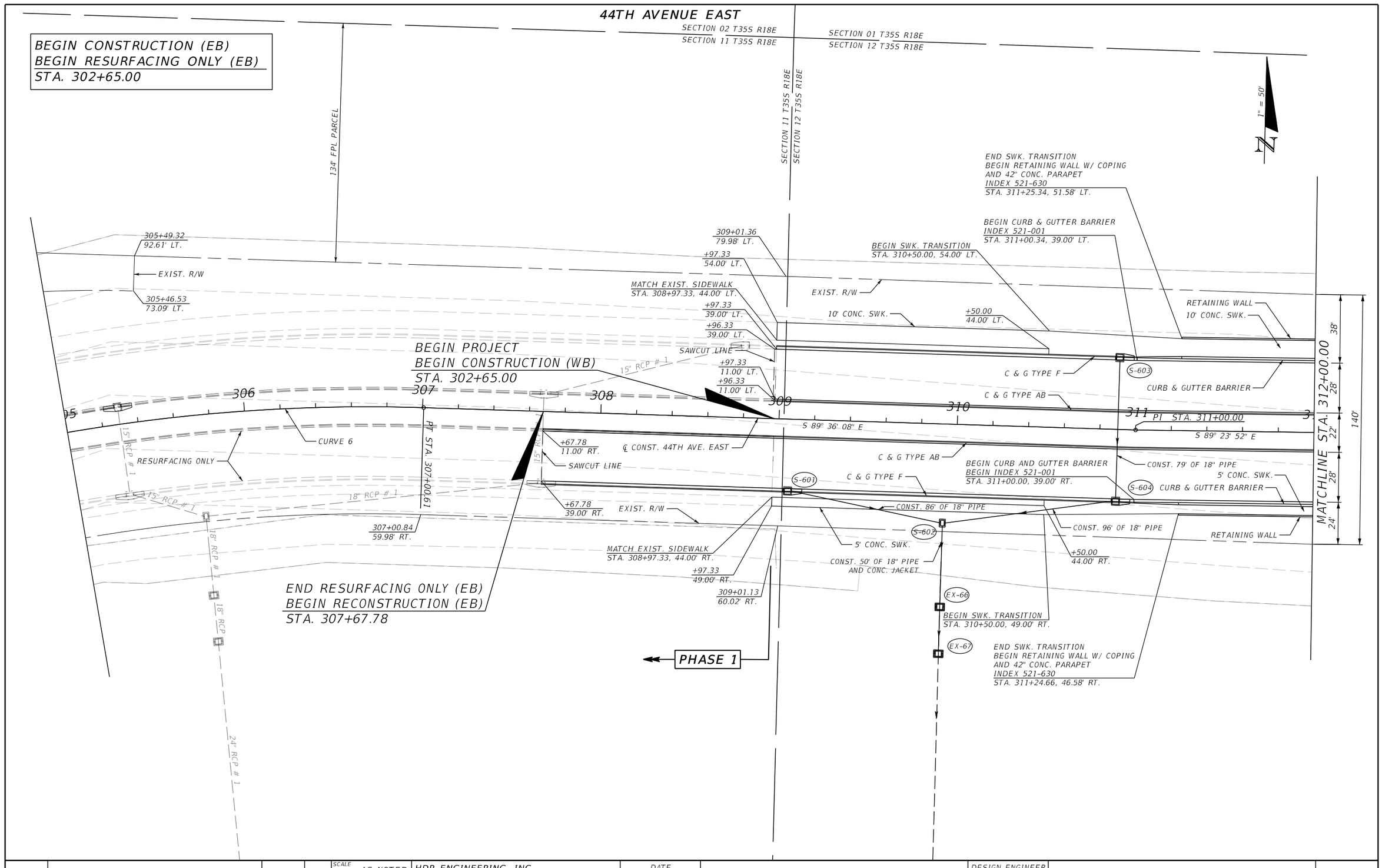
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

GENERAL NOTES

SHEET NO.: 23



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN (1)

SHEET NO.: 24

1:32:12 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLANRD02.dgn

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44TH AVENUE EAST

SECTION 01 T35S R18E
SECTION 12 T35S R18E

1" = 50'

134' FPL PARCEL

OE - - - - - - - - - - - - OE - - - - - - - - - - - - OE - - - - - - - - - - - - OE - - - - - - - - - - - - OE - - - - - - - - - - - - OE - - - - - - - - - - - - OE - - -

EXIST. R/W

RETAINING WALL

10' CONC. SWK.

CURB & GUTTER BARRIER

S-605

CONST. 37' OF 18" PIPE

C & G TYPE AB

CONST. 37' OF 18" PIPE

CONST. 249' OF 18" PIPE

312 313 314 315 316 317 318 319

CONST. 295' OF 18" PIPE

S-608

S 89° 23' 52" E

S-611

CONST. 37' OF 18" PIPE

℄ CONST. 44TH AVE. EAST

C & G TYPE AB

CONST. 37' OF 18" PIPE

S-606

CURB & GUTTER BARRIER

S-610

CONST. 15' OF 18" PIPE

S-607

CONST. 53' OF 18" PIPE
AND CONC. JACKET

5' CONC. SWK.

RETAINING WALL

EXIST. R/W

EX-69

EX-70

140'

38'

28'

22'

28'

24'

MATCHLINE STA. 312+00.00

MATCHLINE STA. 319+00.00

24'

28'

22'

28'

38'

140'

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN (2)

SHEET NO.: 25

1:32:14 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLANRD02.dgn

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44TH AVENUE EAST

SECTION 01 T35S R18E
SECTION 12 T35S R18E

SR 93 (I-75)

WETLAND WL-R

FEMA 100-YEAR FLOODPLAIN

1" = 50'

133' FPL PARCEL

BFOC(B)

EXIST. LA R/W

EXIST. R/W
+25.46
51.58' LT.

+02.18
41.58' LT.

319+75.39
62.76' LT.

CONST. 37' OF 18" PIPE

S-612

S-613

CONST. 18" PIPE

+02.59
46.58' RT.

319+80.30
77.25' RT

+25.48
46.58' RT.

EXIST. R/W

EXIST. LA R/W

323+32.41
62.46' LT.

323+32.40
61.69' LT.

BEGIN RETAINING WALL W/ COPING
AND 42" CONC. PARAPET
INDEX 521-630
STA. 323+75.50, 51.67' LT.

BEGIN CURB & GUTTER BARRIER
BEGIN INDEX 521-001
STA. 323+75.50, 39.00' LT.

+85.54
51.58' LT.
END CONCRETE BARRIER TRANSITION
STA. 323+75.50, 39.00' RT.

PROP. ESMT.

EXIST. R/W

RETAINING WALL

S-701

CONST. 37' OF 18" PIPE
END CURB TRANSITION
STA. 324+00.50, 10.17' LT.

CURB & GUTTER BARRIER

10' CONC. SWK.

CONST. 297' OF 18" PIPE

S-703

END CURB TRANSITION
STA. 324+00.50, 10.17' RT.

CONST. 37' OF 18" PIPE

S-702

C & G TYPE AB

CURB & GUTTER BARRIER

PROP. R/W

323+31.27
60.00' RT

END CONCRETE BARRIER TRANSITION
STA. 323+75.50, 39.00' RT.

+85.50
46.58' RT.

BEGIN CURB & GUTTER BARRIER
BEGIN INDEX 521-001
STA. 323+75.50, 39.00' RT.

BEGIN RETAINING WALL W/ COPING
AND 42" CONC. PARAPET
INDEX 521-630
STA. 323+75.50, 46.67' RT.

RETAINING WALL

5' CONC. SWK.

324+77.85
60.00' RT.

MANATEE COUNTY PARCEL

EXIST. LA R/W

EXIST. LA R/W

MATCHLINE STA. 319+00.00

MATCHLINE STA. 326+00.00

140'
24'
28'
22'
28'
38'
24'
28'
22'
28'
21'
122'

319 320 321 322 323 324 325

S 89° 23' 52" E

S 89° 36' 08" E

℄ CONST. 44TH AVE. EAST

A	END CURB TRANSITION BEGIN APPROACH SLAB STA. 319+35.50, 8.50' LT.	
B	END CURB TRANSITION BEGIN APPROACH SLAB STA. 319+35.50, 8.50' RT.	
C	END APPROACH SLAB BEGIN BRIDGE STA. 319+65.50, 8.50' LT.	
D	END APPROACH SLAB BEGIN BRIDGE STA. 319+65.50, 8.50' RT.	
E	END BRIDGE BEGIN APPROACH SLAB STA. 323+45.50	
F	END BRIDGE BEGIN APPROACH SLAB STA. 323+45.50, 8.50' LT.	
G	END APPROACH SLAB BEGIN CURB TRANSITION STA. 323+75.50, 8.50' LT.	
H	END APPROACH SLAB BEGIN CURB TRANSITION STA. 323+75.50, 8.50' RT.	
I	END RETAINING WALL W/ COPING AND 42" CONC. PARAPET INDEX 521-630 STA. 319+35.50, 51.67' LT.	
J	END RETAINING WALL W/ COPING AND 42" CONC. PARAPET INDEX 521-630 STA. 319+35.50, 46.67' RT.	
K	END CURB & GUTTER BARRIER INDEX 521-001 STA. 319+35.50, 40.33' LT.	
L	END CURB & GUTTER BARRIER INDEX 521-001 STA. 319+35.50, 40.33' RT.	
M	BEGIN CURB TRANSITION STA. 319+10.50, 10.17' LT.	
N	BEGIN CURB TRANSITION STA. 319+10.50, 10.17' RT.	
O	BEGIN CONCRETE BARRIER TRANSITION STA. 319+25.50, 41.58' LT.	
P	BEGIN CONCRETE BARRIER TRANSITION STA. 319+25.50, 41.58' RT.	

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN (3)

SHEET NO.: 26

1:32:16 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLANRD02.dgn

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FPC 1

44TH AVENUE EAST

WETLAND WL-BB

SECTION 01 T35S R18E
SECTION 12 T35S R18E

1" = 50'

FEMA 100-YEAR FLOODPLAIN

1002

1001

1000

℄ FPC

PROP. ESMT.

EXIST. R/W

RETAINING WALL

10' CONC. SWK.

134' FPL PARCEL

CD-01

332+55.00
92.00' LT.

BEGIN SWK. TRANSITION
END RETAINING WALL W/ COPING
AND 42" CONC. PARAPET
INDEX 521-630
STA. 332+75.00, 51.58' LT.

332+55.00
62.46' LT.

S-709B

END CURB & GUTTER BARRIER
INDEX 521-001
STA. 333+00.00, 39.00' LT.

MATCHLINE STA. 326+00.00

MATCHLINE STA. 333+00.00

122'
23'
28'
22'
28'
21'

53'
28'
15'
182'
30'
57'

S-704

FEMA 100-YEAR FLOODPLAIN

CONST. 37' OF 18" PIPE

CONST. 18" PIPE

90°00'00"

A

S-706

CONST. 37' OF 18" PIPE

C & G TYPE AB

S-705

CURB & GUTTER BARRIER

CONST. 297' OF 18" PIPE

WETLAND WL-R

S 89° 36' 08" E

+94.52
11.00' RT.

1500' R

+18.55
5.86' RT.

℄ CONST. 44TH AVE. EAST
CONST. 37' OF 18" PIPE

S-707

CONST. 37' OF 18" PIPE

S-709

1100' R

+68.15
3.66' RT.

END CURB & GUTTER BARRIER
INDEX 521-001
STA. 331+15.00, 34.20' RT.

CONST. 125' OF 36" PIPE

CONST. 257' OF 24" PIPE

+68.00
8.99' RT.

+77.86
37.56' RT.

C & G TYPE F

706' R

CONST. 66' OF 30" PIPE

CONST. 37' OF 18" PIPE

CONST. 35' OF 18" PIPE

S-709C

700' R

+05.00
32.86' RT.

+94.52
46.58' RT.

1536' R

+21.49
41.32' RT.

S-708

1064' R

330+58.53
60.00' RT.

BEGIN SWK. TRANSITION
END RETAINING WALL W/ COPING
AND 42" CONC. PARAPET
INDEX 521-630
STA. 330+90.00, 40.46' RT.

END SWK. TRANSITION
STA. 331+40.00, 45.55' RT.

CD-01

S-709A

+96.87
43.56' RT.

330+58.53
90.00' RT.

5' CONC. SWK.

RETAINING WALL

PROP. R/W

PROP. R/W

WETLAND WL-R

MANATEE COUNTY PARCEL

A STA. 326+85.48 ℄ CONST. 44TH AVE. EAST =
STA. 1000+00.00 ℄ FPC

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN (4)

SHEET NO.: 27

1:32:18 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLANRD02.dgn

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SMF 12

44TH AVENUE EAST

CONST. 212' OF 30" PIPE
S-201
WETLAND WL-R
CONST. 269' OF 48" PIPE
SECTION 01 T35S R18E
SECTION 12 T35S R18E
334+55.07
192.33' LT.
218+20.00
19.45' LT.
S-714
CONST. 58' OF 30" PIPE
218+20.00
40.14' RT.
S-715
330' FPL EASEMENT
WETLAND WL-R
10' CONC. SWK.
PROP. R/W
C & G TYPE F
CONST. 95' OF 48" PIPE
95' R
CR-E
217+76.59
34.97' LT.
CONST. 91' OF 30" PIPE
FPL TRANSMISSION POLE TO BE ADJUSTED
333+67.68
92.00' LT.
217+55.35
49.14' LT.
S-715
S-710B
400' R
217+47.35
62.49' RT.
120' R
S-716
EXIST. R/W
3" MISC.
ASPHALT PAVT.
BEGIN GUARDRAIL W/ PIPE RAIL
TRAILING ANCHORAGE
STA. 339+45.70, 39.14' LT.
BEGIN 3" MISC. ASPHALT PAVT.
STA. 339+40.87, 44.00' LT.
CD-02
CONST. 186'
OF 30" PIPE
PROP. R/W
335+86.99
60.00' LT.
10' CONC. SWK.
CONST. 101' OF 30" PIPE
CONST. 91' OF 30" PIPE
S-710
S-710A
+36.60
58.58' LT.
335+86.97
57.93' LT.
S-719A
CONST. 247' OF 30" PIPE
+05.00
39.00' LT.
+50.00
36.68' LT.
400' R
+65.23
36.14' LT.
S-719
C & G TYPE F
+90.00
33.30' LT.
+31.01
36.65' LT.
+39.67
7.90' LT.
706' R
700' R
C & G TYPE RA
90°50'44"
CR-E
95' R
+45.00
20.20' LT.
+38.17
18.99' LT.
+64.83
0.68' RT.
CONST. 67' OF 18" PIPE
S 89° 36' 08" E
TYPE D CURB
TRUCK APRON
10'
57' R
+27.12
0.69' LT.
S-712
+50.00
19.64' RT.
95' R
CONST. 46' OF 18" PIPE
411' R
+88.29
11.00' RT.
+95.89
33.00' RT.
400' R
S-718
+45.00
39.00' RT.
+00.00
33.00' RT.
℄ CONST. 44TH AVE. EAST
+90.45
39.00' RT.
BEGIN 3" MISC. ASPHALT PAVT.
STA. 339+36.87, 44.00' RT.
C & G TYPE AB
S-720
1' R
50' R
S-711
+14.74
35.21' RT.
+10.97
41.53' RT.
5' CONC. SWK.
C & G TYPE F
+26.87
36.23' RT.
+46.51
50.80' RT.
S-714B
CR-E
+49.65
60.69' RT.
5' CONC. SWK.
C & G TYPE F
PROP. R/W
120' R
℄ CONST. LENA RD
335+88.76
60.00' RT.
334+33.14
90.00' RT.
CONST. 128' OF 36" PIPE
+84.88
98.91' RT.
+95.44
103.25' RT.
335+88.91
90.00' RT.
BEGIN GUARDRAIL W/ PIPE RAIL
TL-3 PARALLEL TERMINAL
STA. 339+46.87, 42.62' RT.
CD-02
3" MISC.
ASPHALT PAVT.
215+29.84
37.12' RT.
400' R
CR-E
S-767
95' R
WETLAND WL-R
EASEMENT LINE
334+70.50
178.59' RT.
214+57.50
20.39' RT.
700' R
CONST. 36" PIPE
MANATEE COUNTY PARCEL
LENA ROAD
SOUTHEAST WATER RECLAMATION
FACILITY (SEWRF)

MATCHLINE STA. 333+00.00
MATCHLINE STA. 340+00.00
182'
53'
28'
15'
30'
57'
29'
28'
14'
21'
120'

1 CONST. 37' OF 18" PIPE
2 CONST. 34' OF 18" PIPE
3 CONST. 30" PIPE
4 CONST. 31' OF 36" PIPE
5 CONST. 83' OF 36" PIPE
6 CONST. 43' OF 42" PIPE
7 CONST. 107' OF 36" PIPE

NOTE: ALL PARTIAL STATIONS REFER TO ℄ CONST. 44TH AVE. EAST

B STA. 335+45.87 ℄ CONST. 44TH AVE. EAST =
STA. 2016+48.84 ℄ CONST. LENA RD

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN (5)

SHEET NO.: 28

3:51:38 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLANRD02.dgn

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BEGIN PROJECT
END MILLING AND RESURFACING
BEGIN FULL DEPTH CONSTRUCTION (WB)
STA. 307+67.78

BEGIN FULL DEPTH CONSTRUCTION (EB)
STA. 308+96.33

K = 97
400' V.C.

+90.00 EL. 30.62

30.66 30.78 30.94 31.14 31.38 31.66 31.98 32.35 32.75 33.20 33.69 34.22 34.79 35.40 36.05 36.75 37.35

30.15

PGL 44th AVE RT
(+) 0.380%
(+) 0.3100% (EXIST.)
EXIST. GROUND @ ℄ CONST. 44TH AVE. EAST

S-601
S-602
S-604

PGL 44th AVE LT & RT
(+) 0.380%
(+) 4.500%

18" PIPE
℄ 29.3
℄ 28.0
PI +90.00
EL. 31.38

18" PIPE
℄ 25.0
℄ 24.8

30.29
30.13

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

10 15 20 25 30 35 40 45 50 55

305+00.00 306+00.00 307+00.00 308+00.00 309+00.00 310+00.00 311+00.00 312+00.00

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

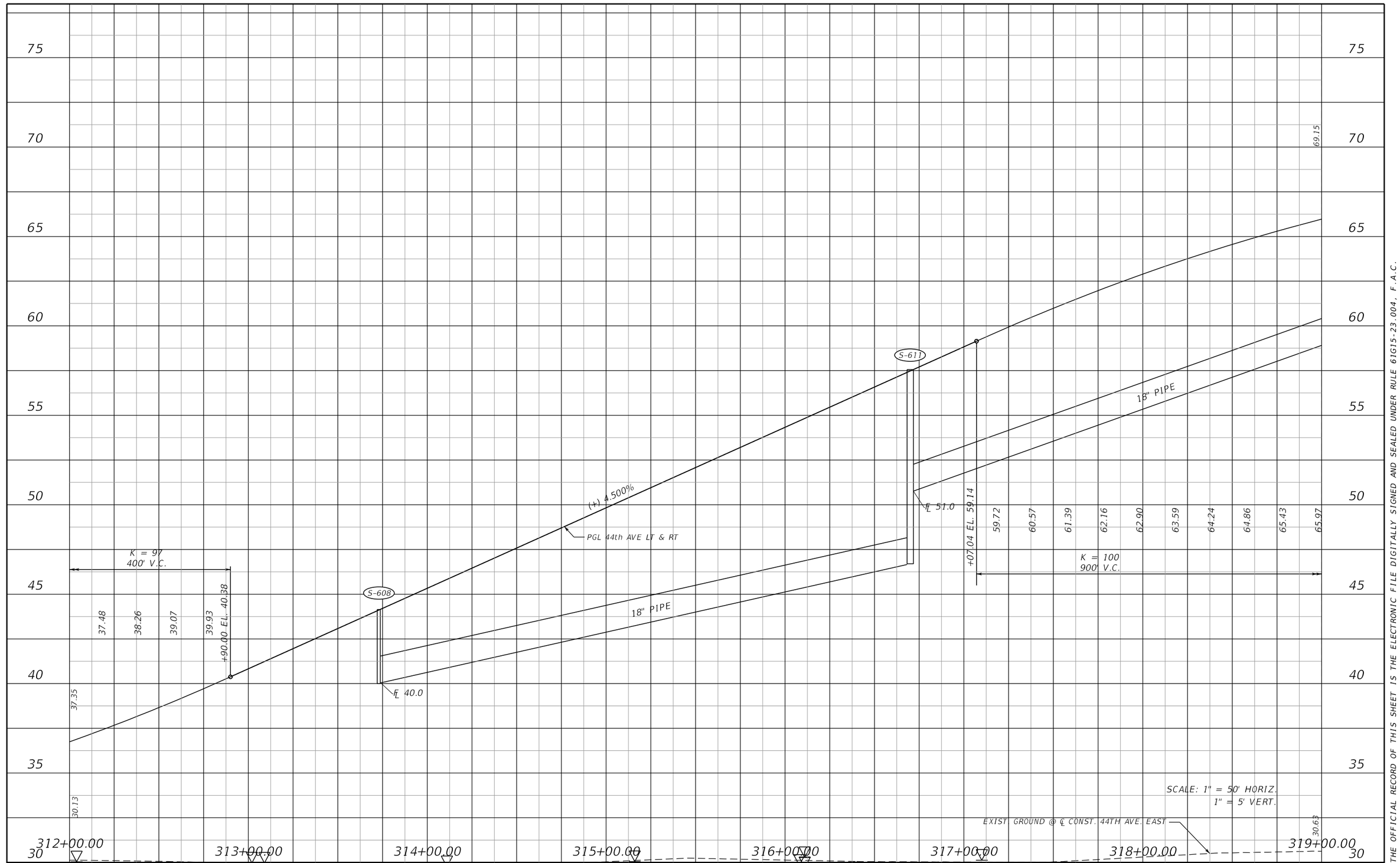
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PROFILE (1)

SHEET NO.: 29

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	TME
CHECKED BY	TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

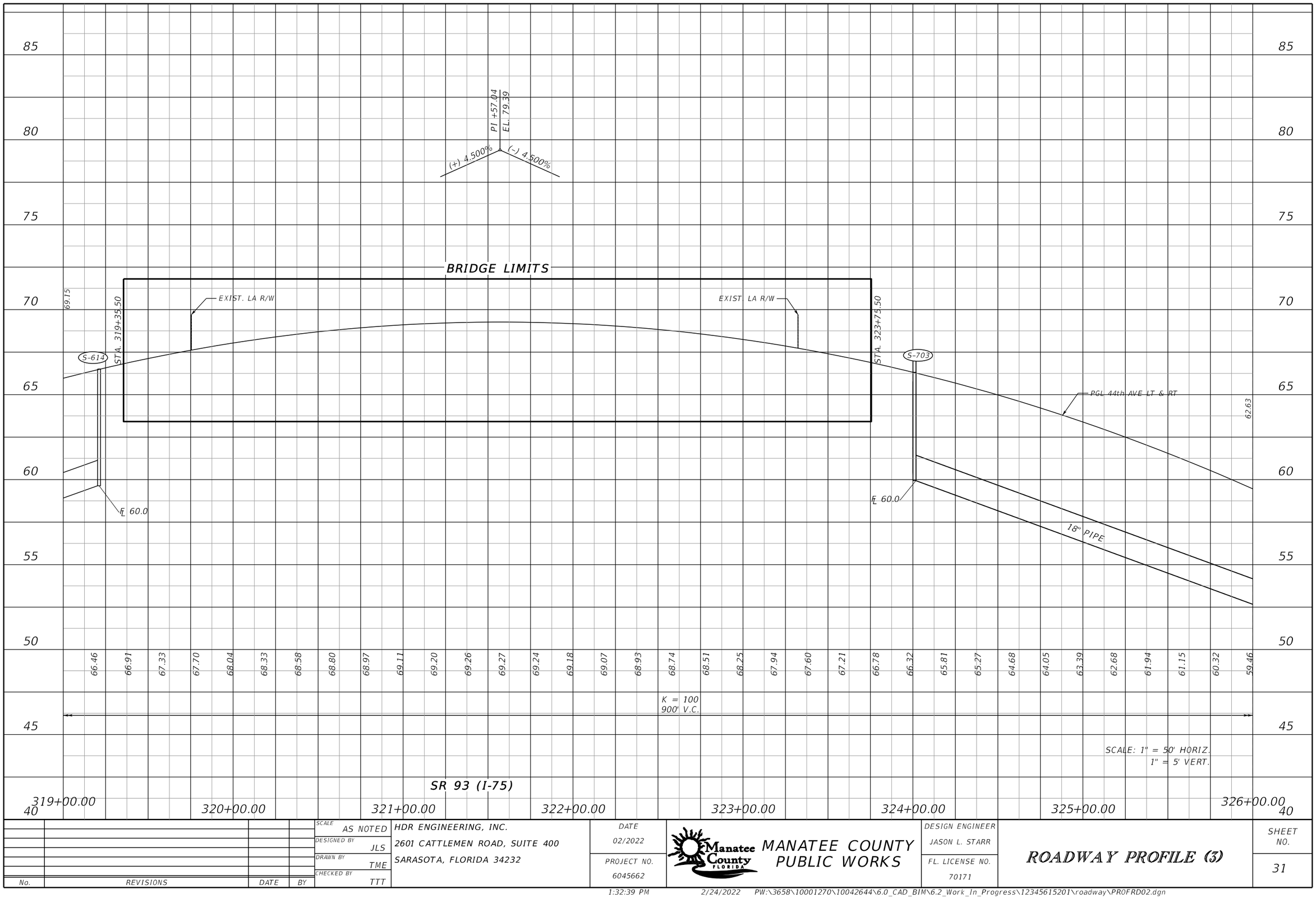
DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

ROADWAY PROFILE (2)

SHEET NO. 30

1:32:38 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PROFRD02.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

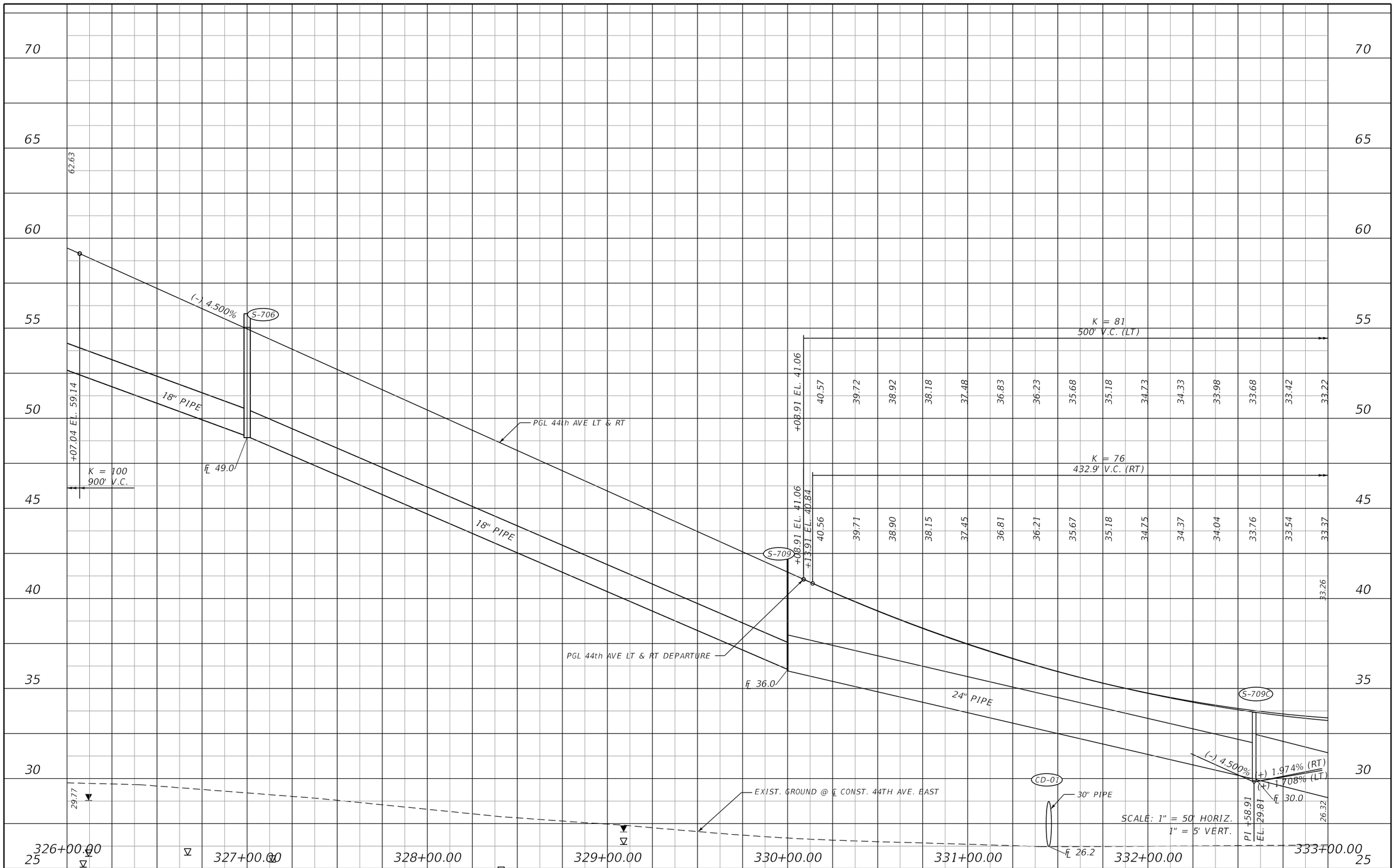
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PROFILE (3)

SHEET NO.: 31

1:32:39 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PROFRD02.dgn

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	TME
CHECKED BY	TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022

PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JASON L. STARR

FL. LICENSE NO. 70171

ROADWAY PROFILE (4)

SHEET NO. 32

1:32:41 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PROFRD02.dgn

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

K = 81
500' V.C. (LT)

K = 76
432.9' V.C. (RT)

33.26 | 33.25 | 33.07 | 33.19 | 32.97 | 33.17 | 32.91 | 33.22 | 32.91 | 33.31 | 32.96 | 33.46 | 33.05 | 33.66 | 33.20

SEE ROUNDABOUT PROFILE AND INTERSECTION DETAIL SHEETS

PGL 44th AVE LT
PGL 44th AVE RT

S-712 S-710 S-710A S-710B S-714 S-715 S-716 S-719 S-719A CD-02

PI +70.00
EL. 37.28

(+) 2.291%
(+) 1.817%
(+) 1.817%

30" PIPE
36" PIPE
42" PIPE
48" PIPE
PIPE
38"X

℄ 28.2
℄ 25.8
℄ 25.5
℄ 25.3
℄ 25.1
℄ 24.9
℄ 21.5
℄ 26.8
℄ 27.0
℄ 29.1
℄ 30.5
℄ 31.9
℄ 33.0
℄ 29.86

EXIST. GROUND @ ℄ CONST. 44TH AVE. EAST

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

333+00.00 | 334+00.00 | 335+00.00 | 336+00.00 | 337+00.00 | 338+00.00 | 339+00.00 | 340+00.00

60 55 50 45 40 35 30 25 20 15

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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MANATEE COUNTY PUBLIC WORKS

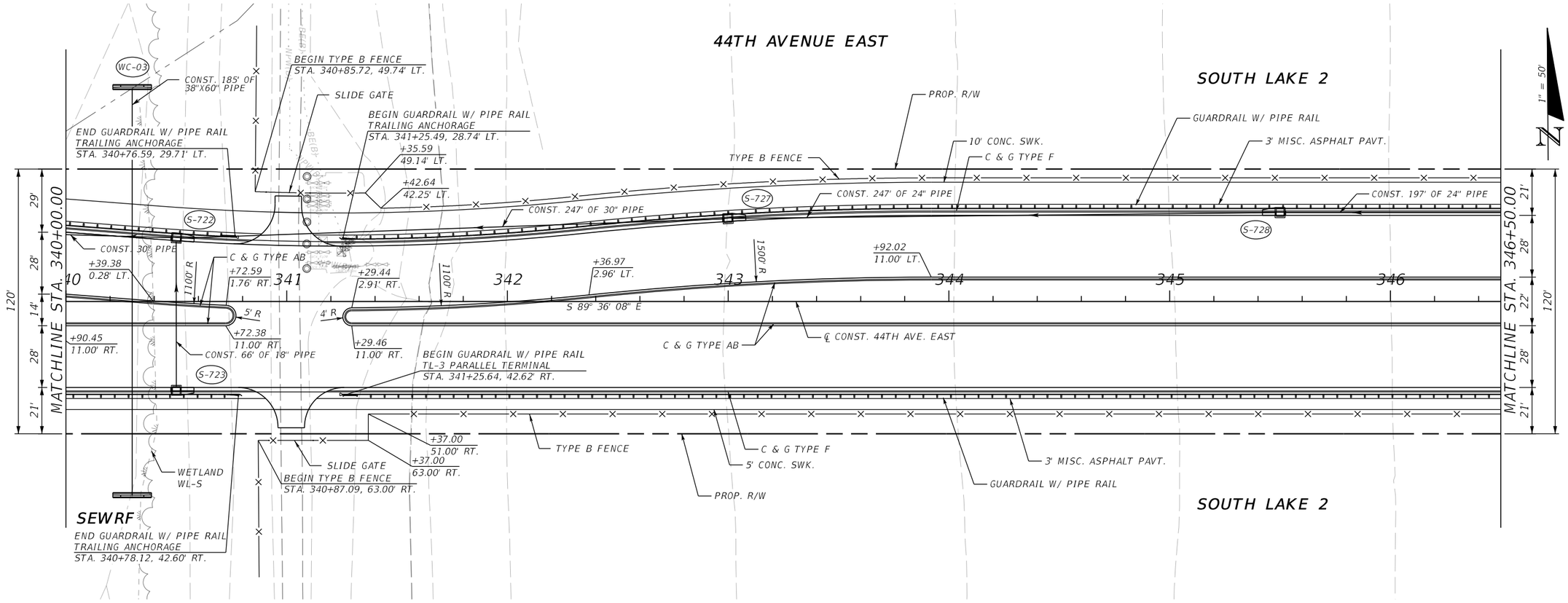
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

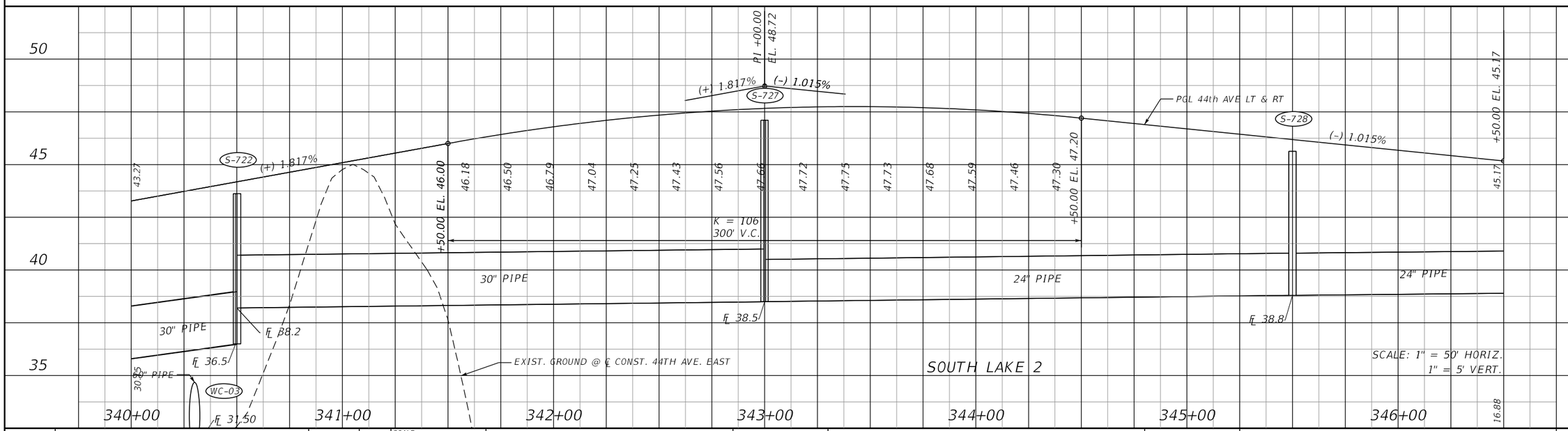
ROADWAY PROFILE (5)

SHEET NO.: 33

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	TME
CHECKED BY	TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

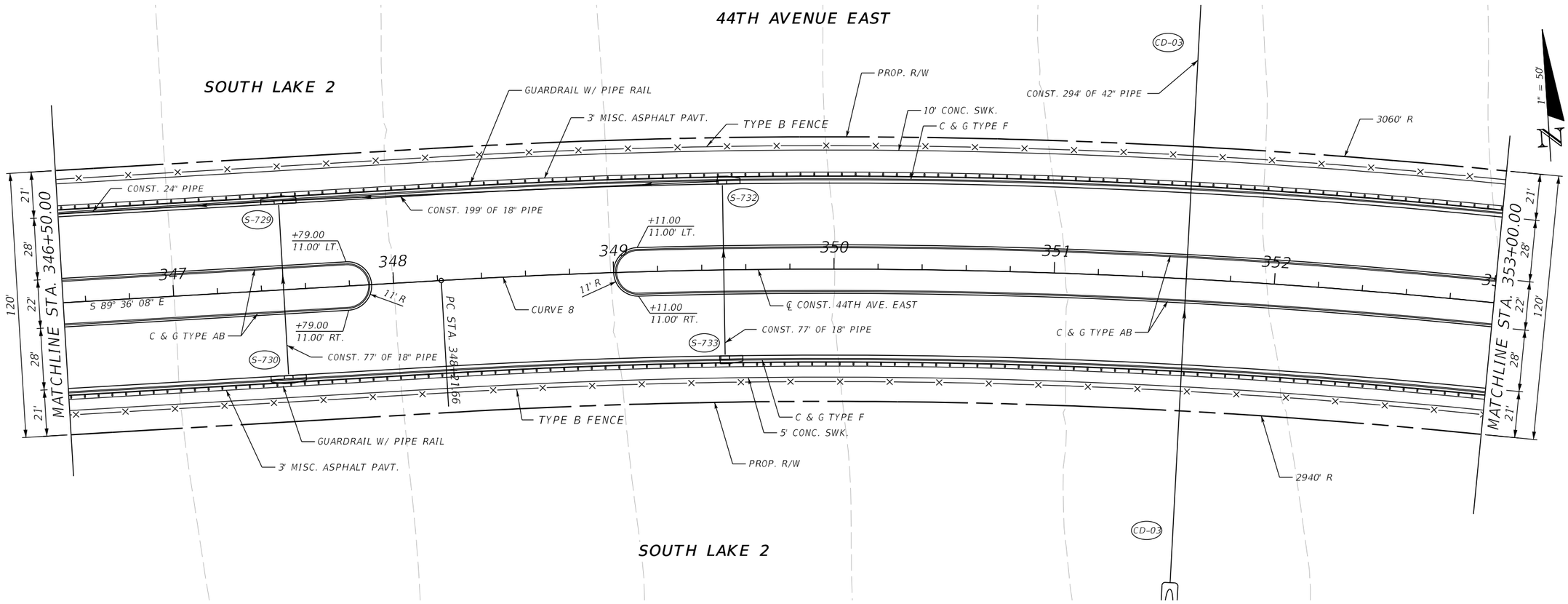
DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

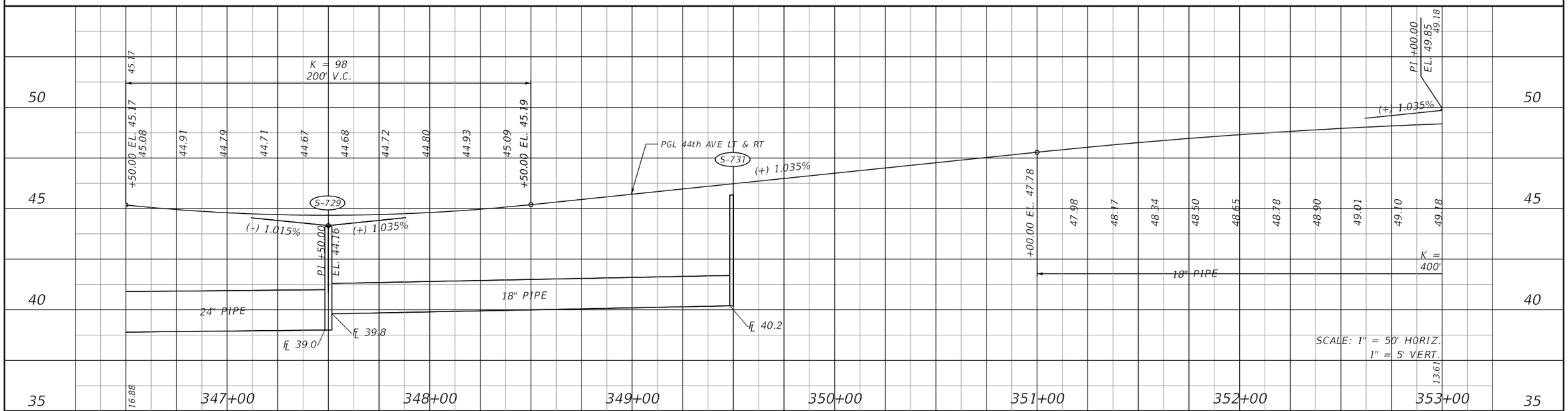
ROADWAY PLAN AND PROFILE (1)

SHEET NO. 34

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
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DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

ROADWAY PLAN AND PROFILE (2)

SHEET NO. 35

1:34:16 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD02.dgn

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(A) END C & G TYPE F, BEGIN VALLEY GUTTER
STA. 359+36.34, 39.00' LT.

(A) END TYPE B FENCE
STA. 359+40.00, 56.00' LT.

MATCHLINE SEE FIGURE 1

44TH AVENUE EAST

SOUTH LAKE 2

GUARDRAIL W/ PIPE RAIL
3' MISC. ASPHALT PAVT.
PROP. R/W
10' CONC. SWK.
C & G TYPE F
3060' R
TYPE B FENCE

+70.43
93.72' LT.
+80.19
100.24' LT.
+76.76
83.64' LT.
+29.30
75.21' LT.
END GUARDRAIL W/ PIPE RAIL
TL-3 PARALLEL TERMINAL
STA. 359+34.59, 42.60' LT.
38' R
12'
+99.00
101.20' LT.
+03.10
89.97' LT.
+25.03
63.00' LT.
1" = 50'

MATCHLINE STA. 353+00.00
21'
28'
22'
28'
21'
120'

S-803
CONST. 37' OF 18" PIPE
CONST. 297' OF 24" PIPE
S-804
℄ CONST. 44TH AVE. EAST
CONST. 37' OF 18" PIPE
S-802
CURVE 8
C & G TYPE AB
354
355
356
357
358
359

CONST. 22' OF 18" PIPE
+18.15
56.00' LT.
18' R
S-806A
S-806
A
B
CONST. 37' OF 18" PIPE
+45.99
11.00' LT.
S-807
CONST. 37' OF 18" PIPE
CONST. 396' OF 30" PIPE
S-805A
+45.99
11.00' RT.
S-805
CONST. 22' OF 18" PIPE

MATCHLINE STA. 359+50.00
21'
28'
22'
28'
21'
120'

TYPE B FENCE
2940' R
GUARDRAIL W/ PIPE RAIL
3' MISC. ASPHALT PAVT.
PROP. R/W
C & G TYPE F
5' CONC. SWK.

+35.57
119.11' RT.
+25.46
126.18' RT.

SOUTH LAKE 2

+20.17
150.21' LT.
+30.82
154.52' LT.
MATCHLINE

FIGURE 1

49.18
PI +00.00
EL. 49.85
(–) 0.300%
49.25
49.30
49.34
49.37
49.38
49.38
49.37
49.34
49.30
+00.00 EL. 49.25
300
V.C.
13.61

S-804
PGL 44th AVE LT & RT
℄ 43.5
24" PIPE

S-807
48.20
(–) 0.300%
(+) 0.300%
PI +00.00
EL. 48.05
30" PIPE
℄ 43.0
℄ 42.9
EXIST. GROUND @ ℄ CONST. 44TH AVE. EAST
39.00

50
45
40
35

353+00
354+00
355+00
356+00
357+00
358+00
359+00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

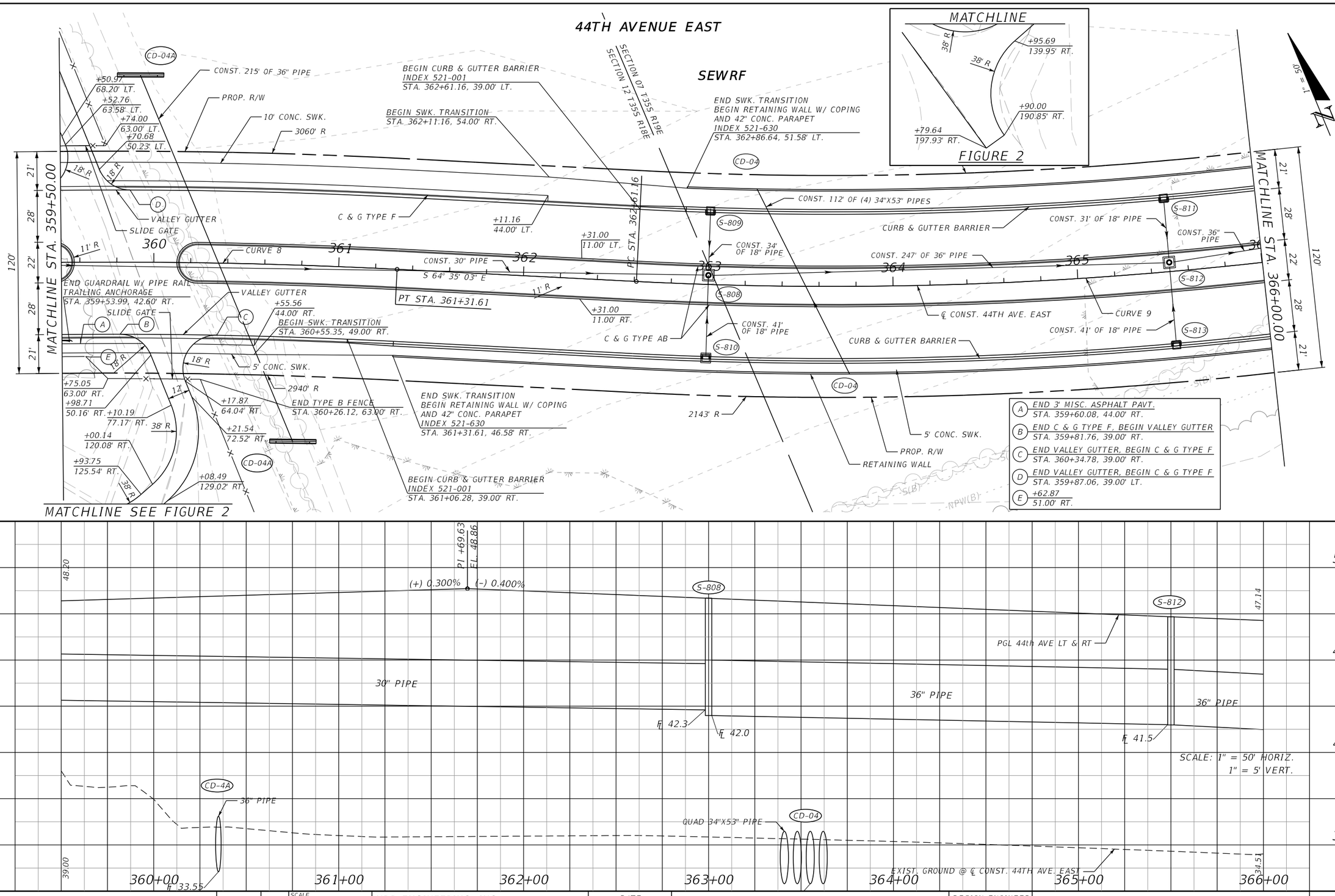
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (3)

SHEET NO.: 36

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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

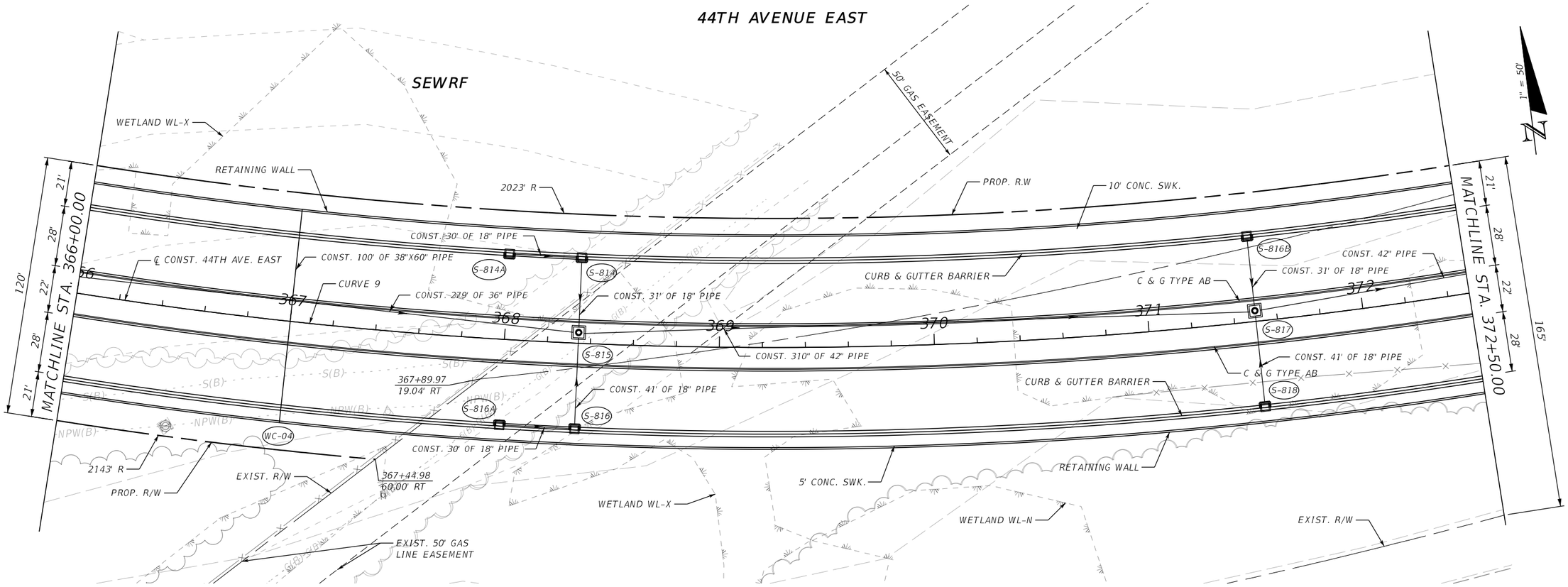
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY
PLAN AND PROFILE (4)

SHEET NO.: 37

1:34:24 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD02.dgn

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DATE: 02/2022
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DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

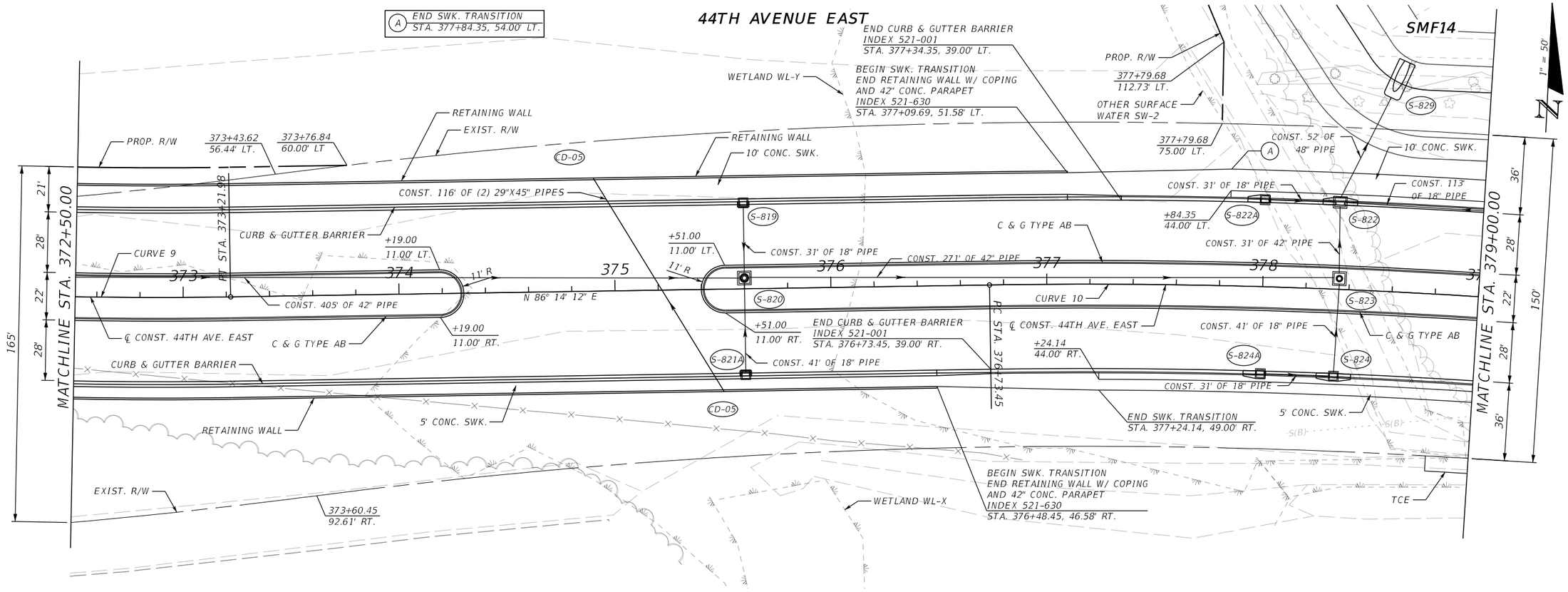
ROADWAY PLAN AND PROFILE (5)

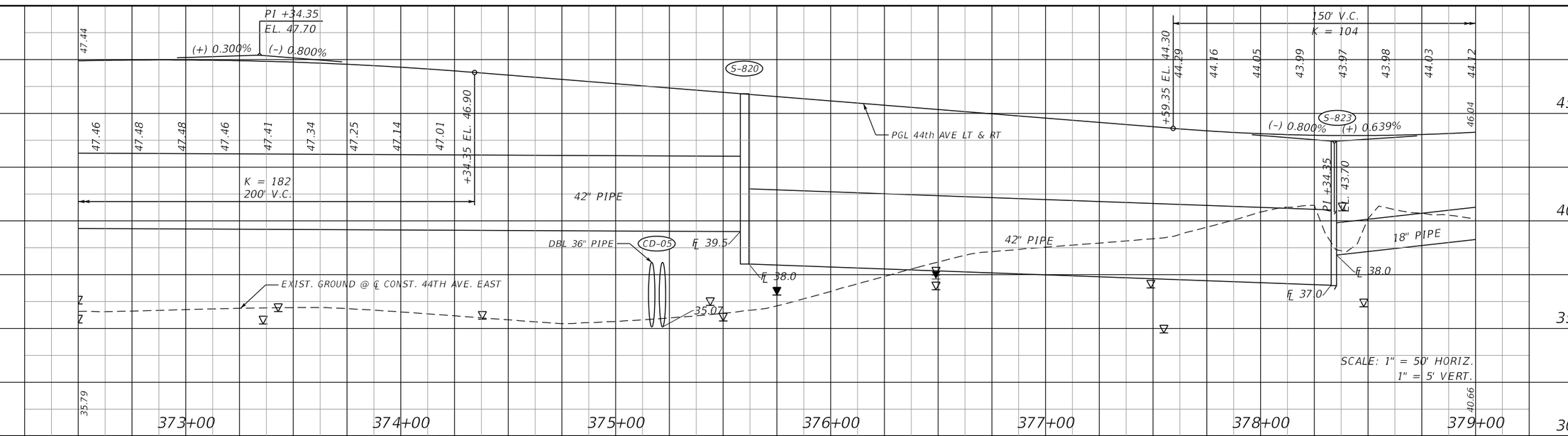
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44TH AVENUE EAST





No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

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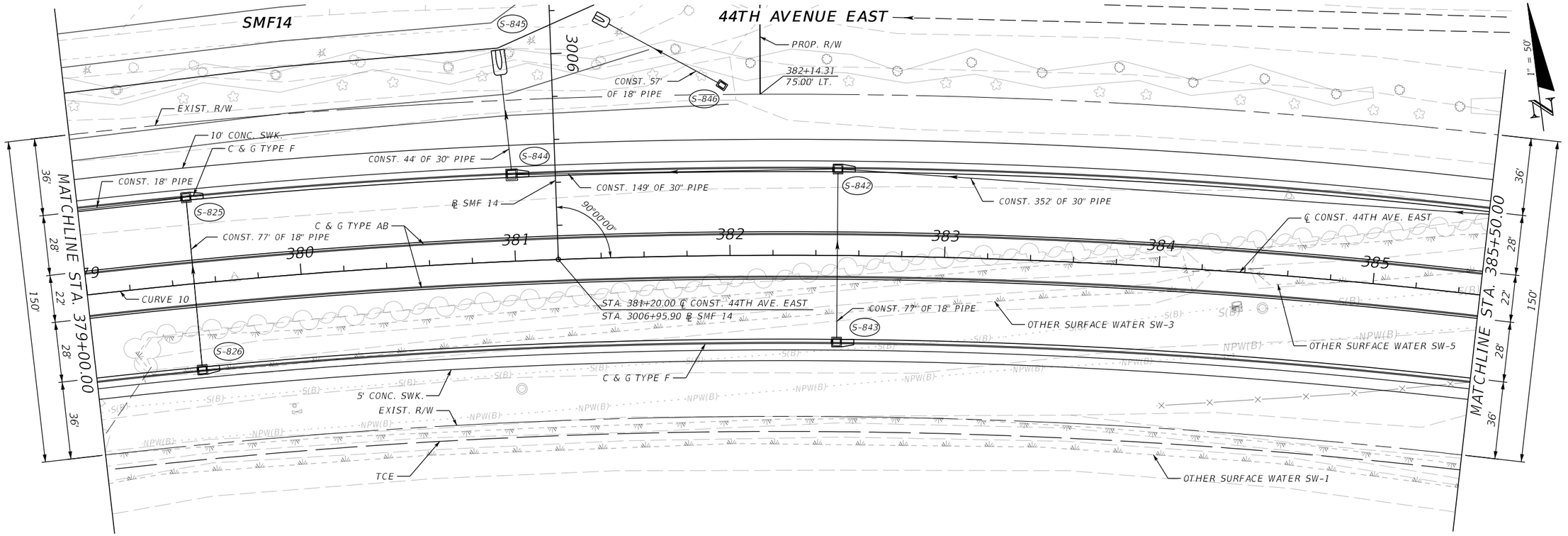
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

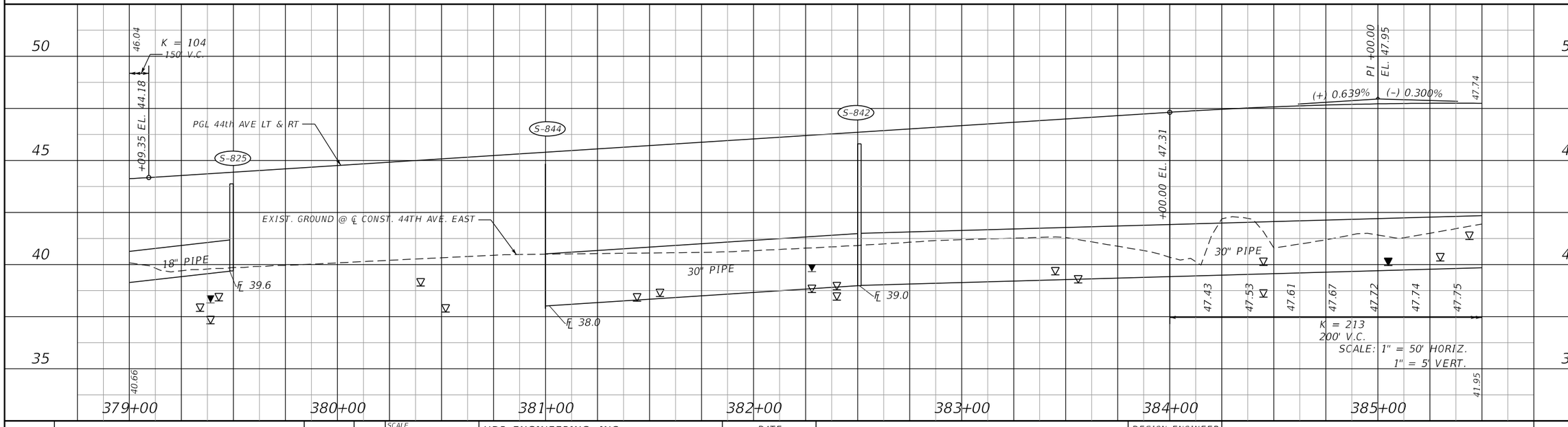
ROADWAY PLAN AND PROFILE (6)

SHEET NO.: 39

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SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

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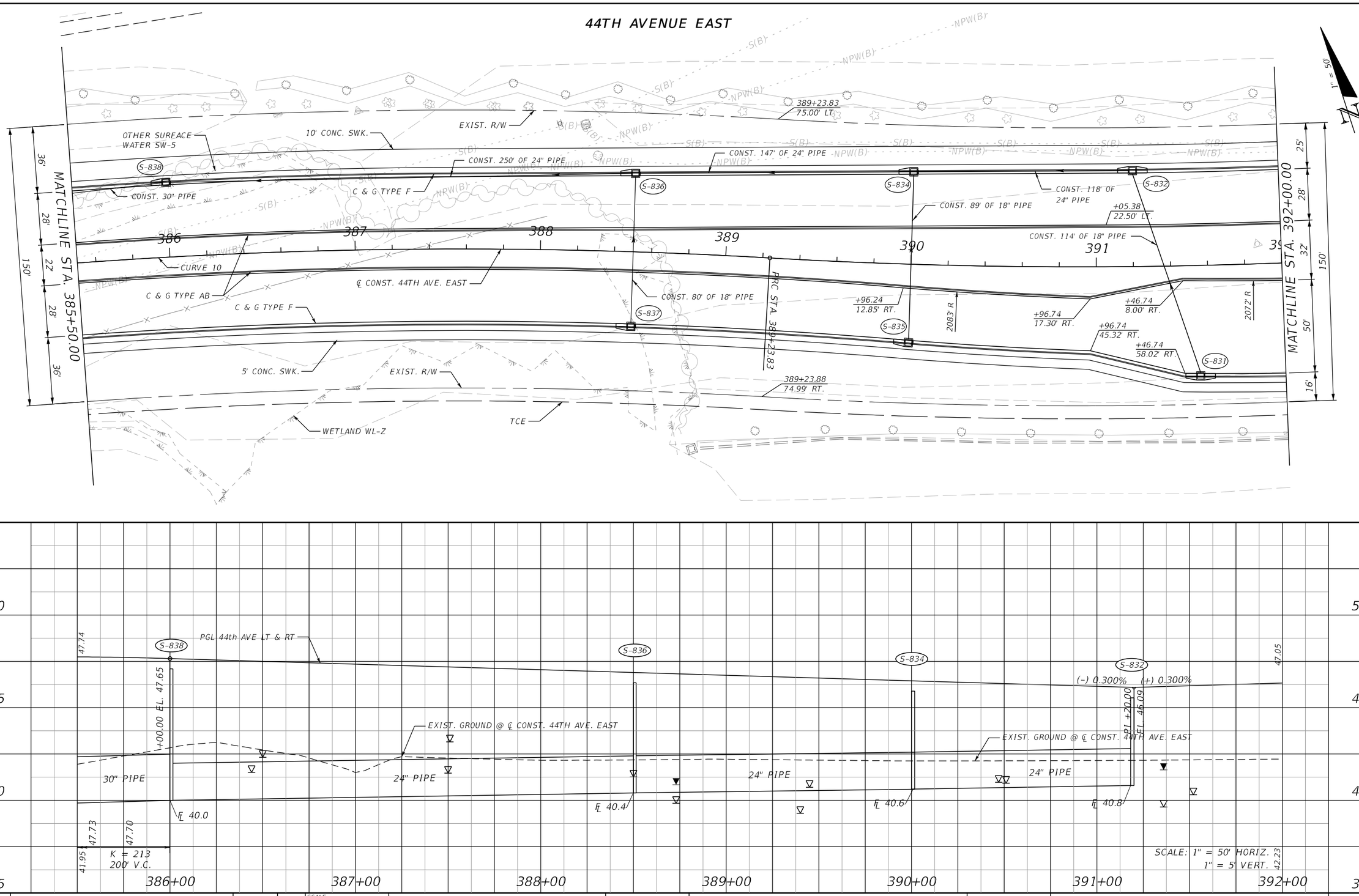
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (7)

SHEET NO.: 40

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DRAWN BY: TME
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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

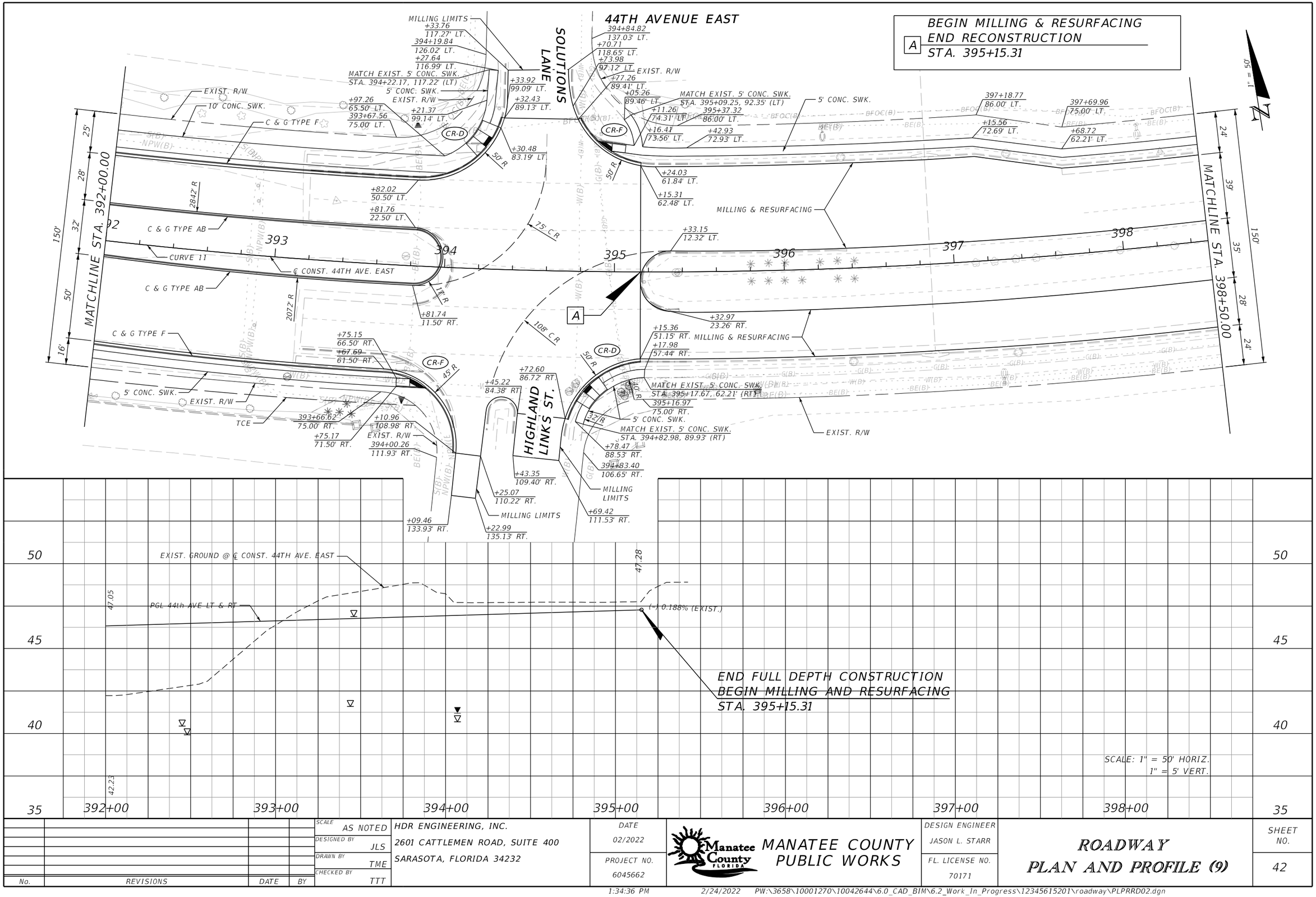
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (8)

SHEET NO.: 41

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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

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FL. LICENSE NO.: 70171

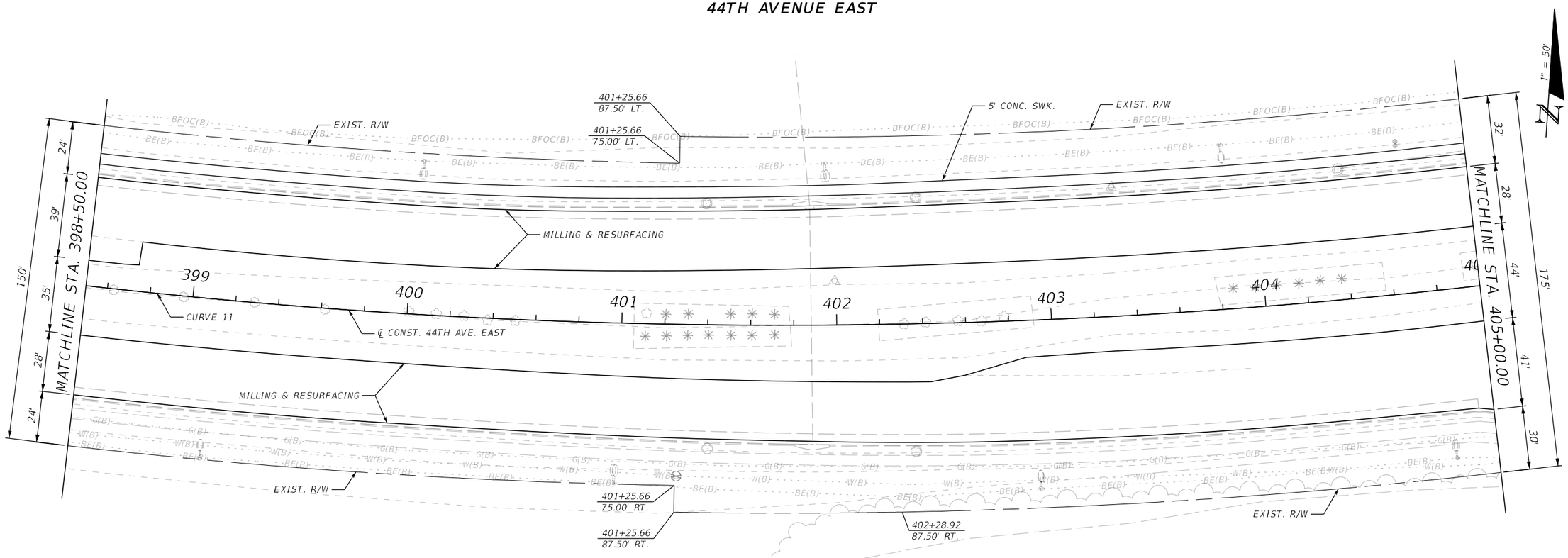
ROADWAY PLAN AND PROFILE (9)

SHEET NO.: 42

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44TH AVENUE EAST



NO PGL THIS SHEET

399+00 400+00 401+00 402+00 403+00 404+00 405+00

No.	REVISIONS	DATE	BY

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SARASOTA, FLORIDA 34232

DATE: 02/2022
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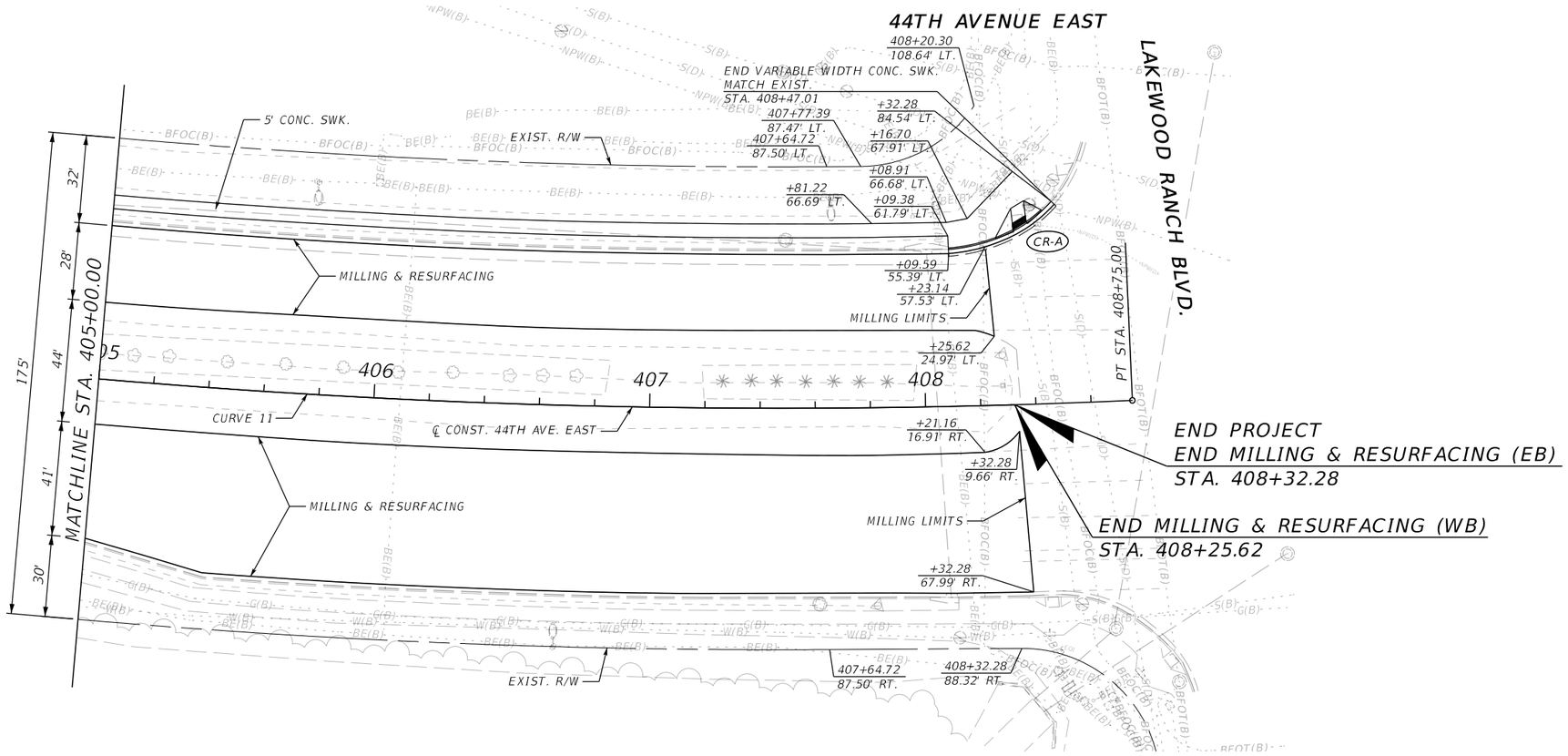
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (10)

SHEET NO.: 43

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55 50 45 40

405+00 406+00 407+00 408+00

NO PGL THIS SHEET

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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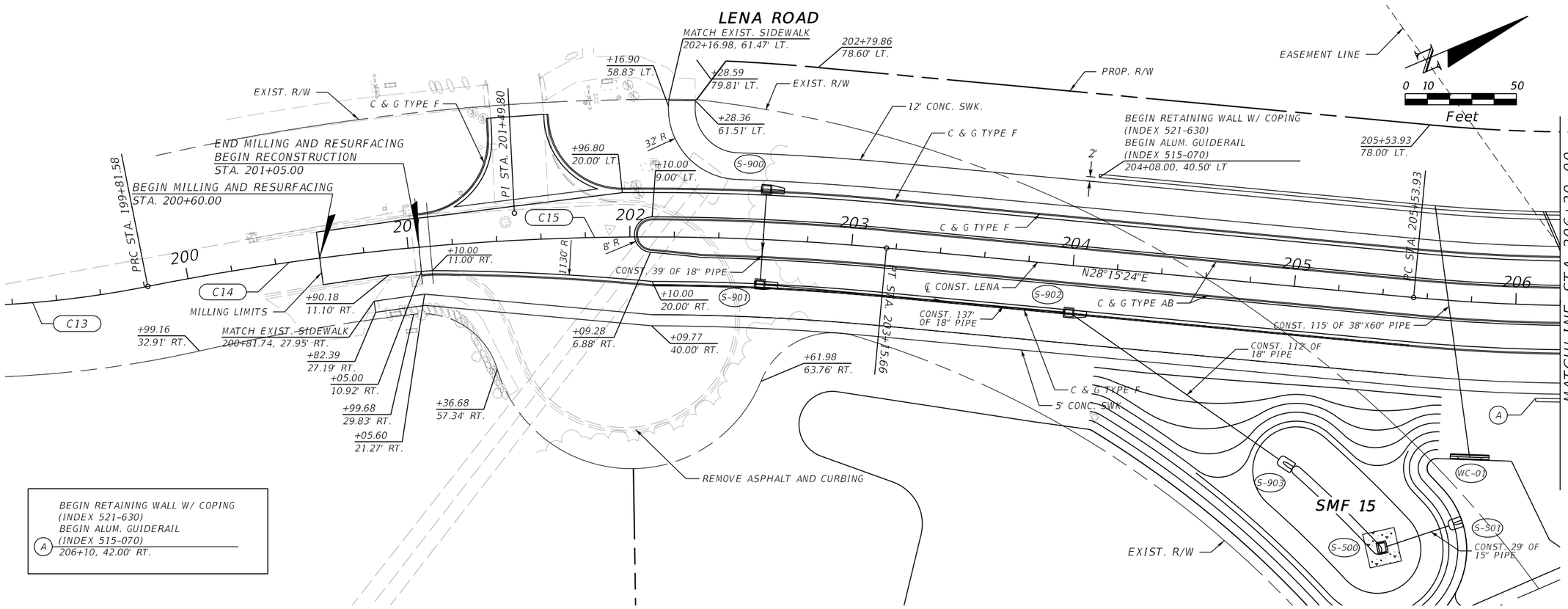
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (11)

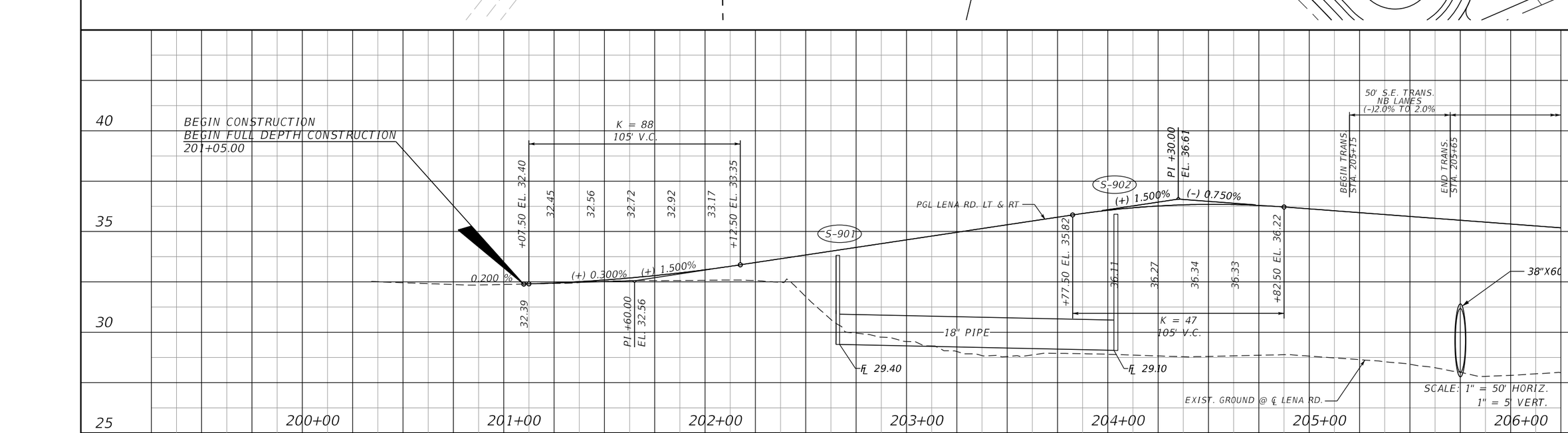
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LENA ROAD



A — BEGIN RETAINING WALL W/ COPING (INDEX 521-630) BEGIN ALUM. GUIDERAIL (INDEX 515-070) 206+10, 42.00' RT.



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PLAN AND PROFILE (12)

SHEET NO.: 45

1:35:05 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD03.dgn

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LENA ROAD

MANATEE COUNTY PARCEL

SEWRF
FPL EASEMENT

N

0 10 50
Feet

END RETAINING WALL W/ COPING
(INDEX 521-630)
END ALUM. GUIDERAIL
(INDEX 515-070)
(A) 207+24.00, 40.50' LT.

END RETAINING WALL W/ COPING
(INDEX 521-630)
END ALUM. GUIDERAIL
(INDEX 515-070)
212+30.00, 45.64' LT.

END RETAINING WALL W/ COPING
(INDEX 521-630)
END ALUM. GUIDERAIL
(INDEX 515-070)
207+30.00, 42.00' RT.

PROPERTY LINE

741' R

861' R

PROP. R/W 209+64.24 102.88' LT.

MATCHLINE STA. 206+20.00

MATCHLINE STA. 213+00.00

58'

11' 18' 11'

50'

19' 18' 22'

CD-06

WC-02

CONST. 94' OF ~~DBL~~ 5'X7' CONC. BOX CULVERT

CONST. 85' OF 38"X60" PIPE

CONST. 26' OF 18" PIPE

CONST. 133' OF 24" PIPE

BEGIN RETAINING WALL W/ COPING
(INDEX 521-630)
BEGIN ALUM. GUIDERAIL
(INDEX 515-070)
209+10.00, 40.50' LT

12' CONC. SWK.

CONST. 94' OF 24" PIPE

CONST. 39' OF 18" PIPE

℄ CONST. LENA

CONST. 39' OF 18" PIPE

CONST. 66' OF 24" PIPE

CONST. 130' OF 24" PIPE

C & G TYPE F

+89.84 40.50' LT.

+90.18 20.00' LT.

NO°26'52"W

CONST. 39' OF 18" PIPE

CONST. 39' OF 18" PIPE

C & G TYPE F

5' CONC. SWK.

2' CONST. 117' OF 36" PIPE

CONST. 141' OF 30" PIPE

C & G TYPE AB

CONST. 57' OF 18" PIPE

+99.91 20.00' RT.

+49.91 31.00' RT.

2'

PI STA. 207+83.49

PT STA. 209+64.24

207 208 209 210 211 212

S-754 S-755 S-758 S-759 S-760 S-760A S-761 S-761A S-762 S-763 S-764 S-765

C16

CD-06

A

FULL S.E.
NB LANES 2.0%

50' S.E. TRANS.
NB LANES
2.0% TO (-)2.0%

BEGIN TRANS.
STA. 207+50

END TRANS.
STA. 208+00

S-754
(-) 0.750%
(-) 0.314%
PI +00.00
EL. 34.58

S-758

PGL LENA RD. LT & RT

S-760

S-760A
(-) 0.314%
(+) 0.300%
PI +90.00
EL. 33.67

S-762

S-764

" PIPE

24" PIPE

24" PIPE

24" PIPE

24" PIPE

30" PIPE

℄ 29.80

℄ 29.60

℄ 29.30

℄ 28.90

℄ 28.70

℄ 28.50

℄ 28.30

EXIST. GROUND @ ℄ LENA RD.

DBL 5'X7' CBC

40 35 30 25

207+00 208+00 209+00 210+00 211+00 212+00 213+00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

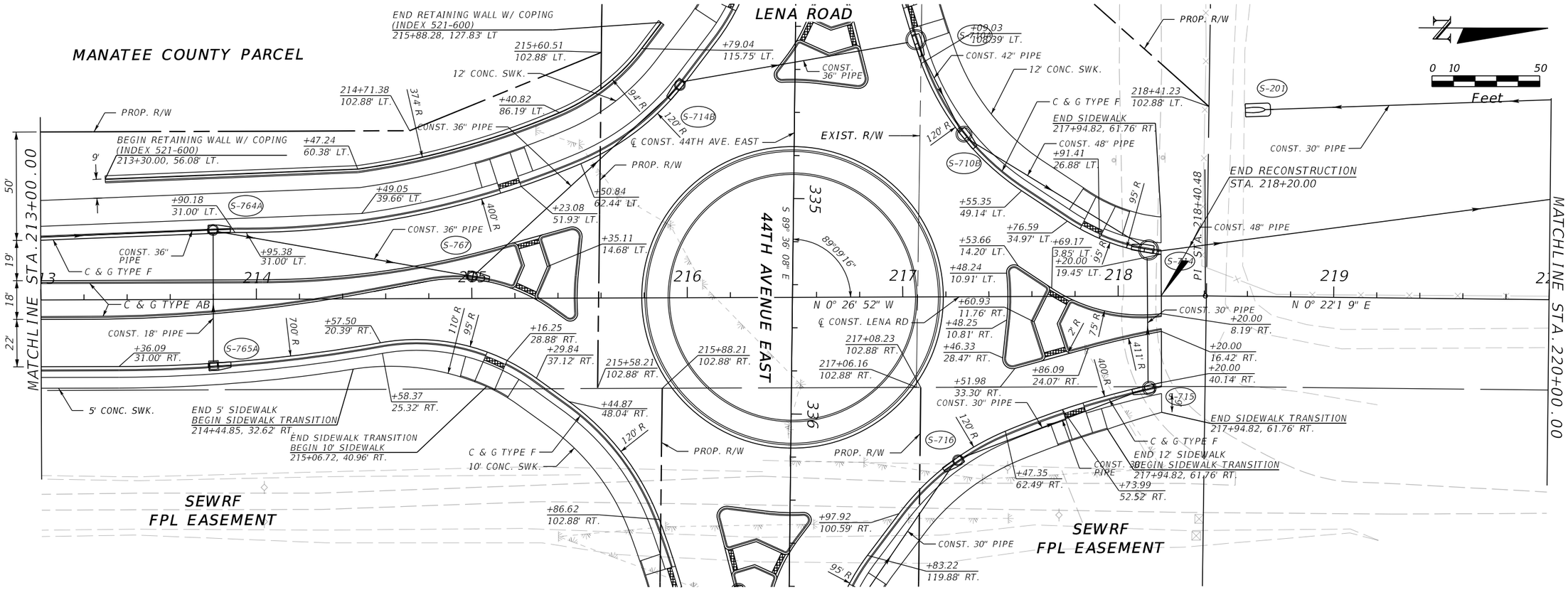
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

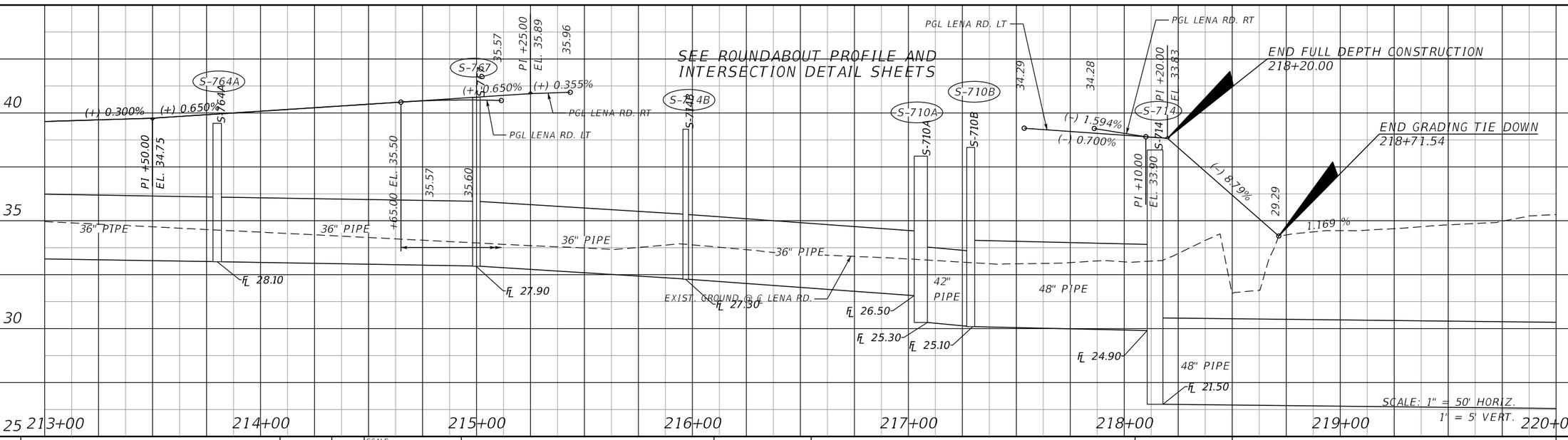
ROADWAY PLAN AND PROFILE (13)

SHEET NO.: 46

1:35:25 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD04.dgn

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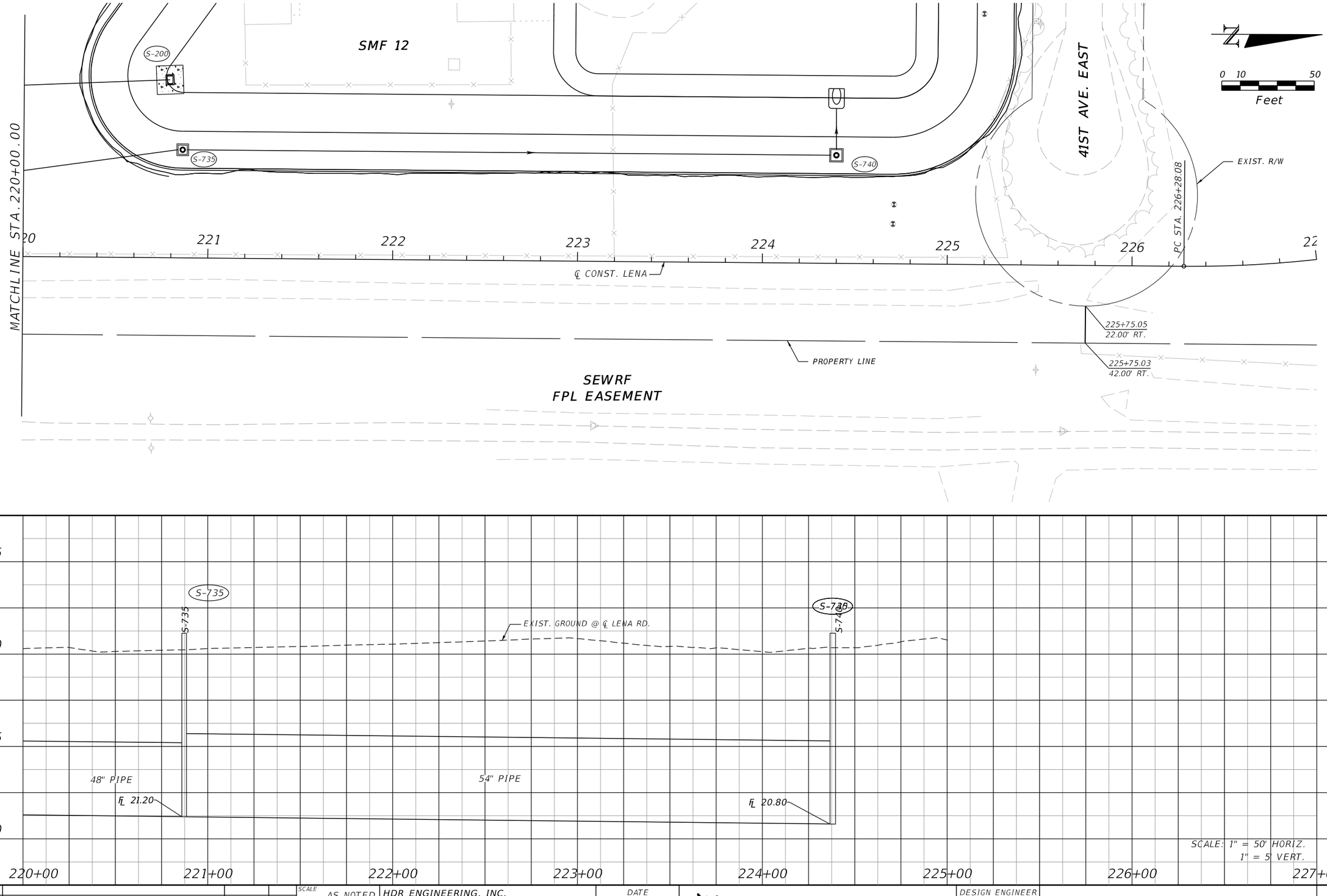




No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: JLS DRAWN BY: TME CHECKED BY: TTT	HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232	DATE: 02/2022 PROJECT NO.: 6045662	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: JASON L. STARR FL. LICENSE NO.: 70171	ROADWAY PLAN AND PROFILE (14)	SHEET NO.: 47

1:35:45 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD05.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

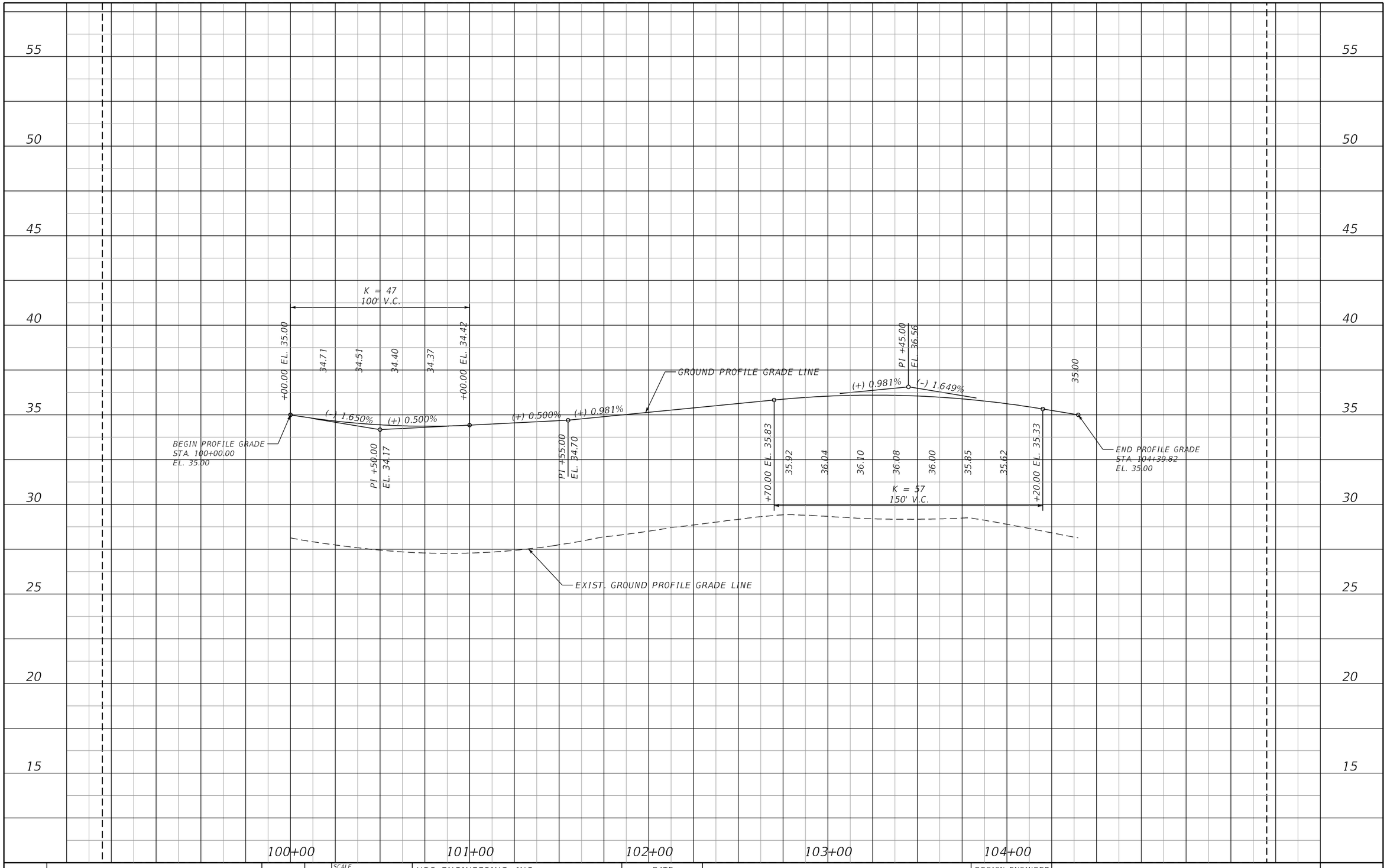
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY
PLAN AND PROFILE (15)

SHEET NO.: 48

1:36:06 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLPRRD06.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY PROFILE (ROUNDABOUT)

SHEET NO.: 49

1:36:21 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PROFRD04.DGN.dgn

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CALLOUT NO.	STATION	OFFSET	ELEVATION
57	217+70.32	39.15' LT	33.51'
58	218+20.00	19.45' LT	33.25'
60	217+53.66	14.20' LT	34.29'
61	218+20.00	8.20' RT	33.83'
62	217+51.98	33.30' RT	34.83'
63	217+86.09	24.07' RT	34.28'
64	218+19.99	16.42' RT	33.83'
65	217+67.94	54.60' RT	34.41'
66	218+10.00	42.34' RT	33.42'
67	218+20.00	40.14' RT	33.35'

BASED OFF OF ℄ CONST. LENA RD

CURVE DATA RAB_ICD
PI STA. = Undefined
Δ = 360° 00' 00" (LT)
D = 81° 51' 04"
T = Undefined
L = 219.91
R = 70.00
PC STA. = 100+00.00
PT STA. = 104+39.82

CALLOUT NO.	STATION	OFFSET	ELEVATION
23	336+29.87	64.59' LT	35.69'
24	336+36.89	57.76' LT	35.94'
25	336+45.72	50.56' LT	36.17'
26	336+50.42	47.08' LT	36.28'
27	337+00.00	20.06' LT	37.21'
28	337+23.00	17.56' LT	37.73'
29	337+41.00	19.49' LT	38.08'
30	337+90.00	33.30' LT	38.86'
31	336+51.26	9.17' LT	36.85'
32	336+48.86	33.76' RT	36.89'
33	336+83.02	24.71' RT	37.52'
34	336+17.21	79.78' RT	36.81'
35	336+95.88	45.70' RT	38.07'
36	338+30.00	37.00' RT	39.67'
37	338+45.00	39.00' RT	39.90'

BASED OFF OF ℄ CONST. 44TH AVE. EAST

PROP. R/W
EXIST. R/W
44TH AVENUE EAST
S89°36'8.04"E
℄ CONST. LENA RD
℄ CONST. 44TH AVE. EAST
℄ CONST. RAB
N0°26'51.81"W
LENA ROAD
-2.00%
-0.70%
-0.71%
-2.60%
-1.20%
-1.06%
-1.75%
-0.92%
-1.80%
-2.40%
332
333
334
335
336
337
338
339
+30.00
11.00' (RT)

B STA. 334+75.87 ℄ CONST. 44TH AVE. EAST =
STA. 101+09.47 ℄ RAB

STA. 335+45.87 ℄ CONST. 44TH AVE EAST =
STA. 216+48.84 ℄ CONST. LENA RD

A STA. 215+78.84 ℄ CONST. LENA RD. =
STA. 102+20.46 ℄ RAB

C STA. 217+18.84 ℄ CONST. LENA RD. =
STA. 100+00.55 ℄ RAB

D STA. 336+15.87 ℄ CONST. 44TH AVE. EAST =
STA. 103+29.38 ℄ RAB

CALLOUT NO.	STATION	OFFSET	ELEVATION
1	333+05.00	39.00' LT	32.64'
2	333+29.97	37.71' LT	32.50'
3	333+44.95	36.94' LT	32.47'
4	333+59.83	38.15' LT	32.49'
5	333+74.59	40.83' LT	32.53'
6	333+89.24	44.05' LT	32.61'
7	334+03.75	47.83' LT	32.72'
8	334+18.12	52.15' LT	32.87'
9	334+32.31	57.00' LT	33.04'
10	334+46.19	62.67' LT	33.19'
11	334+60.14	70.53' LT	33.34'
12	334+08.72	24.71' LT	32.99'
13	334+40.47	8.98' RT	33.66'
14	333+05.00	32.86' RT	32.77'
15	333+22.60	27.69' RT	32.72'
16	333+73.51	17.58' RT	32.95'
17	334+06.91	24.88' RT	33.50'
18	334+22.24	33.01' RT	33.87'
19	334+32.47	40.39' RT	34.00'
20	334+44.52	49.32' RT	34.15'
21	334+56.16	58.77' RT	34.35'
22	334+66.55	69.58' RT	34.56'
38	334+42.88	33.76' LT	33.22'

BASED OFF OF ℄ CONST. 44TH AVE. EAST

CALLOUT NO.	STATION	OFFSET	ELEVATION
40	214+00.00	31.03' LT	34.64'
41	214+62.09	36.60' LT	35.04'
42	214+69.33	37.89' LT	35.08'
43	214+84.01	40.94' LT	35.13'
44	214+98.57	44.54' LT	35.19'
45	215+12.99	48.68' LT	35.20'
46	215+27.24	53.36' LT	35.17'
47	215+41.31	58.57' LT	35.09'
48	215+55.14	64.36' LT	34.96'
49	215+68.29	71.56' LT	34.78'
50	215+11.50	23.60' LT	35.57'
51	215+40.80	31.63' LT	35.40'
52	215+25.00	1.93' LT	35.89'
53	215+43.44	9.91' RT	35.96'
54	214+00.00	28.08' RT	34.61'
55	215+24.01	33.20' RT	36.50'
56	215+44.87	48.04' RT	36.61'

BASED OFF OF ℄ CONST. LENA RD

CALLOUT NO.	STATION	OFFSET	ELEVATION
70	100+08.20	30.00' RT	34.39'
71	101+01.58	30.00' RT	33.46'
72	101+15.43	31.18' RT	33.66'
73	101+98.59	34.20' RT	35.37'
74	102+05.14	30.66' RT	35.46'
75	102+27.28	31.55' RT	35.92'
76	103+06.95	34.20' RT	36.82'
77	103+14.75	30.47' RT	36.83'
78	103+21.73	30.00' RT	36.83'
79	103+28.73	30.00' RT	36.81'
80	103+33.68	30.00' RT	36.77'
81	104+18.25	34.20' RT	34.87'
82	104+20.48	31.57' RT	34.85'
83	104+32.79	30.00' RT	34.65'

BASED OFF OF ℄ CONST. RAB

0 10 50
Feet

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

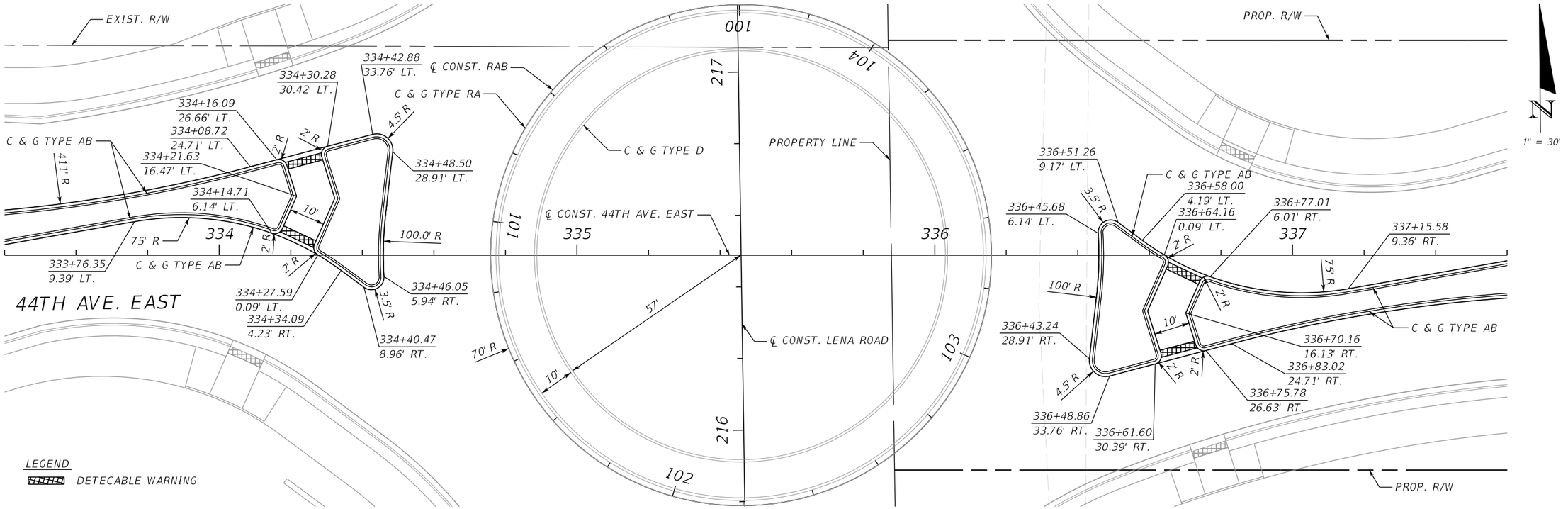
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

INTERSECTION DETAIL ROUNDABOUT

SHEET NO.: 50

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No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

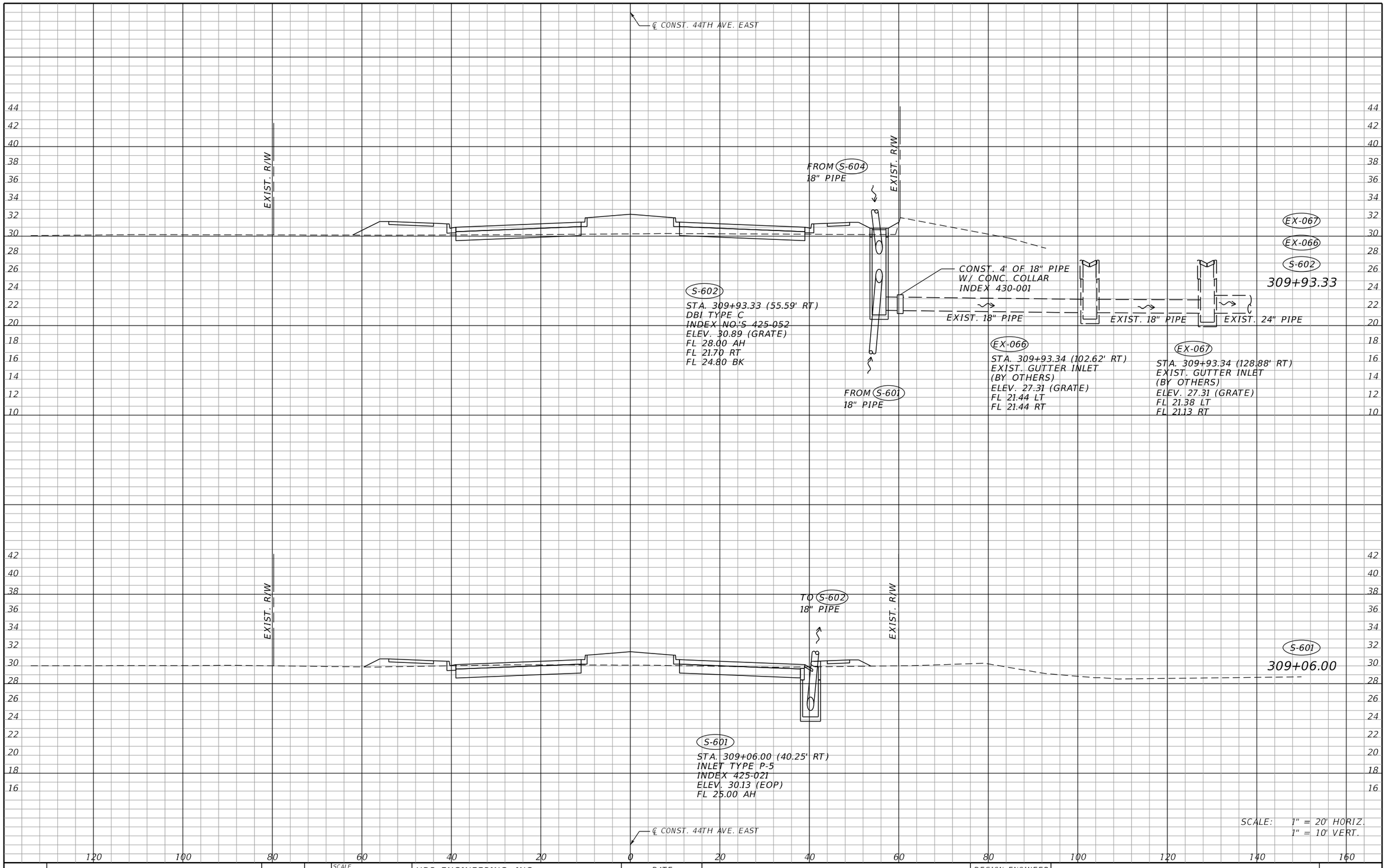
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SPECIAL DETAIL
SPLITTER ISLAND DETAIL

SHEET NO.: 51

1:38:20 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD05.dgn

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	SHE
DRAWN BY	AMS
CHECKED BY	SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

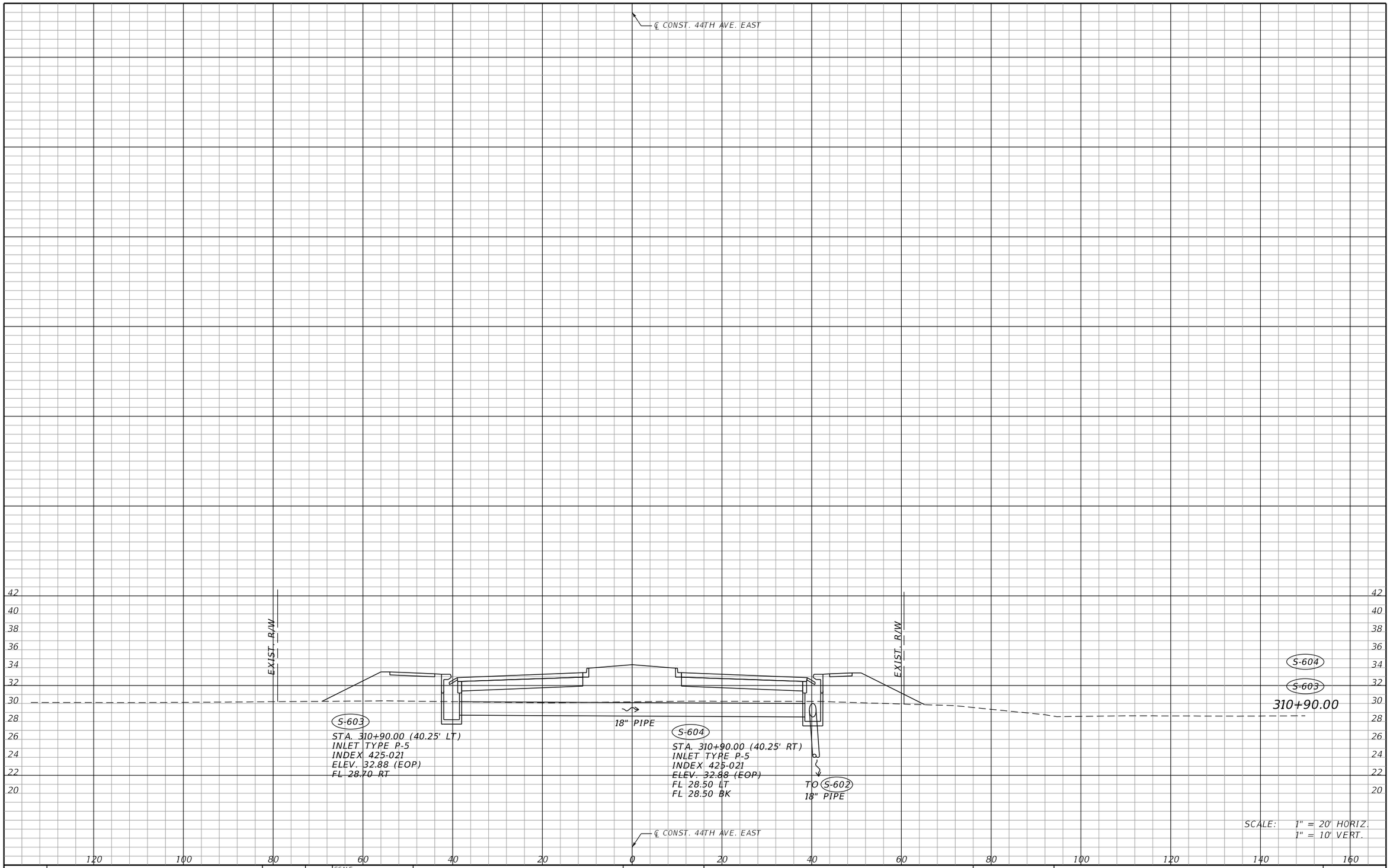
DESIGN ENGINEER SCOTT H. ENNIS
FL. LICENSE NO. 77068

DRAINAGE STRUCTURES (1)

SHEET NO. 52

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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	SHE
DRAWN BY	AMS
CHECKED BY	SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022

PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER SCOTT H. ENNIS

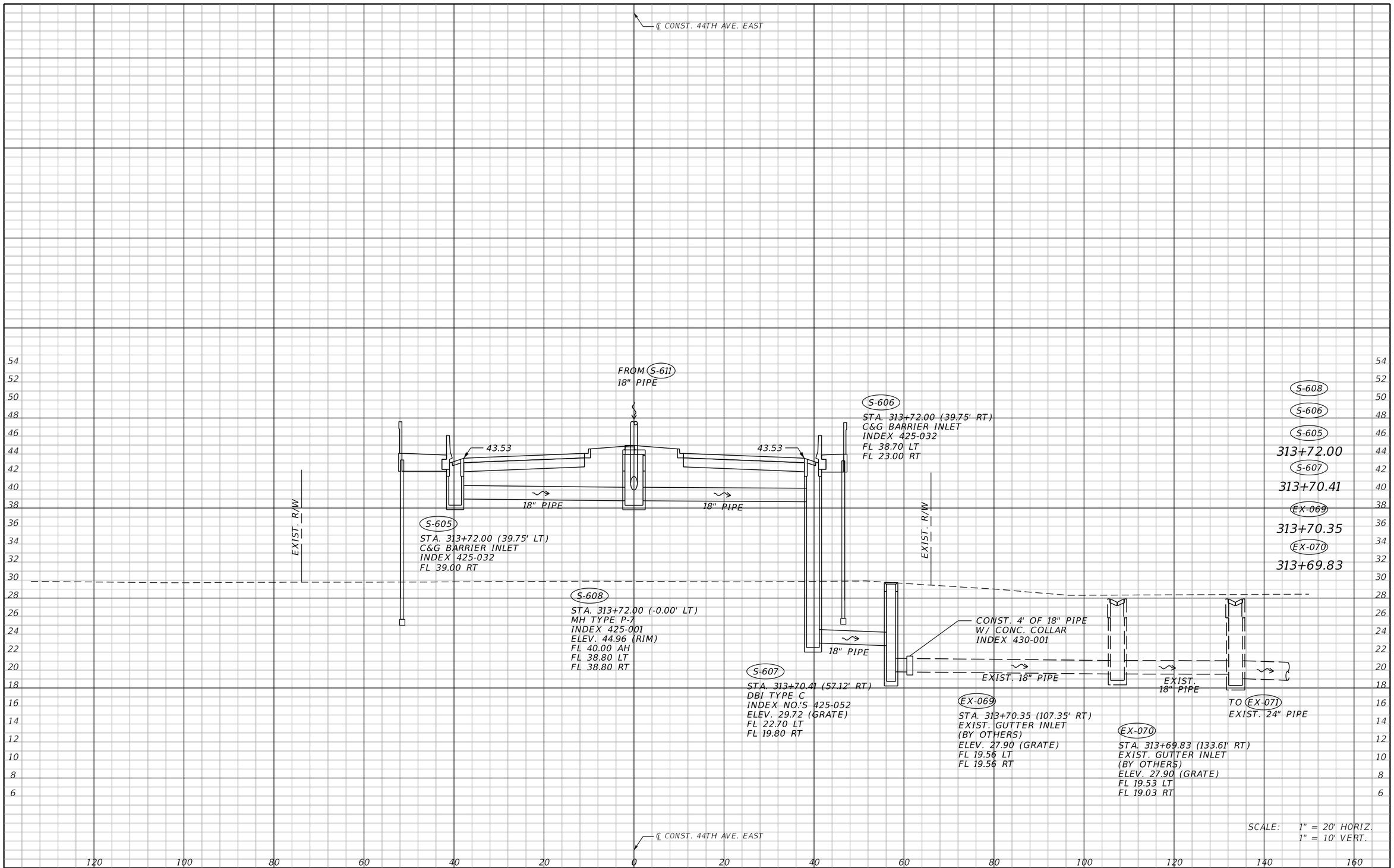
FL. LICENSE NO. 77068

DRAINAGE STRUCTURES (2)

SHEET NO. 53

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

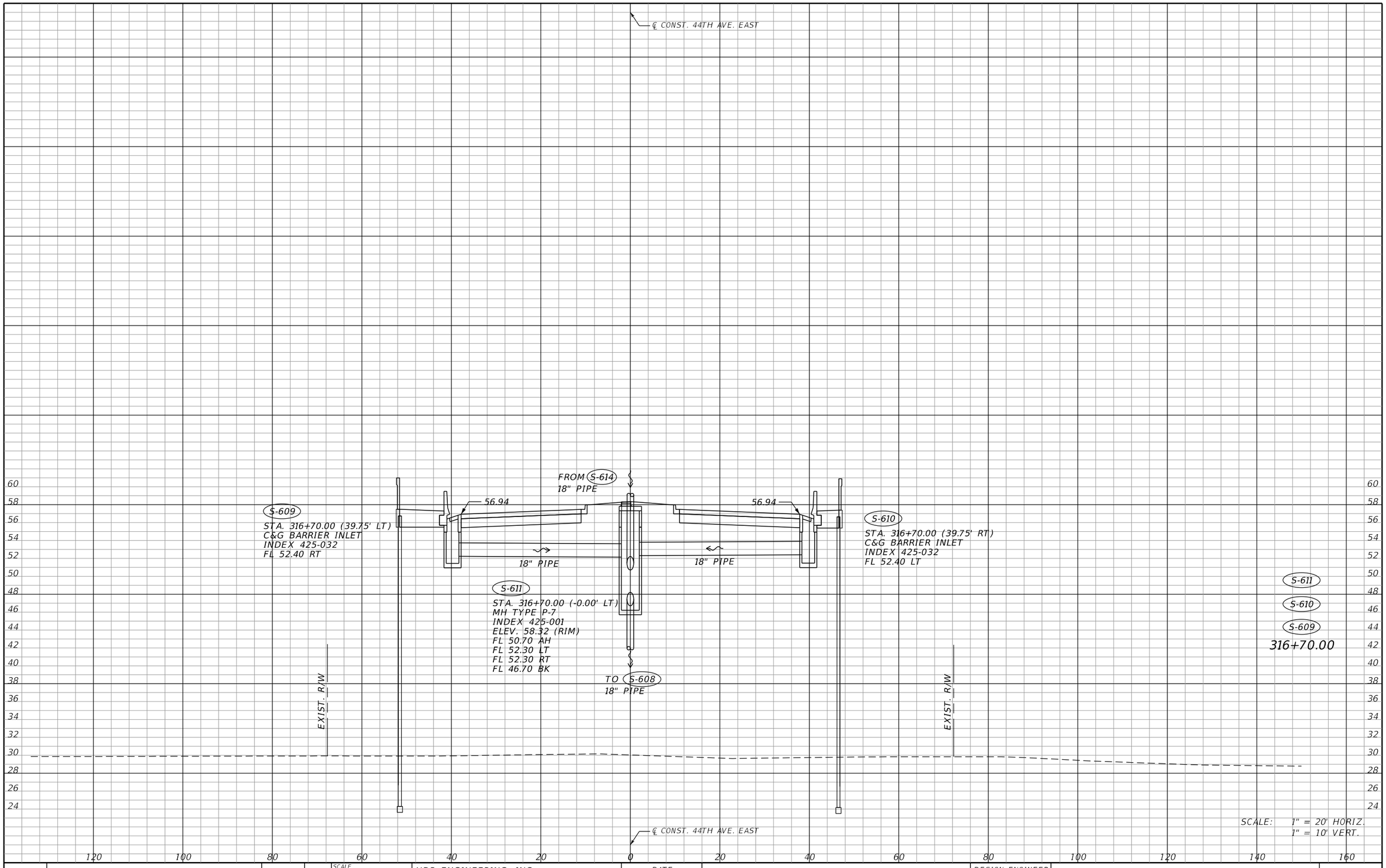
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (3)

SHEET NO.: 54

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	SHE
DRAWN BY	AMS
CHECKED BY	SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

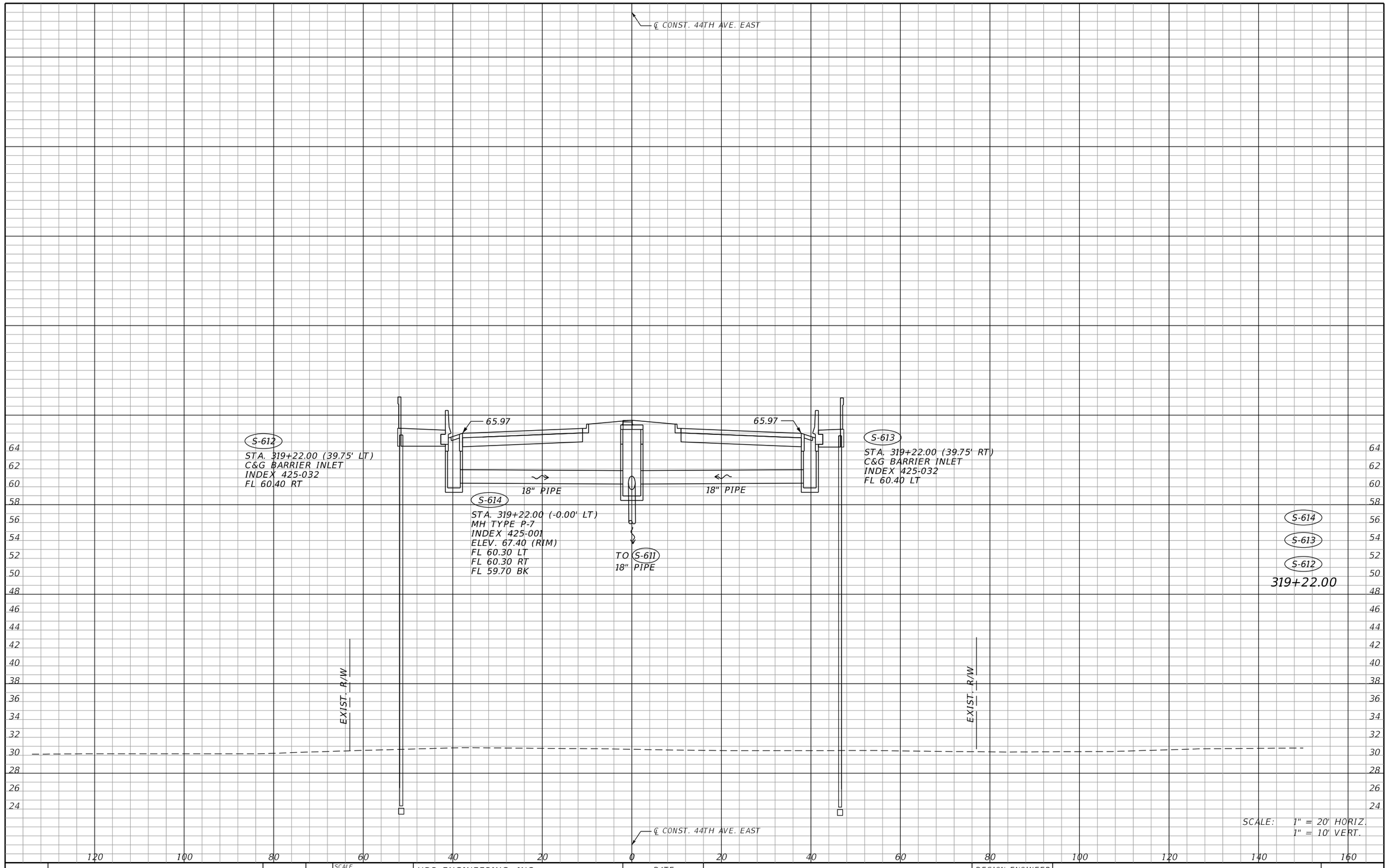
DESIGN ENGINEER
SCOTT H. ENNIS
FL. LICENSE NO.
77068

DRAINAGE STRUCTURES (4)

SHEET NO. 55

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

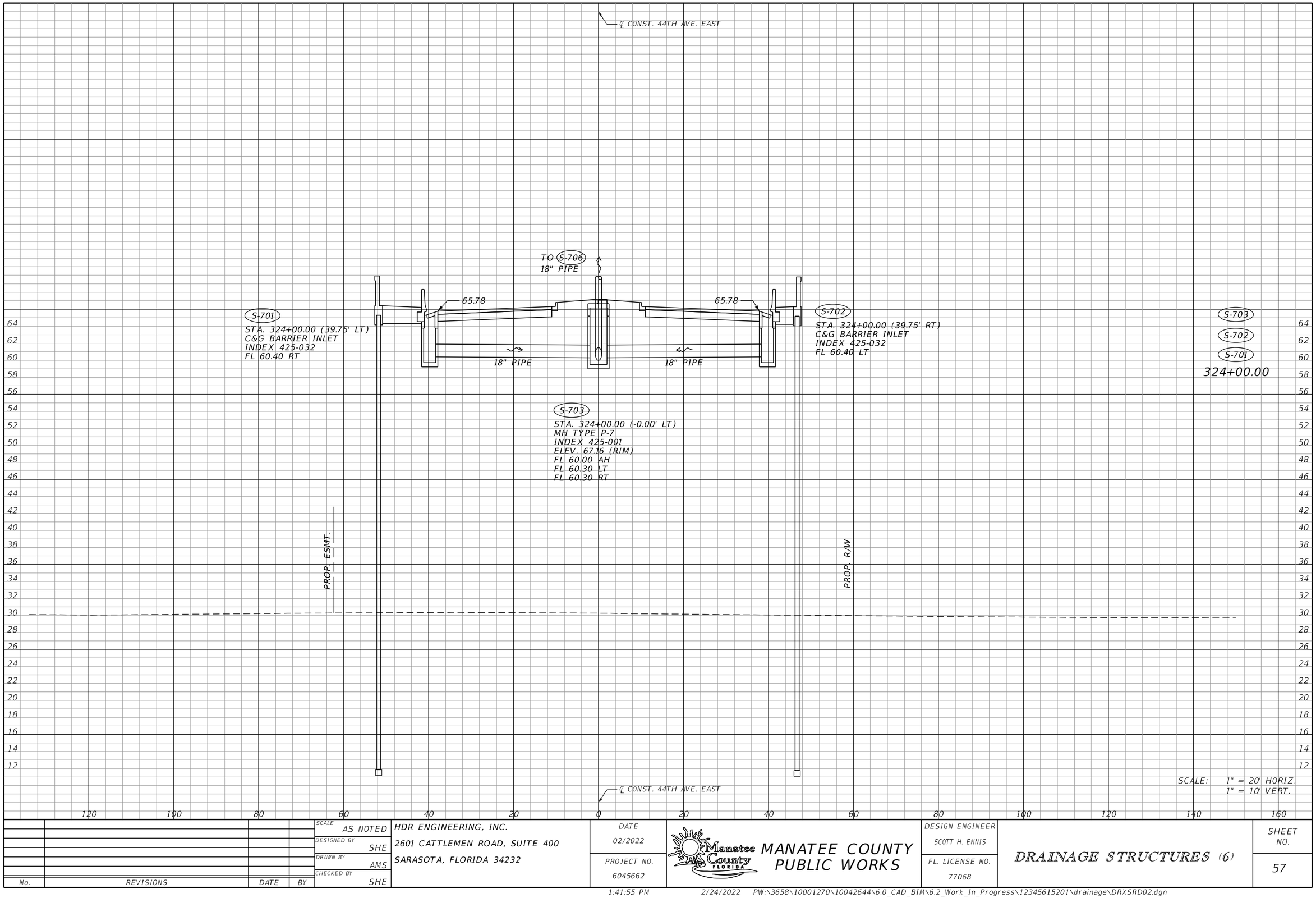
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (5)

SHEET NO.: 56

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (6)

SHEET NO.: 57

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℄ CONST. 44TH AVE. EAST

TO S-709
18" PIPE

S-704
STA. 327+00.00 (39.75' LT)
C&G BARRIER INLET
INDEX 425-032
FL 49.90 RT

54.42

18" PIPE

S-706
STA. 327+00.00 (-0.00' LT)
MH TYPE P-7
INDEX 425-001
ELEV. 55.80 (RIM)
FL 49.00 AH
FL 49.80 LT
FL 49.80 RT
FL 49.00 BK

FROM S-703
18" PIPE

54.42

18" PIPE

S-705
STA. 327+00.00 (39.75' RT)
C&G BARRIER INLET
INDEX 425-032
FL 49.90 LT

WETLAND

PROP. ESMT.

EXIST. R/W

PROP. R/W

S-706
S-705
S-704
327+00.00

62 60 58 56 54 52 50 48 46 44 42 40 38 36 34 32 30 28 26 24 22 20

120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

℄ CONST. 44TH AVE. EAST

SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY SHE
DRAWN BY AMS
CHECKED BY SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

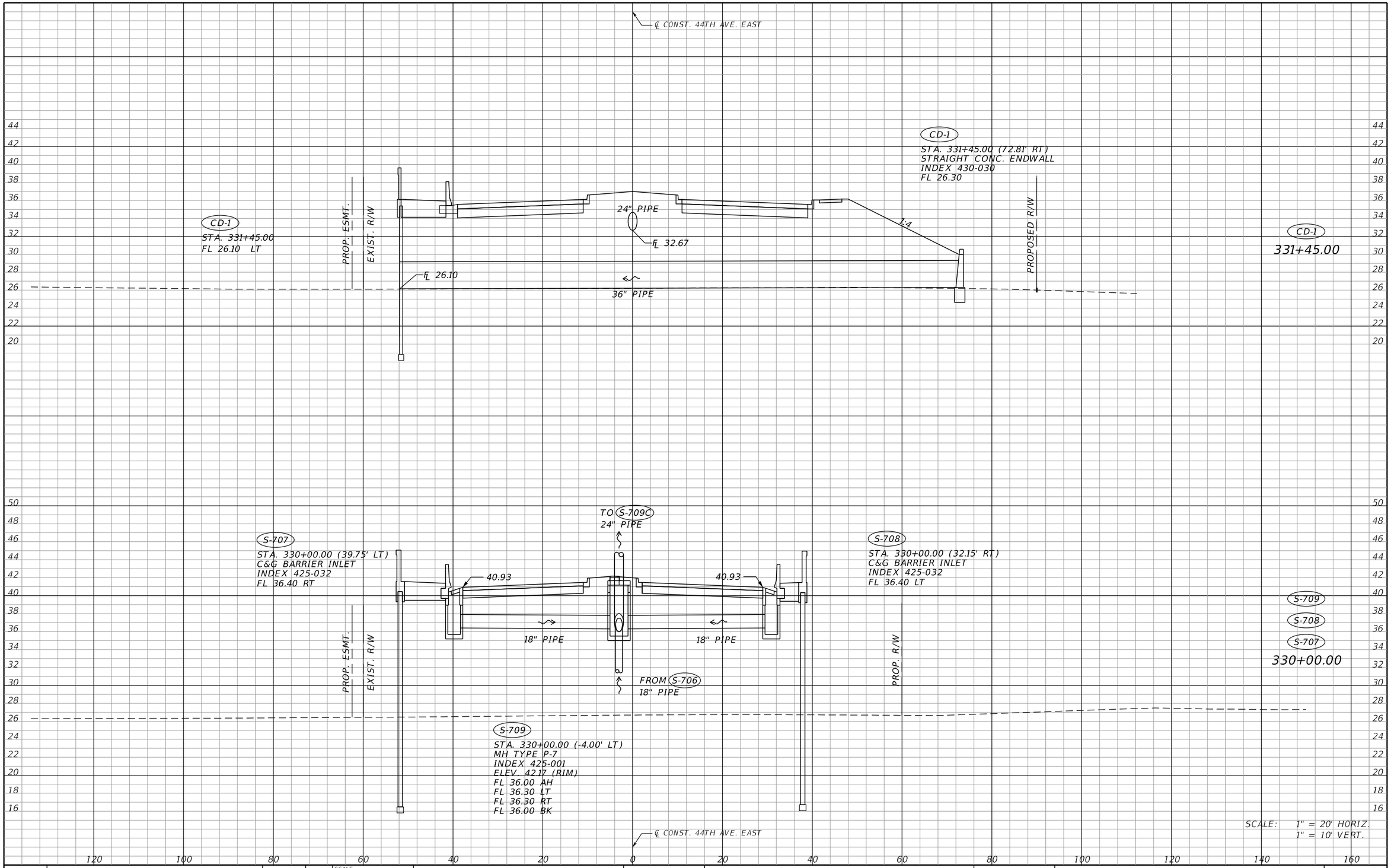
DESIGN ENGINEER SCOTT H. ENNIS
FL. LICENSE NO. 77068

DRAINAGE STRUCTURES (7)

SHEET NO. 58

1:41:58 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD02.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

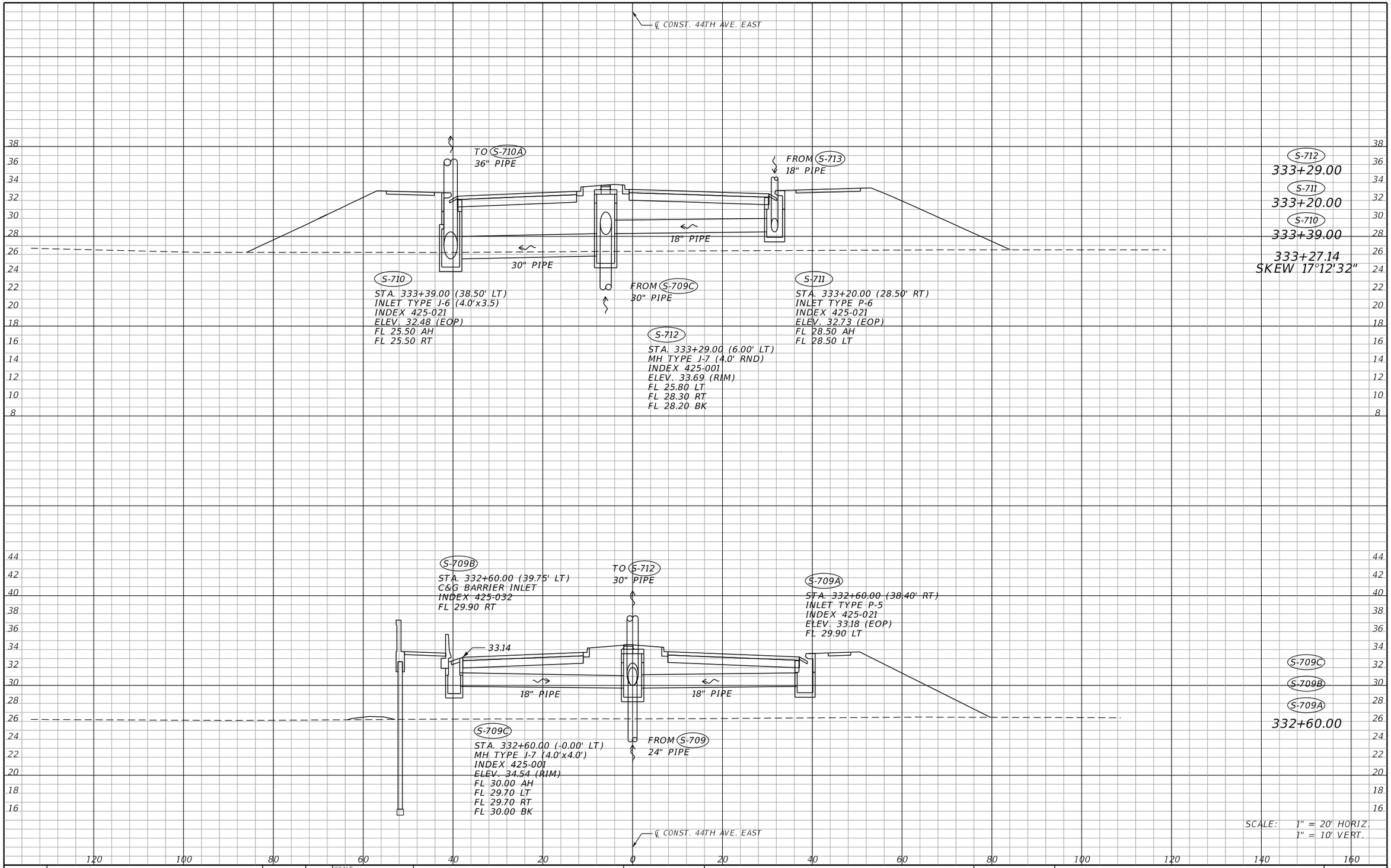
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (8)

SHEET NO.: 59

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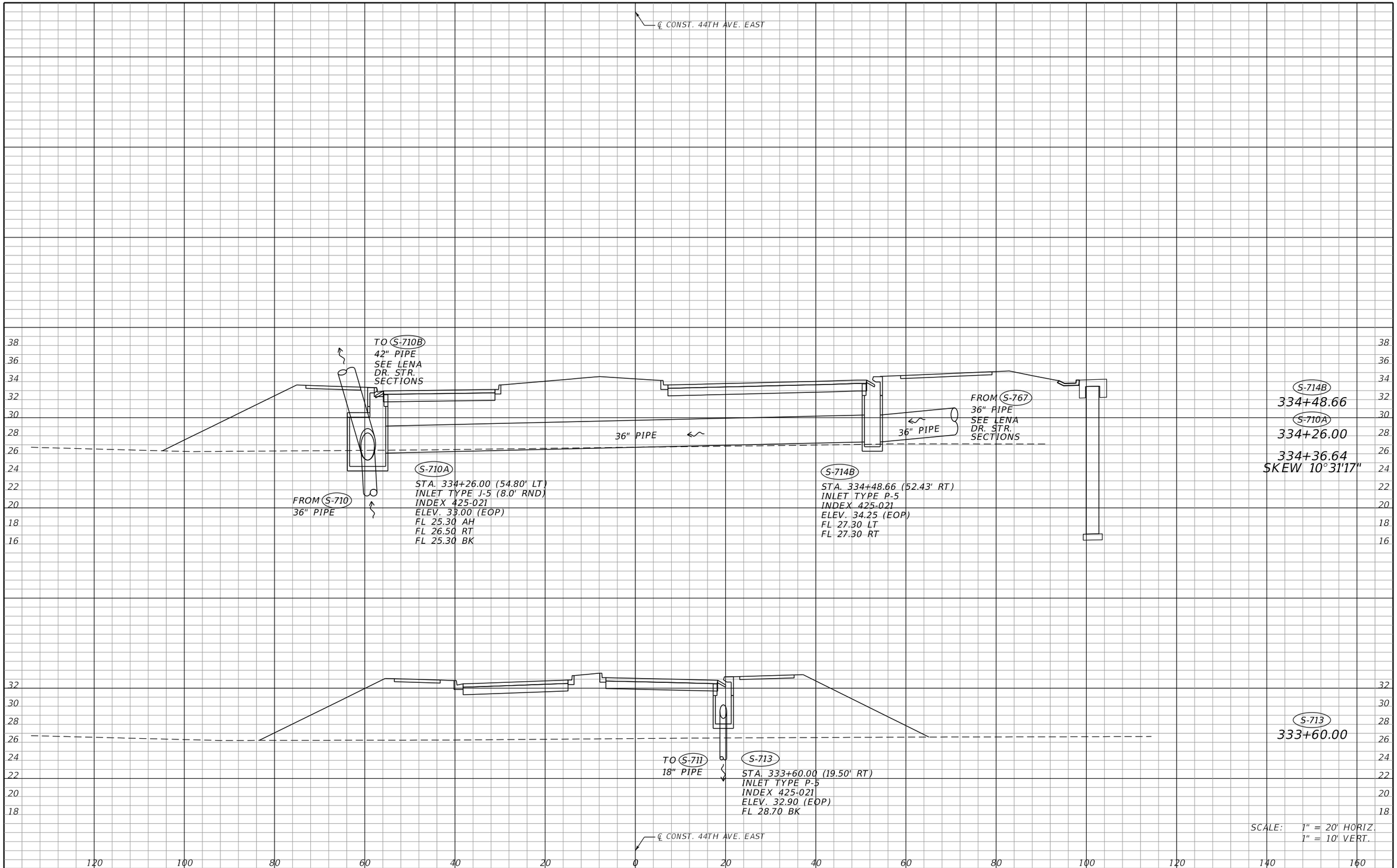
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



No.	REVISIONS	DATE	BY	SCALE: AS NOTED DESIGNED BY: SHE DRAWN BY: AMS CHECKED BY: SHE	HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232	DATE: 02/2022 PROJECT NO.: 6045662	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER: SCOTT H. ENNIS FL. LICENSE NO.: 77068	DRAINAGE STRUCTURES (9)	SHEET NO.: 60

1:42:06 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD02.dgn

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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

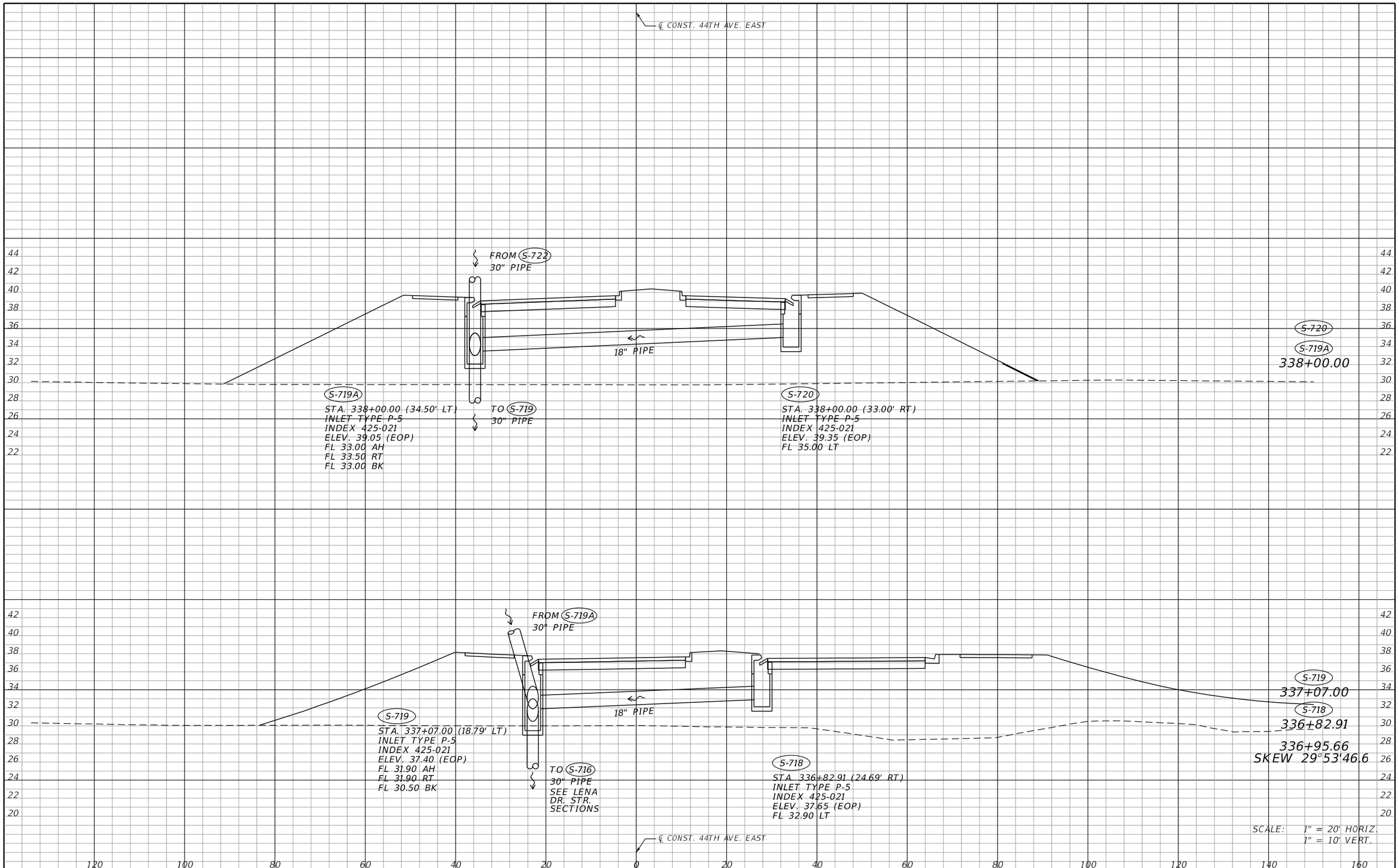
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (10)

SHEET NO.: 61

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No.	REVISIONS	DATE	BY

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DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

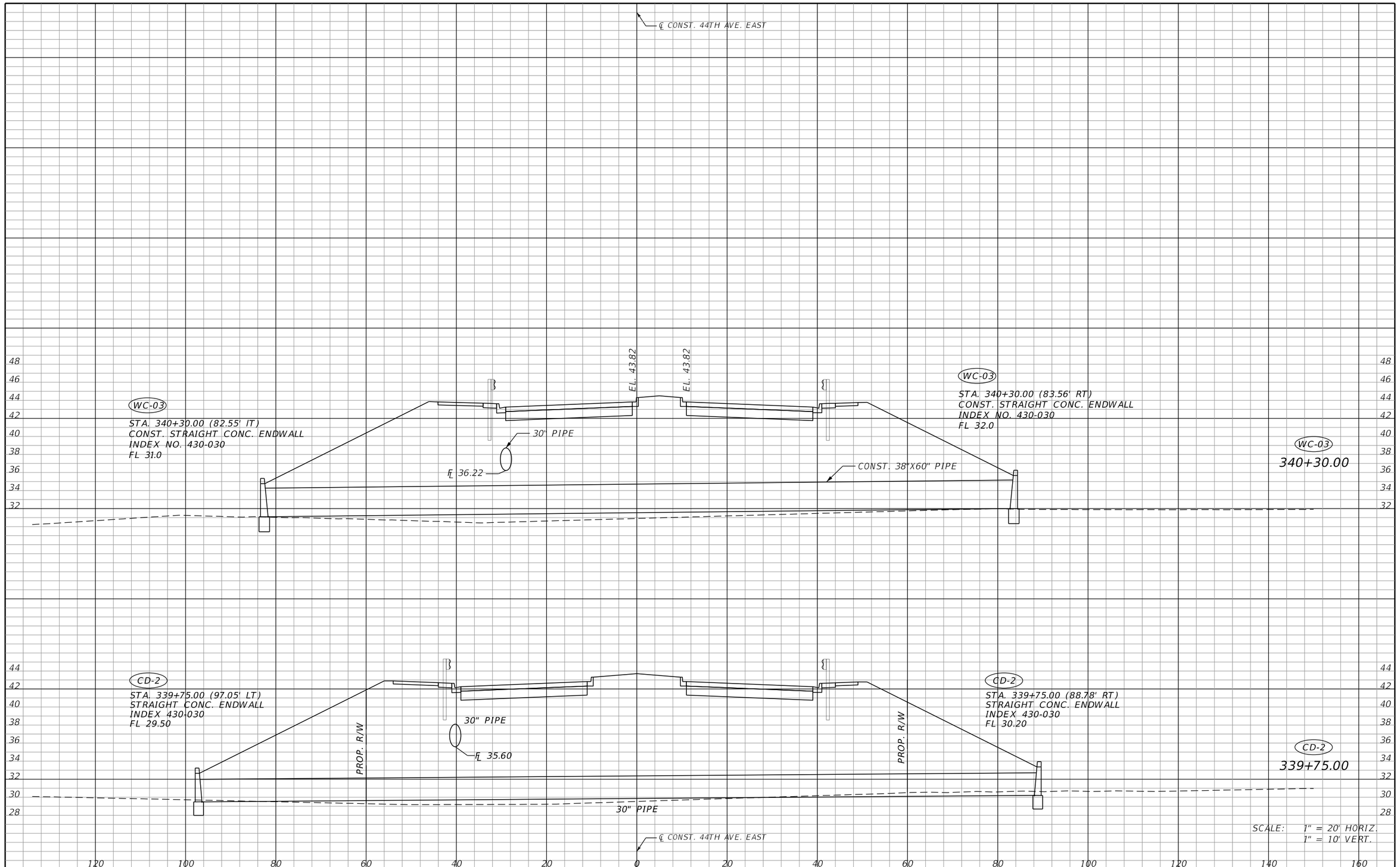
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (11)

SHEET NO.: 62

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

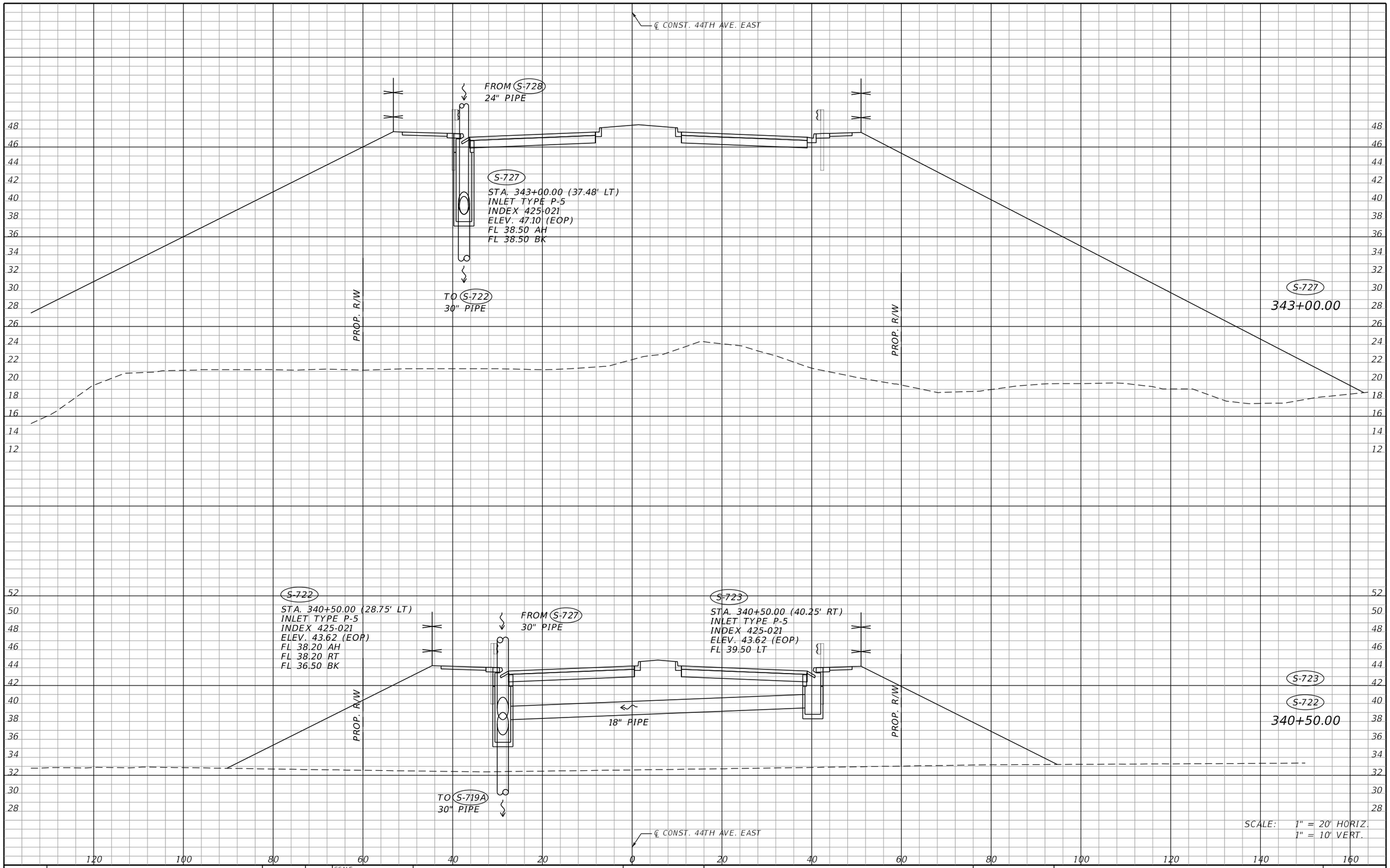
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (12)

SHEET NO.: 63

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

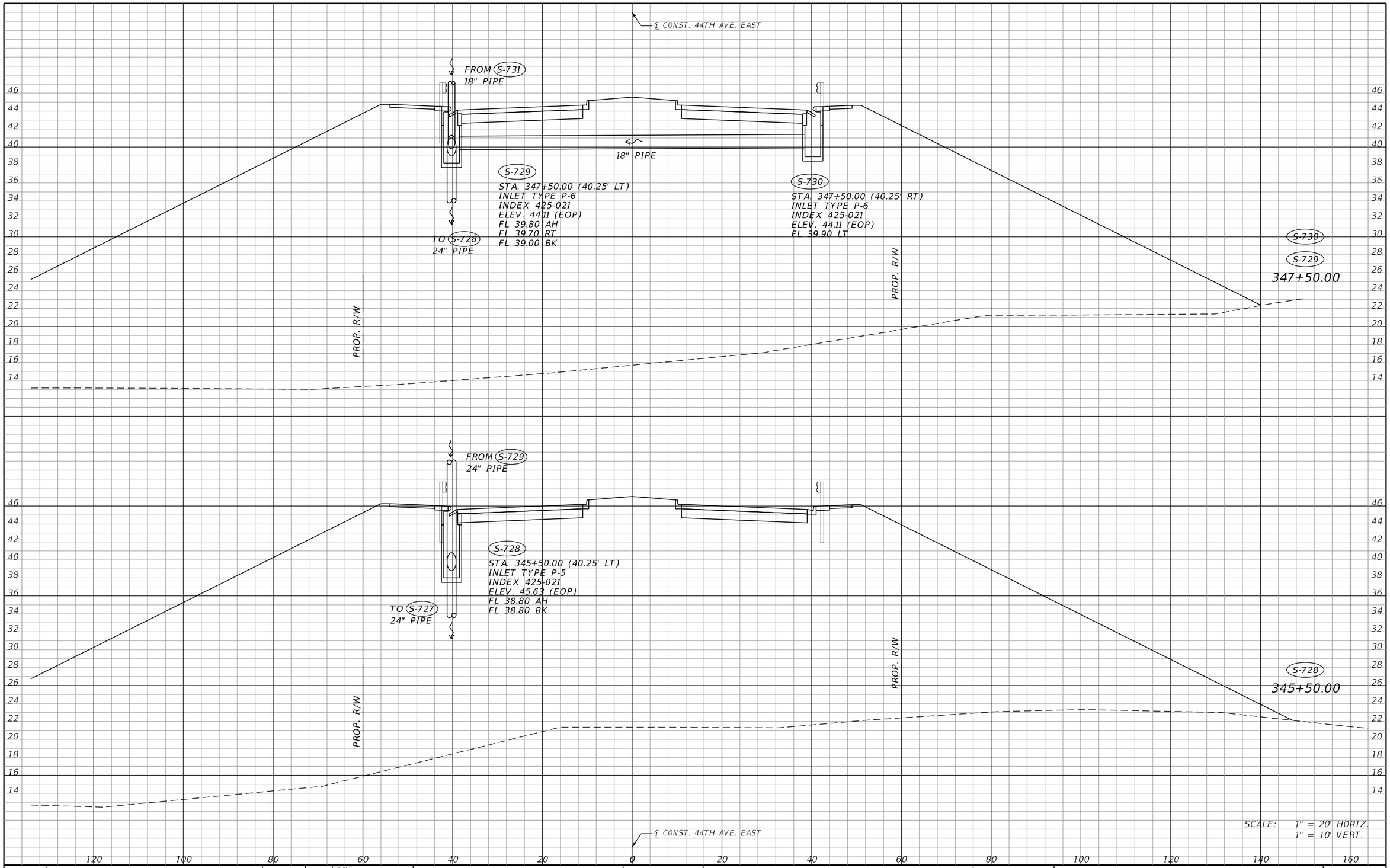
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (13)

SHEET NO.: 64

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HDR ENGINEERING, INC.
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DATE: 02/2022
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DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (14)

SHEET NO.: 65

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℄ CONST. 44TH AVE. EAST

CD-3
STA. 351+59.89 (147.97' LT)
CD MES (1:4)
INDEX 430-021
FL 21.40

42" PIPE

PROP. R/W

42" PIPE

PROP. R/W

CD-3
STA. 351+60.00 (140.97' RT)
CD MES (1:4)
INDEX 430-021
FL 22.00

CD-3
351+60.00

18" PIPE

S-731
STA. 349+50.00 (40.25' LT)
INLET TYPE P-5
INDEX 425-021
ELEV. 45.67 (EOP)
FL 40.20 RT
FL 40.20 BK

TO S-729
18" PIPE

S-732
STA. 349+50.00 (40.25' RT)
INLET TYPE P-5
INDEX 425-021
ELEV. 45.67 (EOP)
FL 40.40 LT

S-732
S-731
349+50.00

PROP. R/W

PROP. R/W

℄ CONST. 44TH AVE. EAST

SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
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DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

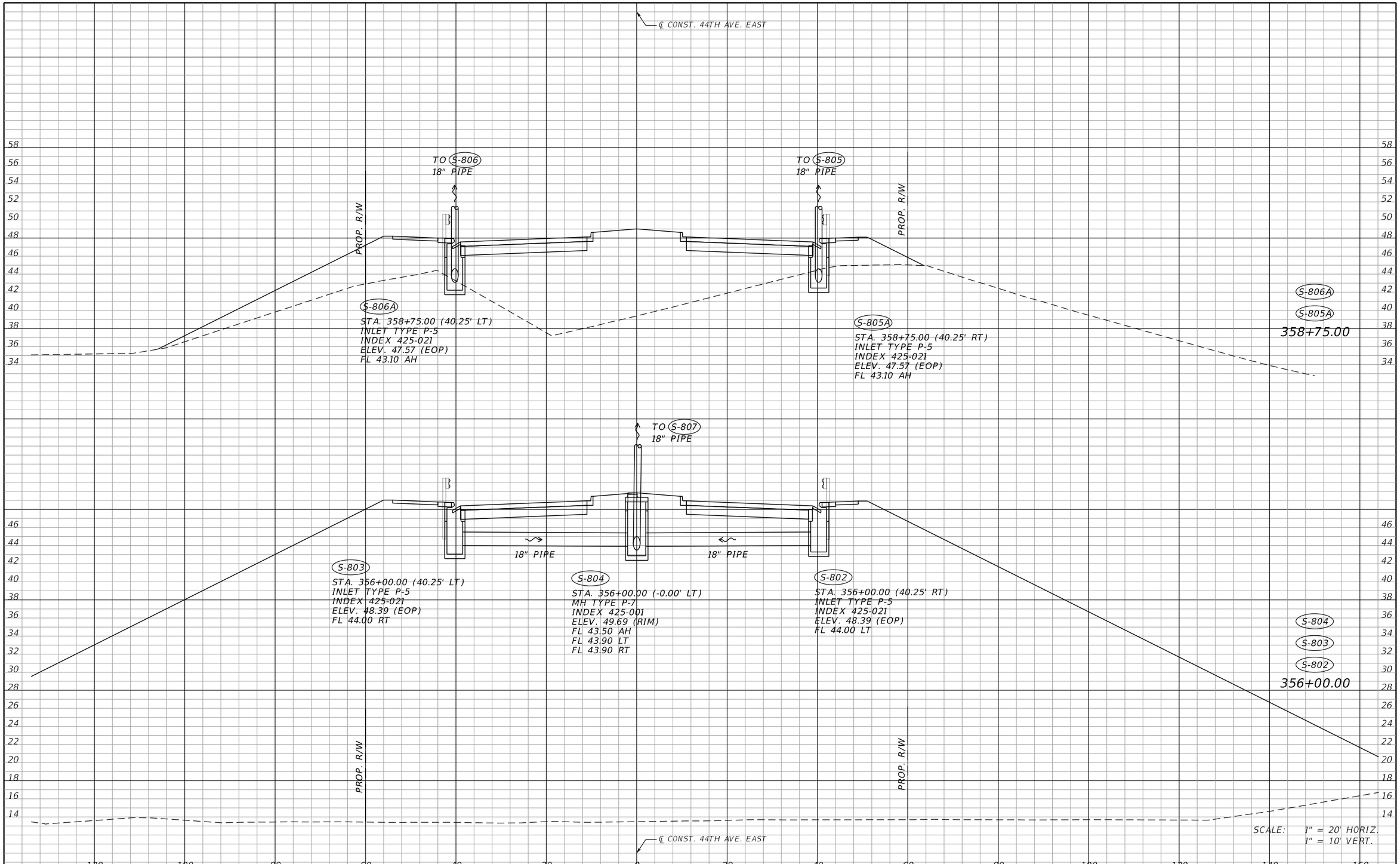
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (15)

SHEET NO.: 66

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

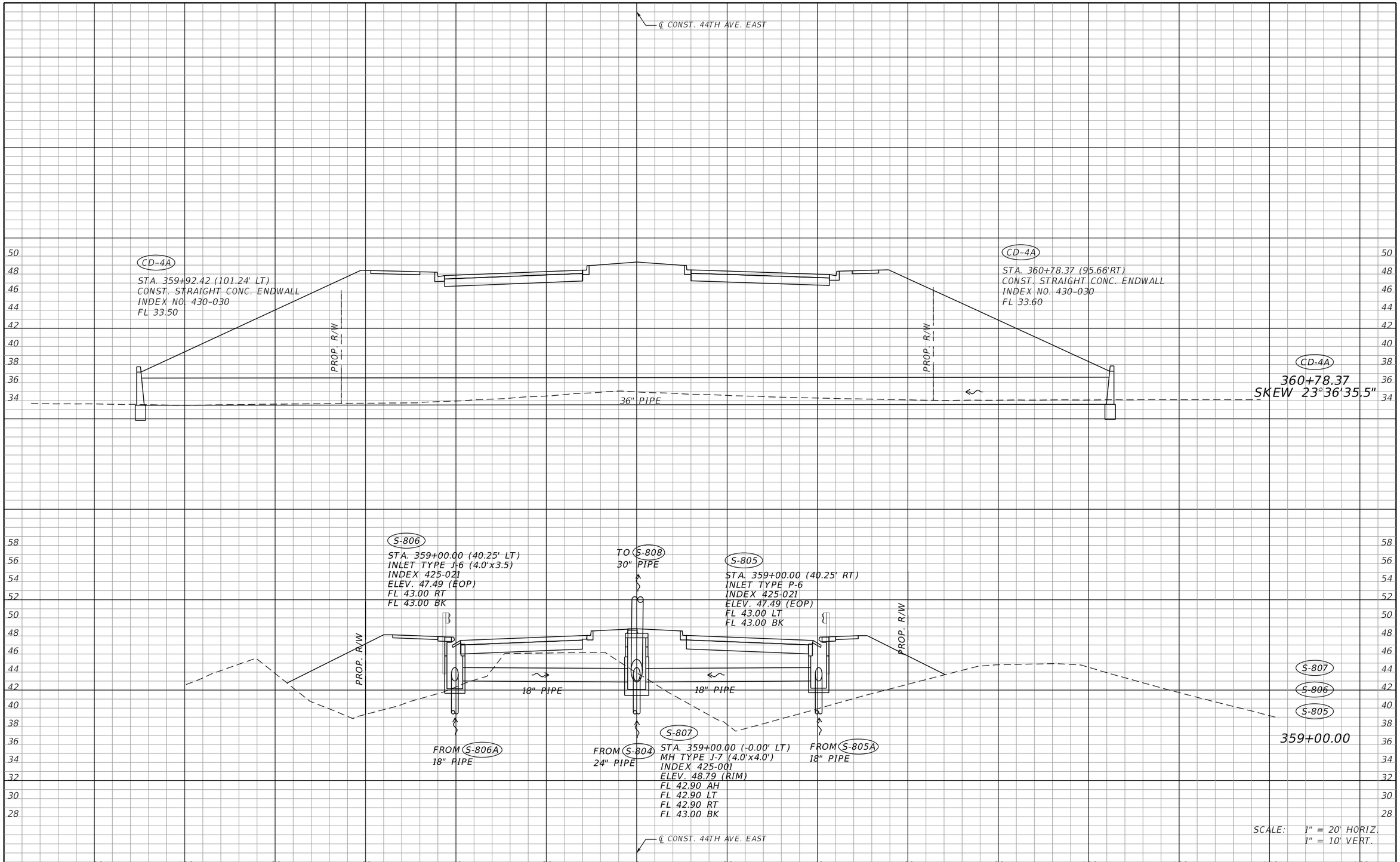
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (16)

SHEET NO.: 67

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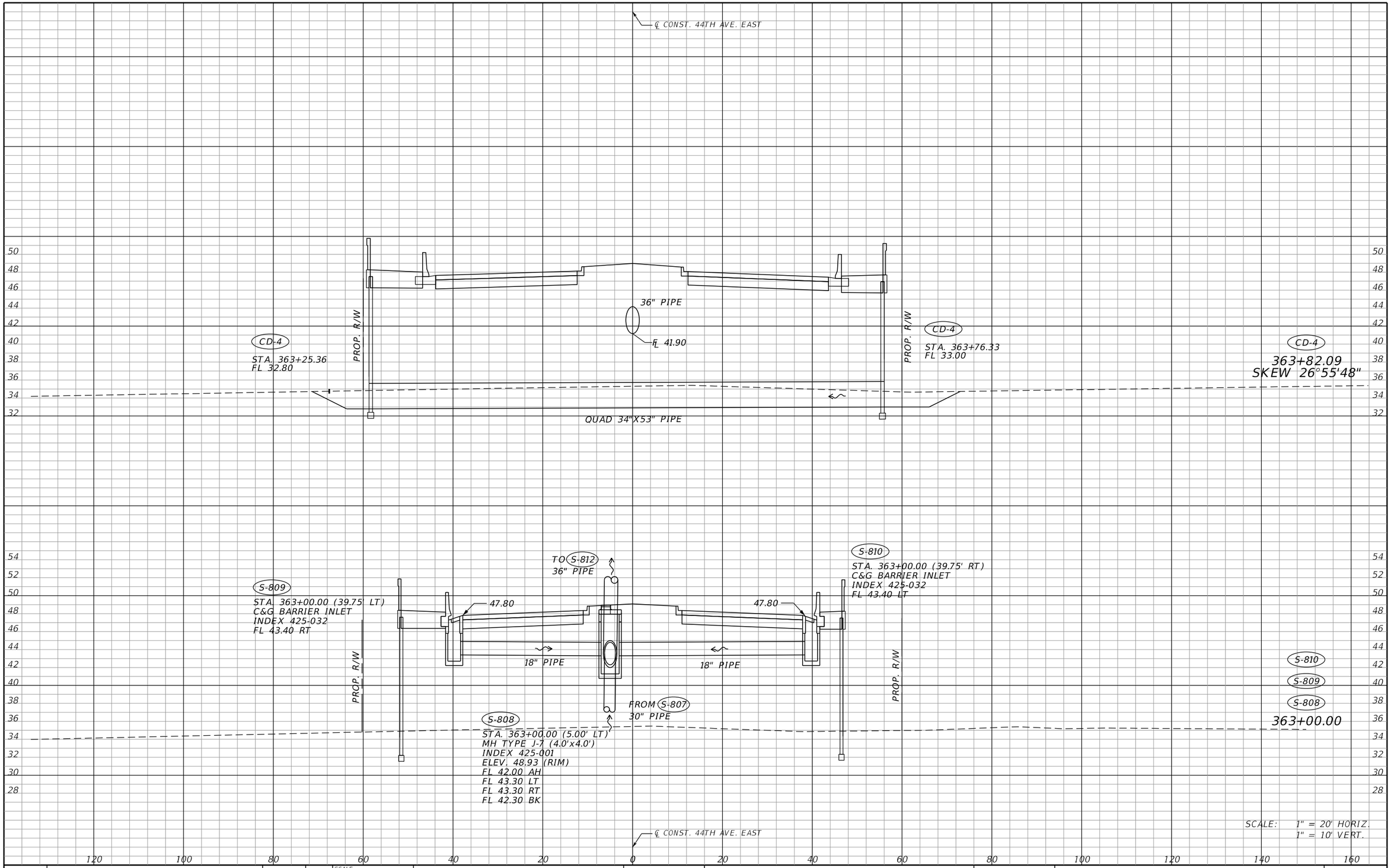
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (17)

SHEET NO.: 68

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	SHE
DRAWN BY	AMS
CHECKED BY	SHE

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SARASOTA, FLORIDA 34232

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Manatee County FLORIDA
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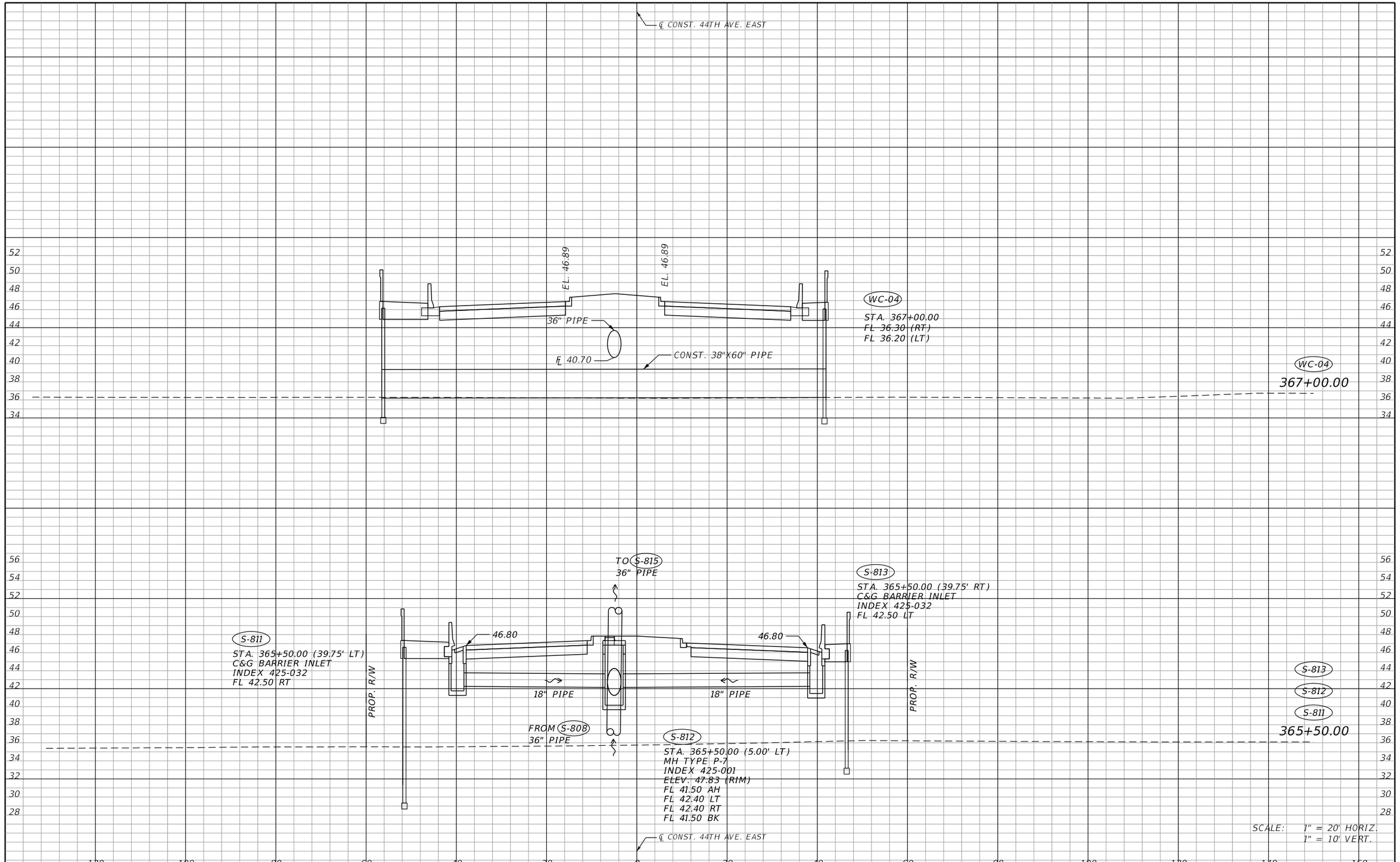
DESIGN ENGINEER SCOTT H. ENNIS
FL. LICENSE NO. 77068

DRAINAGE STRUCTURES (18)

SHEET NO. 69

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Manatee County FLORIDA
MANATEE COUNTY
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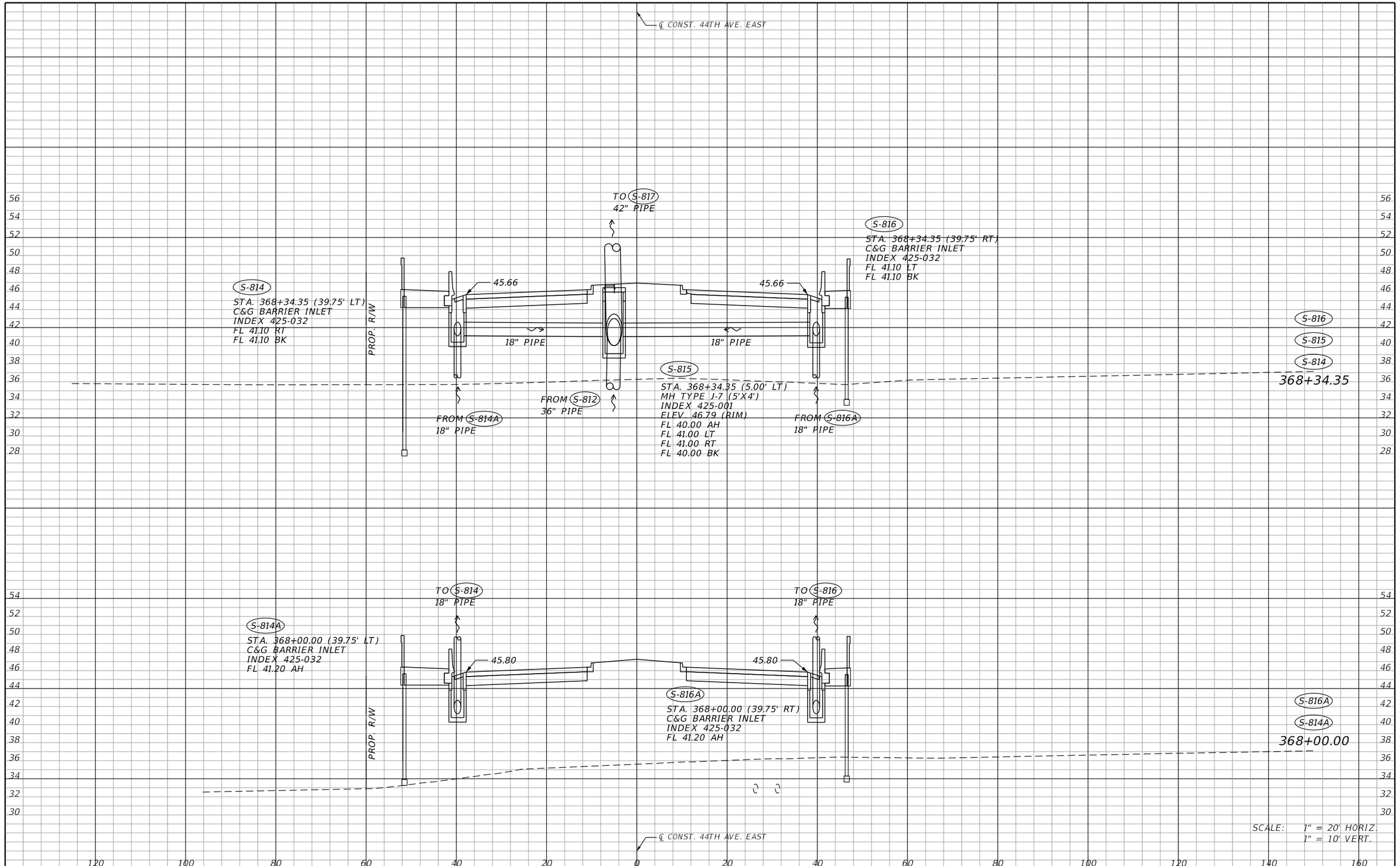
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (19)

SHEET NO.: 70

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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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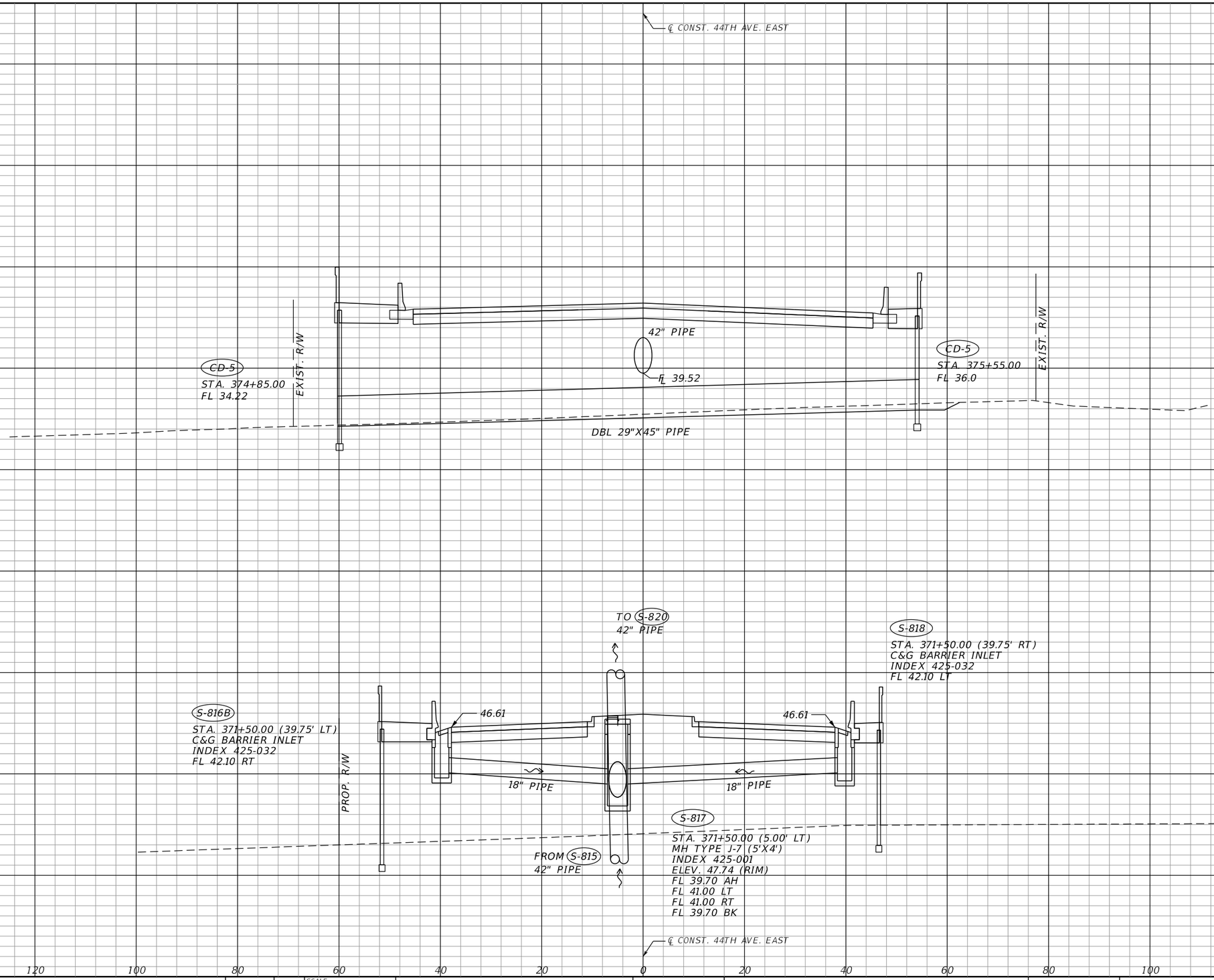
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (20)

SHEET NO.: 71

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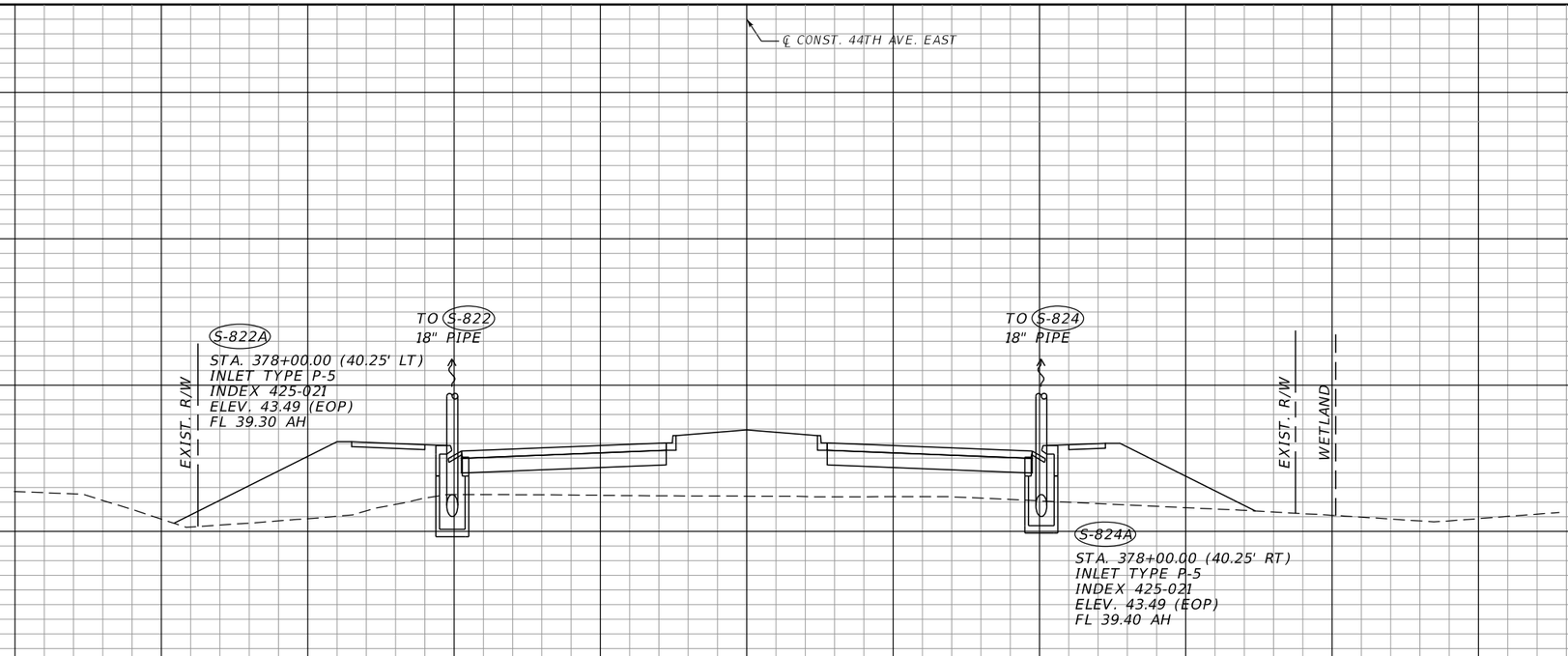
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (21)

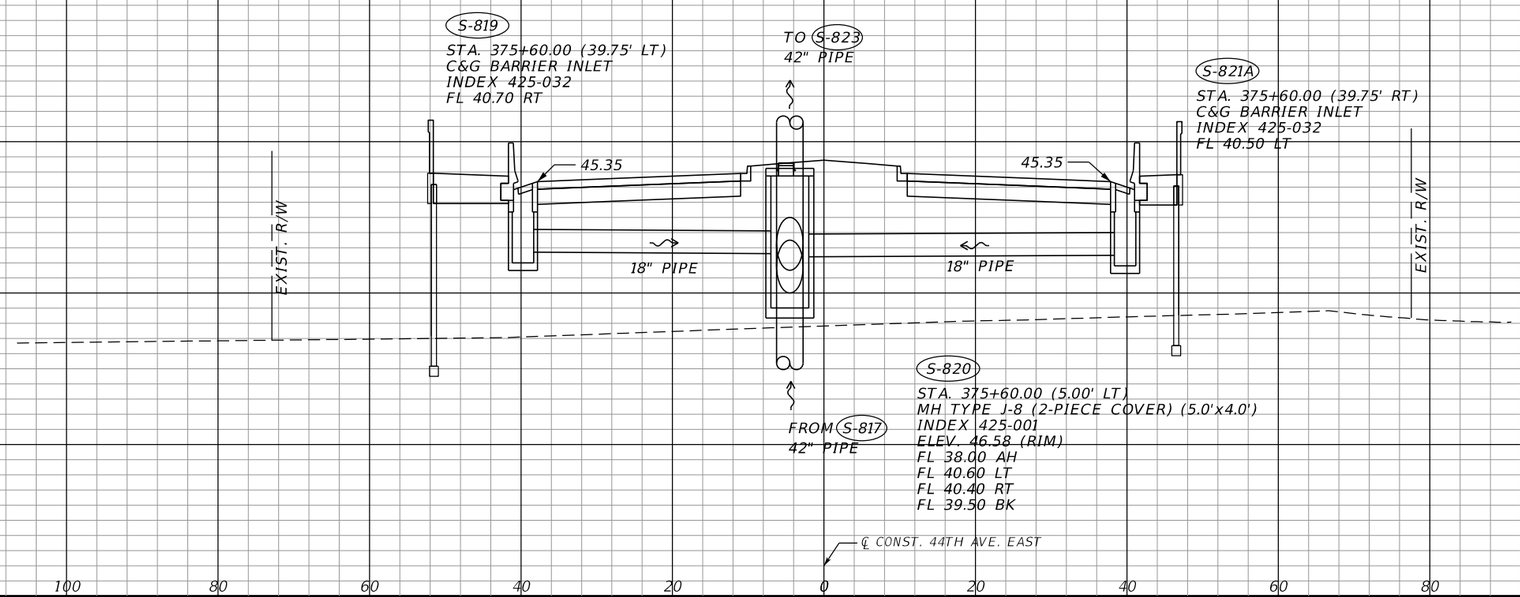
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S-824A
S-822A
378+00.00



S-821A
S-820
S-819
375+60.00

SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

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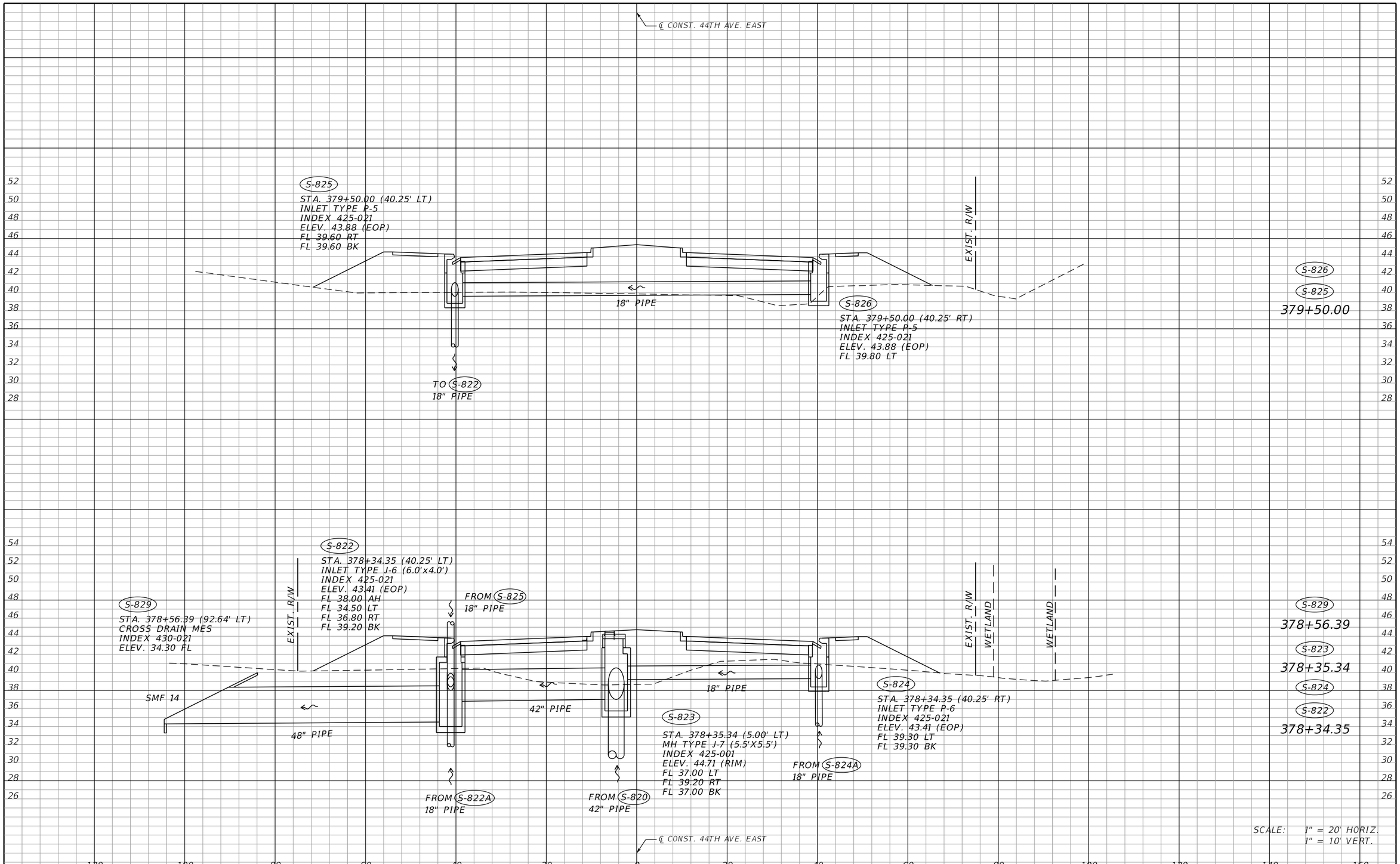
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (22)

SHEET NO.: 73

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Manatee County FLORIDA
MANATEE COUNTY
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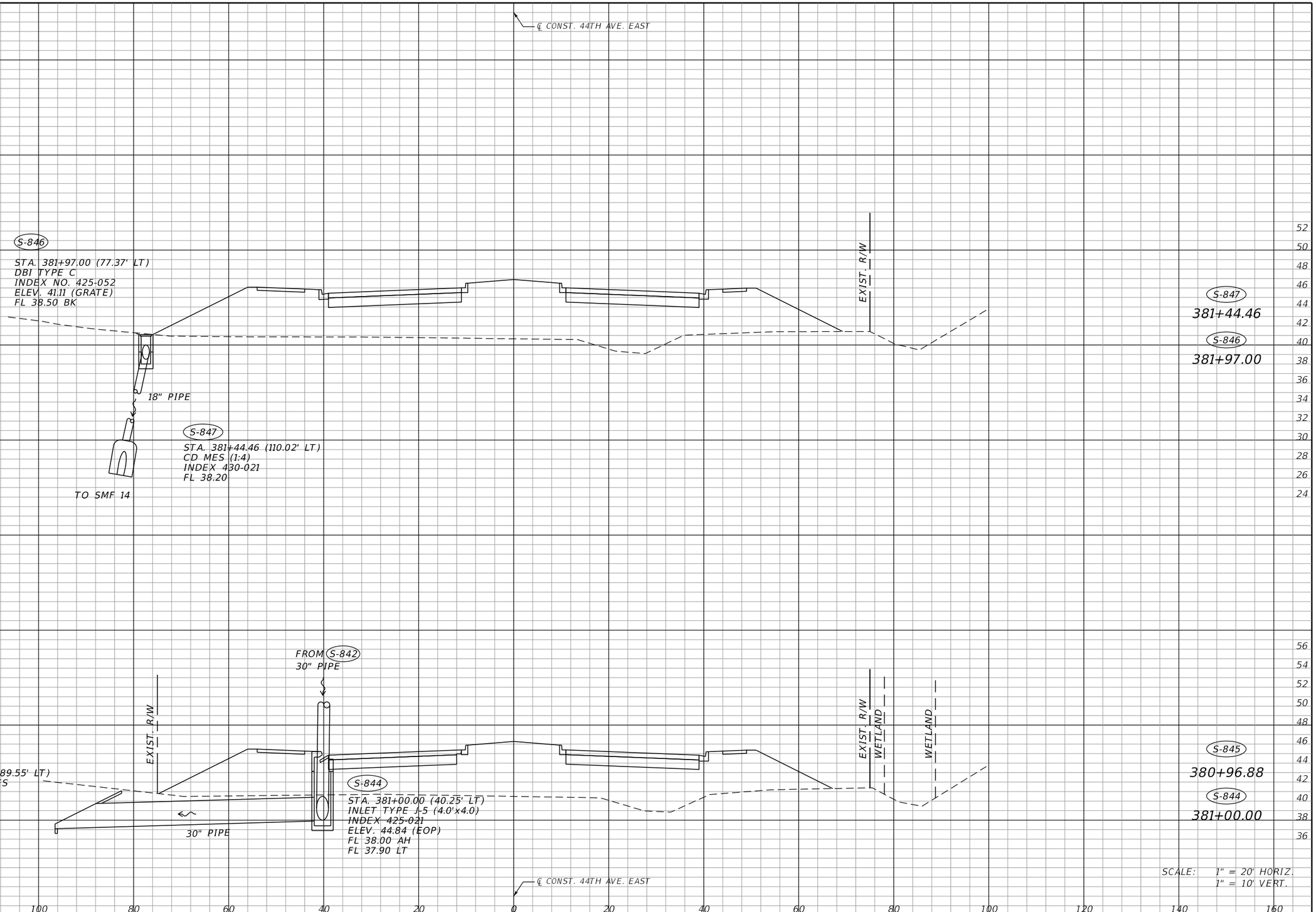
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (23)

SHEET NO.: 74

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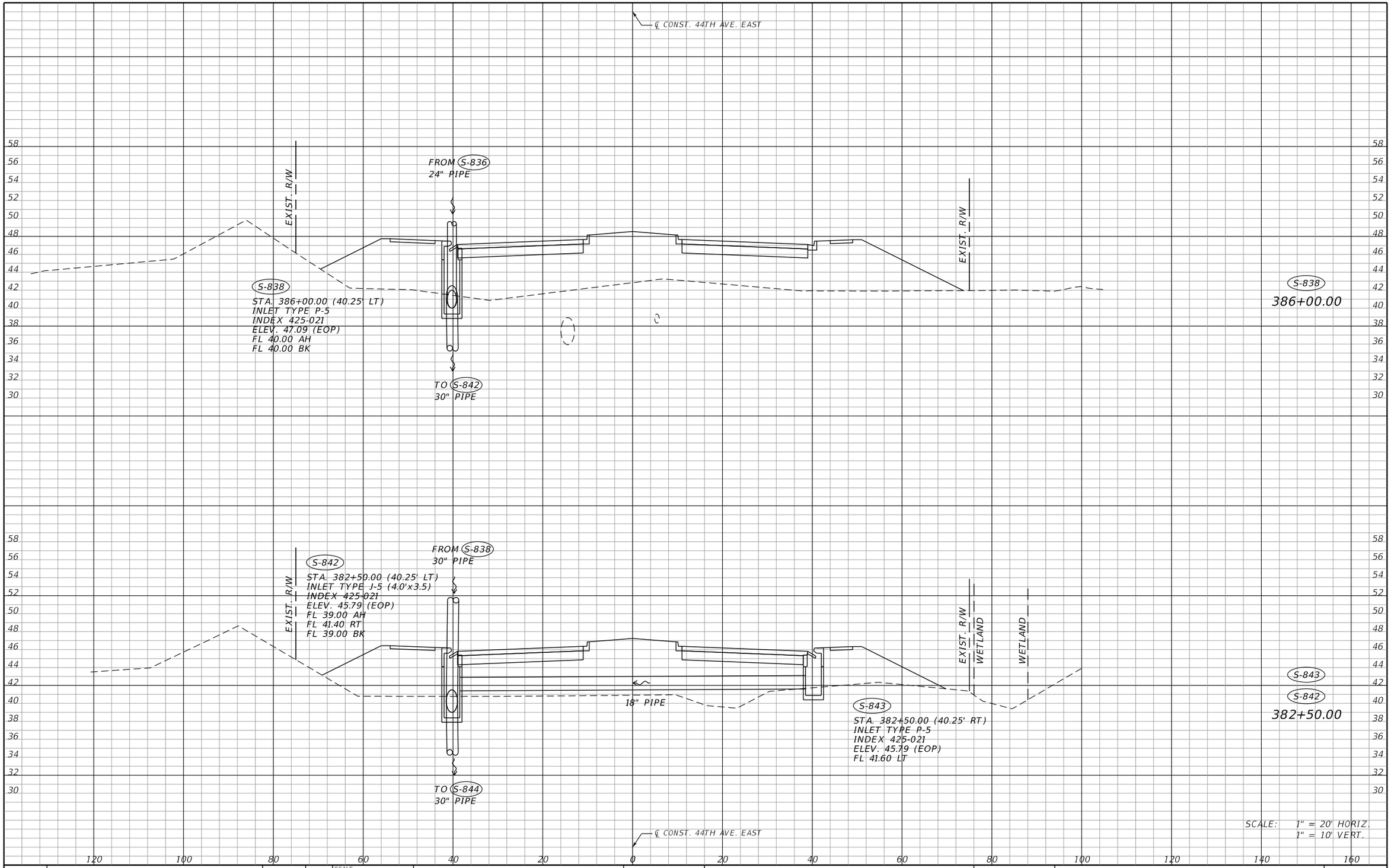
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (24)

SHEET NO.: 75

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	SHE
DRAWN BY	AMS
CHECKED BY	SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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MANATEE COUNTY PUBLIC WORKS

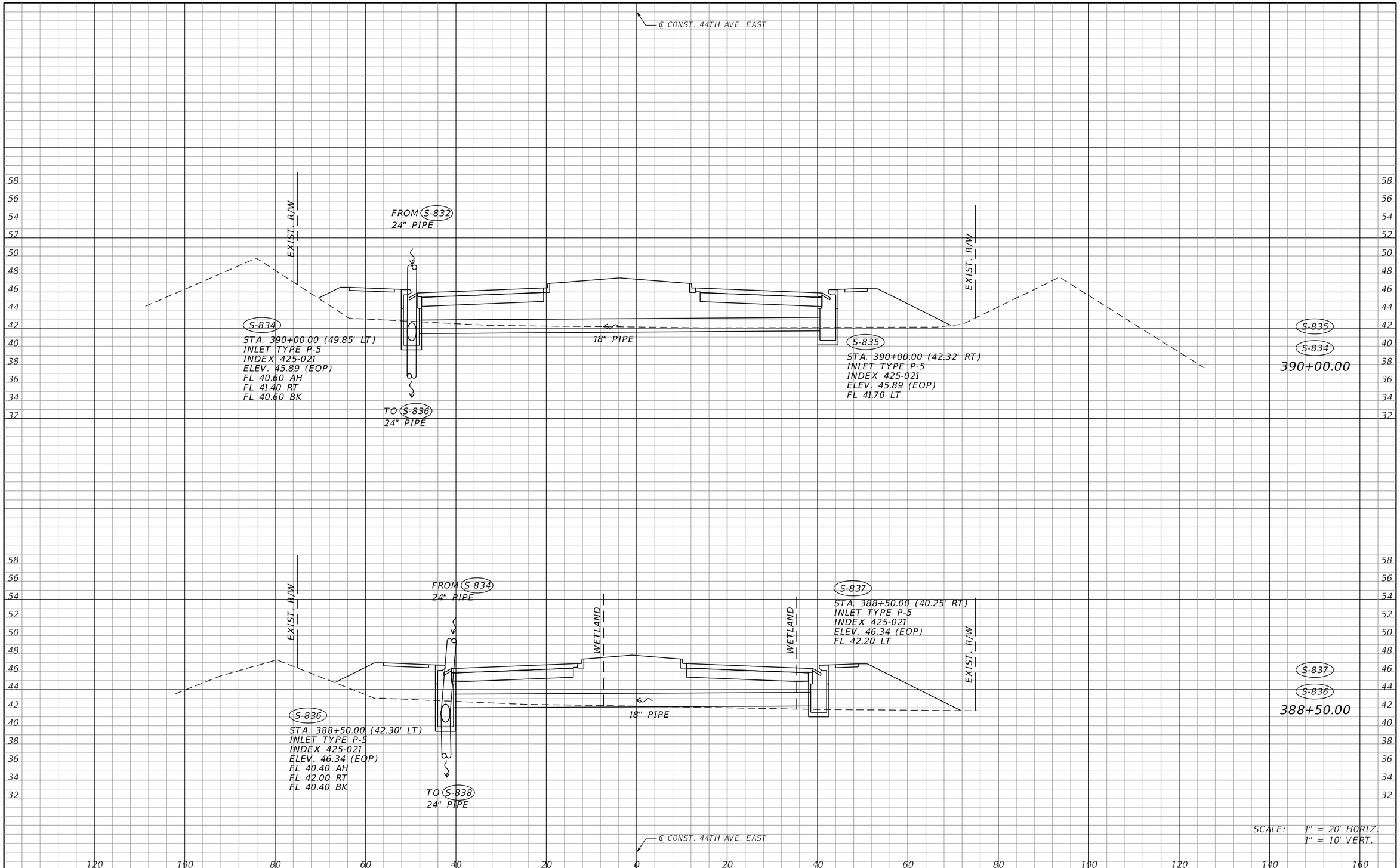
DESIGN ENGINEER SCOTT H. ENNIS
FL. LICENSE NO. 77068

DRAINAGE STRUCTURES (25)

SHEET NO. 76

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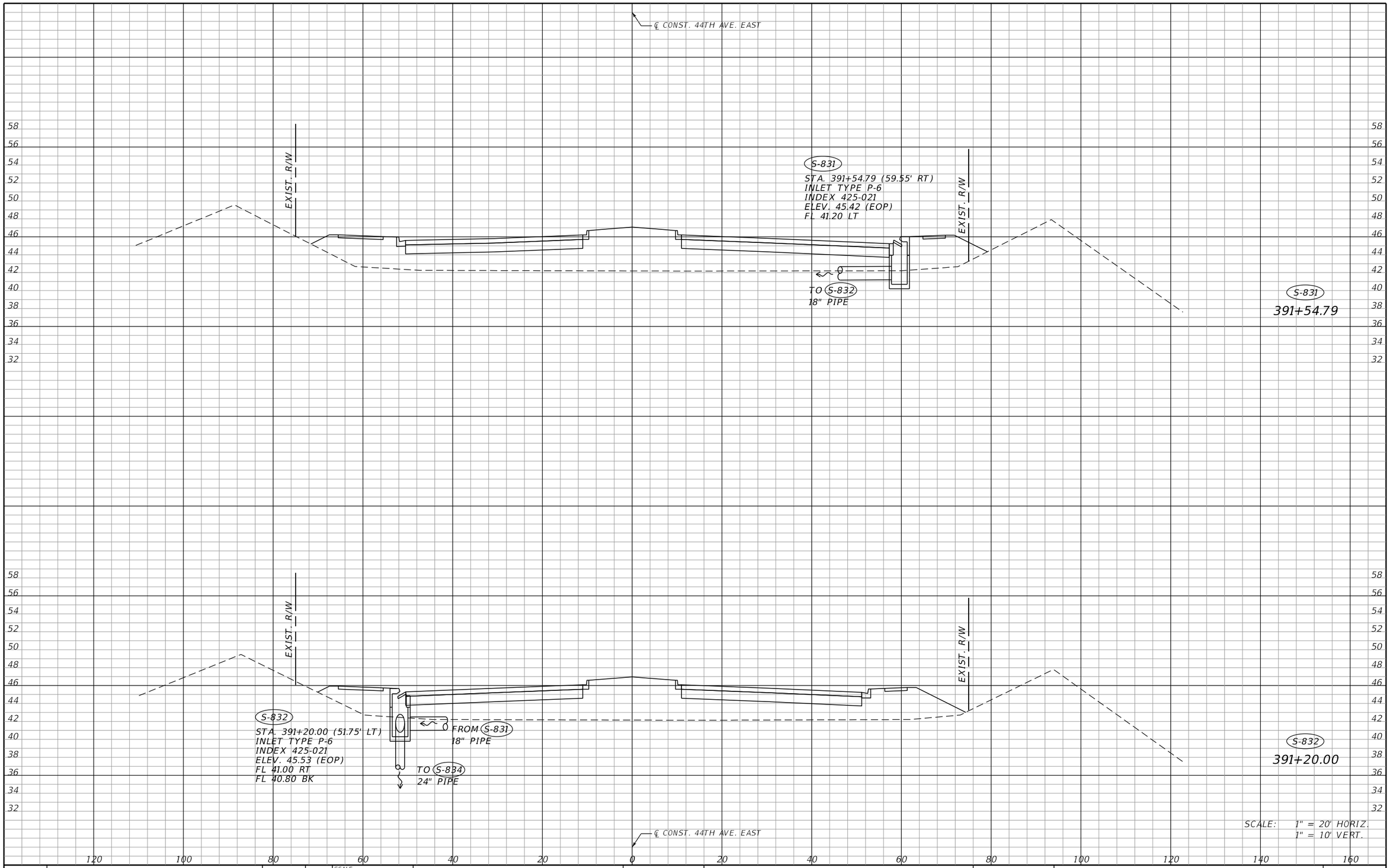
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (26)

SHEET NO.: 77

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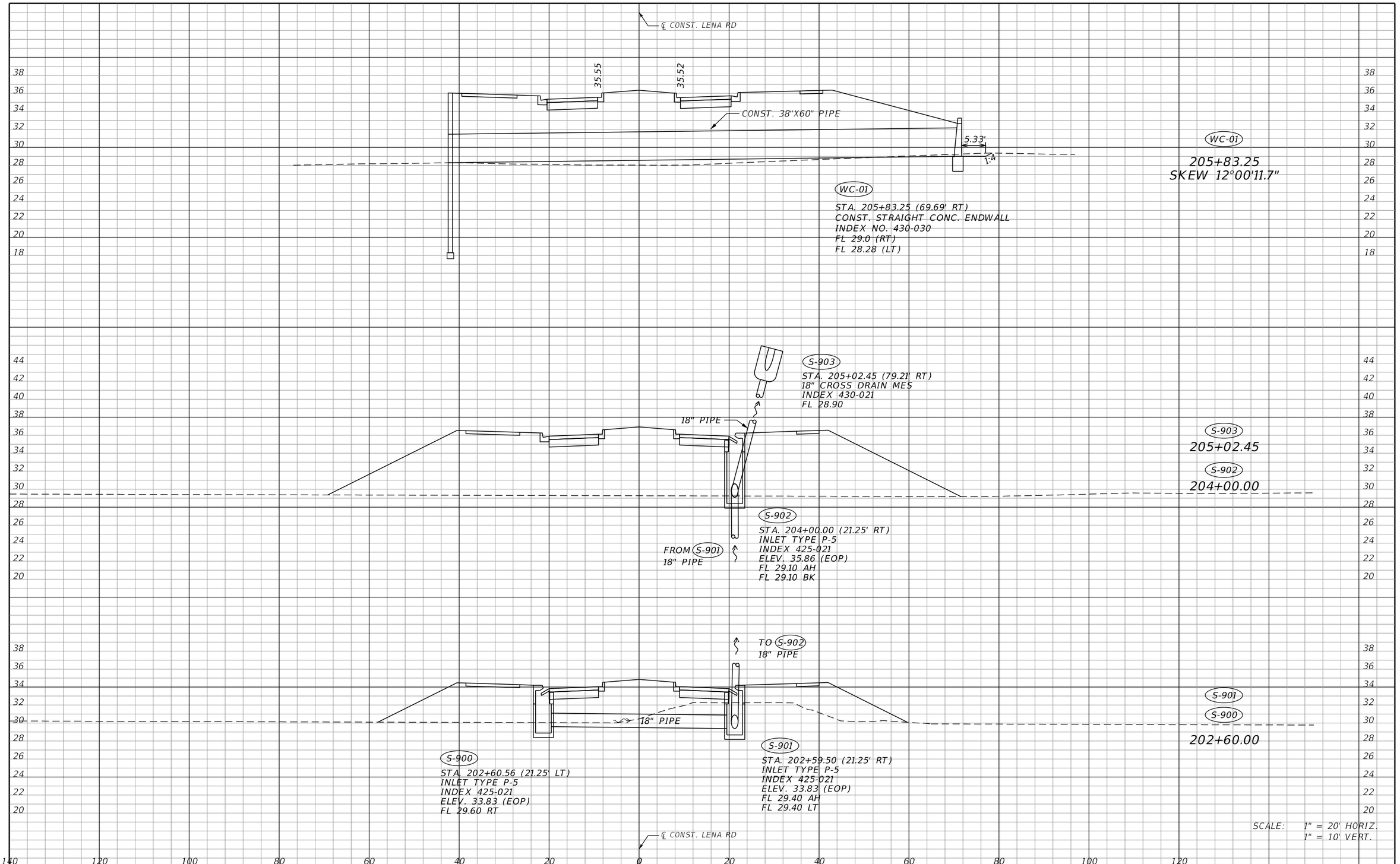
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (27)

SHEET NO.: 78

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SARASOTA, FLORIDA 34232

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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

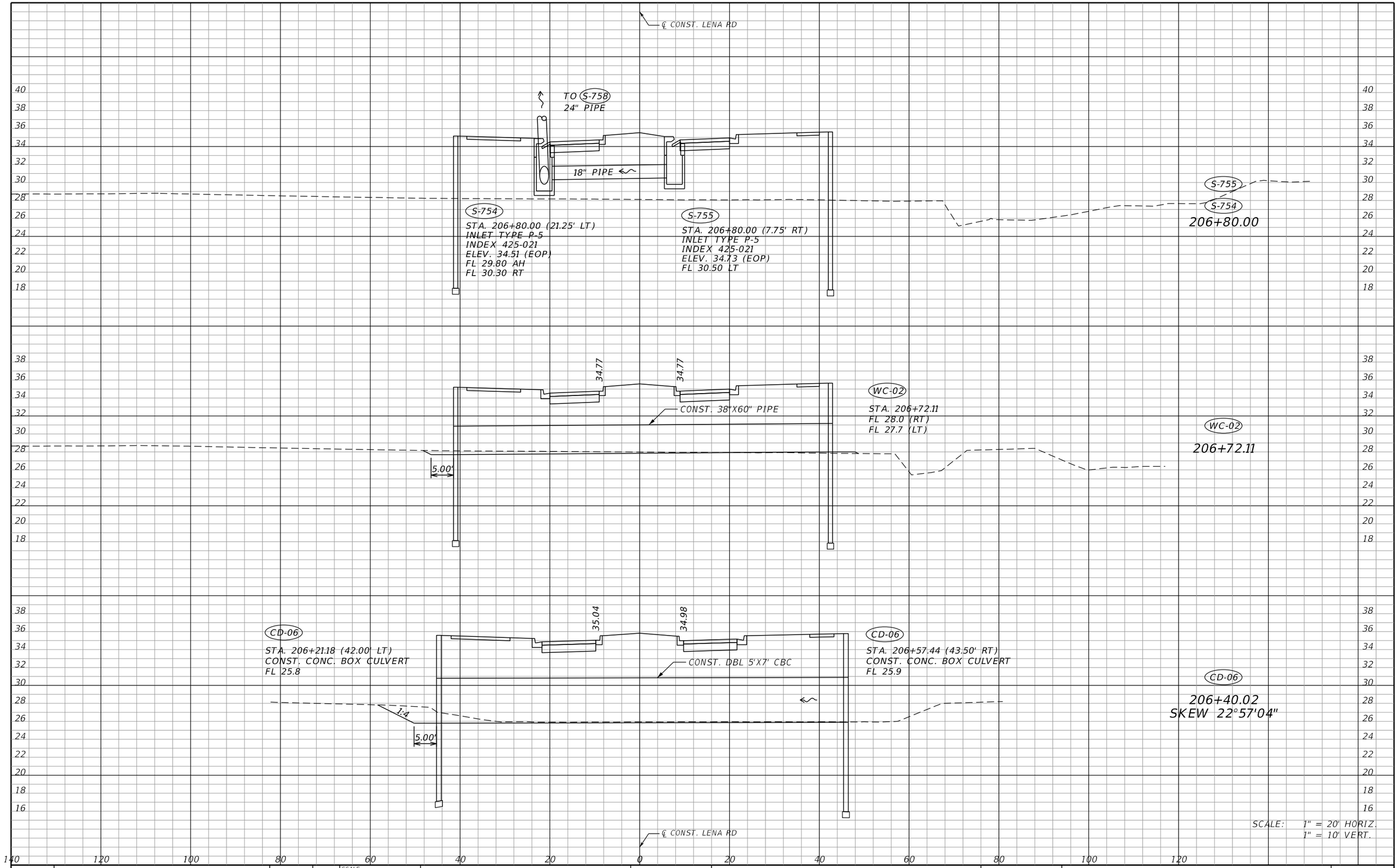
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (28)

SHEET NO.: 79

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SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

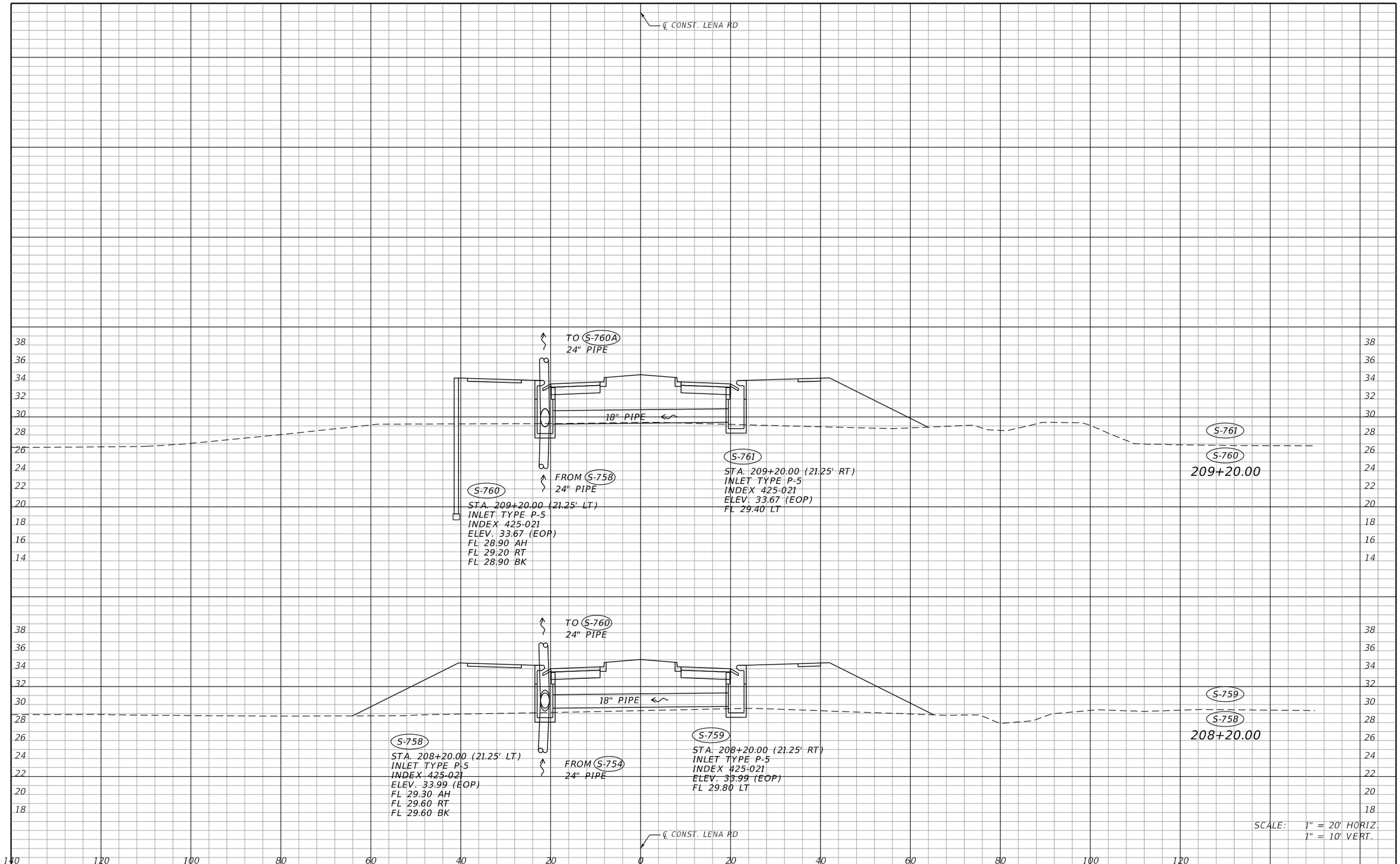
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (29)

SHEET NO.: 80

1:44:46 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD03.dgn

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



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

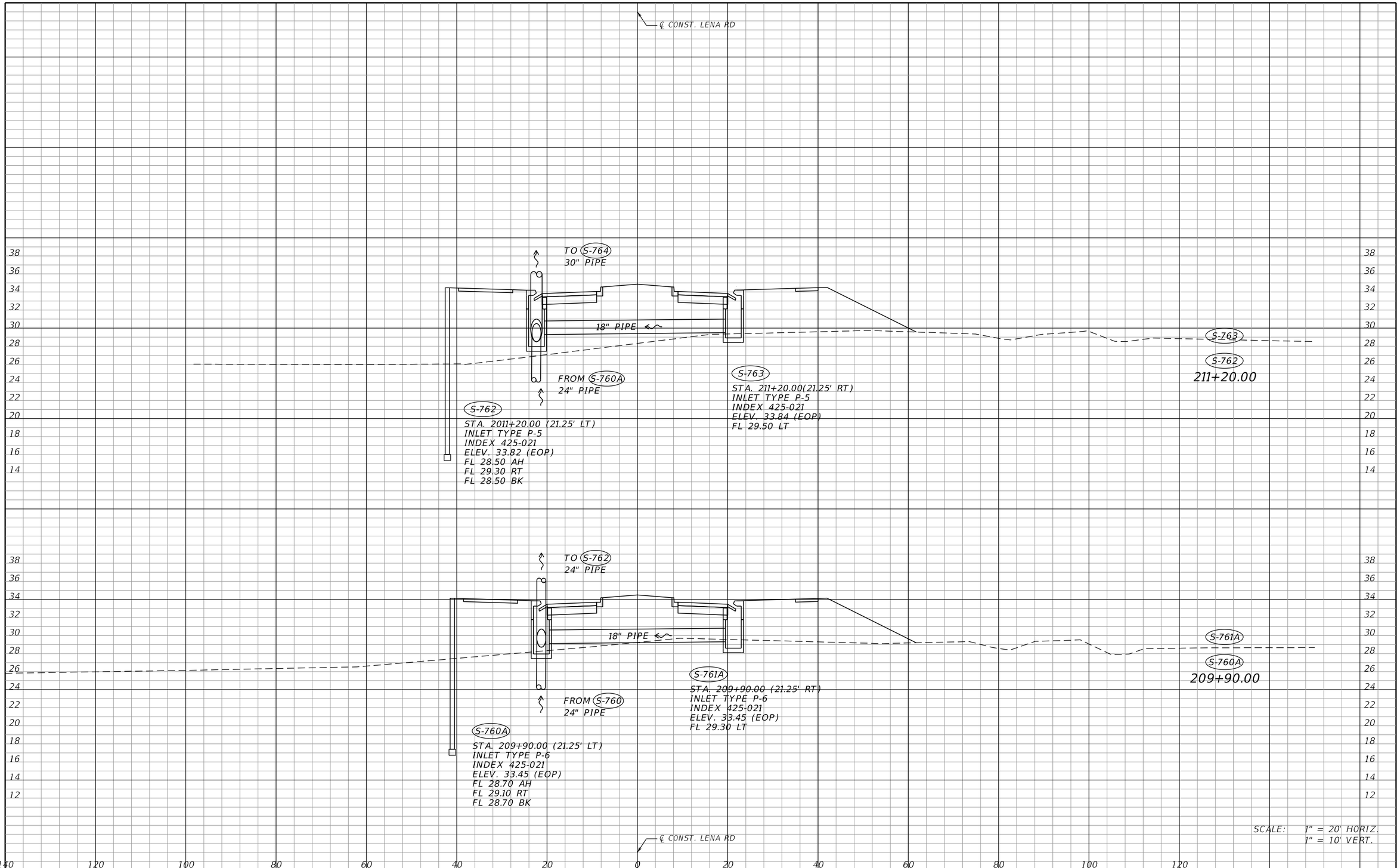
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (30)

SHEET NO.: 81

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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

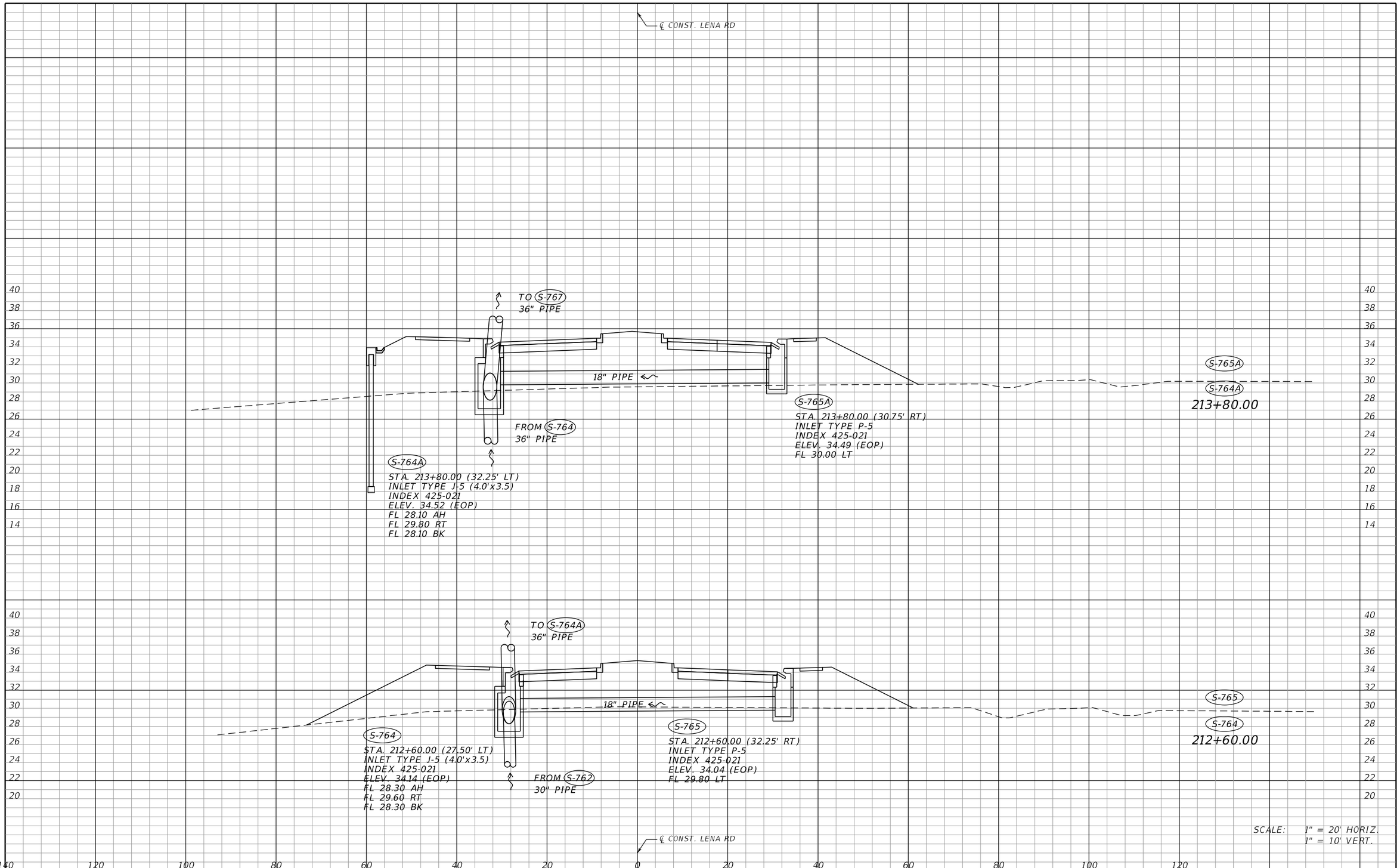
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (31)

SHEET NO.: 82

1:44:53 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD03.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

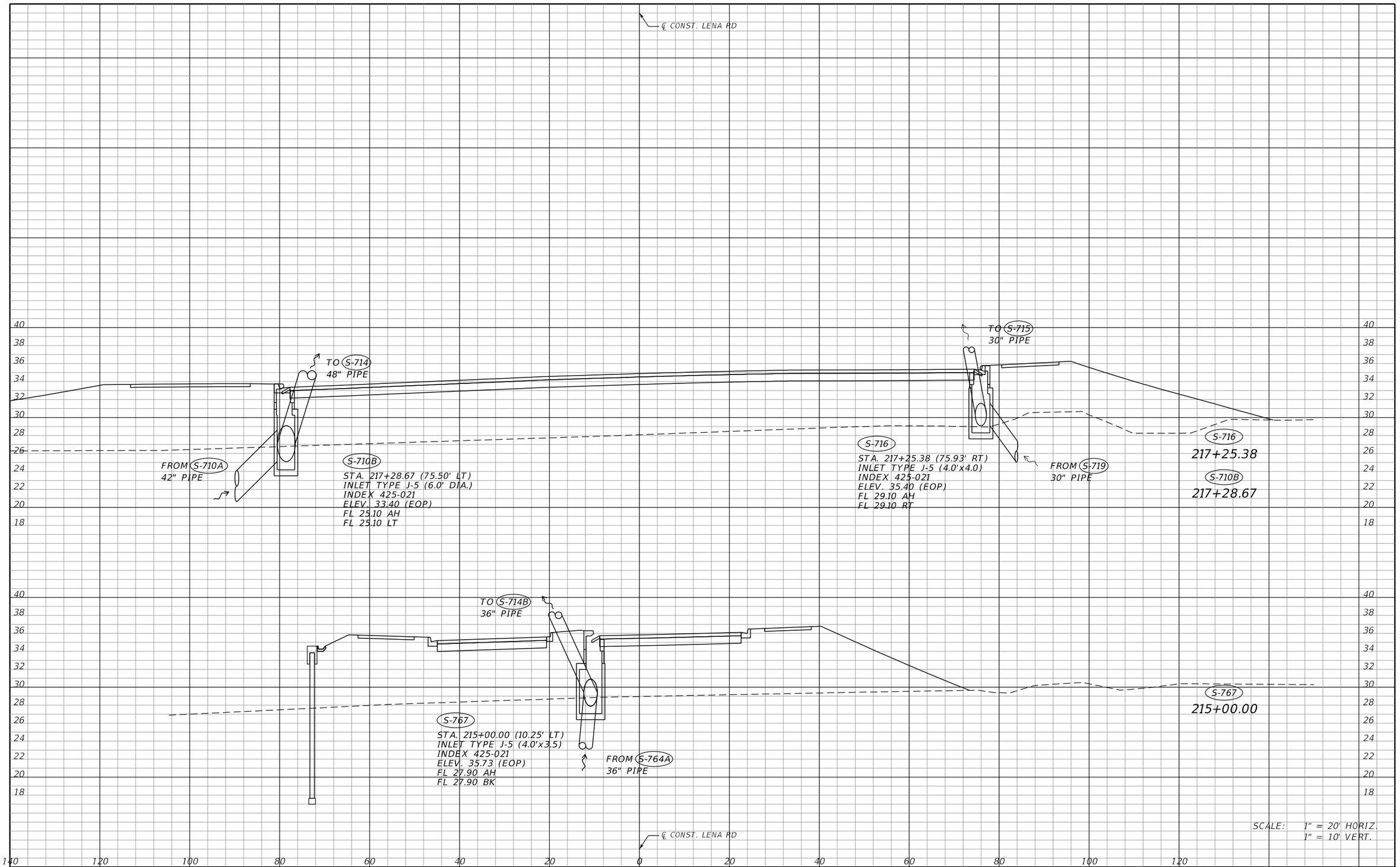
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (32)

SHEET NO.: 83

1:44:56 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD03.dgn

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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

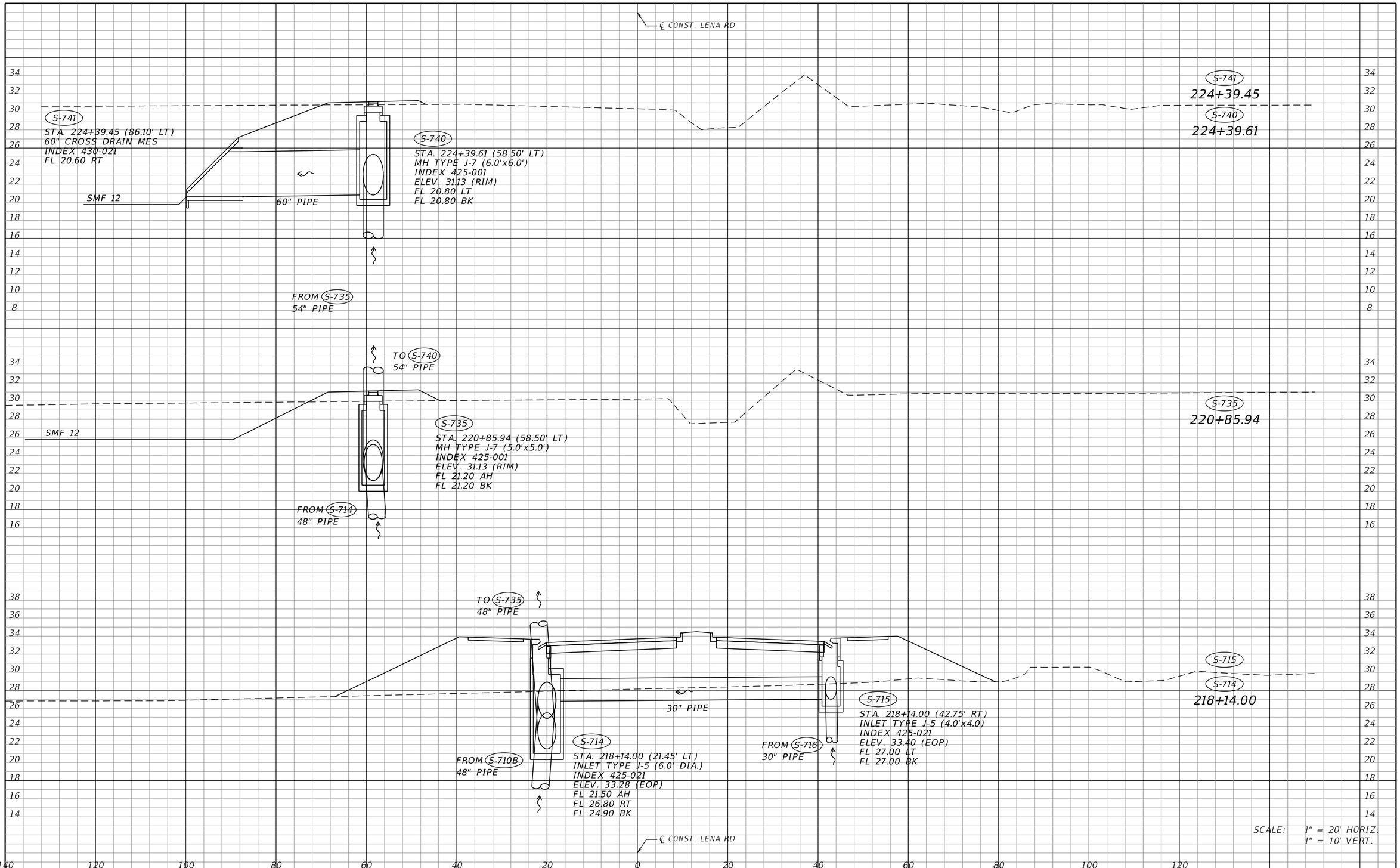
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (33)

SHEET NO.: 84

1:44:59 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD03.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: AMS
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

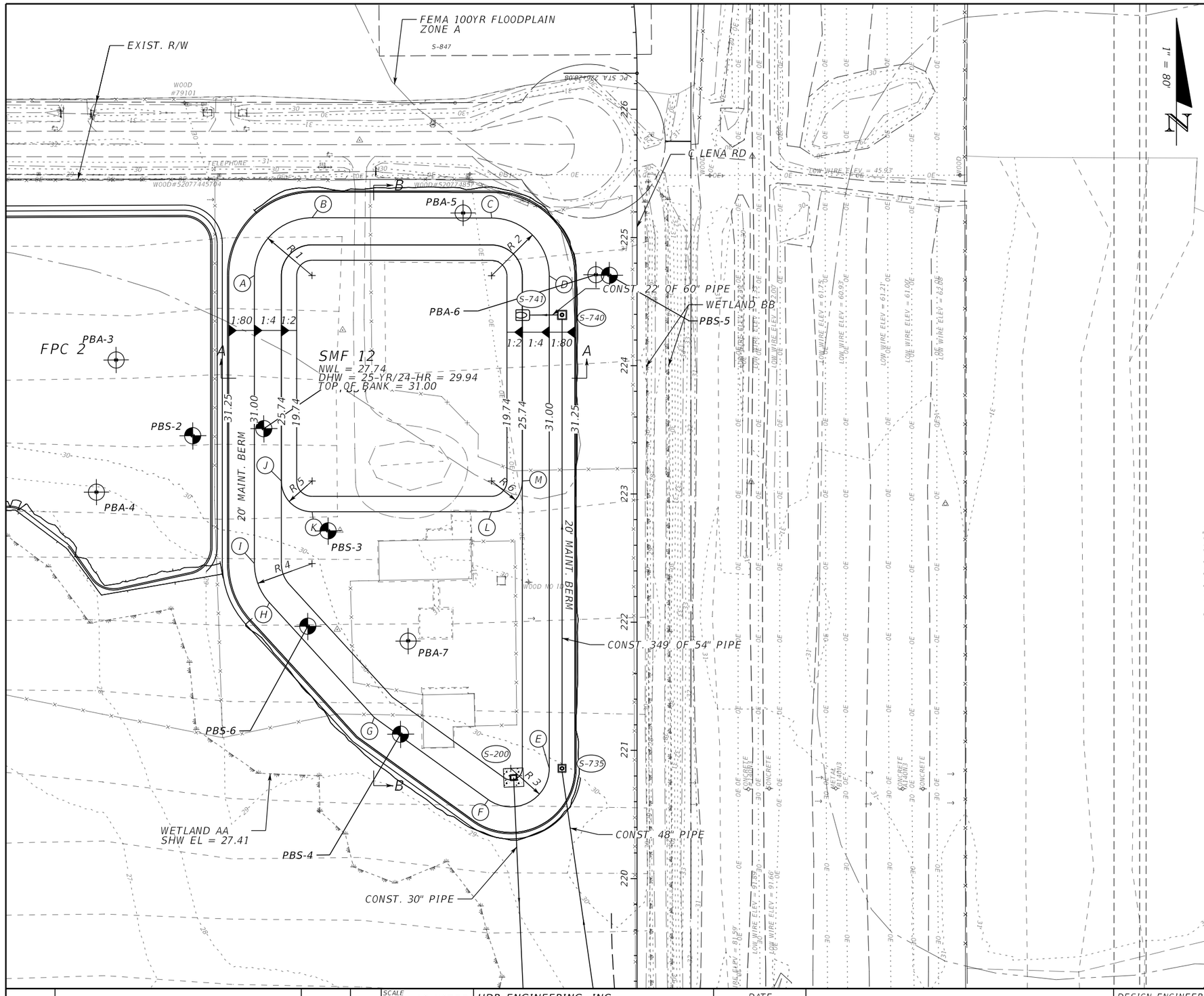
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

DRAINAGE STRUCTURES (34)

SHEET NO.: 85

1:45:03 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD03.dgn



	STA.	OFFSET
A	224+70.36	298.50' LT
B	225+15.36	253.45' LT
C	225+15.20	113.45' LT
D	224+70.20	68.50' LT
E	220+85.94	68.50' LT
F	220+61.61	116.04' LT
G	221+25.68	204.92' LT
H	222+15.29	286.73' LT
I	222+45.63	298.50' LT
J	223+10.11	277.46' LT
K	222+86.11	253.46' LT
L	222+86.11	113.54' LT
M	223+10.11	89.54' LT

NO.	STA.	OFFSET	RADIUS
1	224+70.36	253.50' LT	45'
2	224+70.20	113.50' LT	45'
3	220+85.94	98.50' LT	30'
4	222+45.63	253.50' LT	45'
5	223+10.11	253.46' LT	24'
6	223+10.11	113.54' LT	24'

SMF 12

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

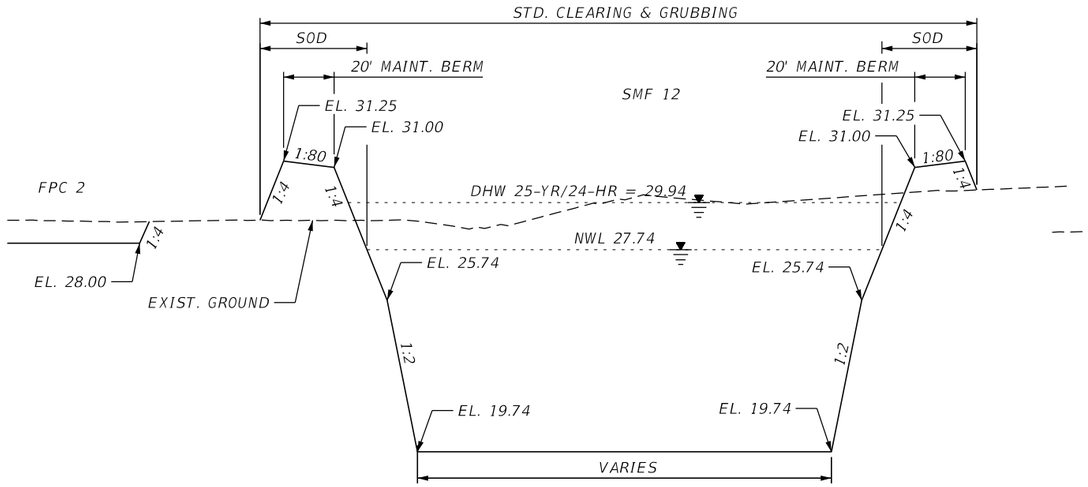
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (1)

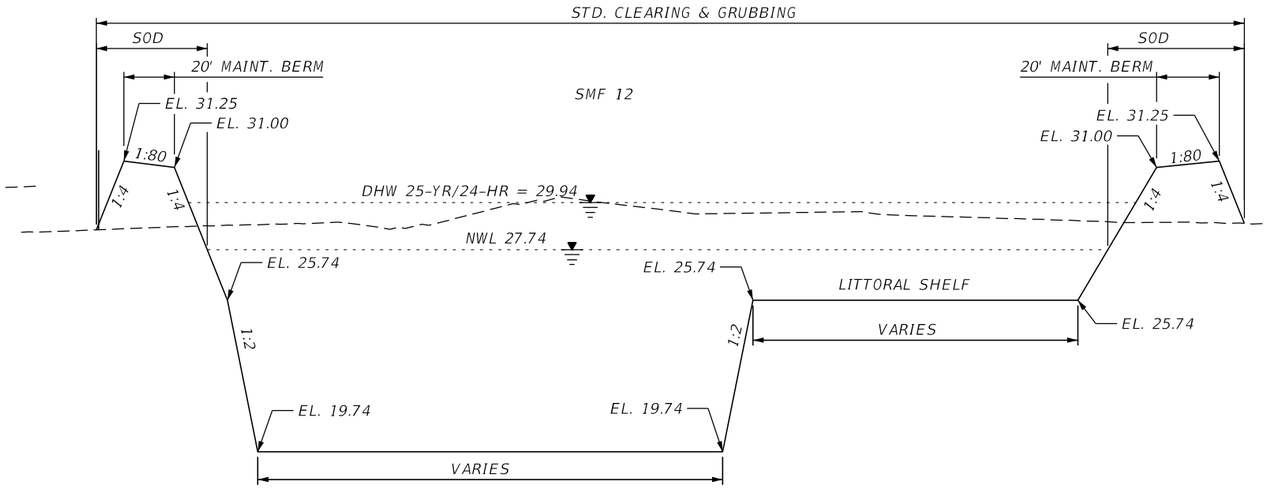
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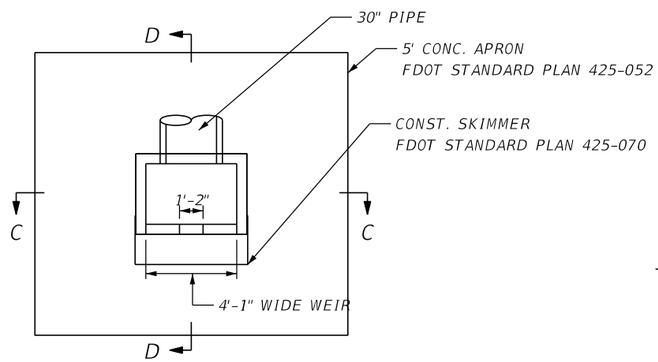
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SECTION A-A
NTS



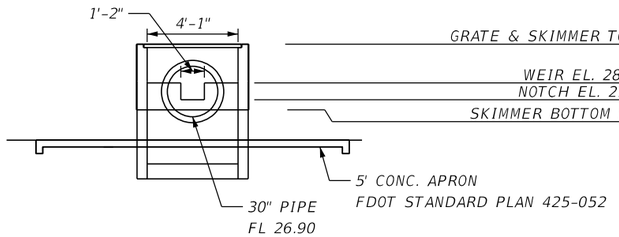
SECTION B-B
NTS



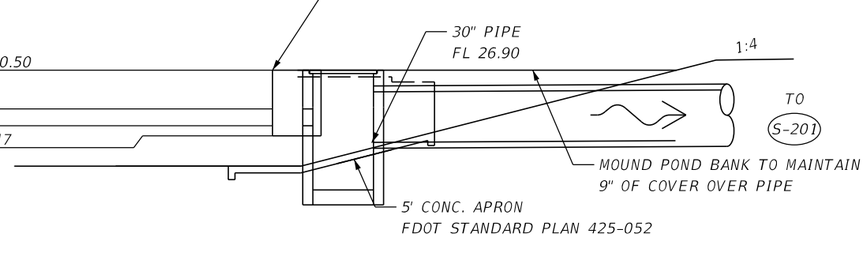
S-200 PLAN VIEW
NTS

S-200

STA. 220+69.82, 95.38' LT
CONST. DBI TYPE D (MODIFIED)
FDOT STANDARD PLAN 425-052
GRATE EL. = 30.50
WEIR EL. = 28.57
NOTCH EL. = 27.74
30" PIPE INV EL = 26.90



SECTION C-C
NTS



SECTION D-D
NTS

NOTES:

1. GALVANIZED STEEL WEIR PLATE MATERIAL SHALL BE STEEL SHEET 0.1345" THICK (10 GAUGE), IN COMPLIANCE WITH FDOT STANDARD SPECIFICATION SECTION 943.
2. BOLTS SHALL BE INSTALLED WITH HEADS ON OUTSIDE OF STRUCTURE TO PRESENT A SMOOTH, SNAG-FREE SURFACE.
3. SEE FDOT STANDARD PLANS 425-070 AND 550-002 FOR ADDITIONAL SKIMMER DETAILS.
4. ONE PERMANENT BENCHMARK WILL BE INSTALLED WITHIN 100 FT OF EACH STORMWATER POND CONTROL STRUCTURE.
5. CONTRACTOR'S SHOP DRAWINGS ARE REQUIRED FOR THE MATERIALS AND FIELD LAYOUT OF ALL STORMWATER POND CONTROL STRUCTURES.

SMF 12

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (2)

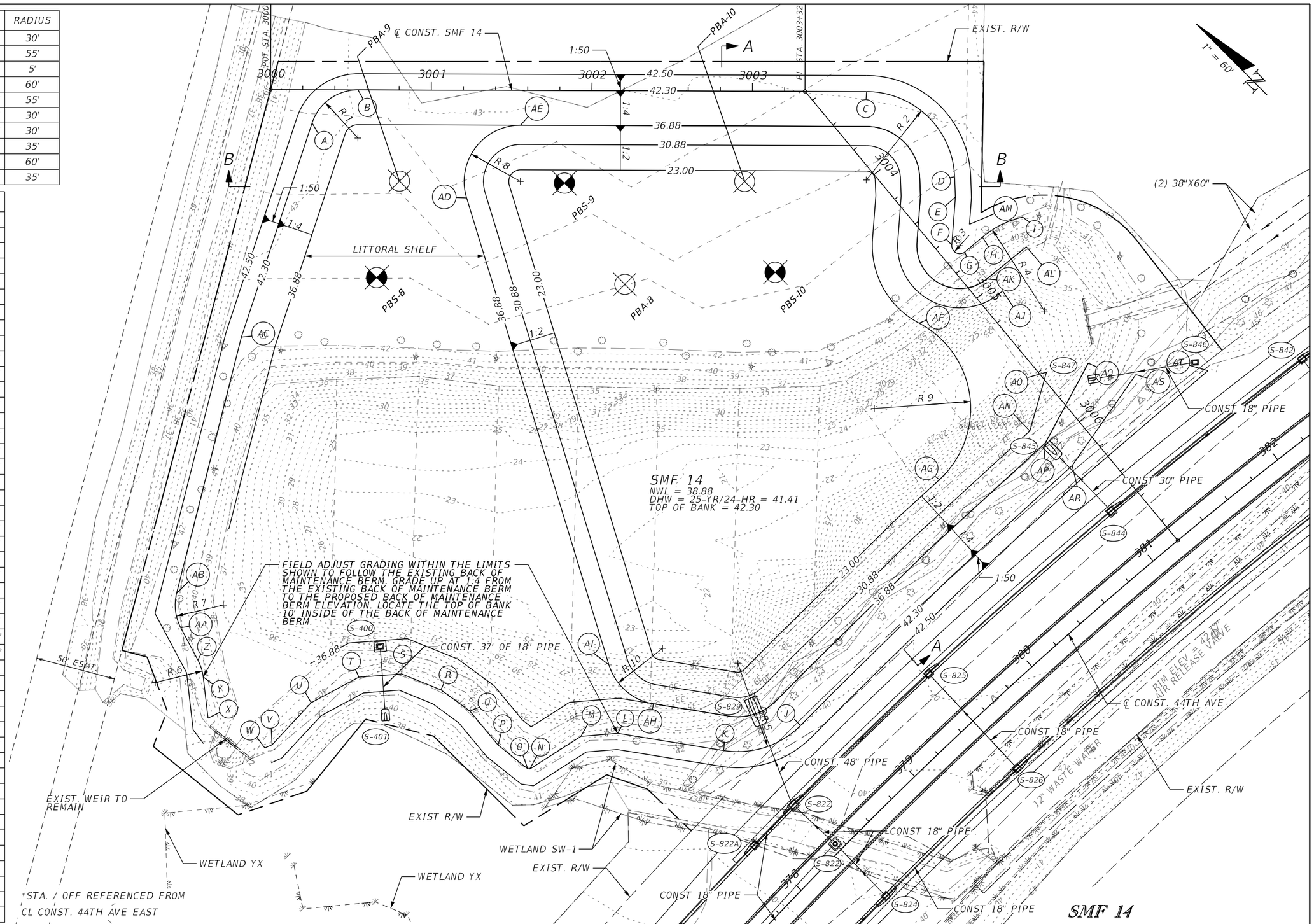
SHEET NO.: 87

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NO.	STA.	OFFSET	RADIUS
1	3000+54.41	30.00' RT	30'
2	3003+99.46	5.85' RT	55'
3	3004+68.10	12.76' LT	5'
4	3005+33.01	27.39' LT	60'
5	3005+79.82	259.51' RT	55'
6	3003+57.46	546.19' RT	30'
7	3003+47.40	482.81' RT	30'
8	3001+55.65	56.68' RT	35'
9	3005+12.08	92.90' RT	60'
10	3005+42.75	289.63' RT	35'

	STA.	OFFSET
A	3000+25.89	20.68' RT
B	300+54.41	0.00' RT
C	3003+57.26	29.42' LT
D	3004+33.03	37.72' LT
E	3004+43.11	29.95' LT
F	3004+64.63	9.16' LT
G	3004+73.11	12.79' LT
H	3004+73.01	27.01' LT
I	3004+79.37	54.26' LT
J	3006+34.56	254.19' RT
K	3006+15.98	300.96' RT
L	3005+65.57	344.94' RT
M	3005+52.40	363.73' RT
N	3005+47.75	401.23' RT
O	3005+46.78	402.12' RT
P	3005+23.66	406.91' RT
Q	3001+25.34	386.39' RT
R	3001+07.28	373.23' RT
S	3000+82.82	363.40' RT
T	3000+56.12	365.51' RT
U	3000+26.55	381.53' RT
V	3000+02.28	407.81' RT
W	3004+32.30	519.73' RT
X	3003+95.45	535.09' RT
Y	3003+73.80	521.03' RT
Z	3003+63.57	516.82' RT
AA	3003+21.29	512.19' RT
AB	376+80.60*	411.19' LT*
AC	378+05.41*	489.89' LT*
AD	3001+22.21	67.00' RT
AE	3001+55.65	21.68' RT
AF	3004+89.02	37.50' RT
AG	3005+72.00	89.93' RT
AH	3005+65.76	316.00' RT
AI	3005+29.22	321.91' RT
AJ	3005+06.81	15.29' LT
AK	3004+94.78	12.49' LT
AL	3004+95.10	44.24' LT
AM	3004+61.68	25.92' LT
AN	3005+84.69	27.33' RT
AO	3005+63.10	4.01' LT
AP	3005+96.57	24.71' RT
AQ	3005+75.41	27.60' LT
AR	3006+18.08	20.79' RT
AS	3005+99.80	45.81' LT
AT	3006+26.60	81.96' LT



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

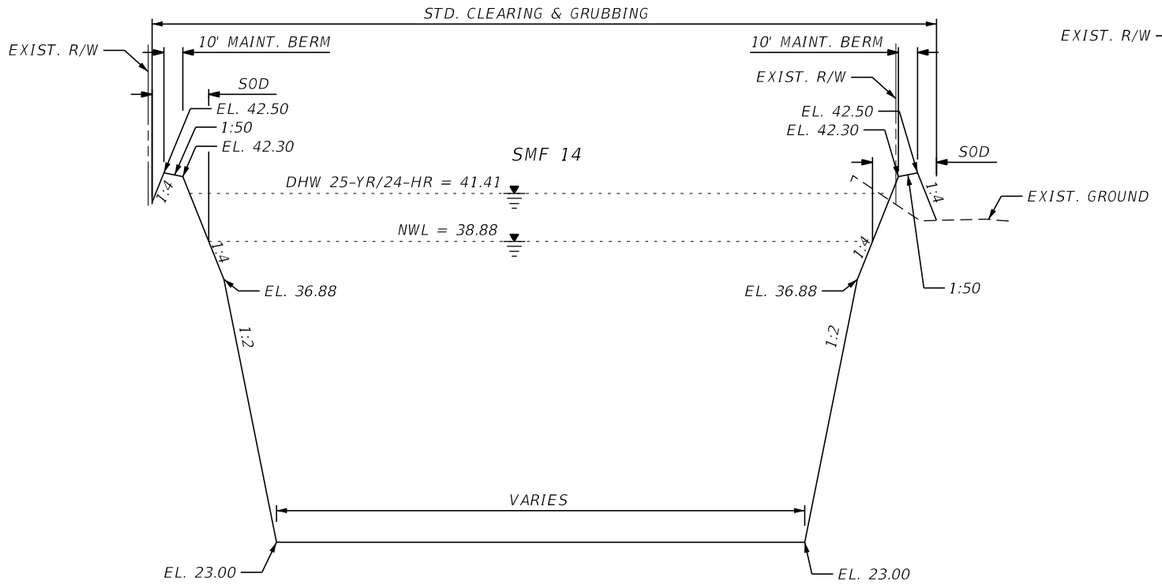
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (3)

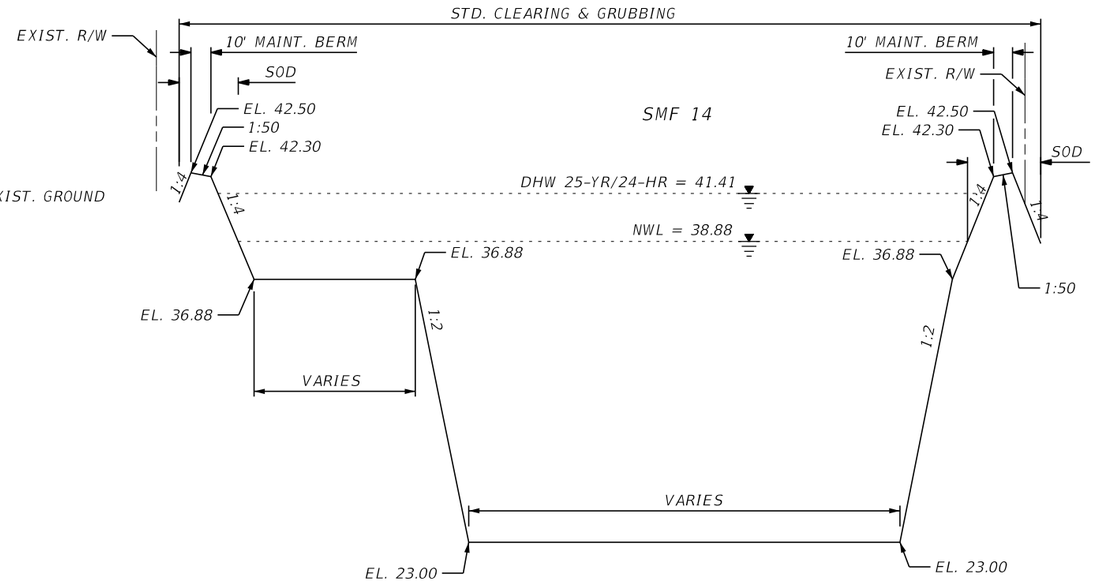
SHEET NO.: 88

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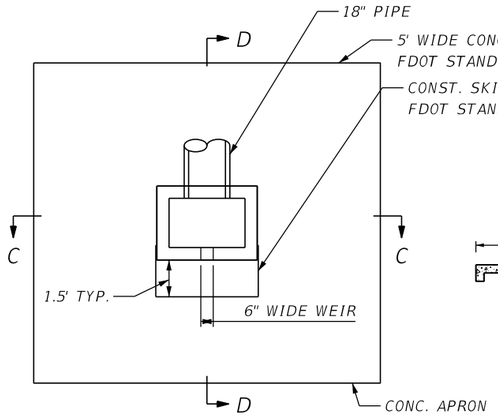
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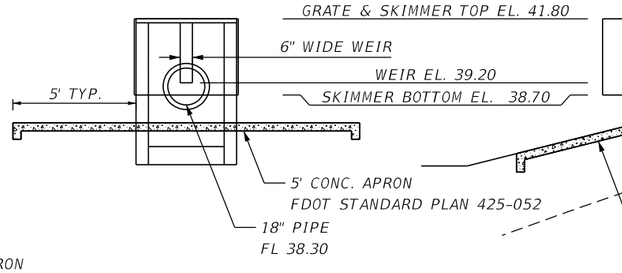
SECTION A-A
NTS



SECTION B-B
NTS



S-400 PLAN VIEW
NTS



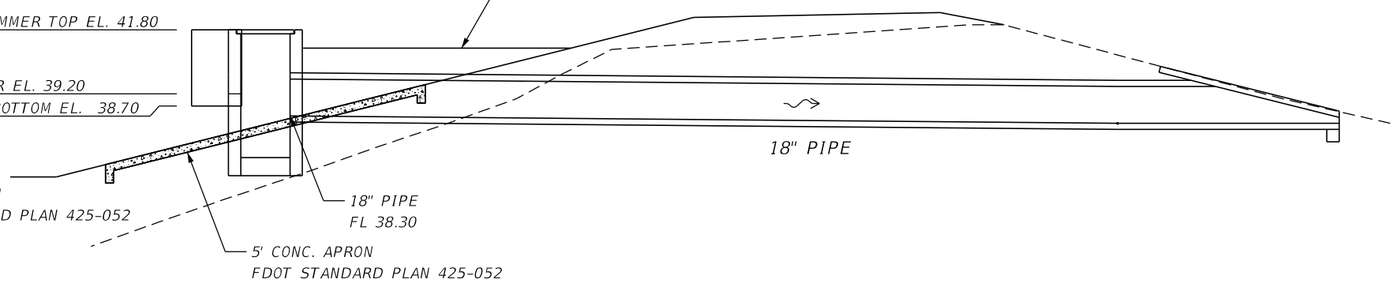
SECTION C-C
NTS

S-400

STA. 3000+69.34, 346.40' RT)
CONST. DBI TYPE C (MODIFIED)
FDOT STANDARD PLAN 425-052
GRATE EL. 41.80
WEIR EL. = 39.20
18" PIPE INV EL = 38.30

S-401

STA. 3000+72.47, 385.48' RT
CONST. 18" CD MES (1:4)
FDOT STANDARD PLAN 430-021
FL 38.00



SECTION D-D
NTS

SMF 14

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (4)

SHEET NO.: 89

1:47:11 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\PDPLRD03.DGN

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NO.	STA.	OFFSET	RADIUS
FPC 1 (℄ FPC)			
1	1008+12.21	81.39' LT	25'
2	1008+12.21	30.00' LT	25'
FPC 2 (℄ LENA RD)			
3	224+93.78	648.58' LT	21'
4	224+95.29	353.50' LT	21'
5	222+58.31	352.54' LT	20'
6	222+46.10	408.33' LT	20'
7	222+45.62	457.01' LT	20'
8	222+70.54	489.57' LT	20'
9	223+05.31	555.10' LT	20'
10	222+75.67	602.38' LT	20'
11	223+18.44	650.25' LT	20'

	STA.	OFFSET
FPC 1 (℄ FPC)		
A	1008+12.21	106.39' LT
B	1008+37.21	81.39' LT
C	1008+37.21	30.00' LT
D	1008+12.21	5.00' LT
E	1002+20.17	106.39' LT
F	1002+18.23	102.39' LT
G	1002+16.23	98.39' LT
H	1002+16.19	13.00' LT
I	1002+18.16	9.00' LT
J	1002+20.14	5.00' LT
FPC 2 (℄ LENA RD)		
K	224+93.86	669.54' LT
L	225+14.74	648.68' LT
M	225+16.25	353.61' LT
N	224+95.29	332.54' LT
O	222+58.31	332.54' LT
P	222+38.77	348.27' LT
Q	222+26.56	404.06' LT
R	222+34.54	424.65' LT
S	222+57.18	440.70' LT
T	222+61.50	444.86' LT
U	222+86.42	477.42' LT
V	222+90.47	491.20' LT
W	222+85.37	553.47' LT
X	222+85.88	559.84' LT
Y	222+95.10	597.64' LT
Z	222+95.64	601.25' LT
AA	222+98.48	651.38' LT
AB	223+18.53	670.25' LT

EXIST. R/W
℄ CONST. FPC
TOB 30.0
29.0
28.0
1:4
FLOODPLAIN COMPENSATION AREA 1
3.05 AC-FT
ESTIMATED BFE=30.8
SHWT=27.74
FEMA 100-YR FLOODPLAIN ZONE A
1005
FLOODPLAIN COMPENSATION AREA 2
4.38 AC-FT
ESTIMATED BFE=30.8
SHWT=27.74
27.74
28.0
29.0
30.0
12.00'
WETLAND AA
WETLAND BB
FEMA 100-YR FLOODPLAIN ZONE A
SMF 12
SEE SMF 12 PLAN SHEET FOR SMF 12 DESIGN DETAIL
CONST. 22' OF 60" PIPE
S-741
S-740
℄ LENA RD
CONST. 349' OF 54" PIPE
S-200
S-735
CONST. 48" PIPE
CONST. 30" PIPE
EXIST. I-75 R/W
EASEMENT LINE
CONST. 18" PIPE
CONST. 24" PIPE
CONST. 36" PIPE
℄ CONST. 44TH AVE
PROP R/W
EXIST. R/W
S-201
S-714
S-715
S-710B
S-710A
S-716
S-710
S-707
CD-01
S-701
S-704
S-703
S-706
S-709
S-709C
S-719
325
350
335
220
225
N
1" = 100'

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FLOODPLAIN COMPENSATION AREAS

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

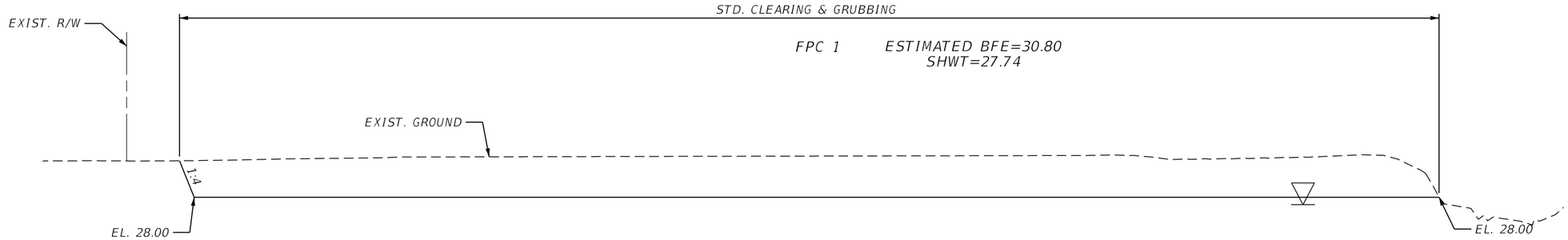
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (5)

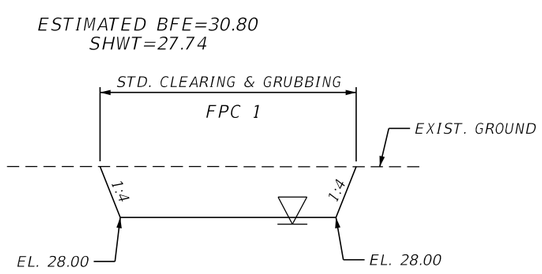
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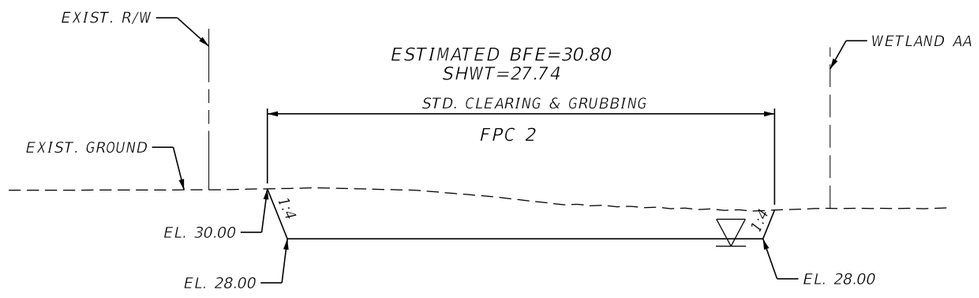
SECTION A-A

NTS



SECTION B-B

NTS



SECTION C-C

NTS

FLOODPLAIN COMPENSATION AREAS 1 & 2

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (6)

SHEET NO.: 91

1:48:32 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\PDPLRD03.DGN

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CONST. DBL 5'X7' CONC. BOX CULVERT

CD-06

1" = 20'

N

WILLIAMS CREEK

27

26

28

206

CONST. 38"X60" PIPE

PC STA. 205+53.93

℄ LENA RD

205

29

62

WC-01

EXIST. R/W

29.00

FLOODPLAIN COMPENSATION AREA 4 0.05 AC-FT ESTIMATED BFE=30.10 SHWT=29.00

S-501

CONST. 15" PIPE

1:4

1:8 OR FLATTER

R 5

R 6

R 1

R 4

R 3

R 2

1:40

10' MAINT. BERM

S-500

S-903

SMF 15
NWL = 29.00
DHW = 25-YR/24-HR = 30.31
TOP OF BANK = 31.40

FPC 3

CONST. 18" PIPE

EXIST. R/W

SMF 15

	STA.	OFFSET
A	205+60.52	99.89' RT
B	205+35.14	129.04' RT
C	204+97.07	98.23' RT
D	205+20.15	66.55' RT
E	205+60.92	86.85' RT
F	205+57.67	68.99' RT
G	205+70.00	71.27' RT
H	206+00.66	70.67' RT
I	206+16.83	105.49' RT
J	206+28.48	114.34' RT
K	205+87.02	136.58' RT
L	205+81.17	130.06' RT

NO.	STA.	OFFSET	RADIUS
1	205+48.23	114.45' RT	20'
2	201+26.70	481.07' LT	481'
3	205+08.61	82.39' RT	20'
4	201+26.70	481.07' RT	521'
4	205+70.01	75.67' RT	15'
4	205+85.11	132.10' RT	5'

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

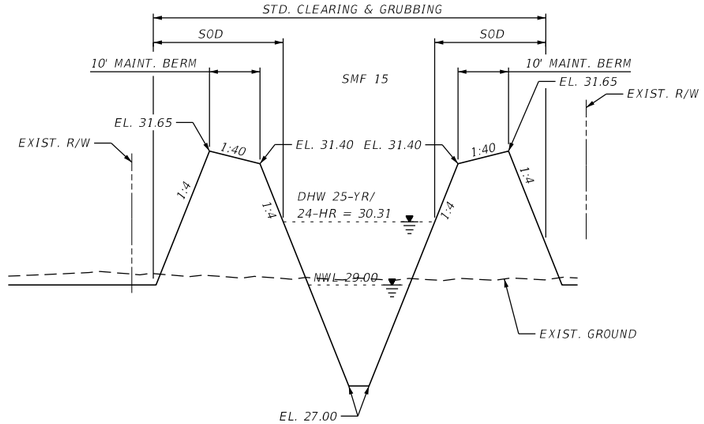
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (7)

SHEET NO.: 92

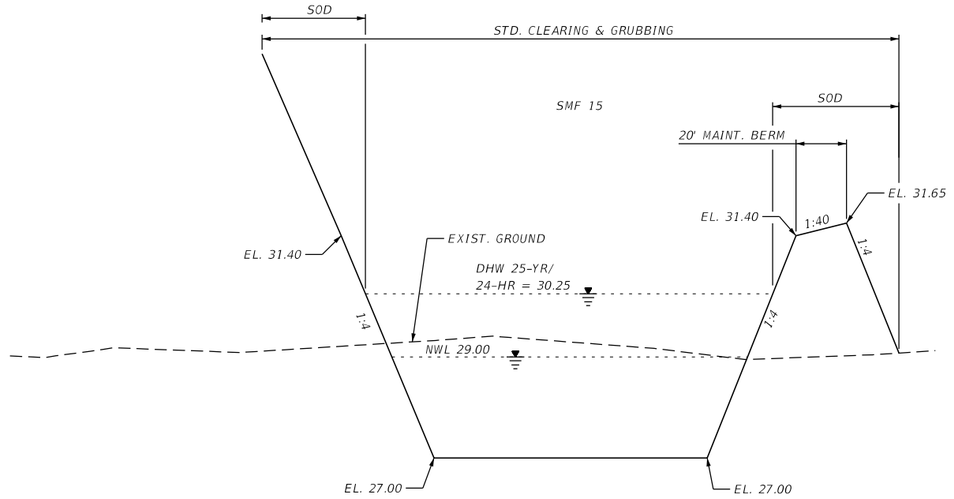
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SECTION A-A

NTS

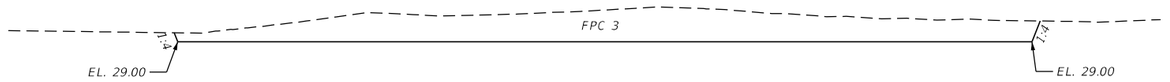


SECTION B-B

NTS

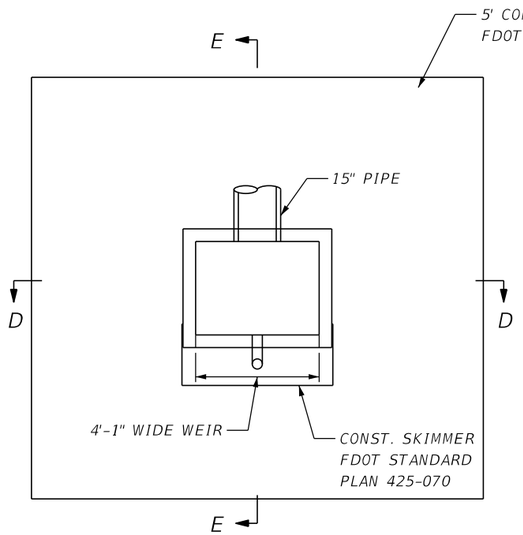
S-500

STA. 205+50.28, 113.37' RT
CONST. DBI TYPE D (MODIFIED)
FDOT STANDARD PLAN 425-052
GRATE EL. = 30.90
WEIR EL. = 30.00
30" PIPE INV EL = 29.00



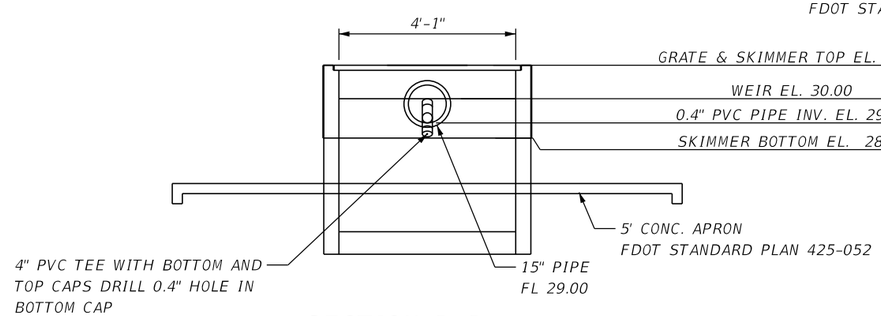
SECTION C-C

NTS



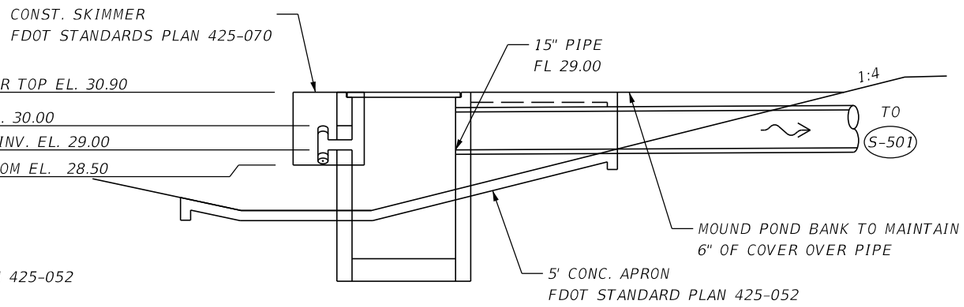
S-200 PLAN VIEW

NTS



SECTION D-D

NTS



SECTION E-E

NTS

SMF 15/FPC 3

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

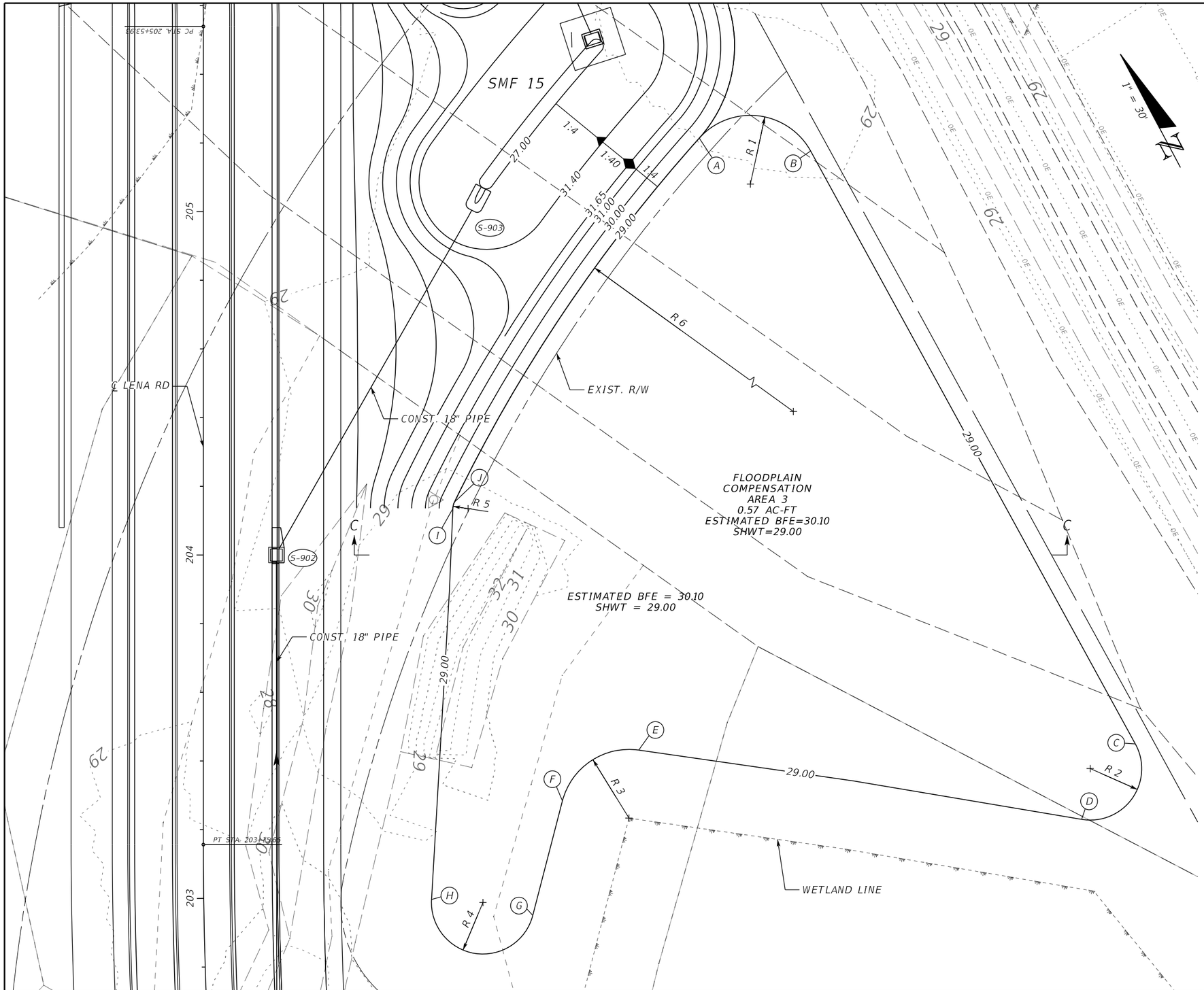
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (8)

SHEET NO.: 93

1:48:36 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\PDPLRD03.DGN

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	STA.	OFFSET
A	205+21.39	144.38' RT
B	205+17.64	176.81' RT
C	203+44.99	271.34' RT
D	203+23.00	255.69' RT
E	203+43.16	126.73' RT
F	203+28.37	104.54' RT
G	202+95.04	95.91' RT
H	202+99.66	66.42' RT
I	204+13.52	72.65' RT
J	204+15.42	73.09' RT

NO.	STA.	OFFSET	RADIUS
1	205+08.03	159.26' RT	20'
2	203+37.79	258.19' RT	15'
3	203+23.36	123.90' RT	20'
4	202+98.79	81.39' RT	15'
4	204+13.50	77.05' RT	4'
4	201+26.70	481.07' RT	210'

FPC 3

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: AMS
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

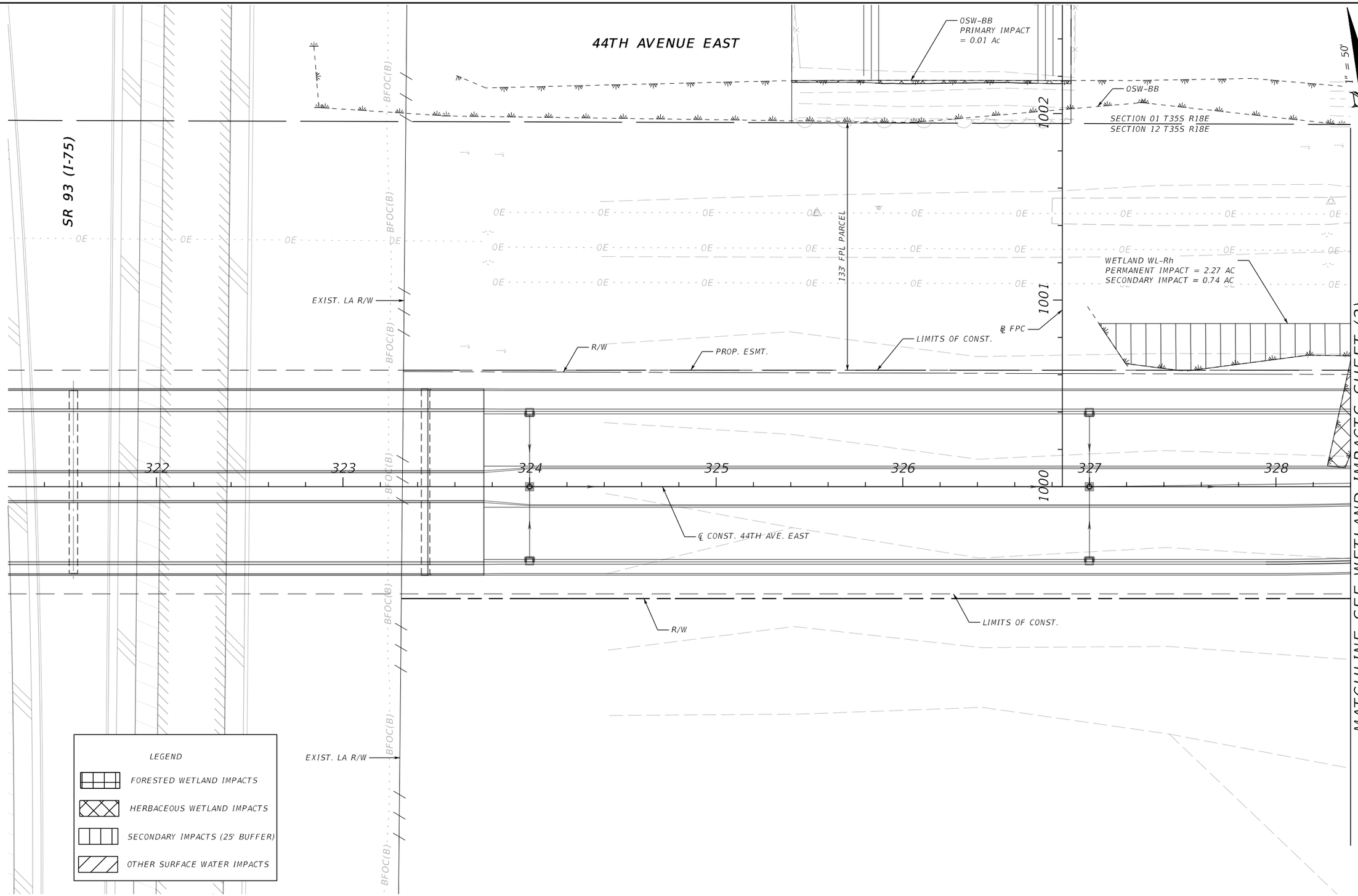
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

POND PLAN (9)

SHEET NO.: 94

1:48:41 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\PDPLRD03.DGN

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (1)

SHEET NO.: 95

1:49:00 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

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MATCHLINE SEE WETLAND IMPACTS SHEET (8)

1" = 50'

SECTION 01 T35S R18E
SECTION 12 T35S R18E

OSW-BB

44TH AVENUE EAST

WETLAND WL-Rf
PERMANENT IMPACT = 0.06 AC
SECONDARY IMPACT = 0.02 AC

131' FPL PARCEL

R/W

WETLAND WL-Rh
PERMANENT IMPACT = 2.27 AC
SECONDARY IMPACT = 0.74 AC

LIMITS OF CONSTRUCTION

329 330 331 332 333 334 335

218 217 216 215

℄ CONST. 44TH AVE. EAST

R/W

LIMITS OF CONSTRUCTION

WETLAND WL-Rh
PERMANENT IMPACT = 2.27 AC
SECONDARY IMPACT = 0.74 AC

WETLAND WL-Rf
PERMANENT IMPACT = 0.47 AC
SECONDARY IMPACT = 0.06 AC

MANATEE COUNTY PARCEL

LENA ROAD

LEGEND

- FORESTED WETLAND IMPACTS
- HERBACEOUS WETLAND IMPACTS
- SECONDARY IMPACTS (25' BUFFER)
- OTHER SURFACE WATER IMPACTS

MATCHLINE SEE WETLAND IMPACTS SHEET (1)

MATCHLINE SEE WETLAND IMPACTS SHEET (3)

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (2)

SHEET NO.: 96

1:49:04 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

MATCHLINE SEE WETLAND IMPACTS SHEET (2)

44TH AVENUE EAST

FPL EASEMENT

SECTION 01 T35S R18E
SECTION 12 T35S R18E

1" = 50'

WETLAND WL-F

WETLAND WL-PoW
PERMANENT IMPACT = 0.42 AC
SECONDARY IMPACT = 0.10 AC

WETLAND WL-F
PERMANENT IMPACT = 1.06 AC
SECONDARY IMPACT = 0.23 AC

WILDLIFE CROSSING
38"X60" PIPE

LIMITS OF CONSTRUCTION

R/W

337 338 339 340 341 342 343

℄ CONST. 44TH AVE. EAST

R/W

LIMITS OF CONSTRUCTION

WETLAND WL-PoW
PERMANENT IMPACT = 0.42 AC
SECONDARY IMPACT = 0.09 AC

WETLAND WL-F
PERMANENT IMPACT = 1.06 AC
SECONDARY IMPACT = 0.23 AC

WETLAND WL-F

WETLAND WL-F

OSW-AA

LEGEND

- FORESTED WETLAND IMPACTS
- HERBACEOUS WETLAND IMPACTS
- SECONDARY IMPACTS (25' BUFFER)
- OTHER SURFACE WATER IMPACTS

SOUTHEAST WATER RECLAMATION FACILITY (SEWRF)

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (3)

SHEET NO.: 97

1:49:08 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

44TH AVENUE EAST

SEWRF

1" = 50'

360 361 362 363 364 365 366 367

WETLAND WL-XY
PERMANENT IMPACT = 1.85 AC
SECONDARY IMPACT = 0.63 AC

OSW-CC

WETLAND WL-XY
PERMANENT IMPACT = 1.85 AC
SECONDARY IMPACT = 0.63 AC

WETLAND WL-XY

EAGLE'S NEST

WETLAND WL-XY
PERMANENT IMPACT = 0.09 AC
SECONDARY IMPACT = 0.07 AC

LIMITS OF CONST.

R/W

WILDLIFE CROSSING
38"X60" PIPE

℄ CONST. 44TH AVE. EAST

R/W

LIMITS OF CONST.

WETLAND WL-V
PERMANENT IMPACT = 0.003 AC
SECONDARY IMPACT = 0.02 AC

WETLAND WL-V

LEGEND

- FORESTED WETLAND IMPACTS
- HERBACEOUS WETLAND IMPACTS
- SECONDARY IMPACTS (25' BUFFER)
- OTHER SURFACE WATER IMPACTS

S(B) NPW(B) W(B)

MATCHLINE SEE WETLAND IMPACTS SHEET (5)

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SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

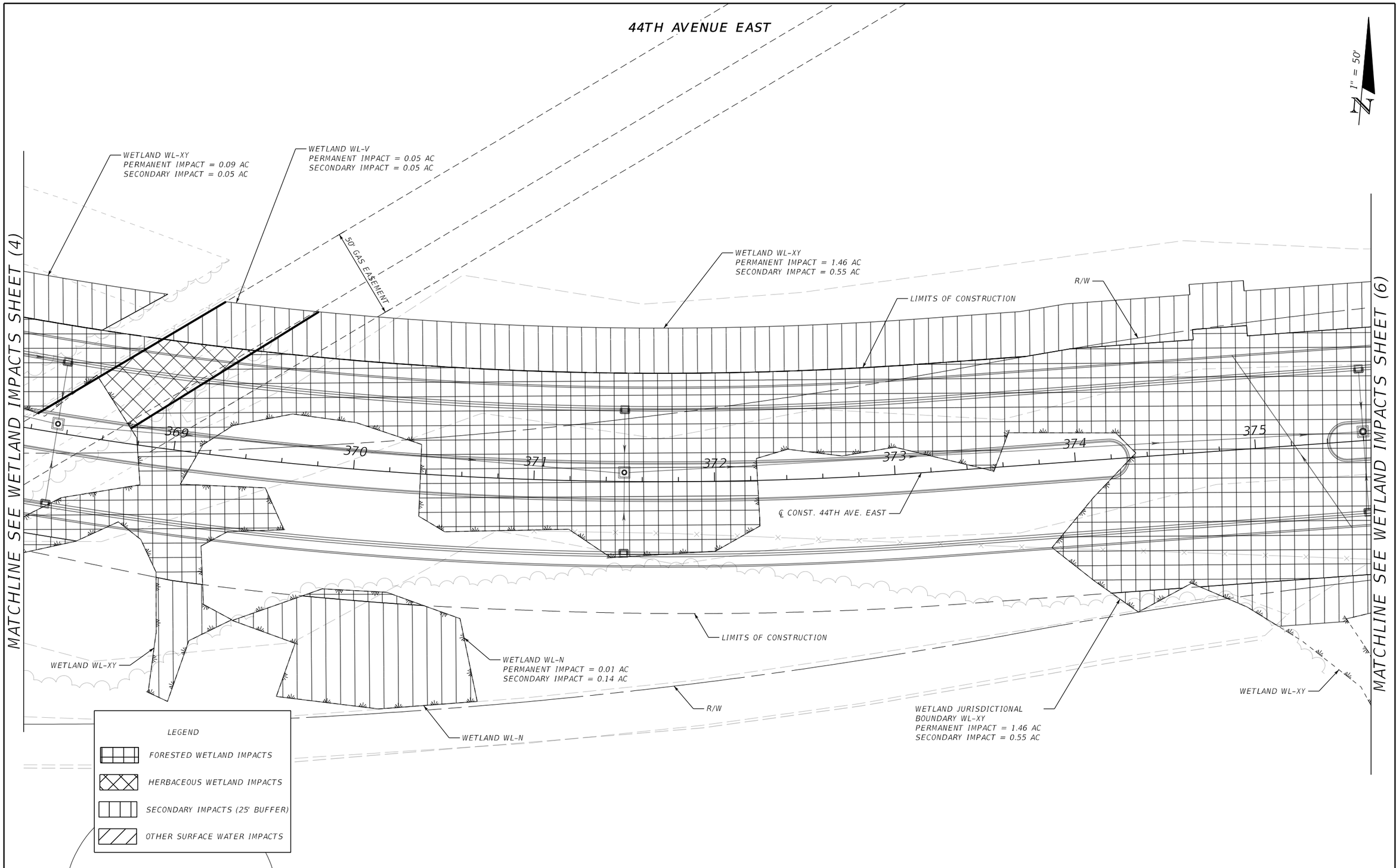
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (4)

SHEET NO.: 98

1:49:12 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

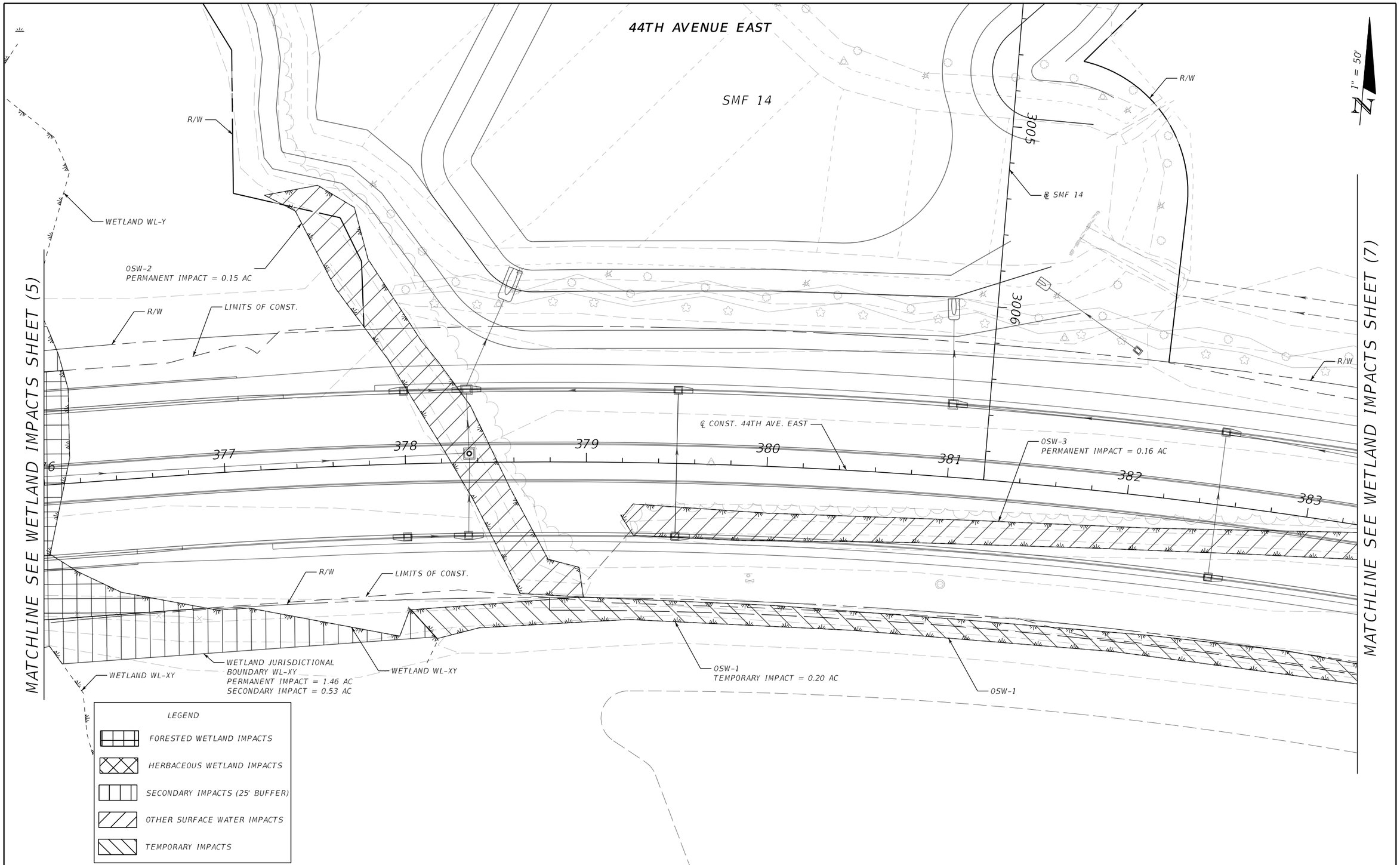
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (5)

SHEET NO.: 99

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (6)

SHEET NO.: 100

1:49:20 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

44TH AVENUE EAST

1" = 50'

MATCHLINE SEE WETLAND IMPACTS SHEET (6)

LIMITS OF CONSTRUCTION

OSW-5
PERMANENT IMPACT = 0.09 AC

R/W

384 385 386 387 388 389 390 391

℄ CONST. 44TH AVE. EAST

OSW-1

LIMITS OF CONST.

R/W

OSW-1
TEMPORARY IMPACT = 0.20 AC

WETLAND WL -Z
PERMANENT IMPACT = 0.12 AC
SECONDARY IMPACT = 0.12 AC

S(B) NPW(B)

LEGEND

- FORESTED WETLAND IMPACTS
- HERBACEOUS WETLAND IMPACTS
- SECONDARY IMPACTS (25' BUFFER)
- OTHER SURFACE WATER IMPACTS
- TEMPORARY IMPACTS

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (7)

SHEET NO.: 101

1:49:24 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

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LEGEND

FORESTED WETLAND IMPACTS

HERBACEOUS WETLAND IMPACTS

SECONDARY IMPACTS (25' BUFFER)

OTHER SURFACE WATER IMPACTS

MATCHLINE SEE WETLAND IMPACTS SHEET (2)

SECTION 01 T35S R18E

OSW-BB

WETLAND WL-G

COMP. AREA 2

1" = 50'

SMF 12
2.77 AC

WL-G
PERMANENT IMPACT = 0.06 AC
SECONDARY IMPACT = 0.02 AC

LIMITS OF CONSTRUCTION

℄ CONST. LENA RD.

219 220 221 222 223 OSW-BB 224 225

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (8)

SHEET NO.: 102

1:49:28 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

LENA ROAD

1" = 50'

WETLAND WL-WC
PERMANENT IMPACT = 0.26 AC
SECONDARY IMPACT = 0.15 AC

WETLAND WL-WC

WETLAND WL-S

WILDLIFE CROSSING
38"X60" PIPE

LIMITS OF CONST.

R/W

WETLAND WL-S
PERMANENT IMPACT = 0.27 AC
SECONDARY IMPACT = 0.16 AC

℄ CONST. LENA RD.

205 206 207 208 209 210 211 212

WILDLIFE CROSSING
38"X60" PIPE

EXIST. R/W

GOV. SECTION LINE

LIMITS OF CONST.

WETLAND WL-WC

LEGEND

- FORESTED WETLAND IMPACTS
- HERBACEOUS WETLAND IMPACTS
- SECONDARY IMPACTS (25' BUFFER)
- OTHER SURFACE WATER IMPACTS

No.	REVISIONS	DATE	BY

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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

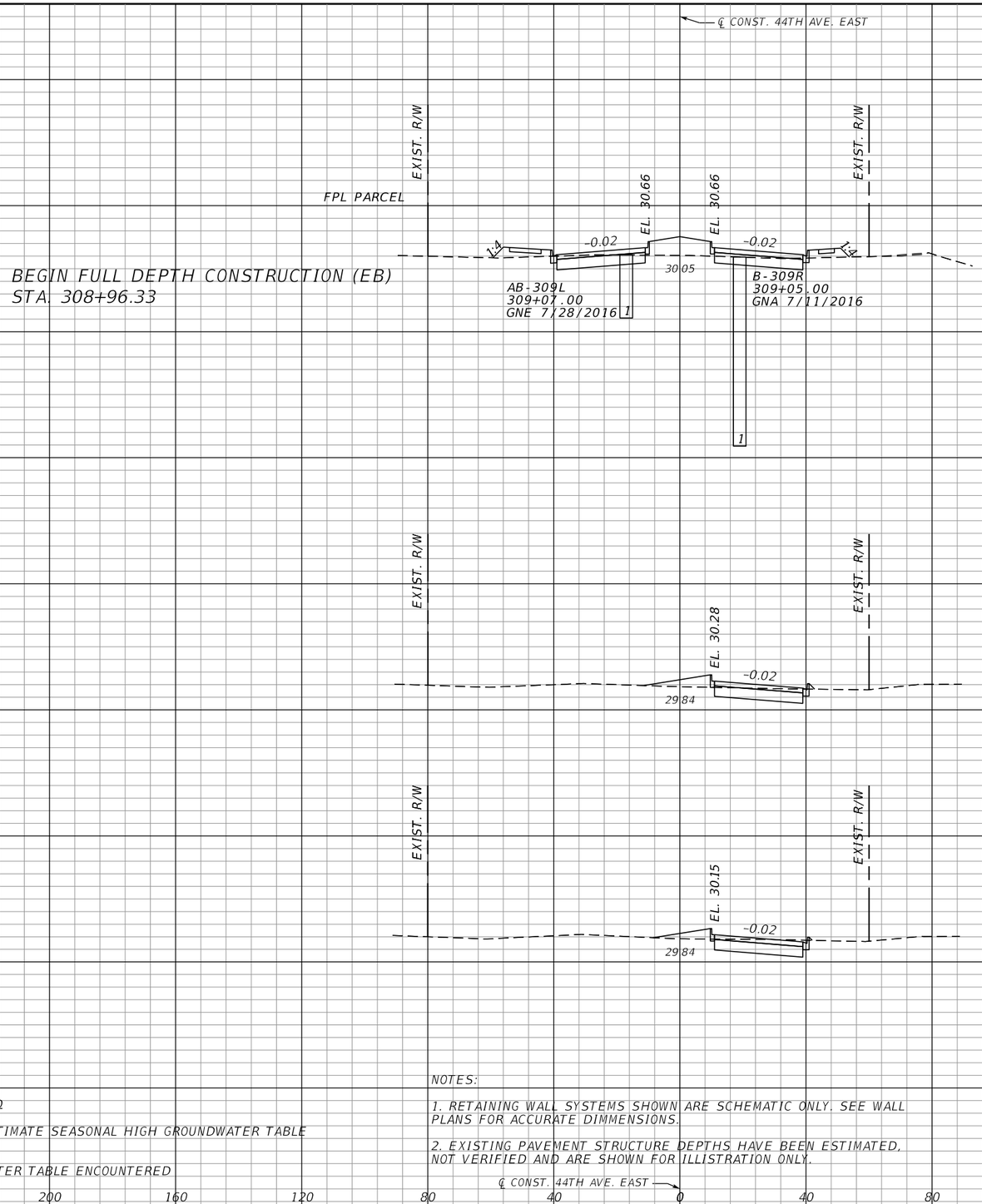
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

WETLAND IMPACTS (9)

SHEET NO.: 103

1:49:32 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\emo\WETLEM03.dgn

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



Regular Exc.		Embankment	
A	V	A	V
47	138	40	95
27	36	11	12
33	0	8	0

NOTES:

1. RETAINING WALL SYSTEMS SHOWN ARE SCHEMATIC ONLY. SEE WALL PLANS FOR ACCURATE DIMMENSIONS.

2. EXISTING PAVEMENT STRUCTURE DEPTHS HAVE BEEN ESTIMATED, NOT VERIFIED AND ARE SHOWN FOR ILLISTRATION ONLY.

LEGEND

▼ ESTIMATE SEASONAL HIGH GROUNDWATER TABLE

▽ WATER TABLE ENCOUNTERED

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

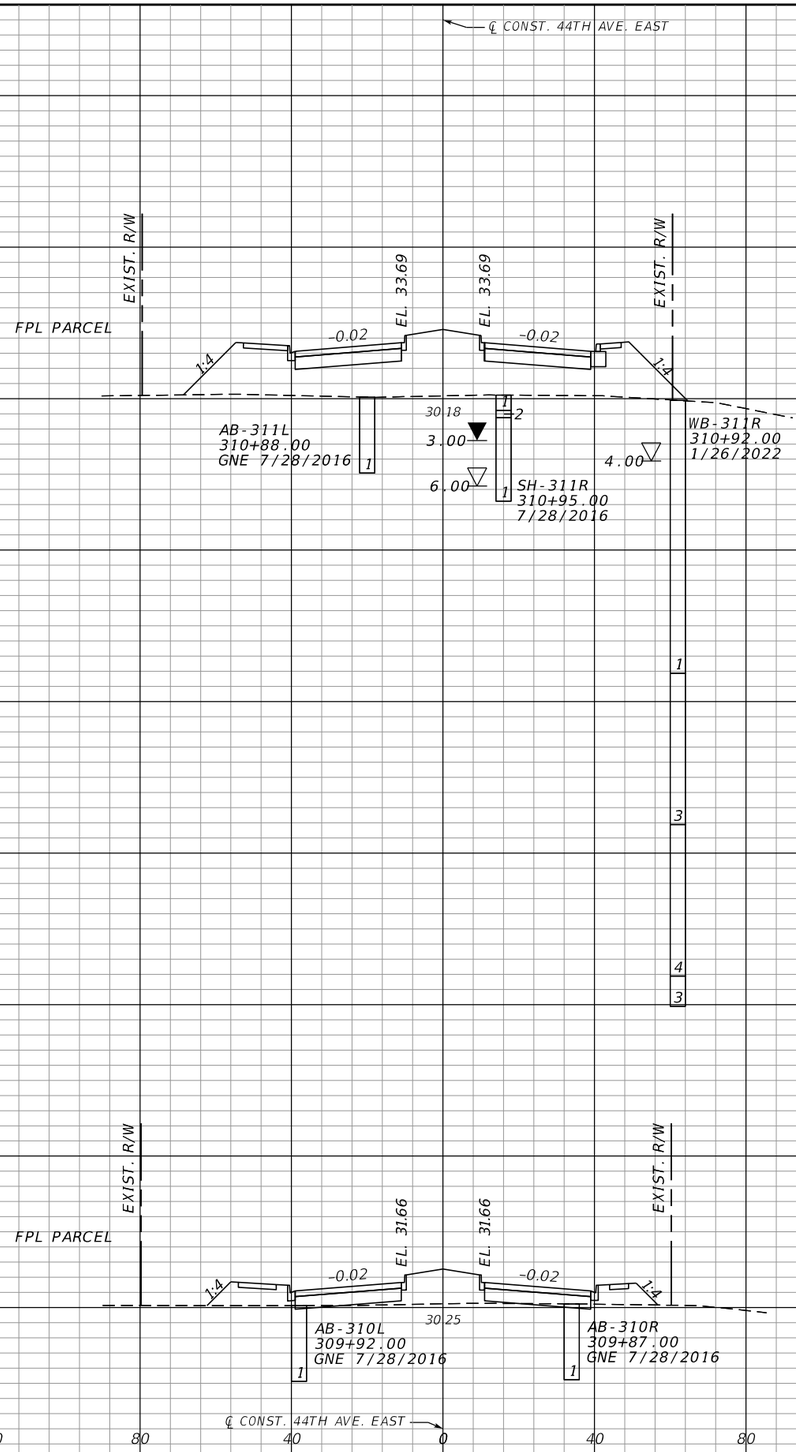
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 104

1:49:52 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn

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



Regular Exc.		Embankment	
A	V	A	V
0	10	330	771
5	97	86	234

				SCALE	AS NOTED	DATE	SHEET NO.
				DESIGNED BY	JLS	02/2022	105
				DRAWN BY	TME	PROJECT NO.	
				CHECKED BY	TTT	6045662	
No.	REVISIONS	DATE	BY				

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

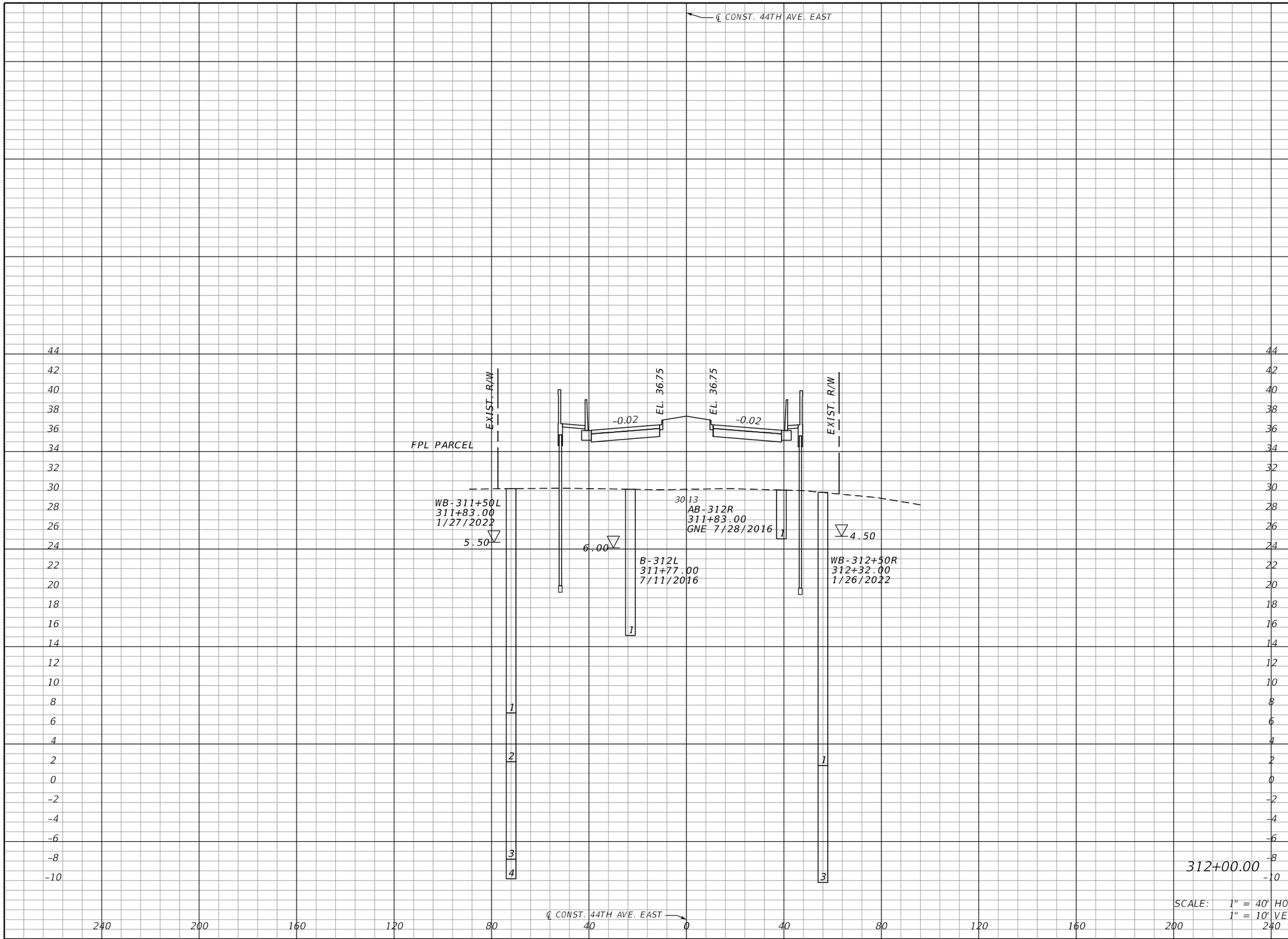
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO. 70171

CROSS SECTIONS

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SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	556	1641

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

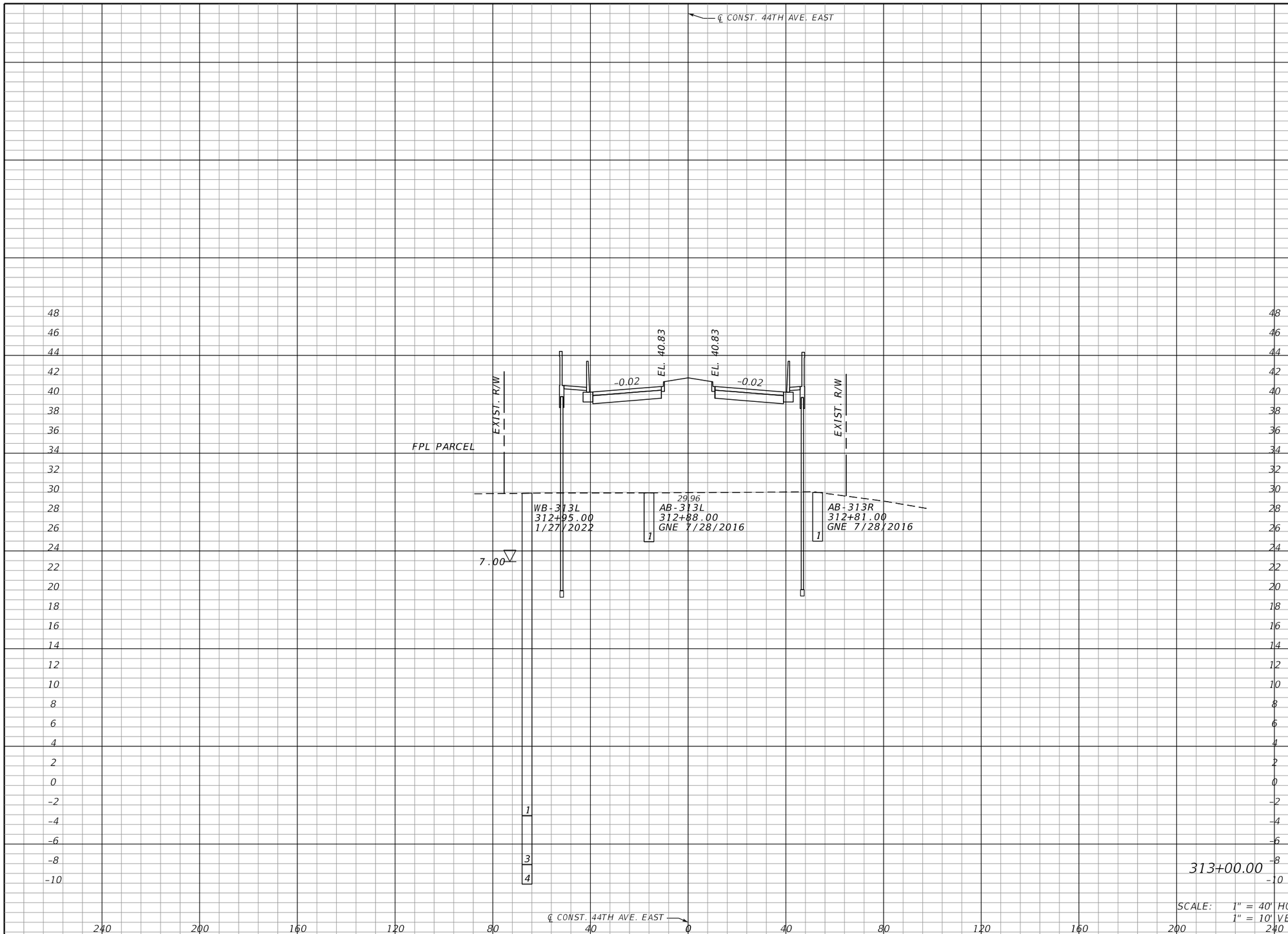
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 106

1:49:58 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	970	2826

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

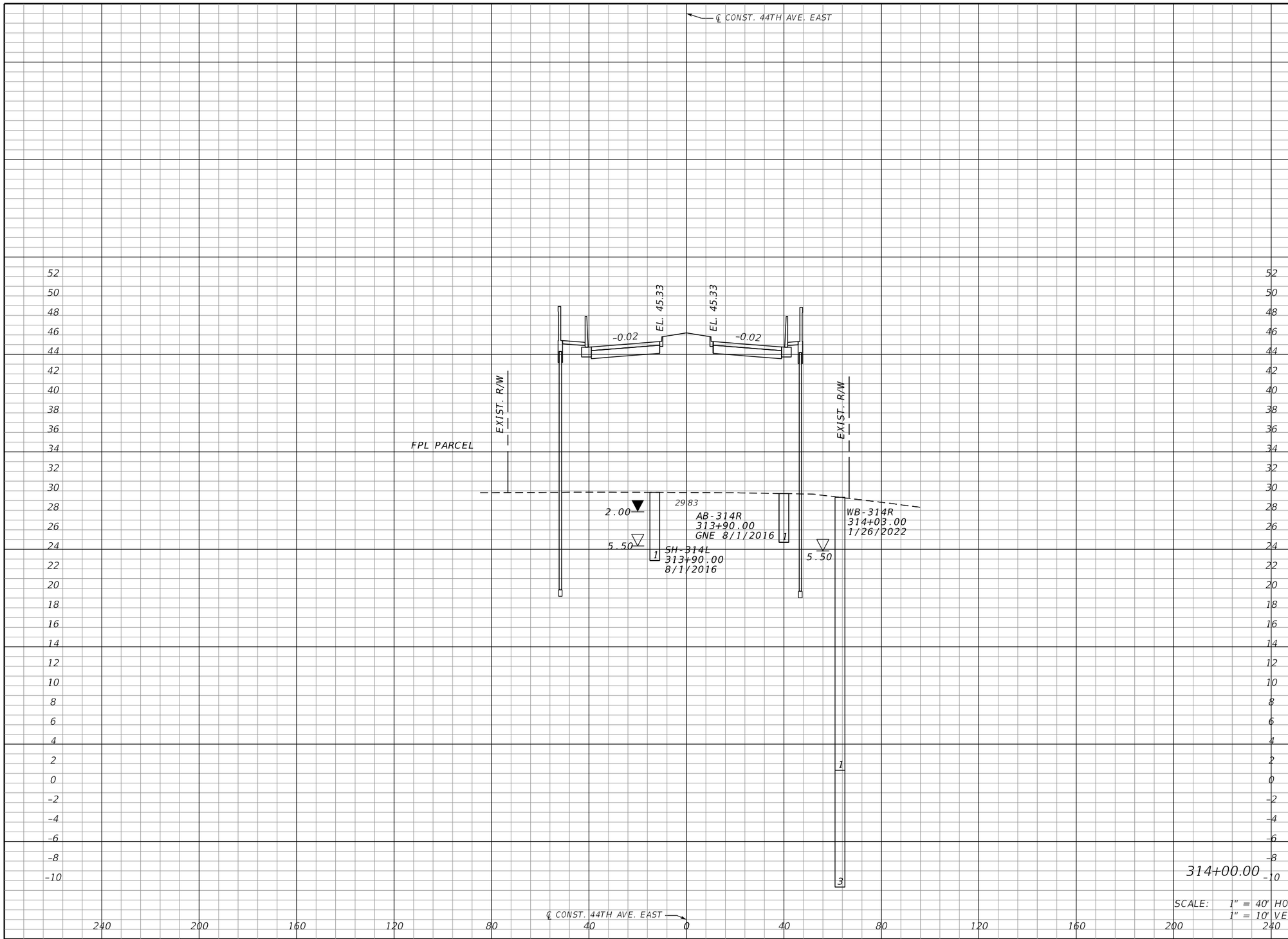
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 107

1:50:01 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



314+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	1424	4434

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

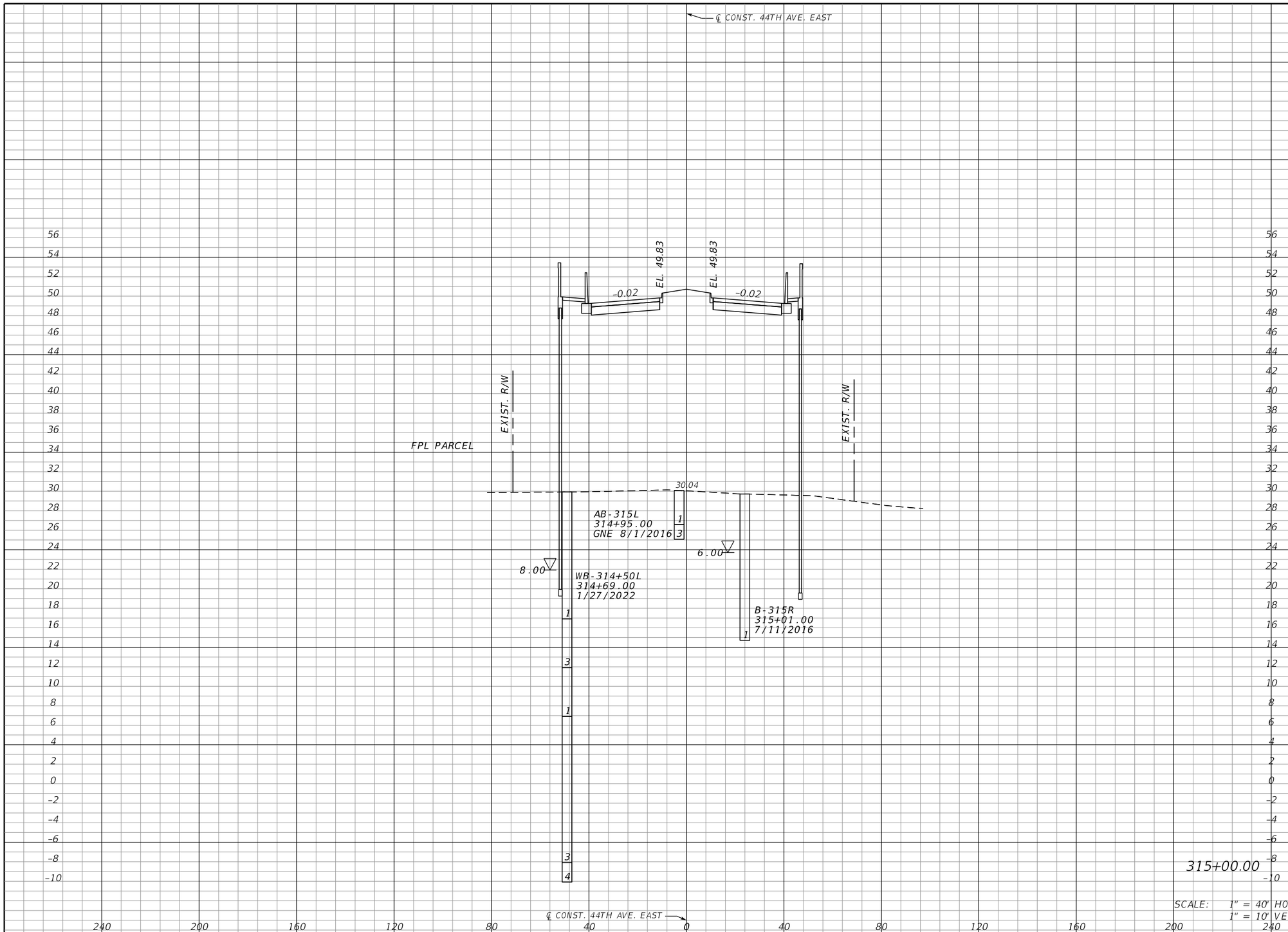
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 108

1:50:04 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



315+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	1855	6073

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

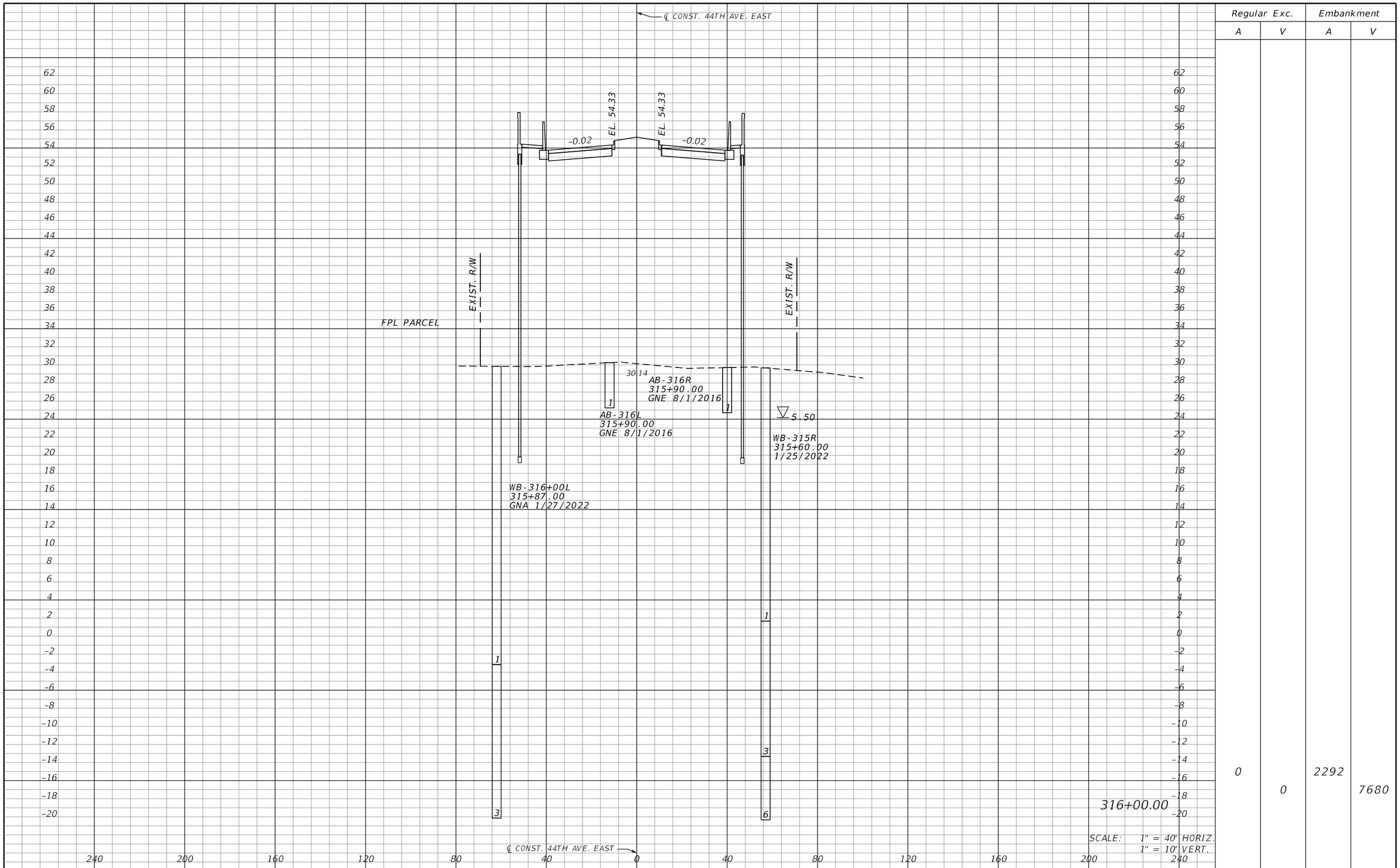
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 109

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Regular Exc.		Embankment	
A	V	A	V
0	0	2292	7680

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

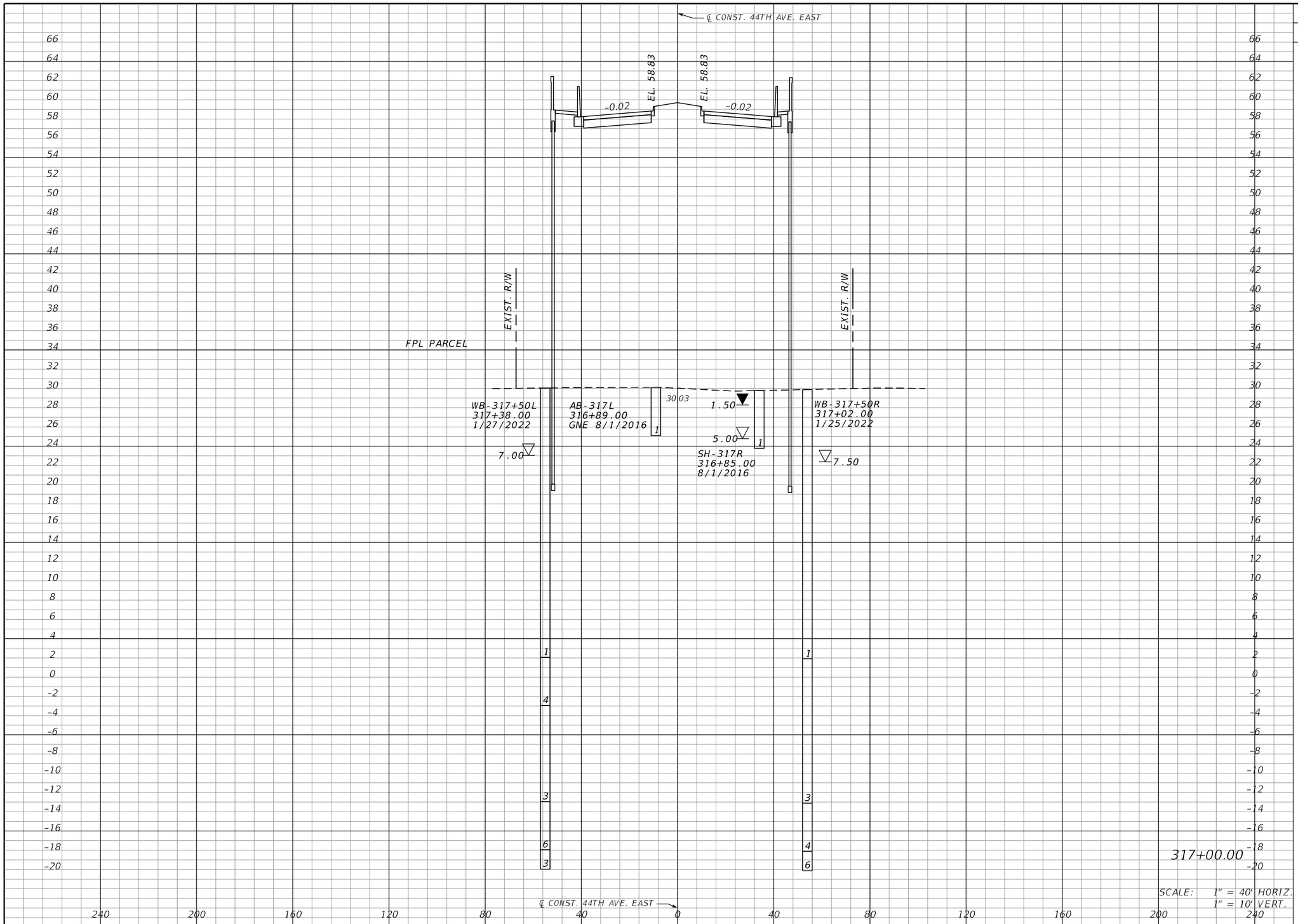
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 110

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Regular Exc.		Embankment	
A	V	A	V
0	0	2726	9293

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

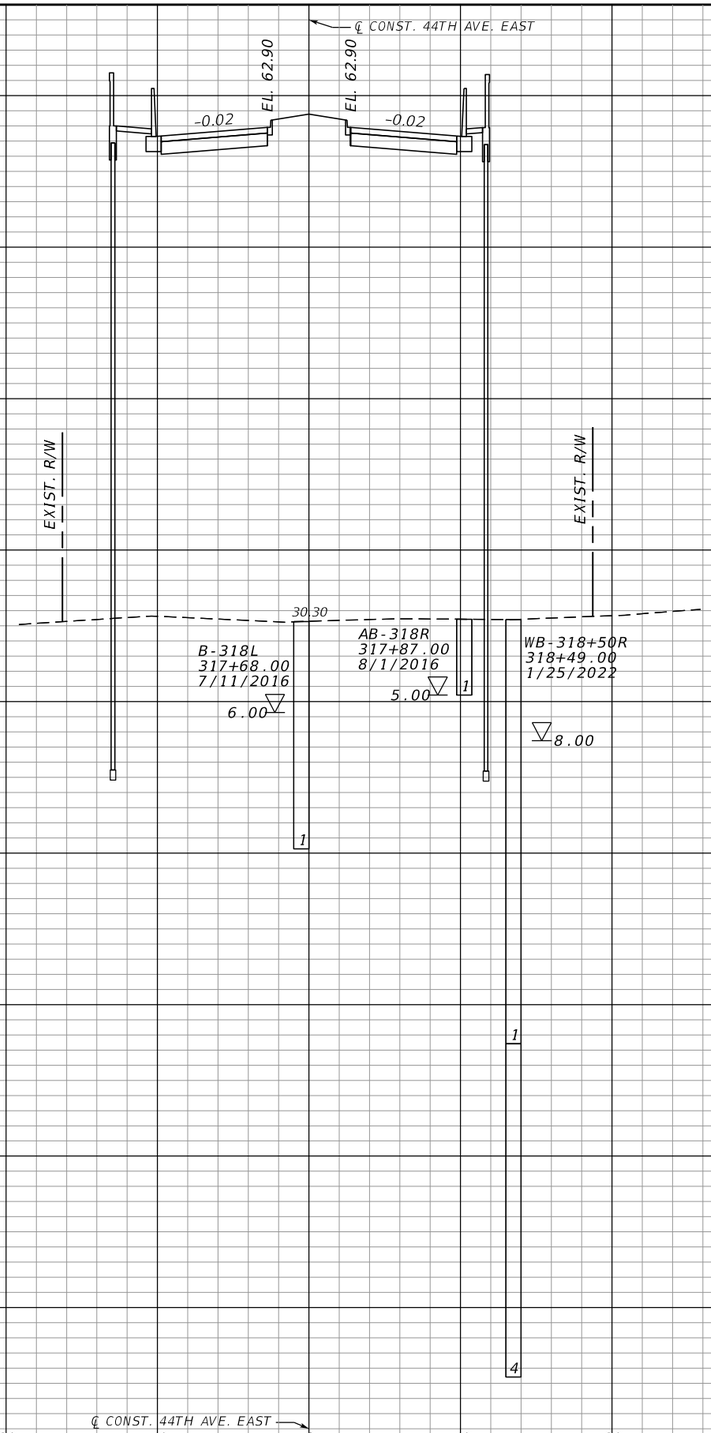
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 111

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Regular Exc.		Embankment	
A	V	A	V
0	0	3078	10749

318+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

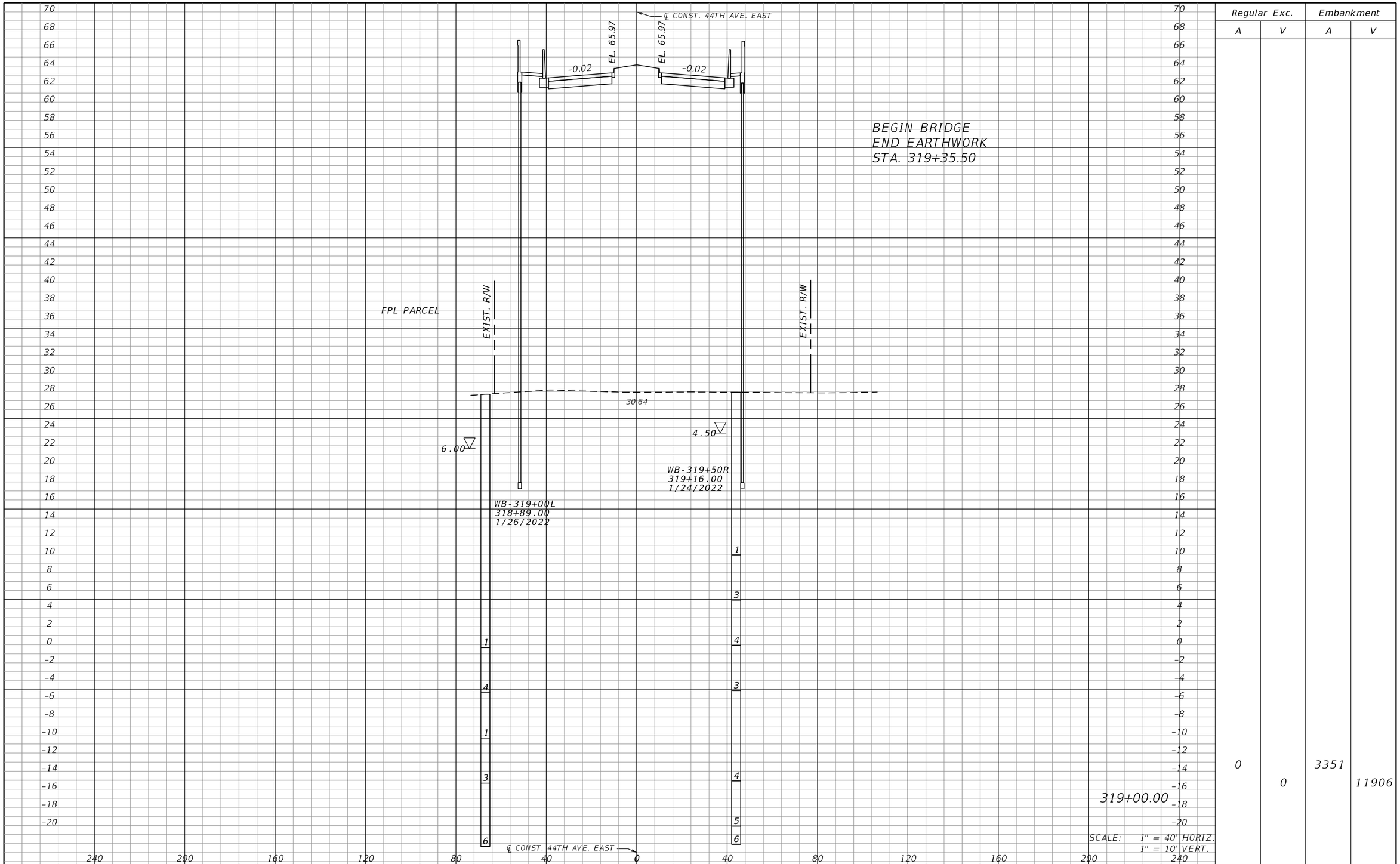
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 112

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Regular Exc.		Embankment	
A	V	A	V
0	0	3351	11906

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

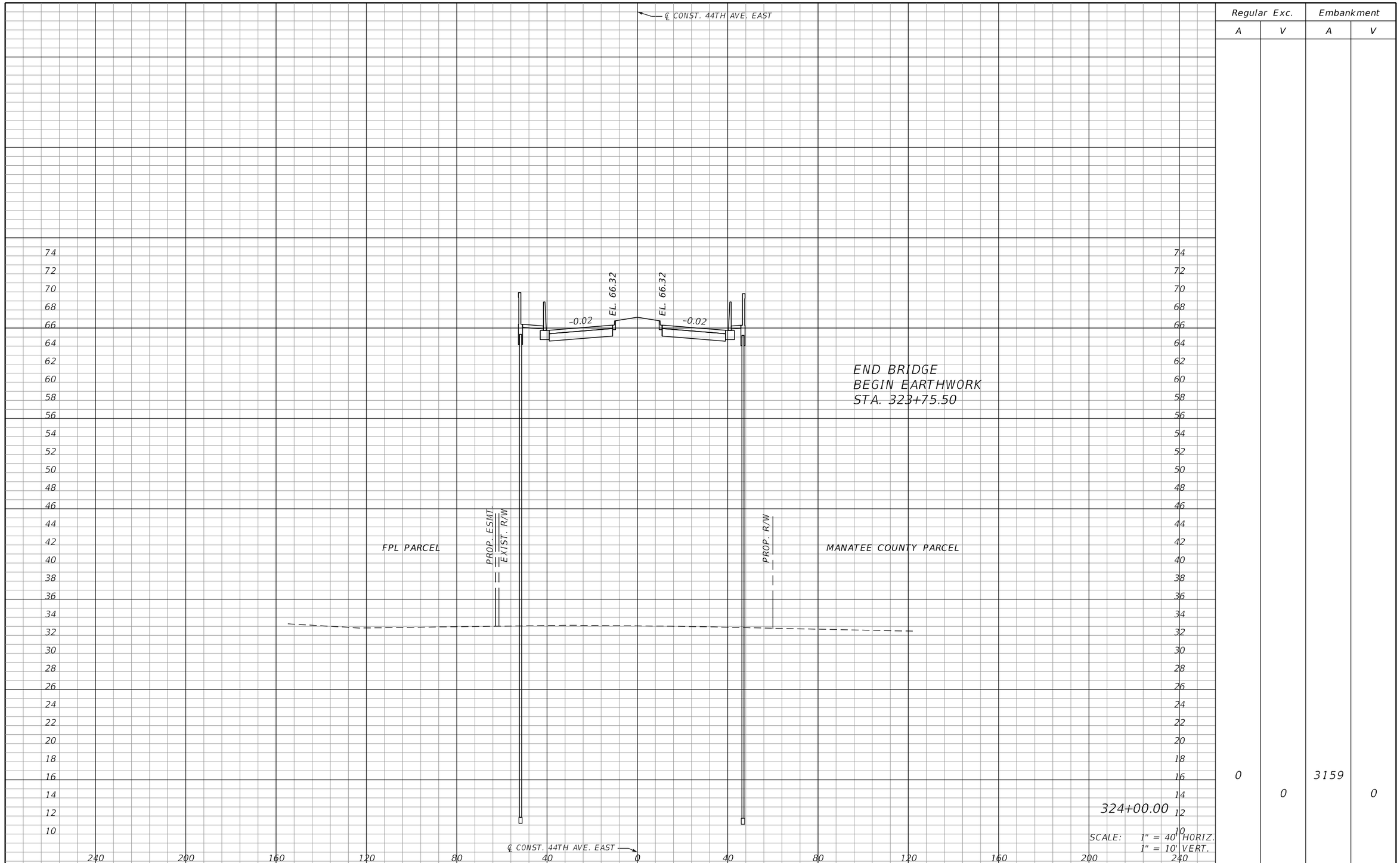
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 113

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Regular Exc.		Embankment	
A	V	A	V
0	0	3159	0

324+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

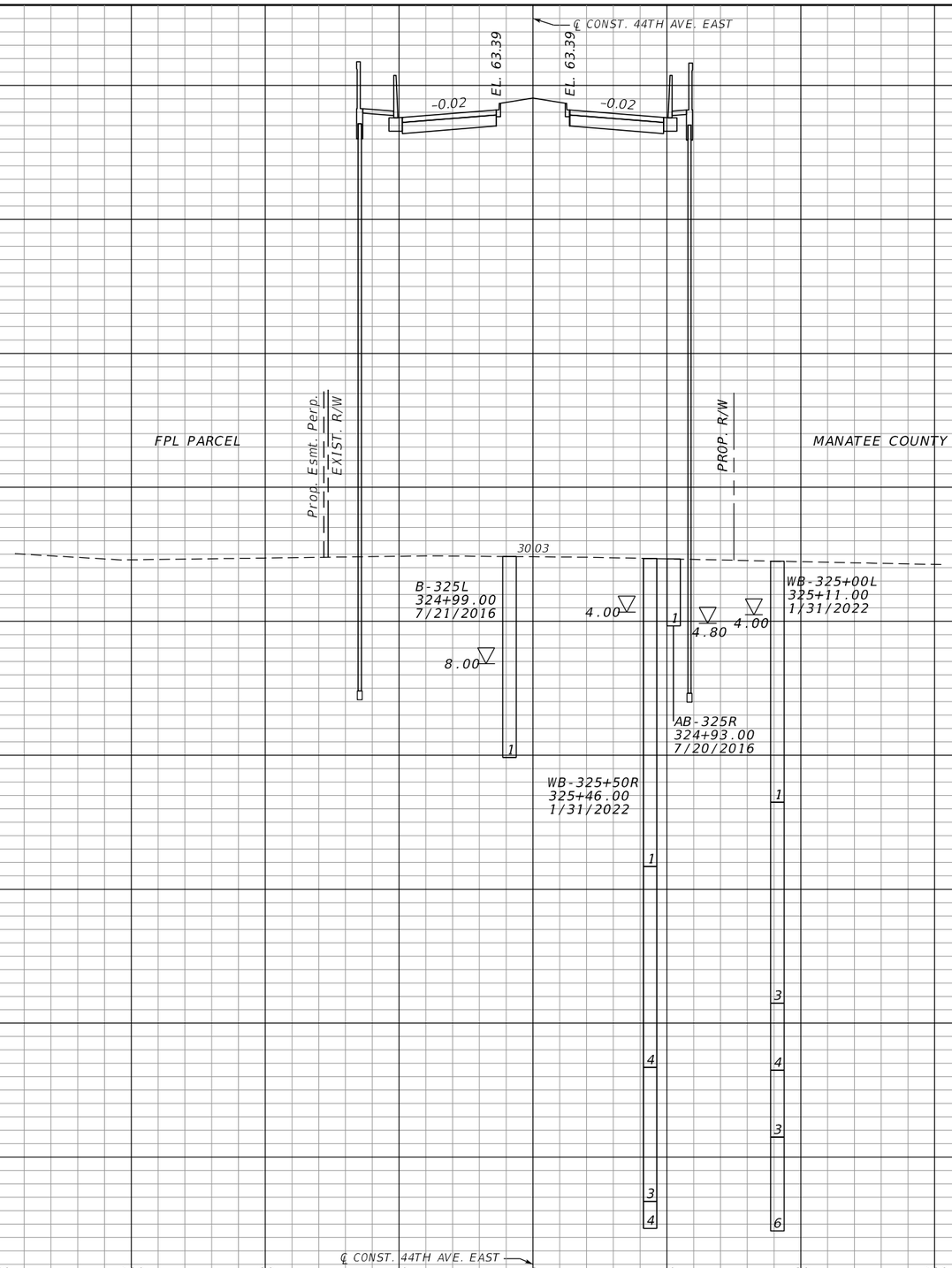
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 114

1:50:22 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	3167	11715

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

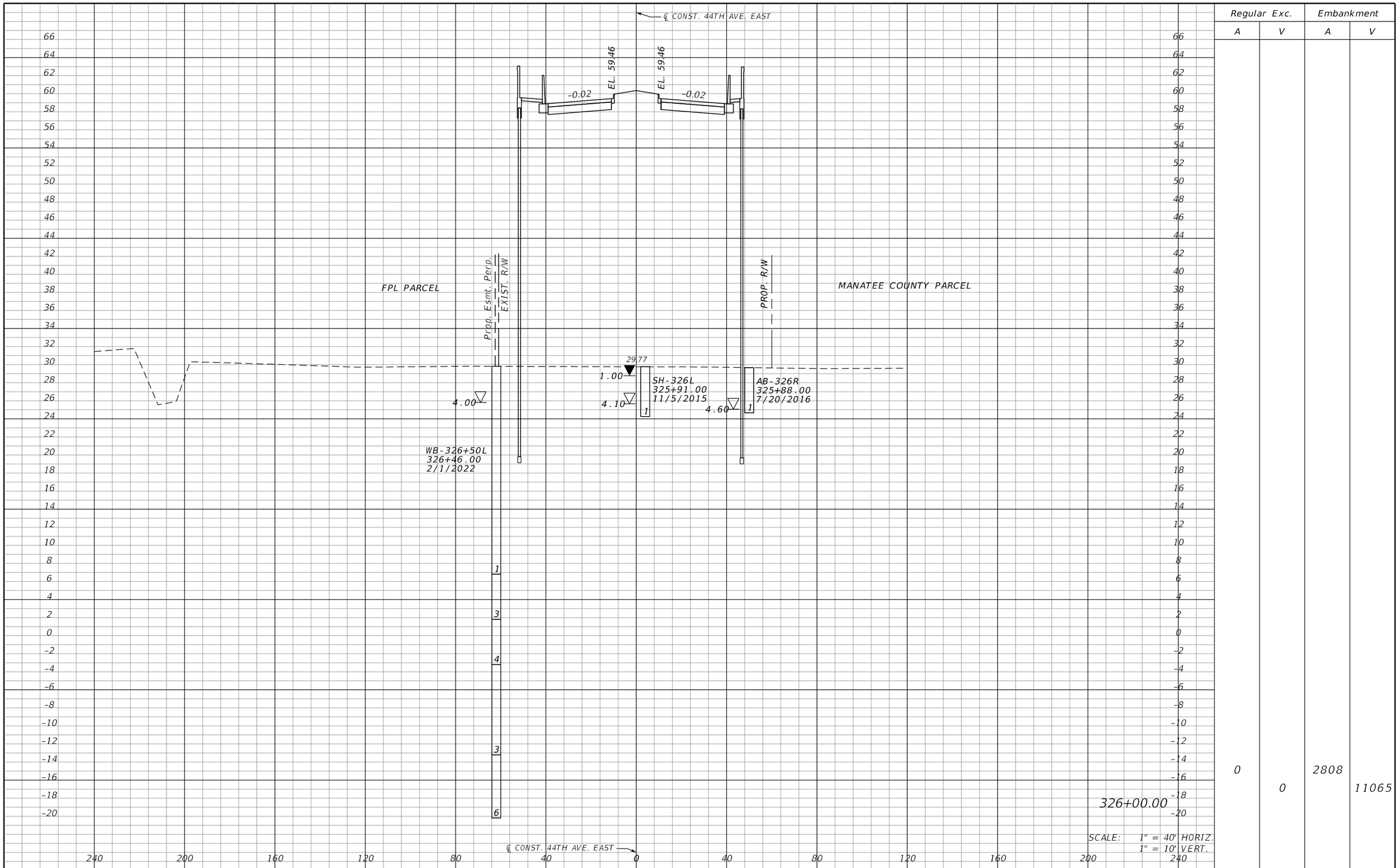
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 115

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Regular Exc.		Embankment	
A	V	A	V
0	0	2808	11065

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

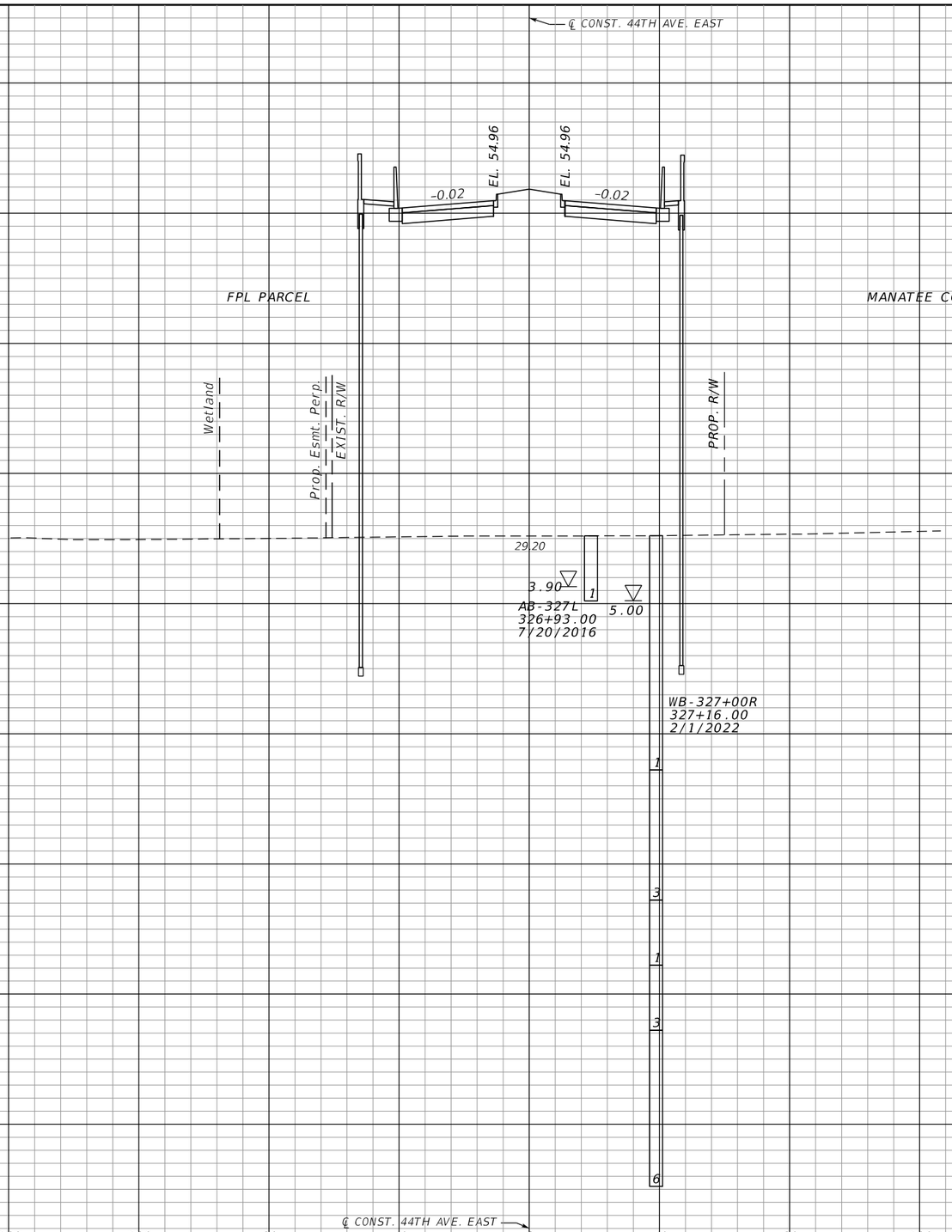
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 116

1:50:28 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	2425	9691

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

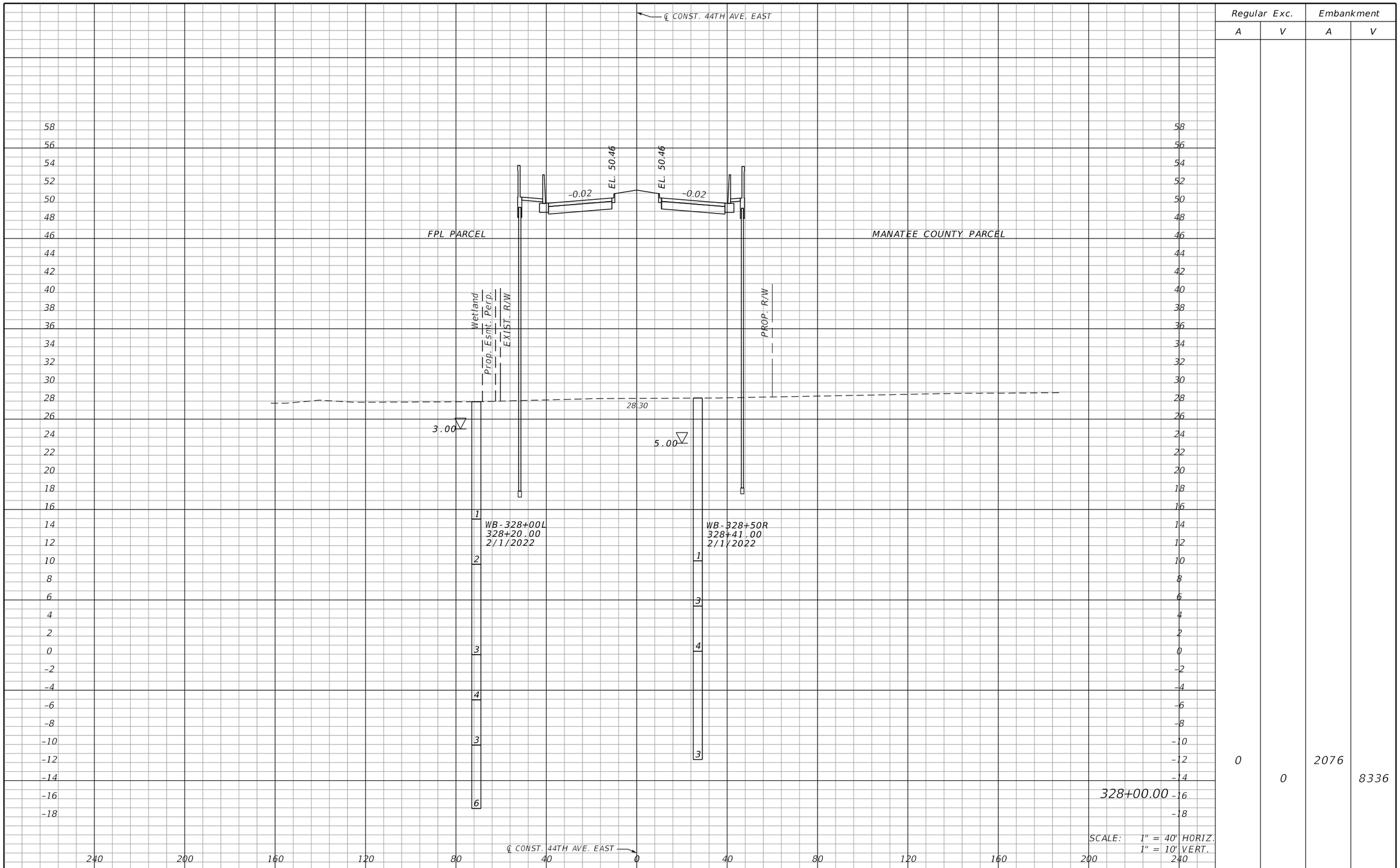
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 117

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Regular Exc.		Embankment	
A	V	A	V
0	0	2076	8336

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

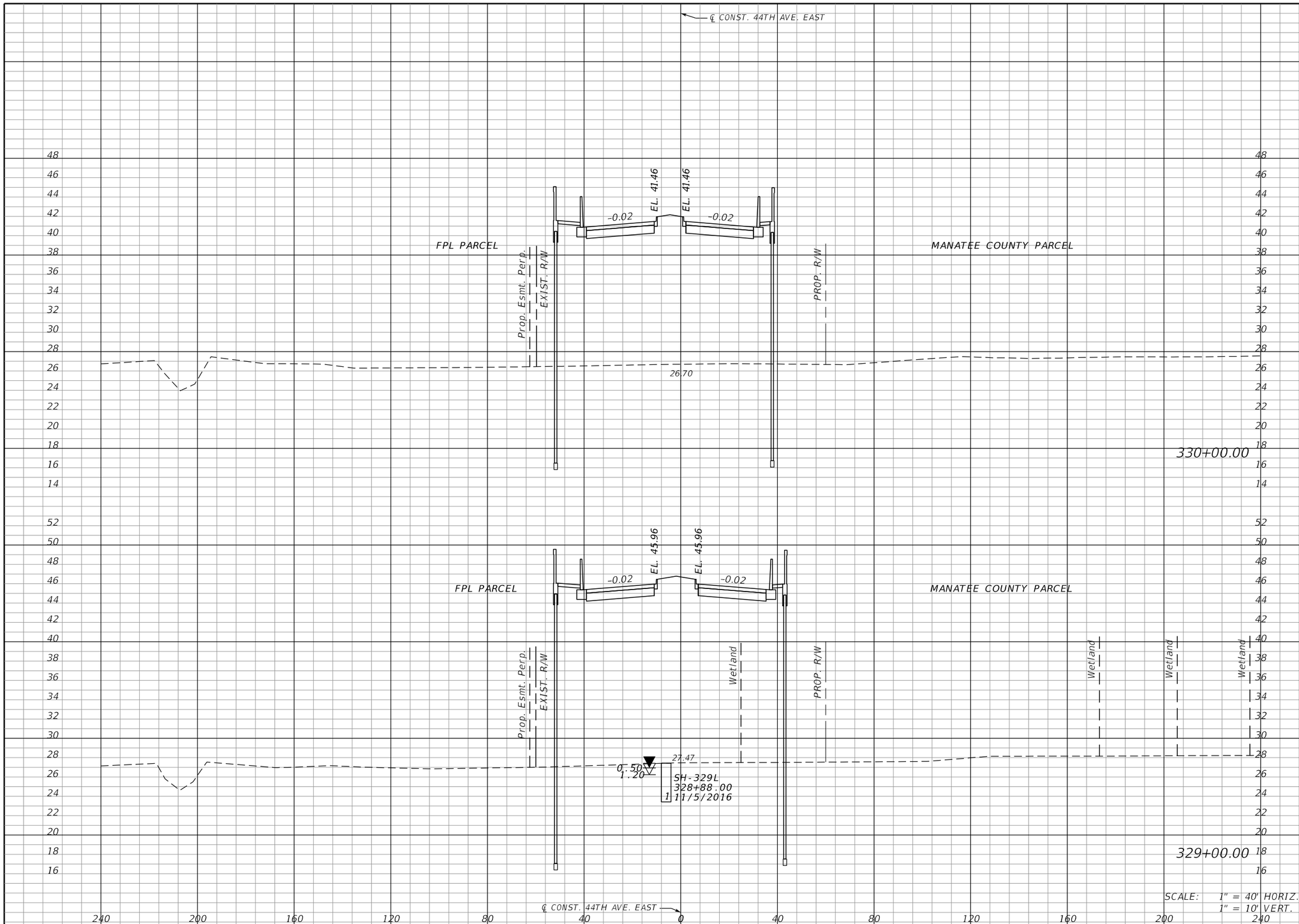
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 118

1:50:34 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	1217	5315
0	0	1653	6906

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

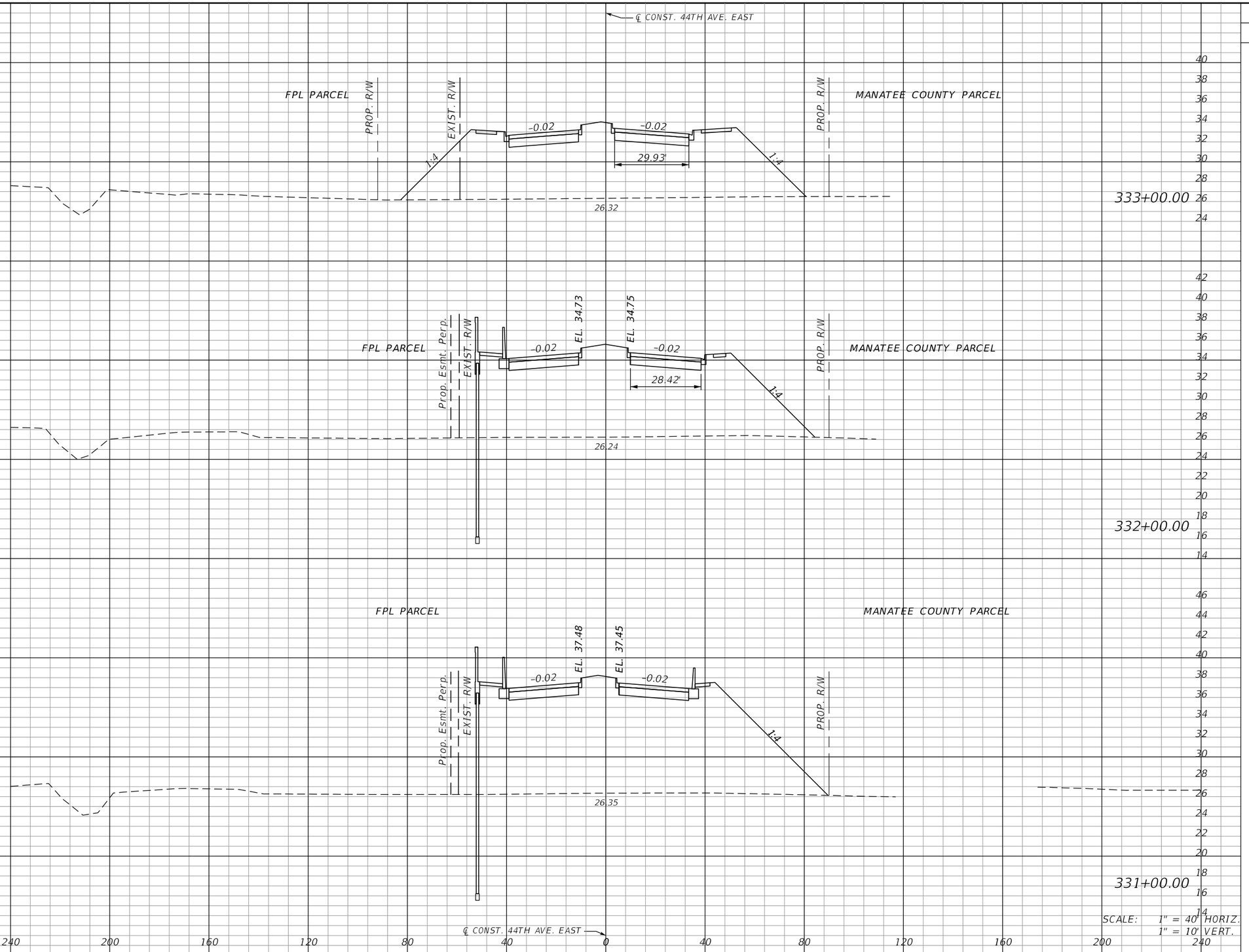
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 119

1:50:38 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	850	3267
0	0	914	3958
0	0	1223	4519

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

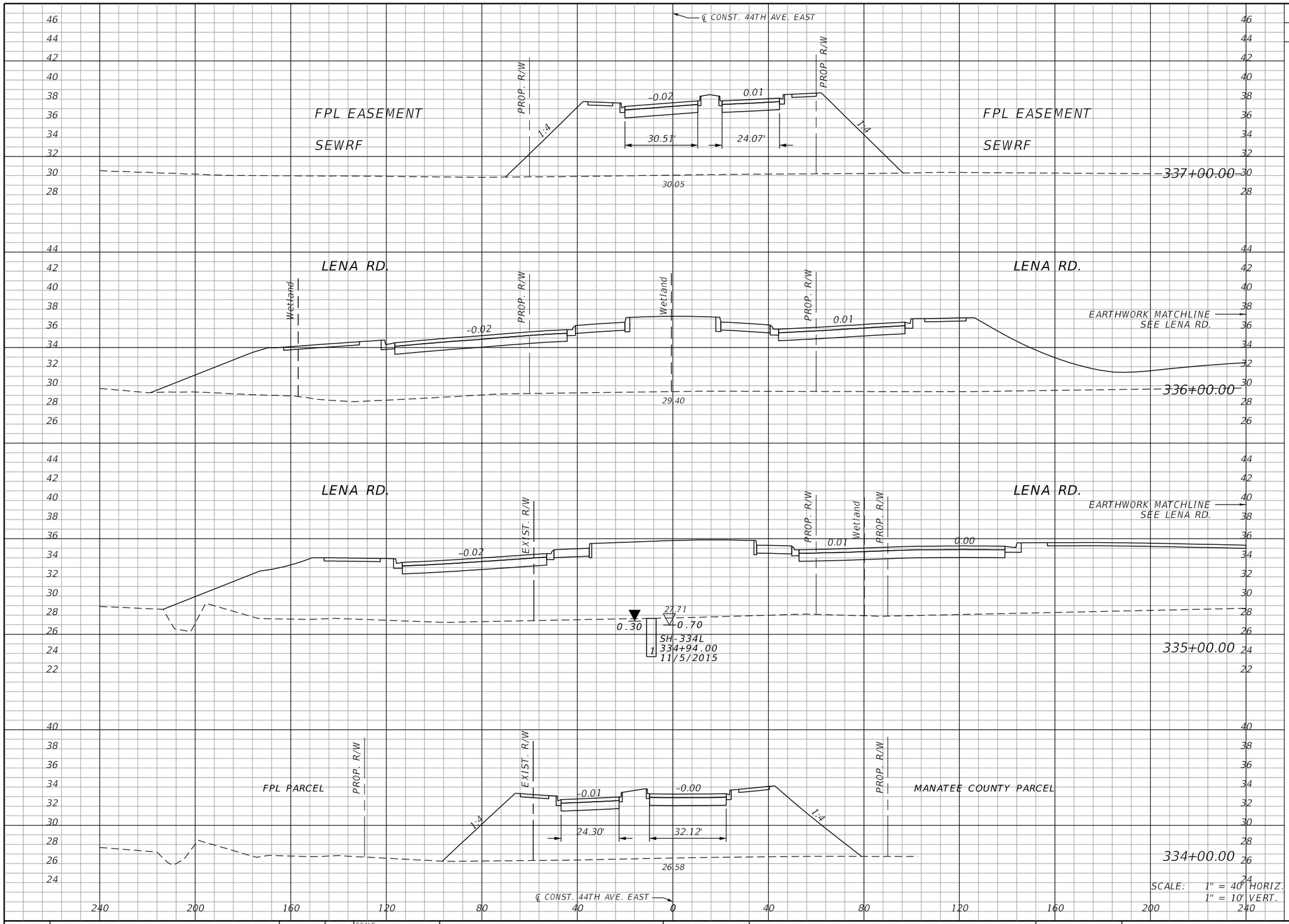
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 120

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Regular Exc.		Embankment	
A	V	A	V
0	0	975	5917
0	0	2220	9106
0	0	2697	6654
0	0	896	3234

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

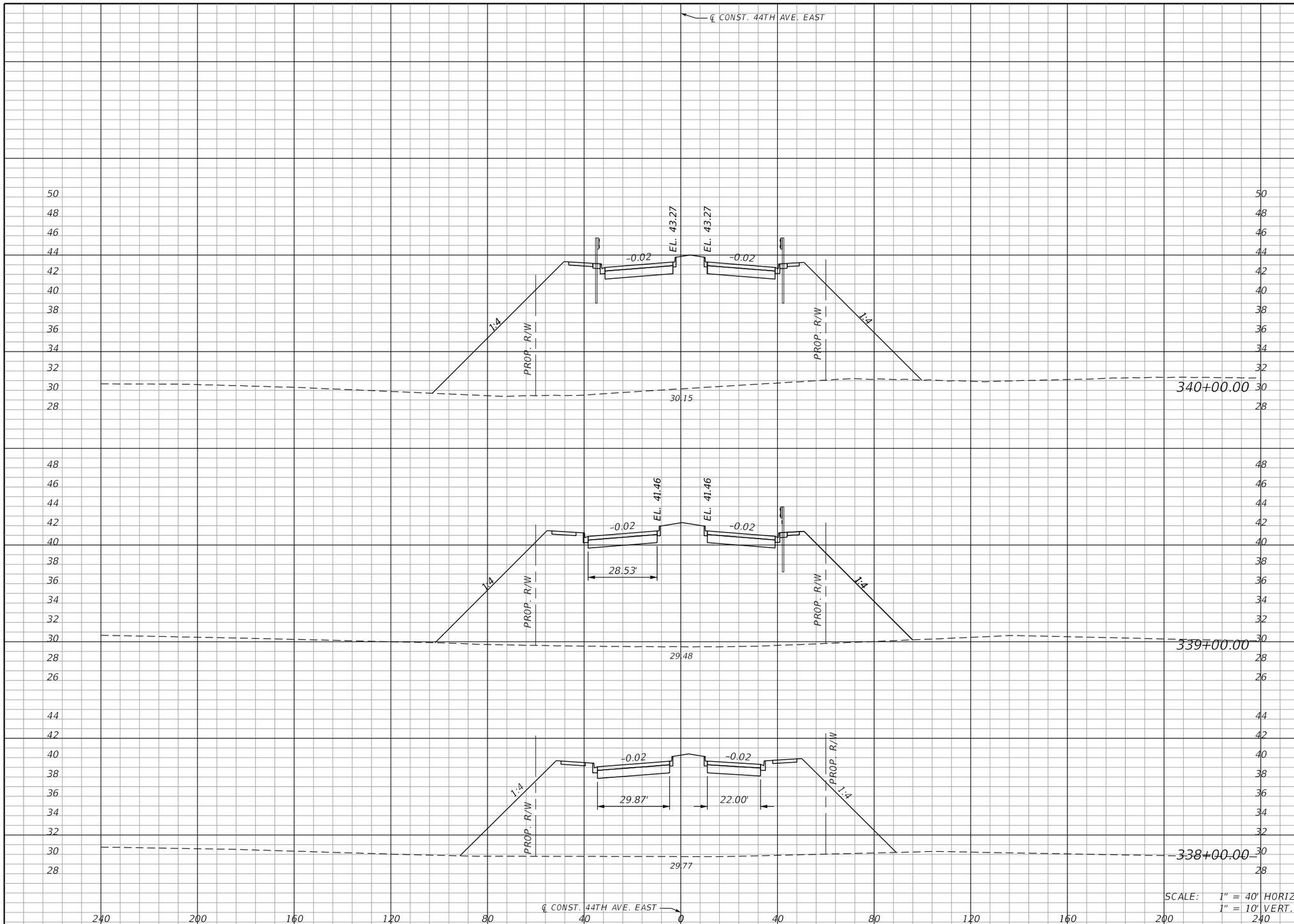
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 121

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

1:50:44 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	1885	6676
0	0	1720	5619
0	0	1314	4239

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

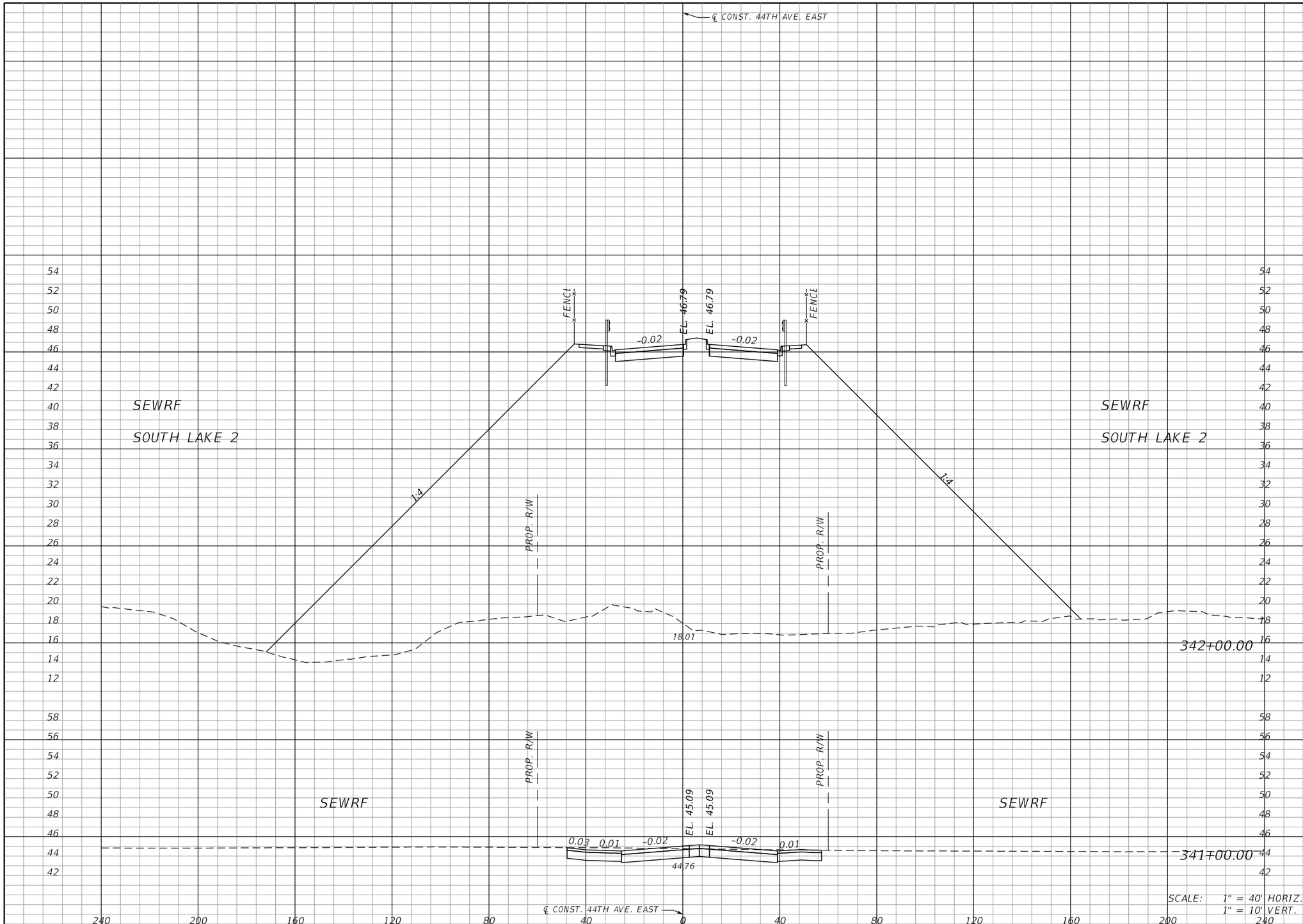
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 122

1:50:47 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	222	6195	11472
120	223	0	3491

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

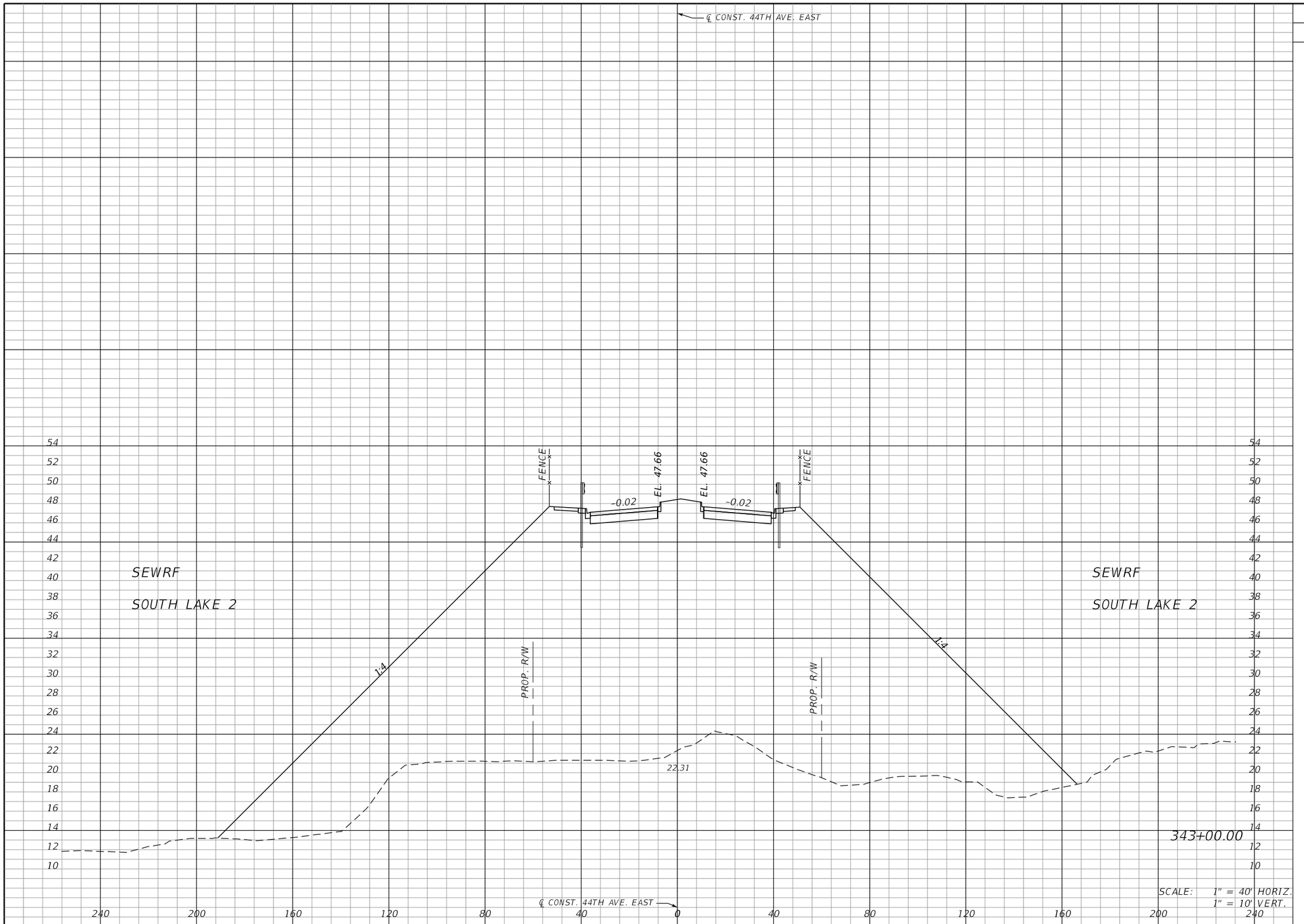
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 123

1:50:50 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	6025	22630

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
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Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

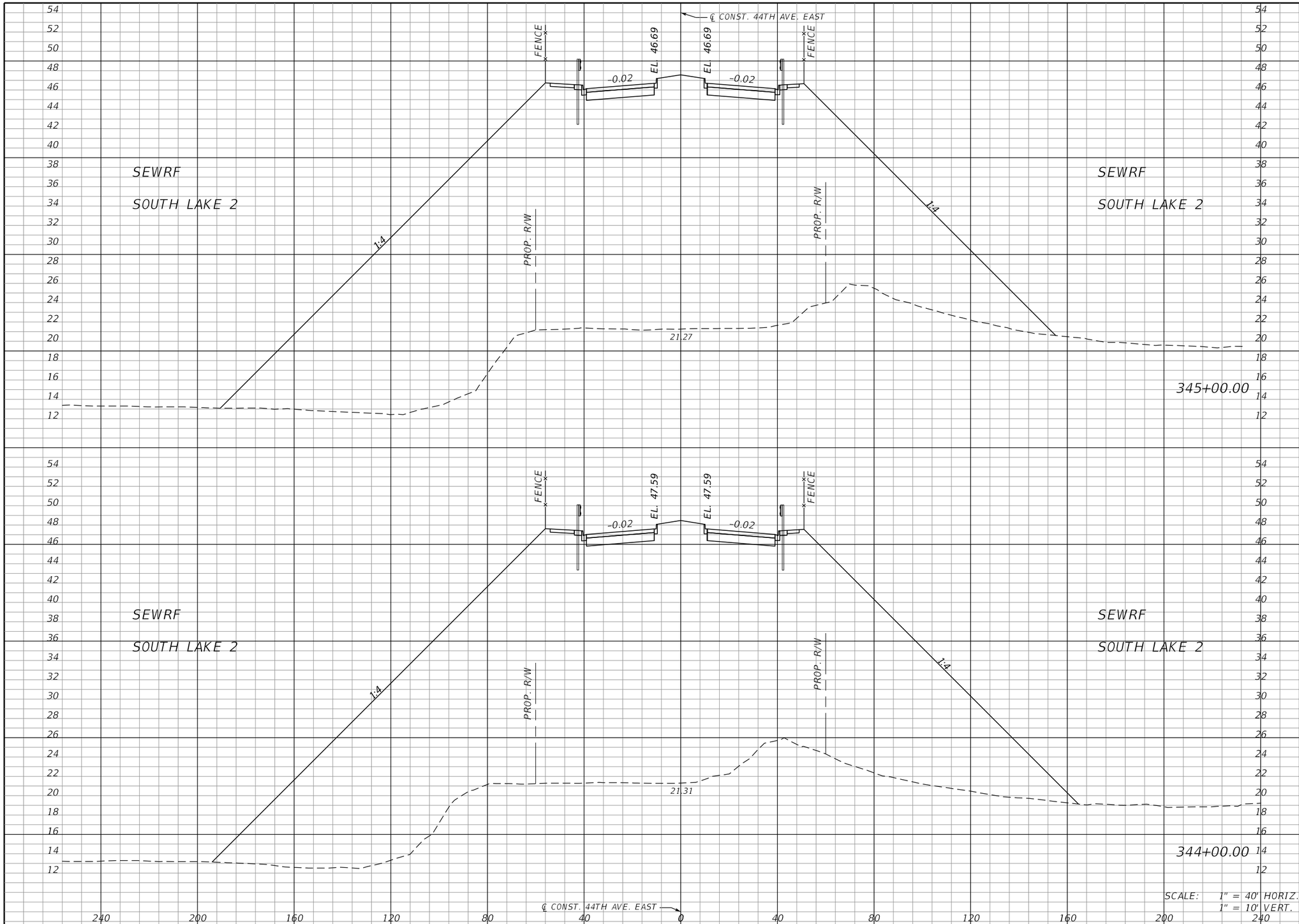
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 124

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Regular Exc.		Embankment	
A	V	A	V
0	0	5803	21900
0	0	6023	22311

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

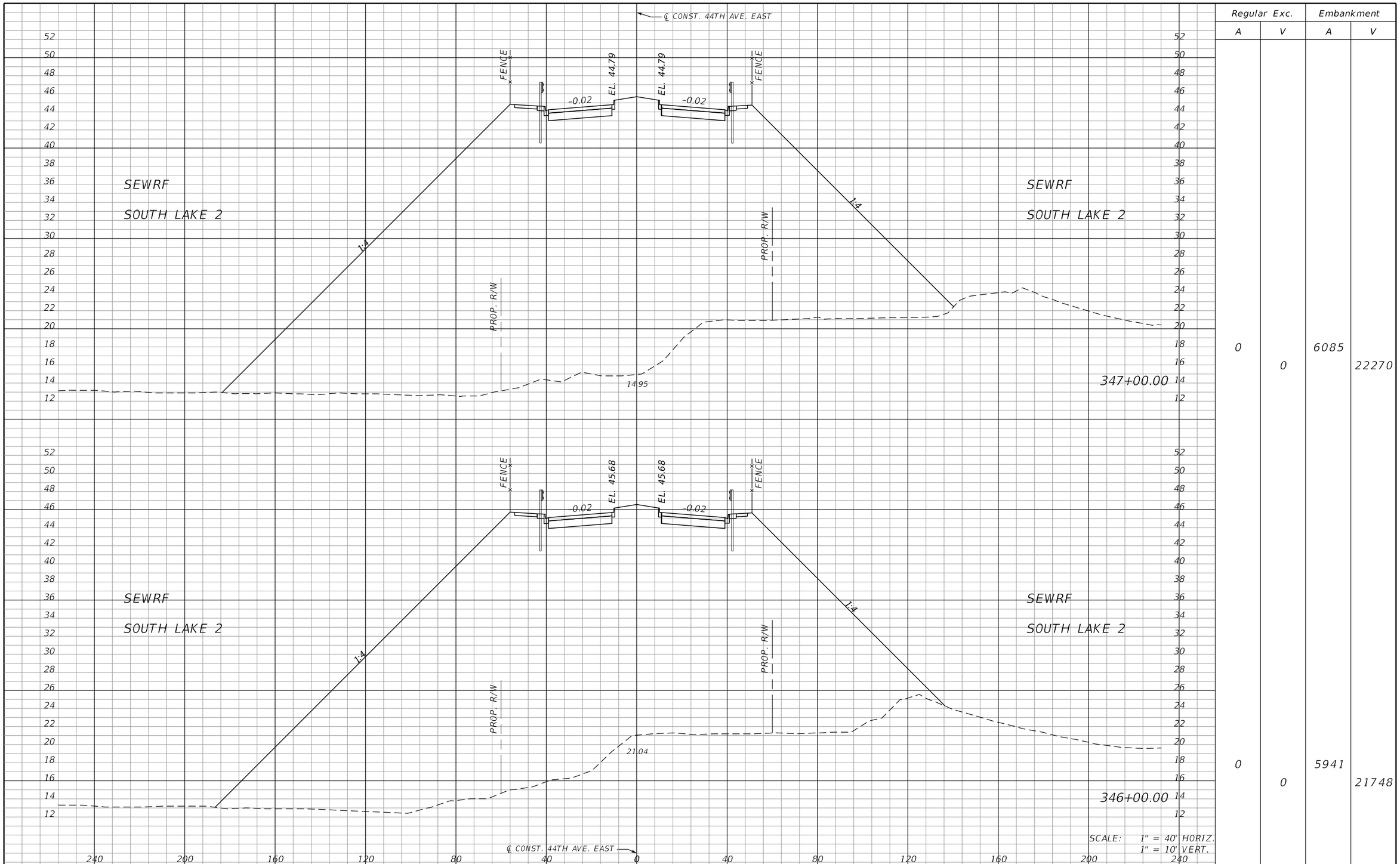
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 125

1:50:56 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	6085	22270
0	0	5941	21748

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

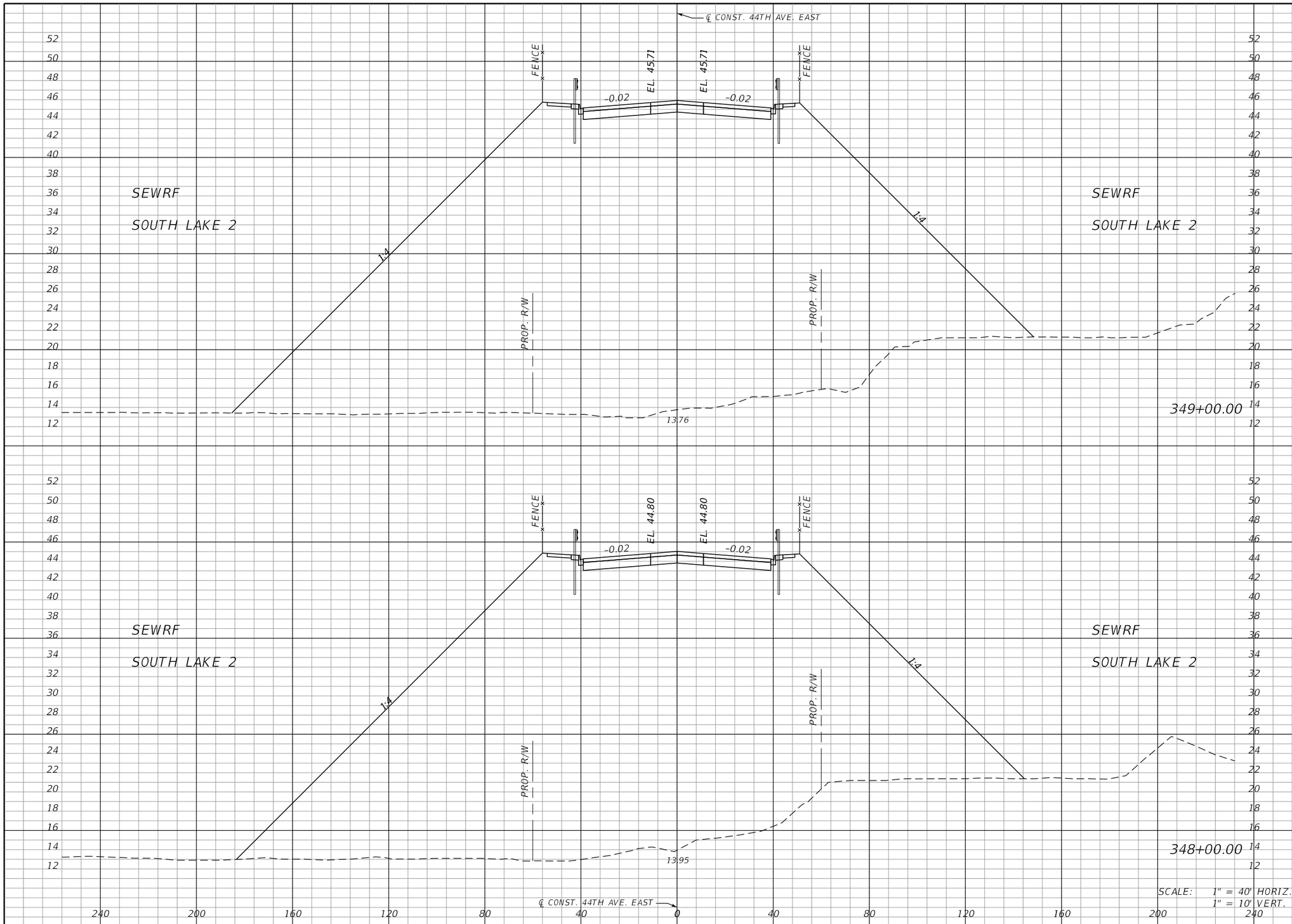
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 126

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SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	6755	24089
0	0	6253	22848

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

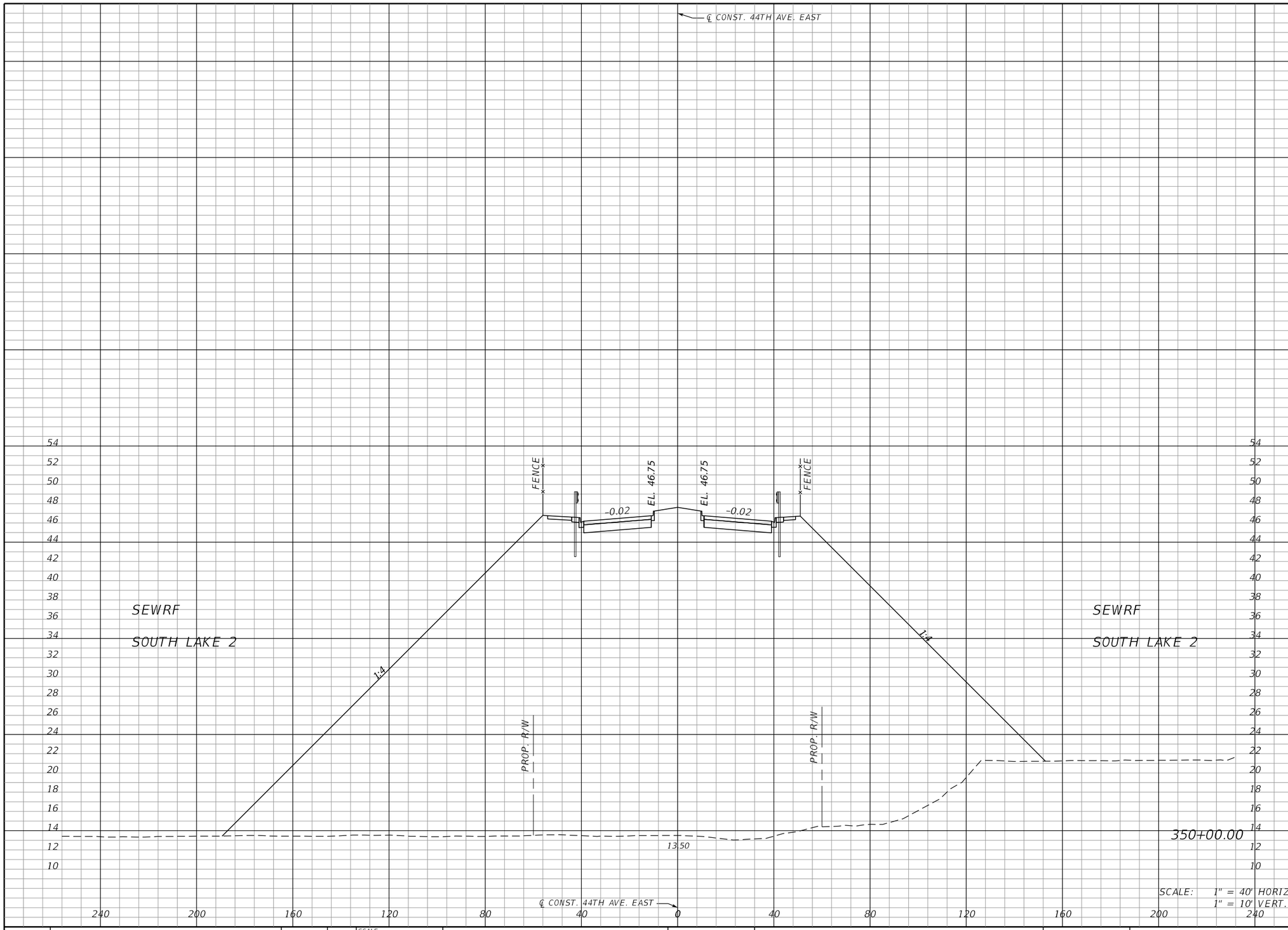
DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 127



Regular Exc.		Embankment	
A	V	A	V
0	0	7389	26193

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

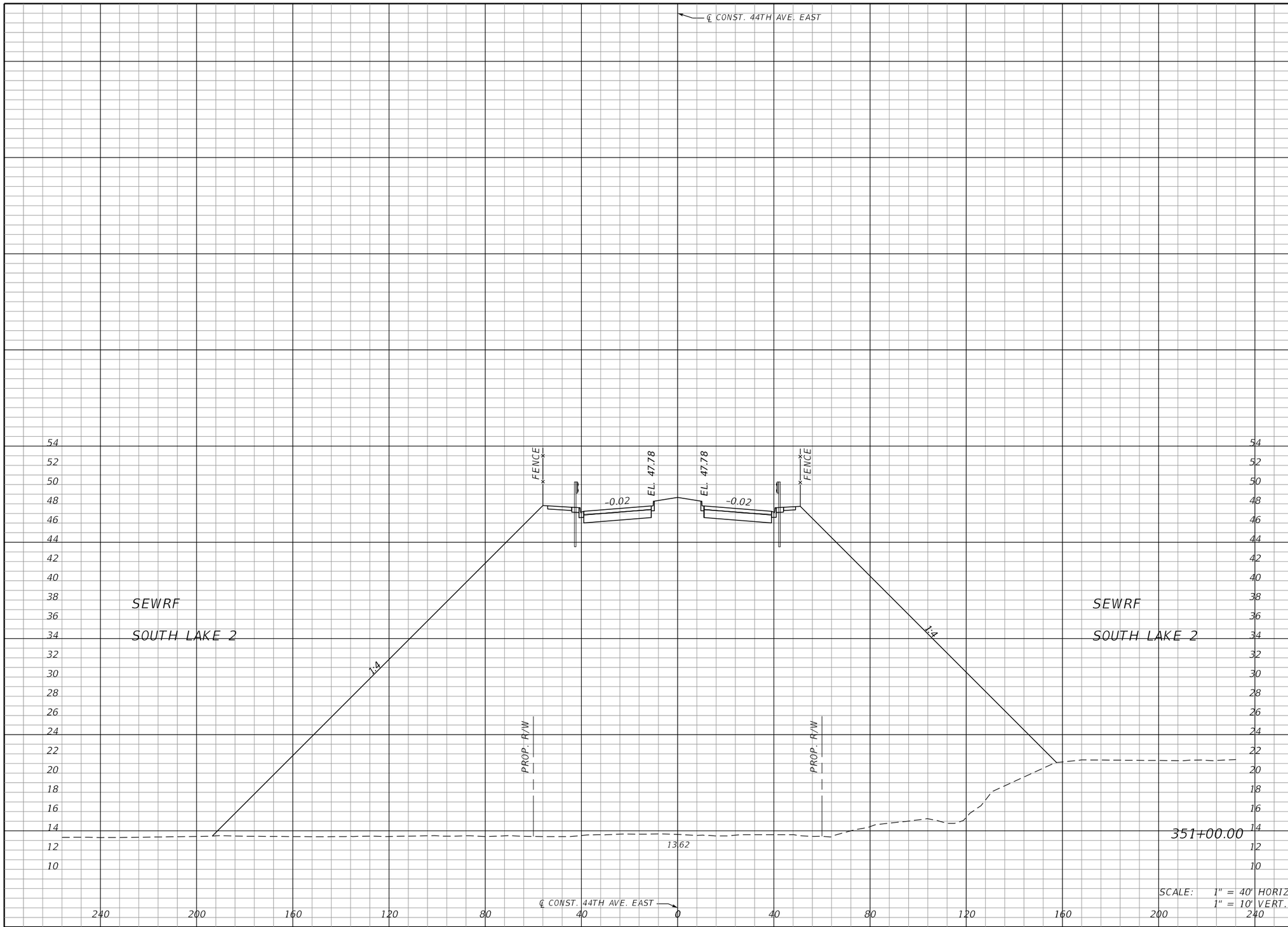
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 128

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

1:51:06 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	7901	28315

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

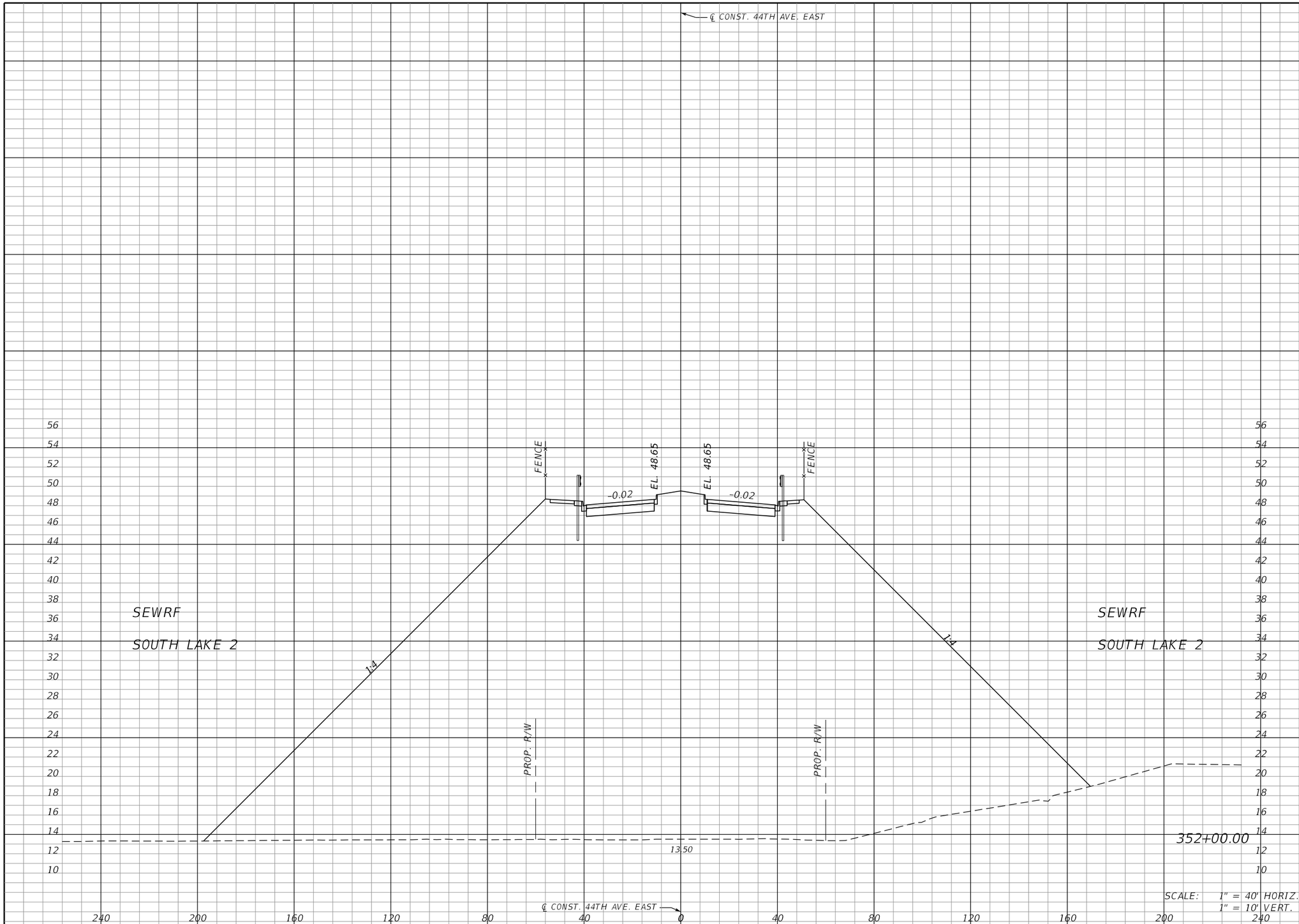
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 129

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

1:51:10 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	8291	29985

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
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Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

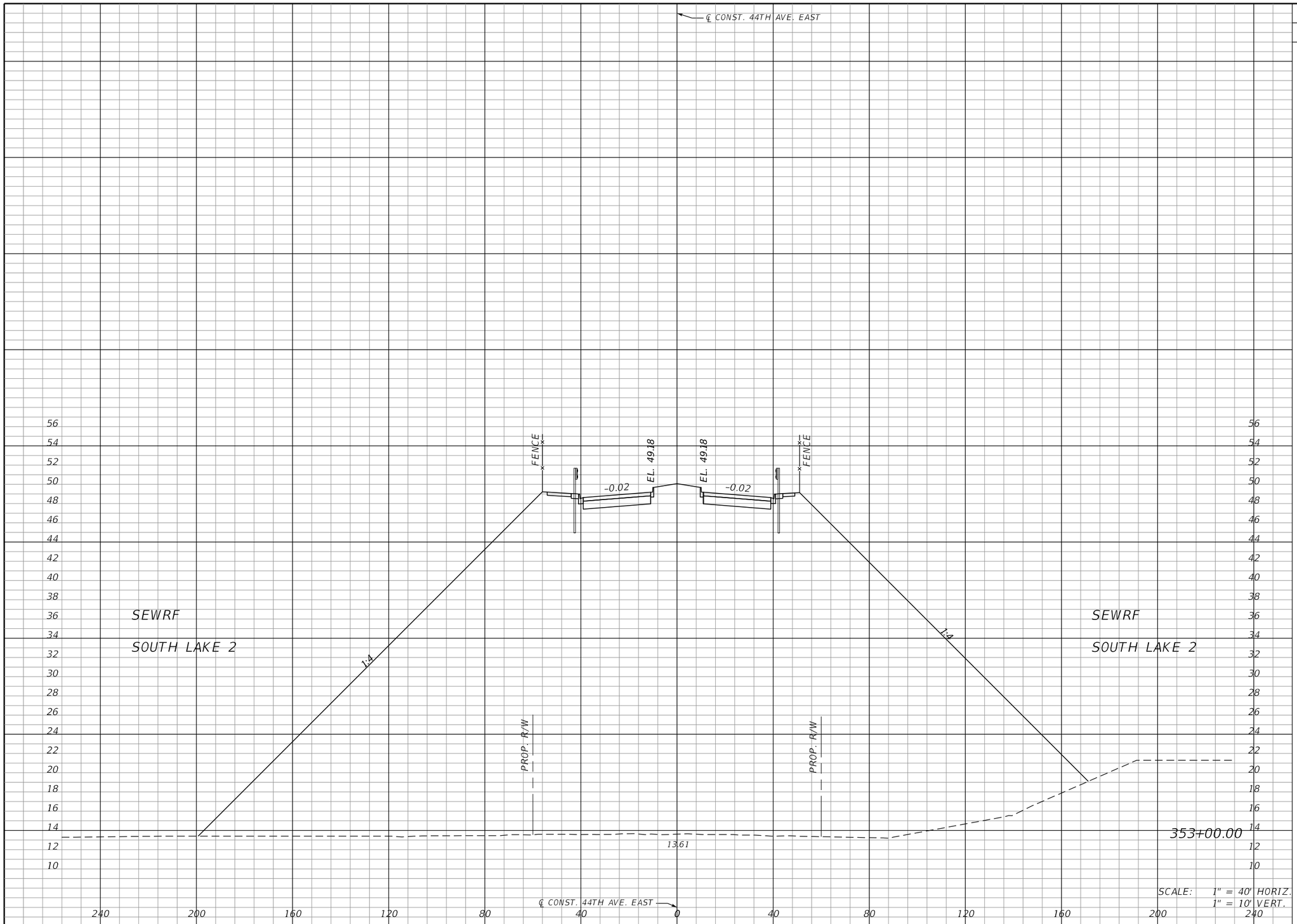
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 130

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SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	8599	31278

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

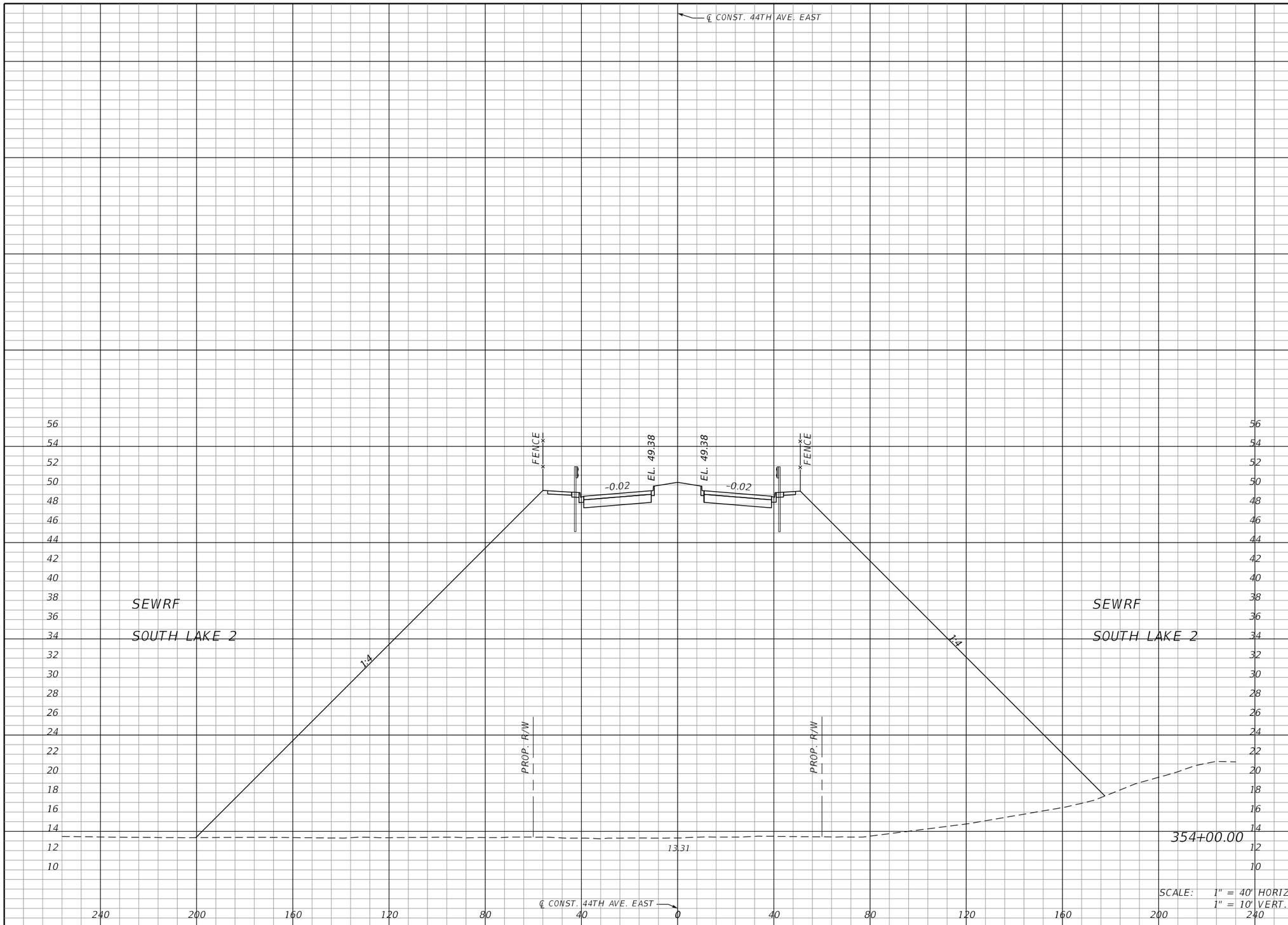
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 131

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SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	8729	32089

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

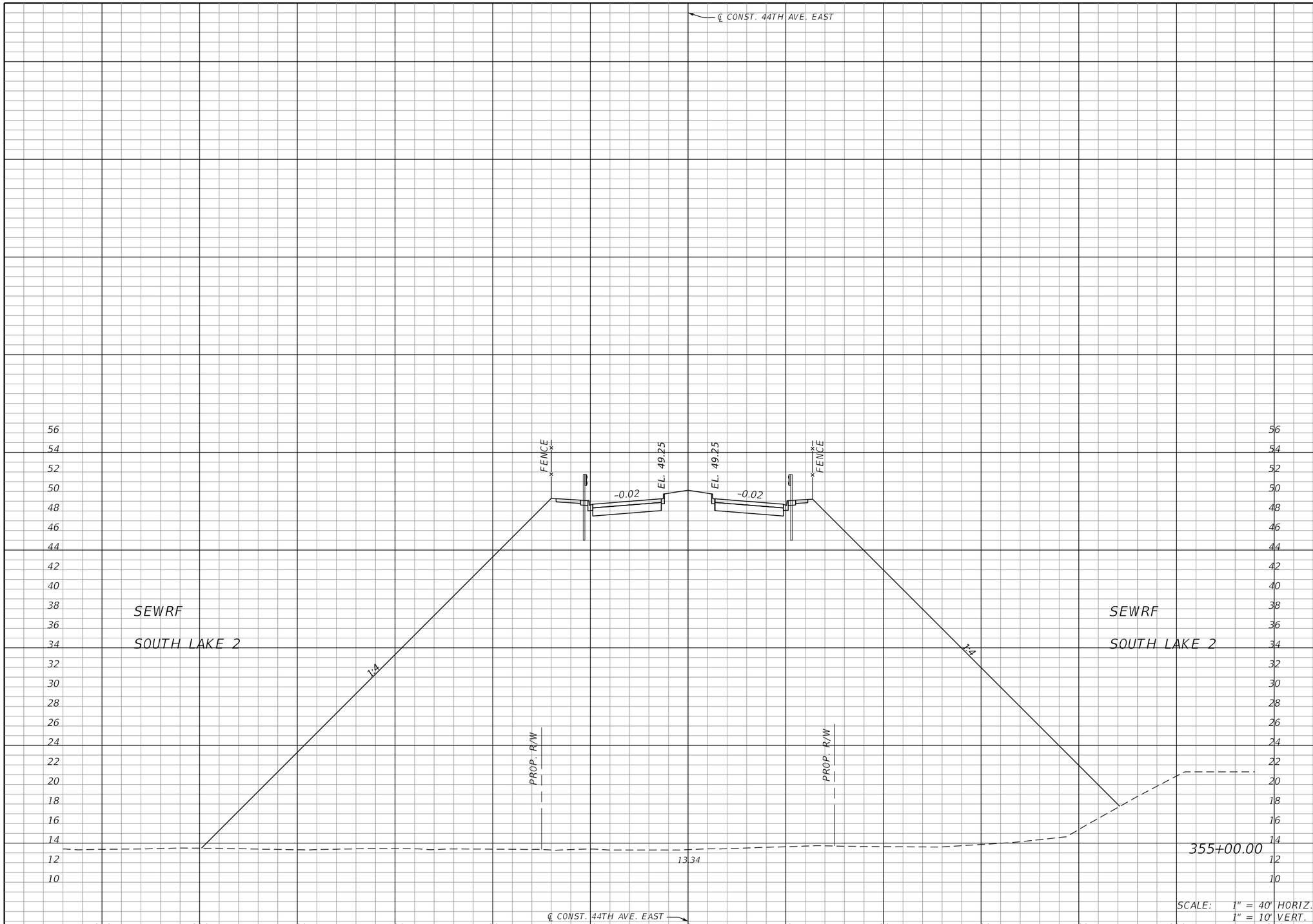
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 132

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Regular Exc.		Embankment	
A	V	A	V
0	0	8738	32346

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

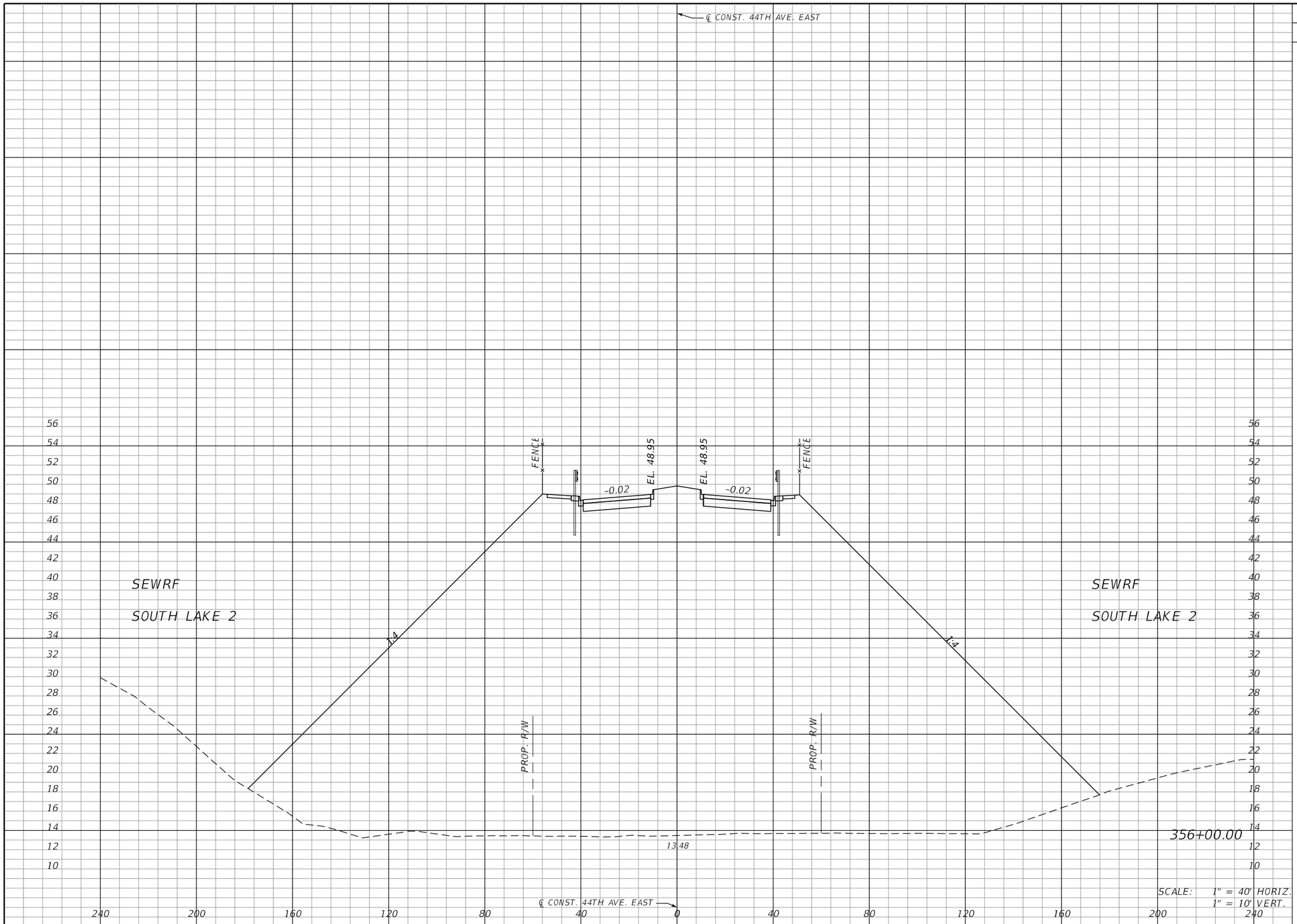
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 133

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SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	8440	31811

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

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Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

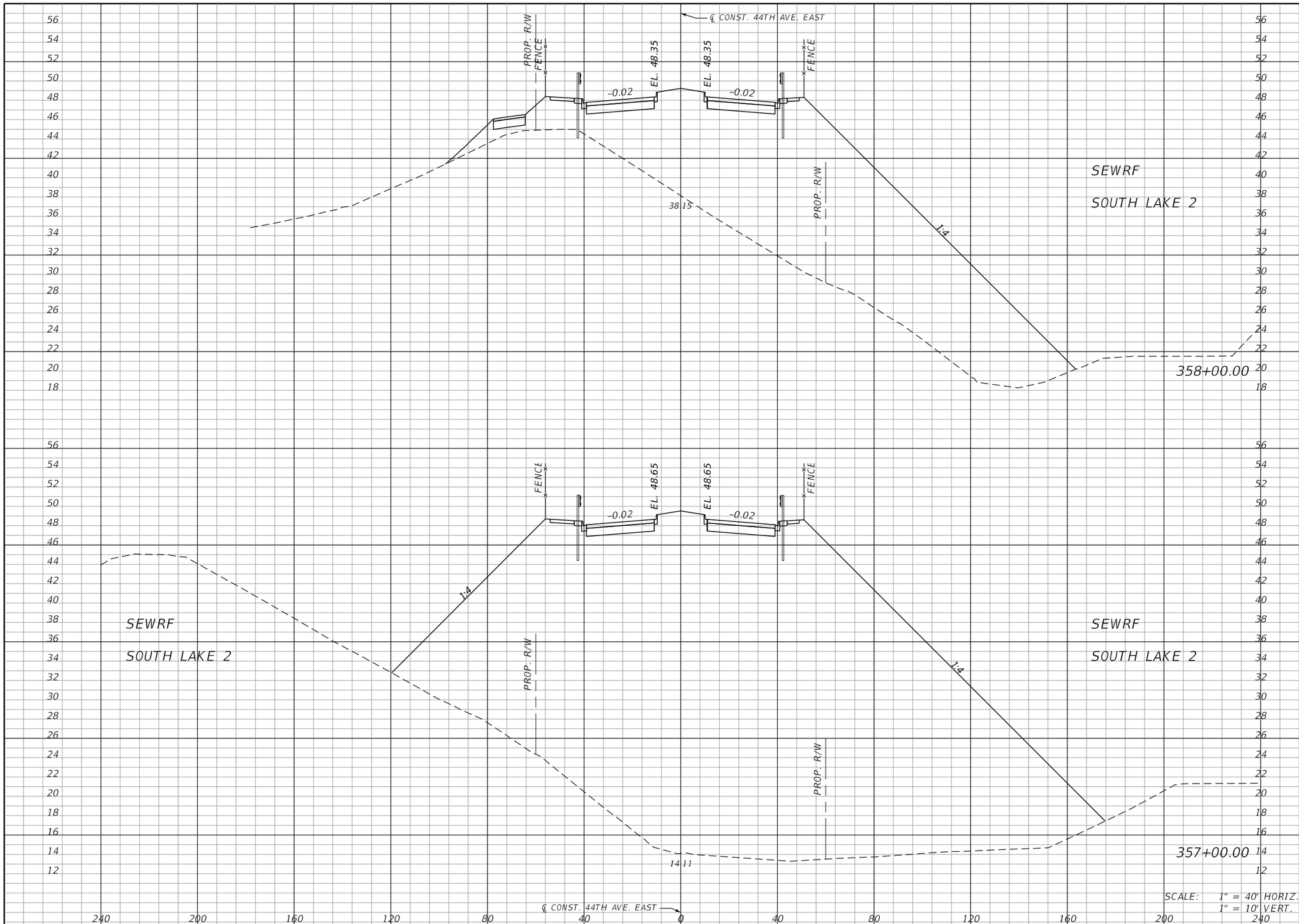
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 134

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Regular Exc.		Embankment	
A	V	A	V
0	0	2299	16285
0	0	6495	27657

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

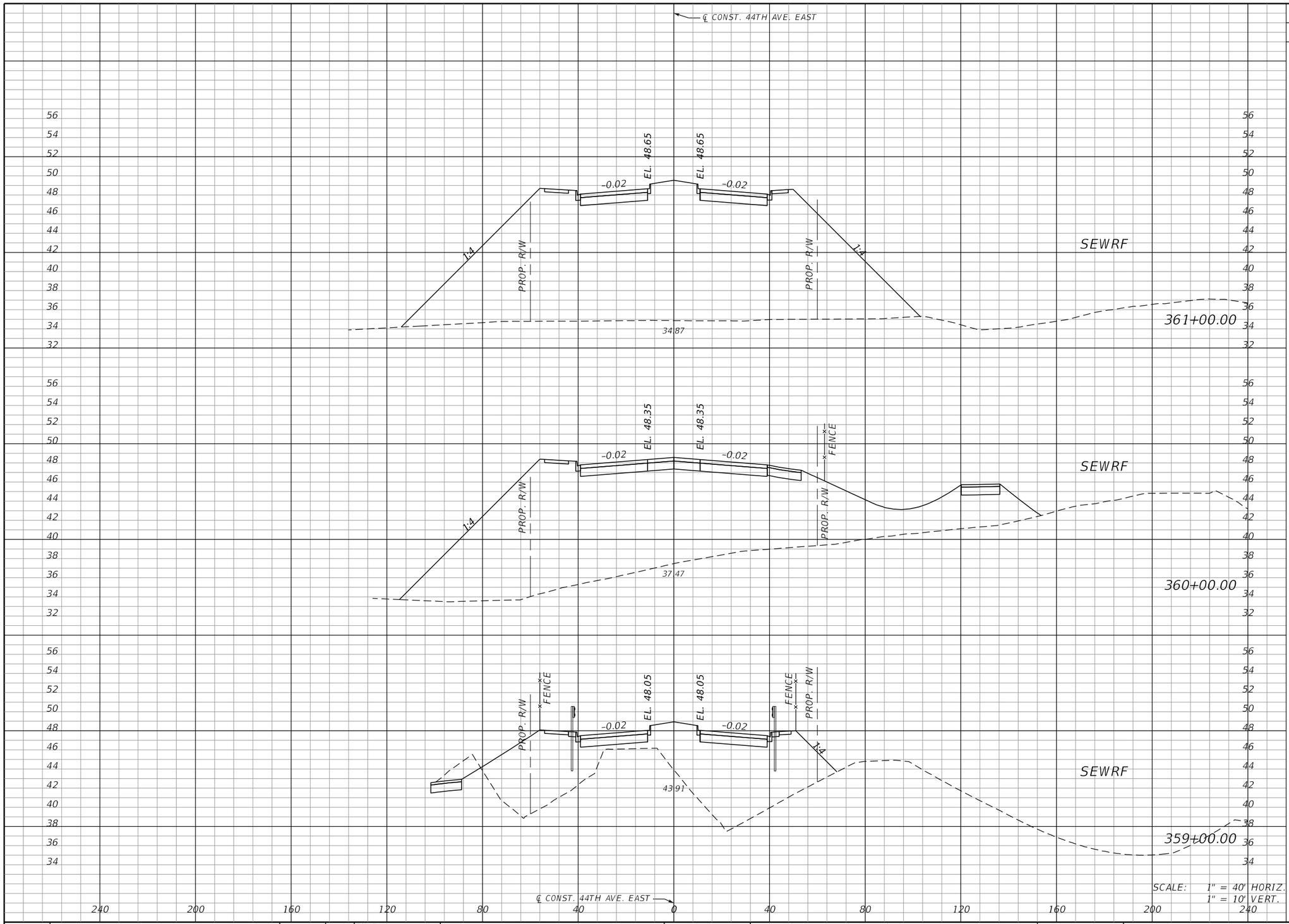
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 135

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Regular Exc.		Embankment	
A	V	A	V
0	0	2138	7471
0	63	1896	4884
34	63	741	6991

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

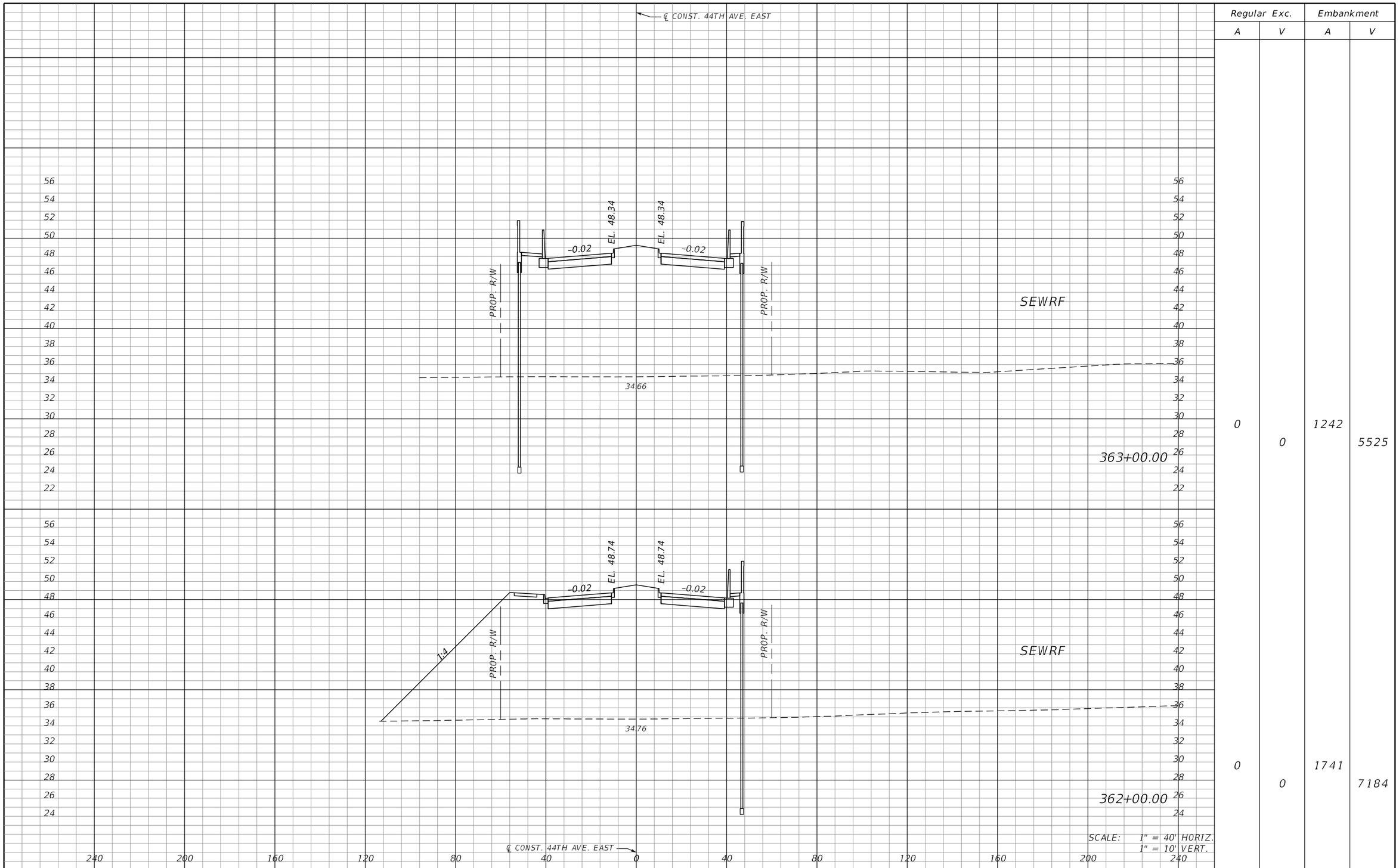
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 136

1:51:31 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	1242	5525
0	0	1741	7184

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

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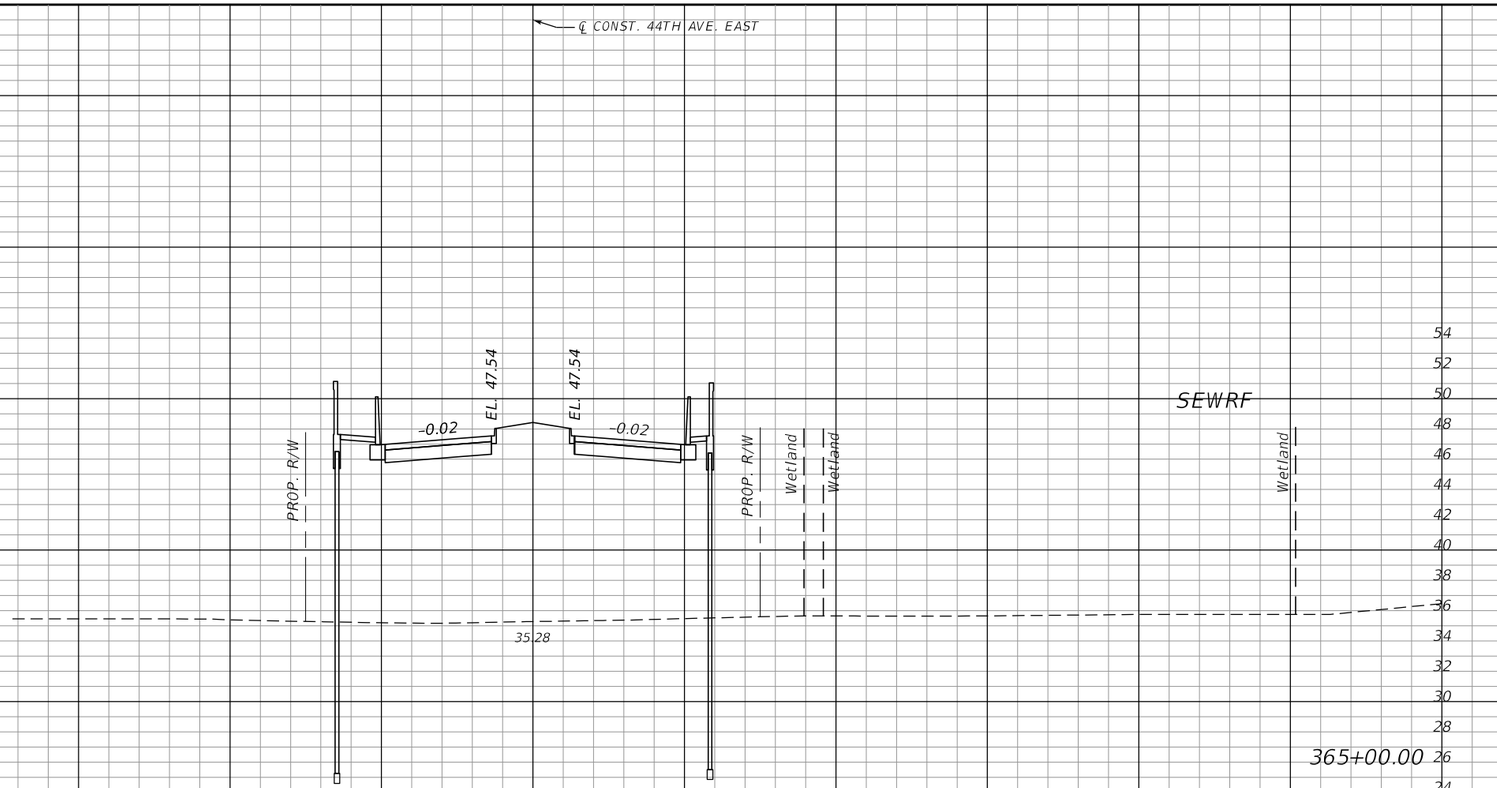
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 137

1:51:35 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

Regular Exc.		Embankment	
A	V	A	V
0	0	1105	4288
0	0	1210	4541

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

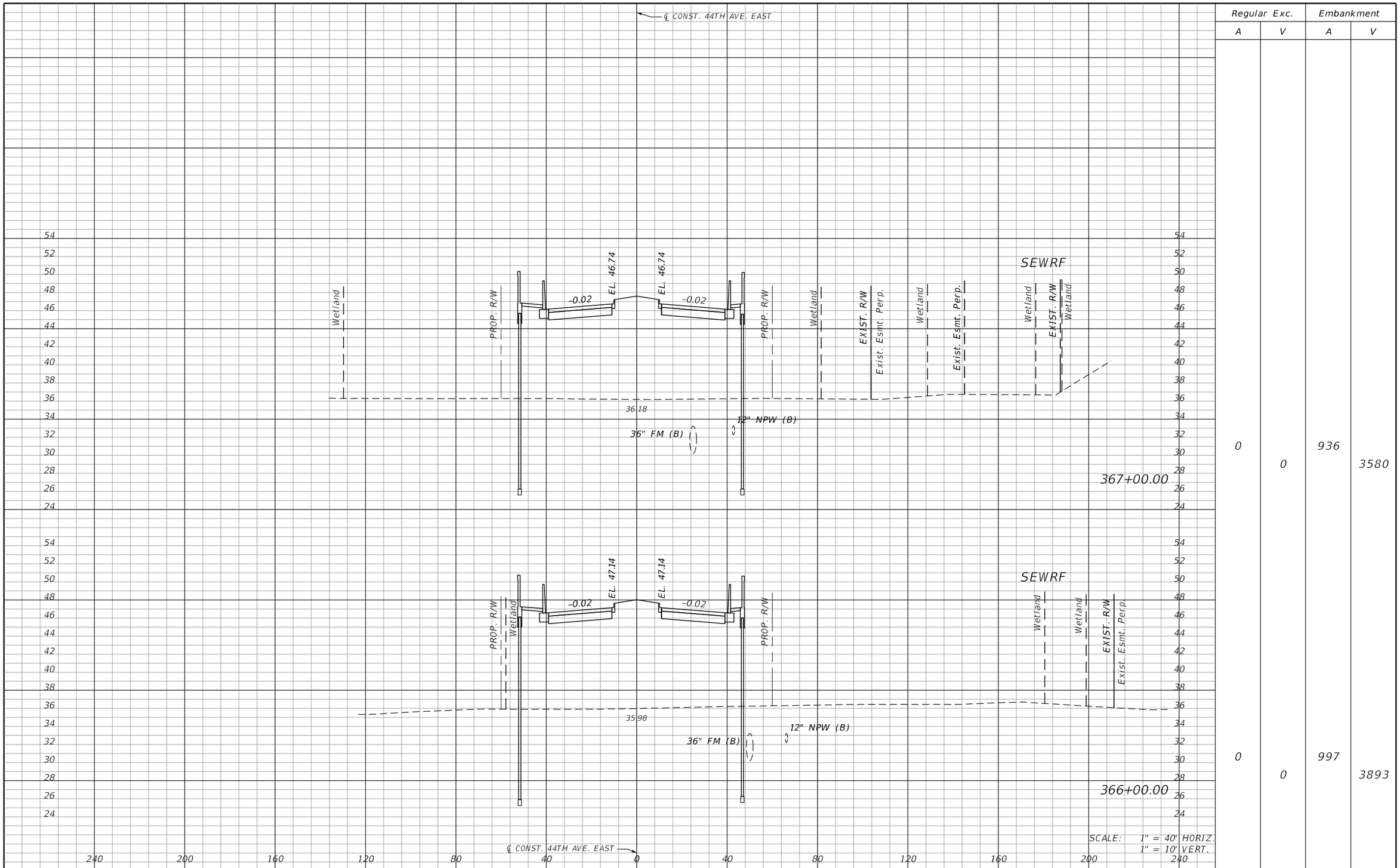
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 138

1:51:38 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	936	3580
0	0	997	3893

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

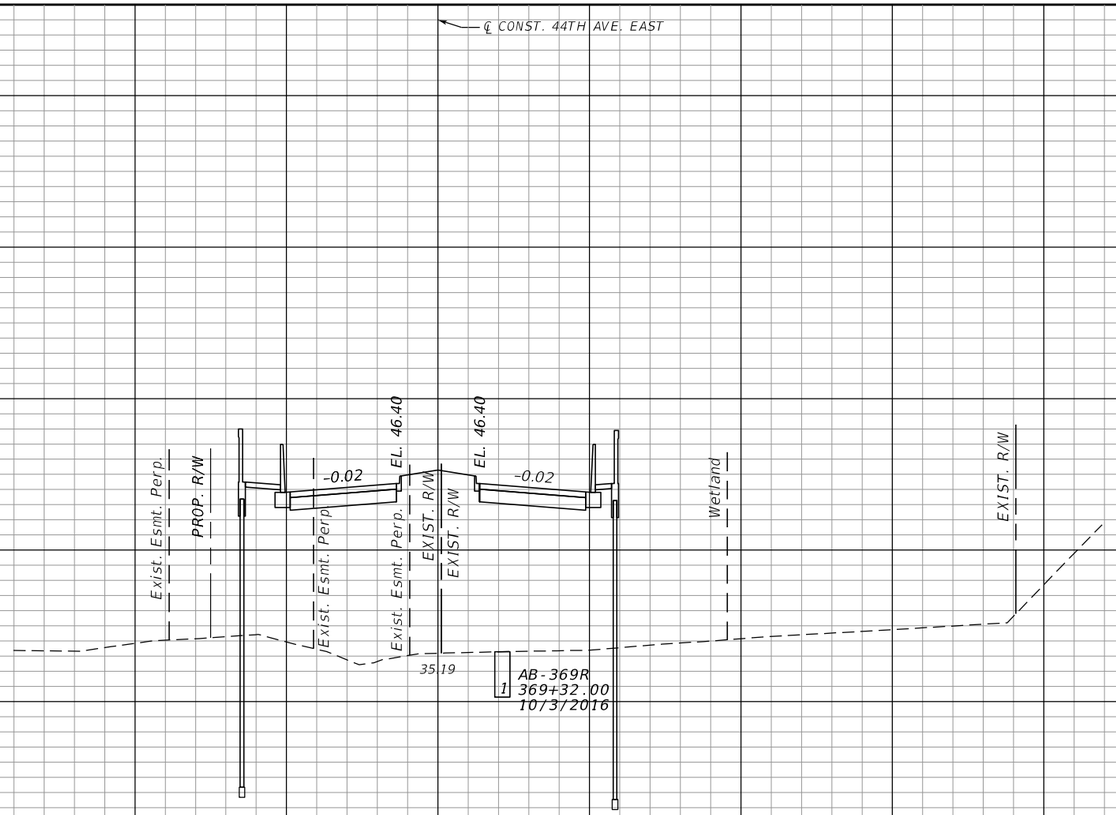
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 139

1:51:41 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	991	3504
0	0	901	3402

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

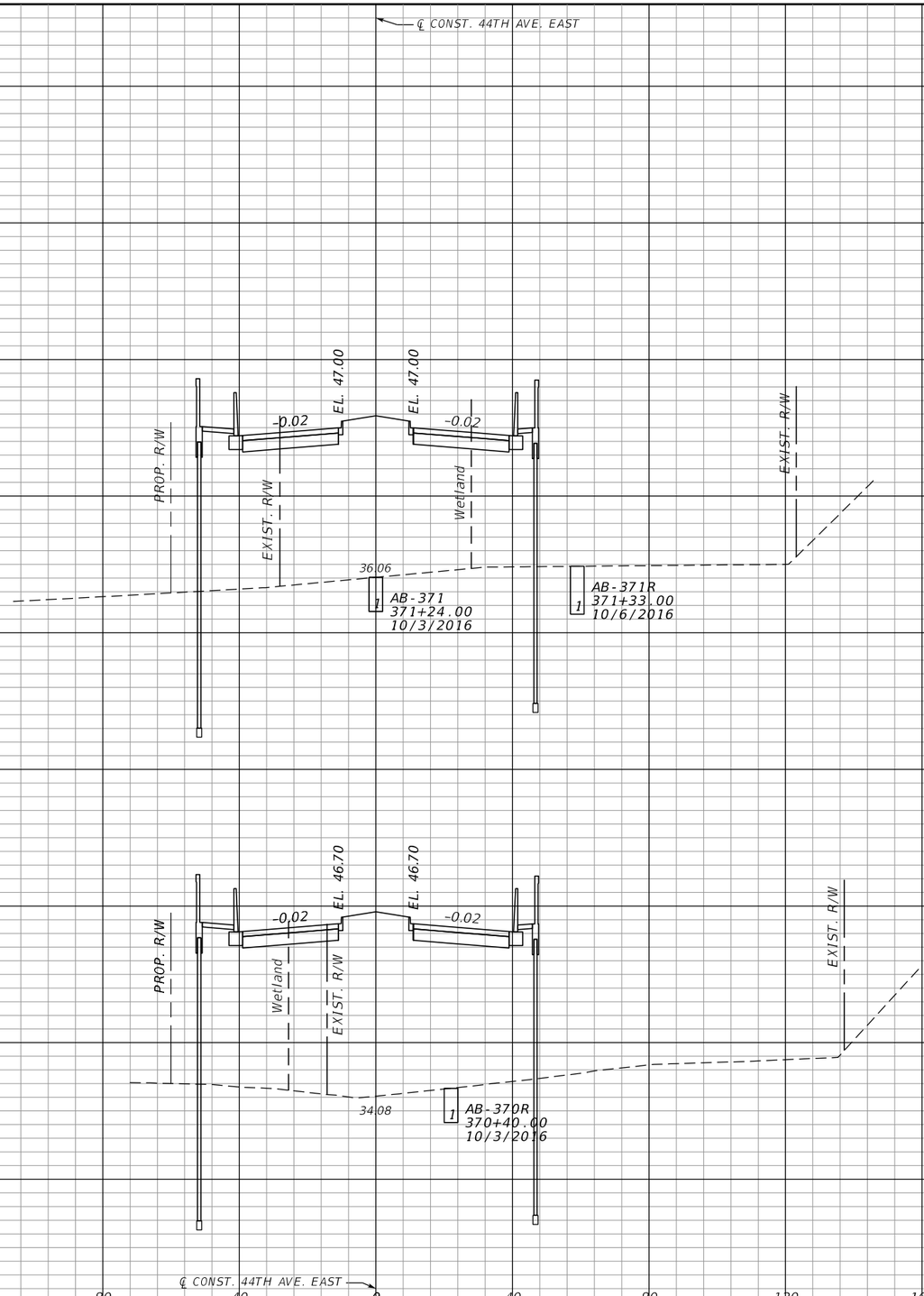
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 140

1:51:44 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	985	3849
0	0	1093	3860

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

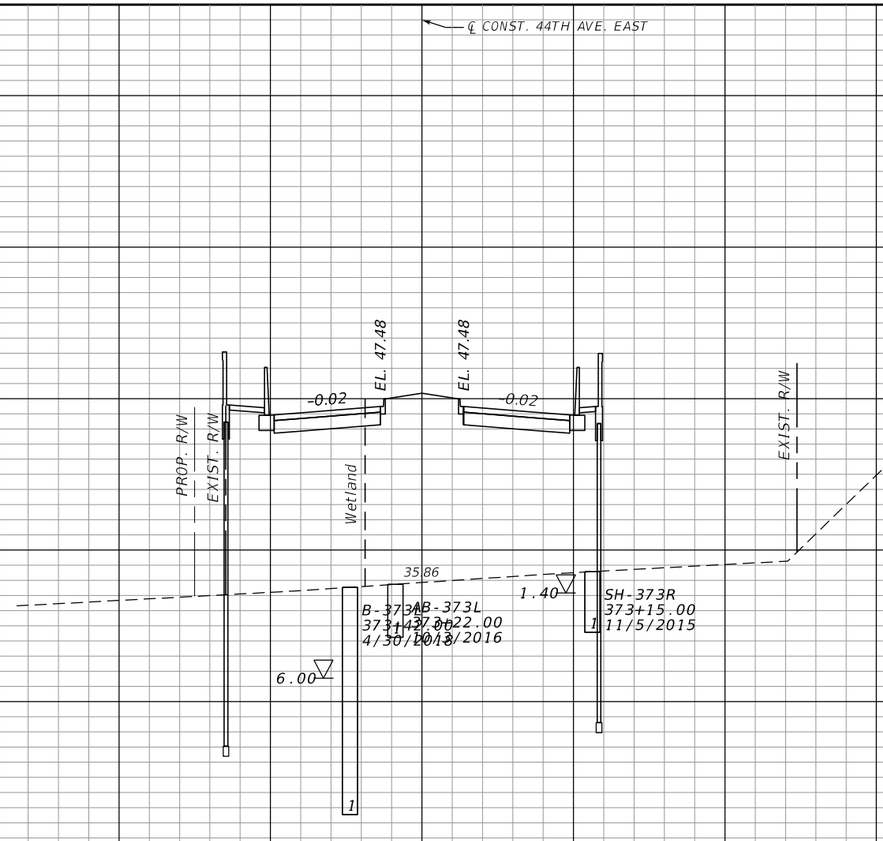
MANATEE COUNTY PUBLIC WORKS

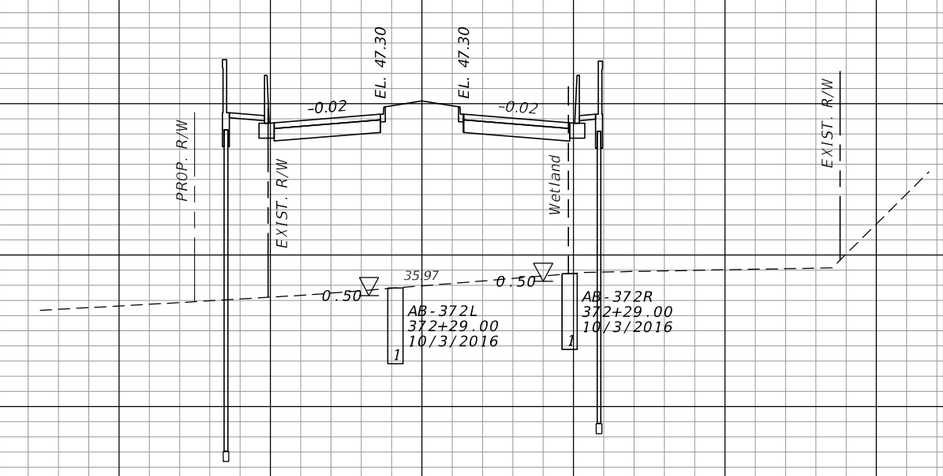
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 141

1:51:47 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn





Regular Exc.		Embankment	
A	V	A	V
0	0	1048	3828
0	0	1019	3712

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

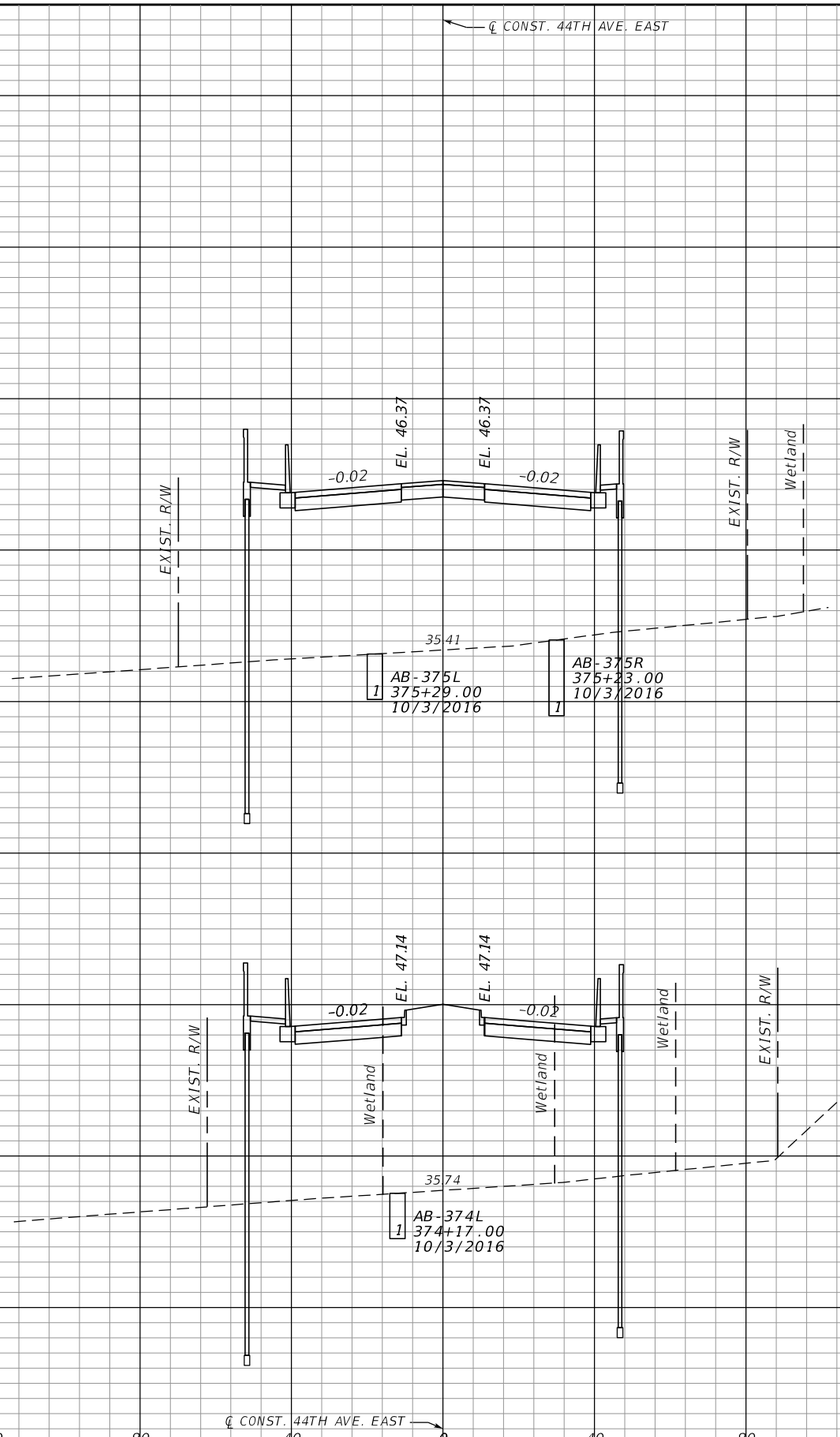
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 142

1:51:50 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	944	3649
0	0	1026	3841

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

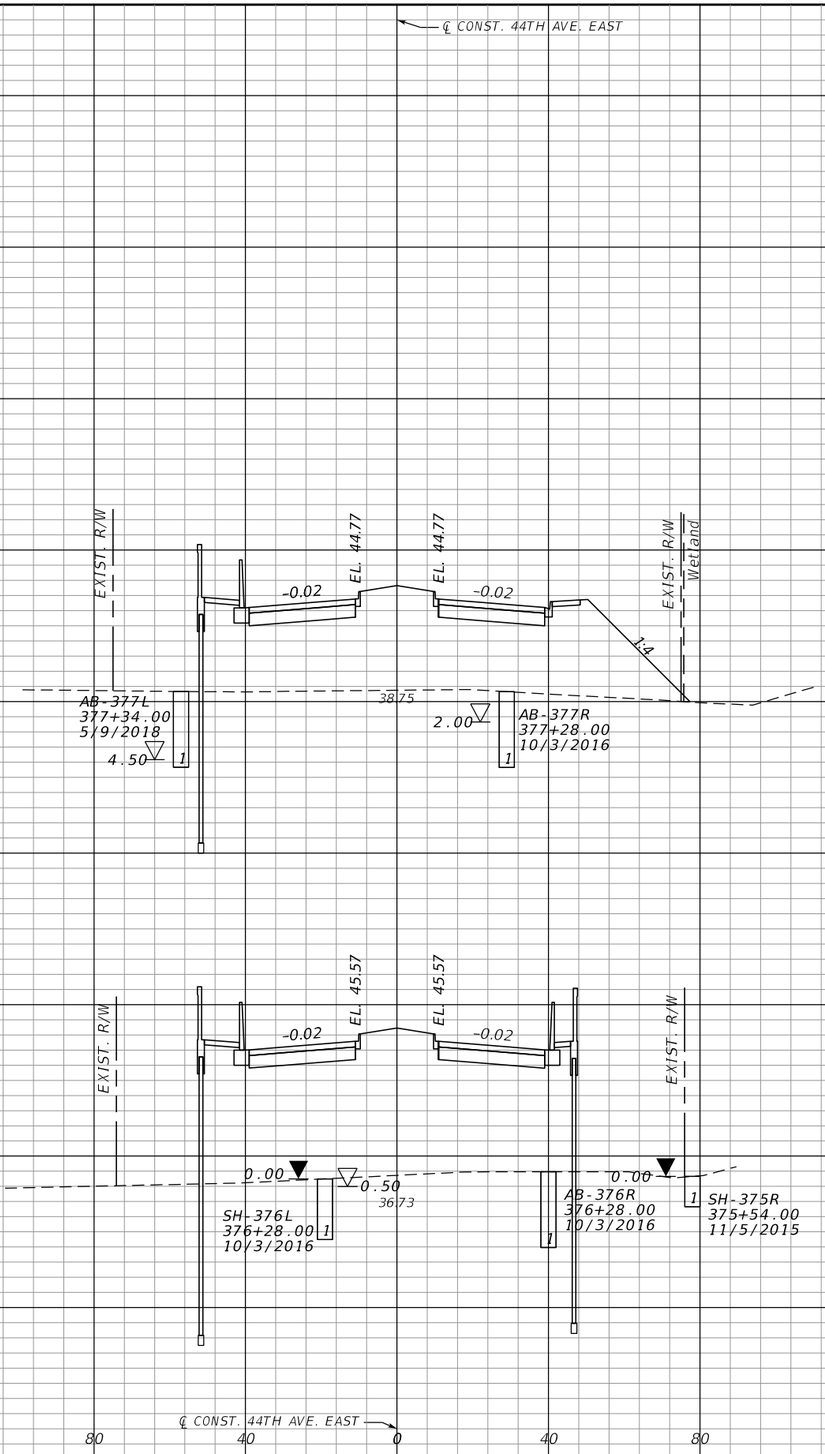
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 143

1:51:53 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	620	2595
0	0	781	3195

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

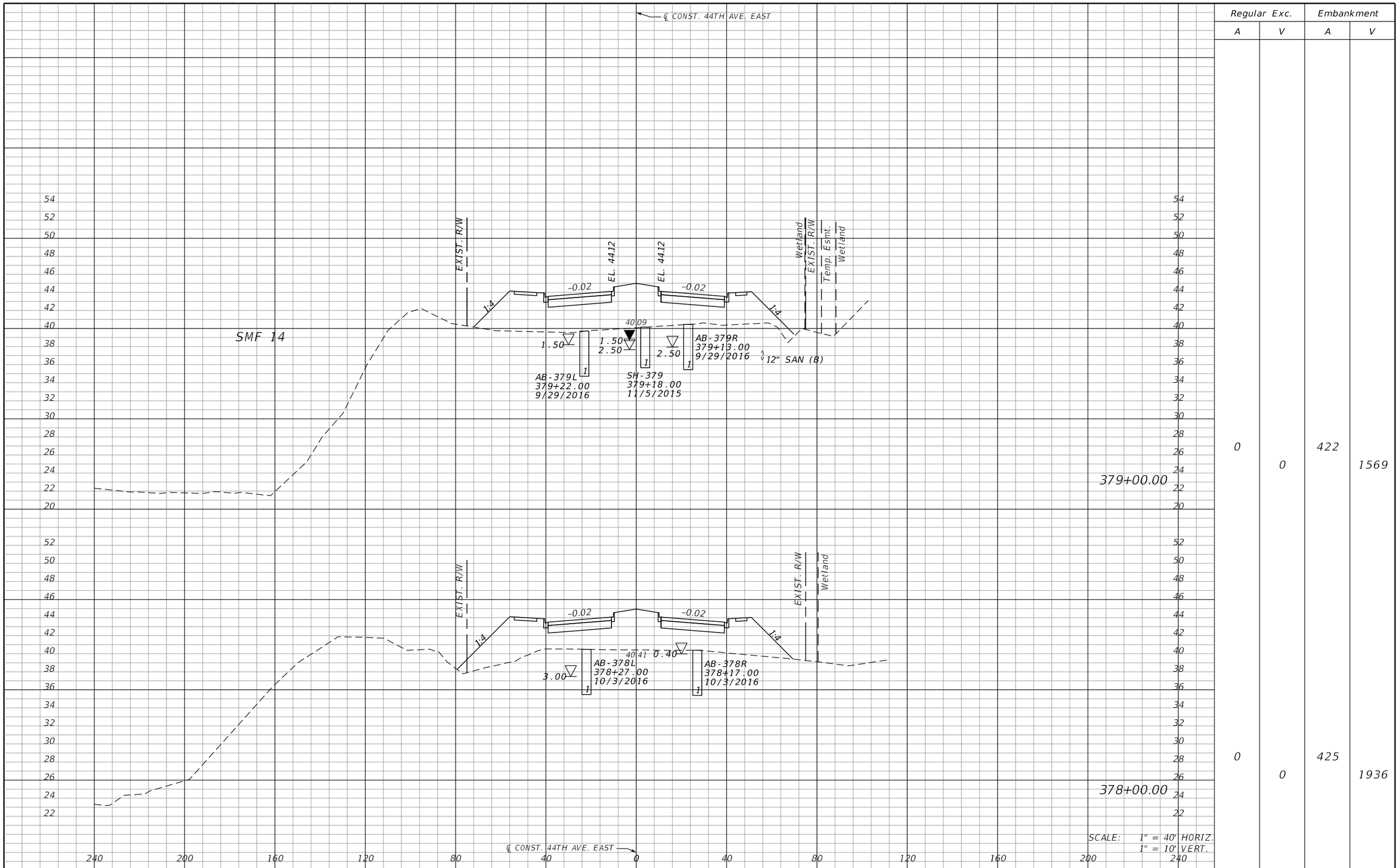
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 144



Regular Exc.		Embankment	
A	V	A	V
0	0	422	1569
0	0	425	1936

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

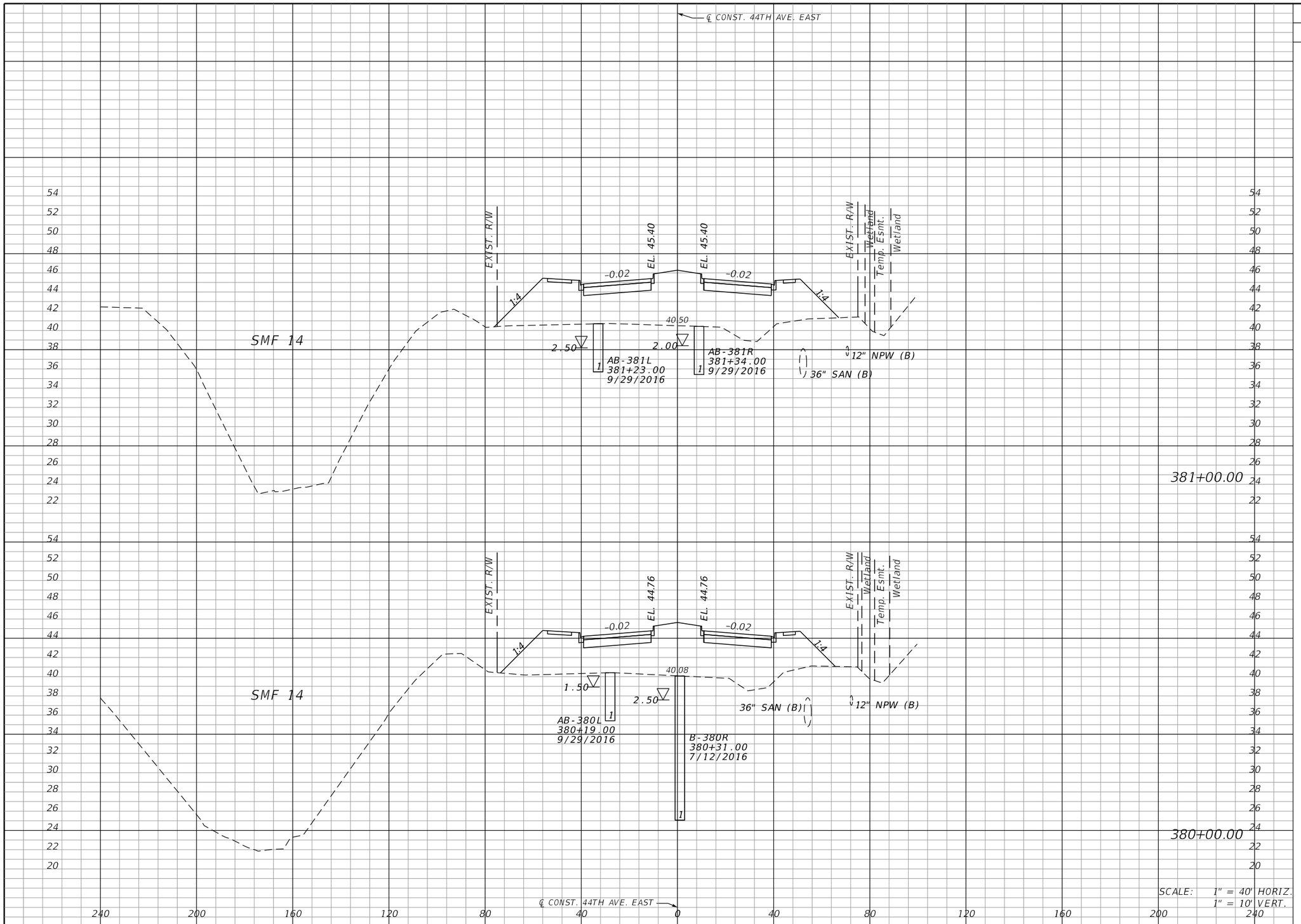
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 145

1:51:59 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	536	1910
0	0	495	1699

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

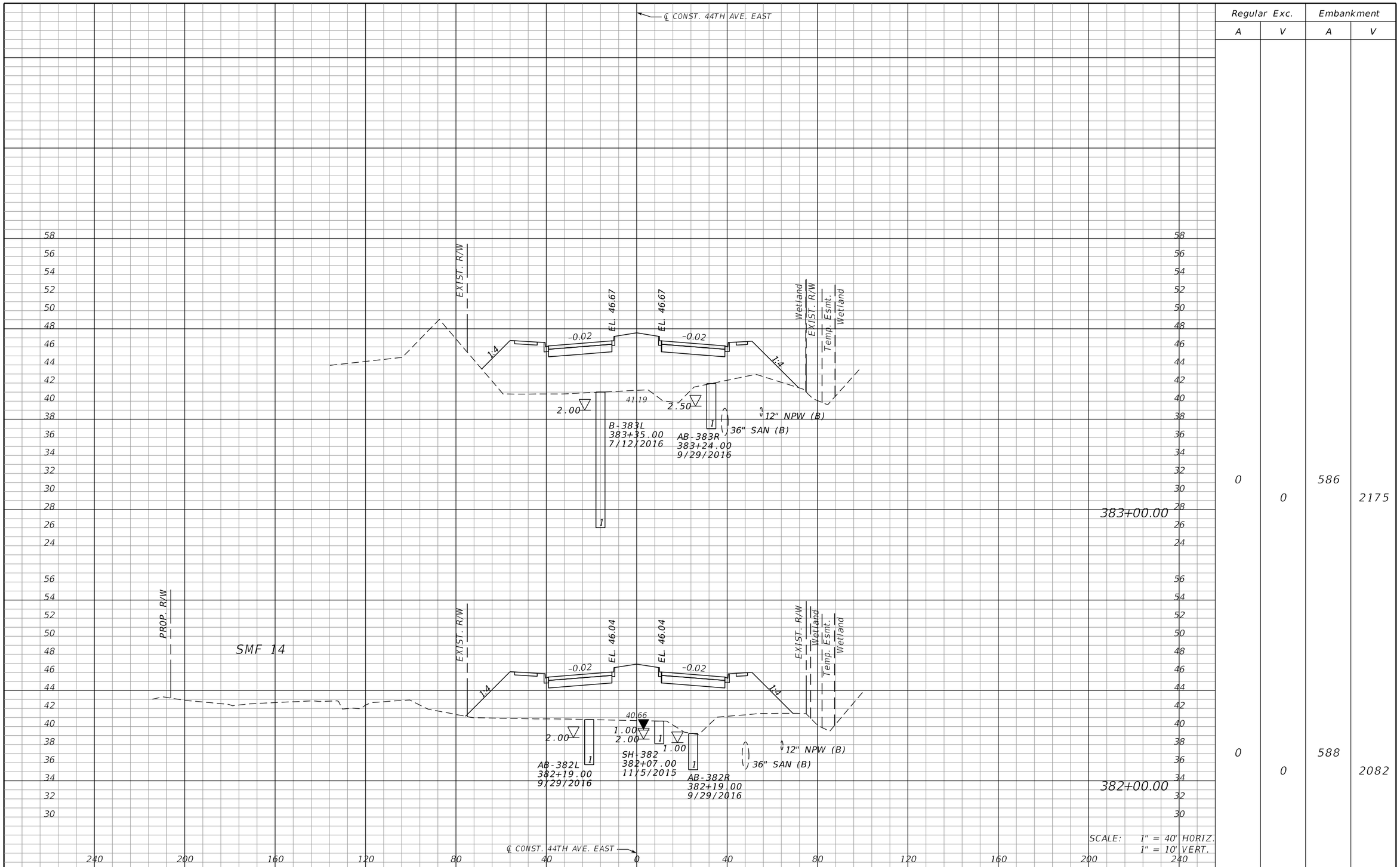
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 146

1:52:02 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	586	2175
0	0	588	2082

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

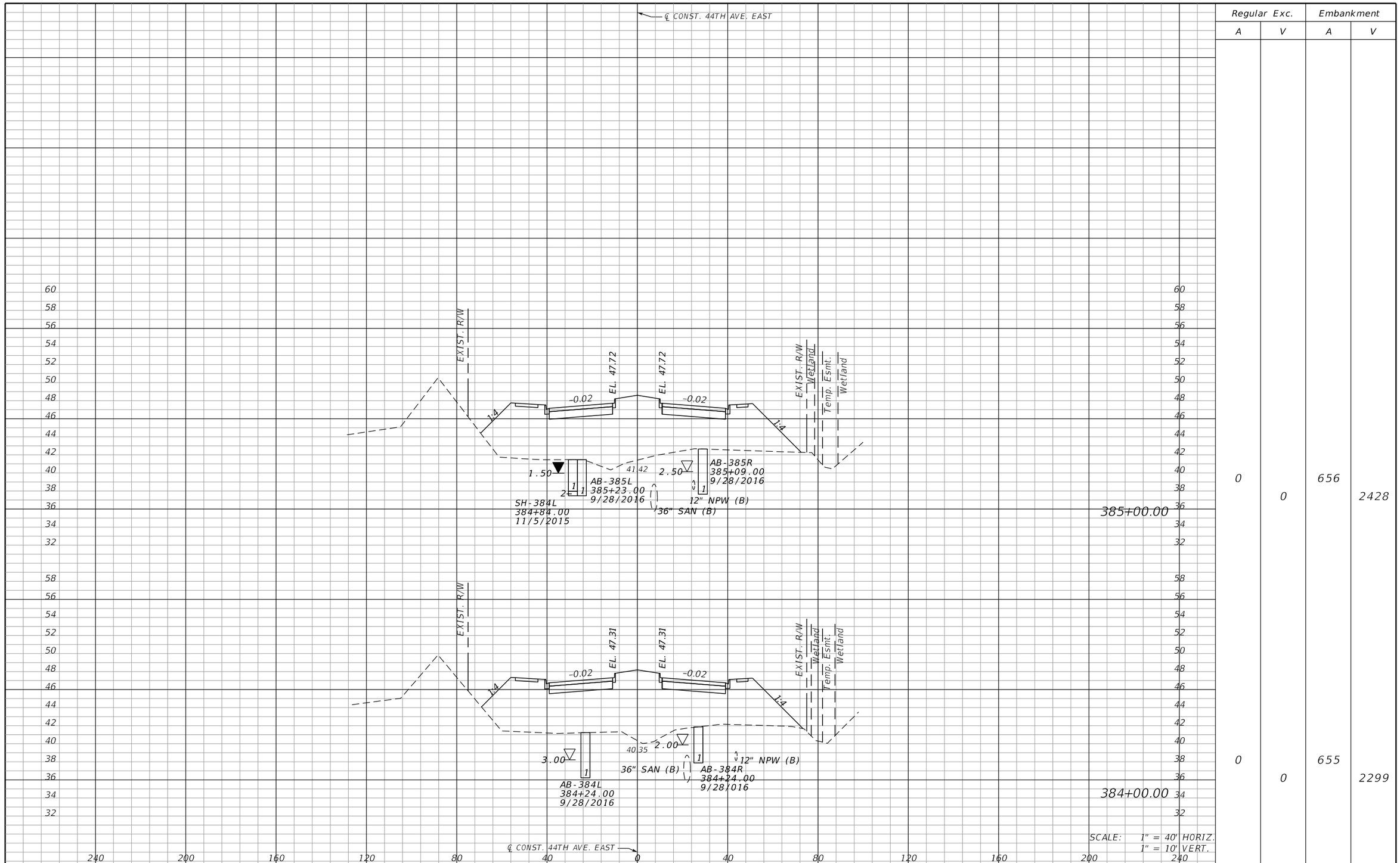
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 147



Regular Exc.		Embankment	
A	V	A	V
0	0	656	2428
0	0	655	2299

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

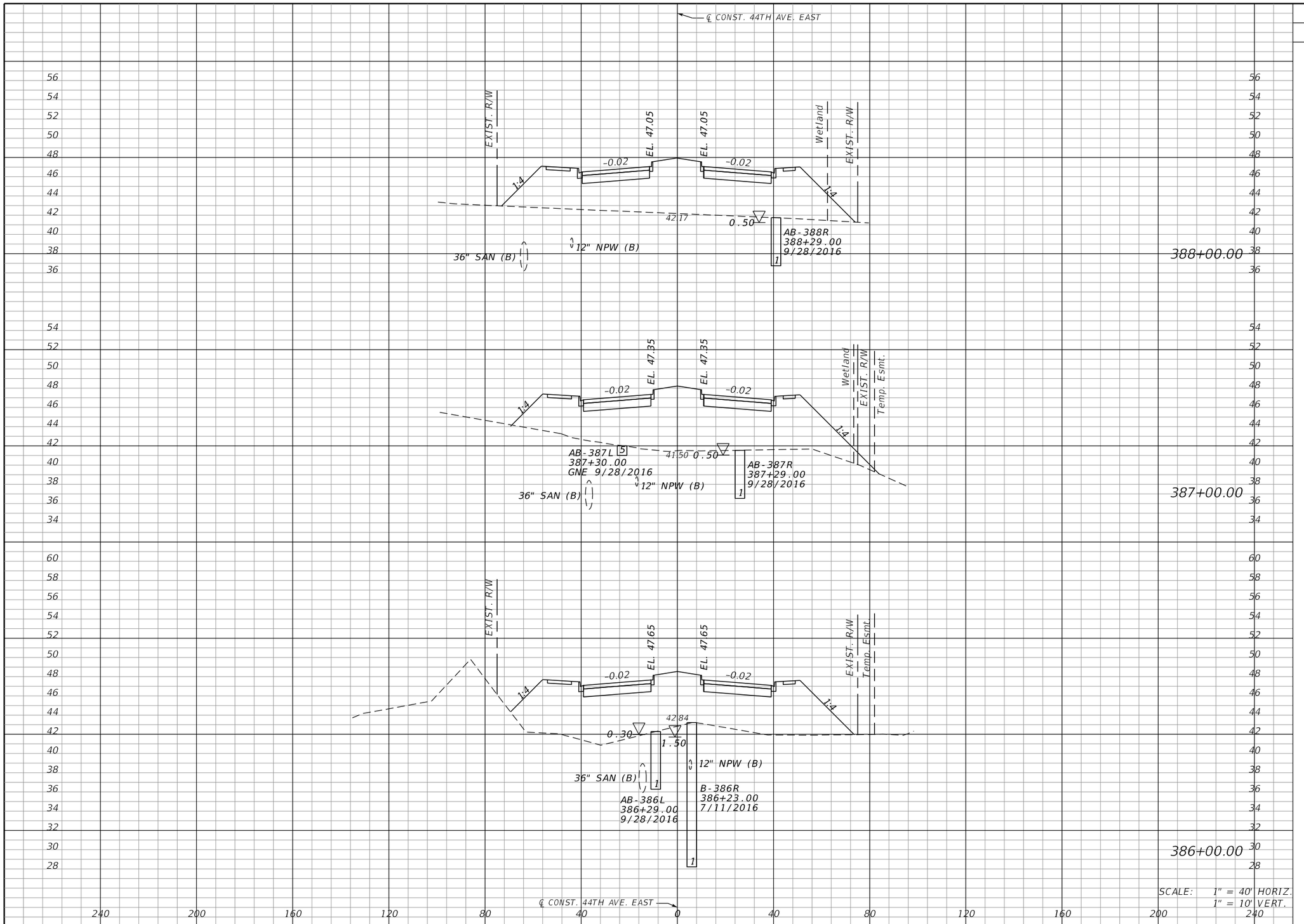
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 148

1:52:08 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	538	2115
0	0	604	2265
0	0	619	2362

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

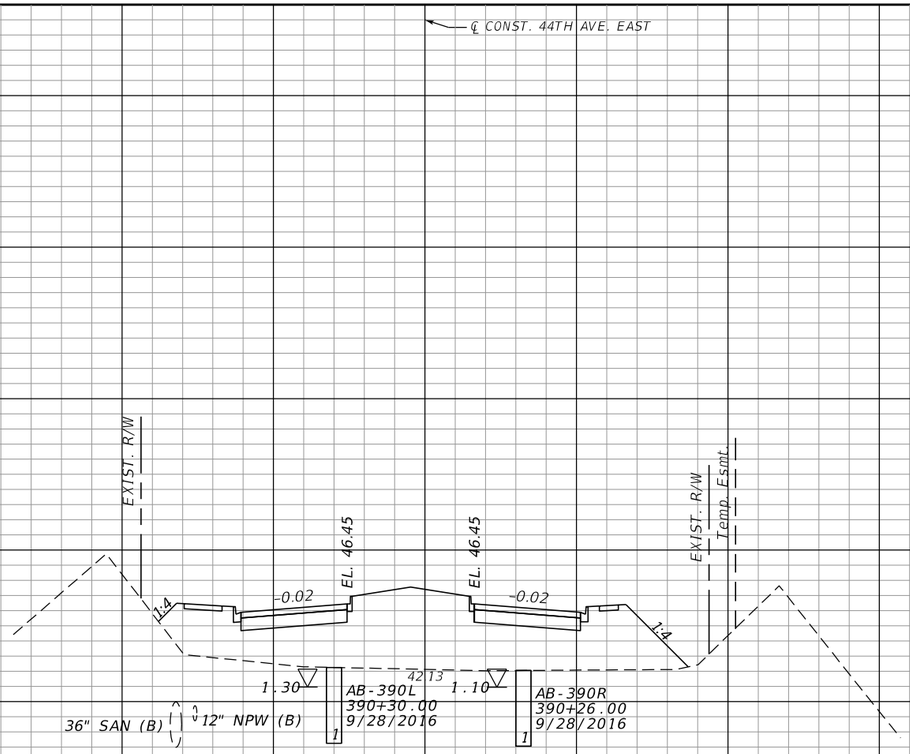
MANATEE COUNTY PUBLIC WORKS

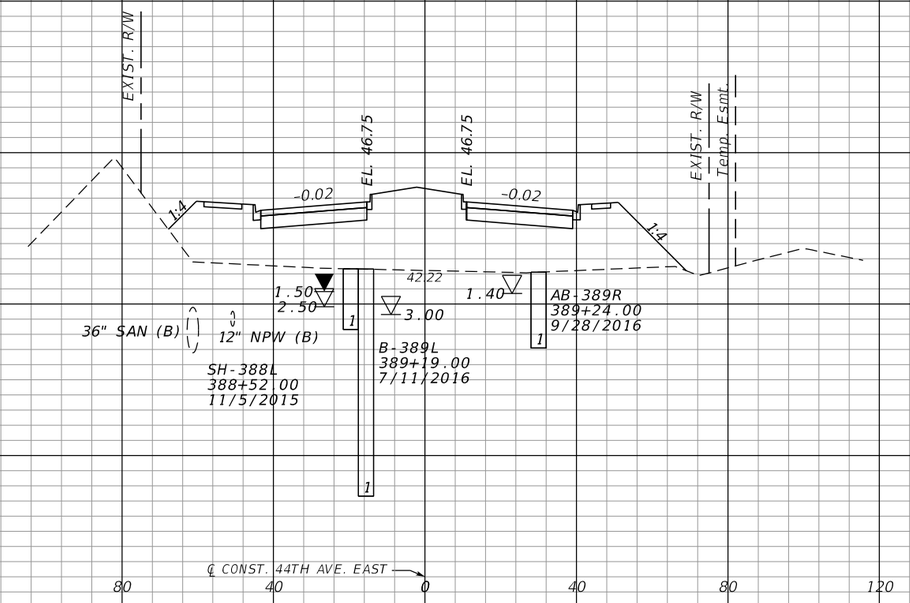
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 149

1:52:10 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn





Regular Exc.		Embankment	
A	V	A	V
0	0	464	1725
0	0	467	1862

390+00.00

389+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

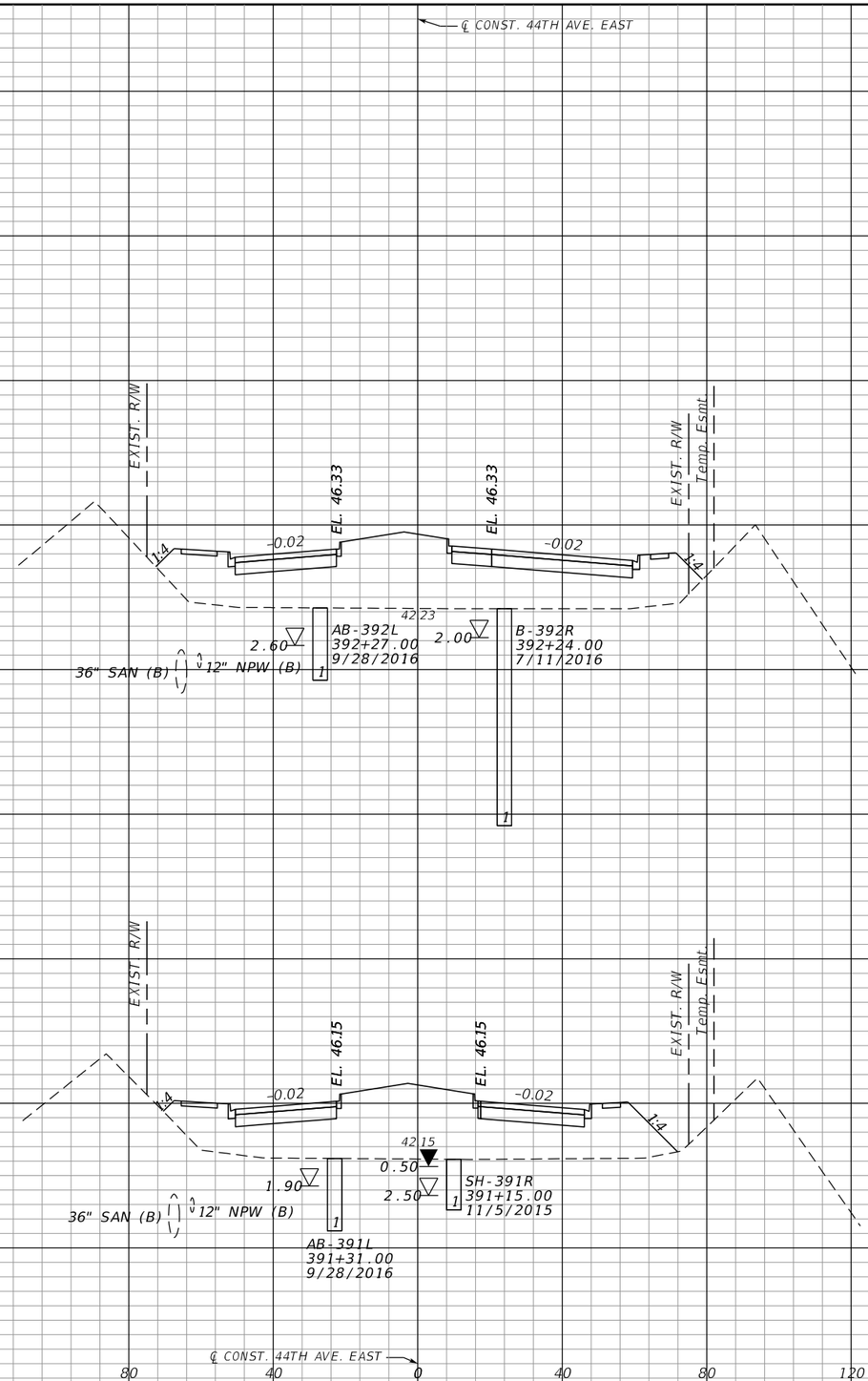
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 150

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Regular Exc.		Embankment	
A	V	A	V
0	0	474	1704
0	0	446	1686

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

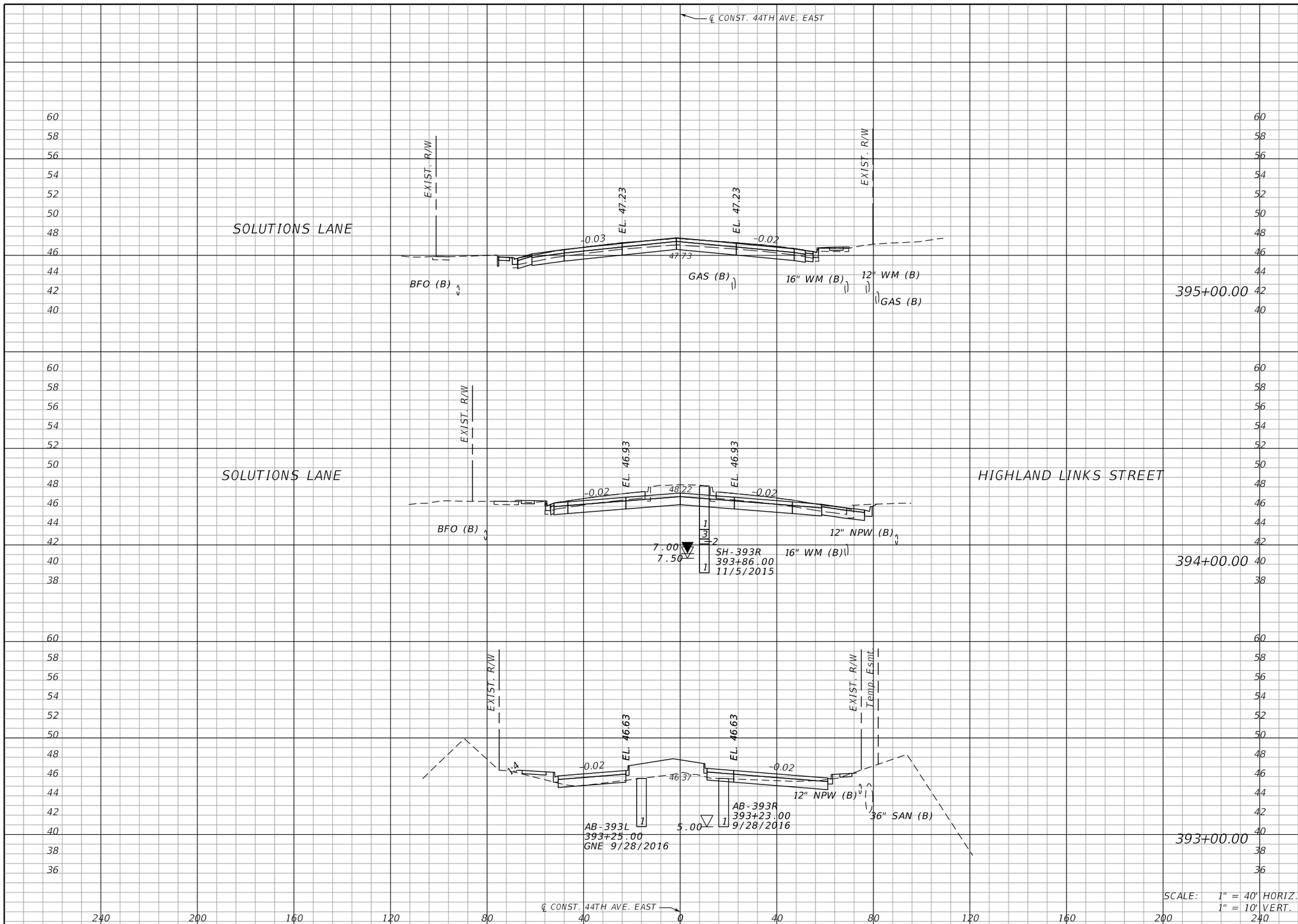
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 151

1:52:16 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD02.dgn



Regular Exc.		Embankment	
A	V	A	V
66	354	2	8
125	289	2	100
31	58	52	975

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

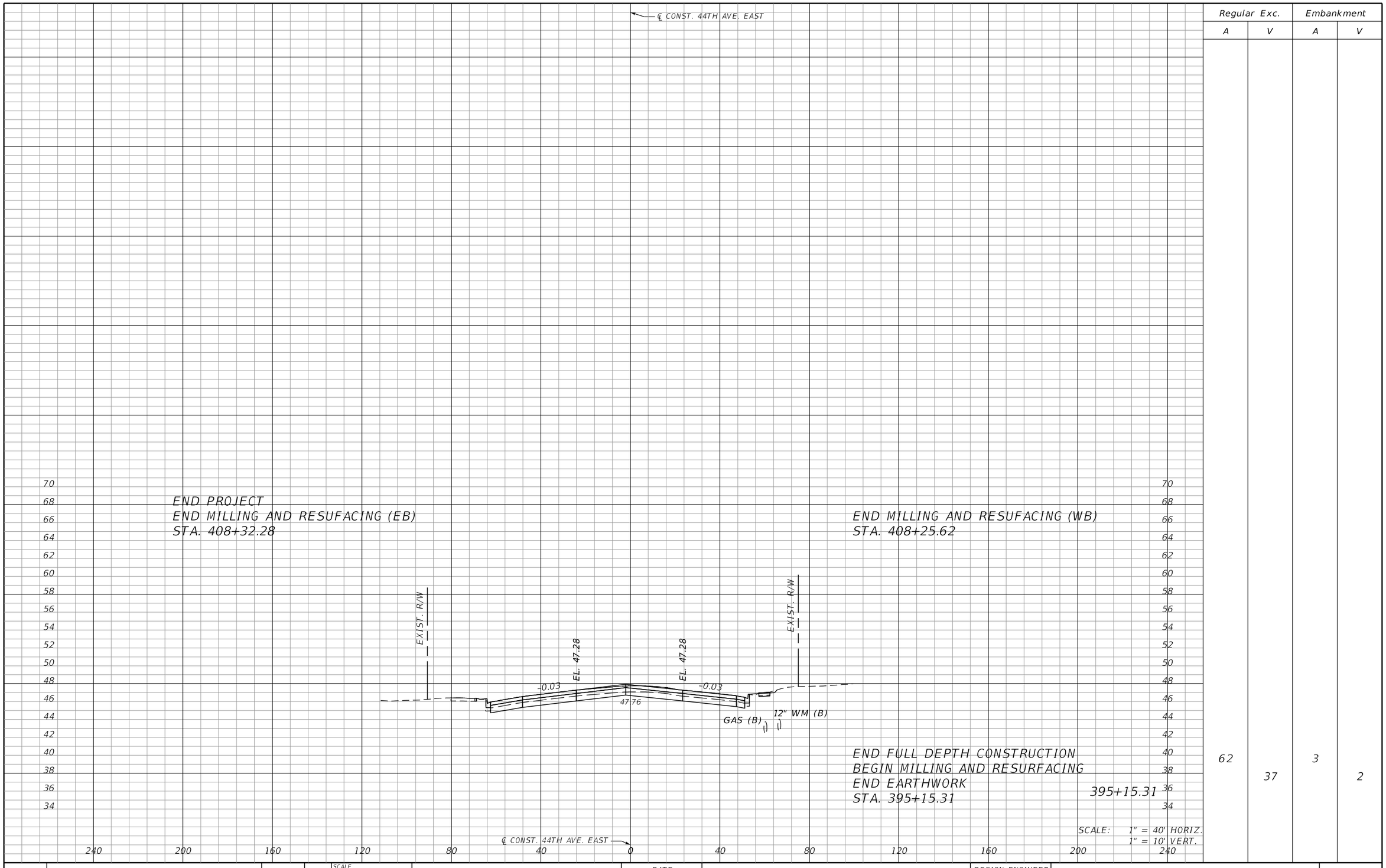
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 152



Regular Exc.		Embankment	
A	V	A	V
62	37	3	2

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

DATE: 02/2022
PROJECT NO.: 6045662

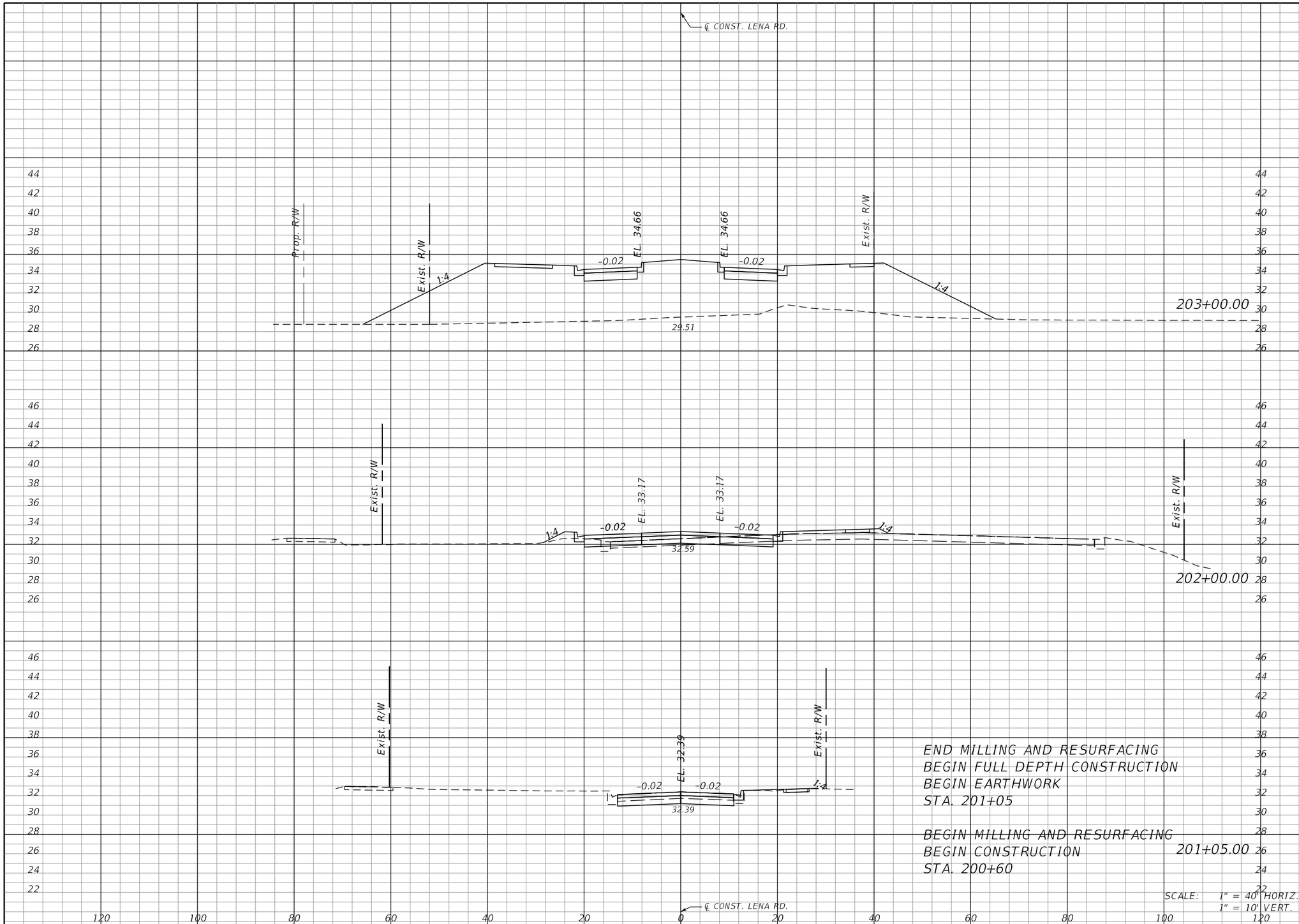
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 153

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Regular Exc.		Embankment	
A	V	A	V
0	15	543	1113
8	37	58	106
13	0	2	0

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY JLS
DRAWN BY TME
CHECKED BY TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

MANATEE COUNTY PUBLIC WORKS

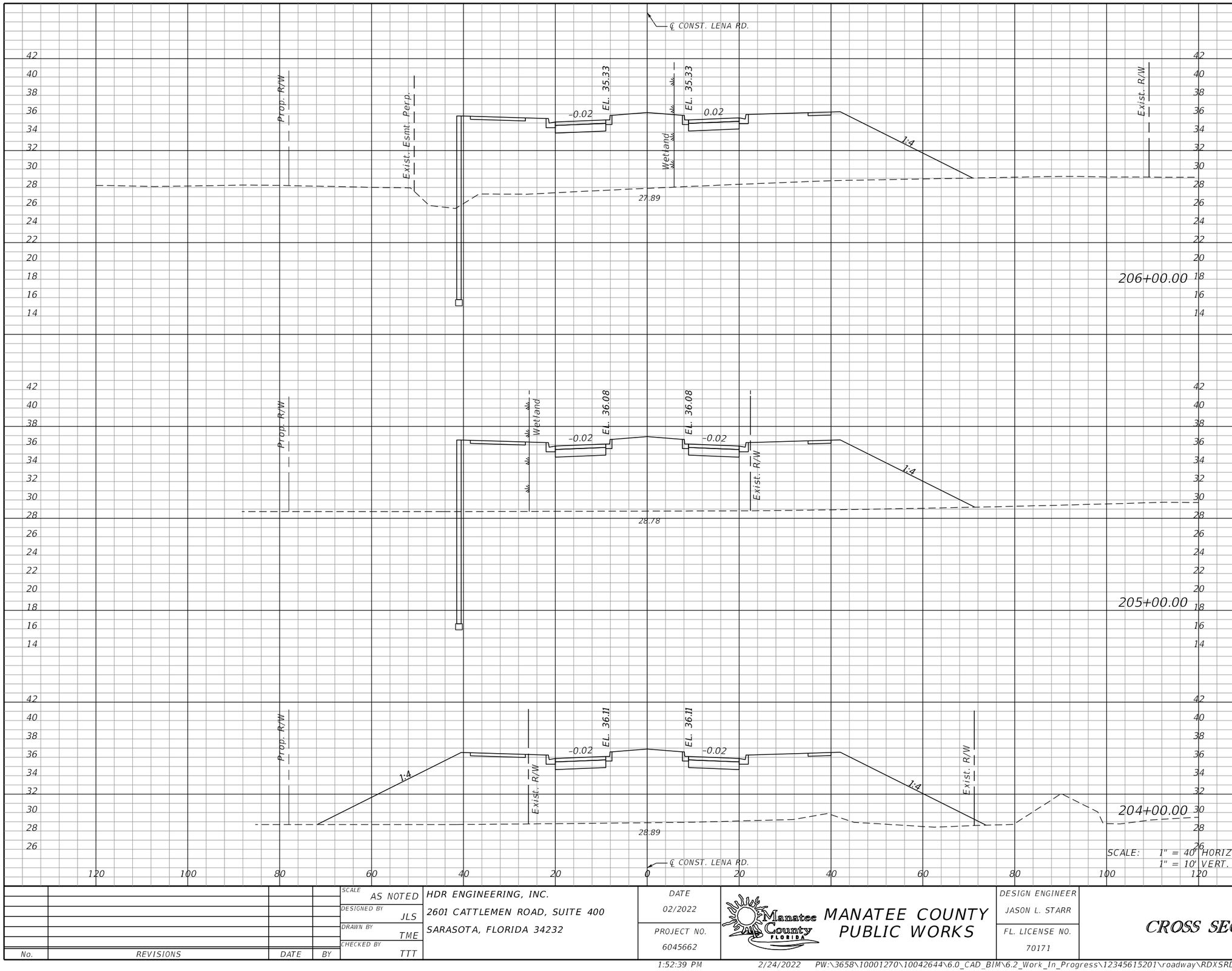
DESIGN ENGINEER JASON L. STARR
FL. LICENSE NO. 70171

CROSS SECTIONS

SHEET NO. 154

1:52:37 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn

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Regular Exc.		Embankment	
A	V	A	V
0	0	717	2615
0	0	695	2800
0	0	817	2519

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

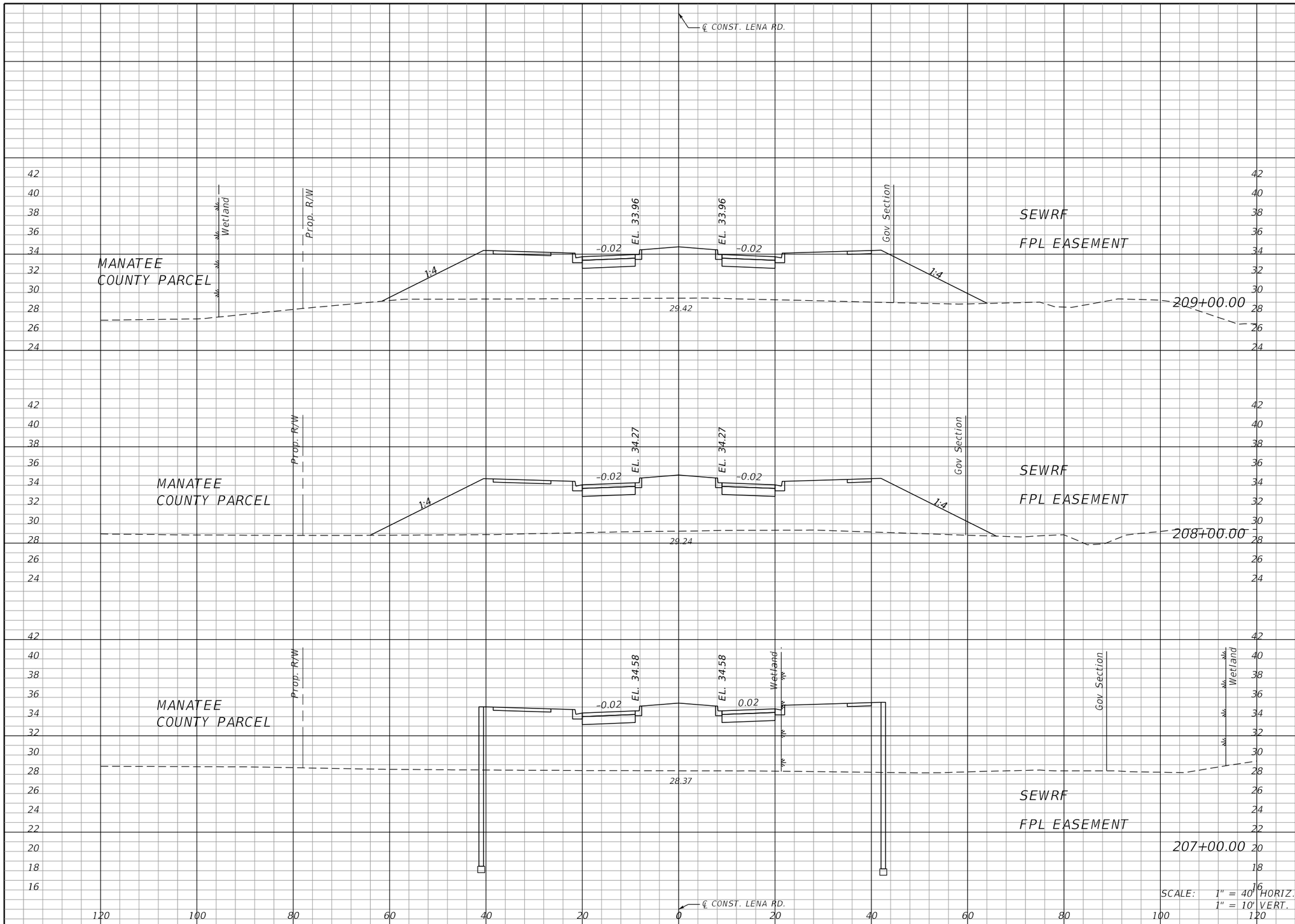
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 155

1:52:39 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	478	1880
0	0	537	1936
0	0	508	2269

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

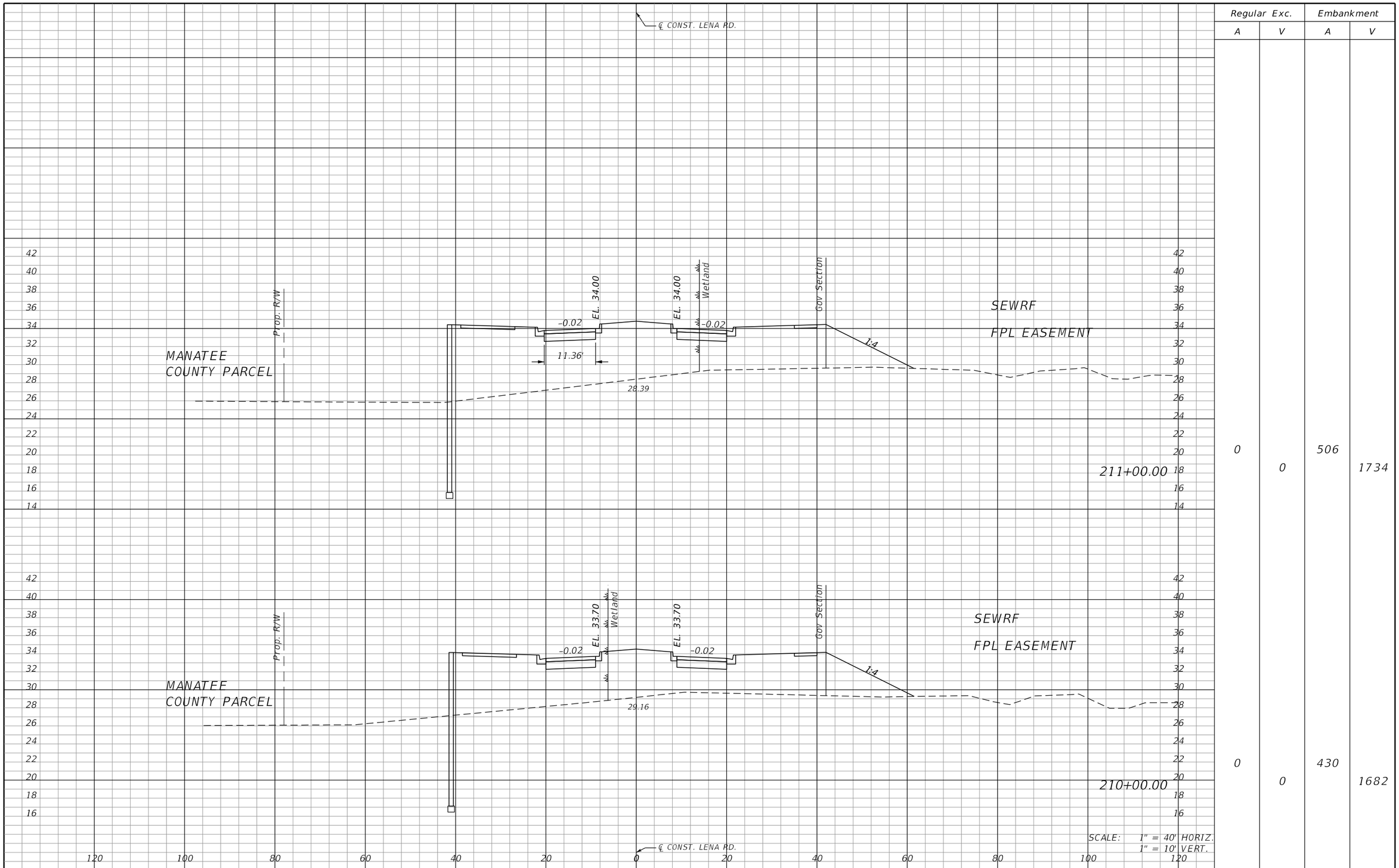
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 156

1:52:40 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	506	1734
0	0	430	1682

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

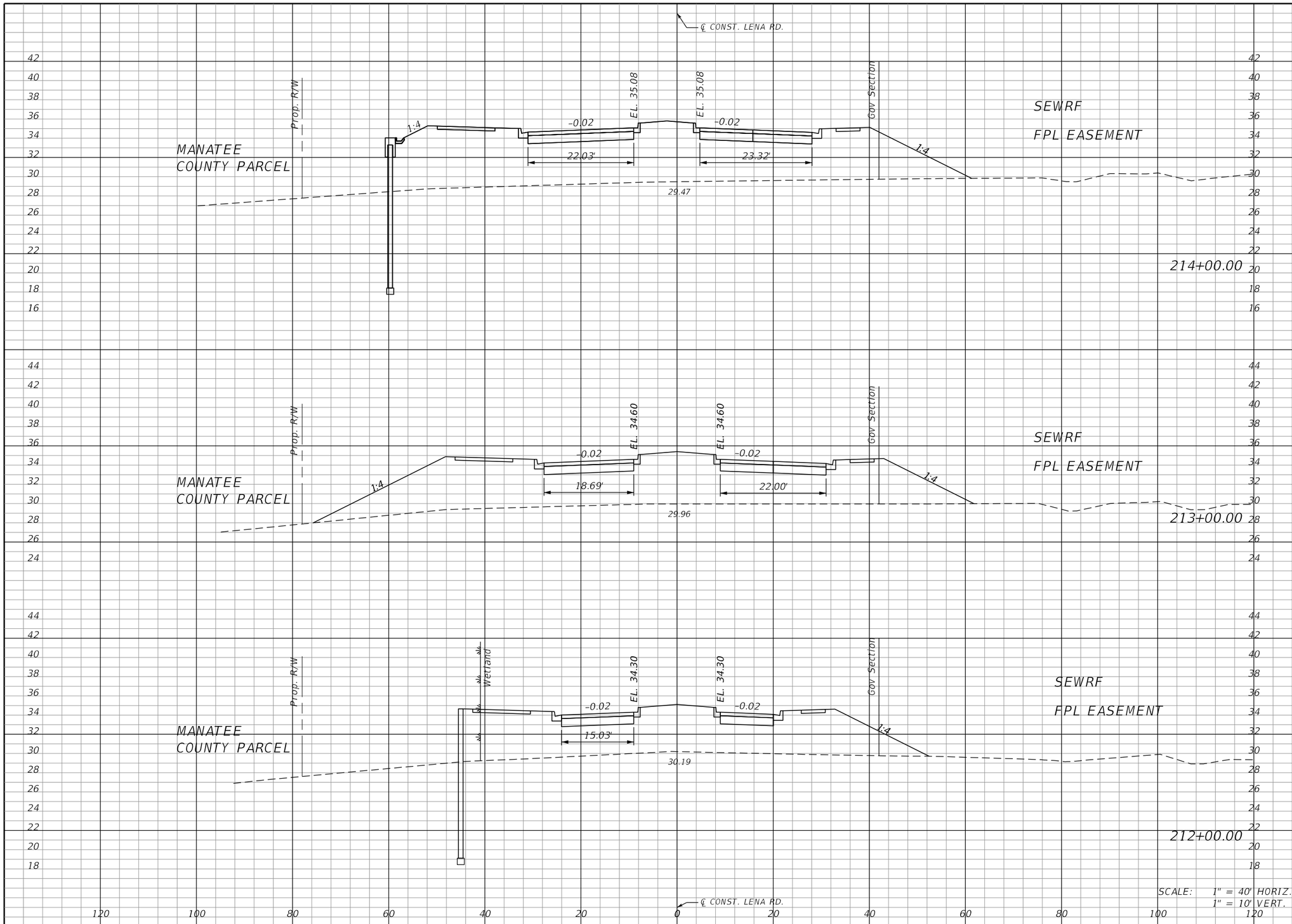
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 157

1:52:42 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn



Regular Exc.		Embankment	
A	V	A	V
0	0	558	1960
0	0	500	1600
0	0	364	1612

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 158

Regular Exc.		Embankment	
A	V	A	V

SEE 44TH AVE EAST EARTHWORK

44TH AVE EAST

-0.012 -0.03 -0.021 EL. 34.43

28.23

217+00.00

44TH AVE EAST

EL. 3577 Wetland 0.003 0.012

44TH AVE EAST

-0.012 EL. 34.79 Wetland

28.88

216+00.00

44TH AVE EAST

EL. 35.89 0.024 0.02

MANATEE COUNTY PARCEL

Prop. R/W 1:4 Wetland -0.017 EL. 35.60 EL. 35.73 0.012 Gov Section 1:4

24.30' 31.49'

28.97

SEWRF

FPL EASEMENT

215+00.00

SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

120 100 80 60 40 20 0 20 40 60 80 100 120

℄ CONST. LENA RD.

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

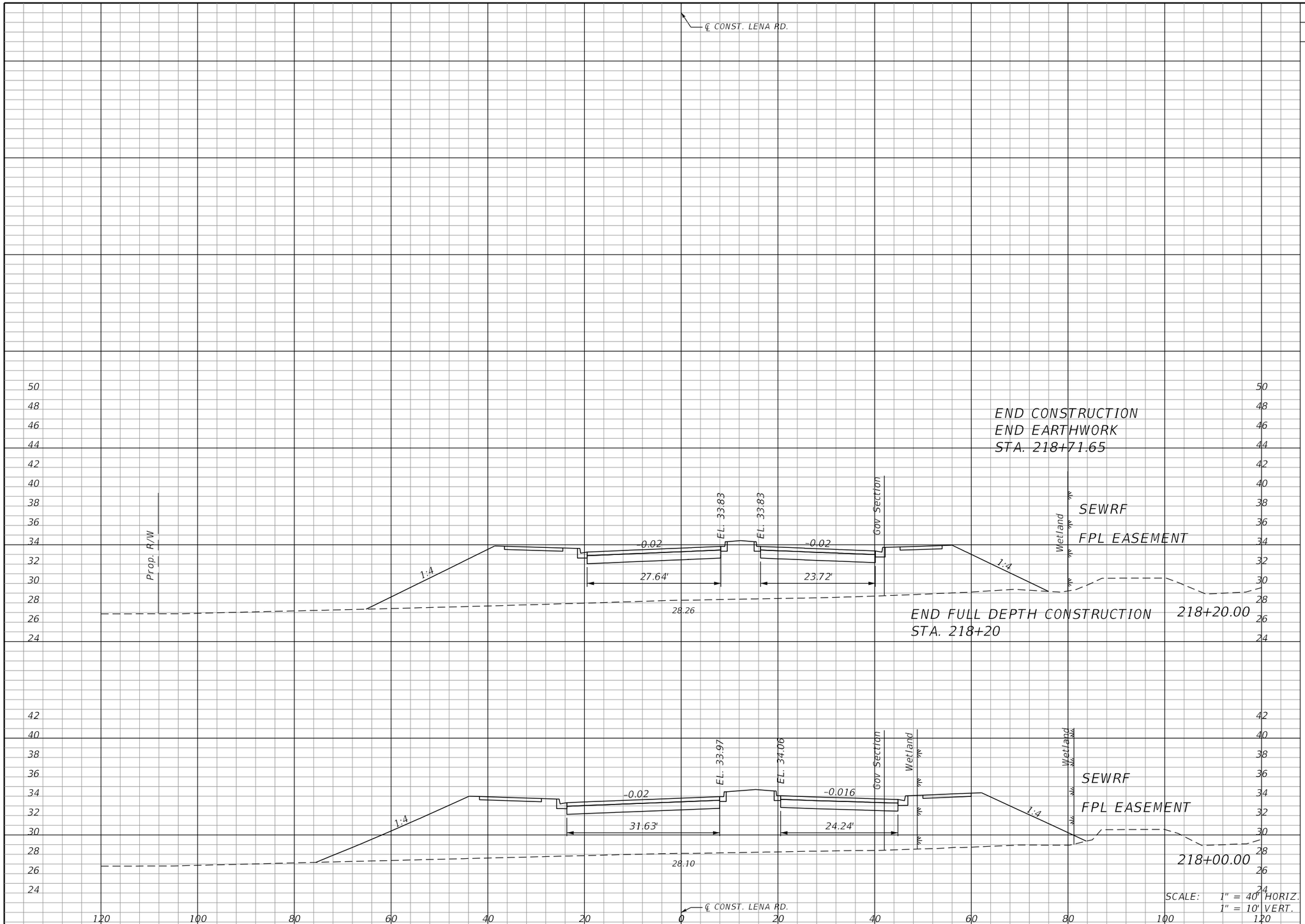
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 159

1:52:44 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn

Regular Exc.		Embankment	
A	V	A	V



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

CROSS SECTIONS

SHEET NO.: 160

1:52:45 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\RDXSRD03.dgn

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I. SITE DESCRIPTION:

(1) THE PROJECT CONSISTS OF A 1.6 MILE NEW SECTION OF 44TH AVENUE EAST AND A NEW 0.29 MILE SEGMENT OF LENA RD. THE NEW SEGMENT OF 44TH AVE BEGINS AT THE EXISTING 44TH AVE EAST LIMITS AND EXTENDS EAST TO WHERE THE EXISTING 44TH AVE EAST BEGINS. THE NEW SEGMENT OF LENA RD EXTENDS NORTH FROM THE EXISTING LENA RD CUL-DE-SAC TERMINUS IN CREEKWOOD EAST CORPORATE PARK TO THE NEW 44TH AVE CORRIDOR IN MANATEE COUNTY, FLORIDA. THE NEW ROADWAY EXTENSION WILL CONSIST OF A 4-LANE DIVIDED URBAN (CURB AND GUTTER) ROADWAY WITH TWO 12-FEET WIDE TRAVEL LANES, 4-FEET WIDE BIKE LANE AND 5-FEET WIDE SIDEWALK IN EACH DIRECTION. THE ROADWAY WILL BE DRAINED BY STORMDRAIN SYSTEM TO WET DETENTION STORMWATER PONDS FOR TREATMENT AND ATTENUATION. THE PROJECT ALSO INCLUDES ADJACENT SITES FOR WETLAND MITIGATION AND INFORMAL FLOODPLAIN VOLUME COMPENSATION.

(2) SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

(a) THE CONTRACTOR SHALL BE REQUIRED TO PREPARE A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN ALONG WITH A DETAILED CONSTRUCTION SCHEDULE TO INDICATE DATES OF MAJOR GRADING ACTIVITIES AND DETERMINE SEQUENCES OF TEMPORARY AND PERMANENT SOIL DISTURBING ACTIVITIES ON ALL PORTIONS OF THE PROJECT.
(b) THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS, CONSTRUCTION ACTIVITY VARIATIONS, OR AS DIRECTED BY THE ENGINEER.
(c) APPLICABLE EROSION AND SEDIMENT CONTROL DEVICES AND IMPLEMENTATION PROCEDURES ARE SUPPLIED IN THE FDOT STANDARD INDEXES 100 THROUGH 106 AND THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).
(d) THE ENGINEER IS RESPONSIBLE FOR DETERMINING IF ANY MODIFICATIONS OR ADDITIONAL CONTROLS ARE REQUIRED AND TO OBTAIN DEPLOYMENT SCHEDULES FOR THE IMPLEMENTATION OF ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES FROM THE CONTRACTOR.

(3) GENERAL NOTES:

(a) ALL EROSION AND SEDIMENT CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.
(b) INSTALL EROSION AND SEDIMENT CONTROL DEVICES WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.
(c) PROVIDE SEDIMENT BARRIERS WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR DITCH/SWALE CHECK DAMS DURING CONSTRUCTION.
(d) PROVIDE INLET PROTECTION SYSTEMS AT INLET OPENINGS.
(e) COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
(f) DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
(g) TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.
(h) DO NOT REMOVE PERIMETER CONTROLS UNTIL ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT VEGETATION IS ESTABLISHED.

(4) PROJECT AREAS:
THE ESTIMATED TOTAL PROJECT AREA IS 58.73 ACRES. THE ESTIMATED AREA TO BE DISTURBED DURING CONSTRUCTION ACTIVITIES IS 58.73 ACRES.

(5) RUNOFF COEFFICIENTS BEFORE Cw (B), DURING Cw (D) AND AFTER Cw (A) CONSTRUCTION:

RUNOFF COEFFICIENT FOR: GRASSED SHOULDERS ADJACENT TO ROADWAY: C = 0.35
IMPERVIOUS ROADWAYS AND PAVED SHOULDER: C = 0.95
DISTURBED AREAS, EXPOSED SOIL, ETC., DURING CONSTRUCTION: C = 0.67

WEIGHTED RUNOFF COEFFICIENT:
BEFORE: Cw (B) = 0.52 DURING: Cw (D) = VARIES FROM 0.52 TO 0.83 AFTER: Cw (A) = 0.83

THE RUNOFF COEFFICIENT DURING CONSTRUCTION, Cw (D), IS CALCULATED ASSUMING THAT THE MAXIMUM ALLOWABLE AREA OF SOIL IS DISTURBED DURING CONSTRUCTION AND THE REMAINING AMOUNT IS THE EXISTING IMPERVIOUS AND GRASSED SHOULDER AREAS.

(6) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE:
THE SOIL CHARACTERISTICS ARE TYPICALLY EAU GALLIE SANDS (HSG B/D) WITH SEASONAL HIGH GROUNDWATER (SHWT) DEPTH OF 0 TO 1-FOOT. THE SUGARHOUSE CREEK FLOWWAY EXHIBITS BRADENTON AND WABASSO SANDS (HSG B/D) WITH SEASONAL HIGH GROUNDWATER (SHWT) DEPTH OF 0 TO 1-FOOT

SOIL TYPE	HYDROLOGIC GROUP	DEPTH TO SHWT
7 - CANOVA, ANCLOTE AND OKEELANTA	A/D	~ 0.0'
16 - DELRAY COMPLEX	A/D	0.0' - 1.5'
20 - EAUGALLIE, FINE SANDS	A/D	0.5' - 1.5'
26 - FLORIDIANA-IMMOKALEE-OKEELANTA	C/D	~ 0.0'

REFERENCE: NRCS WEB SOIL SURVEY

(7) ESTIMATED DRAINAGE AREA AND AVERAGE SLOPE OF DRAINAGE FOR EACH OUTFALL:
(a) DRAINAGE MAPS OR MAPS WITH APPROPRIATE CONTOURS: TO BE INCLUDED WITH THESE SHEETS.

(8) RECEIVING WATERS:

EXISTING DRAINAGE PATTERNS FOLLOW EXISTING WATERSHED FLOW PATTERNS TO WILLIAMS CREEK, BRADEN RIVER BELOW WARD LAKE, AND CYPRESS STRAND. ONSITE RUNOFF FROM 44TH AVE AND LENA RD ARE COLLECTED AND COVEYED WITHIN A CLOSED STORMDRAIN SYSTEM TO PROPOSED STORMWATER MANAGEMENT FACILITIES WITHIN THE PROJECT LIMITS. ALL PROJECT AREAS ARE WITHIN OPEN BASINS WHICH ULTIMATELY DISCHARGE TO EITHER BRADEN RIVER OR MANATEE RIVER.

(9) THE PROJECT'S OUTFALLS (WILLIAMS CREEK TO BRADEN RIVER / MANATEE RIVER) ARE NOT 303(d) LISTED, IMPAIRED WATERS FOR PARAMETERS SUCH AS TOTAL SUSPENDED SOLIDS (TSS), TURBIDITY, NUTRIENTS, DISSOLVED OXYGEN, FECAL COLIFORM, ETC.

(10) OUTFALL LOCATIONS: (TEMPORARY AND PERMANENT)

(a) SMF 12 OUTFALL: LAT. 27°27'42.6" N LONG. 82°27'18.1" W
(b) SMF 14 OUTFALL: LAT. 27°27'36.9" N LONG. 82°26'32.1" W
(c) SMF 15 OUTFALL: LAT. 27°27'29.7" N LONG. 82°27'17.0" W
(d) WILLIAMS CREEK OUTFALL: LAT. 27°27'13.3" N LONG. 82°29'21.3" W
(e) BRADEN RIVER OUTFALL: LAT. 27°30'15.5" N LONG. 82°31'42.0" W

(11) WETLAND AND/OR SURFACE WATER IMPACTS ARE LIMITED TO THE AREAS DESCRIBED IN THE APPROVED PERMITS FOR THE PROJECT.

(12) DESCRIPTION OF STORMWATER MANAGEMENT: (EXISTING/PROPOSED)

(a) PRESENTLY, EXISTING DRAINAGE RUNOFF FROM 30th STREET TO 37th STREET TYPICALLY FLOWS FROM WEST TO EAST VIA DITCHES AND OVERLAND SHEET FLOW TO SUGARHOUSE CREEK FLOW WAY. RUNOFF FROM 37th STREET TO 45th STREET SHEET FLOWS TO AN EXISTING BORROW PIT (SELLERS PIT) AND OUTFALLS TO SUGARHOUSE CREEK. THE PONDS WILL DISCHARGE TO THE SAME WATER COURSES AS THE EXISTING DRAINAGE PATTERNS. THE OFFSITE FLOW WILL BE MAINTAINED.
(b) OFF-SITE RUNOFF SHOULD BE DIVERTED AWAY OR THROUGH THE CONSTRUCTION AREA, IF POSSIBLE. THIS ADDITIONAL FLOW, IF NOT DIVERTED, CAN ADD VOLUME AND SIZE TO STRUCTURAL PRACTICES, REQUIRING MORE FREQUENT MAINTENANCE AND LIMITING EFFECTIVENESS OF EROSION AND SEDIMENT CONTROLS.
(c) THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING ALL PHASES OF CONSTRUCTION. SEDIMENT CONTROL WILL BE ACCOMPLISHED BY USING STREET OR VACUUM SWEEPERS.
(d) STORMWATER RUNOFF SHALL BE CONVEYED TO EITHER TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS AND/OR TO PERMANENT STORMWATER MANAGEMENT FACILITIES (TREATMENT AND ATTENUATION PONDS). THE PROPOSED SEDIMENT BASINS, CONTAINMENT SYSTEMS AND/OR STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND USED DURING CONSTRUCTION OF THE ROADWAY. THE OUTFALL STRUCTURES ARE TO BE PLUGGED WHEN TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS OR PERMANENT STORMWATER MANAGEMENT FACILITIES ARE USED FOR EROSION AND SEDIMENT CONTROL.

(e) THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT UNAUTHORIZED MATERIALS FROM ENTERING WETLANDS, WATERWAYS, OTHER SURFACE WATERS OR WATERS OF THE U.S.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

STORMWATER POLLUTION PREVENTION PLAN (1)

SHEET NO.: 161

II. CONTROLS: SEDIMENT AND EROSION CONTROLS

THE CONTRACTOR SHALL PROVIDE SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL.

(1) WATER QUALITY MONITORING:

(a) WATER QUALITY MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIAL CONDITIONS OF ANY ENVIRONMENTAL PERMIT OR BY THE CONTRACTOR UPON THE OBSERVATION THAT WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS MAY BE SPECIFIED IN THE ENVIRONMENTAL PERMIT OR MAY BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ADMINISTRATOR.

(b) THE PROJECT ADMINISTRATOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND OR 1 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).

(c) IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHALL BE STOPPED IMMEDIATELY, THE ENVIRONMENTAL PERMIT CONDITIONS FOLLOWED AND EROSION AND SEDIMENT CONTROL DEVICES RE-EVALUATED AND APPROVED BY THE ENIGNEER PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (29 NTU'S ABOVE BACKGROUND OR 1 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).

(d) WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE ENGINEER.

(2) STABILIZATION PRACTICES:

(a) STABILIZATION MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTAINING, ESTABLISHING AND USING VEGETATION, APPLYING MULCHES, SODDING, SEEDING, BMP'S AND THE USE OF ROLLED EROSION CONTROLLED PRODUCTS. WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SIDE SLOPES SHALL BE STABILIZED WITH PERFORMANCE SODDING OR SEEDING OR ANY OTHER APPROVED METHOD OF STABILIZATION INCLUDED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).

(b) STABILIZATION SHALL TAKE PLACE AS SOON AS PRACTICAL IN PORTIONS OF THE PROJECT WHERE CONSTRUCTION ACTIVITIES HAVE CEASED, BUT NO LATER THAN 7 DAYS AFTER ANY CONSTRUCTION ACTIVITY CEASES EITHER TEMPORARILY OR PERMANENTLY.

(c) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN.

(d) ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE PROJECT HAS BEEN ACHIEVED.

(e) SEDIMENT BARRIERS SHOULD BE USED ALONG THE LENGTH OF THE PROJECT WHERE THE GROUND SLOPES AWAY FROM THE RIGHT OF WAY OR WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF-SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE ARE WETLANDS OR WATERS OF THE U.S. ARE INVOLVED. SEDIMENT BARRIERS SHOULD BE USED AROUND THE PERIMETER OF STOCKPILE AREAS.

(f) SPACING OF SEDIMENT BARRIERS USED AS DITCH OR SWALE CHECKS/DAMS SHOULD BE BASED UPON THE HEIGHT OF THE BARRIER AND THE SLOPE OF THE DITCH OR SWALE.

(g) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING SOIL TRACKING PREVENTION SYSTEMS OR PROCEDURES AS NEEDED.

(3) STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL:

(a) ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)

PURPOSE:TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.

(1) USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. COULD INCLUDE NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING OR NETS.
(2) COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR IN DITCHES.
(3) USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.

(b) RUNOFF CONTROL STRUCTURE (TEMPORARY SLOPE DRAIN)

PURPOSE: TO PROTECT HILLSIDE SURFACES AGAINST EROSION DUE TO CONCENTRATED FLOW OF RUNOFF WATER.

(1) USED ON FILL SLOPES AND CUT SLOPES TO REDUCE SEDIMENT TRANSPORT AND COULD INCLUDE TEMPORARY SLOPE DRAINS, GRASS-LINED CHANNELS, ROCK-LINED CHANNELS AND CHECK DAMS.
(2) RUNOFF CONTROL STRUCTURES TYPICALLY DISCHARGE TO A SEDIMENT BASIN.

(c) SEDIMENT BASIN (CONTAINMENT SYSTEM)

PURPOSE: A CONTAINMENT SYSTEM IS DESIGNED TO DETAIN AN ADEQUATE VOLUME OF RUNOFF, REDUCE THE VELOCITY OF FLOW THROUGH THE SYSTEM, ALLOW FOR SETTLEMENT OF SUSPENDED SOLIDS AND REGULATE THE DISCHARGE RATE FROM THE SEDIMENT BASIN.

(1) SEDIMENT BASINS MUST BE PLACED IN STRATEGIC LOCATIONS WITHIN THE ACTIVE AREAS OF CONSTRUCTION. CONTRIBUTING AREA AND SIZE OF TARGET SOIL PARTICLE WILL DICTATE WHETHER THE SEDIMENT BASIN WILL BE TYPE 1, TYPE 2 OR TYPE 3 SYSTEM.
(2) THE USE OF SMALLER PRE-SEDIMENTATION BASINS USED IN CONJUNCTION WITH LARGER PERMANENT RETENTION/DETENTION PONDS ARE EFFECTIVE IN CAPTURING LARGER VOLUMES OF SEDIMENTS. THIS TECHNIQUE REQUIRES PERIODICALLY SCHEDULED REMOVAL OF THE ACCUMULATED SEDIMENTS.

(d) SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP'S)

PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.

(1) THESE CONSTUCTION BMP'S CAN INCLUDE SEDIMENT BARRIERS, SYNTHETIC BALES, STAKED SILT FENCE, TURBIDITY BARRIER, STORM SEWER INLET PROTECTION, ROCK BAGS, AND GEOSYNTHETIC BARRIERS, SUCH AS "GUTTER BUDDY" OR GUTTER GATOR" SEDIMENT CONTIANMENT SYSTEMS.
(2) APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOWPOINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.
(3) INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW (UNLESS PROPERLY REINFORCED), UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

STORMWATER POLLUTION PREVENTION PLAN (2)

SHEET NO.: 162

(3) STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL:

(a) ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)

PURPOSE: TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.

(1) USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. COULD INCLUDE NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING OR NETS.
(2) COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR IN DITCHES.
(3) USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.

(b) RUNOFF CONTROL STRUCTURE (TEMPORARY SLOPE DRAIN)

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(1) USED ON FILL SLOPES AND CUT SLOPES TO REDUCE SEDIMENT TRANSPORT AND COULD INCLUDE TEMPORARY SLOPE DRAINS, GRASS-LINED CHANNELS, ROCK-LINED CHANNELS AND CHECK DAMS.
(2) RUNOFF CONTROL STRUCTURES TYPICALLY DISCHARGE TO A SEDIMENT BASIN.

(c) SEDIMENT BASIN (CONTAINMENT SYSTEM)

PURPOSE: A CONTAINMENT SYSTEM IS DESIGNED TO DETAIN AN ADEQUATE VOLUME OF RUNOFF, REDUCE THE VELOCITY OF FLOW THROUGH THE SYSTEM, ALLOW FOR SETTLEMENT OF SUSPENDED SOLIDS AND REGULATE THE DISCHARGE RATE FROM THE SEDIMENT BASIN.

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(d) SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP'S)

PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.

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(2) APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOWPOINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.
(3) INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW (UNLESS PROPERLY REINFORCED), UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.

(e) FLOATING TURBIDITY BARRIER

PURPOSE: USED IN PERMANENT BODIES OF WATER TO RETAIN SEDIMENT AND FLOATING DEBRIS FROM A CONSTRUCTION AREA SO THAT REMOVAL OR CONTAINMENT OF THE MATERIAL IS POSSIBLE. THEY ARE ALSO USED TO CONTROL MIGRATION OF SUSPENDED SEDIMENTS.

(1) TYPE I, LIGHT DUTY, IS USED WHERE THERE IS LITTLE OR NO CURRENT, NO WIND AND NO WAVE ACTION.
(2) TYPE II, MODERATE DUTY, IS USED WITH SOME CURRENT (<3.5 FT. PER SECOND) AND SOME EXPOSURE TO WIND.
(3) TYPE III, HEAVY DUTY, IS USED WITH GREATER CURRENT (3.5-5.0 FT. PER SECOND), MODERATE WIND AND WAVE ACTION.
(4) BARRIER MUST BE ATTACHED AT BOTH ENDS AND WEIGHTED ON THE BOTTOM.
(5) MULTIPLE LINES OF BARRIER MAY BE USED IN SOME CIRCUMSTANCES FOR ADDITIONAL PROTECTION.
(6) STANDARD PANELS FOR WATER DEPTHS ARE 5.0'. ADDITIONAL PANELS CAN BE USED FOR WATER DEPTHS > 5.0'.

(f) STAKED TURBIDITY BARRIER

PURPOSE: THIS ITEM IS COMMONLY USED IN AREAS WHERE CONTINUOUS CONSTRUCTION ACTIVITIES CHANGE THE NATURAL CONTOURS AND DRAINAGE RUNOFF PATTERNS.

(1) COMMONLY USED IN LAKES AND STREAMS AS A SEDIMENT CONTAINMENT SYSTEM. SHOULD NOT BE USED WHERE WATER CURRENTS MOVE THE CURTAIN AND DISLODGE COLLECTED SEDIMENTS.
(2) MAXIMUM DEPTH OF PANEL IS 3'-8".
(3) POST MUST BE A MINIMUM LENGTH OF 5.0' AND A MINIMUM OF 10" OF FABRIC MUST BE IMBEDDED IN THE GROUND.

(g) INLET PROTECTION SYSTEM

PURPOSE: ANY OF A NUMBER OF SEDIMENT BARRIERS THAT EITHER PREVENT SEDIMENT FROM ENTERING AN INLET OR TRAP THE SEDIMENTS ONCE THEY ENTER THE INLET.

(1) TYPICAL APPLICATIONS INCLUDE ROCK BAGS, FRAME AND FILTER BARRIERS, CURB INLET "SUMP" BARRIER, CURB INLET DIVERSION BERM, CURB AND GUTTER SEDIMENT CONTAINMENT SYSTEM OR CURB INLET INSET, SUCH AS "GUTTER BUDDY" OR "GUTTER GATOR" SEDIMENT CONTAINMENT SYSTEM.
(2) SHOULD BE INSTALLED ONLY WHEN CONSTRUCTION ACTIVITIES ARE ON-GOING AND ONLY WHERE SUMP CONDITIONS EXIST.
(3) SHOULD NOT BE USED WHEN CONSTRUCTION IS COMPLETE AND SHOULD NOT BE USED IN AREAS WHERE FLOODING COULD ENCROACH INTO THE TRAVEL LANES.

(h) SOIL TRACKING PREVENTION DEVICE

PURPOSE: TEMPORARY STRUCTURES TO ASSIST WITH THE REMOVAL OF SOIL MATERIAL CAPTURED ON VEHICLE TIRES BEFORE THE VEHICLES ENTER THE ROADWAY.

(1) USE ONE DEVICE PER MILE WITH A MINIMUM OF TWO PER PROJECT.
(2) USE ADDITIONAL DEVICES FOR CONSRUCTION AREAS THAT ARE NOT ADJACENT TO THE ROAD RIGHT OF WAY AND NO ACCESS IS PROVIDED THROUGH A SOIL TRACKING PREVENTION DEVICE.
(3) RRR PROJECTS SHOULD BE HANDLED ON A CASE BY CASE BASIS.

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SHE
DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

STORMWATER POLLUTION PREVENTION PLAN (3)

SHEET NO.: 163

(4) CHEMICAL TREATMENTS FOR EROSION AND SEDIMENT CONTROL:

(a) CHEMICAL TREATMENT – POLYACRYLAMIDES (PAM AND PAM BLENDS)

PURPOSE: REDUCE SOIL EROSION THROUGH SOIL BINDING, USED AS A WATER TREATMENT ADDITIVE TO REMOVE SUSPENDED SOLIDS FROM RUNOFF, PROVIDES APPROPRIATE MEDIUM FOR GROWTH OF VEGETATION FOR STABILIZATION AND INCREASES INFILTRATION BY INCREASING SIZE OF SOIL PARTICLE.

(1) CAN BE USED ON DISTURBED SOILS. CAN BE USED IN CONJUNCTION WITH OTHER BMP'S TO ENHANCE PERFORMANCE. CAN BE APPLIED IN DISSOLVED FORM WITH WATER, CAN BE USED AS A DRY POWDER, CAN BE USED IN GRANULAR FORM OR MAY BE USED IN THE FORM OF FLOC LOGS.
(2) HIGHER CONCENTRATIONS OF PAM'S DON'T INCREASE THE EFFECTIVENESS OF THE PRODUCT.
(3) ACTIVELY WORKED AREAS WILL REQUIRE REAPPLICATION TO REMAIN EFFECTIVE.
(4) PAM SHOULD NOT BE USED WHERE THE IS A POTENTIAL FOR EQUIPMENT CLOGGING OR TOXICITY IS A CONCERN.

(b) CHEMICAL TREATMENT – ALUM

PURPOSE: REMOVE SUSPENDED SOLIDS AND POLLUTANTS BY ENMESHMENT AND ABSORPTION INTO ALUM. COLLECT FLOCS OF SUSPENDED SEDIMENTS IN RUNOFF AND STORE THEM IN SEDIMENT BASINS OR STORMWATER MANAGEMENT FACILITIES.

(1) ALUM IS INJECTED INTO THE FLOW STREAM CONTAINING TURBID WATER. INJECTION IS CONTROLLED BY VARIABLE SPEED CHEMICAL PUMP TO FEED ALUM AT MULTIPLE TREATMENT POINTS. ALUM TREATMENT IS EFFECTIVE IN TREATMENT OF RUNOFF THAT CONTAINS LIMEROCK FROM UNPAVED SURFACES.
(2) ALUM TREATMENT REQUIRES CLOSE MONITORING OF DOSAGE. COMBINATION WITH OTHER COMPOUNDS MAY VIOLATE TOXICITY REQUIREMENTS AND THE USE OF ALUM MAY LOWER Ph LEVELS.

NOTE: THIS PAY ITEM IS CONSIDERED A CONTRACTOR'S OPTION FOR SEDIMENT CONTROL ISSUES THAT ARE PROJECT/SITE SPECIFIC. NOT TO BE USED IN THE DESIGN PROCESS WITHOUT CONTACTING LARRY RITCHIE IN THE STATE CONSTRUCTION OFFICE.

(5) DEWATERING OPERATIONS (OPTIONAL – BASED ON PROJECT APPLICABILITY):

DESCRIPTION: DEWATERING OPERATIONS ARE PRACTICES THAT MANAGE THE DISCHARGE OF TURBID WATER WHEN WATERS OTHER THAN STORMWATER AND ACCUMULATED SURFACE WATERS MUST BE REMOVED FROM A LOCATION SO THAT CONSTRUCTION WORK MAY BE ACCOMPLISHED. THESE WATERS CAN INCLUDE GROUNDWATER, WATER FROM COFFERDAMS, WATER DIVERSIONS AND WATERS USED DURING CONSTRUCTION THAT MUST BE REMOVED FROM A WORK AREA.

(a) ENVORONMENTAL AGENCIES ARE ESPECIALLY CONCERNED WITH THE PROTECTION OF WETLANDS FROM DRAWDOWN EFFECTS, PROTECTING RECEIVING BODIES FROM SEDIMENTATION AND POSSIBLE CAPACITY LIMITATIONS.
(b) THREE PRIMARY METHODS OF DEWATERING COMMONLY USED IN FLORIDA ARE RIM–DITCHING, SOCK/PIPE/HORIZONTAL WELLS AND WELL–POINT SYSTEMS.
(c) METHODS FOR CONTAINING SEDIMENTATION CAN INCLUDE A COMBINATION OF BMP'S AND SEDIMENT TRAPS, SEDIMENT BASINS, GRAVITY BAG FILTERS, WEIR TANKS, DEWATERING TANKS, SAND MEDIA/PRESSURIZED BAGS AND CHEMICAL TREATMENTS.

(6) COASTAL OPERATIONS (OPTIONAL – BASED UPON PROJECT LOCATION):

DESCRIPTION: CONSTRUCTION SITES IN COASTAL AREAS PRESENT UNIQUE CHALLENGES DUE TO HIGHER WIND SPEEDS, SALINE LADEN AIR MOISTURE AND WAVE ACTION THAT REQUIRE USING APPROPRIATE EROSION CONTROL TECHNIQUES THAT CAN WITHSTAND THESE ELEMENTS.

(a) PARTICULAR CONCERNS DURING THE DEVELOPMENT OF EROSION CONTROL PLANS IN COASTAL OPERATIONS CAN INCLUDE THE RESISTANCE OF EROSION CONTROL MATERIALS TO SALT WATER, HIGH WATER TABLES, SOIL COMPACTION AND SITE DEVELOPMENT DUE TO THE TYPICAL SANDY SOILS LOCATED IN THESE AREAS AND SOIL STABILIZING VEGETATION MUST BE SALT TOLERANT.
(b) HIGH ENERGY ENVIRONMENT SHOULD BE CONSIDERED WHEN SELECTING EROSION CONTROL DEVICES. FREQUENT MAINTENANCE IS NORMALLY REQUIRED FOR EROSION CONTROL DEVICES AND TIDAL FLUCTUATIONS MUST BE CONSIDERED WHEN SELECTING THE METHODS OF EROSION CONTROL.
(c) TEMPORARY CONTROL TECHNOLOGIES FOR THE COASTAL ENVIRONMENT COULD INCLUDE THE USE OF COMPOST/WOOD MULCHING, HYDRAULIC MULCHING, SOIL BINDERS AND TEMPORARY HYDROSEEDING.
(d) PERMANENT CONTROLS COULD INCLUDE THE USE OF POLYMER–ENHANCED ARMORING, PRESERVING EXISTING VEGETATION WHEN POSSIBLE, ESTABLISHING PERMANENT SALT–TOLERANT VEGETATION, CONSTRUCTION SITE BARRIERS (SHEET PILES/CONCRETE WALLS/EARTHERN BERMS), NATURAL /SYNTHETIC GEOTEXTILES, MATS, OR GEOGRIDS.

III. OTHER CONTROLS:

(1) WASTE DISPOSAL:
(a) THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.
(b) ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
(c) NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR BURIED ON SITE.
(d) ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

(2) OFF–SITE VEHICLE TRACKING – WILL BE CONTROLLED BY THE FOLLOWING METHODS:
(a) LOADED HAUL TRUCKS ARE TO BE COVERED BY A TARPAULIN AT ALL TIMES.
(b) EXCESS DIRT ON ROAD WILL BE REMOVED DAILY.

(3) STATE AND FEDERAL REGULATIONS: PERMITS WILL BE REQUIRED FROM THE FOLLOWING AGENCIES:

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ERP NO. (PENDING)
U.S. ARMY CORPS OF ENGINEERS PERMIT NO. (PENDING)

(4)

IV. MAINTENANCE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF SEDIMENT BUILDUP THROUGH THE LIFE OF THE INSTALLED EROSION AND SEDIMENT CONTROL DEVICES.

(1) ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR AND ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF NOTICE.
(2) SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
(3) SYNTHETIC BALES SHALL BE MAINTAINED TO ENSURE THEIR USEFULNESS AND NOT BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
(4) STAKED SILT FENCES SHALL BE REPLACED EVERY TWELVE (12) MONTHS OR WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
(5) STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: GAC
CHECKED BY: SHE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

STORMWATER POLLUTION PREVENTION PLAN (4)

SHEET NO.: 164

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V. INSPECTION:

(1) THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT.
(2) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED DAILY BY CONTRACTOR'S PERSONNEL WHO ARE F.D.E.P. CERTIFIED STORMWATER MANAGEMENT INSPECTORS.
(3) THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.

VI. WATER QUALITY MONITORING:

(1) MONITORING FOR TURBIDITY AS MEASURED IN NEPHELOMETRIC TURBIDITY UNITS (NTUs) SHALL BE CONDUCTED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SAMPLING WILL COMMENCE 24 HOURS BEFORE INITIATION OF CONSTRUCTION ACTIVITIES AND WILL BE CONDUCTED ACCORDING TO THE APPROVED WATER QUALITY MONITORING PLAN AS SUBMITTED BY THE CONTRACTOR. SEE THE SWFWMD ERP FOR WATER QUALITY MONITORING SITE LOCATIONS.

(A.) A MINIMUM OF SEVEN (7) WATER QUALITY MONITORING SITES AND FOUR (4) BACKGROUND CHECK SITES WILL BE ESTABLISHED AS SHOWN IN THE PERMIT.

(B.) THE BACKGROUND SITES WILL BE MARKED BY TEMPORARY BUOYS AND SHALL BE MAINTAINED FOR THE DURATION OF THE SAMPLING PROGRAM. THESE SITES CANNOT BE CHANGED WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM THE SWFWMD SARASOTA REGULATION DEPARTMENT.

(2) THE FOLLOWING INFORMATION MUST BE RECORDED FOR EACH SAMPLE TAKEN IN A MONITORING REPORT:

(A.) SITE NUMBER;
(B.) DATES AND TIME OF DAY WHEN SAMPLE WAS COLLECTED;
(C.) TOTAL DEPTH AND SAMPLE DEPTH;
(D.) ANTECEDENT WEATHER CONDITIONS, INCLUDING WIND DIRECTION AND VELOCITY; AND,
(E.) TIDAL STAGE AND/OR FLOW DIRECTION.

(3) IN ADDITION TO THE ABOVE MENTIONED, EACH MONITORING REPORT MUST INCLUDE THE FOLLOWING:

(A.) A STATEMENT OF METHODOLOGY INCLUDING TYPES OF SAMPLING EQUIPMENT AND ANALYTICAL INSTRUMENTATION, PRESERVATION, AND HANDLING;
(B.) PERMIT NUMBER;
(C.) A MAP INDICATING NUMBERED LOCATIONS OF ALL SAMPLING SITES;
(D.) COPIES OF THE QUALITY ASSURANCE/QUALITY CONTROL LOG; AND,
(E.) A STATEMENT BY THE QUALITY CONTROL OFFICER AS TO THE AUTHENTICITY OF THE DATA.

(4) ALL TURBIDITY MONITORING REPORTS SHALL BE SUBMITTED TO THE SARASOTA REGULATION DEPARTMENT OF THE DISTRICT, ATTENTION ENVIRONMENTAL MANAGER WITHIN SEVEN DAYS OF SAMPLE COLLECTION. ALL CORRESPONDENCE SHOULD INCLUDE THE PERMITTEE NAME AND PERMIT NUMBER. FAILURE TO SUBMIT REPORTS IN A TIMELY MANNER CONSTITUTES A VIOLATION OF THE PERMIT AND MAY BE GROUNDS FOR REVOCATION.

(5) THE FOLLOWING QA/QC PROTOCOL IS REQUIRED FOR EACH SAMPLE COLLECTED:

(A.) ALL TURBIDITY ANALYSIS SHALL BE PERFORMED ON INSTRUMENTS THAT CAN PERFORM NEPHELOMETRIC MEASUREMENTS;
(B.) THE INSTRUMENT MUST BE CALIBRATED EACH MORNING AND EACH TIME THE INSTRUMENT IS TURNED ON, AND RECALIBRATED EVERY FOUR HOURS THEREAFTER;
(C.) CALIBRATIONS MUST BE PERFORMED AGAINST A BLANK SAMPLE, AND AT LEAST ONE FORMALIN OR GEL-TYPE STANDARD. THE STANDARD VALUE SHOULD BE IN THE SAME RANGE AS THE SAMPLE READINGS.
(D.) ALL CALIBRATION PROCEDURES MUST BE RECORDED IN A PERMANENT LOG BOOK, AND COPIES MUST BE SUBMITTED WITH THE DATA; AND,
(E.) DATE AND TIME OF COLLECTION, DATE AND TIME OF ANALYSES, WARM-UP TIME, AND THE NAME OF THE ANALYST MUST BE INCLUDED IN THE LOG.

(6) IF 29 NTUs EXCEED BACKGROUND AMBIENT WATER QUALITY, ALL CONSTRUCTION ACTIVITIES SHALL IMMEDIATELY CEASE. ANY VIOLATIONS SHALL BE IMMEDIATELY REPORTED TO THE DISTRICT AT (941) 377-3722. THE VIOLATION REPORT SHALL INCLUDE THE DESCRIPTION OF THE CORRECTIVE ACTIONS BEING TAKEN OR PROPOSED TO BE TAKEN. IF VIOLATIONS ARE NOTED AFTER NORMAL BUSINESS HOURS, ON HOLIDAYS OR ON WEEKENDS, THE REPORT SHALL BE MADE TO THE DISTRICT AS SOON AS NORMAL BUSINESS HOURS RESUME. A COPY OF ALL MONITORING DATA SHEETS, WHICH INDICATE VIOLATIONS, SHALL BE FORWARDED IMMEDIATELY TO THE SARASOTA REGULATION DEPARTMENT OF THE DISTRICT, ATTENTION ENVIRONMENTAL MANAGER AND INCLUDE A COPY TO (SWFWMD) MANATEE COUNTY DEPARTMENT OF PUBLIC WORKS, INFRASTRUCTURE ENGINEERING DIVISION: ATTN. SIA MOLLANAZAR (941) 708-7487.

(7) WHEN A TURBIDITY VIOLATION IS FOUND, CONSTRUCTION OPERATIONS MAY NOT RESUME UNTIL A COMPLIANCE INSPECTION BY DISTRICT PERSONNEL HAS BEEN CONDUCTED AND A SET OF SAMPLES HAS BEEN TAKEN WHICH DEMONSTRATES THAT WATER QUALITY STANDARDS DESIGNATED ABOVE ARE NO LONGER EXCEEDED. INTERIM SAMPLES TAKEN FOLLOWING THE VIOLATION SHALL BE TAKEN IN THE SAME MANNER AS THE ROUTINE MONITORING AND THE SAME LOCATIONS. IF SAMPLES DEMONSTRATE THE WATER QUALITY STANDARDS SPECIFIED ABOVE FOR TURBIDITY ARE STILL BEING VIOLATED, SAMPLING SHALL CONTINUE AT TWO-HOUR INTERVALS UNTIL THE INTERIM SAMPLES DEMONSTRATE THAT NO VIOLATION IS OCCURRING.

(8) FAILURE TO REPORT VIOLATIONS OR TO FOLLOW CORRECT PROCEDURES BEFORE RESUMING WORK WILL CONSTITUTE GROUNDS FOR REVOCATION OF THE DISTRICT PERMIT AND MAY ALSO RENDER THE PERMITTEE SUBJECT TO ENFORCEMENT ACTION.

VII. TRACKING AND REPORTING:

(1) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE COUNTY DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE EROSION AND SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.

(2) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION, SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION AND SEDIMENT CONTROL DEVICES OF THE PROJECT.

(3) THE CONTRACTOR SHALL USE THE FDOT'S STANDARD SWPPP CONSTRUCTION INSPECTION REPORT FORM # 650-040-03, FOR DAILY INSPECTIONS.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: GAC
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

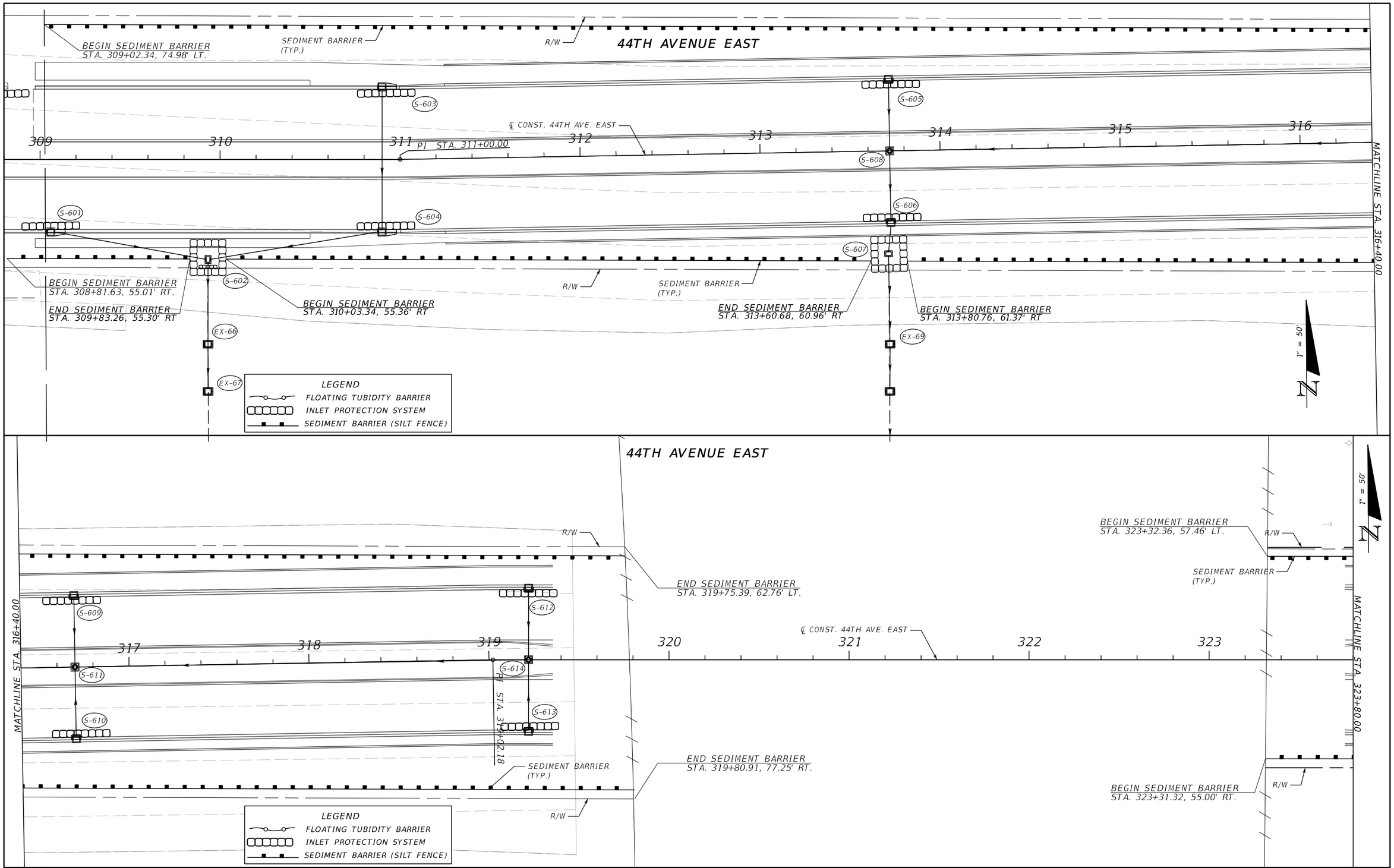
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

STORMWATER POLLUTION PREVENTION PLAN (5)

SHEET NO.: 165



No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

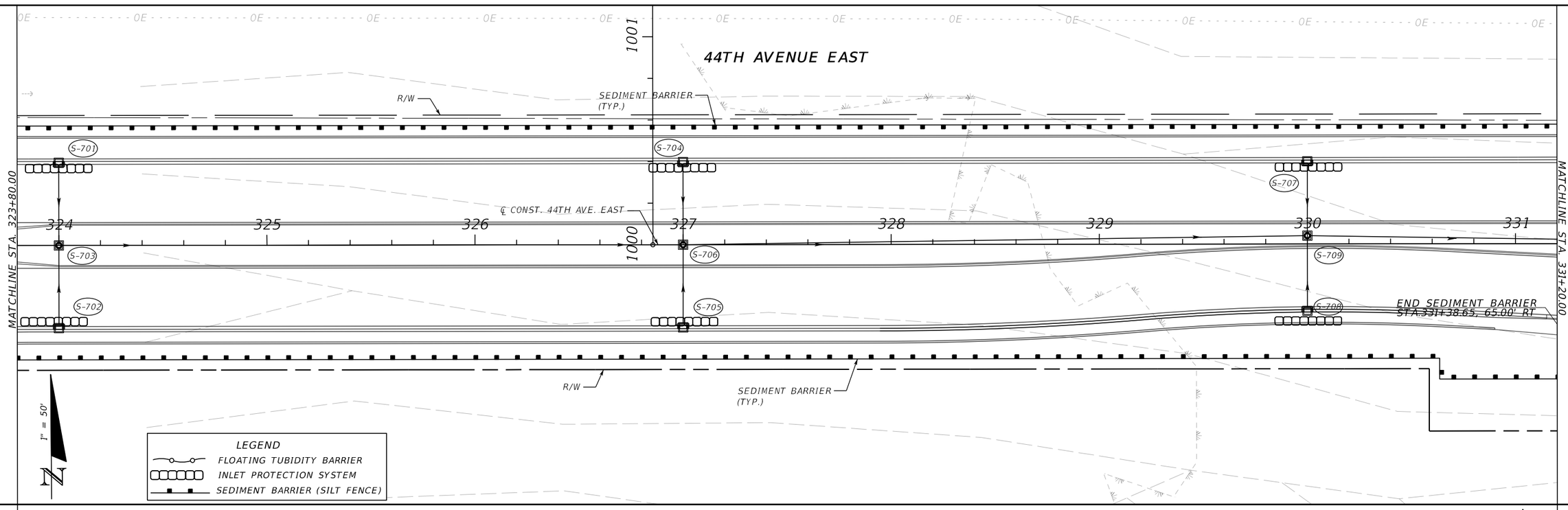
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

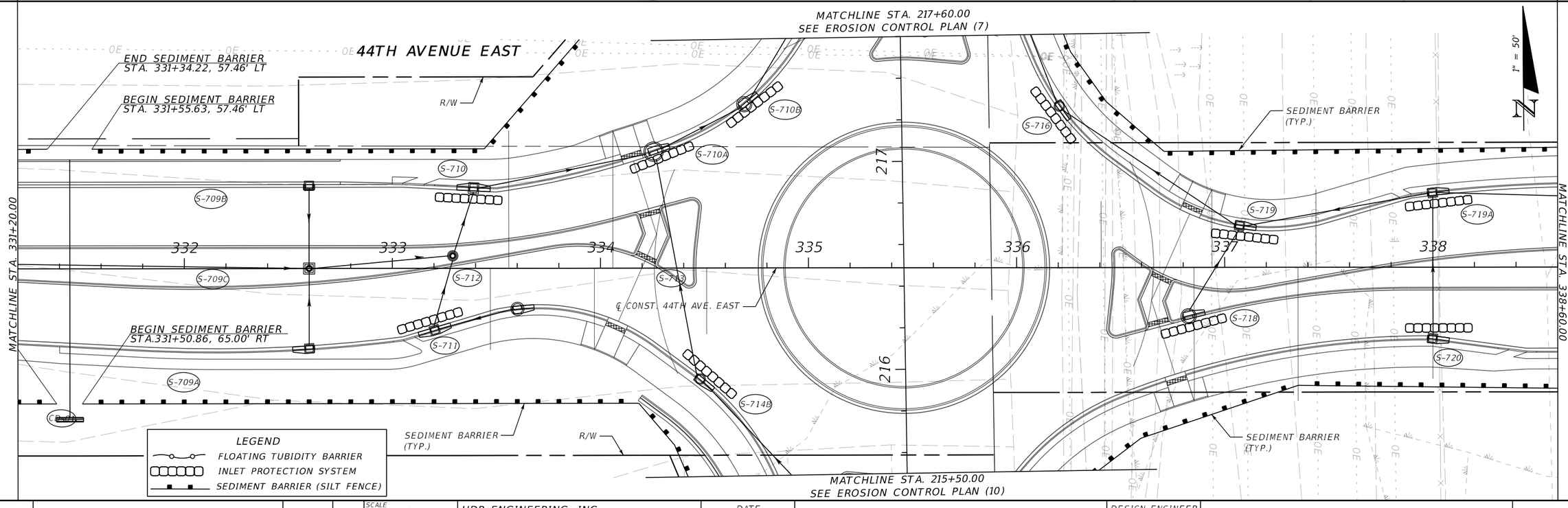
EROSION CONTROL PLAN (1)

SHEET NO.: 166

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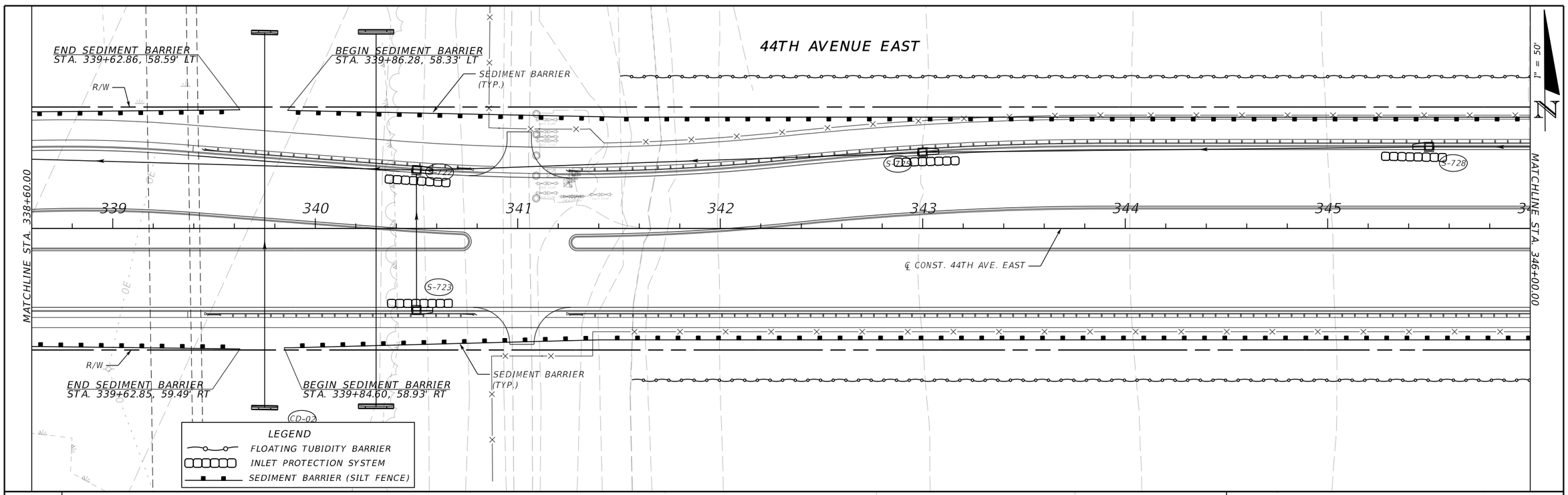
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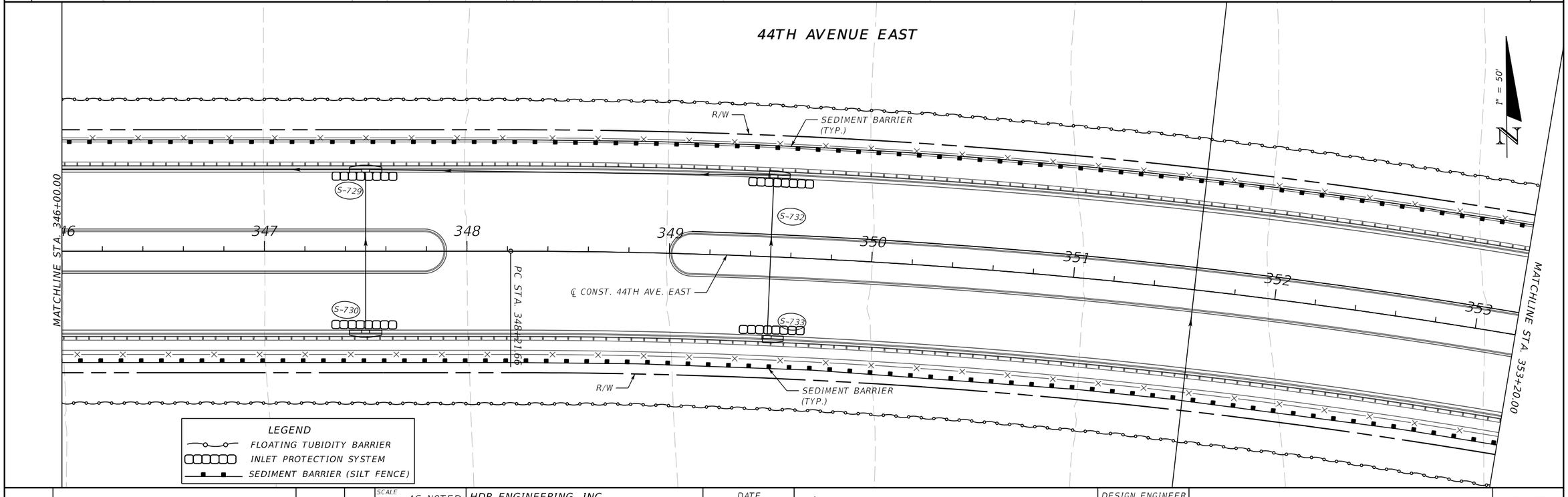
EROSION CONTROL PLAN (2)

SHEET NO.: 167

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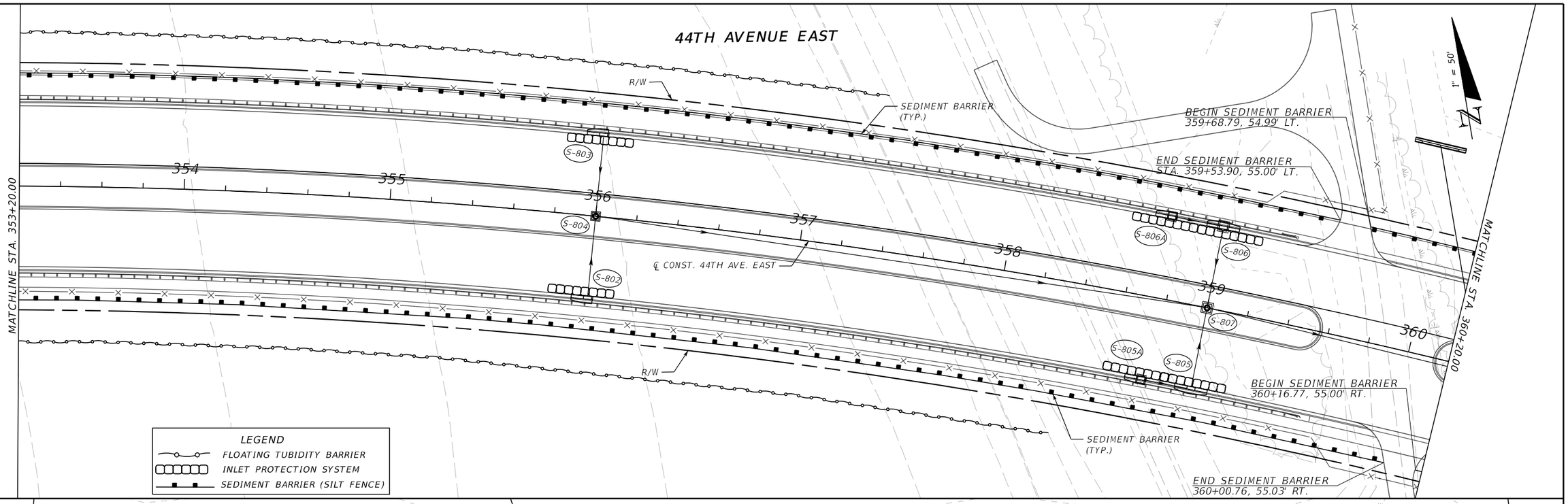
DESIGN ENGINEER: SCOTT H. ENNIS
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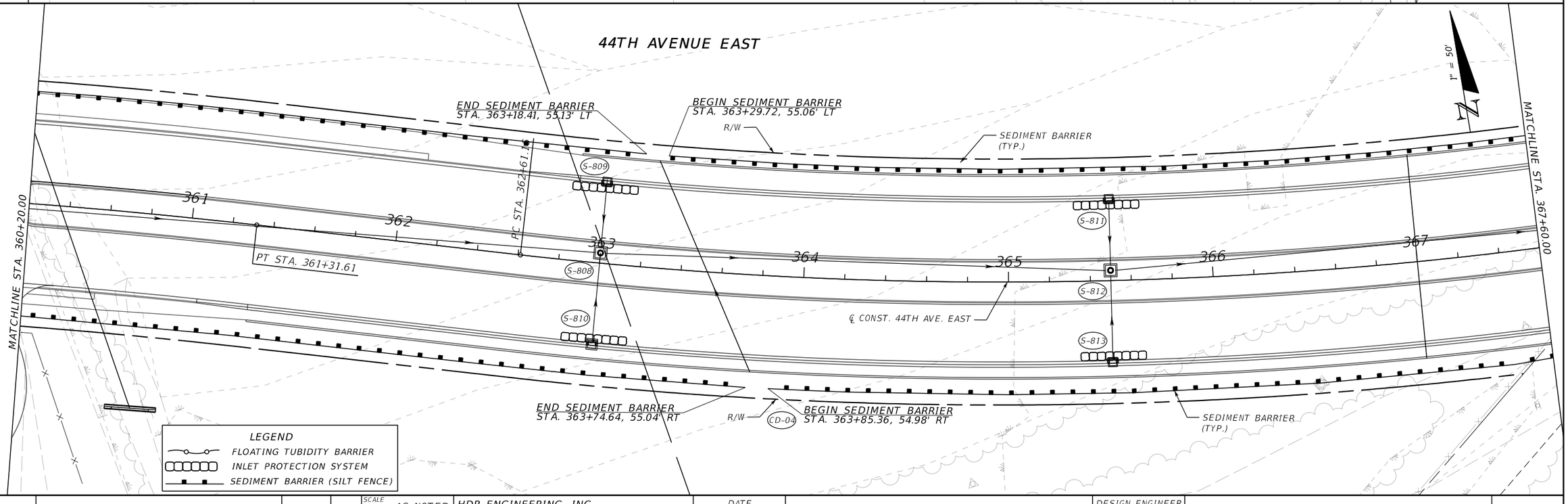
EROSION CONTROL PLAN (3)

SHEET NO.: 168

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Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (4)

SHEET NO.: 169

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LEGEND
FLOATING TUBIDITY BARRIER
INLET PROTECTION SYSTEM
SEDIMENT BARRIER (SILT FENCE)

44TH AVENUE EAST

MATCHLINE STA. 367+60.00

MATCHLINE STA. 374+60.00

SEDIMENT BARRIER (TYP.)

R/W

PC STA. 373+21.68

℄ CONST. 44TH AVE. EAST

S-814A, S-814, S-815, S-816A, S-816, S-816B, S-817, S-818

368, 369, 370, 371, 372, 373, 374

1" = 50'

SEDIMENT BARRIER (TYP.)

R/W

LEGEND
FLOATING TUBIDITY BARRIER
INLET PROTECTION SYSTEM
SEDIMENT BARRIER (SILT FENCE)

END SEDIMENT BARRIER
STA. 374+79.45, 63.51' LT

BEGIN SEDIMENT BARRIER
STA. 374+90.49, 64.21' LT

SMF 14
9.24 ac

3006

S-829, S-847, S-845, S-844

CD-05B, S-819, S-820, S-821A, CD-05A

S-822A, S-822, S-823, S-824A, S-824

S-825, S-826

375, 376, 377, 378, 379, 380, 381

PC STA. 376+73.45

℄ CONST. 44TH AVE. EAST

MATCHLINE STA. 374+60.00

MATCHLINE STA. 381+60.00

SEDIMENT BARRIER (TYP.)

44TH AVENUE EAST

R/W

1" = 50'

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SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

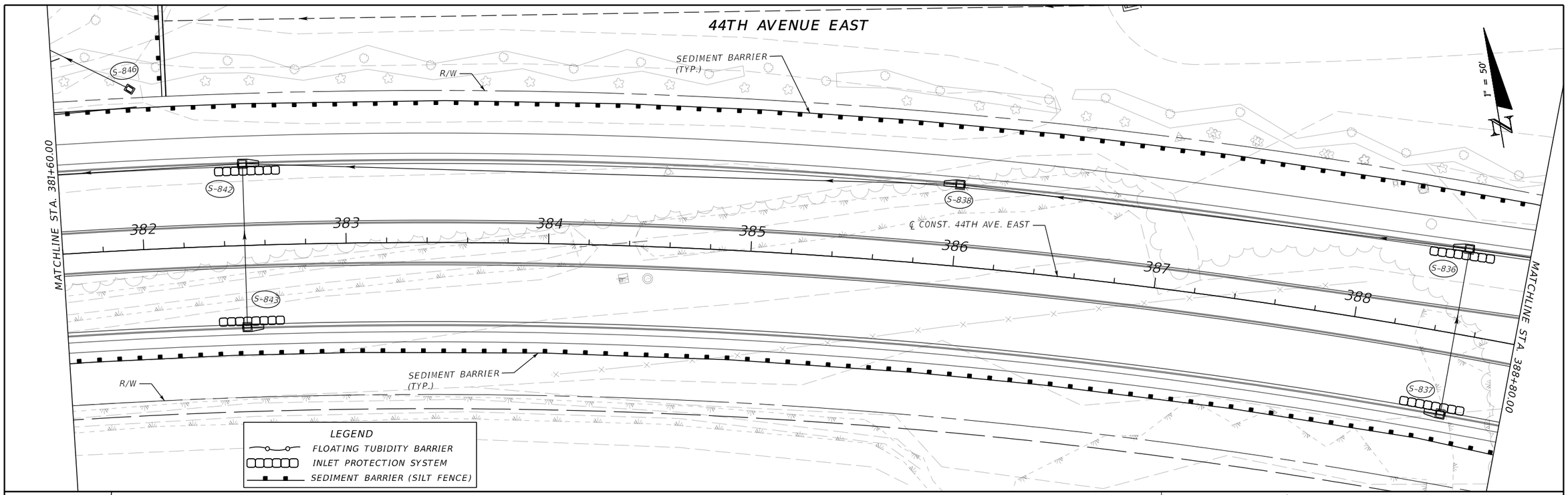
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

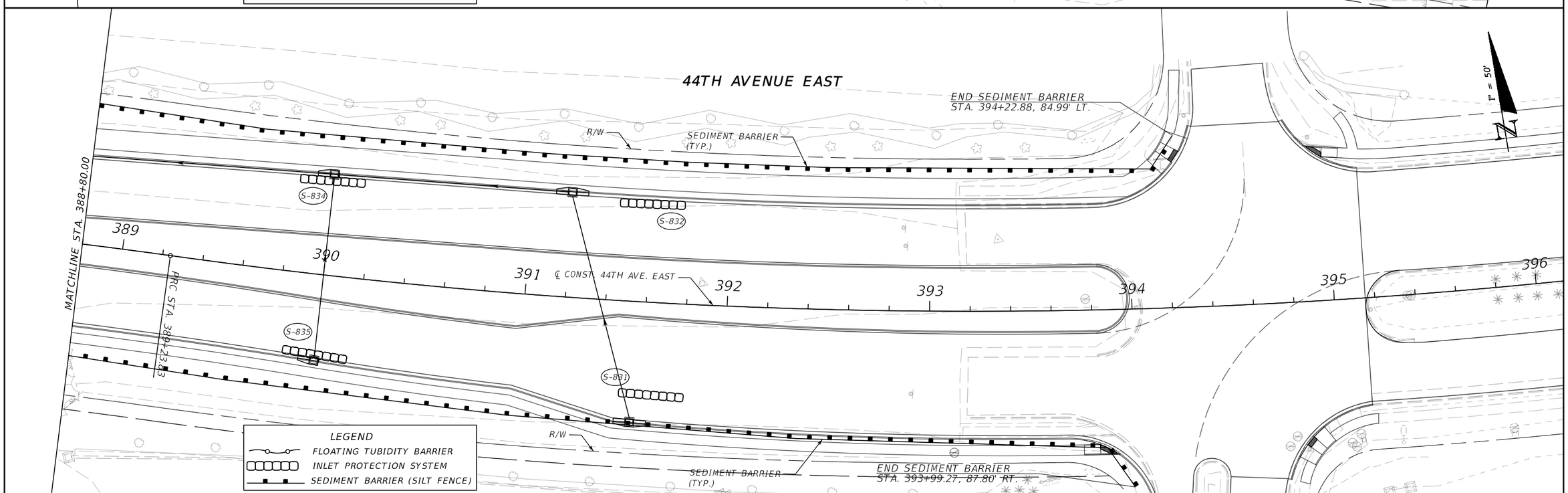
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (5)

SHEET NO.: 170

1:56:18 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\SWPPRD11.dgn





No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: SE
DRAWN BY: GAC
CHECKED BY: SE

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

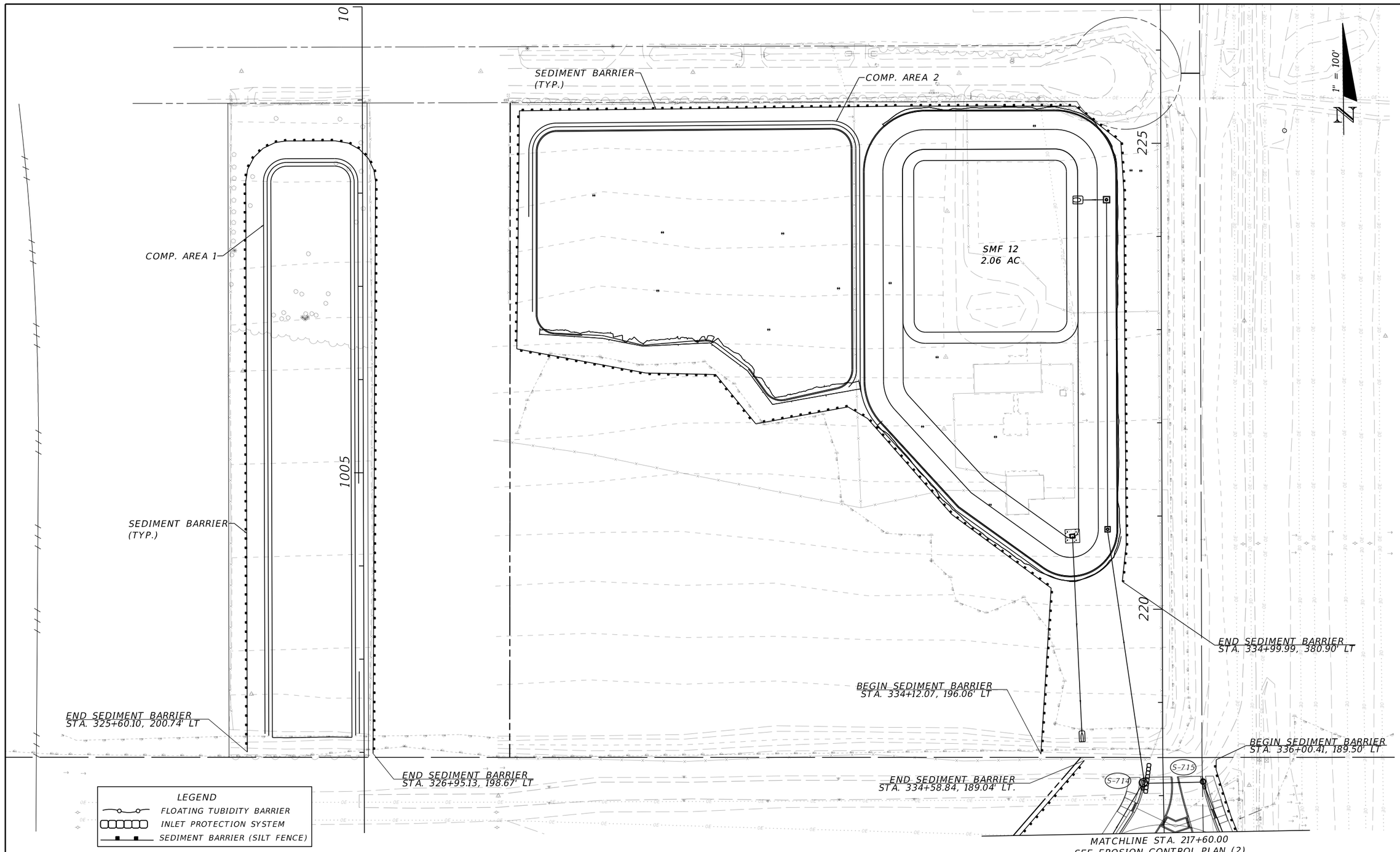
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (6)

SHEET NO.: 171

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DESIGNED BY: SHE
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

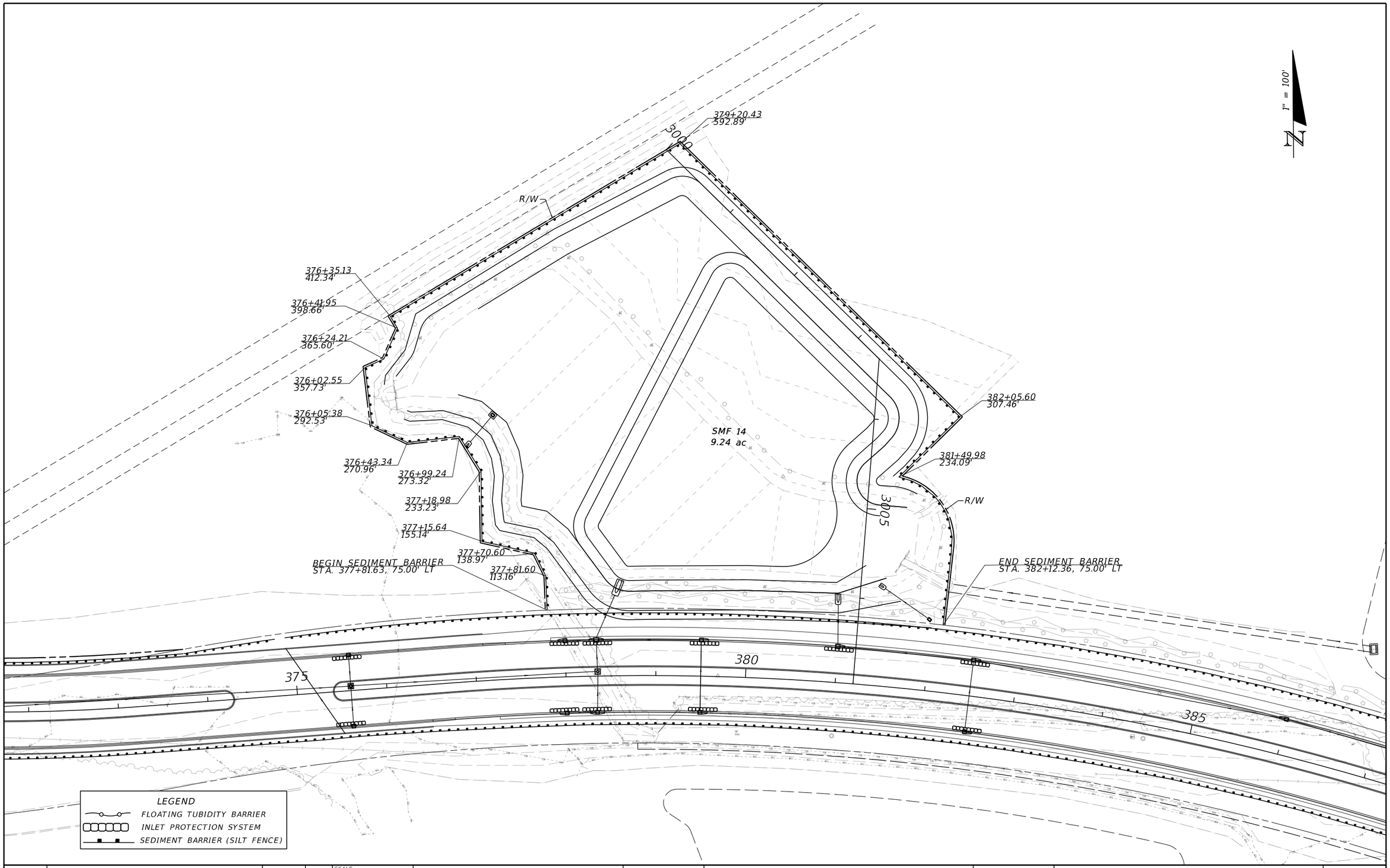
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (7)

SHEET NO.: 172

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

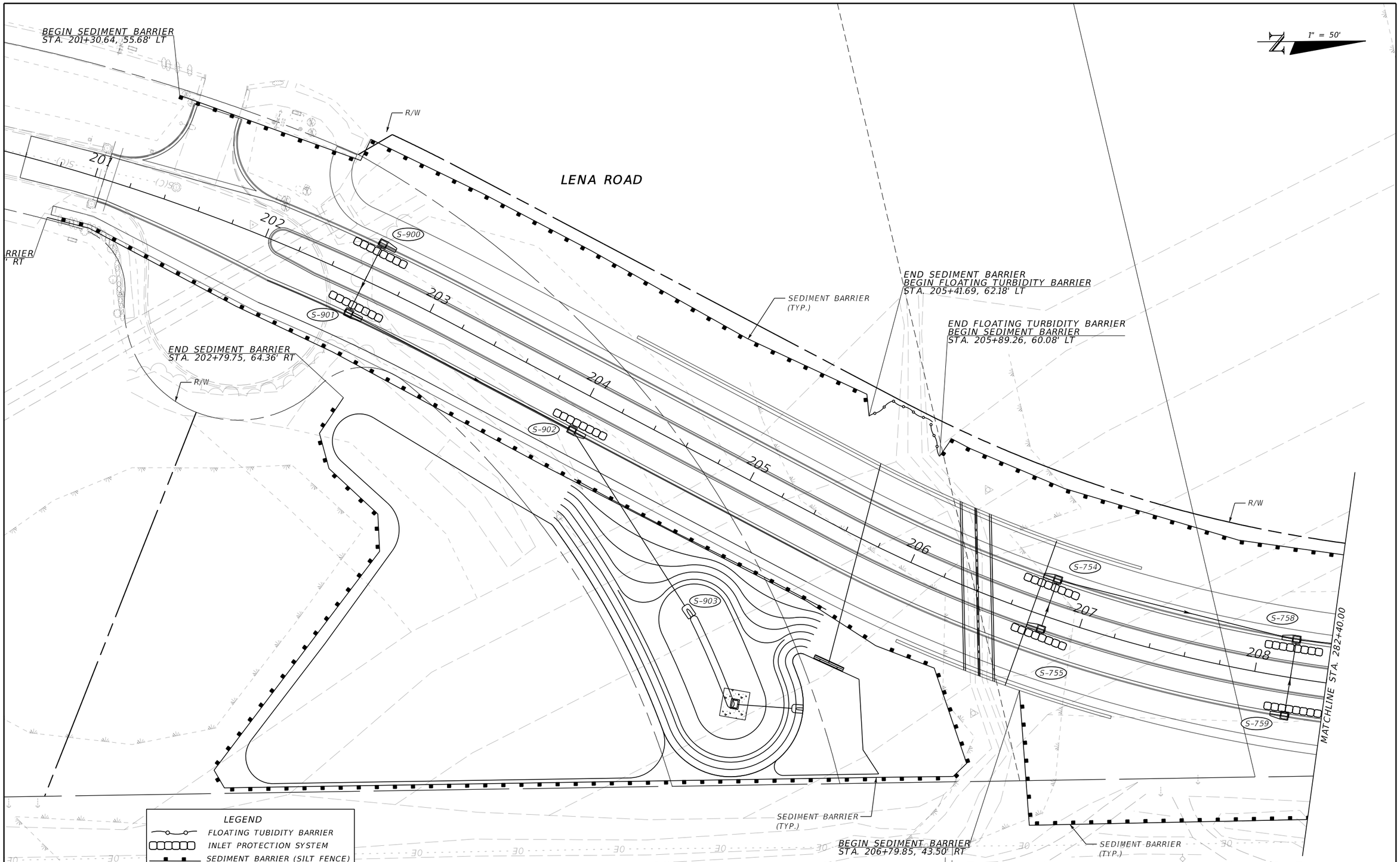
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (8)

SHEET NO.: 173

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

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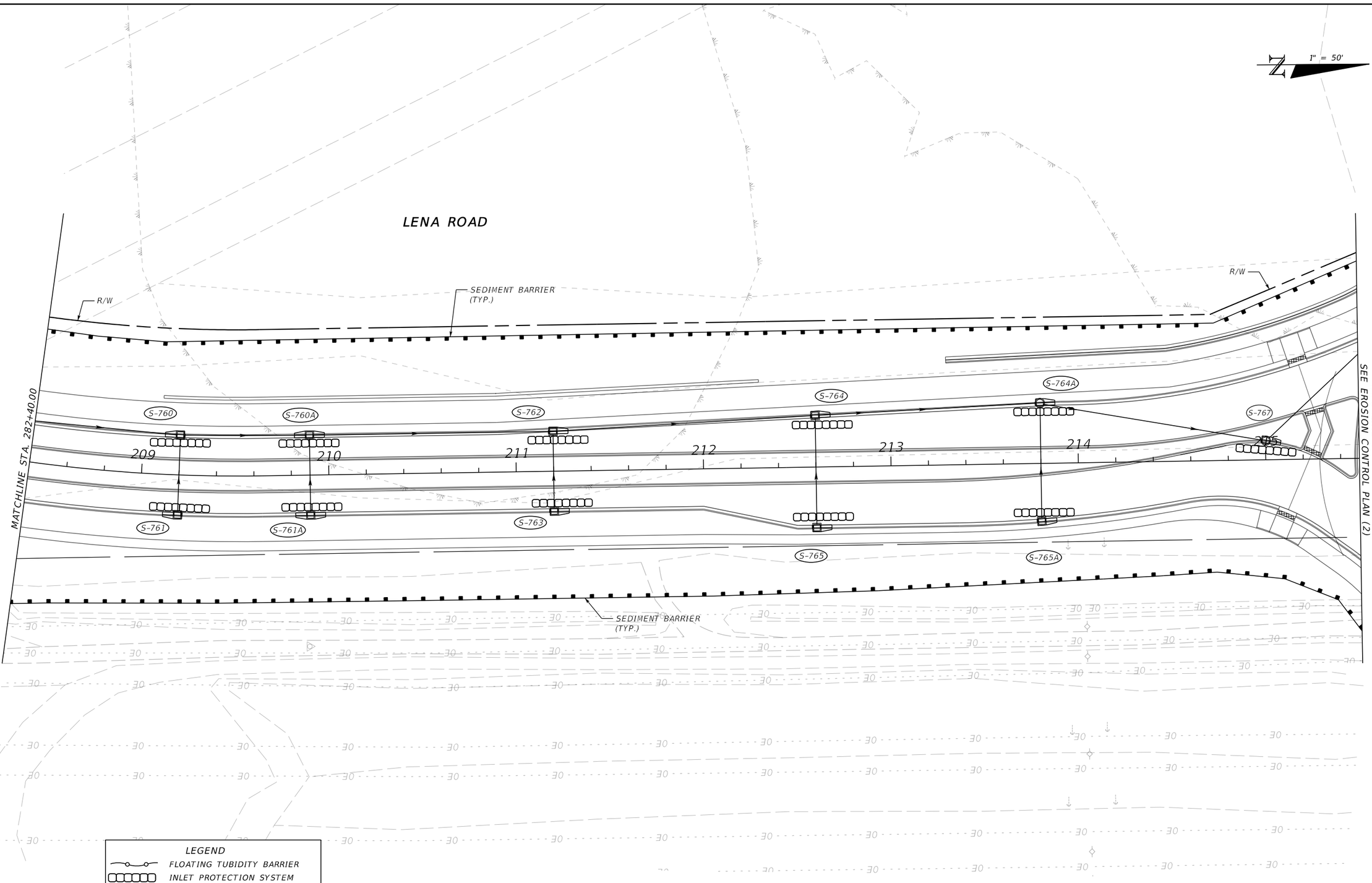
DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (9)

SHEET NO.: 174

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HDR ENGINEERING, INC.
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SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: SCOTT H. ENNIS
FL. LICENSE NO.: 77068

EROSION CONTROL PLAN (10)

SHEET NO.: 175

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TRAFFIC CONTROL GENERAL NOTES

1. EXISTING SPEED LIMIT TO BE MAINTAINED OR REDUCED

2. THE COST OF MAINTENANCE OF TRAFFIC OPERATIONS SHALL BE INCLUDED UNDER THE LUMP SUM PAY ITEM, UNLESS A SEPARATE PAY ITEM IS PROVIDED.

3. CONTRACTOR SHALL MAINTAIN SUFFICIENT TRAVEL WAYS TO PROVIDE INGRESS AND EGRESS FOR ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES.

4. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009) AND FDOT DESIGN STANDARDS.

5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN TEMPORARY DRAINAGE AND EROSION CONTROL FACILITIES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE COUNTY. POSITIVE DRAINAGE OFF OF THE TRAVELED ROADWAY SHALL BE MAINTAINED AT ALL TIMES.

6. FOR SIDE STREET INTERSECTIONS, LANE CLOSURE SHALL BE LIMITED TO ONE LANE AT ALL TIMES, EXCEPT FOR SPECIFIED DETOURS. AT A MINIMUM, ONE-LANE, TWO-WAY OPERATION SHALL BE MAINTAINED THROUGH THE USE OF FLAGGERS. TWO-LANE, TWO-WAY OPERATION SHALL BE MAINTAINED DURING PERIODS OF LANE CLOSURE RESTRICTIONS AND WHEN CONSTRUCTION ACTIVITIES ARE BEYOND THE LIMITS OF THE INTERSECTIONS.

TRAFFIC CONTROL COORDINATION NOTES

1. THE INTENT OF CONSTRUCTION IS TO:
CONSTRUCT NEW BRIDGE AND ROADWAYS INCLUDING PROPOSED DRAINAGE AND OTHER PROPOSED ROADWAY COMPONENTS.

2. CONTRACTOR TO COORDINATE WITH THE FOLLOWING PROJECTS IN VARIOUS STAGES OF CONSTRUCTION:
44TH AVENUE EAST FROM 44TH AVENUE PLAZA EAST TO WEST OF I-75, PHASE I (PROJECT NUMBER 6045662).
US 301 AT I-75 (FPID 201032-5-52-01).

3. CONSTRUCTION ACTIVITIES WILL BE LIMITED BY THE EAGLE NEST ON THE EAST SIDE OF SOUTH LAKE 2. ALL PERMIT CONSTRAINTS MUST BE FOLLOWED AT ALL TIMES.

4. THE HIDDEN HARBOR OFFSITE MITIGATION COMPONENT OF PROJECT SHALL BE COORDINATED WITH RESPECT TO EARTH MOVING ACTITIVIES. MUCK REMOVED FROM 44TH AVENUE EAST CAN BE UTILIZED FOR WETLAND CREATION AREAS AND CLEAN FILL MATERIAL FROM HIDDEN HARBOR CAN BE UTILIZED FOR EMBANKMENT ON 44TH AVENUE EAST. HAUL ROUTE DISTANCE IS APPROXIMATELY 6 MILES BETWEEN PROJECT SITES.

5. SOUTH LAKE 2 HAS A DRY SEASON FROM NOVEMBER TO MAY. COORDINATION WITH EAST LAKE EXPANSION ACTIVITIES AND STARTER DYKE / EMBANKMENT ACTIVITIES SHALL NOT DISTURB SOUTHEAST WATER RECLAMATION FACILITY (SEWRF) OPERATIONS.

6. COORDINATION WITH FDOT IS REQUIRED FOR ALL I-75 WORK IN THE LIMITED ACCESS RIGHT OF WAY.

FDOT LIMITED ACCESS RIGHT OF WAY TRAFFIC CONTROL NOTES

1. THE INTENT OF CONSTRUCTION IS TO:
CONSTRUCT NEW PIERS IN I-75 MEDIAN
CONSTRUCT NEW MSE WALLS OUTSIDE LIMITED ACCESS RIGHT OF WAY
CONSTRUCT NEW BRIDGE OVER I-75 TRAVEL LANES
RESTORE EXISTING CONDITIONS / MEDIAN STORMWATER MANAGEMENT FACILITY UPON COMPLETION

2. MEDIAN WORK SHALL REQUIRE ACCESS FROM BOTH DIRECTIONS OF I-75 WITH APPROPRIATE DECELERATION AND ACCELERATION LANES FOR CONSTRUCTION EQUIPMENT. THESE ACCESSWAYS SHALL BE PROTECTED BY TEMPORARY BARRIER WALL AND SHALL REQUIRE REMOVAL OF EXISTING CABLE BARRIER SYSTEM ADJACENT TO WORK ZONE FOR ACCESS.

3. THE INTENTION OF MEDIAN ACCESS SHALL NOT INTERFERE WITH I-75 TRAVEL LANE LOCATIONS. IF LANE SHIFTS ARE REQUIRED, COORDINATION OF EMERGENCY SHOULDER USE SHALL BE ADDRESSED WITH FDOT.

4. ALL MSE WORK IS ANTICIPATED FROM OUTSIDE THE LIMITED ACCESS RIGHT OF WAY, ON COUNTY-OWNED PROPERTY. ACCESS TO MSE WORK ZONE SHALL NOT BE PROVIDED FROM I-75 LIMITED ACCESS RIGHT OF WAY.

5. FDOT STANDARD PLANS INDEX 102-602 SHALL BE UTILIZED FOR INSIDE SHOULDER CLOSURE. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL REMAIN IN ADVANCE OF I-75 WORK ZONE FOR THE DURATION OF CONSTRUCTION.

6. OVERHEAD BEAM PLACEMENT SHALL BE COORDINATED WITH FDOT. REQUIRED DETOURS SHALL BE MAINTAINED BY CONTRACTOR. ANTICIPATED DETOURS BETWEEN SR 70 AND SR 64 SHALL UTILIZE LAKEWOOD RANCH BOULEVARD FOR BOTH DIRECTIONS OF TRAVEL.

7. CONTRACTOR SHALL REINSTALL STORMWATER MANAGEMENT FACILITY AND ALL CABLE BARRIERS UPON COMPLETION OF I-75 WORK ACTIVITIES TO THE SATISFACTION OF FDOT.

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

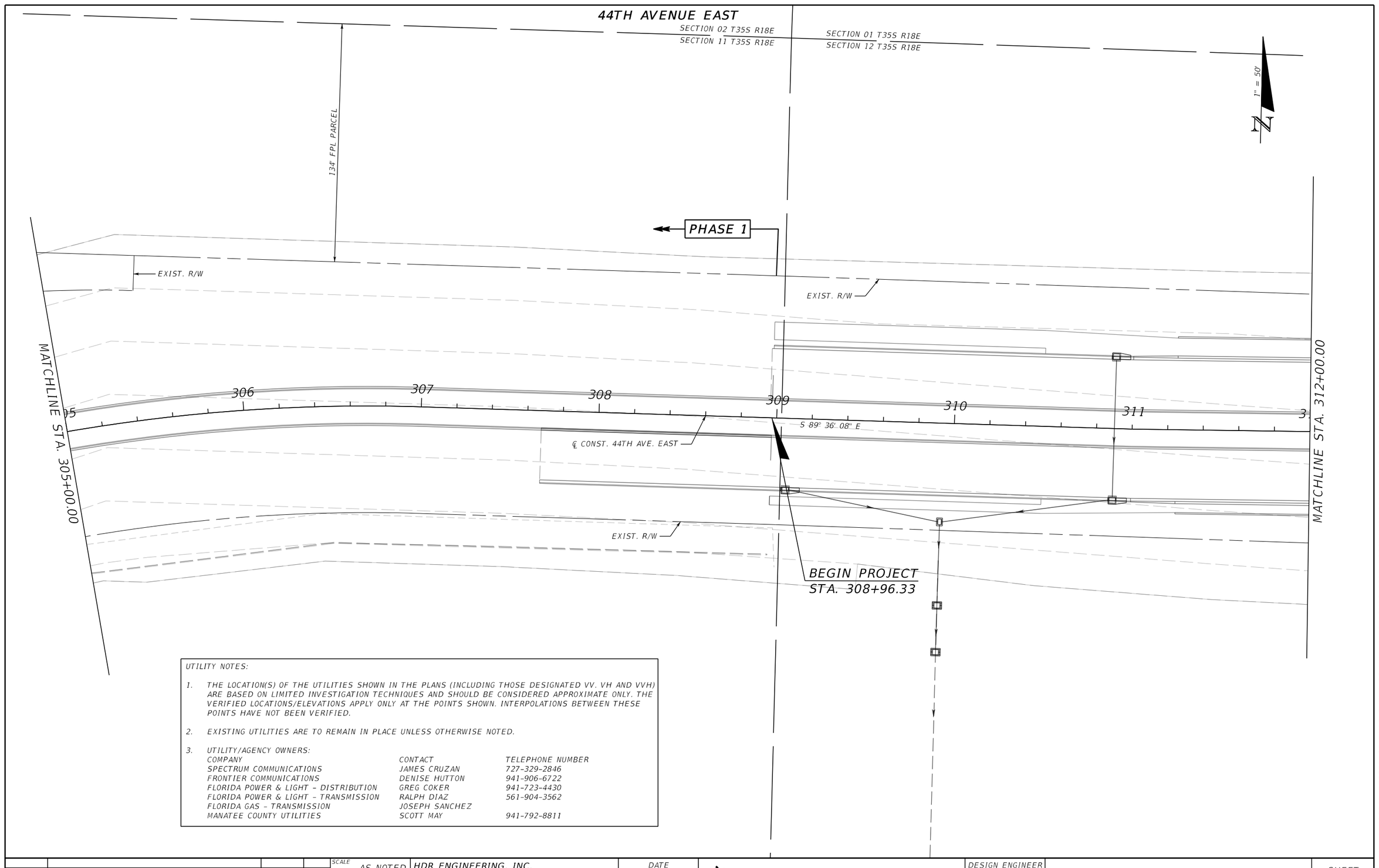
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

TRAFFIC CONTROL GENERAL NOTES

SHEET NO.: 176

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UTILITY NOTES:

1. *THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.*

2. *EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.*

3. *UTILITY/AGENCY OWNERS:*

COMPANY	CONTACT	TELEPHONE NUMBER
SPECTRUM COMMUNICATIONS	JAMES CRUZAN	727-329-2846
FRONTIER COMMUNICATIONS	DENISE HUTTON	941-906-6722
FLORIDA POWER & LIGHT - DISTRIBUTION	GREG COKER	941-723-4430
FLORIDA POWER & LIGHT - TRANSMISSION	RALPH DIAZ	561-904-3562
FLORIDA GAS - TRANSMISSION	JOSEPH SANCHEZ	
MANATEE COUNTY UTILITIES	SCOTT MAY	941-792-8811

No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (1)

SHEET NO.: 177

1:57:18 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\UTADRD03.DGN.dgn

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44TH AVENUE EAST

INVERT ELEV. = 26.73' — 48" CMP #1 — INVERT ELEV. = 25.84'

SECTION 01 T35S R18E
SECTION 12 T35S R18E

1" = 50'

EXIST. OE / TO REMAIN
FPL TRANSMISSION

OE - - - - - - - - - - OE - - - - - - - - - - OE - - - - - - - - - - OE - - - - - - - - - - OE - - - - - - - - - - OE - - - - - - - - - - OE - - -

134' FPL PARCEL

EXIST. R/W

MATCHLINE STA. 312+00.00

312 313 314 315 316 317 318 319

MATCHLINE STA. 319+00.00

S 89° 23' 52" E

℄ CONST. 44TH AVE. EAST

EXIST. R/W

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (2)

SHEET NO.: 178

1:57:19 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\UTADRD03.DGN.dgn

44TH AVENUE EAST

54" RCP #2

INVERT = 24.6±

INVERT = 24.65±

SECTION 01 35S R18E

SECTION 12 35S R18E

SR 93 (I-75)

BFOC(B)

EXIST. CONC. POLE #139N15 / TO REMAIN
FPL TRANSMISSION

EXIST. OE / TO REMAIN
FPL TRANSMISSION

OE

1" = 50'

133' FPL PARCEL

EXIST. LA R/W

EXIST. R/W

PROP. ESMT.

MATCHLINE STA. 319+00.00

MATCHLINE STA. 326+00.00

319

320

321

322

323

324

325

S-701

S-703

S-702

S 89° 23' 52" E

S 89° 36' 08" E

℄ CONST. 44TH AVE. EAST

PROP. R/W

EXIST. BFO / TO REMAIN
FDOT

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (3)

SHEET NO.: 179

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44TH AVENUE EAST

SECTION 01 T35S R18E
SECTION 12 T35S R18E

1002

1001

1000

1" = 50'

OE

EXIST. OE / TO REMAIN
FPL TRANSMISSION

℄ FPC

PROP. ESMT.

EXIST. R/W

134' FPL PARCEL

CD-01

MATCHLINE STA. 326+00.00

MATCHLINE STA. 333+00.00

S-704
S-705
S-706
S-707
S-708
S-709
S-709A
S-709B
S-709C

326
327
328
329
330
331
332

℄ CONST. 44TH AVE. EAST

PROP. R/W

LEGEND
= POTENTIAL FUTURE ROUNDABOUT

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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (4)

SHEET NO.: 180

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44TH AVENUE EAST

MATCHLINE STA. 333+00.00

MATCHLINE STA. 340+00.00

S-201 S-714 S-715 S-710B S-710A S-710 S-712 S-711 S-714B S-715 S-716 S-719 S-719A S-718 S-720 S-767

218 217 216 215

SMF 12

EXIST. OE / TO REMAIN
FPL TRANSMISSION

PROP. R/W

PROP. ESMT.

EXIST. R/W

℄ CONST. 44TH AVE. EAST

330' FPL EASEMENT

SECTION 01 T35S R18E
SECTION 12 T35S R18E

EXIST. CONC. POLE / TO REMAIN
FPL TRANSMISSION

EXIST. CONC. POLE / TO BE ADJUSTED
FPL TRANSMISSION

EXIST. 20" FM / TO REMAIN
MANATEE COUNTY

CD-02

PROP. 20" PVC FM W/ 36" STEEL CASING
MANATEE COUNTY

SEWRF
CD-02

EXIST. OE / TO REMAIN
FPL TRANSMISSION

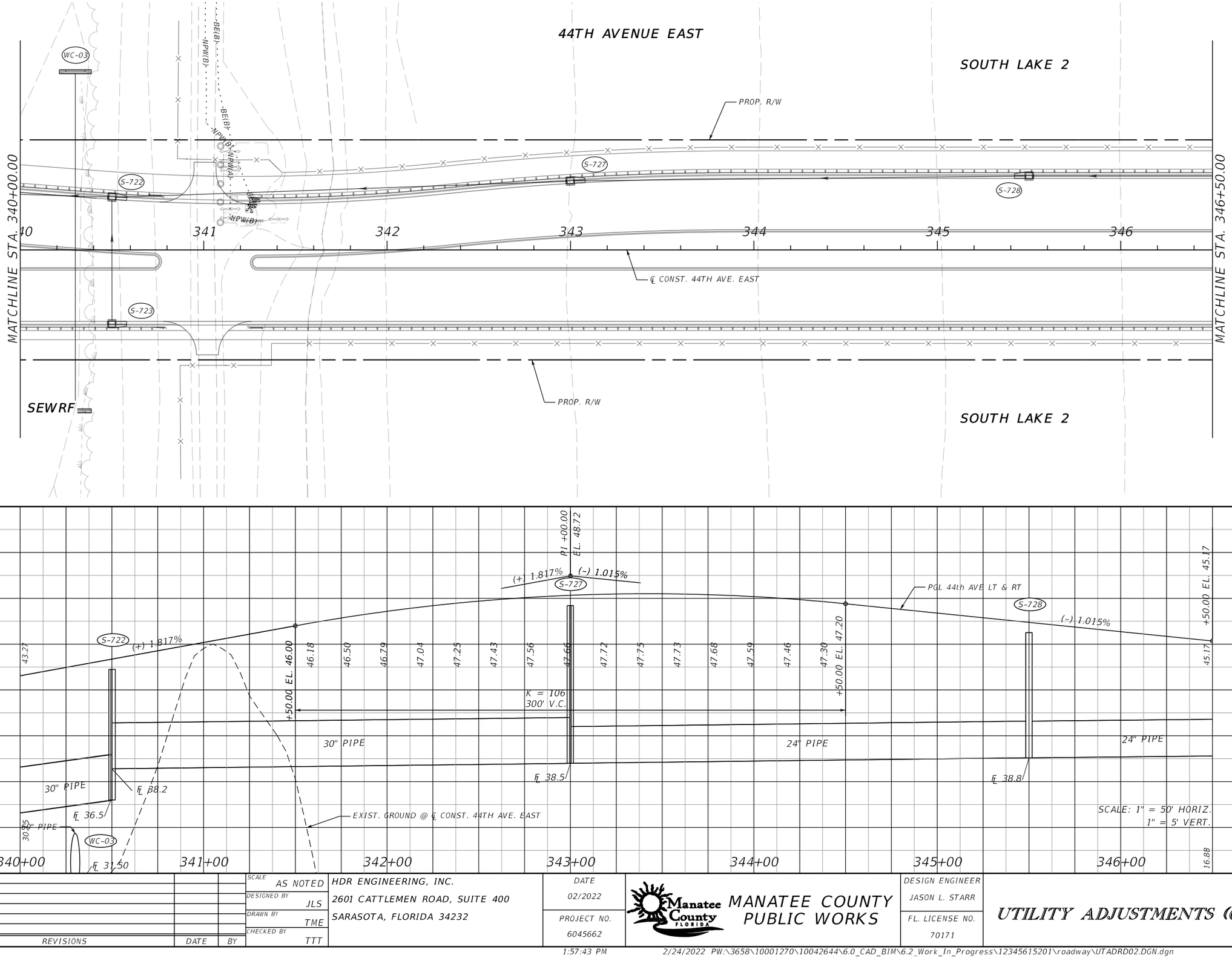
EXIST. 20" FM / TO REMAIN
MANATEE COUNTY

EXIST. OE / TO REMAIN
FPL TRANSMISSION

1" = 50'

333 334 335 336 337 338 339 340

S(B) S(B) S(B)



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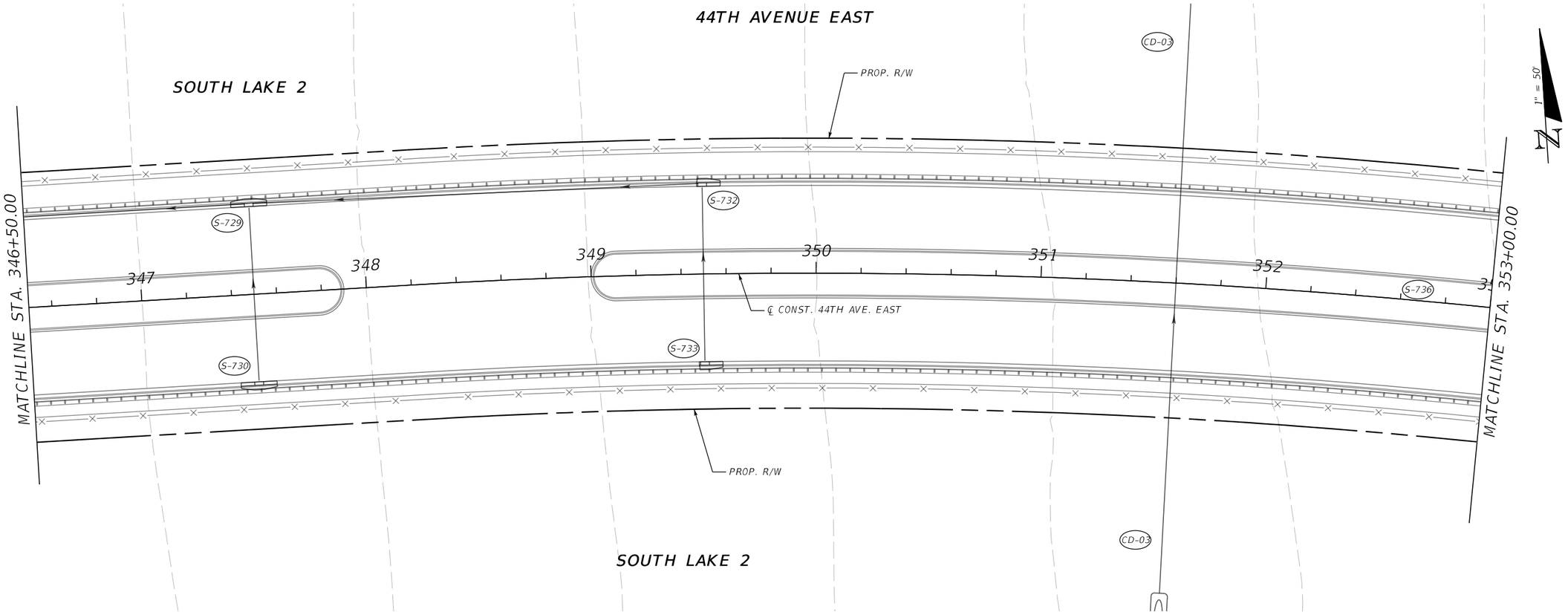
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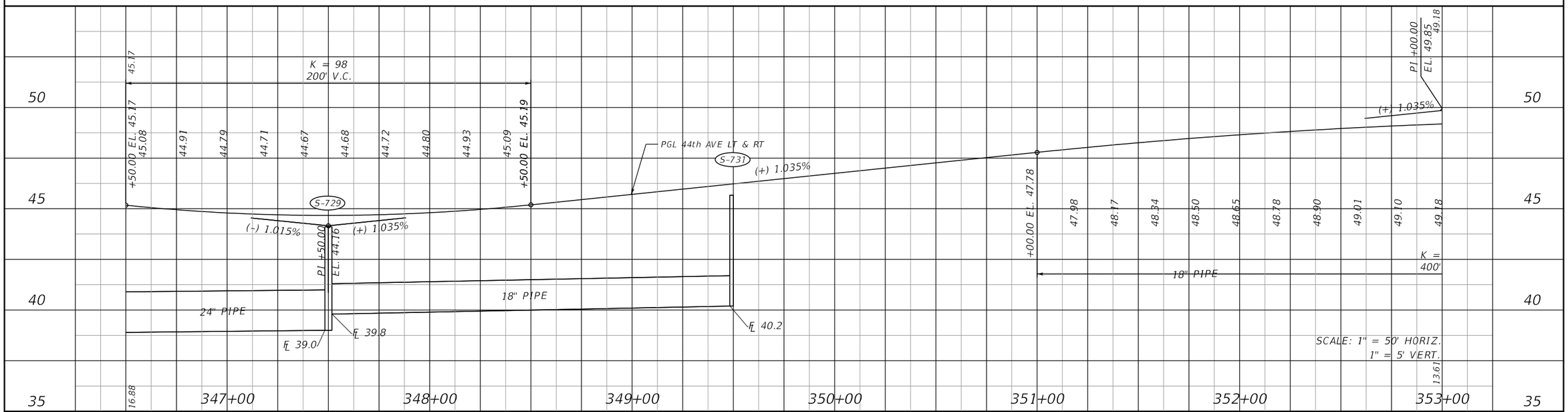
UTILITY ADJUSTMENTS (6)

SHEET NO.: 182

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CHECKED BY	TTT

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SARASOTA, FLORIDA 34232

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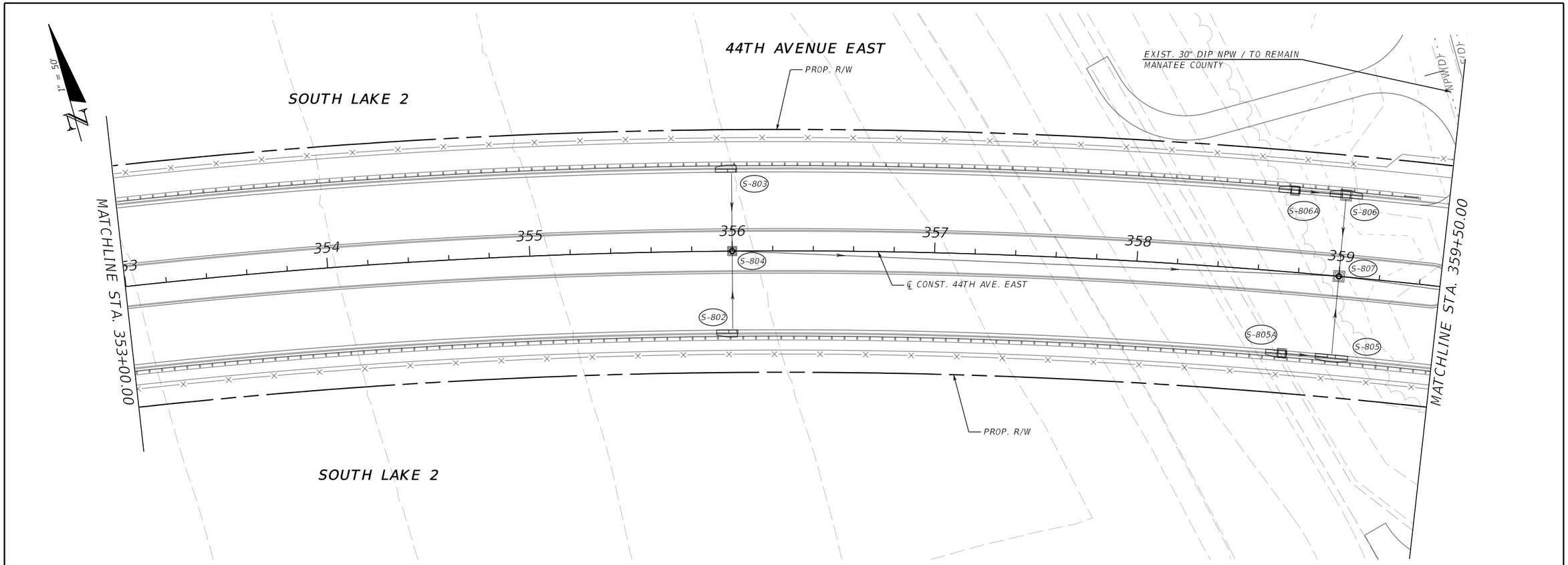
DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

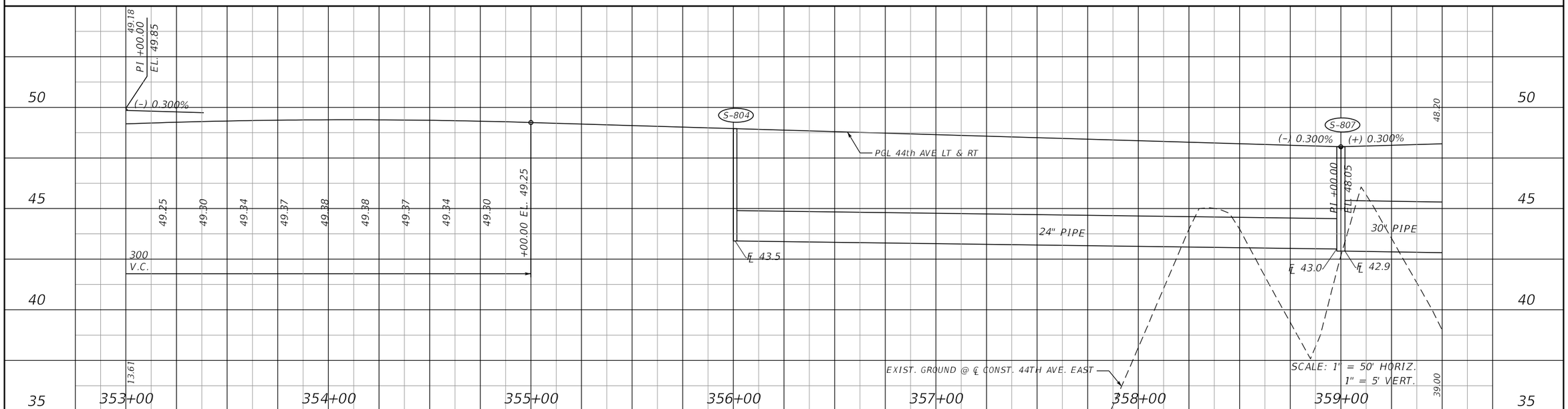
UTILITY ADJUSTMENTS (7)

SHEET NO. 183

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Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

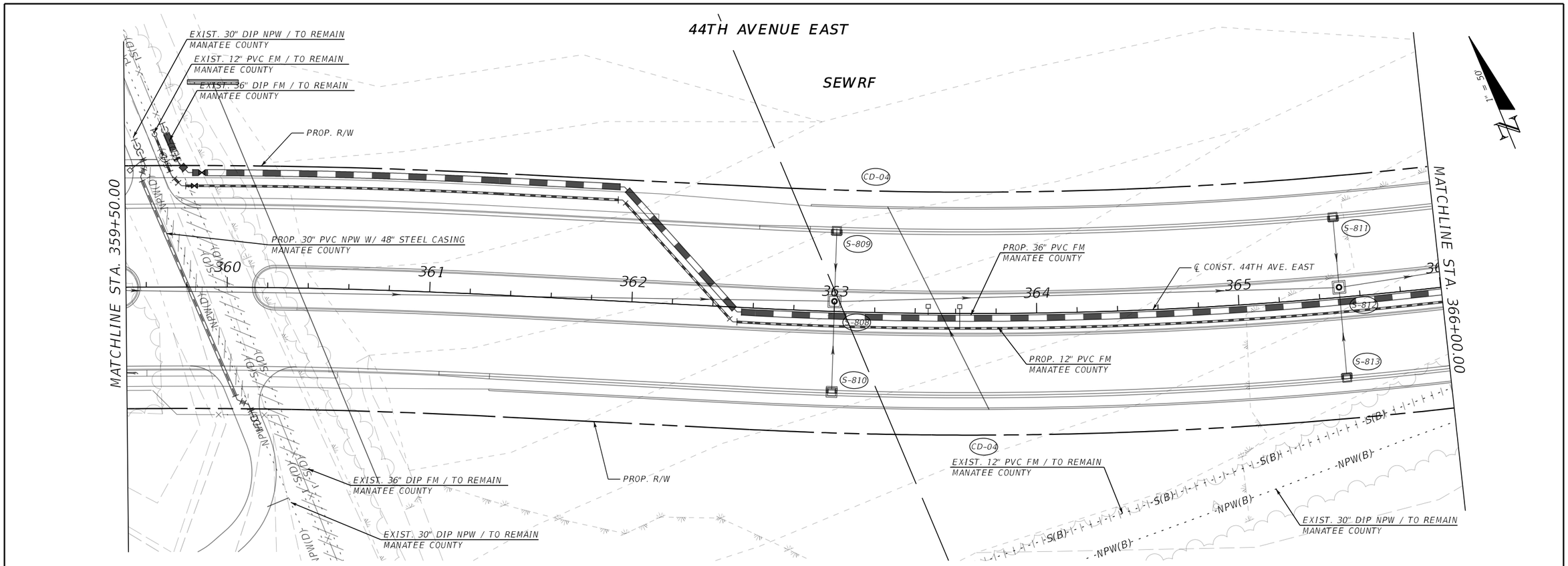
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

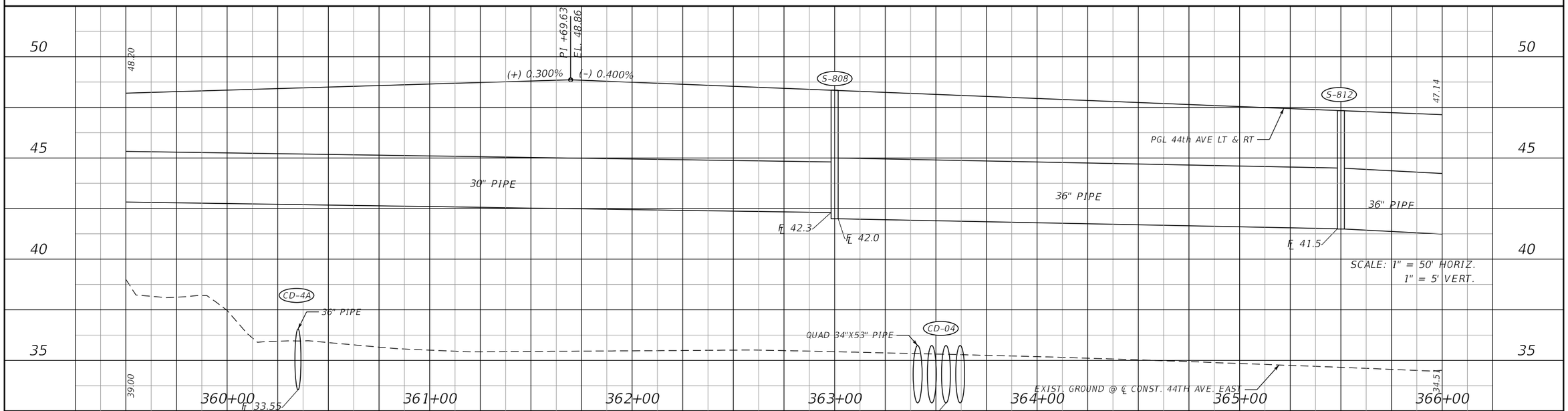
UTILITY ADJUSTMENTS (8)

SHEET NO.: 184

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

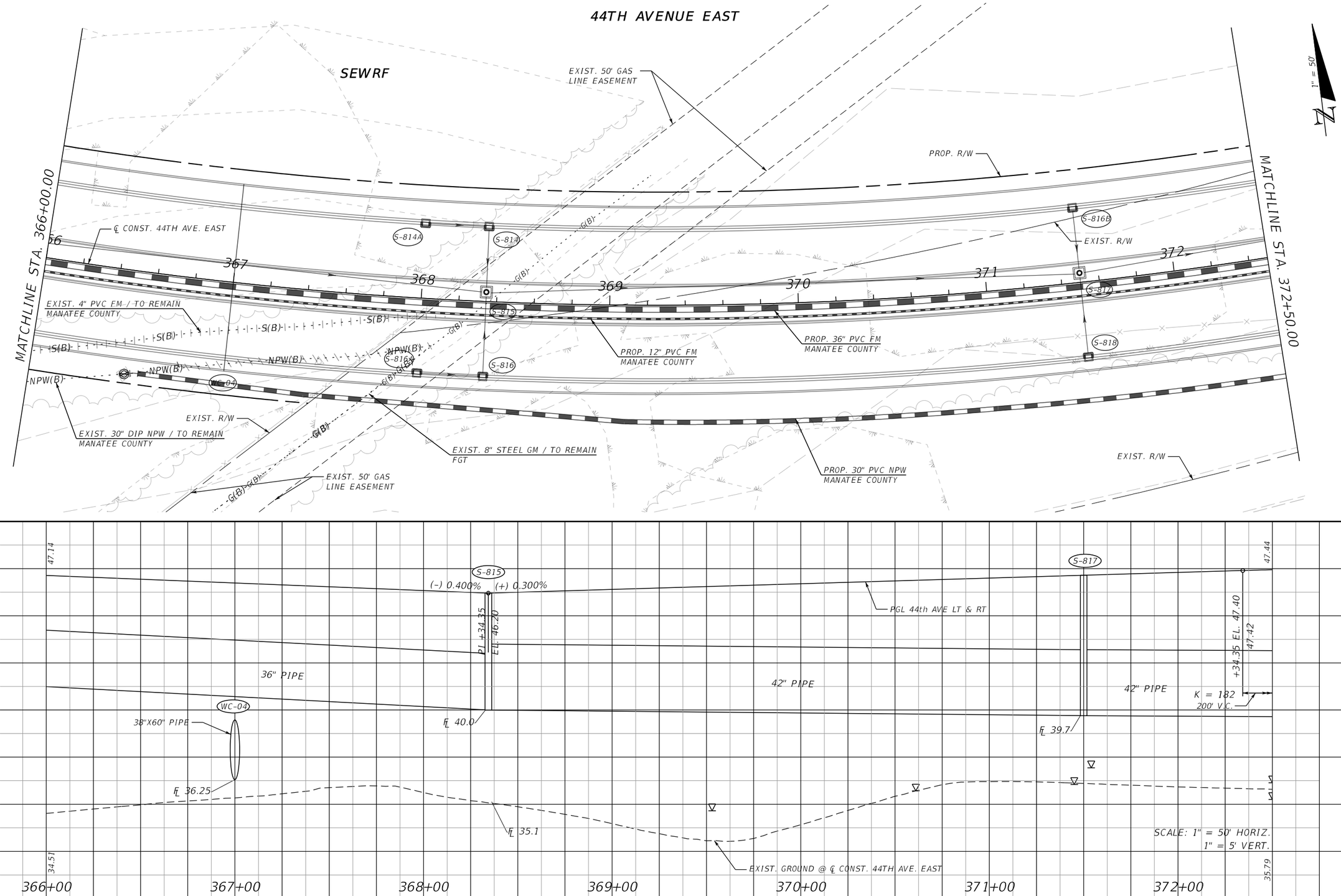
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (9)

SHEET NO.: 185

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

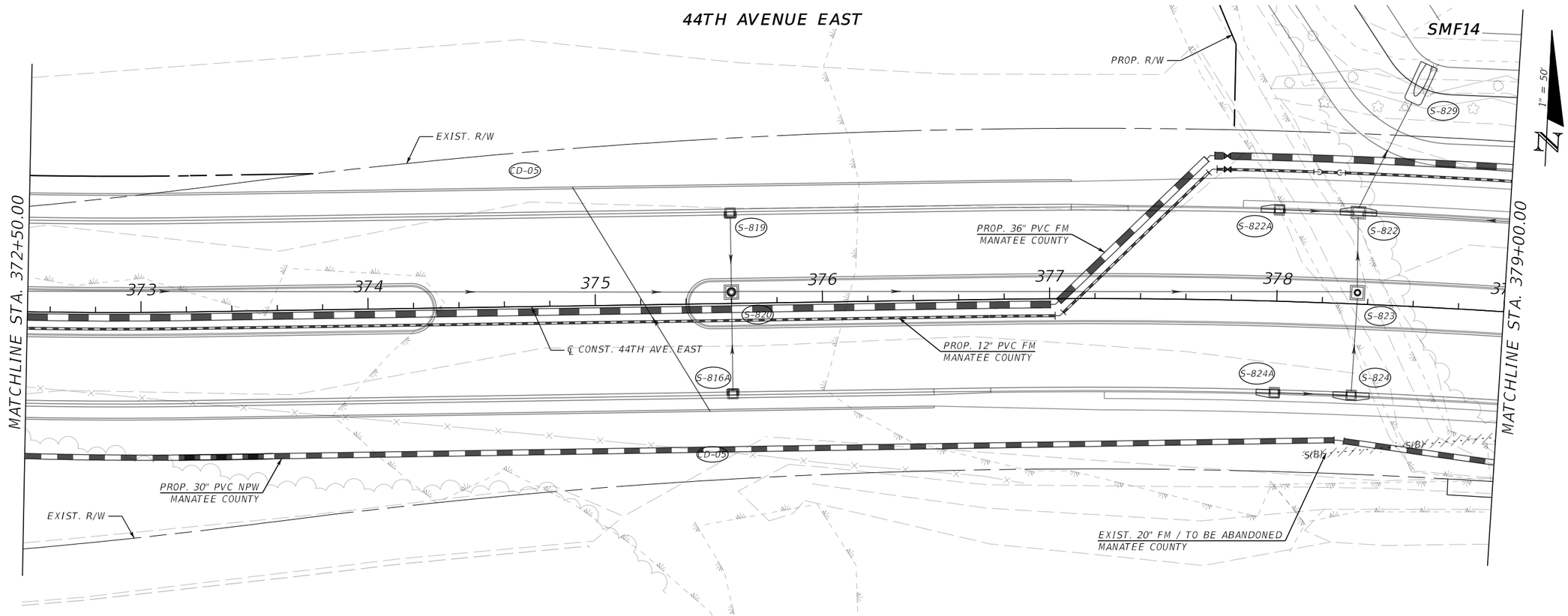
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (10)

SHEET NO.: 186

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
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MANATEE COUNTY PUBLIC WORKS

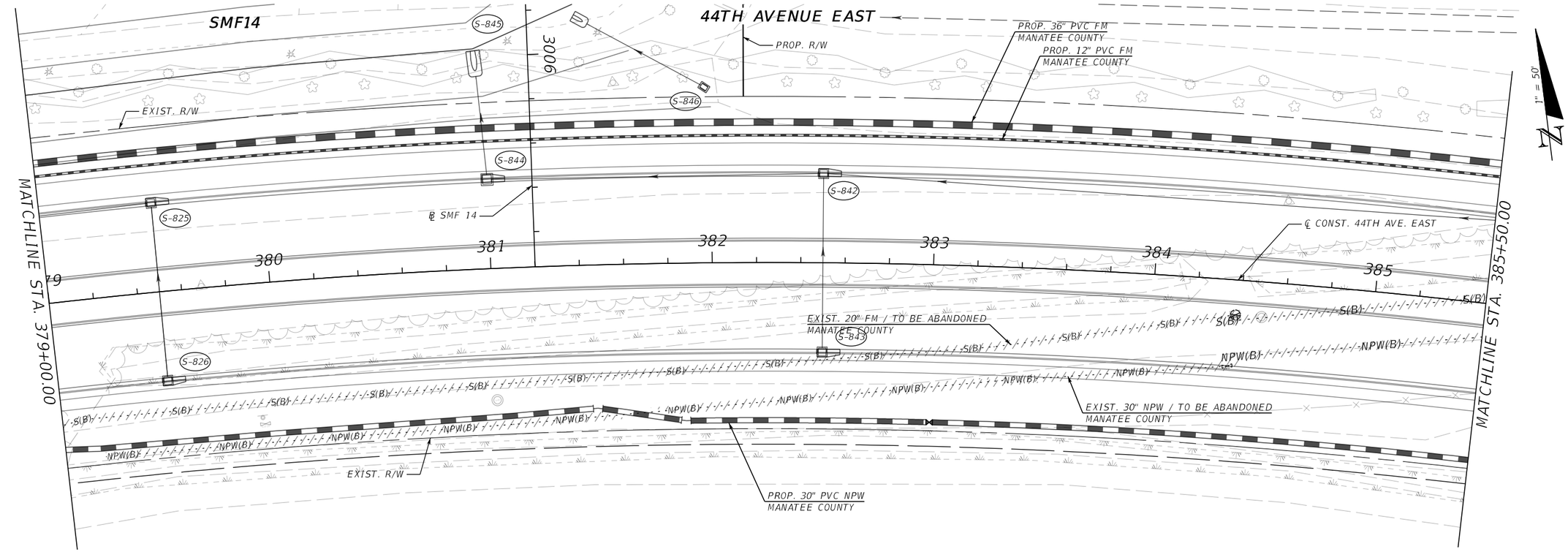
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (11)

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

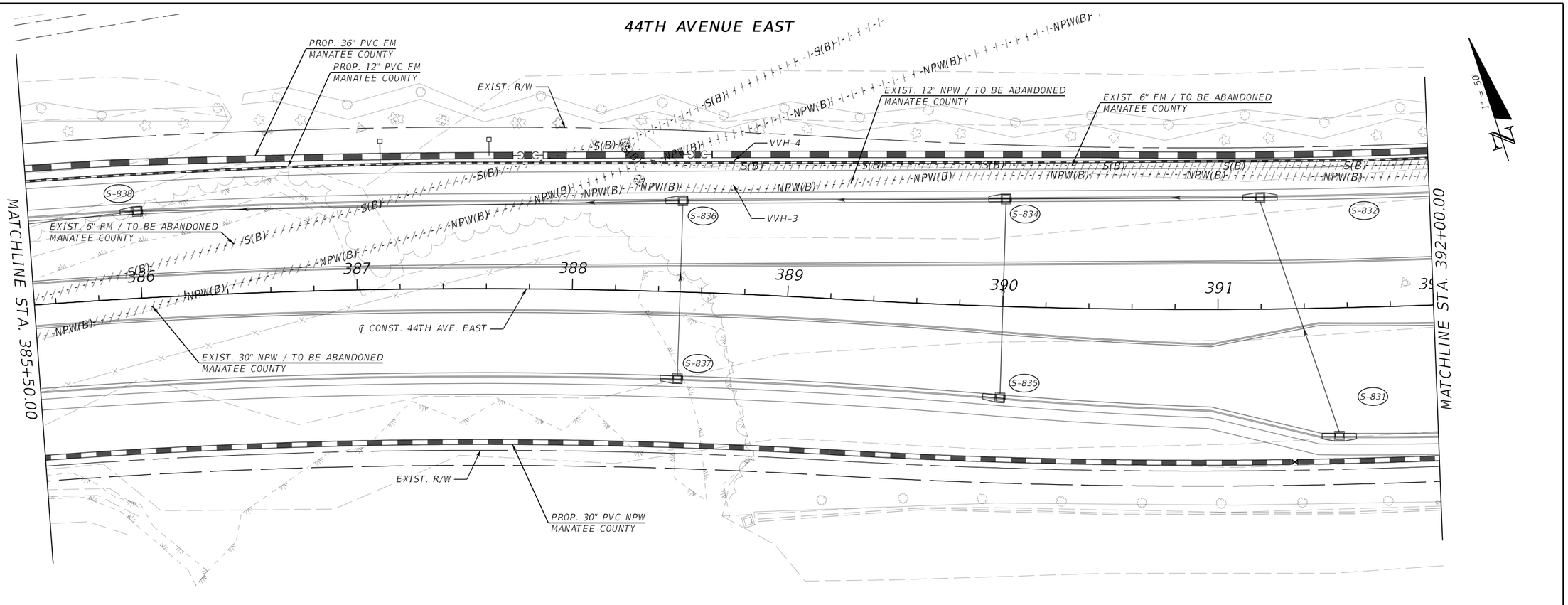
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (12)

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

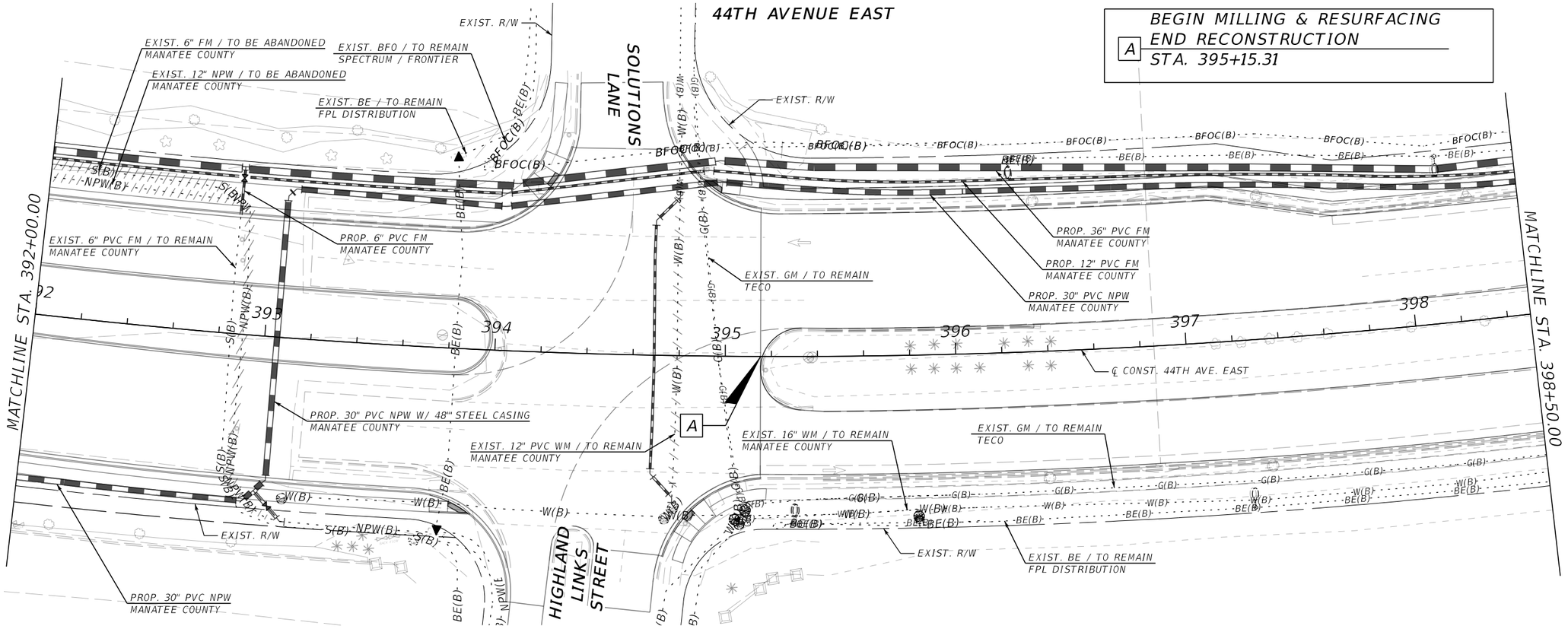
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

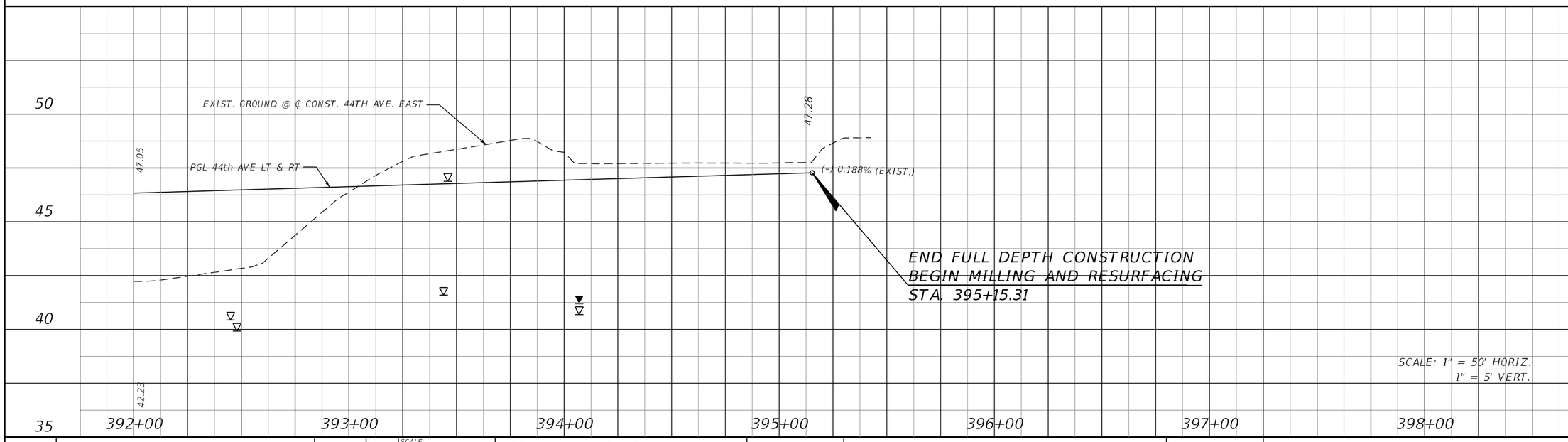
UTILITY ADJUSTMENTS (13)

SHEET NO.: 189

1:58:00 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\UTADRD02.DGN.dgn

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

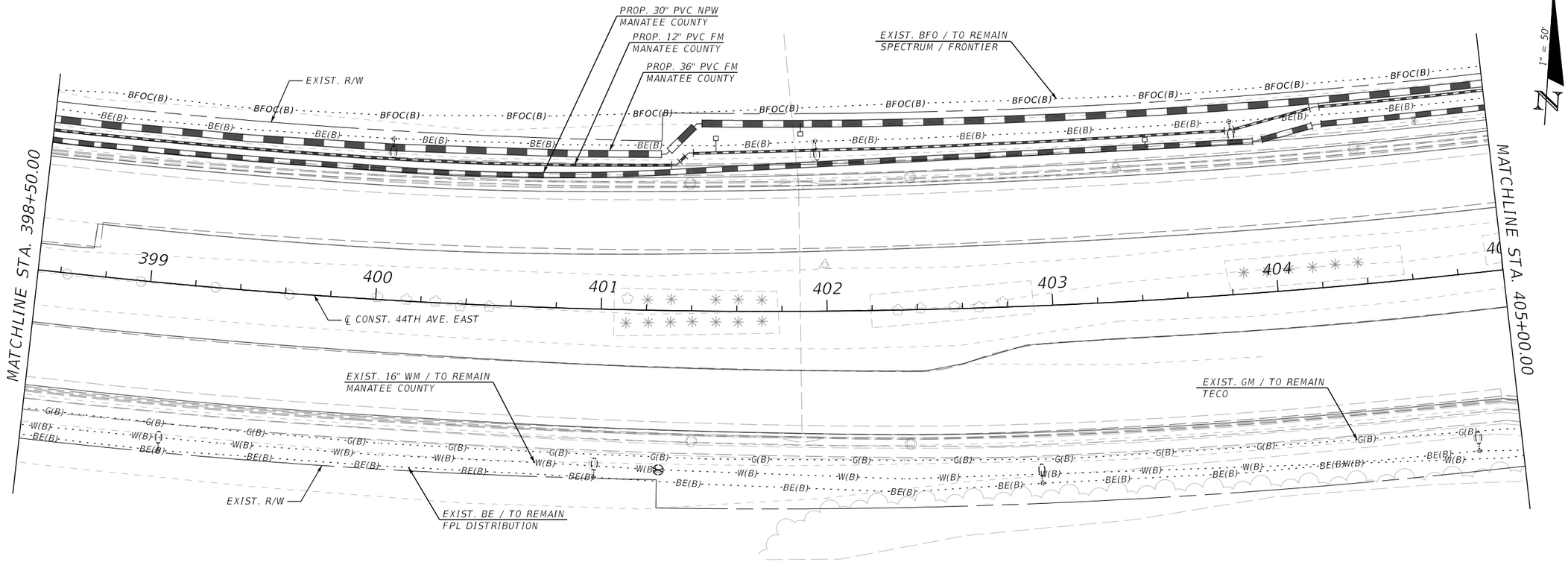
UTILITY ADJUSTMENTS (14)

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44TH AVENUE EAST



NO PGL THIS SHEET

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

399+00 400+00 401+00 402+00 403+00 404+00 405+00

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

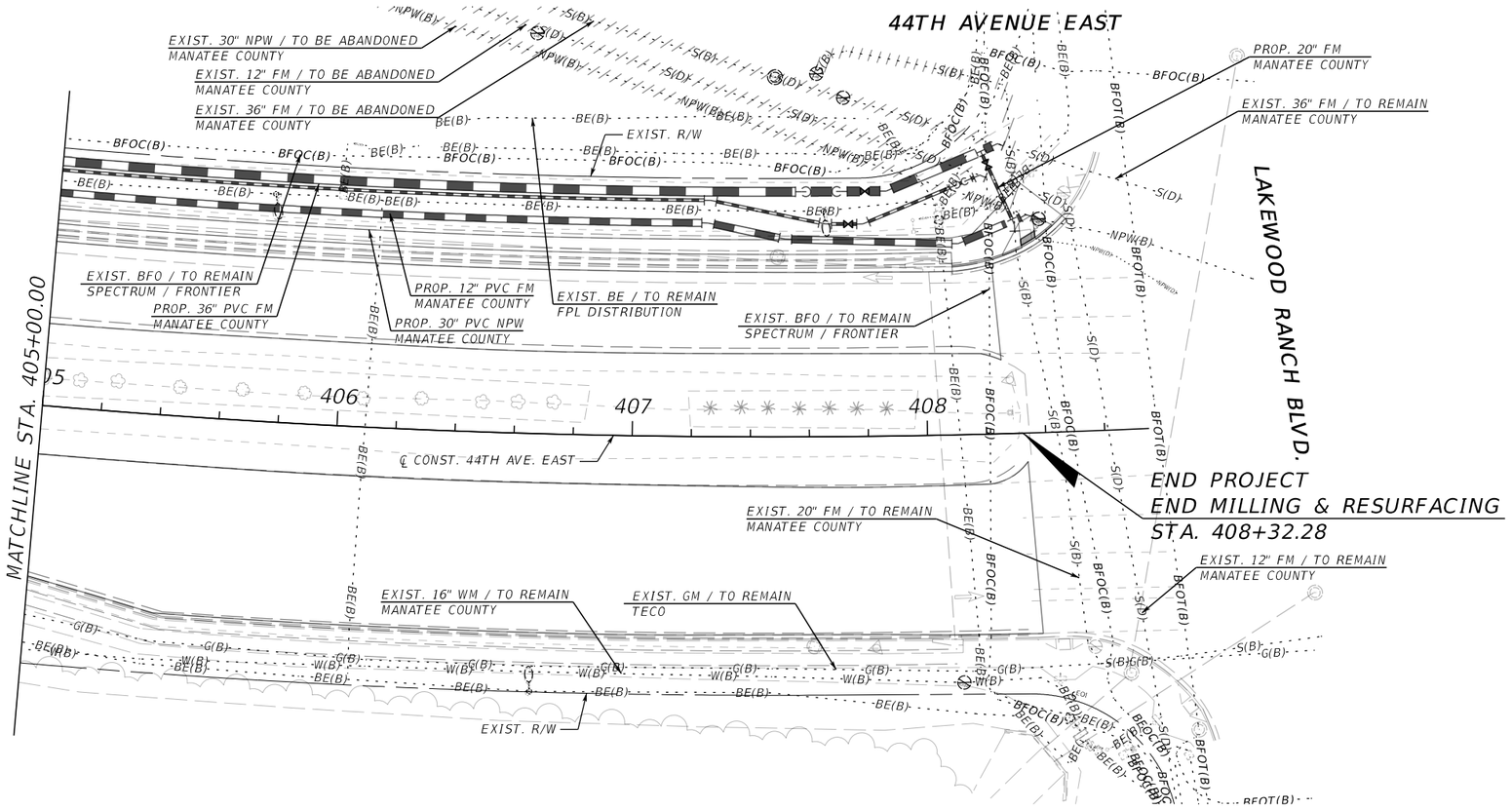
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (15)

SHEET NO.: 191

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NO PGL THIS SHEET

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

405+00 406+00 407+00 408+00

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

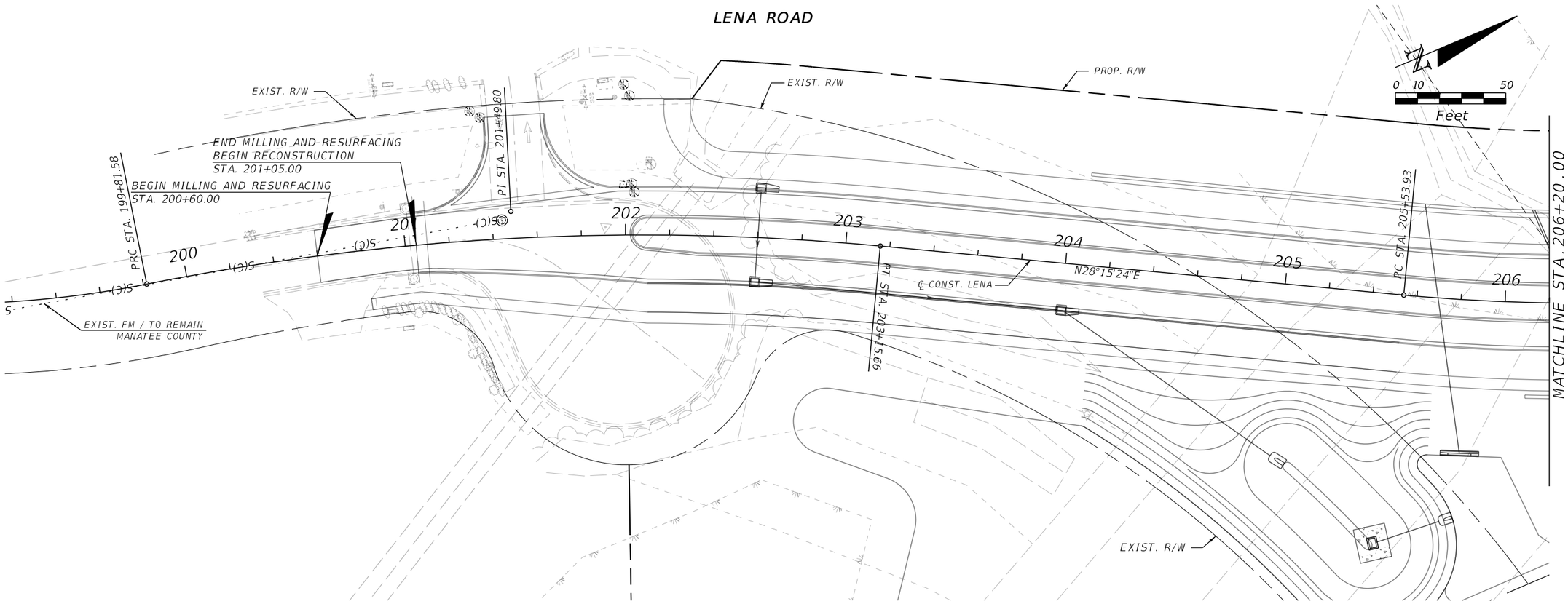
UTILITY ADJUSTMENTS (16)

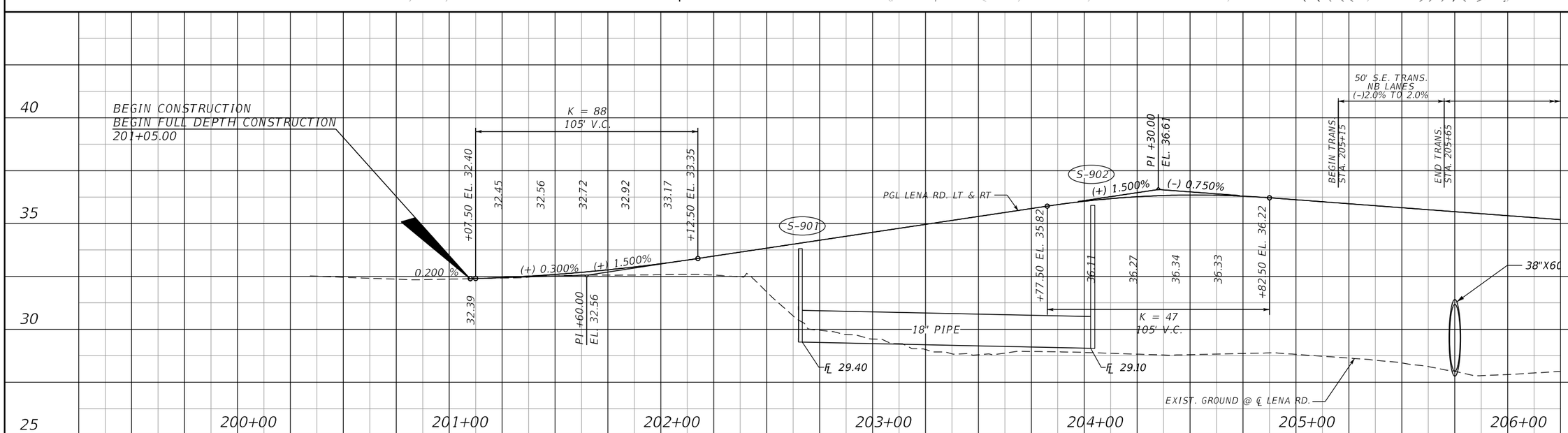
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LENA ROAD





No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	TME
CHECKED BY	TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE 02/2022
PROJECT NO. 6045662

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

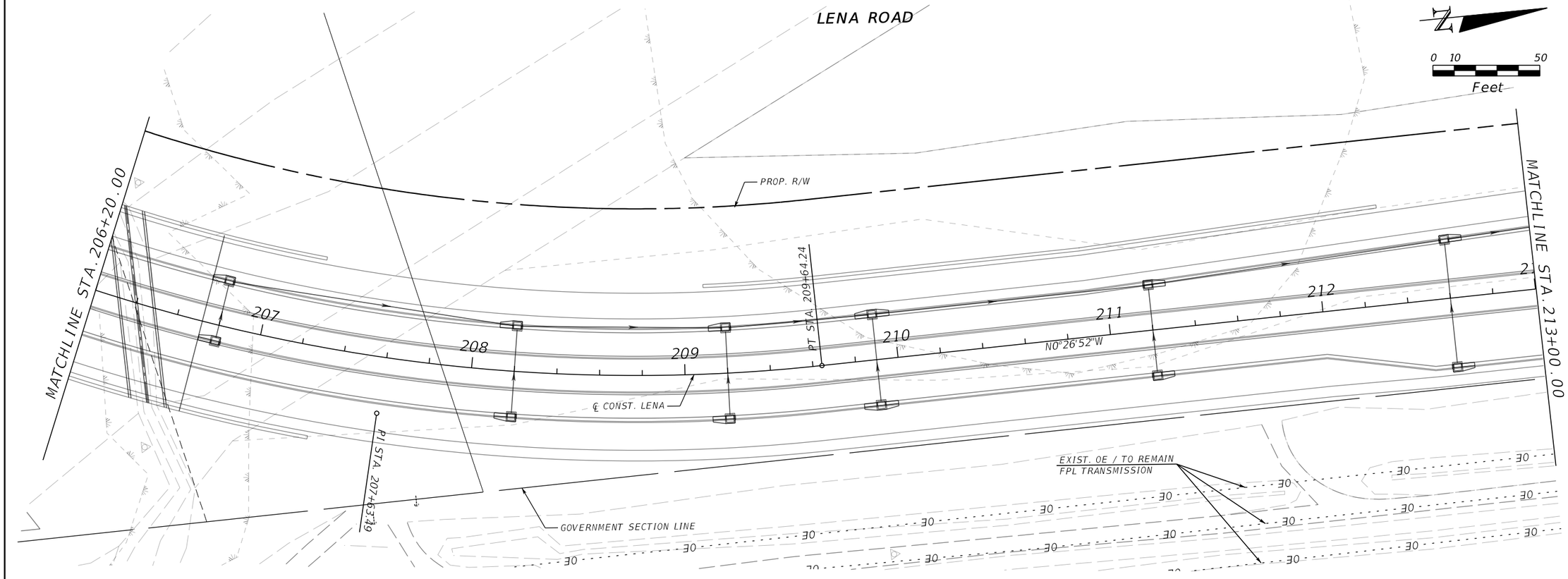
DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

UTILITY ADJUSTMENTS (17)

SHEET NO. 193

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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
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CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (18)

SHEET NO.: 194

1:58:52 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\UTADRD05.DGN

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LENA ROAD

PROP. R/W

PROP. R/W

EXIST. R/W

EXIST. OE / TO REMAIN
FPL TRANSMISSION

℄ CONST. 44TH AVE. EAST

PROP. R/W

GOVERNMENT SECTION LINE

PI. STA. 218+40.48

MATCHLINE STA.213+00.00

MATCHLINE STA.220+00.00

℄ CONST. LENA RD

N 0° 26' 52" W

END RECONSTRUCTION
STA. 218+20.00

EXIST. OE / TO REMAIN
FPL TRANSMISSION

GOVERNMENT SECTION LINE

0 10 50
Feet

SEE ROUNDABOUT PROFILE AND
INTERSECTION DETAIL SHEETS

PGL LENA RD. LT

PGL LENA RD. RT

PGL LENA RD. RT

END FULL DEPTH CONSTRUCTION
218+20.00

END GRADING TIE DOWN
218+71.54

(+) 0.300%

(+) 0.650%

(+) 0.650%

(+) 0.355%

(+) 1.594%

(−) 0.700%

(−) 6.79%

1.169 %

P.I. +50.00
EL. 34.75

P.I. +25.00
EL. 35.89

P.I. +20.00
EL. 33.83

P.I. +10.00
EL. 33.90

+65.00 EL. 35.50

35.57

35.60

35.96

34.29

34.28

29.29

36" PIPE

36" PIPE

36" PIPE

36" PIPE

42"
PIPE

48" PIPE

48" PIPE

℄ 28.10

℄ 27.90

℄ 27.50

EXIST. GROUND @ ℄ LENA RD.

℄ 26.50

℄ 25.30

℄ 25.10

℄ 24.90

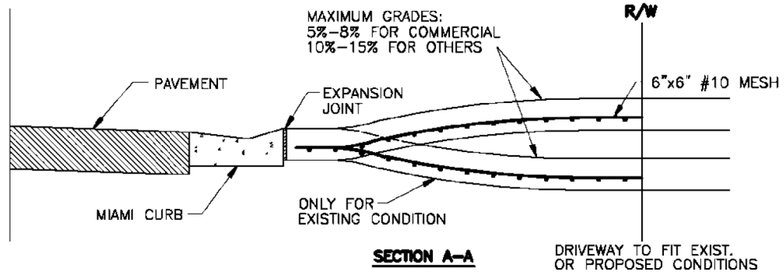
℄ 21.50

213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00

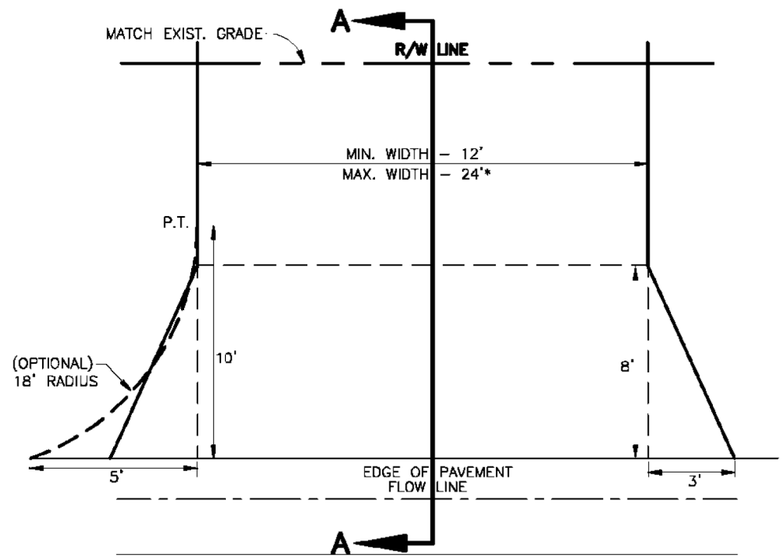
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				DESIGNED BY: JLS	2601 CATTLEMEN ROAD, SUITE 400	PROJECT NO. 6045662	FL. LICENSE NO. 70171
				DRAWN BY: TME	SARASOTA, FLORIDA 34232	MANATEE COUNTY PUBLIC WORKS	UTILITY ADJUSTMENTS (19)
				CHECKED BY: TTT			SHEET NO. 195
No.	REVISIONS	DATE	BY				

3:36:43 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\UTADRD06.dgn

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SECTION A–A



PLAN VIEW

* For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:

a.) 30' total at the R/W line

b.) 30% of the front footage as defined on the survey (or field measurement, 36' max.)

(A) CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB– TO R/W LINE.

(B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)

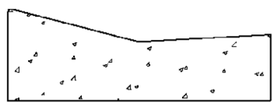
(C) MAINTAIN EXISTING DRAINAGE FLOWLINE. FOR PIPING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200– DRAINAGE (STD. 200.0, 202.5).

(D) 3'x8' FLARE OR 18' RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "F" CURB TO MIAMI CURB) SEE STD. 102.2 NO CHANGE WITH 3' VALLEY CROSSINGS – SEE STDS. 201.0, 201.1, 201.2, 201.4, 201.5, 201.6.

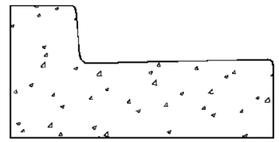
(E) EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12' (BEYOND FLARE) PLACE JOINT ON 10' CENTER.

(F) LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

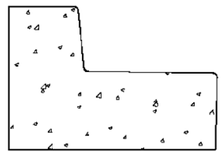
MANATEE COUNTY TRANSPORTATION DEPARTMENT				
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	URBAN DRIVES	101.1



TYPE "A"
MIAMI CURB & GUTTER
STD. 201.1



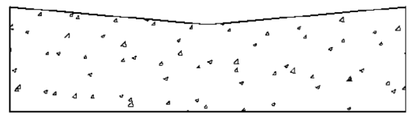
TYPE "F"
CURB & GUTTER
STD. 201.2



TYPE "AB"
MODIFIED CURB & GUTTER
STD. 201.3



TYPE "D"
CURB
STD. 201.4



INVERTED CROWN
CURB & GUTTER
STD. 201.5

1. ALL CURB & GUTTER SHALL PROVIDE A 0.125" TO 0.25" CONTRACTION JOINT AT 10' CENTERS.
2. ALL CURB & GUTTER SHALL BE CONSTRUCTED IN COMPLIANCE WITH FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.
3. TOP OF FINISHED PAVEMENT SHALL BE 0.25" ABOVE LIP OF GUTTER, LOW SIDE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT				
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	CURB & GUTTER CONTROL SHEET	201.0

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

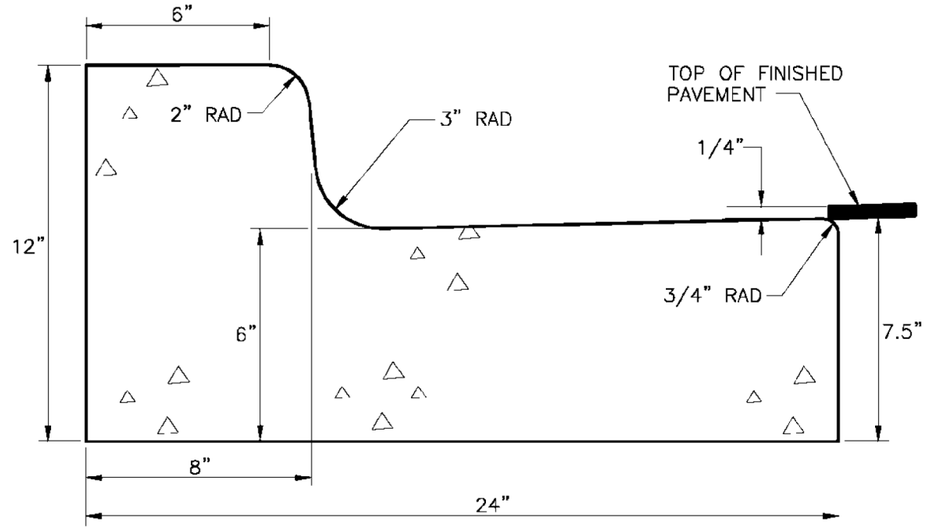
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY DETAILS (1)

SHEET NO.: DET-1

2:05:48 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD04.DGN

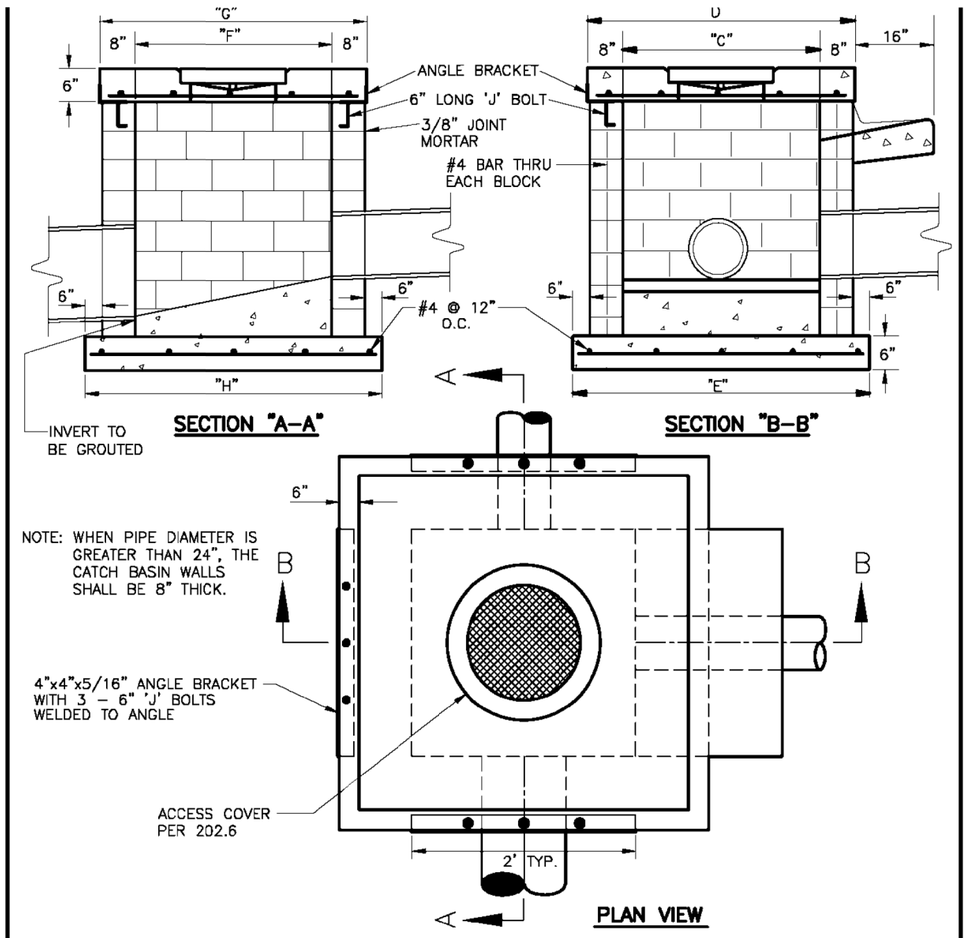


TYPE "F" BARRIER CURB & GUTTER

A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.

B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			TYPE F CURB & GUTTER	201.2
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL		



NOTE: DIMENSIONS PER SECTION 202.0

A) THE FOLLOWING MATERIALS TO BE AS SPECIFIED IN THE FLORIDA D.O.T. SPEC'S. 1991, SECTION 346 CONCRETE, SECT. 962-B IRON CASTING, SECT. 931-1 REINFORCEMENT STEEL, SECT. 425 INLETS, MANHOLES & JUNCTION BOXES.

B) FILL BLOCKS WITH 3,000 psi CONCRETE, USE #4 ROD IN EACH BLOCK, 16" O/C.

C) 2" MINIMUM COVER ON ALL REBAR.

D) USE #4 REBARS ON 6" CENTERS BOTH WAYS ON LID; NO.4 REBARS ON 12" CENTERS BOTH WAYS ON FLOOR SLAB.

E) SEE SHEET 202.0 FOR GENERAL NOTES AND DIMENSION INDEX.

F) ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".

G) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2000) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.

H) ALL PIPE ENTRIES TO CATCH BASIN TO BE GROUTED AND SEALED.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			TYPICAL CONC. BLOCK BOX	202.1
REV.BY	DATE	6/12/07		

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

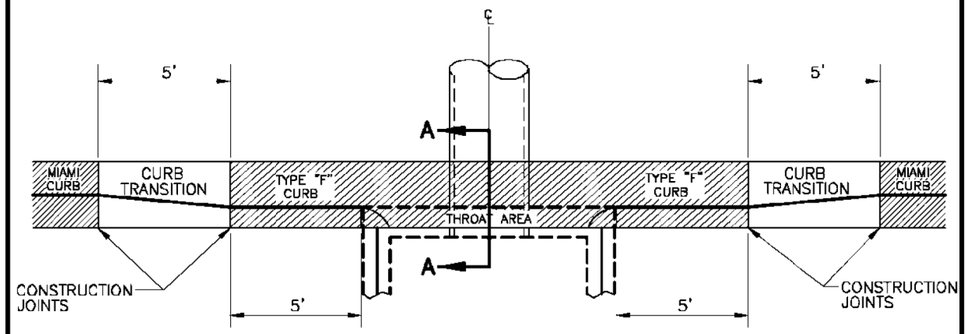
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

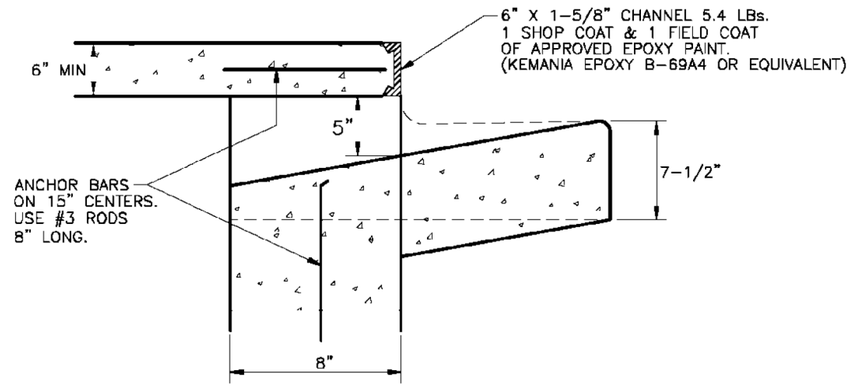
ROADWAY DETAILS (2)

SHEET NO.: DET-2

2:05:10 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD04.DGN



PLAN VIEW



SECTION A-A

A) USE STANDARD CATCH BASIN & JUNCTION BOX DIMENSION INDEX (SHEET # 202.0) DETAILS AND COVER (SHEET # 202.6).

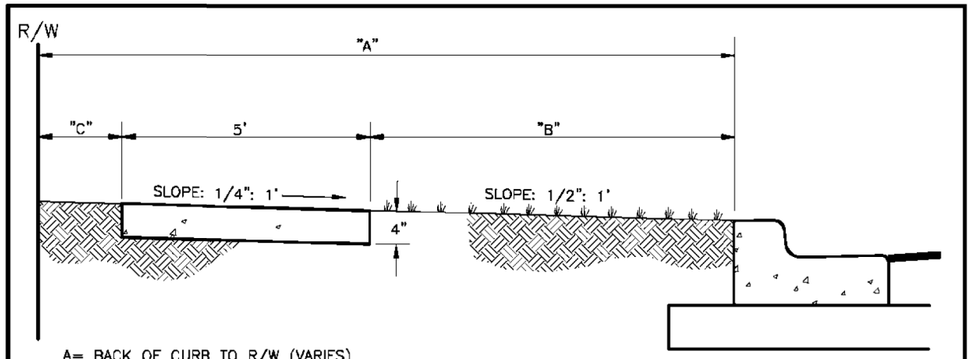
B) SEE CURB & GUTTER INDEX (SHEET # 201.0) FOR APPLICABLE CURB TYPE.

C) SEE SHEET # 202.0 "GENERAL NOTES" FOR APPLICABLE INFORMATION.

D) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2006) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE DIRECTOR OR HIS DESIGNEE.

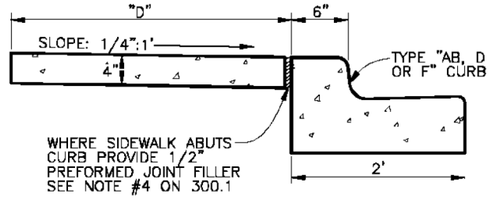
E) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

MANATEE COUNTY TRANSPORTATION DEPARTMENT				
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	CURB INLET	202.2



A= BACK OF CURB TO R/W (VARIES)
B= UNPAVED AREA (VARIES). REFER TO F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
C= VARIES, SEE 401 SERIES

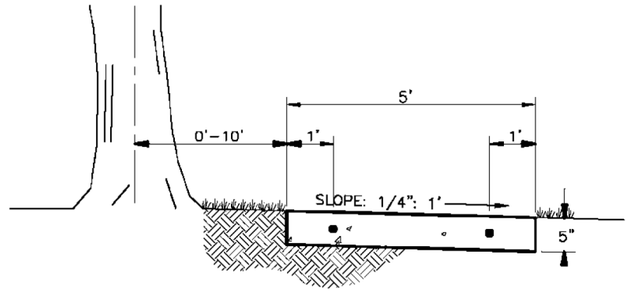
TYPICAL SIDEWALK LOCATION



D= SIDEWALK WIDTH SHALL BE 6' STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-6".

* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

ALTERNATE SIDEWALK LOCATION



SIDEWALK LOCATION CLOSE TO TREES

MANATEE COUNTY TRANSPORTATION DEPARTMENT				
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	SIDEWALK REQUIREMENTS	301.1

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

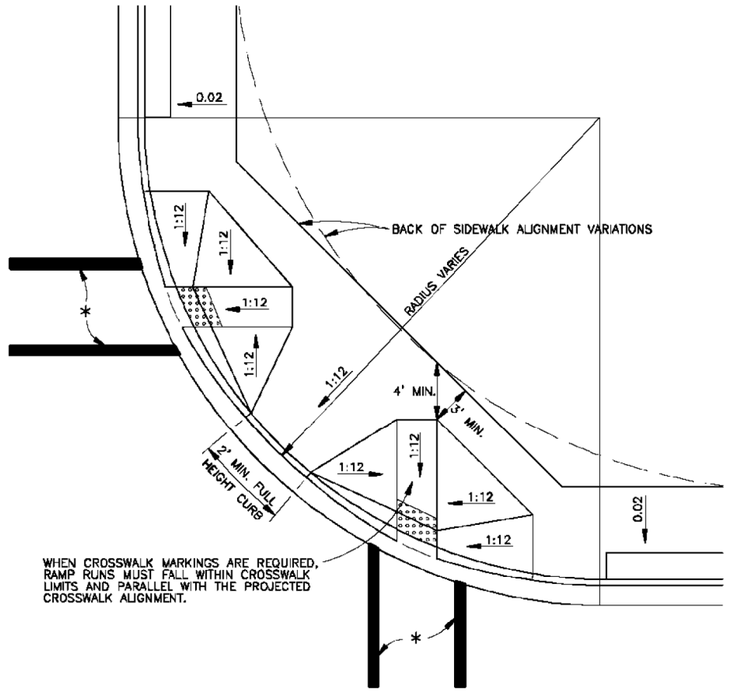
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY DETAILS (3)

SHEET NO.: DET-3

2:05:18 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD04.DGN

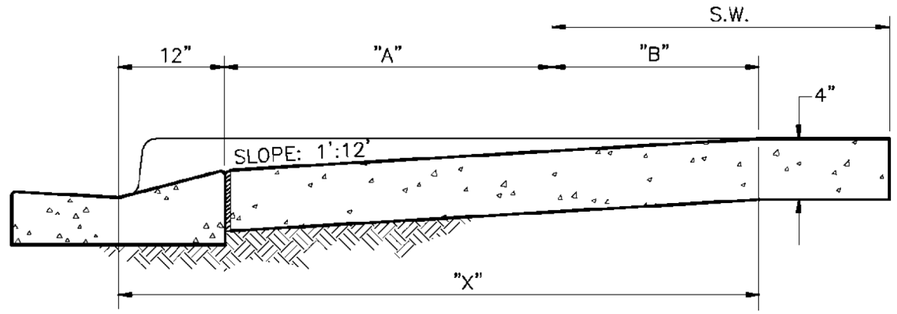


* CROSSWALK WIDTHS AND CONFIGURATION VARY; MUST CONFORM TO FDOT INDEX NO. 17344 AND 17346.

1) CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
2) SEE SHEETS # 300.1 "GENERAL NOTES" & # 301.2 "HANDICAPPED RAMP" SHT 2 FOR FURTHER REQUIREMENTS.
3) RADIUS OF CURB VARIES AS FOLLOWS:
   A) 25' RAD. LOCAL STREET WITH ALLEY.
   B) 25' RAD. LOCAL STREET WITH LOCAL STREET.
   C) 35' RAD. LOCAL STREET WITH THOROUGHFARE OR COLLECTOR.
   D) 50' RAD. THOROUGHFARE WITH THOROUGHFARE
4) CURB RADIUS SHOULD BE A MINIMUM OF 50' WHERE INDUSTRIAL AND BUS TRAFFIC (5% OR MORE) IS ANTICIPATED ON LOWER CLASSIFICATION ROADWAYS.
5) BOTH LOCATION OPTIONS FOR HANDICAPPED RAMP ARE SHOWN. ENGINEER MAY SELECT EITHER, WHICHEVER FITS THE SITUATION.

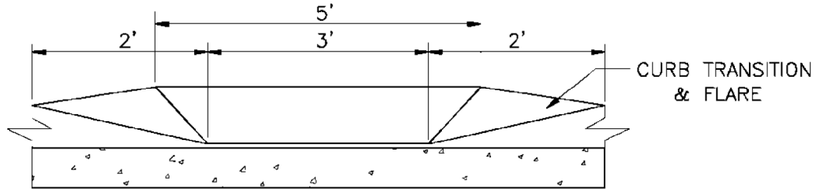
NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	HANDICAPPED RAMP SHEET 1
			302.1



SECTION A–A
(SEE SHEET 301.0)

S.W.= SIDEWALK	"A"	S.W.+ A + 10"	"X"	"B"
5'	0	5.8'	5.8'	5'
6'	0	6.8'	6.8'	6'
7'	0	7.8'	7.3'	6.5'
8'	0	8.8'	7.3'	6.5'
5'	2'	7.8'	7.8'	5'
5'	2.5'	8.3'	8.1'	4.8'
5'	3'	8.8'	8.2'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5'	10.8'	9.1'	3.1'



SECTION B–B
(SEE SHEET 301.0)

NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	HANDICAPPED RAMP SHEET 2
			302.2

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

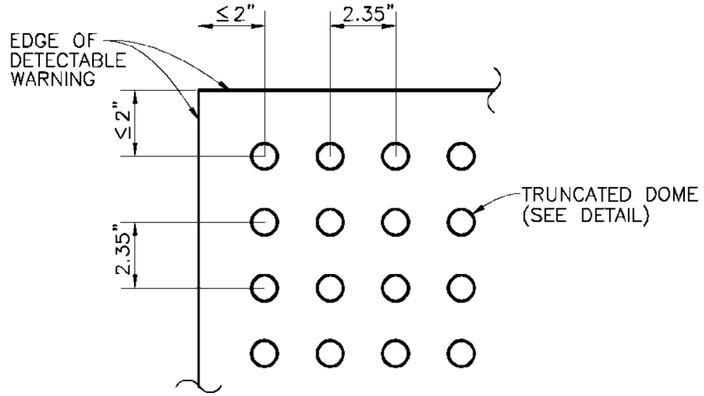
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

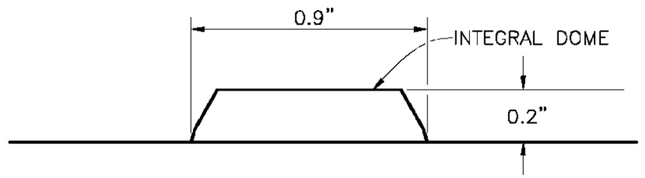
ROADWAY DETAILS (4)

SHEET NO.: DET-4

2:05:25 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD04.DGN



PLAN VIEW



TRUNCATED DOME

CURB RAMP DETECTABLE WARNING DETAIL

NOTES:

DETECTABLE WARNINGS ON WALKING SURFACES

THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.2 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCH AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

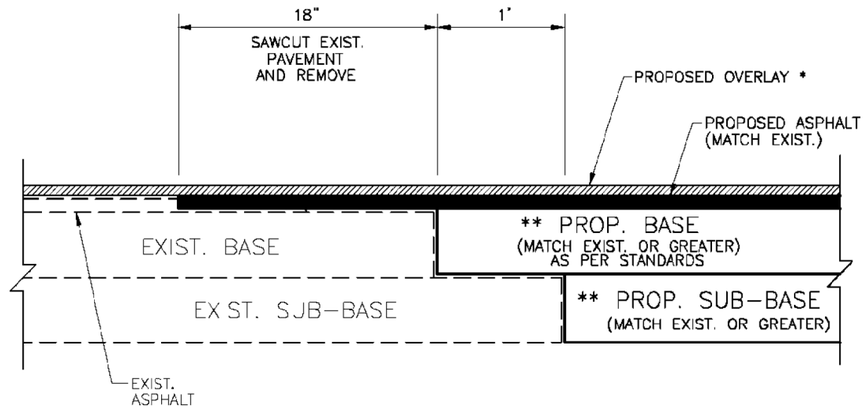
THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY:

$$\text{CONTRAST} = [(B1 - B2)/B1] \times 100$$

WHERE B1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND B2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.

NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THUS, B1 NEVER EQUALS 100 AND B2 IS ALWAYS GREATER THAN 0.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			CURB RAMP DETECTABLE WARNINGS	302.3
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL		



* NOTE: LIMITS OF OVERLAY – EDGE OF PAVEMENT TO EDGE OF PAVEMENT AND 25' BEYOND LIMITS OF CONSTRUCTION.

** NOTE: CONNECTION TO OLDER (SUBSTANDARD THICKNESS) ROADS MAY REQUIRE THICKER PROPOSED BASE AND SUB-BASE TO MEET CURRENT STANDARDS.

SIGNAGE AND MARKING PLAN SHALL ACCOMPANY CONSTRUCTION PLAN.

ROAD CONNECTION DETAIL

N.T.S.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			ROAD CONNECTION DETAIL	403.3
REV.BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL		

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

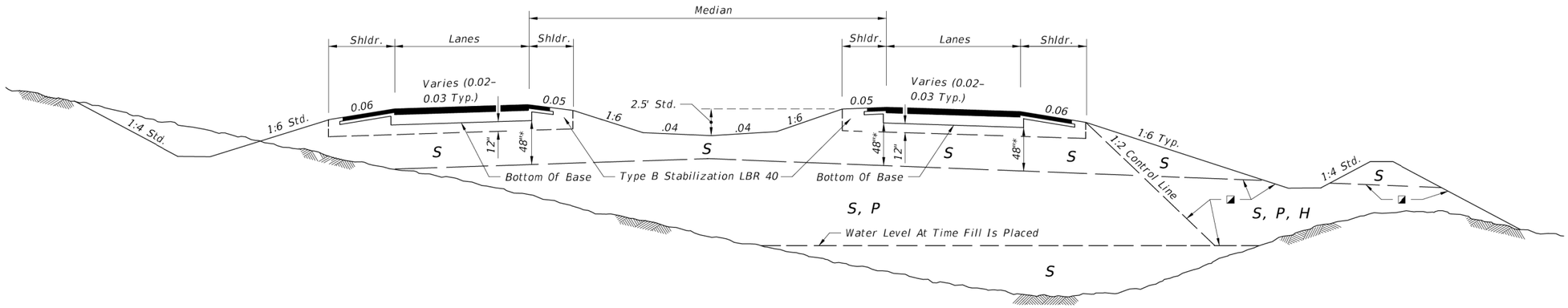
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

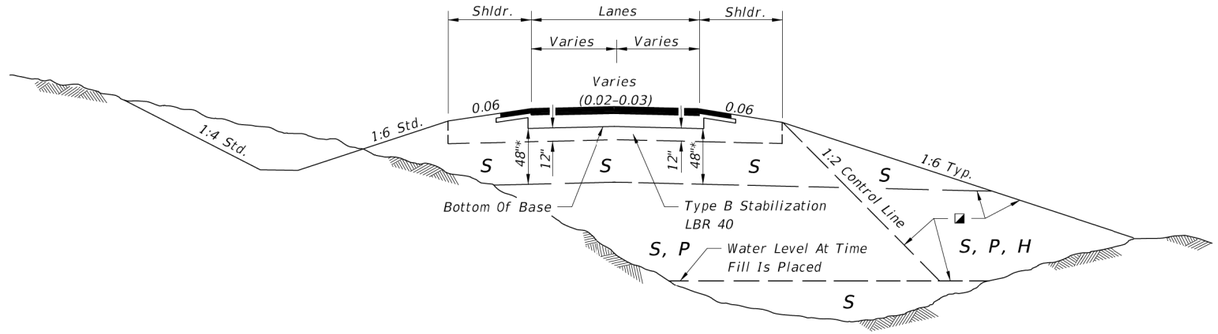
ROADWAY DETAILS (5)

SHEET NO.: DET-5

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DIVIDED ROADWAYS



UNDIVIDED ROADWAY

GENERAL NOTES:

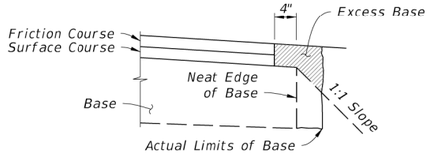
1. Roadway dimensions are representative. Subgrade dimensions and control lines are standard. The details shown on this Index do not supersede the details shown in the Plans or Indexes 120-002 and 160-001.

2. Plastic (P) soils may be placed above the existing water level (at the time of construction) to within 4 feet of the proposed base. It should be placed uniformly in the lower portion of the embankment for some distance along the project rather than full depth for short distances.

3. High Plastic (H) soils excavated within the project limits may be used in embankment construction as indicated on this Index. High Plastic soils are not to be used for embankment construction when obtained from outside the project limits.

4. Select (S) soils having an average organic content of more than two and one-half (2.5) percent, or having an individual test value which exceeds four (4) percent, are not permitted in the subgrade portion of the roadbed. Select (S), Plastic (P), or High Plastic (H) soils having an average organic content of more than five (5) percent, or an organic content individual test result which exceeds seven (7) percent, are not permitted in the portion of embankment inside the control line, unless written authorization is provided by the District Geotechnical Engineer; these soils may be used for embankment construction outside the control line, unless restricted by the Plans or otherwise specified in the Plans, provided they can be compacted sufficiently to sustain a drivable surface for operational vehicles as approved by the Engineer. Determine average organic content from the test results from a minimum of three randomly selected samples from each stratum or stockpile of a particular material. Perform tests in accordance with AASHTO T 267 on the portion of a sample passing the No. 4 sieve.

5. Highly organic soils, composed primarily of partially decayed organic matter, often dark brown or black in color with an odor of decay, and sometimes fibrous, are designated as muck. Further, any stratum or stockpile of soil which contains pockets of highly organic material may be designated as Muck (M). Highly organic soils are not permitted within the subgrade or embankment portion of the roadbed.



NOTES:

1. All material in the shaded area is excess base to be removed.

2. There is no additional payment for removal of excess base material.

REMOVAL OF EXCESS BASE MATERIAL

SYMBOL	SOIL	CLASSIFICATION (AASHTO M 145)
S	Select	A-1, A-3, A-2-4 **
P	Plastic	A-2-5, A-2-6, A-2-7, A-4, A-5, A-6, A-7 (ALL WITH LL < 50)
H	High Plastic	A-2-5, A-2-7, A-5 Or A-7 (ALL WITH LL > 50)
M	Muck	A-8

Classification listed left to right in order of preference.

◪ See General Notes Nos. 4 & 5 for utilization of soils classified as organic material or muck.

** Certain types of A-2-4 material are likely to retain excess moisture and may be difficult to dry and compact. They should be used in the embankment above the water level existing at time of construction. They may be used in the subgrade portion of the roadbed when approved by the District Materials Engineer. A-2-4 material placed below the existing water level must be nonplastic and contain less than 15% passing the No. 200 U.S. Standard sieve.

* For cut sections this dimension may be reduced to 24"; see Index 120-002. For minor collectors and local facilities this dimension may be reduced to 18".

GENERAL NOTES AND FLEXIBLE PAVEMENT

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/18			FY 2022-23 STANDARD PLANS	EMBANKMENT UTILIZATION	120-001	1 of 3

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: TME
CHECKED BY: TTT

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

ROADWAY DETAILS (6)

SHEET NO.: DET-6

2:05:39 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\SPDTRD04.DGN

9/28/2021 10:15:51 AM

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

DATE OF SURVEY: JUNE 2017-JUNE 2021
SURVEY MADE BY: TIERRA, INC.
SUBMITTED BY: DANIEL R. RUEL, P.E.

MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

ROAD NO.: 44TH AVENUE
COUNTY: MANATEE

MANATEE COUNTY PROJECT NO. 6045662
PROJECT NAME: 44TH AVENUE EAST PHASE II FROM I-75 TO LAKEWOOD RANCH BOULEVARD

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

SURVEY BEGINS STA. : 260+00.00 SURVEY ENDS STA. : 418+98.86 REFERENCE: CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

	ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS (%)						ATTERBERG LIMITS (%)					CORROSION TEST RESULTS				
STRATUM NO.	NO. OF TESTS	% ORGANIC	NO. OF TESTS	MOISTURE CONTENT	NO. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX	AASHTO GROUP	DESCRIPTION	NO. OF TESTS	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	pH
1	--	--	--	--	37	100	85-98	59-80	17-45	3-8	--	--	--	A-3	GRAY TO BROWN SAND TO SAND WITH SILT	19	4,600-43,000	15-145	<5-75	4.1-7.0
2	--	--	2	24-25	10	90-100	59-92	32-74	22-41	12-23	2	NP	NP	A-2-4	GRAY SILTY SAND	1	3,800	30	42	7.5
3	--	--	5	13-29	5	64-100	57-100	46-97	28-49	15-30	5	20-29	2-7	A-2-4/A-2-6	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND	--	--	--	--	--
4	--	--	4	6-51	5	100	99	95-96	83-87	37-66	4	25-49	8-27	A-4/A-6/ A-7-5/A-7-6	PALE BROWN TO GRAY CLAYEY SAND TO SANDY CLAY	--	--	--	--	--
5	--	--	4	27-67	4	100	99	96	77	65-96	4	53-77	34-55	A-7-5/A-7-6	GRAY TO GREEN CLAY	--	--	--	--	--

NOTES:

1. THE MATERIAL FROM STRATUM 1 (A-3) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
2. THE MATERIAL FROM STRATUM 2 (A-2-4) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001. HOWEVER, THIS MATERIAL IS LIKELY TO RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT. IT SHOULD BE USED IN THE EMBANKMENT ABOVE THE WATER LEVEL EXISTING AT THE TIME OF CONSTRUCTION.
3. THE MATERIAL FROM STRATA 3 AND 4 (A-2-4/A-2-6/A-6/A-7-5/A-7-6) IS PLASTIC MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
4. THE MATERIAL FROM STRATUM 5 IS HIGH PLASTIC (A-7-5/A-7-6) MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING.

▽ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

▼ - WATER TABLE ENCOUNTERED

GNE - GROUNDWATER NOT ENCOUNTERED

GNA - GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID

NP - NON-PLASTIC

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: DRR
DRAWN BY: BJS
CHECKED BY: DRR

TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

DATE: 02/2022
PROJECT NO.: 6045662

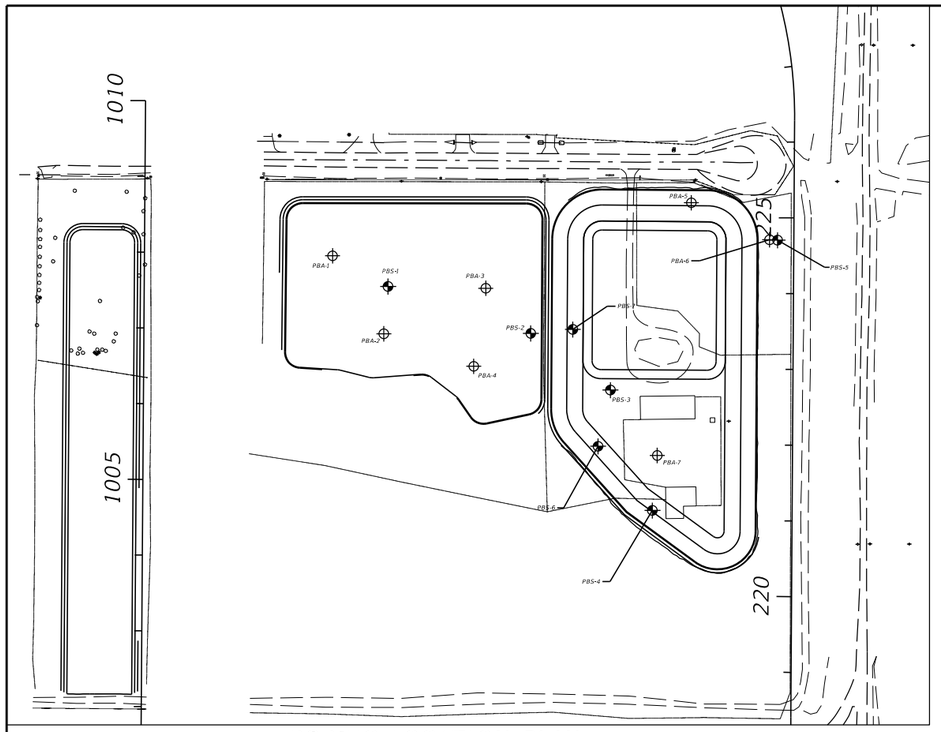
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

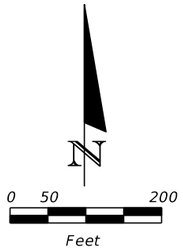
ROADWAY SOIL SURVEY

SHEET NO.: GR-1

2:06:46 PM 2/24/2022 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\geotech\SSUVRD01.dgn



BORING LOCATION PLAN

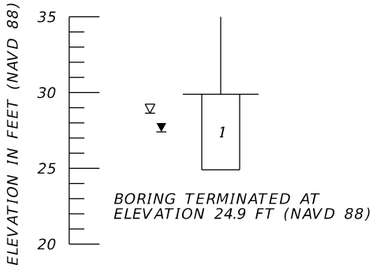


LEGEND

1.	GRAY TO BROWN SAND TO SAND WITH SILT (A-3)
2.	GRAY SILTY SAND (A-2-4)
3.	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND (A-2-4/A-2-6)
4.	PALE BROWN TO GRAY SAND TO SANDY CLAY (A-4/A-6/A-4-5/A-7-6)
5.	GRAY TO GREEN CLAY (A-7-5/A-7-6)
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	APPROXIMATE AUGER BORING LOCATION
	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

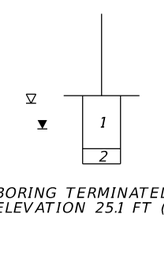
NOTE: THE EASTING COORDINATES, NORTHING COORIDINATES AND ELEVATIONS WERE PROVIDED BY THE PROJECT SURVEYOR.

BOR # PBA-1
EASTING 508063
NORTHING 1137848
ELEV. 29.9
DATE 2/4/2021



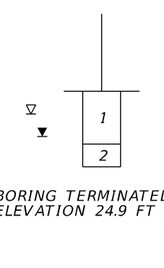
BORING TERMINATED AT ELEVATION 24.9 FT (NAVD 88)

BOR # PBA-2
EASTING 508130
NORTHING 1137746
ELEV. 29.6
DATE 2/4/2021



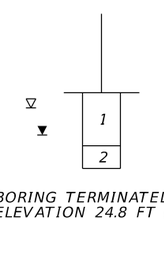
BORING TERMINATED AT ELEVATION 25.1 FT (NAVD 88)

BOR # PBA-3
EASTING 508265
NORTHING 1137806
ELEV. 29.9
DATE 2/4/2021



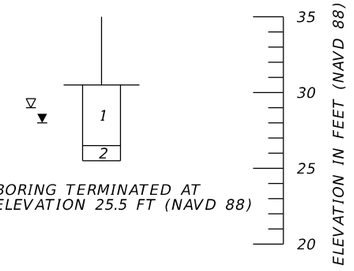
BORING TERMINATED AT ELEVATION 24.9 FT (NAVD 88)

BOR # PBA-4
EASTING 508249
NORTHING 1137703
ELEV. 29.8
DATE 2/4/2021



BORING TERMINATED AT ELEVATION 24.8 FT (NAVD 88)

BOR # PBA-5
EASTING 508536
NORTHING 1137919
ELEV. 30.5
DATE 2/4/2021



BORING TERMINATED AT ELEVATION 25.5 FT (NAVD 88)

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

POND

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: BMG
DRAWN BY: BMG
CHECKED BY: DRR

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

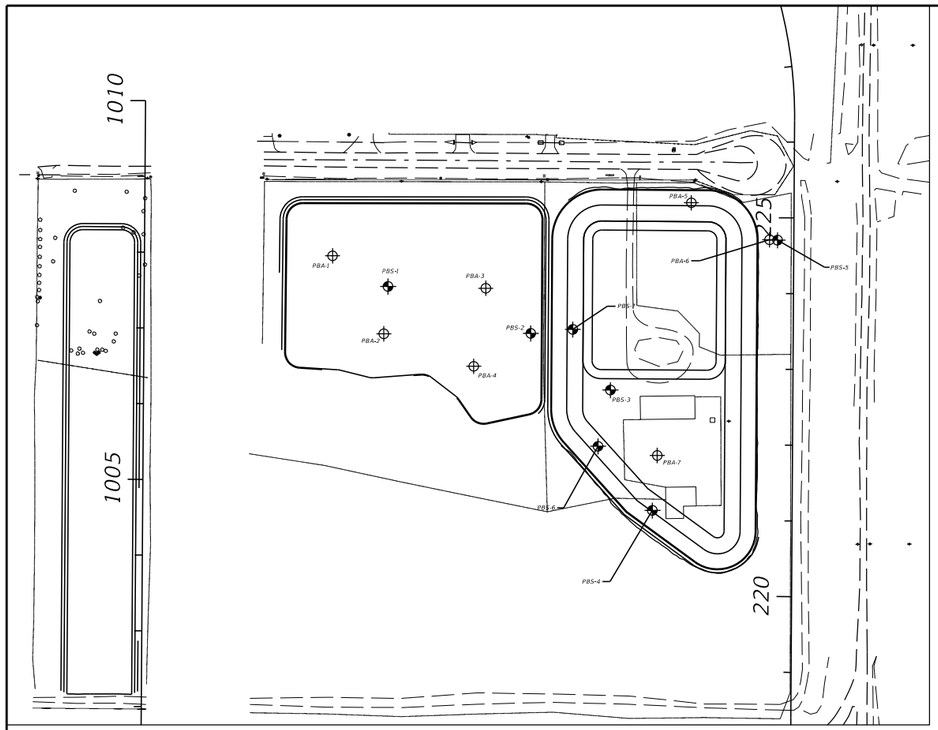
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

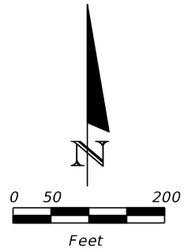
DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

POND SOIL SURVEY (1)

SHEET NO.: GR-2



BORING LOCATION PLAN



LEGEND

1.	GRAY TO BROWN SAND TO SAND WITH SILT (A-3)
2.	GRAY SILTY SAND (A-2-4)
3.	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND (A-2-4/A-2-6)
4.	PALE BROWN TO GRAY SAND TO SANDY CLAY (A-4/A-6/A-4-5/A-7-6)
5.	GRAY TO GREEN CLAY (A-7-5/A-7-6)
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
⊕	APPROXIMATE AUGER BORING LOCATION
▽	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NOTE: THE EASTING COORDINATES, NORTHING COORIDINATES AND ELEVATIONS WERE PROVIDED BY THE PROJECT SURVEYOR.

BOR # PBA-6
EASTING 508640
NORTHING 1137870
ELEV. 30.9
DATE 2/4/2021

BORING TERMINATED AT ELEVATION 25.9 FT (NAVD 88)

BOR # PBA-7
EASTING 508491
NORTHING 1137585
ELEV. 30.5
DATE 2/4/2021

BORING TERMINATED AT ELEVATION 25.5 FT (NAVD 88)

BOR # PBS-1
EASTING 508136
NORTHING 1137808
ELEV. 29.9
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

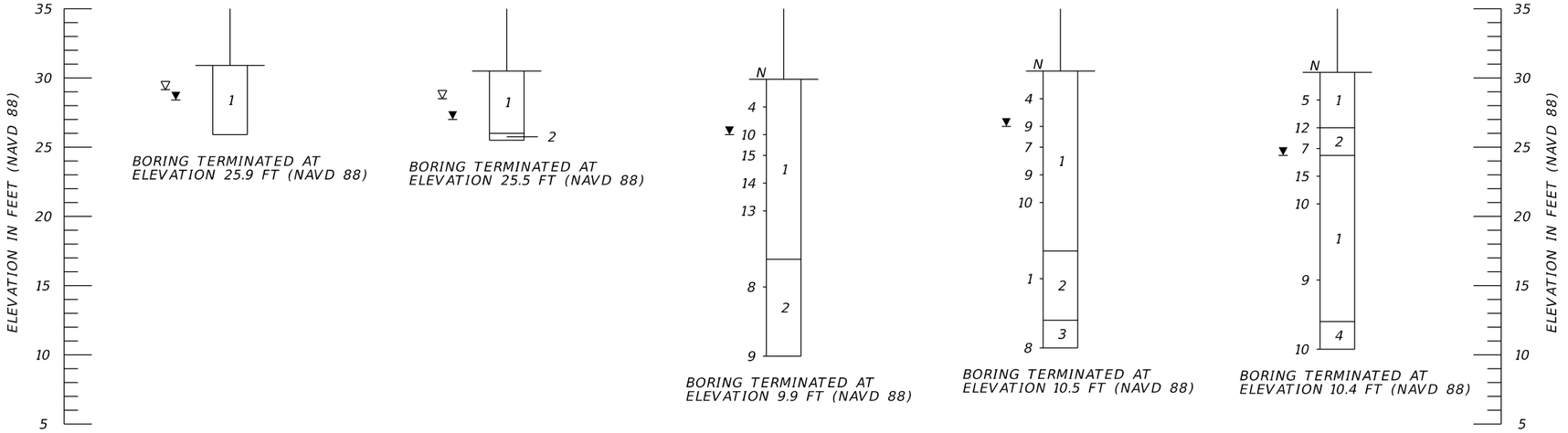
BORING TERMINATED AT ELEVATION 9.9 FT (NAVD 88)

BOR # PBS-2
EASTING 508324
NORTHING 1137746
ELEV. 30.5
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

BORING TERMINATED AT ELEVATION 10.5 FT (NAVD 88)

BOR # PBS-3
EASTING 508430
NORTHING 1137671
ELEV. 30.4
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

BORING TERMINATED AT ELEVATION 10.4 FT (NAVD 88)



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

POND

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: BMG
DRAWN BY: BMG
CHECKED BY: DRR

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

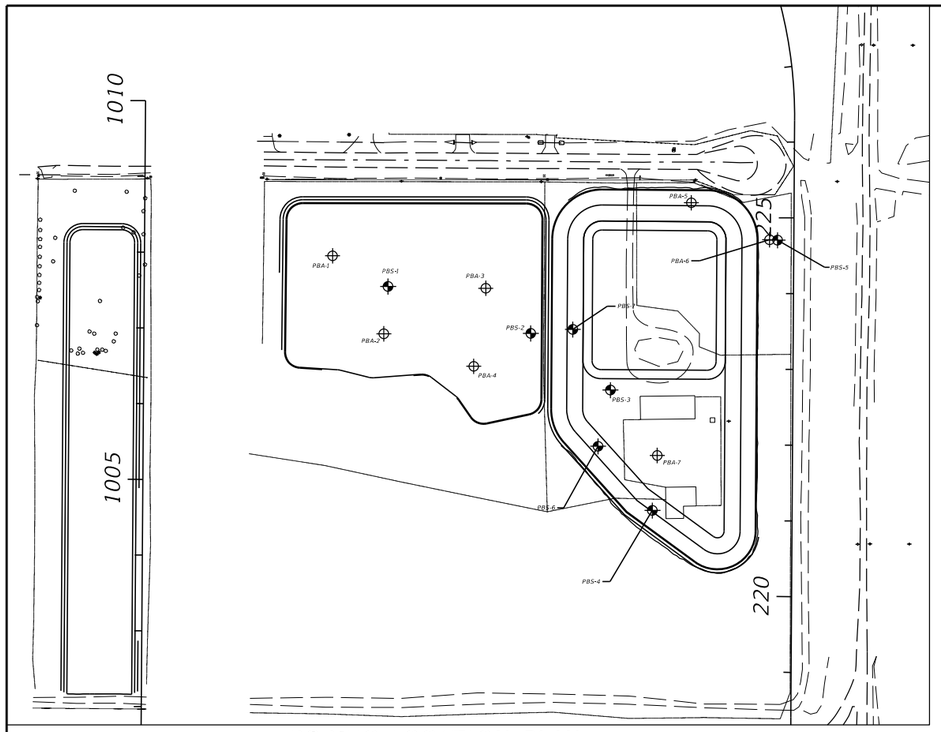
DATE: 02/2022
PROJECT NO.: 6045662

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

POND SOIL SURVEY (2)

SHEET NO.: GR-3



BORING LOCATION PLAN

LEGEND

1.	GRAY TO BROWN SAND TO SAND WITH SILT (A-3)
2.	GRAY SILTY SAND (A-2-4)
3.	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND (A-2-4/A-2-6)
4.	PALE BROWN TO GRAY SAND TO SANDY CLAY (A-4/A-6/A-4-5/A-7-6)
5.	GRAY TO GREEN CLAY (A-7-5/A-7-6)
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
⊕	APPROXIMATE AUGER BORING LOCATION
▽	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NOTE: THE EASTING COORDINATES, NORTHING COORIDINATES AND ELEVATIONS WERE PROVIDED BY THE PROJECT SURVEYOR.

BOR # PBS-4
EASTING 508485
NORTHING 1137512
ELEV. 29.3
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

BORING TERMINATED AT ELEVATION 9.3 FT (NAVD 88)

BOR # PBS-5
EASTING 508650
NORTHING 1137869
ELEV. 30.8
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

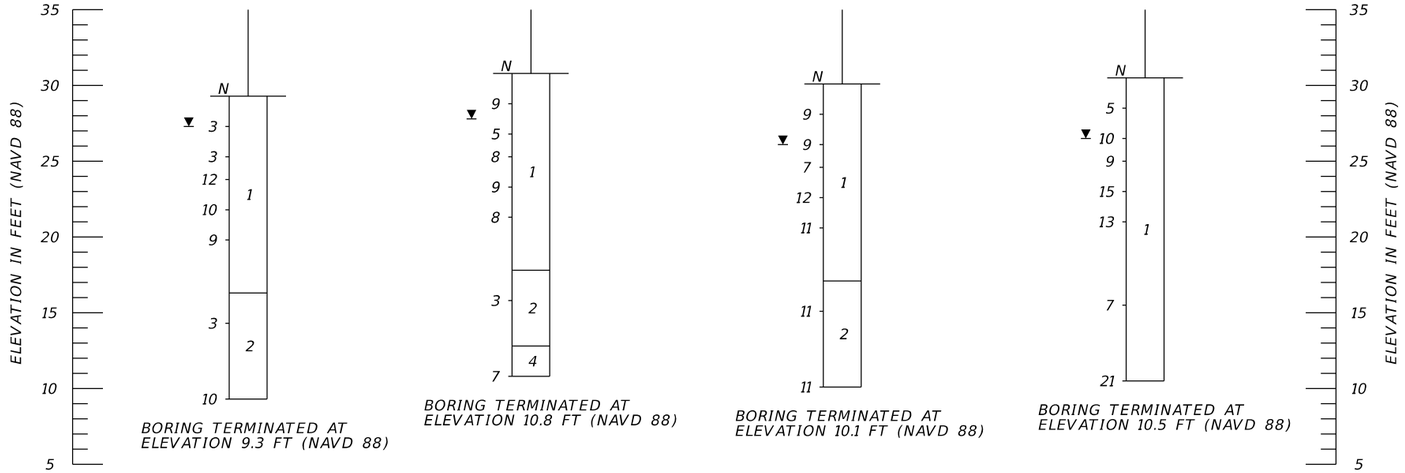
BORING TERMINATED AT ELEVATION 10.8 FT (NAVD 88)

BOR # PBS-6
EASTING 508413
NORTHING 1137597
ELEV. 30.1
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

BORING TERMINATED AT ELEVATION 10.1 FT (NAVD 88)

BOR # PBS-7
EASTING 508380
NORTHING 1137751
ELEV. 30.5
DATE 2/1/2021
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25

BORING TERMINATED AT ELEVATION 10.5 FT (NAVD 88)



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

POND

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: BMG
DRAWN BY: BMG
CHECKED BY: DRR

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DATE: 02/2022
PROJECT NO.: 6045662

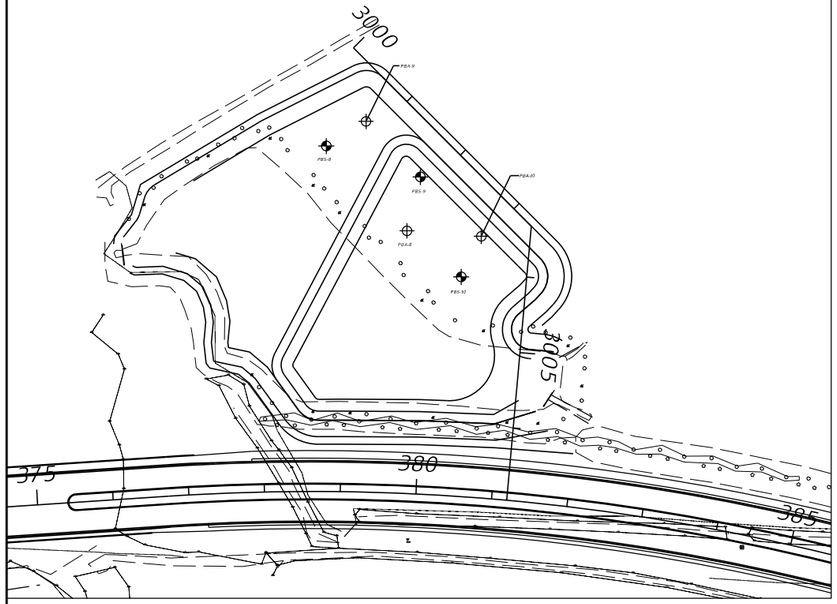
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

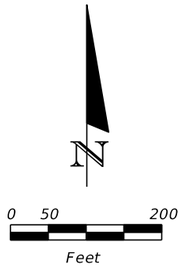
POND SOIL SURVEY (3)

SHEET NO.: GR-4

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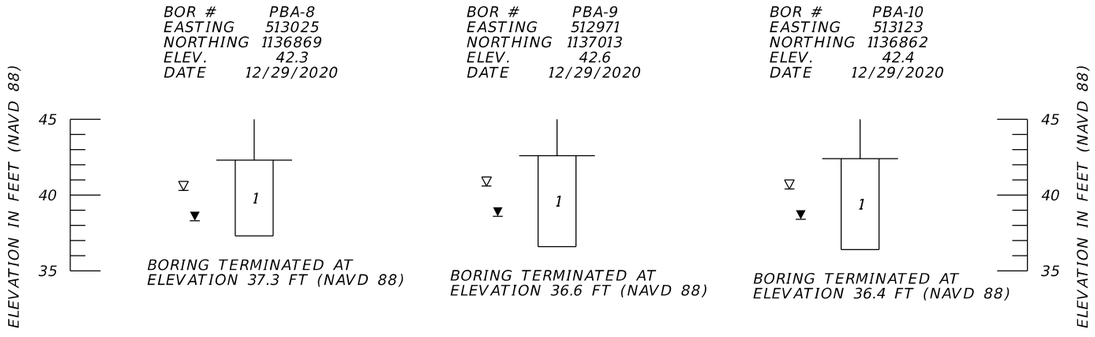
BORING LOCATION PLAN



LEGEND

1.	GRAY TO BROWN SAND TO SAND WITH SILT (A-3)
2.	GRAY SILTY SAND (A-2-4)
3.	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND (A-2-4/A-2-6)
4.	PALE BROWN TO GRAY SAND TO SANDY CLAY (A-4/A-6/A-4-5/A-7-6)
5.	GRAY TO GREEN CLAY (A-7-5/A-7-6)
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
⊕	APPROXIMATE AUGER BORING LOCATION
▽	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

NOTE: THE EASTING COORDINATES, NORTHING COORIDINATES AND ELEVATIONS WERE PROVIDED BY THE PROJECT SURVEYOR.



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

POND

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: BMG
DRAWN BY: BMG
CHECKED BY: DRR

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DATE: 02/2022
PROJECT NO.: 6045662

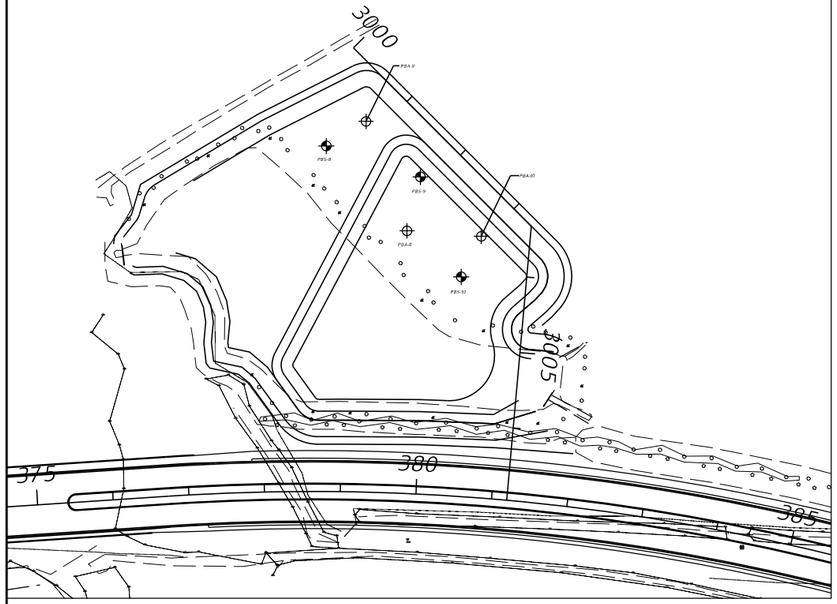
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

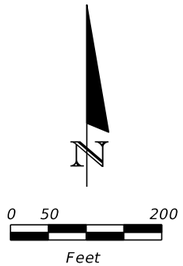
POND SOIL SURVEY (4)

SHEET NO.: GR-5

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BORING LOCATION PLAN

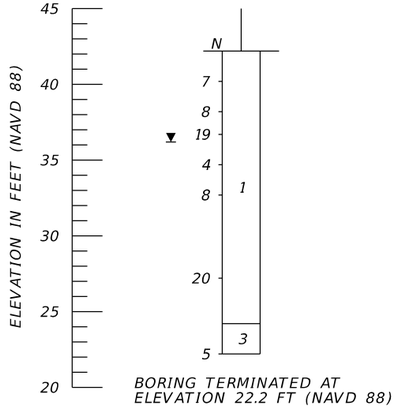


LEGEND

1.	GRAY TO BROWN SAND TO SAND WITH SILT (A-3)
2.	GRAY SILTY SAND (A-2-4)
3.	LIGHT BROWN TO GRAY SILTY-CLAYEY SAND TO CLAYEY SAND (A-2-4/A-2-6)
4.	PALE BROWN TO GRAY SAND TO SANDY CLAY (A-4/A-6/A-4-5/A-7-6)
5.	GRAY TO GREEN CLAY (A-7-5/A-7-6)
A-3	AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
⊕	APPROXIMATE AUGER BORING LOCATION
▽	ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

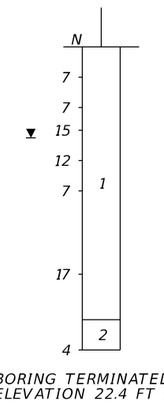
NOTE: THE EASTING COORDINATES, NORTHING COORIDINATES AND ELEVATIONS WERE PROVIDED BY THE PROJECT SURVEYOR.

BOR # PBS-8
EASTING 512918
NORTHING 1136981
ELEV. 42.2
DATE 12/2/2020
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



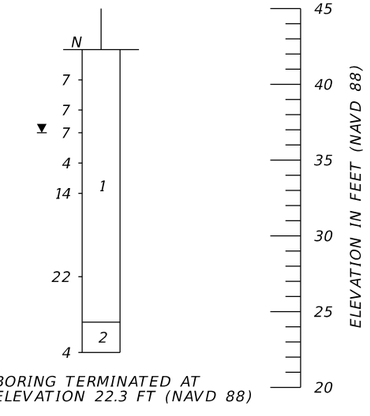
BORING TERMINATED AT ELEVATION 22.2 FT (NAVD 88)

BOR # PBS-9
EASTING 513042
NORTHING 1136940
ELEV. 42.4
DATE 12/2/2020
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION 22.4 FT (NAVD 88)

BOR # PBS-10
EASTING 513096
NORTHING 1136808
ELEV. 42.3
DATE 12/2/2020
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION 22.3 FT (NAVD 88)

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

POND

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: BMG
DRAWN BY: BMG
CHECKED BY: DRR

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DATE: 02/2022
PROJECT NO.: 6045662

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: DANIEL R. RUEL
FL. LICENSE NO.: 82404

POND SOIL SURVEY (5)

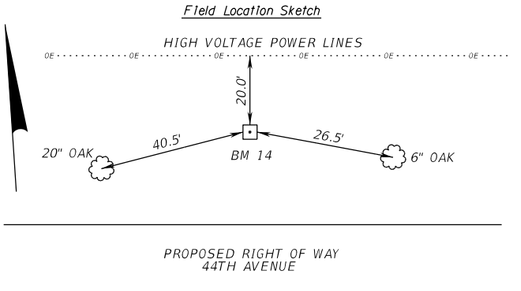
SHEET NO.: GR-6

Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 14 Elevation feet: 29.539'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 8 /15 /2016 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137157 E (X): = 506361
Base Line Station and Offset: @ STA. 312+38 O/S 105.5' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 14"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

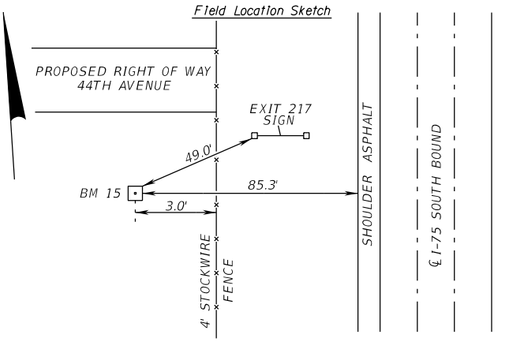


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 15 Elevation feet: 29.538'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 8 /15 /2016 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136947 E (X): = 507100
Base Line Station and Offset: @ STA. 319+78 O/S 111.3' RT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 15"

Distance and Direction from Nearest Intersection: 1.3 MILES NORTH ALONG SR 93 / I-75 FROM THE INTERSECTION PF SR 93 / I-75 AND SR 70

Field Location Sketch

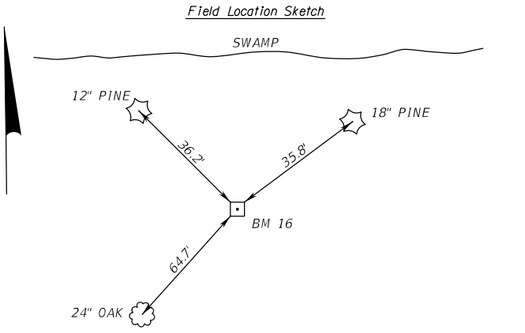


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 16 Elevation feet: 29.045'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 8 /15 /2016 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = E (X): =
Base Line Station and Offset:
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 16"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

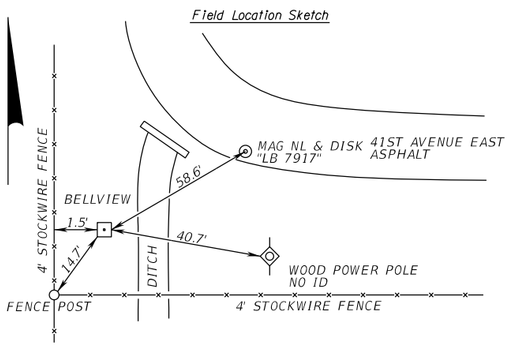


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BELLVIEW Elevation feet: 29.950'
State Road No.: N/A County: MANATEE
Section: 1 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: / / Recovered: 5 / 21 /2015 Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137964 E (X): = 507446
Base Line Station and Offset: OUTSIDE PROJECT LIMITS
Description of Monument: FOUND FLANGE ENCASED ROD WITH ALUMINUM DISK STAMPED "MANATEE COUNTY FLORIDA NAVD 88 2013 BELLVIEW"

Distance and Direction from Nearest Intersection: 0.37 MILES SOUTH ALONG LENA ROAD FROM THE INTERSECTION LENA ROAD AND 34th AVENUE E.

Field Location Sketch

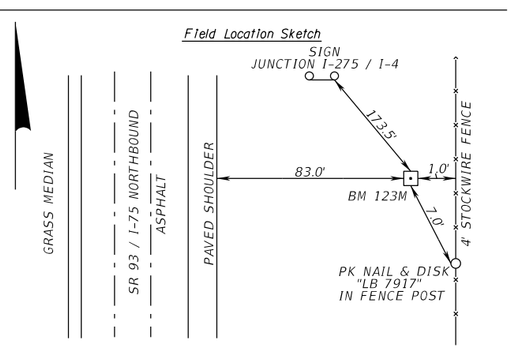


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 123M Elevation feet: 28.223'
State Road No.: N/A County: MANATEE
Section: 1 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: / / Recovered: 5 / 21 / 2015 Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137583 E (X): = 507462
Base Line Station and Offset: @ STA. 323+35 O/S 527.2' LT
Description of Monument: FOUND STANDARD 4"X4" CONCRETE MONUMENT WITH FDOT BRASS DISK STAMPED "BM 123M"

Distance and Direction from Nearest Intersection: 1.5 MILES NORTH ALONG SR 93 / I-75 FROM THE INTERSECTION PF SR 93 / I-75 AND SR 70

Field Location Sketch

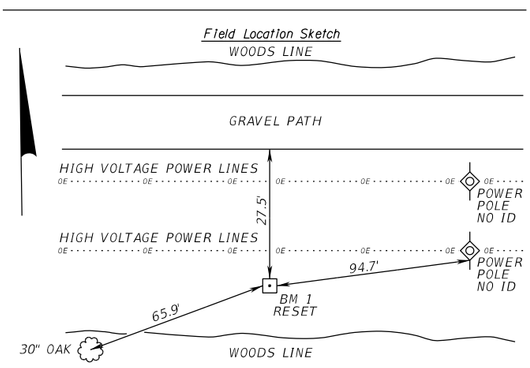


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 1 RESET Elevation feet: 27.695'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 8 /15 /2016 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137165 E (X): = 507856
Base Line Station and Offset: @ STA. 326+96 O/S 145.7' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 1 RESET"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch



No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY
DRAWN BY
CHECKED BY

MCKIM AND CREED
551 NORTH CATTLEMEN ROAD, SUITE 106
SARASOTA, FLORIDA 34232
LICENSED BUSINESS NO. 6566

DATE 08/2021
PROJECT NO. 6045662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

PROFESSIONAL SURVEYOR
MARK HOLT
P. S. M. NO. 6541

PROJECT CONTROL
SHEET (1)

SHEET NO. CTL-1

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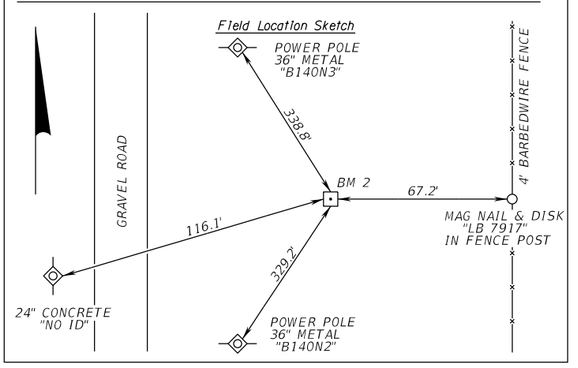
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Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 2 Elevation feet: 30.094'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137131 E (X): = 508858
Base Line Station and Offset: @ STA. 332+53 0/S 729.0' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 2"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

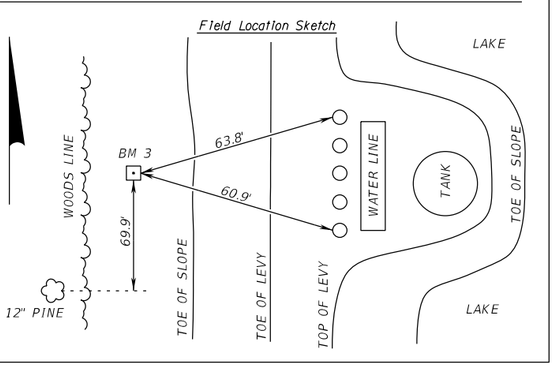


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 3 Elevation feet: 32.371'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1137076 E (X): = 509174
Base Line Station and Offset: @ STA. 334+72 0/S 956.4' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 3"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

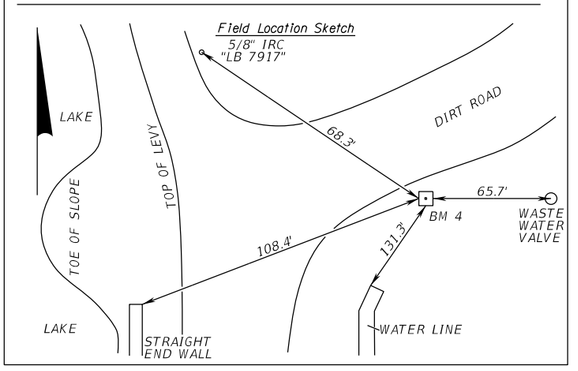


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 4 Elevation feet: 43.151'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136656 E (X): = 511027
Base Line Station and Offset: @ STA. 367+83 0/S 403.1' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 4"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

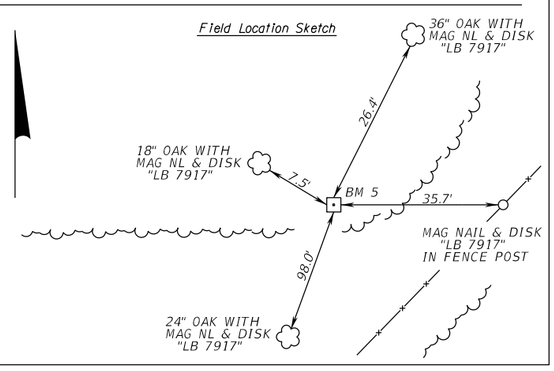


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 5 Elevation feet: 35.957'
State Road No.: N/A County: MANATEE
Section: 7 Township: 35 S Range: 19 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136540 E (X): = 511810
Base Line Station and Offset: @ STA. 374+33 0/S 90.4' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 5"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

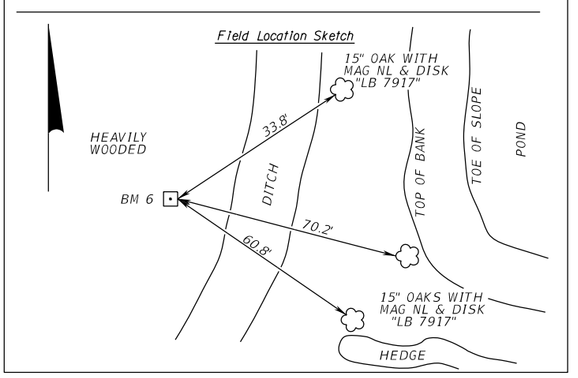


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 6 Elevation feet: 40.001'
State Road No.: N/A County: MANATEE
Section: 7 Township: 35 S Range: 19 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136631 E (X): = 512777
Base Line Station and Offset: @ STA. 384+10 0/S 109.1' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 6"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

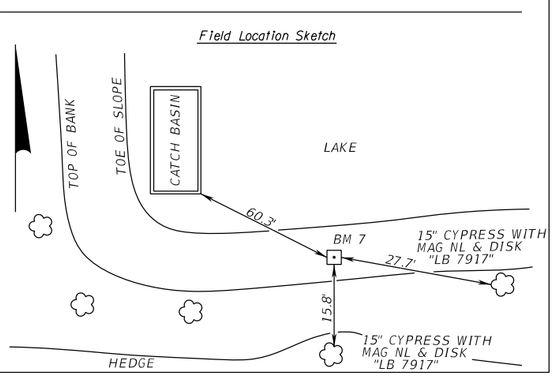


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 ___
NAVD 1988 X

Monument Name or Designation: BM 7 Elevation feet: 41.515'
State Road No.: N/A County: MANATEE
Section: 7 Township: 35 S Range: 19 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5/21/2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136496 E (X): = 513787
Base Line Station and Offset: @ STA. 393+97 0/S 107.5' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 7"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch



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No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY:
DRAWN BY:
CHECKED BY:

MCKIM AND CREED
551 NORTH CATTLEMEN ROAD, SUITE 106
SARASOTA, FLORIDA 34232
LICENSED BUSINESS NO. 6566

DATE: 08/2021
PROJECT NO. 6045662

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

PROFESSIONAL SURVEYOR
MARK HOLT
P. S. M. NO. 6541

PROJECT CONTROL
SHEET (2)

SHEET NO.
CTL-2

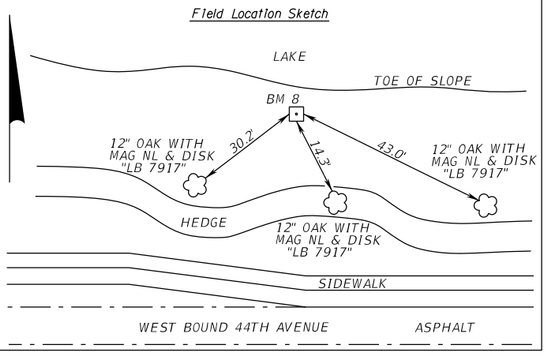
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Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BM 8 Elevation feet: 43.637'
State Road No.: N/A County: MANATEE
Section: 7 Township: 35 S Range: 19 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: 5 / 21 / 2015 Recovered: / / Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1136252 E (X): = 514765
Base Line Station and Offset: @ STA. 404+34 O/S 108.4' LT
Description of Monument: SET STANDARD 4"X4" CONCRETE MONUMENT WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 8"

Distance and Direction from Nearest Intersection: 0.21 MILES WEST ALONG 44th AVENUE FROM THE INTERSECTION 44th AVENUE AND LAKEWOOD RANCH BOULEVARD

Field Location Sketch

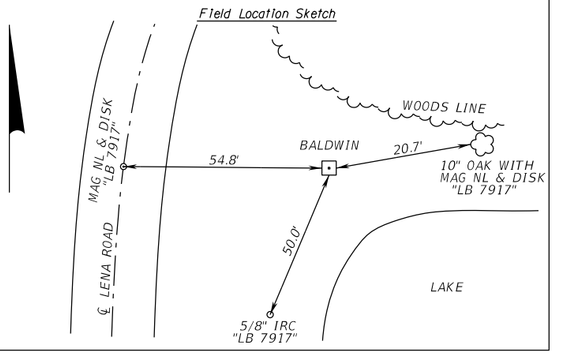


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 __
NAVD 1988 X

Monument Name or Designation: BALDWIN Elevation feet: 32.680'
State Road No.: N/A County: MANATEE
Section: 12 Township: 35 S Range: 18 E Roadway Section I.D.: N/A
Establishing Firm: MCKIM & CREED Financial Project ID: N/A
Established: / / Recovered: 5 /21 / 2015 Field Book No.: N/A
State Plane Coordinates:
(Nearest Foot) N (Y): = 1134777 E (X): = 508228
Base Line Station and Offset: OUTSIDE PROJECT LIMITS
Description of Monument: FOUND FLANGE ENCASED ROD WITH ALUMINUM DISK STAMPED "MANATEE COUNTY FLORIDA NAVD 88 2013 BALDWIN"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY:
DRAWN BY:
CHECKED BY:

MCKIM AND CREED
551 NORTH CATTLEMEN ROAD, SUITE 106
SARASOTA, FLORIDA 34232
LICENSED BUSINESS NO. 6566

DATE: 08/2021
PROJECT NO. 60345662

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

PROFESSIONAL SURVEYOR: MARK HOLT
P. S. M. NO. 6541

PROJECT CONTROL SHEET (3)

SHEET NO. CTL-3

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