

CONTRACT PLANS COMPONENTS

SIGNING AND PAVEMENT MARKING
 SIGNALIZATION
 LIGHTING

**MANATEE COUNTY
 PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

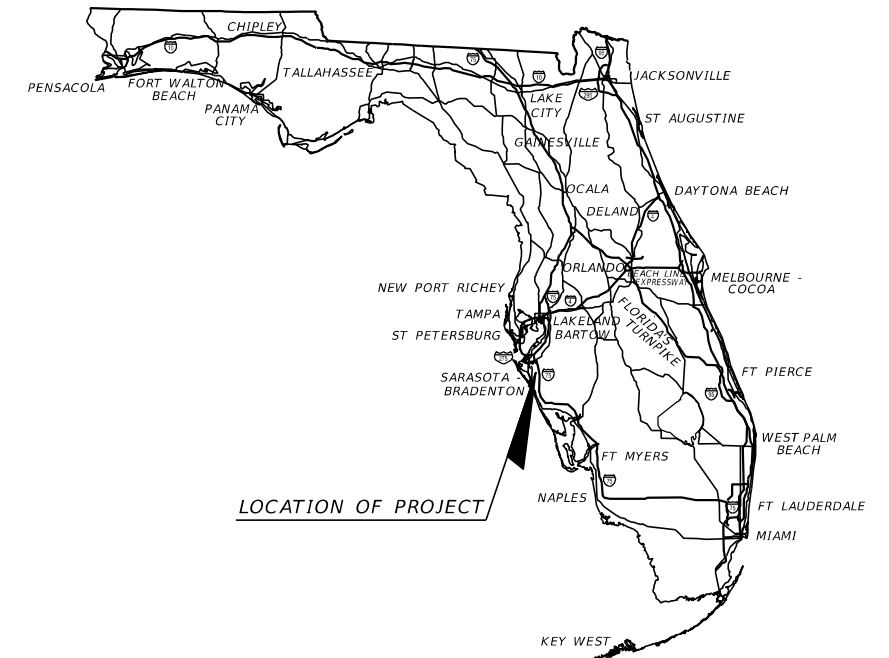
**MANATEE COUNTY
 PROJECT NUMBER 6045662
 44TH AVENUE EAST
 PHASE I
 FROM 44TH AVENUE PLAZA EAST TO I-75**

INDEX OF ROADWAY PLANS

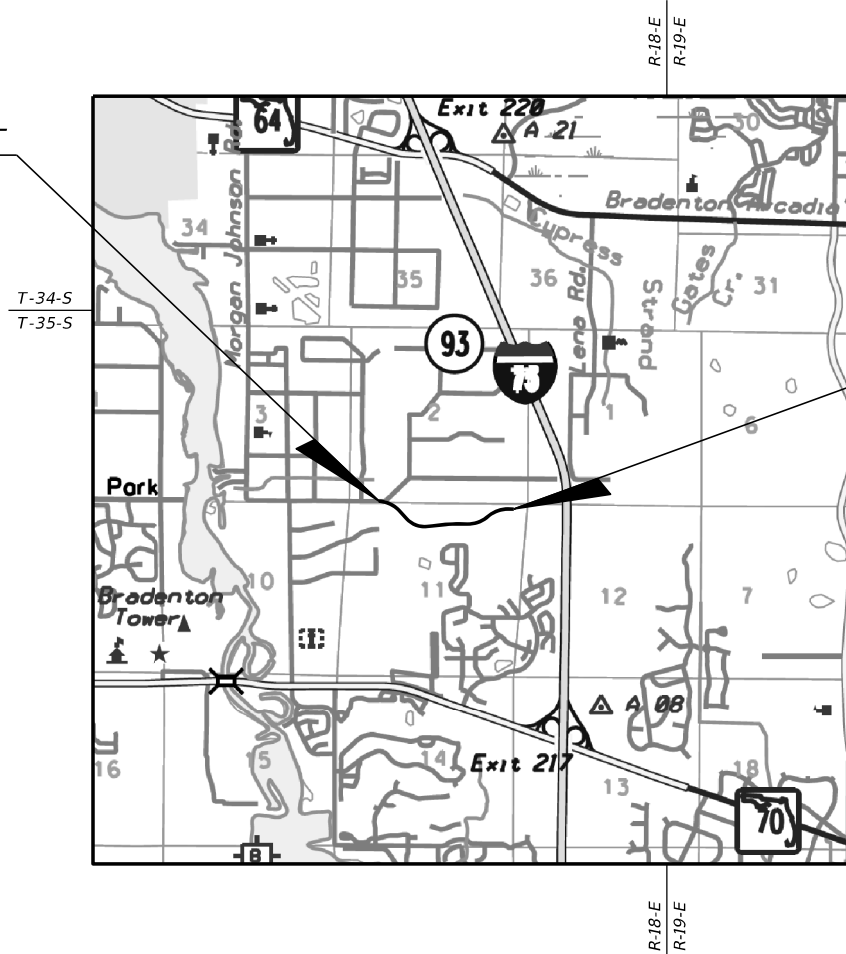
| SHEET NO. | SHEET DESCRIPTION |
|-----------|-----------------------------------|
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| 2 | SIGNATURE SHEET |
| 3 | SUMMARY OF PAY ITEMS |
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| 7 | EXISTING DRAINAGE STRUCTURES |
| 8 - 11 | TYPICAL SECTIONS |
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FOR INFORMATION ONLY

DET-1 - DET-2 ROADWAY DETAILS



BEGIN PROJECT
 STA. 260+00.00



END PROJECT
 STA. 308+97.33

**100% SUBMITTAL
 09/2019**

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2019-20 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>

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

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2019 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

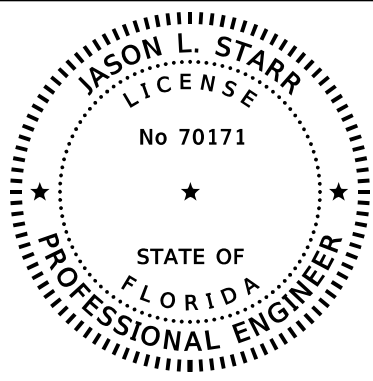
**ROADWAY PLANS
 ENGINEER OF RECORD:**

JASON L. STARR, P.E.
 P.E. NO.: 70171
 HDR ENGINEERING, INC.
 2601 CATTLEMEN ROAD, SUITE 400
 SARASOTA, FLORIDA 34232
 FBPR CERTIFICATE OF AUTHORIZATION NO. 4213
 VENDOR NO. 47-0680568
 CONTRACT NO. C9480

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

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 19 | 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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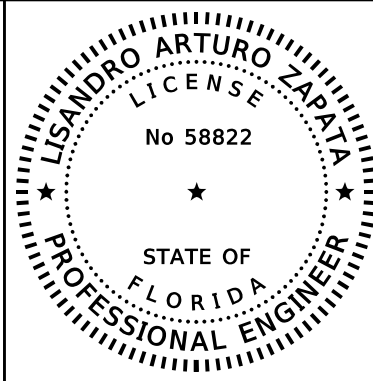
ON THE DATE ADJACENT TO THE SEAL

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
CERTIFICATE OF AUTHORIZATION NO. 4213
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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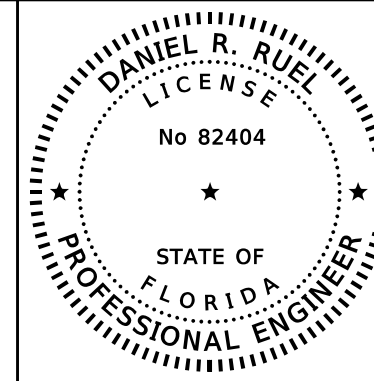
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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
CERTIFICATE OF AUTHORIZATION NO. 4213
LISANDRO ARTURO ZAPATA, PE NO. 58822

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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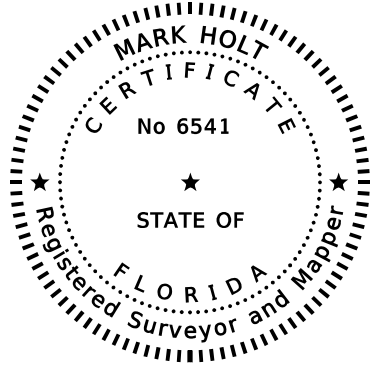
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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486
DANIEL R. RUEL, PE NO. 82404

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 | POND SOIL SURVEY |
| GR-2 | ROADWAY SOIL SURVEY |



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ON THE DATE ADJACENT TO THE SEAL

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MCKIM & CREED
3903 NORTHDAL BOULEVARD, SUITE 115E
TAMPA, FLORIDA 33624
CERTIFICATE OF AUTHORIZATION LB 7917
MARK HOLT, P.S.M NO. 6541

THE ABOVE NAMED PROFESSIONAL SURVEYOR & MAPPER SHALL BE RESPONSIBLE FOR THE FOLOWING SHEETS IN ACCORDANCE WITH RULE 5J-17.062, F.A.C.

| SHEET NO. | SHEET DESCRIPTION |
|-----------|-----------------------|
| 2 | SIGNATURE SHEET |
| CTL-1 | PROJECT CONTROL SHEET |


| | | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|------------------------------------|-----------------|----------------|------------------------|-----------|---|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | JASON L. STARR | SIGNATURE SHEET | SHEET NO. | 2 |
| | | | | DESIGNED BY | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 70171 | | | |
| | | | | DRAWN BY | JHC | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |

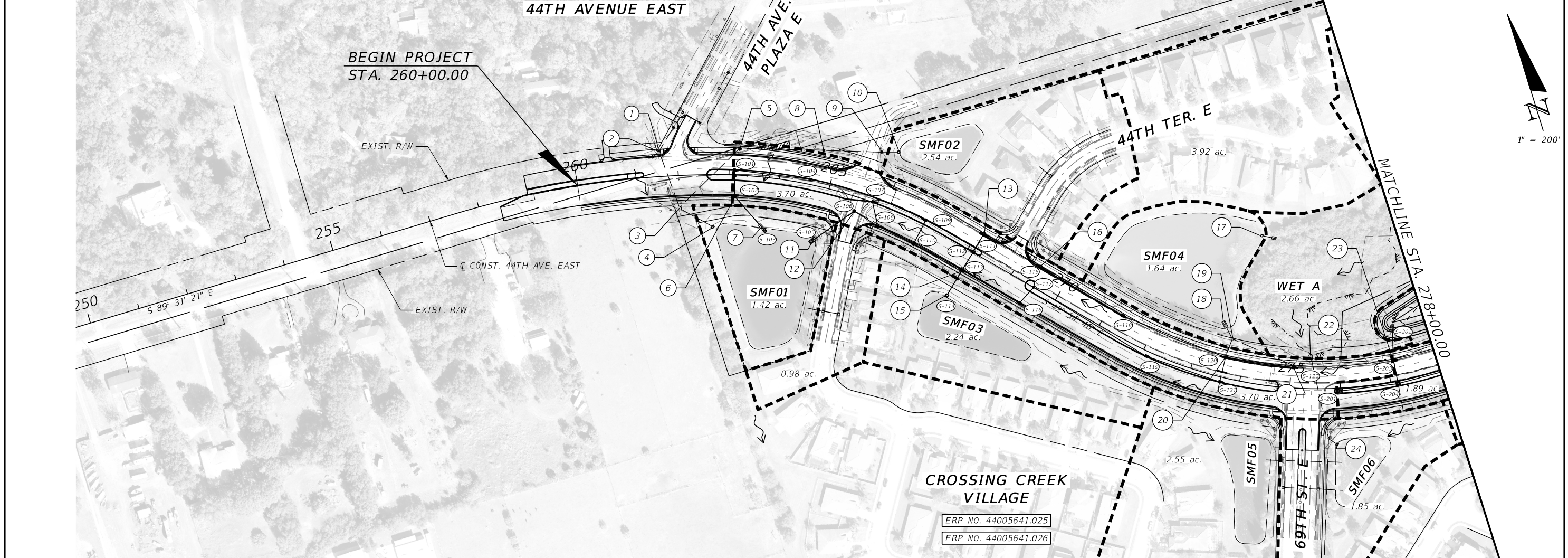
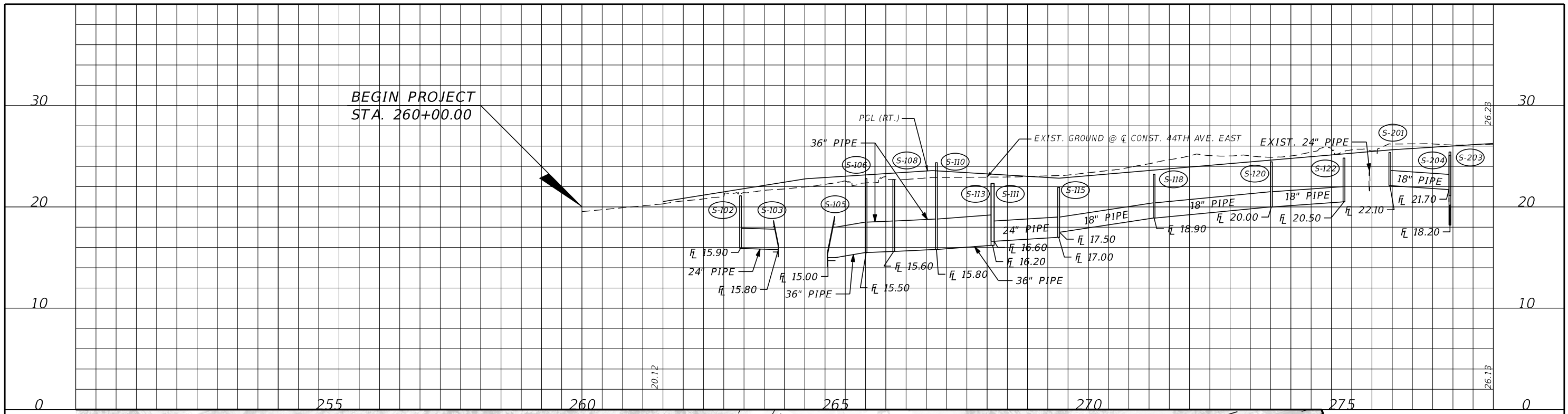
| ROADWAY PLANS | | | |
|---------------|--|------|----------|
| ITEM NO. | ITEM | UNIT | QUANTITY |
| 101-1 | MOBILIZATION | LS | 1 |
| 102-1 | MAINTENANCE OF TRAFFIC | LS | 1 |
| 104-10-3 | SEDIMENT BARRIER | LF | 8,219 |
| 104-11 | FLOATING TURBIDITY BARRIER | LF | 438 |
| 104-12 | STAKED TURBIDITY BARRIER- NYLON REINFORCED PVC | LF | 156 |
| 104-15 | SOIL TRACKING PREVENTION DEVICE | EA | 2 |
| 104-18 | INLET PROTECTION SYSTEM | EA | 48 |
| 107-1 | LITTER REMOVAL | AC | 5.28 |
| 107-2 | MOWING | AC | 5.28 |
| 110-1-1 | CLEARING AND GRUBBING | AC | 11.12 |
| 120-1 | REGULAR EXCAVATION | CY | 16,689 |
| 120-6 | EMBANKMENT | CY | 3,749 |
| 160-4 | TYPE B STABILIZATION | SY | 23,825 |
| 285-709 | OPTIONAL BASE (BASE GROUP 09) | SY | 21,028 |
| 327-70-6 | MILLING EXIST. ASPH. PAVT., 1 1/2" AVG. DEPTH | SY | 11,740 |
| 334-1-13 | SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C | TN | 3,470 |
| 337-7-83 | ASPHALT FRICTION COURSE, TRAFFIC C, FC-12.5, PG 76-22 | TN | 3,023 |
| 400-0-11 | CONCRETE CLASS NS, GRAVITY WALL | CY | 75 |
| 400-2-2 | CONCRETE CLASS II, ENDWALLS | CY | 0.33 |
| 425-1-351 | INLETS, CURB, TYPE P-5, < 10' | EA | 23 |
| 425-1-355 | INLETS, CURB, TYPE P-5, PARTIAL | EA | 2 |
| 425-1-361 | INLETS, CURB, TYPE P-6, < 10' | EA | 2 |
| 425-1-365 | INLETS, CURB, TYPE P-6, PARTIAL | EA | 4 |
| 425-1-451 | INLETS, CURB, TYPE J-5, < 10' | EA | 4 |
| 425-1-461 | INLETS, CURB, TYPE J-6, < 10' | EA | 3 |
| 425-1-529 | INLETS, DT BOT, TYPE C, MODIFY | EA | 1 |
| 425-1-541 | INLETS, DT BOT, TYPE D, <10' | EA | 2 |
| 425-1-549 | INLETS, DT BOT, TYPE D, MODIFY | EA | 2 |
| 425-2-61 | MANHOLES, P-8, < 10' | EA | 3 |
| 425-2-63 | MANHOLES, P-8, PARTIAL | EA | 1 |
| 425-2-91 | MANHOLES, J-8, < 10' | EA | 2 |
| 430-175-115 | PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 15" S/CD | LF | 141 |
| 430-175-118 | PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18" S/CD | LF | 2,722 |
| 430-175-124 | PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24" S/CD | LF | 593 |
| 430-175-130 | PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 30" S/CD | LF | 99 |
| 430-175-136 | PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 36" S/CD | LF | 359 |
| 430-175-218 | PIPE CULVERT, OPTIONAL MATERIAL, OTHER SHAPE-ELIP/ARCH, 18" S/CD | LF | 8 |
| 430-175-224 | PIPE CULVERT, OPTIONAL MATERIAL, OTHER SHAPE-ELIP/ARCH, 24" S/CD | LF | 4 |
| 430-982-123 | MITERED END SECTION, OPTIONAL ROUND, 15" CD | EA | 1 |
| 430-982-125 | MITERED END SECTION, OPTIONAL ROUND, 18" CD | EA | 1 |
| 430-982-129 | MITERED END SECTION, OPTIONAL ROUND, 24" CD | EA | 2 |
| 430-982-138 | MITERED END SECTION, OPTIONAL ROUND, 30" CD | EA | 1 |
| 430-982-133 | MITERED END SECTION, OPTIONAL ROUND, 36" CD | EA | 1 |
| 515-1-1 | PIPE HANDRAIL - GUIDERAIL, STEEL | LF | 550 |
| 520-1-10 | CONCRETE CURB & GUTTER, TYPE F | LF | 4,753 |
| 520-2-2 | CONCRETE CURB & GUTTER, TYPE AB | LF | 8,707 |
| 522-1 | CONCRETE SIDEWALK & DRIVEWAYS, 4" THICK | SY | 4,531 |
| 522-2 | CONCRETE SIDEWALK & DRIVEWAYS, 6" THICK | SY | 170 |
| 527-2 | DETECTABLE WARNINGS | SF | 379 |
| 570-1-2 | PERFORMANCE TURF (SOD) | SY | 18,705 |
| 710-11-101 | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6" | GM | 3,114 |
| 710-11-125 | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR STOP LINE, 24" | LF | 183 |
| 710-11-201 | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6" | GM | 2,947 |

| LIGHTING PLANS | | | |
|----------------|---|------|----------|
| ITEM NO. | ITEM | UNIT | QUANTITY |
| 630-2-11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 8,295 |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 1,765 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE | EA | 57 |
| 715-1-12 | LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6 | LF | 34,727 |
| 715-1-13 | LIGHTING CONDUCTORS, F&I, INSULATED, NO. 4 - 2 | LF | 500 |
| 715-4-13 | LIGHT POLE COMPLETE, F&I STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT | EA | 22 |
| 715-4-23 | LIGHT POLE COMPLETE, F&I STANDARD POLE SPECIAL FOUNDATION, 40' MOUNTING HEIGHT | EA | 31 |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | 1 |
| 715-11-111 | LUMINAIRE, F&I, ROADWAY, COBRAHEAD | EA | 2 |
| 715-500-1 | POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL | EA | 53 |

| SIGNALIZATION PLANS | | | |
|---------------------|---|------|----------|
| ITEM NO. | ITEM | UNIT | QUANTITY |
| 630-2-11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 3,316 |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 779 |
| 630-2-14 | CONDUIT, FURNISH & INSTALL, ABOVE GROUND | LF | 30 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL | PI | 1 |
| 633-1-121 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS | LF | 220 |
| 633-1-122 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS | LF | 3,994 |
| 633-2-31 | FIBER OPTIC CONNECTION, INSTALL, SPLICE | EA | 8 |
| 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 | 2 |
| 633-3-15 | FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL | EA | 2 |
| 633-8-1 | MULTICONDUCTOR COMMUNICATION CABLE, F&I | LF | 460 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE | EA | 15 |
| 635-2-12 | PULL & SPLICE BOX, F&I, 24" x 36" COVER SIZE | EA | 3 |
| 635-2-13 | PULL & SPLICE BOX, F&I, 30" x 60" RECTANGULAR OR 36" ROUND COVER SIZE | EA | 2 |
| 639-1-122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR | AS | 1 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, FURNISH & INSTALL | LF | 807 |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT | EA | 1 |
| 639-4-6 | EMERGENCY GENERATOR- PORTABLE, INSTALL HOUSING ONLY | EA | 1 |
| 641-2-12 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE | EA | 1 |
| 641-2-13 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-III | EA | 1 |
| 646-1-11 | ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL | EA | 6 |
| 649-21-6 | STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50' | EA | 3 |
| 650-1-14 | TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY | AS | 6 |
| 650-1-16 | TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY | AS | 2 |
| 653-1-11 | PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY | AS | 6 |
| 660-3-11 | VEHICLE DETECTION SYSTEM- MICROWAVE, F&I CABINET EQUIPMENT | EA | 2 |
| 660-3-12 | VEHICLE DETECTION SYSTEM- MICROWAVE, F&I, ABOVE GROUND EQUIPMENT | EA | 4 |
| 660-6-121 | VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT | EA | 1 |
| 660-6-122 | VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT | EA | 1 |
| 663-1-111 | SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, CABINET ELECTRONICS | EA | 1 |
| 663-1-112 | SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR | EA | 3 |
| 665-1-11 | PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD | EA | 6 |
| 670-5-112 | TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION | AS | 1 |
| 676-2-122 | ITS CABINET, FURNISH & INSTALL, POLE MOUNT W/ SUNSHIELD, 336S, 24"Wx46"Hx22"D | EA | 1 |
| 682-1-113 | ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION | EA | 1 |
| 684-1-11 | MANAGED FIELD ETHERNET SWITCH, F&I | EA | 2 |
| 684-6-11 | WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL, ETHERNET ACCESS POINT | EA | 1 |
| 684-6-12 | WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL, ETHERNET SUBSCRIBER UNIT | EA | 1 |
| 685-1-11 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE | EA | 1 |
| 685-1-12 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION | EA | 1 |
| 700-3-201 | SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF | EA | 2 |
| 700-5-22 | INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF | EA | 3 |

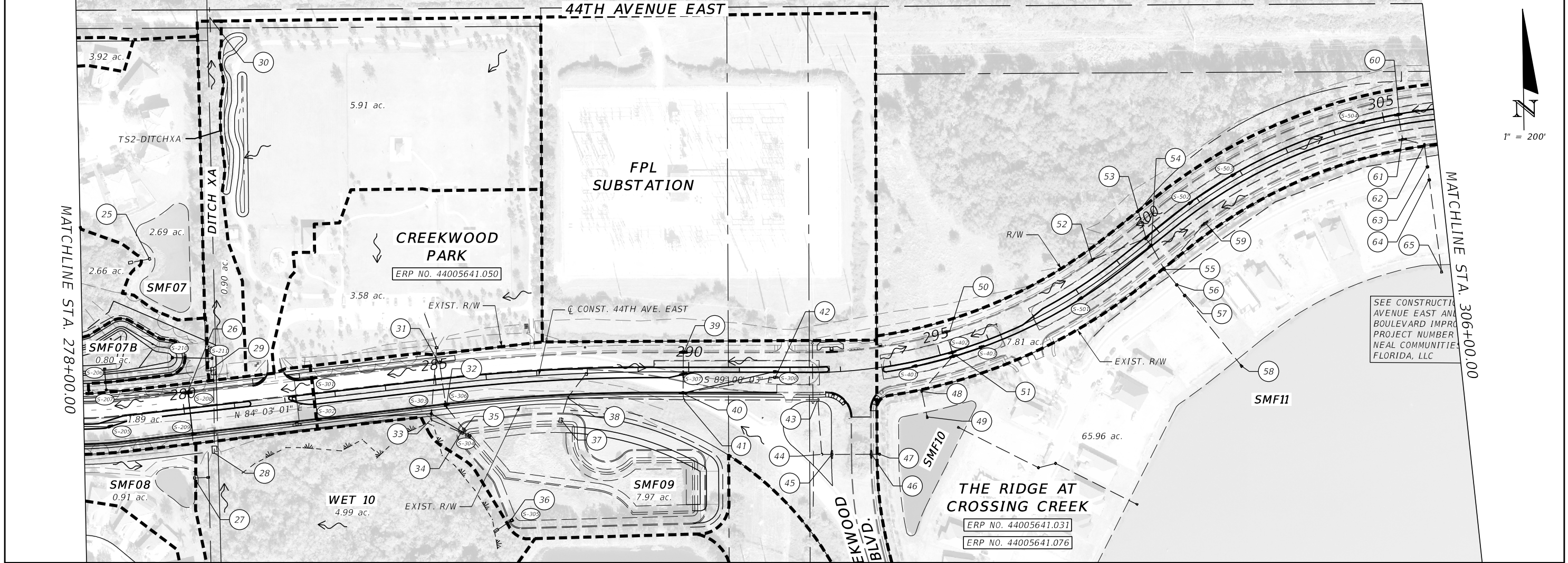
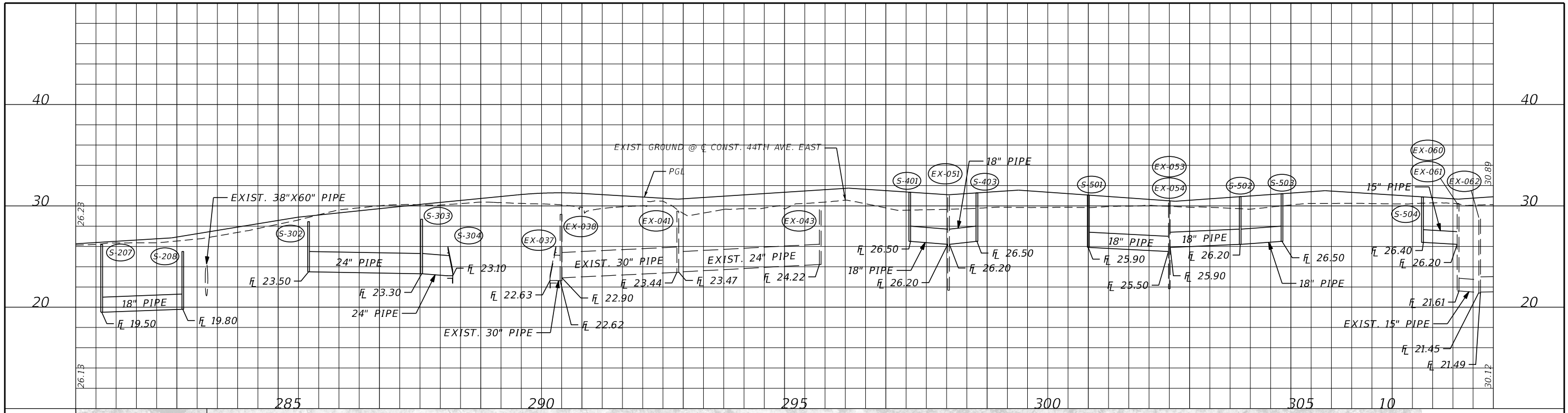
| SIGNING AND PAVEMENT MARKING PLANS | | | |
|------------------------------------|---|------|----------|
| ITEM NO. | ITEM | UNIT | QUANTITY |
| 654-2-21 | RRFB, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION | AS | 2 |
| 654-2-22 | RRFB, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- BACK TO BACK | AS | 1 |
| 700-1-11 | SINGLE POST SIGN, F&I, GROUND MOUNT, UP TO 12 SF | AS | 36 |
| 700-1-12 | SINGLE POST SIGN, F&I, GROUND MOUNT, 12-20 SF | AS | 9 |
| 700-1-13 | SINGLE POST SIGN, F&I, GROUND MOUNT, 21-30 SF | AS | 5 |
| 700-1-50 | SINGLE POST SIGN, RELOCATE | AS | 3 |
| 700-1-74 | SINGLE POST SIGN, F&I CUSTOM, 31+ SF | AS | 1 |
| 700-2-14 | MULTI - POST SIGN, F&I GROUND MOUNT, 31-50 SF | AS | 2 |
| 700-3-601 | SIGN PANEL, REMOVE, UP TO 12 SF | EA | 3 |
| 705-10-1 | OBJECT MARKER, TYPE 1 | EA | 14 |
| 705-11-1 | DELINEATOR, FLEXIBLE TUBULAR, YELLOW - YELLOW | EA | 8 |
| 710-11-290 | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE | SF | 124 |
| 710-90 | PAINTED PAVEMENT MARKINGS, FINAL SURFACE | LS | 1 |
| 711-11-123 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT | LF | 1,448 |
| 711-11-125 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE | LF | 290 |
| 711-11-141 | THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6" | GM | 0.545 |
| 711-11-170 | THERMOPLASTIC, STANDARD, WHITE, ARROW | EA | 25 |
| 711-11-224 | THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON | LF | 256 |
| 711-11-241 | THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDELINE/6-10 DOTTED EXTENSION, 6" | GM | 0.186 |
| 711-14-125 | THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK | LF | 526 |
| 711-14-160 | THERMOPLASTIC, PREFORMED, WHITE, BIKE MESSAGE | EA | 8 |
| 711-14-170 | THERMOPLASTIC, PREFORMED, WHITE, BIKE ARROW | EA | 8 |
| 711-16-101 | THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6" | GM | 3.284 |
| 711-16-131 | THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6",10-30 SKIP OR 3-9 LANE DROP | GM | 1.706 |
| 711-16-201 | THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6" | GM | 1.852 |

| | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|---|--|--------------------------------|--|-------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 3 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | SUMMARY OF PAY ITEMS | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | |  | | | | |
| No. | REVISIONS | DATE | BY | | | | | |



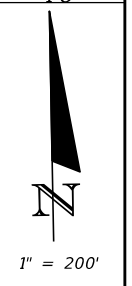
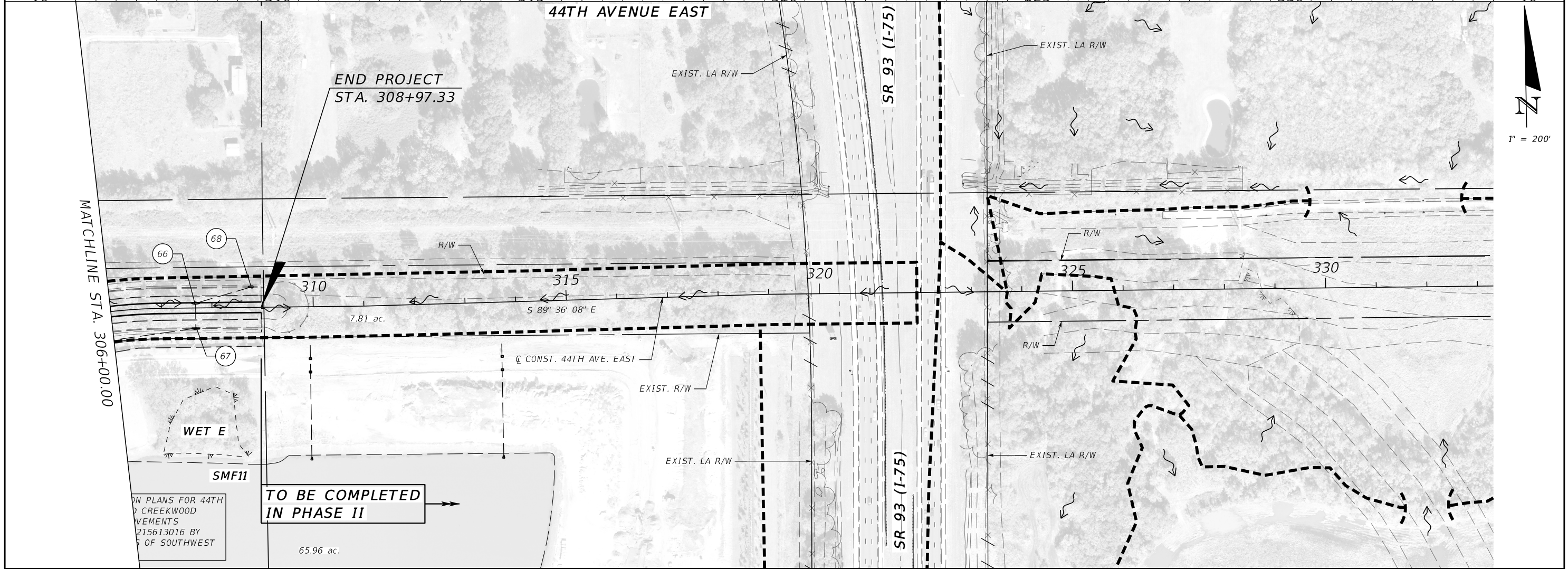
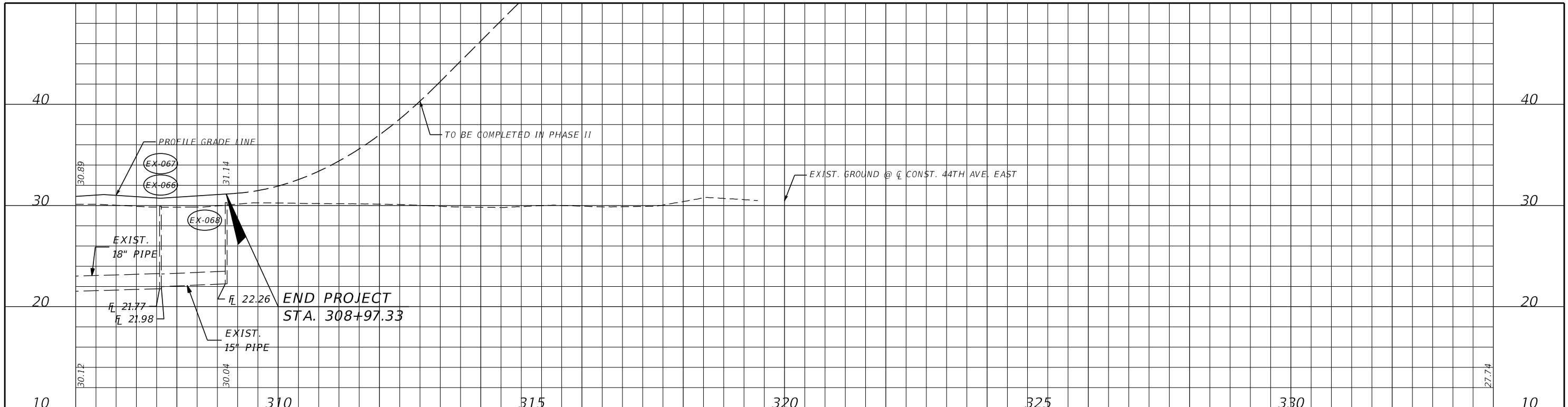
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|-----------------|-----------|-----------------------------------|----|---------------------|--|------------------------------------|--|-------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 4 |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | 4 |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| No. | REVISIONS | DATE | BY | | | | | |

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



| | | | | | | | | |
|---|--|---|--|-------------------------------------|--|--|--|----------------|
| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | SHEET NO. 5 |
| No. REVISIONS DATE BY | | | | | | MANATEE COUNTY PUBLIC WORKS SEE CONSTRUCTION AVENUE EAST AND BOULEVARD IMPROVEMENT PROJECT NUMBER NEAL COMMUNITIES FLORIDA, LLC | | |

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




| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|---|-------------|---------|------------------------------------|-----------------|--------------------|-------------------------|-----------|---|
| No. | REVISIONS | | | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | DRAINAGE MAP (3) | SHEET NO. | 6 |
| | | | | DESIGNED BY | LAZ | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | | |
| | | | | DRAWN BY | GAC | | | | | | | | | |
| | | | | CHECKED BY | LAZ | | | | | | | | | |

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

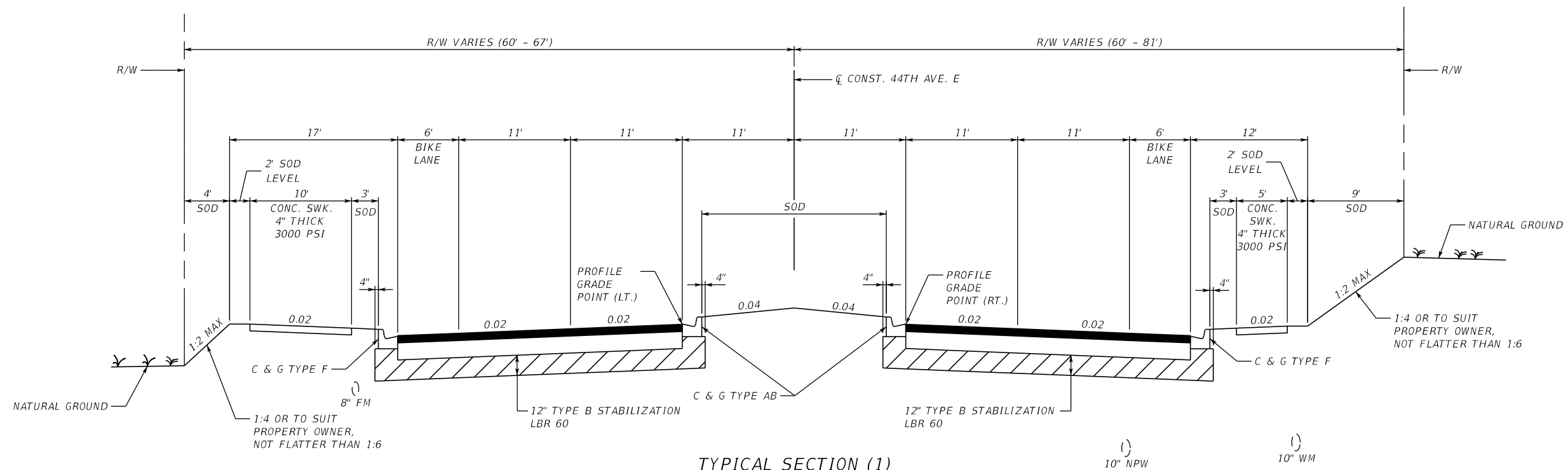
1. 30"X19" RCP PROJECTING
INVERT EL = 16.35
2. MANHOLE
RIM EL = 20.04
INVERT EL = 16.80 (N)
30"X19" RCP
INVERT EL = 16.37 (S)
30"X19" RCP
3. MANHOLE
RIM EL = 20.24
INVERT EL = 16.39 (NE)
30"X19" RCP
INVERT EL = 16.54 (SE)
24" RCP
INVERT EL = 16.47 (NW)
30"X19" RCP
4. TYPE D CONTROL STRUCTURE
GRATE EL = 20.21
WEIR EL = 18.44 (*1)
INVERT EL = 16.60 (NW)
24" RCP
5. CATCH BASIN
GRATE EL = 19.11
INVERT EL = 16.36 (E)
24" RCP
INVERT EL = 16.22 (SW)
30"X19" RCP
6. CURB INLET
RIM EL = 21.45
INVERT EL = 18.26 (N)
18" RCP
INVERT EL = 17.65 (SE)
24" RCP
7. MES
INVERT EL = 17.53
24" RCP
8. CATCH BASIN
GRATE EL = 20.09
INVERT EL = 16.71 (E)
18" RCP
INVERT EL = 16.65 (W)
24" RCP
9. CATCH BASIN
GRATE EL = 21.98
INVERT EL = 16.90 (E)
24" RCP
INVERT EL = 16.84 (W)
18" RCP
10. TYPE D CONTROL STRUCTURE
GRATE EL = 21.46
WEIR EL = 19.60
INVERT EL = 17.04 (W)
24" RCP
11. MES
INVERT EL = 15.45
30" RCP
12. MANHOLE
RIM EL = 23.07
INVERT EL = 17.09 (SE)
30" RCP
INVERT EL = 17.08 (SW)
30" RCP
13. CURB INLET
RIM EL = 22.29
INVERT EL = 18.29 (SE)
15" RCP
INVERT EL = 18.03 (SW)
18" RCP
14. CURB INLET
RIM EL = 22.30
INVERT EL = 17.99 (NE)
18" RCP
INVERT EL = 18.39 (SW)
24" RCP
INVERT EL = 17.52 (NW)
30" RCP
15. TYPE D CONTROL STRUCTURE
GRATE EL = 20.45
WEIR EL = 20.01 (*1)
INVERT EL = 17.55 (NE)
24" RCP
16. CURB INLET
RIM EL = 22.34
INVERT EL = 18.79 (NW)
17. TYPE D CONTROL STRUCTURE
GRATE EL = 23.86
WEIR EL = 21.99 (*1)
INVERT EL = 21.69 (SE)
24" RCP
18. MES
INVERT EL = 17.68
36" RCP
19. MANHOLE
RIM EL = 25.28
INVERT EL = 17.92 (N)
36" RCP
INVERT EL = 17.79 (SE)
36" RCP
INVERT EL = 21.64 (SW)
18" RCP
20. CURB INLET
RIM EL = 24.65
INVERT EL = 21.48 (N)
18" RCP
21. CURB INLET
RIM EL = 25.31
INVERT EL = 17.97 (E) (*5)
24" RCP
INVERT EL = 16.47 (W)
36" RCP
22. MES
INVERT EL = 21.56 (S)
24" RCP
23. CURB INLET
RIM EL = 25.47
INVERT EL = 21.21 (E)
24" RCP
INVERT EL = 21.14 (W)
24" RCP
24. TYPE D CONTROL STRUCTURE
GRATE EL = 22.76
WEIR EL = 21.61 (*1)
INVERT EL = 18.09 (NW)
30" RCP
25. TYPE D CONTROL STRUCTURE
GRATE EL = 23.00
WEIR EL = 21.89 (*1)
INVERT EL = 19.04 (W)
24" RCP
26. CURB INLET
RIM EL = 25.63
INVERT EL = 21.89 (S)
18" RCP
INVERT EL = 21.57 (W)
24" RCP
27. TYPE D CONTROL STRUCTURE
GRATE EL = 24.41
WEIR EL = 23.90
INVERT EL = 22.41 (W)
18" RCP
28. MES
INVERT EL = 21.19
60"X38" RCP
29. MES
INVERT EL = 21.04
60"X38" RCP
30. 48" RCP PROJECTING
INVERT EL = 19.43 (N)
INVERT EL = 19.16 (S)
31. CURB INLET
RIM EL = 29.08
INVERT EL = 26.03 (S)
18" RCP
32. CURB INLET
RIM EL = 28.87
INVERT EL = 24.89 (N)
18" RCP
INVERT EL = 24.74 (S)
18" RCP
33. MANHOLE
RIM EL = 28.68
INVERT EL = 24.64 (N)
19"X30" RCP
INVERT EL = 24.52 (SE)
24" RCP
34. MES
INVERT EL = 24.32
35. MES
INVERT EL = 24.30
18" RCP
36. TYPE D CONTROL STRUCTURE
GRATE EL = 28.00
WEIR EL = 26.23 (*3)
INVERT EL = 23.59 (SW)
37. MES
INVERT EL = 22.63
30" RCP
38. MANHOLE
RIM EL = 29.16
INVERT EL = 22.90 (E)
30" RCP
INVERT EL = 22.62 (S)
30" RCP
39. FDOT TYPE 6 CURB INLET
TOP EL = 29.45 (*2)
INVERT EL = 26.09 (S) (*2)
14"X23" ERCP
40. FDOT TYPE 6 CURB INLET
TOP EL = 28.42 (*2)
INVERT EL = 25.92 (N) (*2)
14"X23" ERCP
INVERT EL = 25.72 (E) (*2)
15" RCP
INVERT EL = 25.60 (S) (*2)
18" RCP
41. MANHOLE
RIM EL = 29.53 (*2)
INVERT EL = 25.23 (N) (*2)
18" RCP
INVERT EL = 23.53 (E) (*2)
24" RCP
INVERT EL = 25.06 (S) (*2)
15" RCP STUB-OUT
INVERT EL = 23.48 (W) (*2)
30" RCP
42. FDOT TYPE 5 CURB INLET
INVERT EL = 26.36 (W) (*2)
15" RCP
43. MANHOLE
RIM EL = 29.76 (*2)
INVERT EL = 24.57 (S) (*2)
18" RCP
INVERT EL = 24.22 (W) (*2)
24" RCP
44. MANHOLE
RIM EL = 29.49 (*2)
INVERT EL = 25.25 (N) (*2)
18" RCP
INVERT EL = 25.27 (E) (*2)
18" RCP
45. FDOT TYPE 6 CURB INLET
GRATE EL = 30.44 (*2)
INVERT EL = 25.29 (E) (*2)
18" RCP
INVERT EL = 25.24 (W) (*2)
18" RCP
46. FDOT TYPE 6 CURB INLET
GRATE EL = 30.53 (*2)
INVERT EL = 25.43 (E) (*2)
18" RCP
INVERT EL = 25.43 (W) (*2)
18" RCP
47. FDOT TYPE C CATCH BASIN
GRATE EL = 28.88 (*2)
INVERT EL = 25.52 (W) (*2)
18" RCP
48. FDOT TYPE C CATCH BASIN
GRATE EL = 29.04 (*2)
INVERT EL = 21.62 (NE) (*2)
18" RCP
INVERT EL = 21.49 (S) (*2)
18" RCP
49. FES
INVERT EL = 21.38 (*4)
18" RCP
50. FDOT TYPE 6 CURB INLET
GRATE EL = 30.16 (*2)
INVERT EL = 21.93 (S) (*2)
18" RCP
51. FDOT TYPE 6 CURB INLET
GRATE EL = 29.28 (*2)
INVERT EL = 21.86 (N) (*2)
18" RCP
INVERT EL = 21.83 (SW) (*2)
18" RCP
52. FDOT TYPE 6 CURB INLET
INVERT EL = 22.45 (E) (*2)
15" RCP
53. FDOT TYPE 5 CURB INLET
TOP EL = 29.68 (*2)
INVERT EL = 21.95 (SE) (*2)
18" RCP
INVERT EL = 22.02 (W) (*2)
15" RCP
54. FDOT TYPE 5 CURB INLET
TOP EL = 29.62 (*2)
INVERT EL = 21.87 (SE) (*2)
18" RCP
INVERT EL = 21.87 (NW) (*2)
18" RCP
55. FDOT TYPE C CATCH BASIN
GRATE EL = 28.86 (*2)
INVERT EL = 21.77 (NE) (*2)
15" RCP
INVERT EL = 21.56 (SE) (*2)
18" RCP
INVERT EL = 21.68 (NW) (*2)
18" RCP
56. GUTTER INLET
RIM EL = 27.86 (*4)
INVERT EL = 21.39 (SE) (*4)
18" RCP
INVERT EL = 21.48 (NW) (*4)
18" RCP
57. GUTTER INLET
RIM EL = 27.91 (*4)
INVERT EL = 20.66 (SE) (*4)
24" RCP
INVERT EL = 21.18 (NW) (*4)
18" RCP
58. FES
INVERT EL = 20.32 (*4)
24" RCP
59. FDOT TYPE 6 CURB INLET
INVERT EL = 22.46 (SW) (*2)
15" RCP
60. FDOT TYPE 6 CURB INLET
GRATE EL = 30.55 (*2)
INVERT EL = 21.63 (S) (*2)
15" RCP
61. FDOT TYPE 6 CURB INLET
GRATE EL = 29.97 (*2)
INVERT EL = 21.61 (N) (*2)
15" RCP
INVERT EL = 21.61 (SE) (*2)
15" RCP
62. FDOT TYPE D CATCH BASIN
GRATE EL = 28.84 (*2)
INVERT EL = 21.49 (E) (*2)
18" RCP
INVERT EL = 21.40 (S) (*2)
18" RCP
INVERT EL = 21.45 (NW) (*2)
15" RCP
63. GUTTER INLET
RIM EL = 27.82 (*4)
INVERT EL = 21.41 (N) (*4)
18" RCP
INVERT EL = 21.38 (S) (*4)
18" RCP
64. GUTTER INLET
RIM EL = 27.96 (*4)
INVERT EL = 21.25 (N) (*4)
18" RCP
INVERT EL = 20.80 (S) (*4)
24" RCP
65. FES
INVERT EL = 20.46 (*4)
24" RCP
66. FDOT TYPE 6 CURB INLET
INVERT EL = 21.98 (E) (*2)
15" RCP
INVERT EL = 22.05 (S) (*2)
15" RCP
67. FDOT TYPE 6 CURB INLET
INVERT EL = 21.93 (N) (*2)
15" RCP
INVERT EL = 21.77 (W) (*2)
18" RCP
68. FDOT TYPE 5 CURB INLET
INVERT EL = 22.26 (W) (*2)
15" RCP

NOTES:

- 1.) ALL ELEVATIONS SHOWN ARE IN NAVD88. THE CONVERSION FROM NAVD88 TO NGVD29 IS NAVD88 + 0.96 = NGVD29.
- 2.) ALL ELEVATIONS SHOWN HEREIN ARE EXISTING AND DO NOT REFLECT ANY PROPOSED MODIFICATIONS.
- 3.) ELEVATIONS MARKED WITH "*1" WERE OBTAINED FROM SWFWMD ERP 44005641.026 AS-BUILT DRAWINGS.
- 4.) ELEVATIONS MARKED WITH "*2" WERE OBTAINED FROM SWFWMD ERP 44005641.076 AS-BUILT DRAWINGS.
- 5.) ELEVATIONS MARKED WITH "*3" WERE OBTAINED FROM SWFWMD ERP 44005641.025 AS-BUILT DRAWINGS.
- 6.) ELEVATIONS MARKED WITH "*4" WERE OBTAINED FROM SWFWMD ERP 44005641.066 AS-BUILT DRAWINGS.
- 7.) ELEVATIONS MARKED WITH "*5" WERE OBTAINED FROM SWFWMD ERP 44005641.034 AS-BUILT DRAWINGS.

| | | | | | | | | | | | |
|-----|-----------|------|----|-------------------|--------------------|---|------------------------|--|---------------------------------------|---|--------------|
| | | | | | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER LISANDRO A. ZAPATA | EXISTING DRAINAGE STRUCTURES | SHEET NO. |
| | | | | | DESIGNED BY LAZ | | PROJECT NO. 6045662 | FL. LICENSE NO. 58822 | 7 | | |
| No. | REVISIONS | DATE | BY | CHECKED BY LAZ | | | | | | | |

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TYPICAL SECTION (1)
44TH AVENUE EAST
STA. 260+00.00 TO STA. 266+24.58

NEW CONSTRUCTION - MAINLINE PAVEMENT

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, ARB)

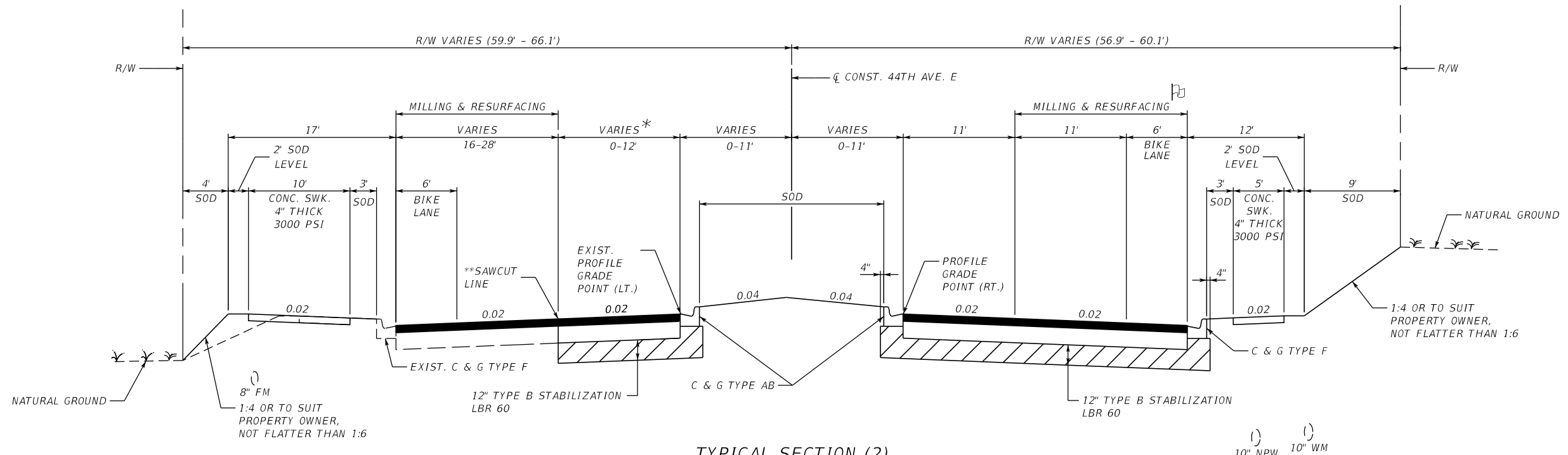
TRAFFIC DATA

DESIGN SPEED = 45 MPH

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

| | | | | | | | | | | |
|-----------------|--|--|--|-----------------------------------|--|---|--|--------------------------------|--|-------------|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 8 |
| DESIGNED BY JLS | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | TYPICAL SECTION (1) | | |
| CHECKED BY DRH | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 16:05:17 09/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYP SRD01.DGN | | | | |

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TYPICAL SECTION (2)
44TH AVENUE EAST
 STA. 266+24.58 TO STA. 269+52.91
 STA. 274+51.80 TO STA. 292+57.96

** SEE DETAIL 403.3 ON ROADWAY DETAILS (1)

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

* WIDENING LIMITS (LT.)
 STA. 289+30.95 TO STA. 292+57.96

NEW CONSTRUCTION - MAINLINE PAVEMENT

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, ARB)

MILLING AND RESURFACING

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

MILLING & RESURFACING LIMITS (RT.)
 STA. 291+74.19 TO STA. 292+57.96

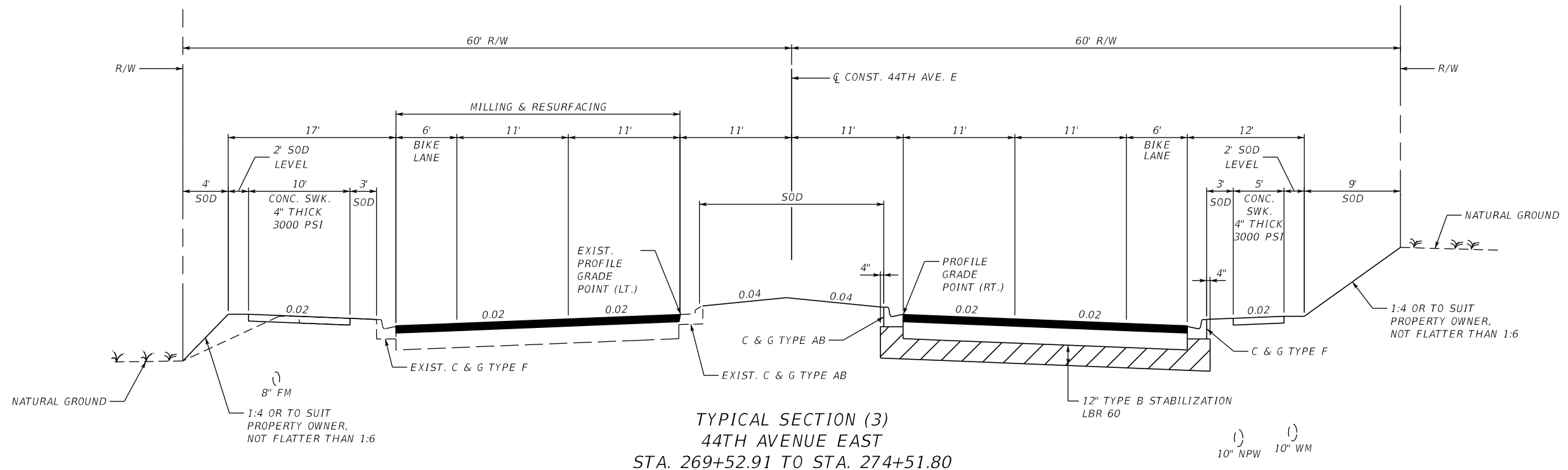
TRAFFIC DATA

DESIGN SPEED = 45 MPH

EXISTING 44TH AVENUE EAST
 FROM STA. 258+41.54 TO STA. 308+97.33
 BASED ON AS-BUILTS FOR NEAL
 COMMUNITIES OF SOUTHWEST
 FLORIDA, LLC DATED AUGUST 2019

| | | | | | | | | | | |
|-----------------|--|--|--|-----------------------------------|--|-----------------------------|--|---|--|-------------|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 9 |
| DESIGNED BY JLS | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | TYPICAL SECTION (2) | | |
| CHECKED BY DRH | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 5:58:10 PM 9/20/2019 | | PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\TYP SRD01.DGN | | |

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TYPICAL SECTION (3)
 44TH AVENUE EAST
 STA. 269+52.91 TO STA. 274+51.80

NEW CONSTRUCTION - MAINLINE PAVEMENT

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, ARB)

MILLING AND RESURFACING

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

(1) 10" NPW (1) 10" WM

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

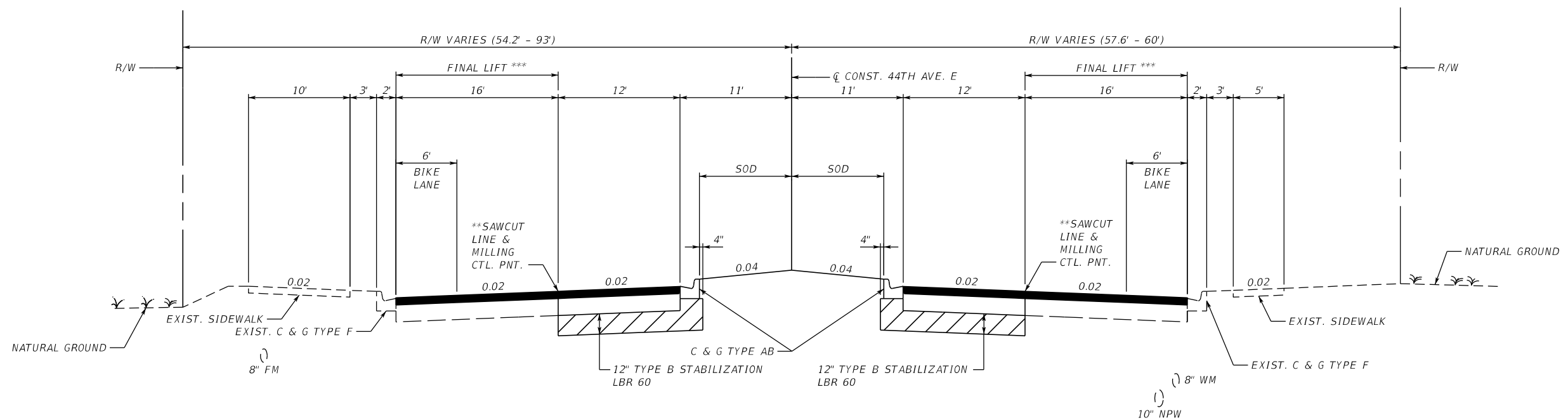
EXISTING 44TH AVENUE EAST
 FROM STA. 258+41.54 TO STA. 308+97.33
 BASED ON AS-BUILTS FOR NEAL
 COMMUNITIES OF SOUTHWEST
 FLORIDA, LLC DATED AUGUST 2019

TRAFFIC DATA

DESIGN SPEED = 45 MPH

| | | | | | | | | | | |
|-----------------|-----------|------|----|--------------------------------|--|-----------------------------------|--|--------------------------------|--|---------------------|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 10 |
| DESIGNED BY JLS | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY PUBLIC WORKS | | TYPICAL SECTION (3) |
| CHECKED BY DRH | | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | |

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. 292+57.96 TO STA. 308+97.33

** SEE DETAIL 403.3 ON ROADWAY DETAILS (1)

NEW CONSTRUCTION - MAINLINE PAVEMENT

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, ARB)

**MILLING AND RESURFACING
 STA. 292+57.96 TO STA. 297+20.00**

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

*****FINAL LIFT
 STA. 297+20.00 TO STA. 308+97.33**

1-1/2" FRICTION COURSE FC-12.5 (TRAFFIC C, PG 76-22, ARB)

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

EXISTING 44TH AVENUE EAST
 FROM STA. 258+41.54 TO STA. 308+97.33
 BASED ON AS-BUILTS FOR NEAL
 COMMUNITIES OF SOUTHWEST
 FLORIDA, LLC DATED AUGUST 2019

TRAFFIC DATA

DESIGN SPEED = 45 MPH

| | | | | | | | | | | |
|-----------------|-----------|------|----|-----------------------------------|--|-----------------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. II |
| DESIGNED BY JLS | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | TYPICAL SECTION (4) | | |
| CHECKED BY DRH | | | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY FLORIDA | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | |

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Main data table with columns: QUANTITY, STR. NO., STATION, SIDE, DESCRIPTION, BARRELS, STORM AND CROSS DRAIN OPTIONAL TYPE, CURB INLETS, MANHOLES, DITCH BOTTOM INLETS, CROSS DRAIN MITERED END SECTION, SOD, CLASS II CONC. (EW), CLASS II CONC. (DITCH PAVT.), REMARKS

SHEET TOTALS PLAN QUANTITY FINAL QUANTITY

REVISIONS table with columns: No., REVISIONS, DATE, BY

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

DATE: 09/2019 PROJECT NO.: 6045662

Manatee County Florida logo and MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: LISANDRO A. ZAPATA FL. LICENSE NO. 58822

SUMMARY OF DRAINAGE STRUCTURES (1 OF 2)

SHEET NO. 12

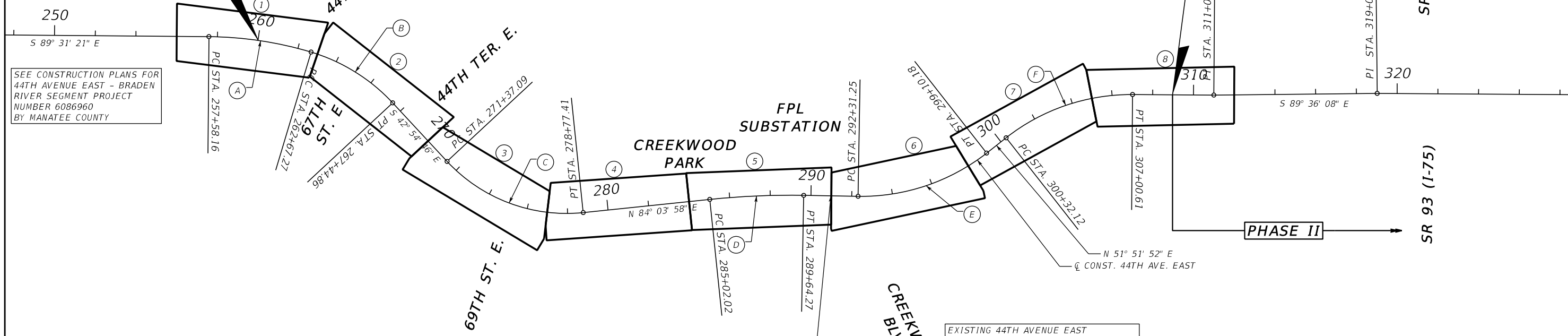
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

44TH AVENUE EAST



BEGIN PROJECT
STA. 260+00.00

END PROJECT
STA. 308+97.33



SEE CONSTRUCTION PLANS FOR
44TH AVENUE EAST - BRADEN
RIVER SEGMENT PROJECT
NUMBER 6086960
BY MANATEE COUNTY

EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019

(A) CURVE 1
CURVE DATA CL44_3
PI STA. = 260+14.43
Δ = 16° 12' 19" (RT.)
D = 3° 10' 59"
T = 256.26
L = 509.11
R = 1,800.00
PC STA. = 257+58.16
PT STA. = 262+67.27
e = 0.02

(D) CURVE 4
CURVE DATA CL44_12
PI STA. = 287+33.43
Δ = 6° 55' 59" (RT.)
D = 1° 30' 00"
T = 231.41
L = 462.25
R = 3,820.00
PC STA. = 285+02.02
PT STA. = 289+64.27
e = 0.02

(B) CURVE 2
CURVE DATA CL44_4
PI STA. = 265+11.83
Δ = 30° 24' 16" (RT.)
D = 6° 21' 58"
T = 244.56
L = 477.59
R = 900.00
PC STA. = 262+67.27
PT STA. = 267+44.86
e = 0.023

(E) CURVE 5
CURVE DATA CL44_15
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 = 0.02

(C) CURVE 3
CURVE DATA CL44_7
PI STA. = 275+36.14
Δ = 53° 01' 16" (LT.)
D = 7° 09' 43"
T = 399.05
L = 740.31
R = 800.00
PC STA. = 271+37.09
PT STA. = 278+77.41
e = 0.032

(F) CURVE 6
CURVE DATA CL44_18
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 = 0.02

| | | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|--|--|--------------------------------|--|----------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 14 | |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | PROJECT LAYOUT | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | 16:06:09 09/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\PLAYRD01.DGN | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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

Florida Department of Transportation District One
Vertical Control Data Sheet

DATUM
NGVD 1929
NAVD 1988 X

Monument Name or Designation: BM 10 Elevation feet: 24.380'
 State Road No.: N/A County: MANATEE
 Section: 11 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) = 1136622 E (X) = 502473
 Base Line Station and Offset: ST. 272+17 O/S 63.1' RT
 Description of Monument: SET STANDARD 4"x4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 10"

Distance and Direction from Nearest Intersection: 300' +/- WEST OF THE
INTERSECTION OF 44TH AVENUE AND 69TH STREET

Field Location Sketch

Florida Department of Transportation District One
Vertical Control Data Sheet

DATUM
NGVD 1929
NAVD 1988 X

Monument Name or Designation: BM 12 Elevation feet: 29.278'
 State Road No.: N/A County: MANATEE
 Section: 11 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) = 1136627 E (X) = 504454
 Base Line Station and Offset: ST. 292+07 O/S 73.3' LT
 Description of Monument: SET STANDARD 4"x4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 12"

Distance and Direction from Nearest Intersection: 0.34 MILES EAST OF THE
INTERSECTION OF 44TH AVENUE AND 69TH STREET

Field Location Sketch

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: ST. 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 9 Elevation feet: 19.487'
 State Road No.: N/A County: MANATEE
 Section: 11 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) = 1137211 E (X) = 501703
 Base Line Station and Offset: ST. 261+95 O/S 72.1' RT
 Description of Monument: SET STANDARD 4"x4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 9"

Distance and Direction from Nearest Intersection: THE MARK IS LOCATED
ON THE SOUTH SIDE OF 44TH AVENUE, AT THE INTERSECTION OF
44TH AVENUE AND 44TH AVENUE PLAZA.

Field Location Sketch

Florida Department of Transportation District One
Vertical Control Data Sheet

DATUM
NGVD 1929
NAVD 1988 X

Monument Name or Designation: BM 11 Elevation feet: 27.781'
 State Road No.: N/A County: MANATEE
 Section: 11 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) = 1136586 E (X) = 503503
 Base Line Station and Offset: ST. 282+63 O/S 72.9' LT
 Description of Monument: SET STANDARD 4"x4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 11"

Distance and Direction from Nearest Intersection: 800' +/- EAST OF THE
INTERSECTION OF 44TH AVENUE AND 69TH STREET

Field Location Sketch

Florida Department of Transportation District One
Vertical Control Data Sheet

DATUM
NGVD 1929
NAVD 1988 X

Monument Name or Designation: BM 13 Elevation feet: 30.036'
 State Road No.: N/A County: MANATEE
 Section: 11 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) = 1136890 E (X) = 505418
 Base Line Station and Offset: ST. 302+48 O/S 72.5' RT
 Description of Monument: SET STANDARD 4"x4" CONCRETE MONUMENT
WITH MCKIM & CREED ALUMINUM DISK STAMPED "BM 13"

Distance and Direction from Nearest Intersection: N/A

Field Location Sketch

| | | | | | | | | | | | | | |
|-------------|-----------|-------------------------------------|------|-----------------|--|--------------|--|--|-----------------------|--|------------------------------|-----------|-------|
| SCALE | | AS NOTED | | MCKIM AND CREED | | DATE | | MANATEE COUNTY PUBLIC WORKS | PROFESSIONAL SURVEYOR | | PROJECT CONTROL SHEET | SHEET NO. | |
| DESIGNED BY | | 551 NORTH CATTLEMEN ROAD, SUITE 106 | | 09/2019 | | PROJECT NO. | | | MARK HOLT | | | 6541 | CTL-1 |
| DRAWN BY | | SARASOTA, FLORIDA 34232 | | 6045662 | | P. S. M. NO. | | | 6541 | | | | |
| CHECKED BY | | LICENSED BUSINESS NO. 6566 | | 16:06:27 | | 09/20/2019 | | PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\roadway\CTLSRD01.DGN | | | | | |
| No. | REVISIONS | | DATE | BY | | | | | | | | | |


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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. ALL STATIONS AND OFFSETS REFER TO THE C OF CONSTRUCTION UNLESS OTHERWISE NOTED.
8. 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.
9. 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.
10. 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.
11. DRIVEWAY LOCATION AND WIDTH MAY BE FIELD ADJUSTED DURING CONSTRUCTION BY THE CONTRACTOR IN COORDINATION WITH REQUESTS FROM PROPERTY OWNERS, AND COUNTY COORDINATION.
12. CONTRACTOR SHALL INSTALL SOIL TRACKING PREVENTION DEVICES AT ALL POINTS OF CONSTRUCTION VEHICLE INGRESS/EGRESS.
13. SEE COUNTY HIGHWAY & TRAFFIC STANDARD MANUAL ROAD CONNECTION DETAIL 403.3 AT ALL WIDENING AND CONNECTIONS TO EXISTING PAVEMENT.
14. BEARINGS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS OF THE FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT
15. ELEVATIONS BASED ON NAVD-1988 VERTICAL DATUM. CONVERSION FROM NGVD-1929 VERTICAL DATUM: NGVD -0.96 FT. = NAVD.
16. ALL PROPOSED SIDE SLOPES STEEPER THAN 1:3 SHALL BE SODDED WITH STAKED SOD.
17. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEMS DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.

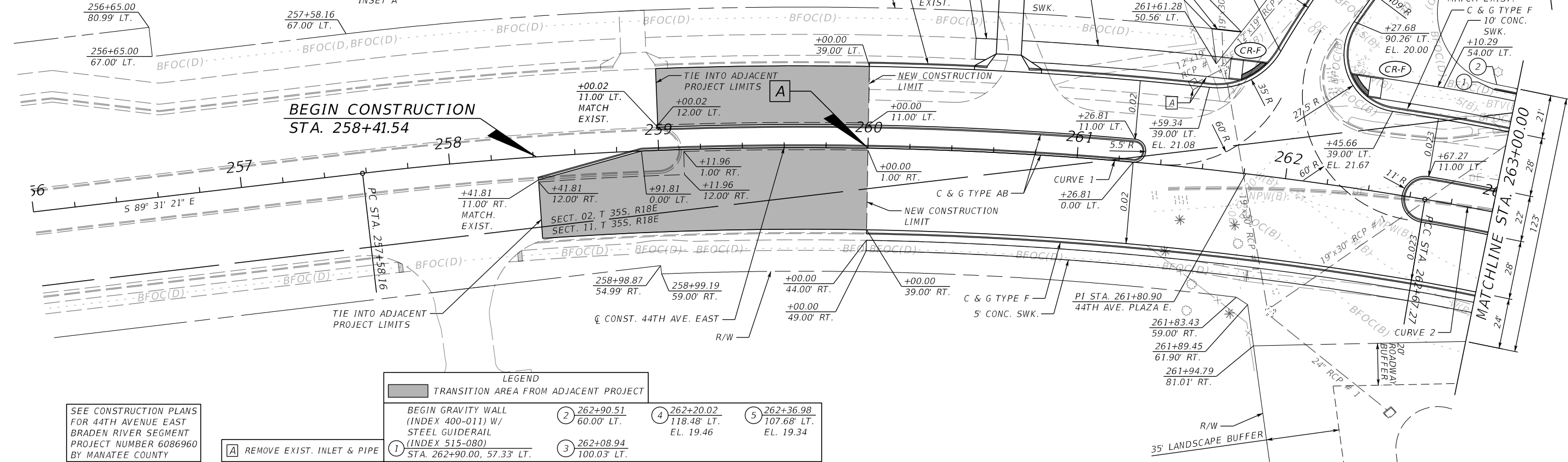
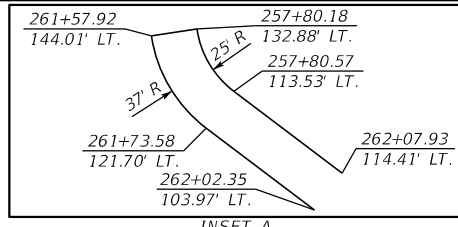
DRAINAGE STRUCTURE NOTES:

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. 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.
3. EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN CONSTRUCTION LIMITS SHALL REMAIN, UNLESS OTHERWISE NOTED.
4. ALL STORMDRAIN MANHOLES SHALL USE MANATEE COUNTY ACCESS COVER, PER MANATEE COUNTY STANDARD NO. 203.1.
5. ANY STORMDRAIN INLETS REQUIRING AN ACCESS COVER SHALL BE IN ACCORDANCE WITH MANATEE COUNTY STANDARD NO. 203.2.
6. ALL PROPOSED STORM SEWER PIPE SHALL BE RCP CLASS II UNLESS NOTED OTHERWISE.

| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|-------------|------------|--|-----------------|----------------|----------------------|-----------|----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/20/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | JASON L. STARR | GENERAL NOTES | SHEET NO. | 15 |
| | | | | DESIGNED BY | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 70171 | | | |
| | | | | DRAWN BY | JHC | SARASOTA, FLORIDA 34232 | | | | | | | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | |

44TH AVENUE EAST

BEGIN PROJECT
 BEGIN PGL (LT.)
 BEGIN PGL (RT.)
 STA. 260+00.00



SEE CONSTRUCTION PLANS FOR 44TH AVENUE EAST BRADEN RIVER SEGMENT PROJECT NUMBER 6086960 BY MANATEE COUNTY

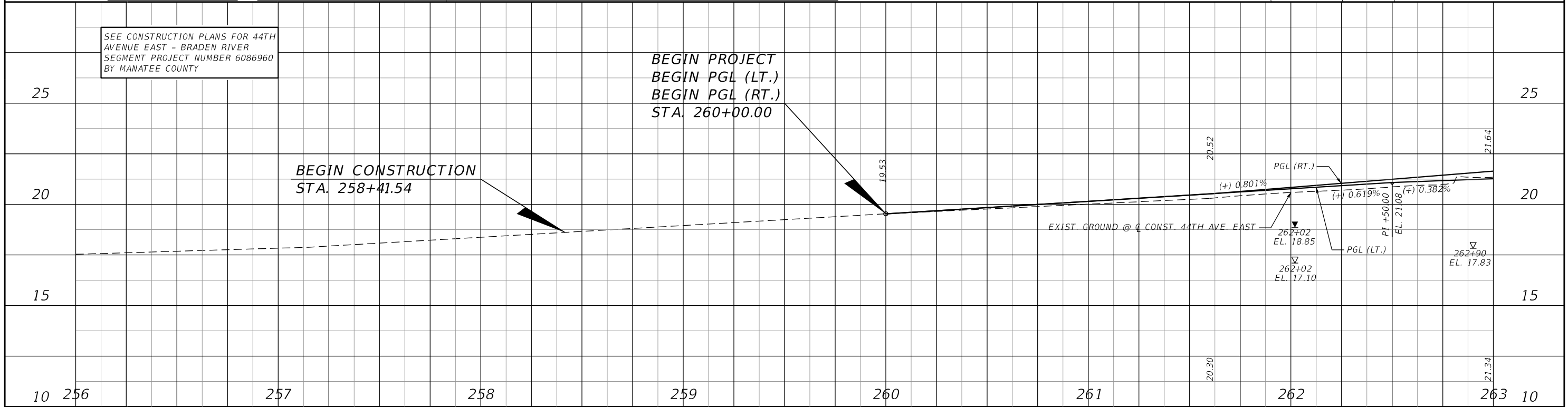
A REMOVE EXIST. INLET & PIPE

| LEGEND | | |
|---------------------------------------|---|---------------------------------------|
| TRANSITION AREA FROM ADJACENT PROJECT | | |
| 2 | BEGIN GRAVITY WALL (INDEX 400-011) W/ STEEL GUIDERAIL (INDEX 515-080) | 262+90.51 60.00' LT. |
| 3 | | 262+08.94 100.03' LT. |
| 4 | | 262+20.02 118.48' LT. EL. 19.46 |
| 5 | | 262+36.98 107.68' LT. EL. 19.34 |

SEE CONSTRUCTION PLANS FOR 44TH AVENUE EAST - BRADEN RIVER SEGMENT PROJECT NUMBER 6086960 BY MANATEE COUNTY

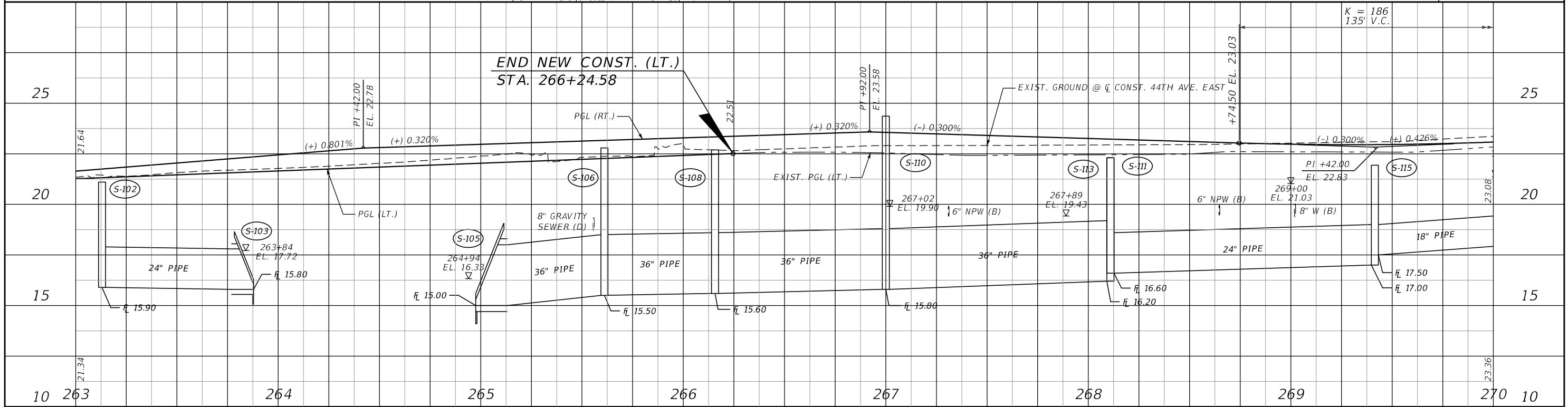
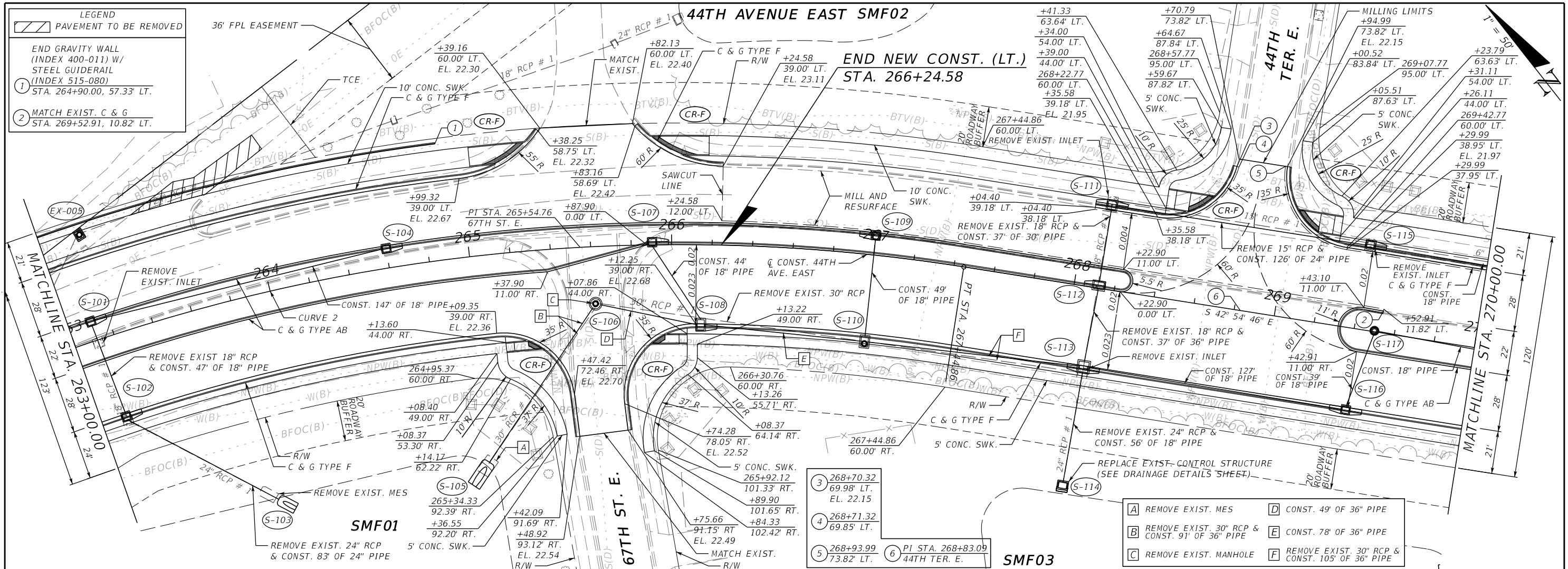
BEGIN PROJECT
 BEGIN PGL (LT.)
 BEGIN PGL (RT.)
 STA. 260+00.00

BEGIN CONSTRUCTION
 STA. 258+41.54



| | | | | | | | | | | |
|-----|-----------|------|----|-------------|----------|-----------------------------------|-------------|------------------------------|-----------------|-----------|
| No. | REVISIONS | DATE | BY | SCALE | AS NOTED | DATE | PROJECT NO. | DESIGN ENGINEER | FL. LICENSE NO. | SHEET NO. |
| | | | | DESIGNED BY | JLS | | | | | |
| | | | | DRAWN BY | JHC | MANATEE COUNTY PUBLIC WORKS | | ROADWAY PLAN AND PROFILE (1) | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | 16 | | |

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| | | | | | | | | | |
|-----------------|-----------|--------------------------------|----|-----------------------------------|--|--------------------------------|--|------------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/20/19 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 17 | |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | ROADWAY PLAN AND PROFILE (2) | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| CHECKED BY DRH | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

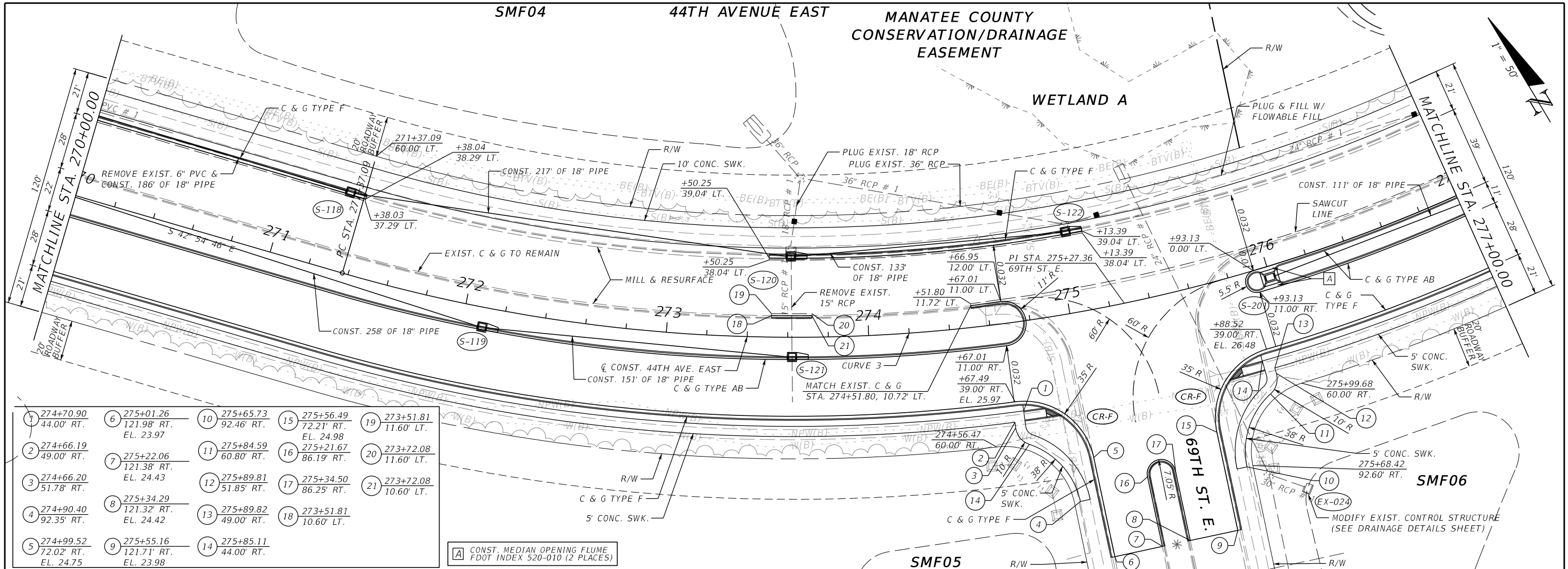
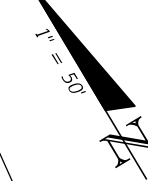
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SMF04

44TH AVENUE EAST

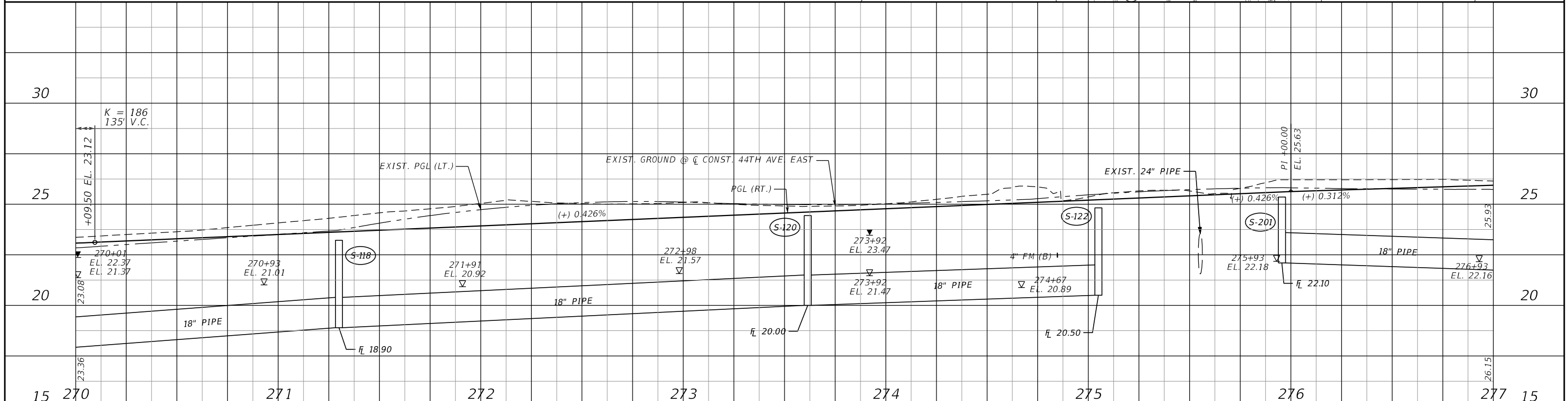
MANATEE COUNTY
CONSERVATION/DRAINAGE
EASEMENT

WETLAND A



| | | | | |
|--|---|----------------------------|---|----------------------------|
| 1 274+70.90 44.00' RT. | 6 275+01.26 121.98' RT. EL. 23.97 | 10 275+65.73 92.46' RT. | 15 275+56.49 72.21' RT. EL. 24.98 | 19 273+51.81 11.60' LT. |
| 2 274+66.19 49.00' RT. | 7 275+22.06 121.38' RT. EL. 24.43 | 11 275+84.59 60.80' RT. | 16 275+21.67 86.19' RT. | 20 273+72.08 11.60' LT. |
| 3 274+66.20 51.78' RT. | 8 275+34.29 121.32' RT. EL. 24.42 | 12 275+89.81 51.85' RT. | 17 275+34.50 86.25' RT. | 21 273+72.08 10.60' LT. |
| 4 274+90.40 92.35' RT. | 9 275+55.16 121.71' RT. EL. 23.98 | 13 275+89.82 49.00' RT. | 18 273+51.81 10.60' LT. | |
| 5 274+99.52 72.02' RT. EL. 24.75 | | 14 275+85.11 44.00' RT. | | |

[A] CONST. MEDIAN OPENING FLUME
FDOT INDEX 520-010 (2 PLACES)

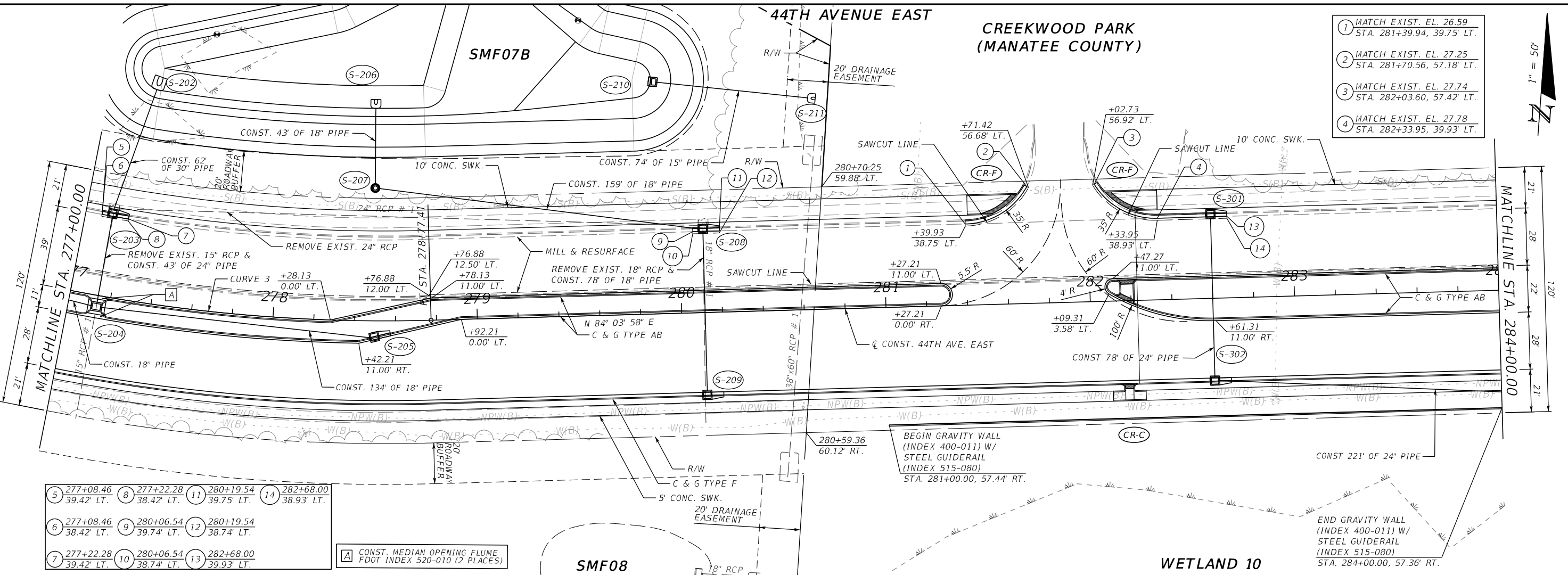


| | | | | | | | | |
|-----------------|--|-----------------------------------|--|---------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 18 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | ROADWAY PLAN AND PROFILE (3) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | 5:41:41 PM | | | | |



MANATEE COUNTY
PUBLIC WORKS

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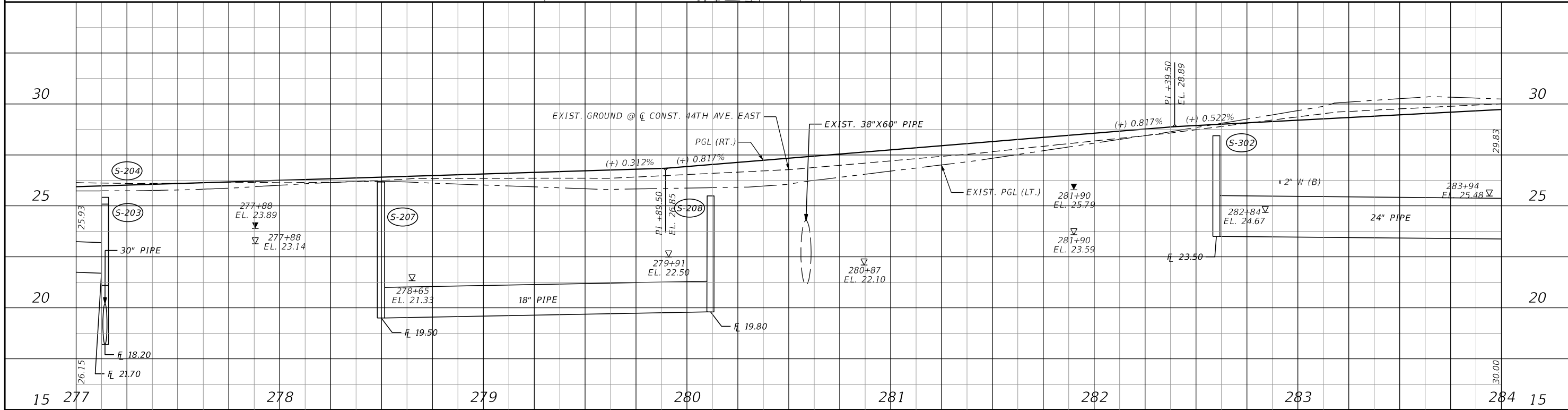


- ① MATCH EXIST. EL. 26.59
STA. 281+39.94, 39.75' LT.
- ② MATCH EXIST. EL. 27.25
STA. 281+70.56, 57.18' LT.
- ③ MATCH EXIST. EL. 27.74
STA. 282+03.60, 57.42' LT.
- ④ MATCH EXIST. EL. 27.78
STA. 282+33.95, 39.93' LT.



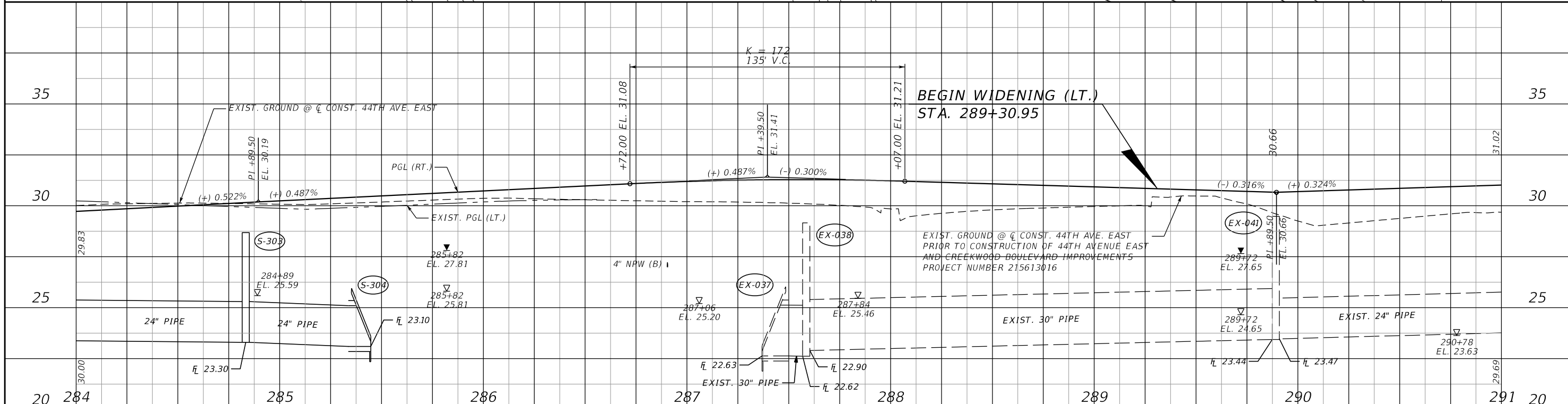
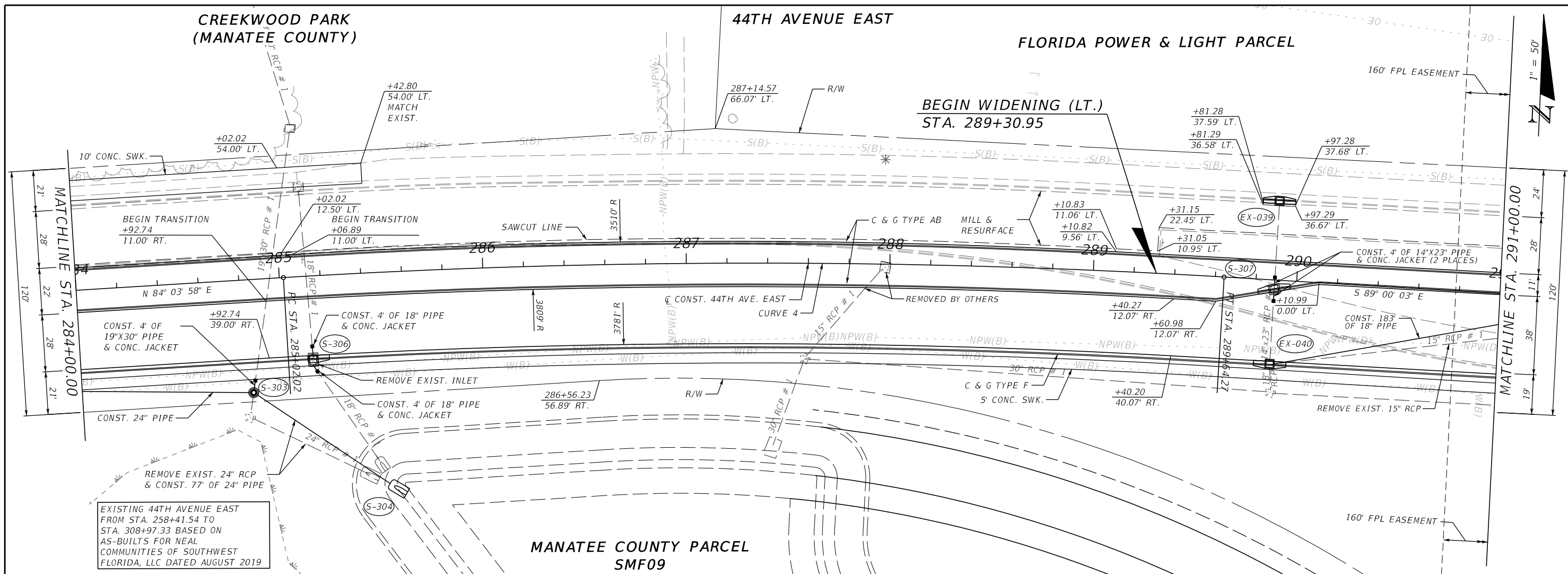
| | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| ⑤ 277+08.46 39.42' LT. | ⑧ 277+22.28 38.42' LT. | ⑪ 280+19.54 39.75' LT. | ⑭ 282+68.00 38.93' LT. |
| ⑥ 277+08.46 38.42' LT. | ⑨ 280+06.54 39.74' LT. | ⑫ 280+19.54 38.74' LT. | |
| ⑦ 277+22.28 39.42' LT. | ⑩ 280+06.54 38.74' LT. | ⑬ 282+68.00 39.93' LT. | |

A CONST. MEDIAN OPENING FLUME
FDOT INDEX 520-010 (2 PLACES)



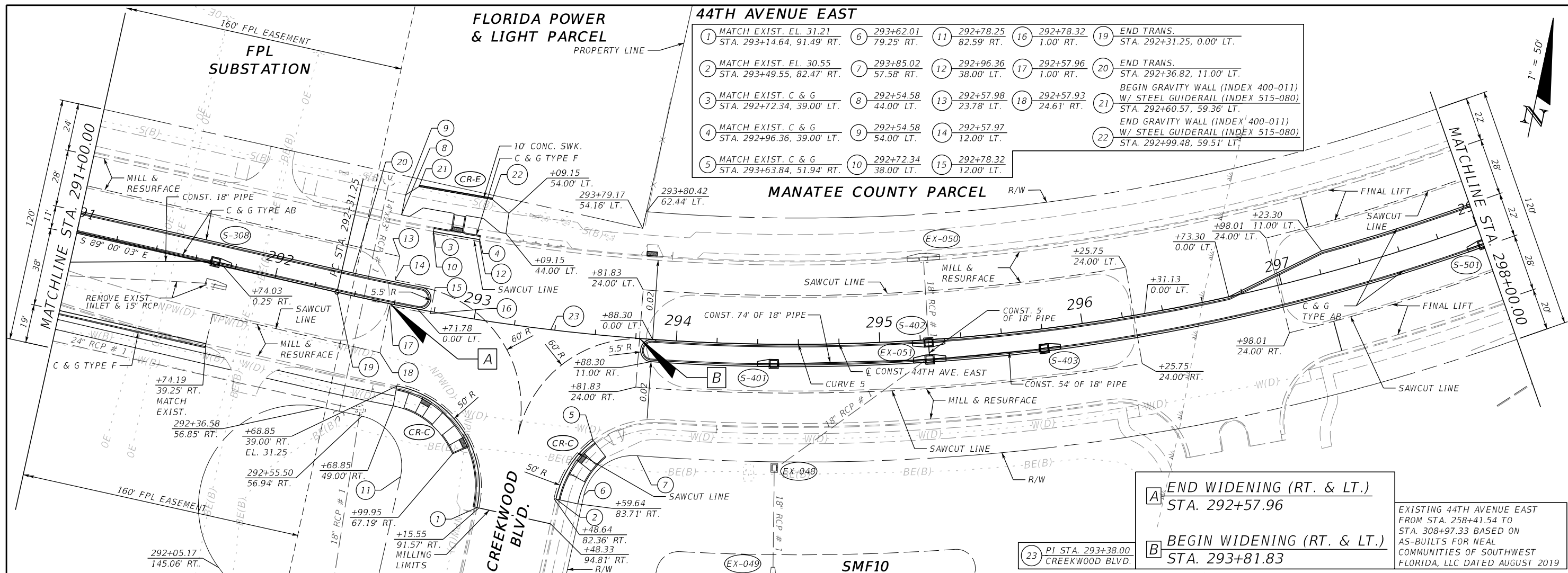
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|-----------------|--|-----------------------------------|--|---------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 19 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | ROADWAY PLAN AND PROFILE (A) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | 5:42:08 PM | | | | |

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| | | | | | | | | | | | |
|---|--|---|--|-------------------------------------|--|---|--|---|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | MANATEE COUNTY PUBLIC WORKS ROADWAY PLAN AND PROFILE (5) | | SHEET NO. 20 | |
|---|--|---|--|-------------------------------------|--|---|--|---|--|--------------|--|

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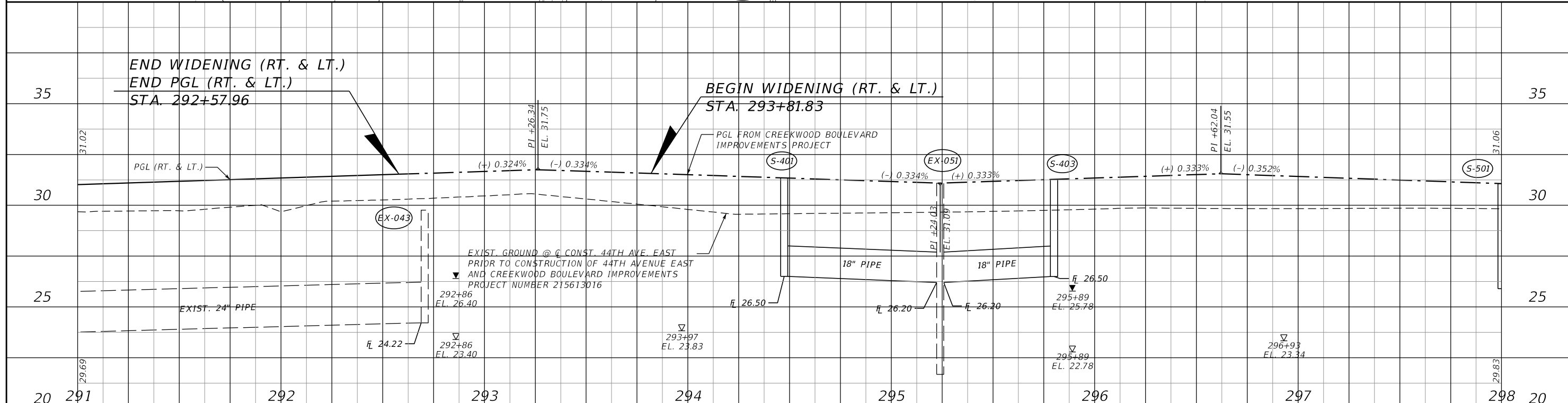


| 44TH AVENUE EAST | | | | | |
|--|----------------------------|----------------------------|----------------------------|---|--|
| 1 MATCH EXIST. EL. 31.21 STA. 293+14.64, 91.49' RT. | 6 293+62.01 79.25' RT. | 11 292+78.25 82.59' RT. | 16 292+78.32 1.00' RT. | 19 END TRANS. STA. 292+31.25, 0.00' LT. | |
| 2 MATCH EXIST. EL. 30.55 STA. 293+49.55, 82.47' RT. | 7 293+85.02 57.58' RT. | 12 292+96.36 38.00' LT. | 17 292+57.96 1.00' RT. | 20 END TRANS. STA. 292+36.82, 11.00' RT. | |
| 3 MATCH EXIST. C & G STA. 292+72.34, 39.00' LT. | 8 292+54.58 44.00' LT. | 13 292+57.98 23.78' LT. | 18 292+57.93 24.61' RT. | 21 BEGIN GRAVITY WALL (INDEX 400-011) W/ STEEL GUIDERAIL (INDEX 515-080) STA. 292+60.57, 59.36' LT. | |
| 4 MATCH EXIST. C & G STA. 292+96.36, 39.00' LT. | 9 292+54.58 54.00' LT. | 14 292+57.97 12.00' LT. | 15 292+78.32 12.00' LT. | 22 END GRAVITY WALL (INDEX 400-011) W/ STEEL GUIDERAIL (INDEX 515-080) STA. 292+99.48, 59.51' LT. | |
| 5 MATCH EXIST. C & G STA. 293+63.84, 51.94' RT. | 10 292+72.34 38.00' LT. | | | | |

A END WIDENING (RT. & LT.)
STA. 292+57.96

B BEGIN WIDENING (RT. & LT.)
STA. 293+81.83

EXISTING 44TH AVENUE EAST FROM STA. 258+41.54 TO STA. 308+97.33 BASED ON AS-BUILTS FOR NEAL COMMUNITIES OF SOUTHWEST FLORIDA, LLC DATED AUGUST 2019

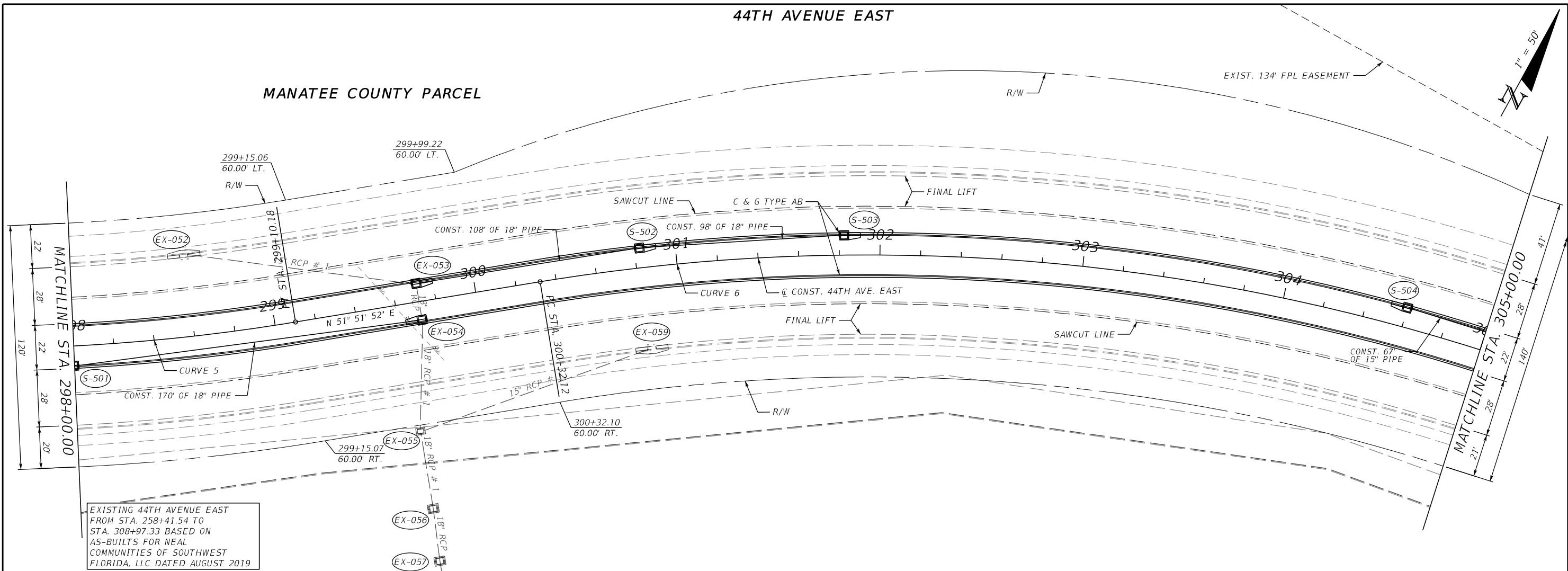


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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 21 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | ROADWAY PLAN AND PROFILE (6) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | Manatee County Florida | | | | |

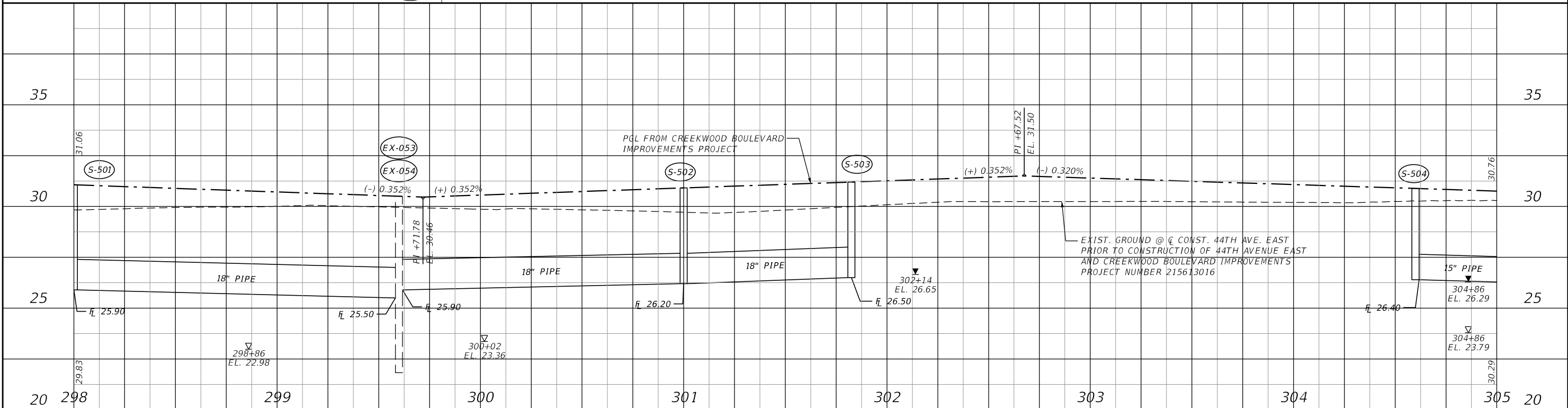
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

44TH AVENUE EAST

MANATEE COUNTY PARCEL



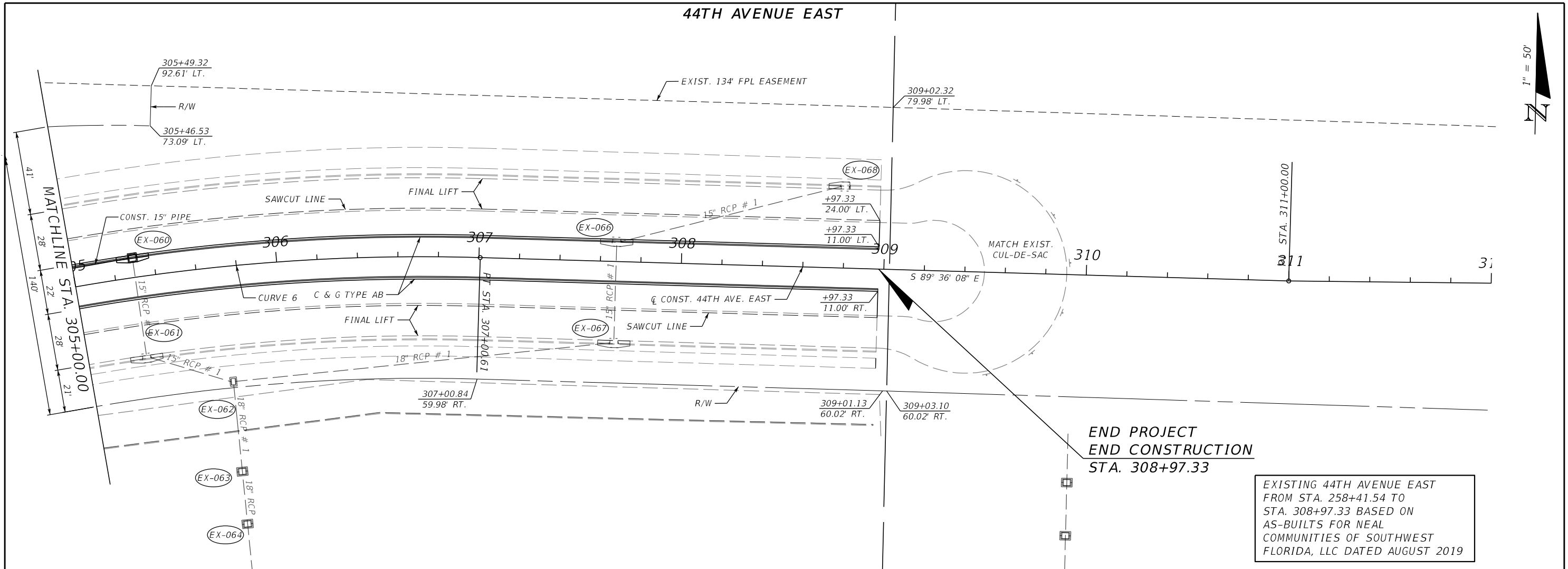
EXISTING 44TH AVENUE EAST FROM STA. 258+41.54 TO STA. 308+97.33 BASED ON AS-BUILTS FOR NEAL COMMUNITIES OF SOUTHWEST FLORIDA, LLC DATED AUGUST 2019



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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 22 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | ROADWAY PLAN AND PROFILE (7) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | 5:43:01 PM | | | | |

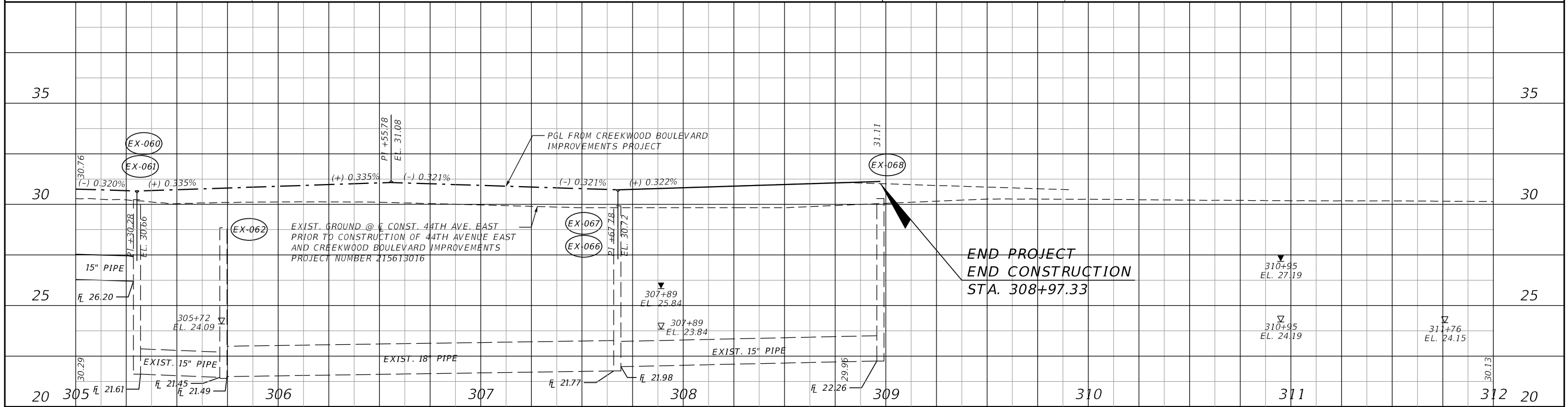
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

44TH AVENUE EAST



EXISTING 44TH AVENUE EAST FROM STA. 258+41.54 TO STA. 308+97.33 BASED ON AS-BUILTS FOR NEAL COMMUNITIES OF SOUTHWEST FLORIDA, LLC DATED AUGUST 2019

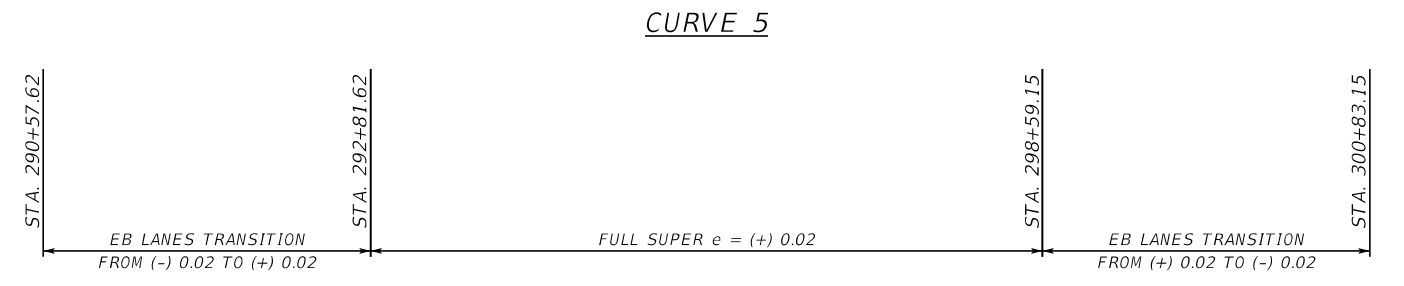
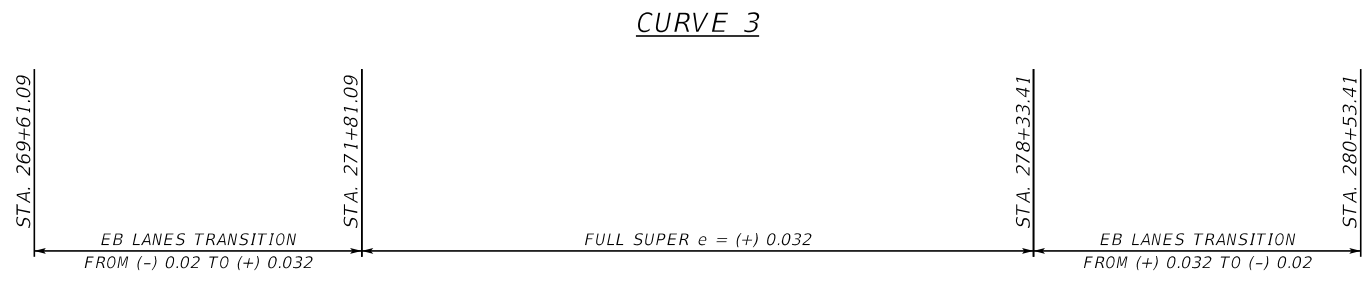
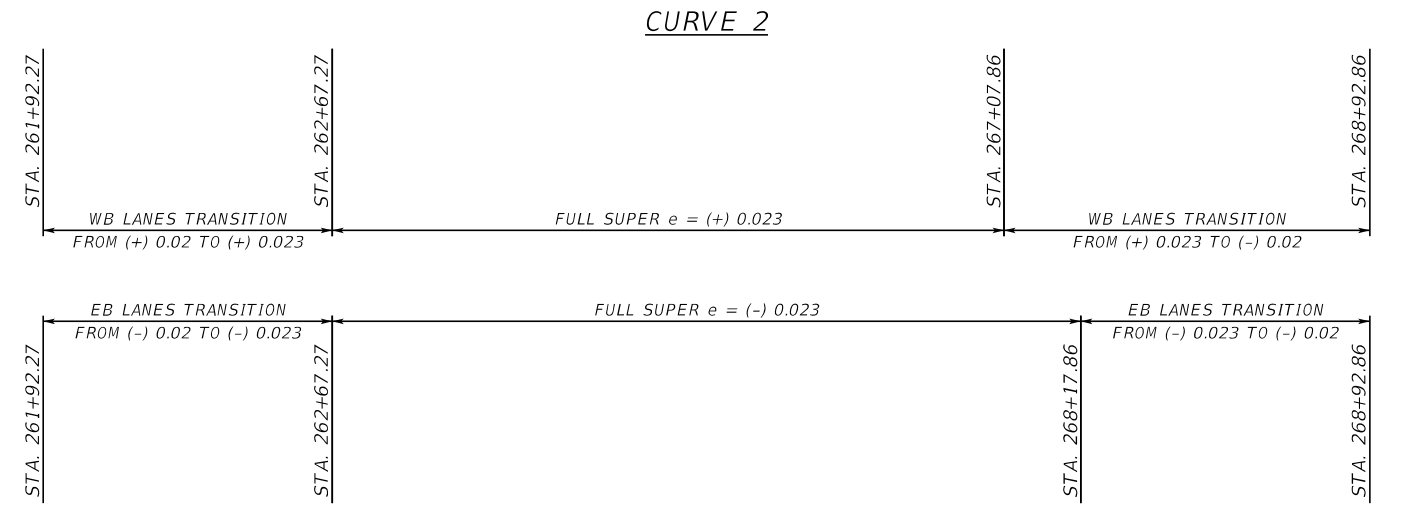
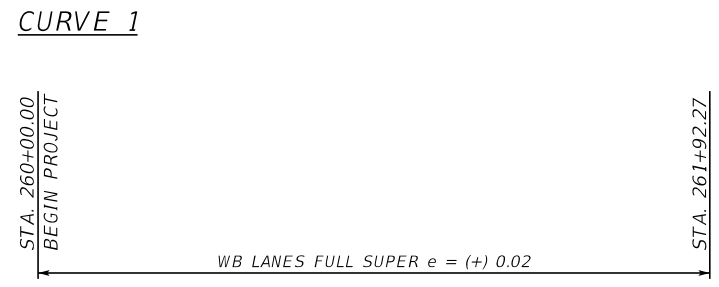
END PROJECT
END CONSTRUCTION
STA. 308+97.33



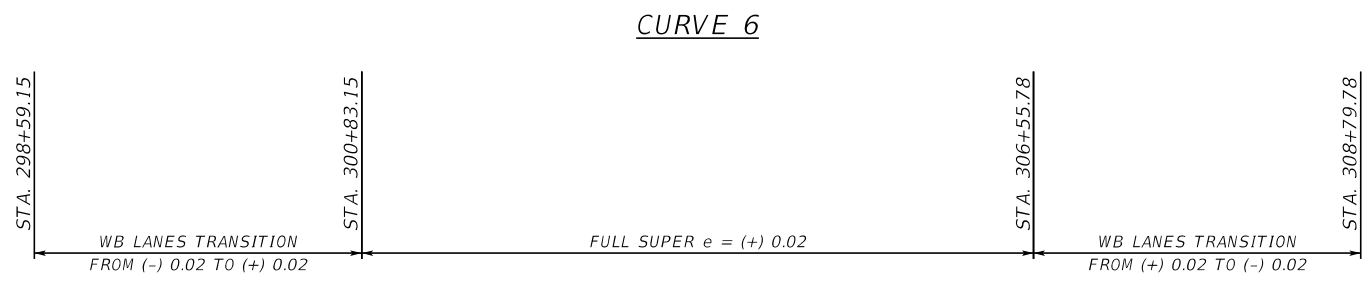
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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 23 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | <p align="center">ROADWAY PLAN AND PROFILE (8)</p> | | |
| CHECKED BY DRH | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | |

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FOR WB LANE TRANSITION
SEE CONSTRUCTION PLANS FOR
44TH AVENUE EAST - BRADEN
RIVER SEGMENT PROJECT
NUMBER 6086960
BY MANATEE COUNTY



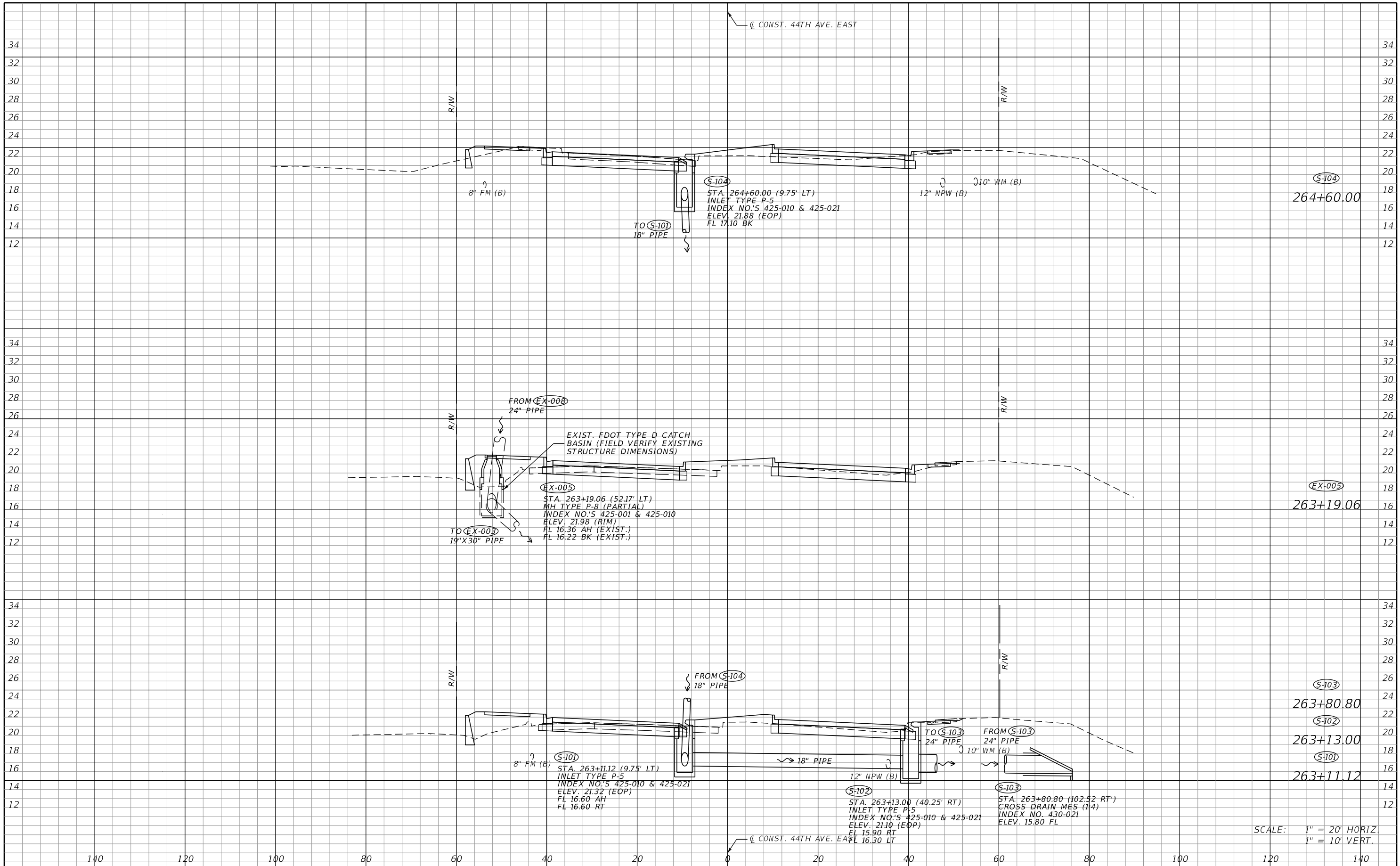
EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019




EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019

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| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER JASON L. STARR | SUPERELEVATION TRANSITION DETAIL | SHEET NO. 24 |
| | | | | DESIGNED BY JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| | | | | DRAWN BY JHC | SARASOTA, FLORIDA 34232 | | | | | |
| | | | | CHECKED BY DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | |

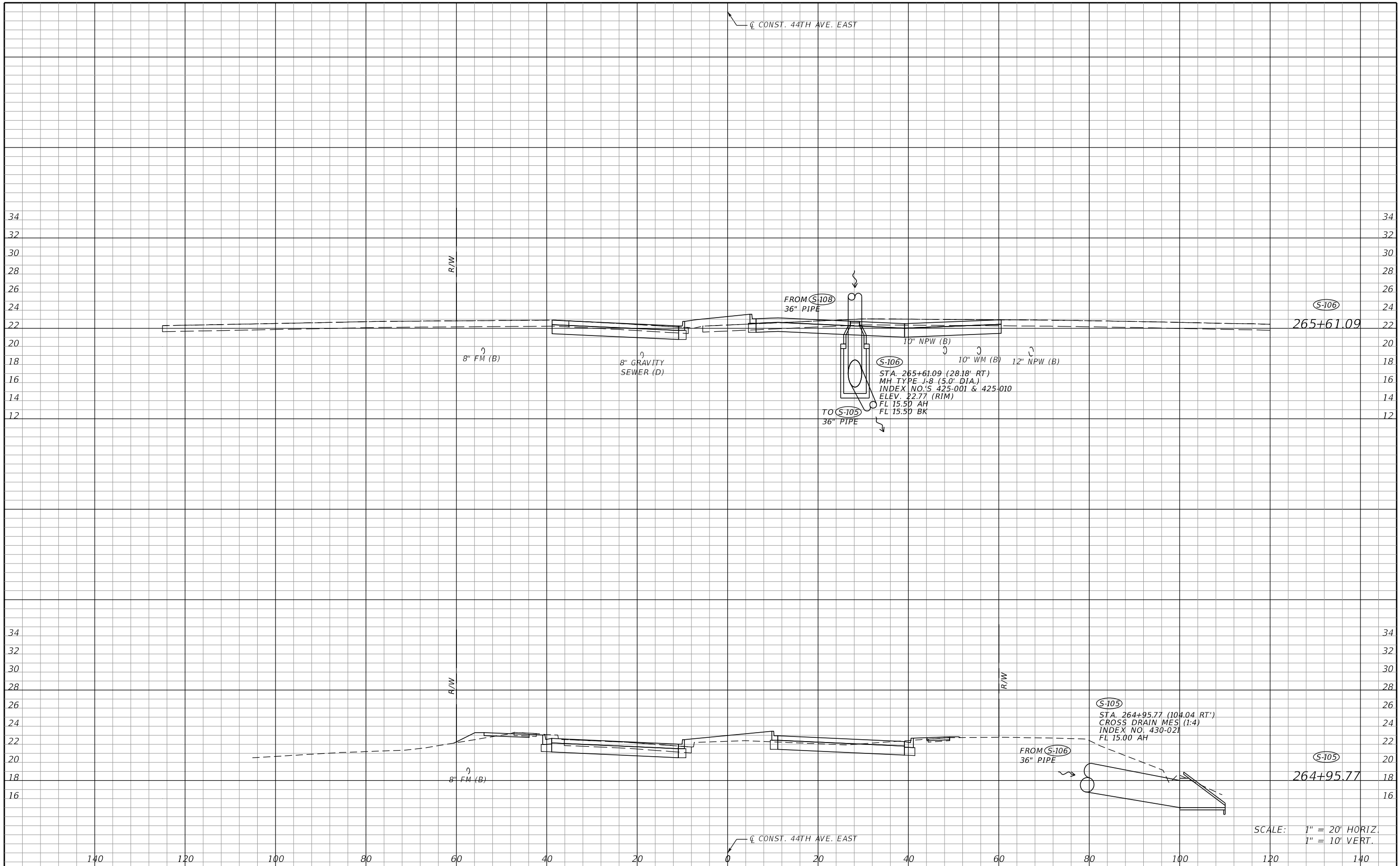
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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

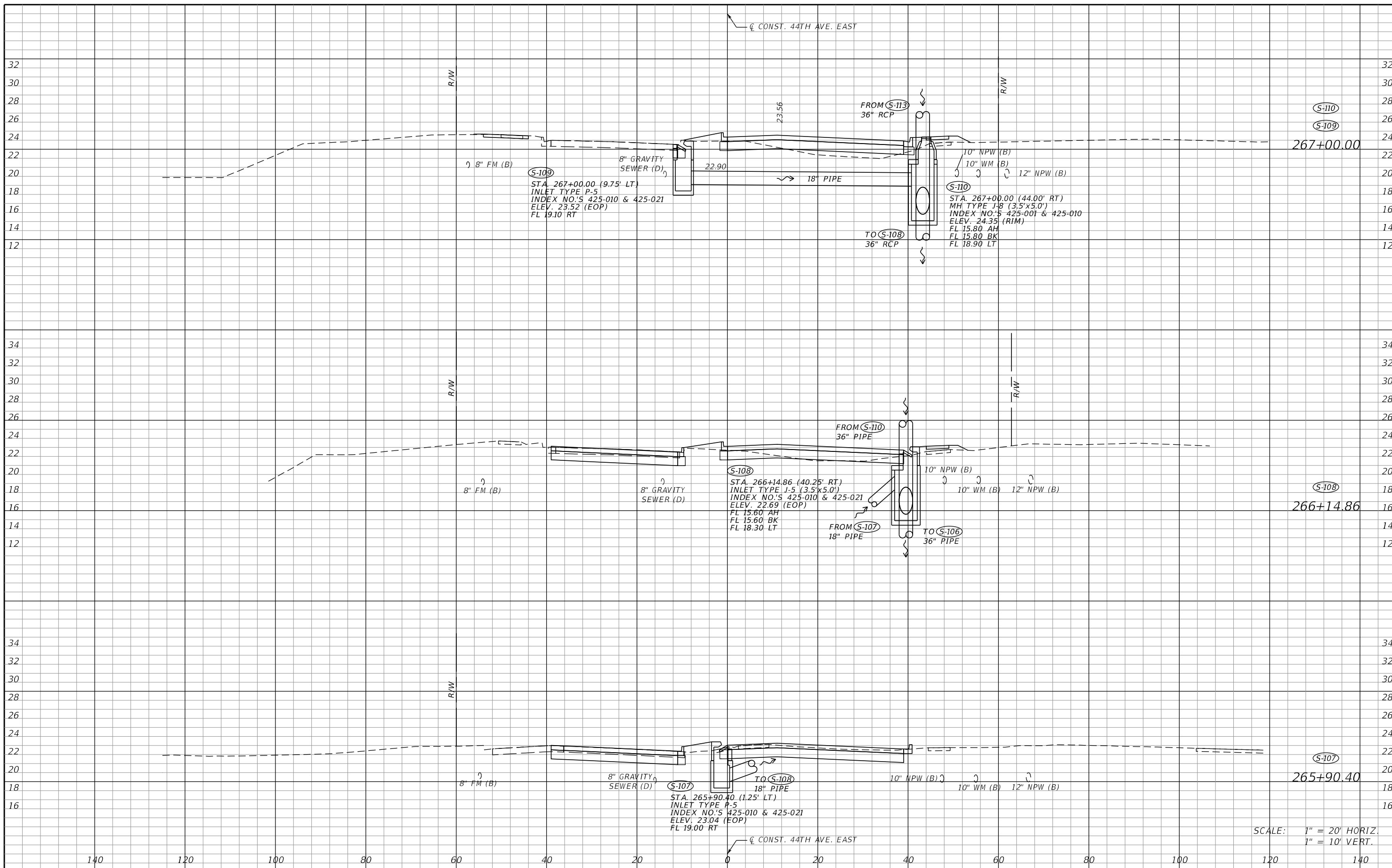
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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (1) SHEET NO. 25 | |
| No. | REVISIONS | DATE | BY | | | | | | |

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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.

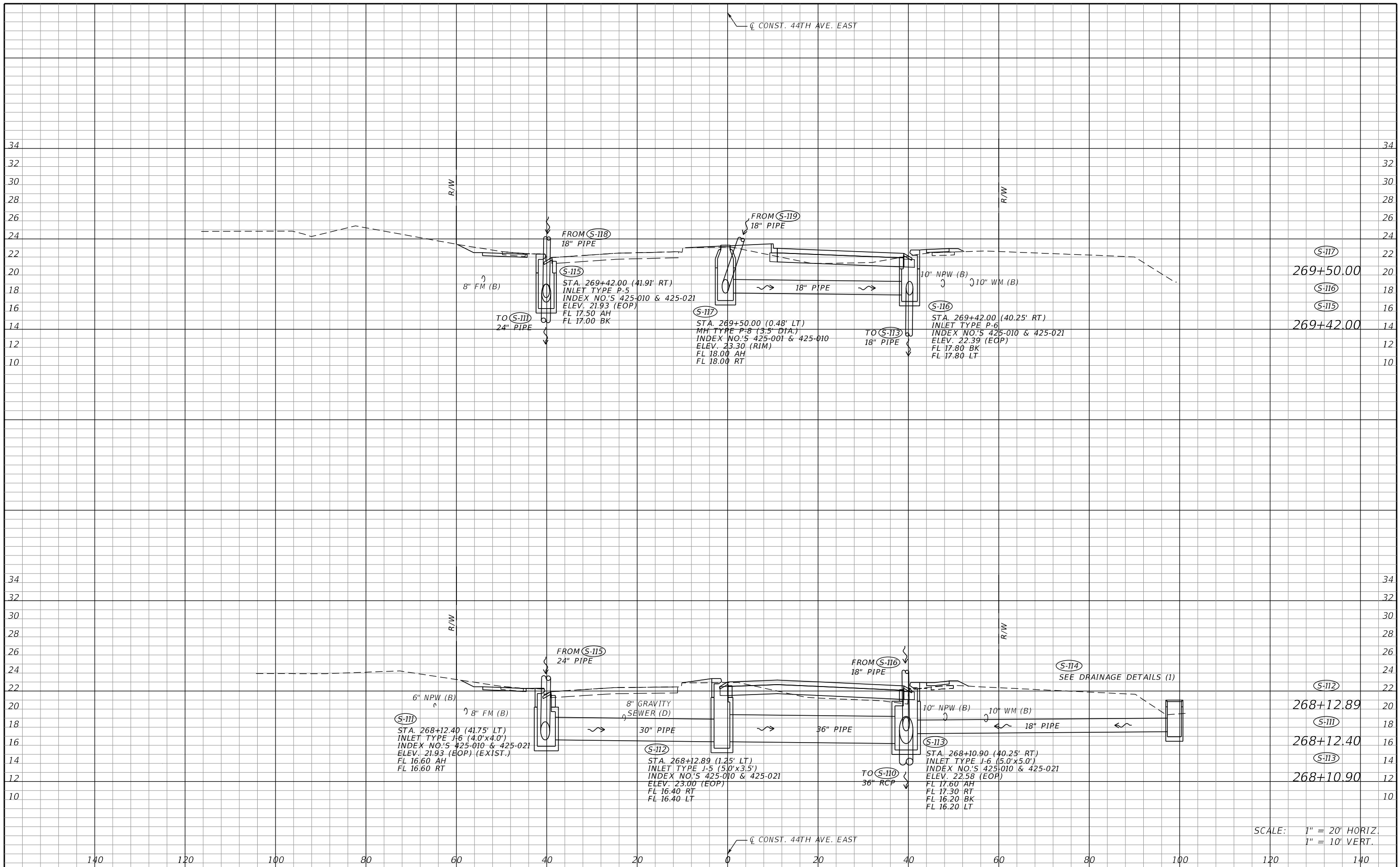
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| | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | DRAINAGE STRUCTURES (2) | SHEET NO. 26 |
| No. | REVISIONS | DATE | BY | PROJECT NO. 6045662 | | | |




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

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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 27 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (3) | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | 16:08:35 | | 09/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD01.dgn | | | |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | Manatee County Florida | | MANATEE COUNTY PUBLIC WORKS | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

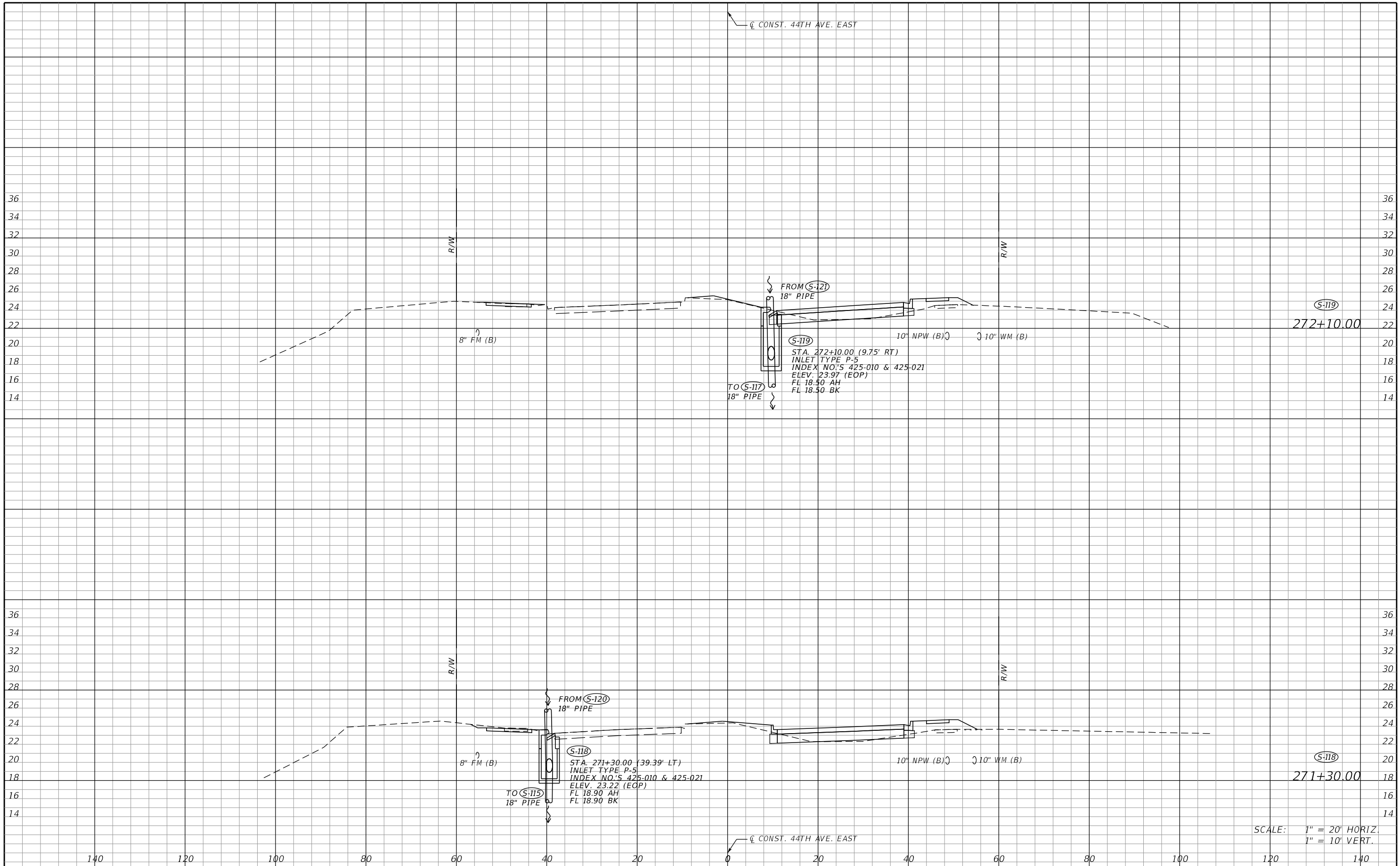
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



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

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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (4) SHEET NO. 28 | |
| No. | REVISIONS | DATE | BY | | | | | | |

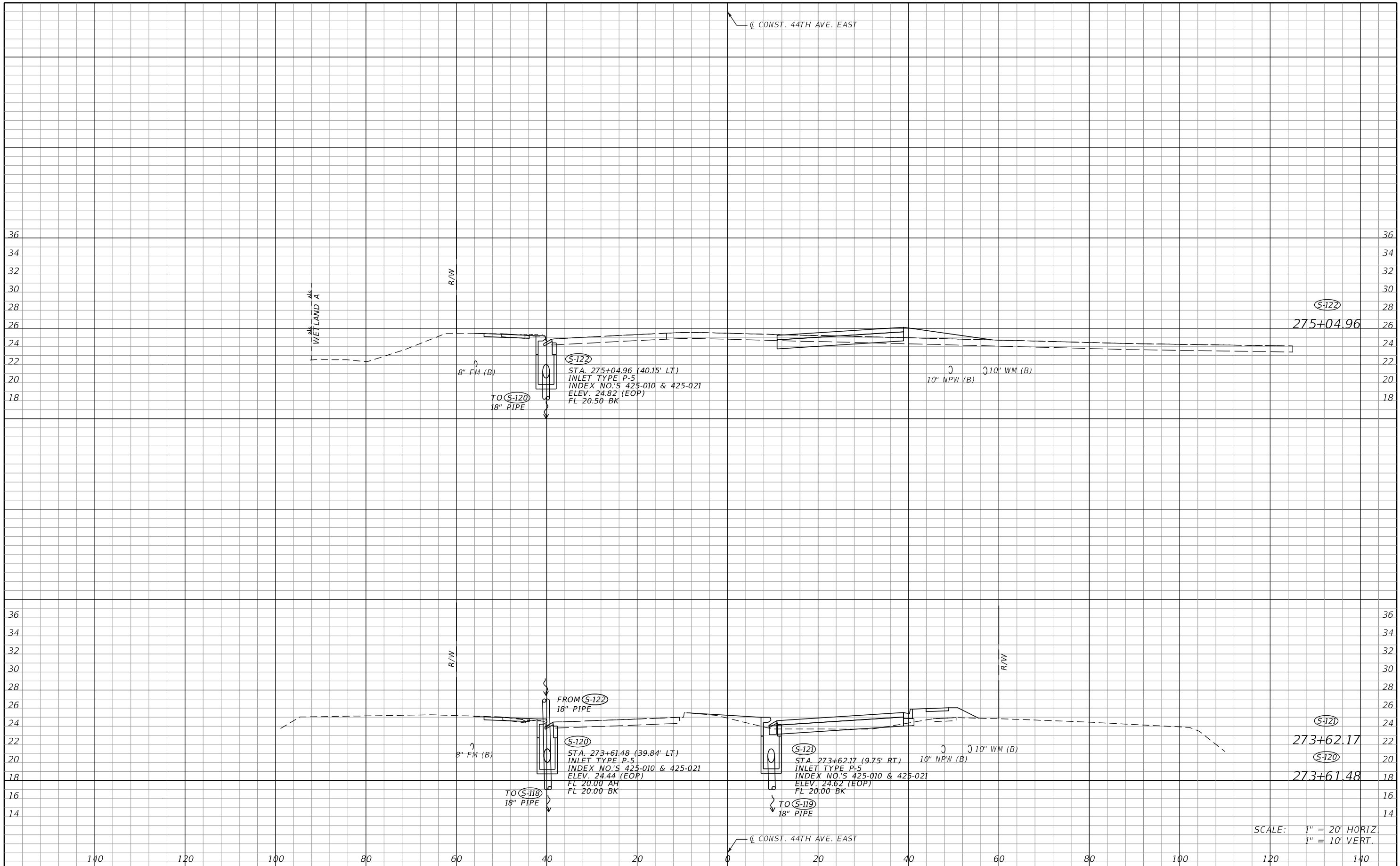
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



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1" = 10' VERT.

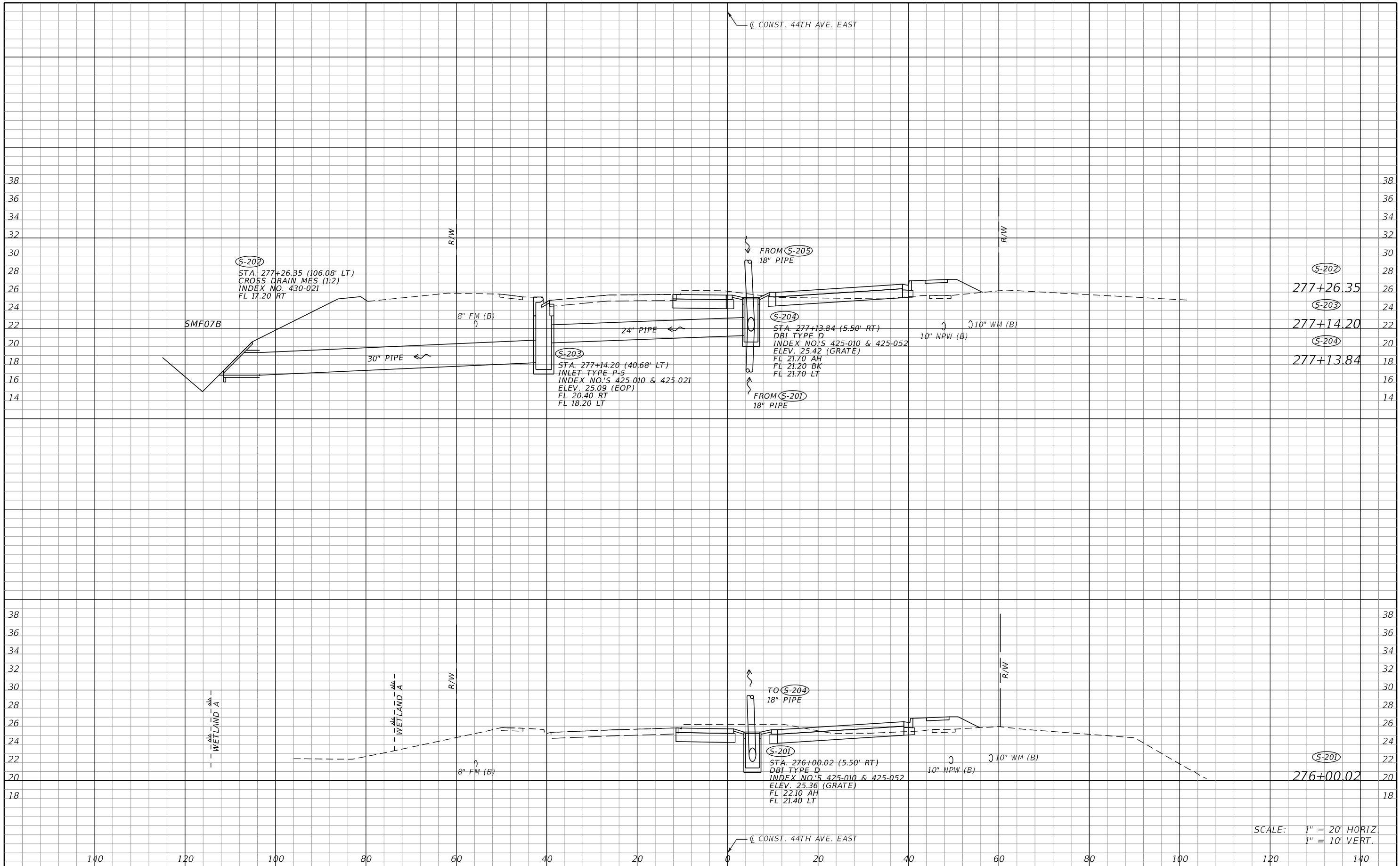
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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 29 |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY PUBLIC WORKS | | DRAINAGE STRUCTURES (5) |
| CHECKED BY LAZ | | | | | | 58822 | | |
| No. | REVISIONS | DATE | BY | | | | | |

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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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 30 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (6) | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| CHECKED BY LAZ | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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



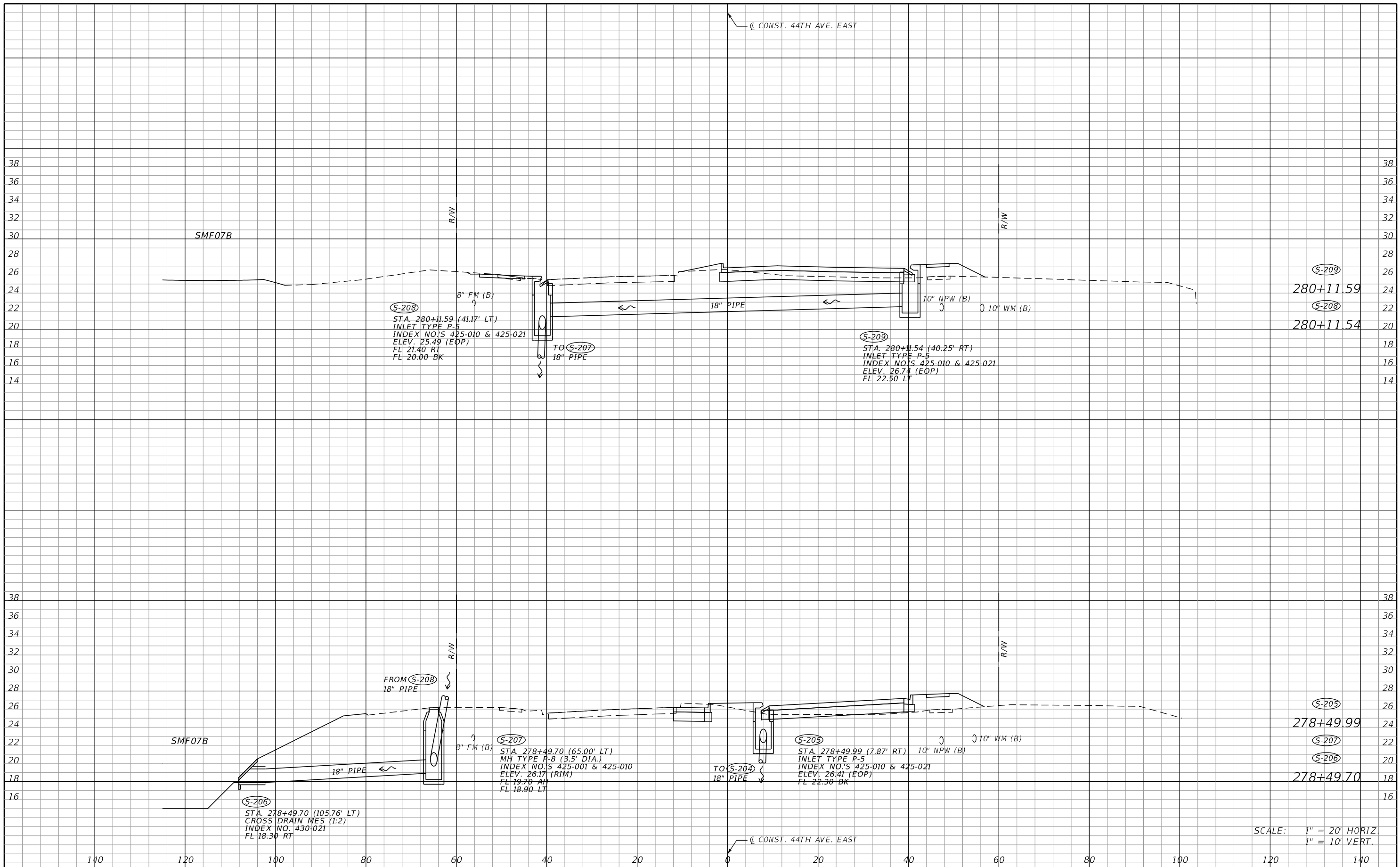
SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (7) | | SHEET NO. 31 | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |


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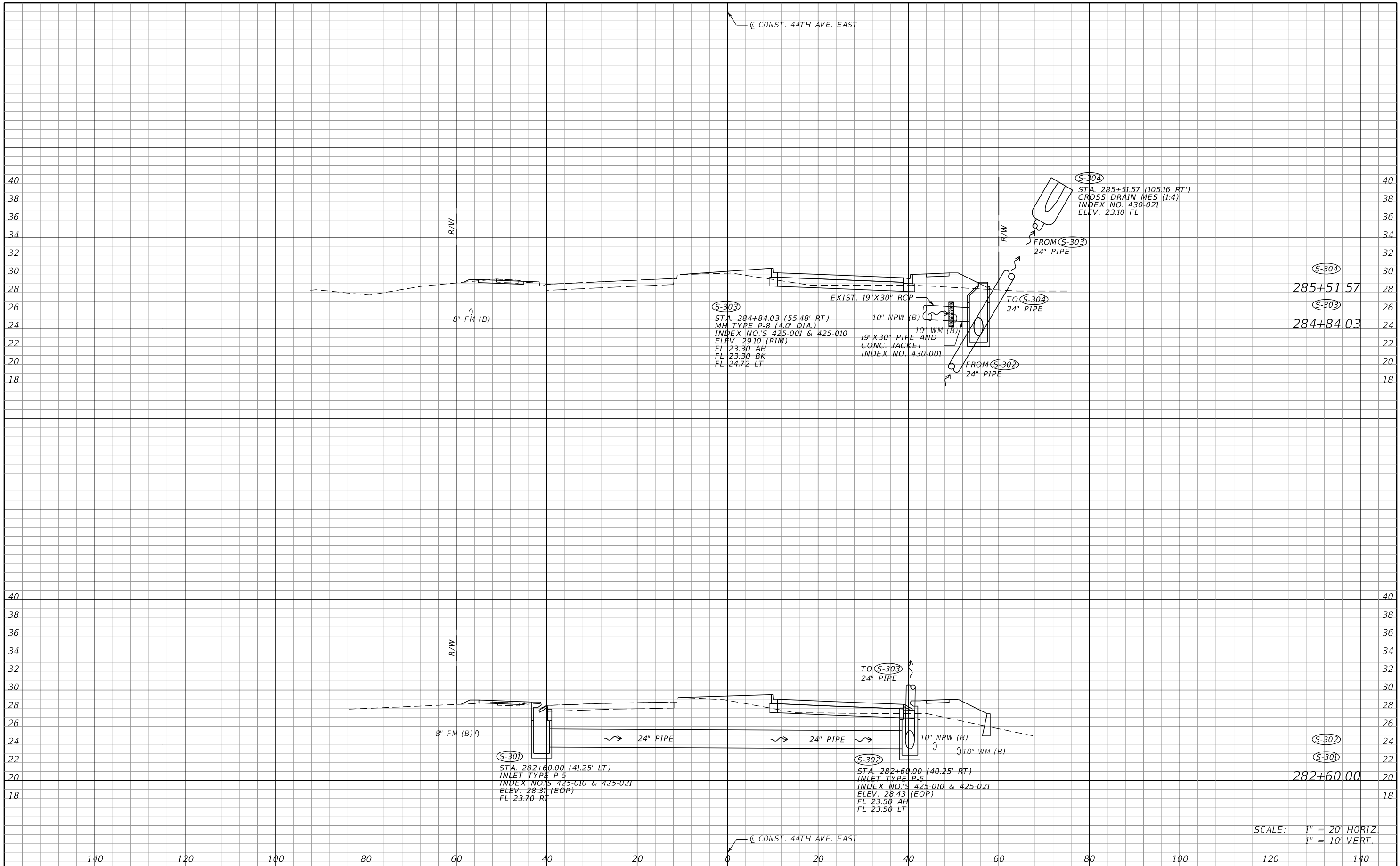
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.




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

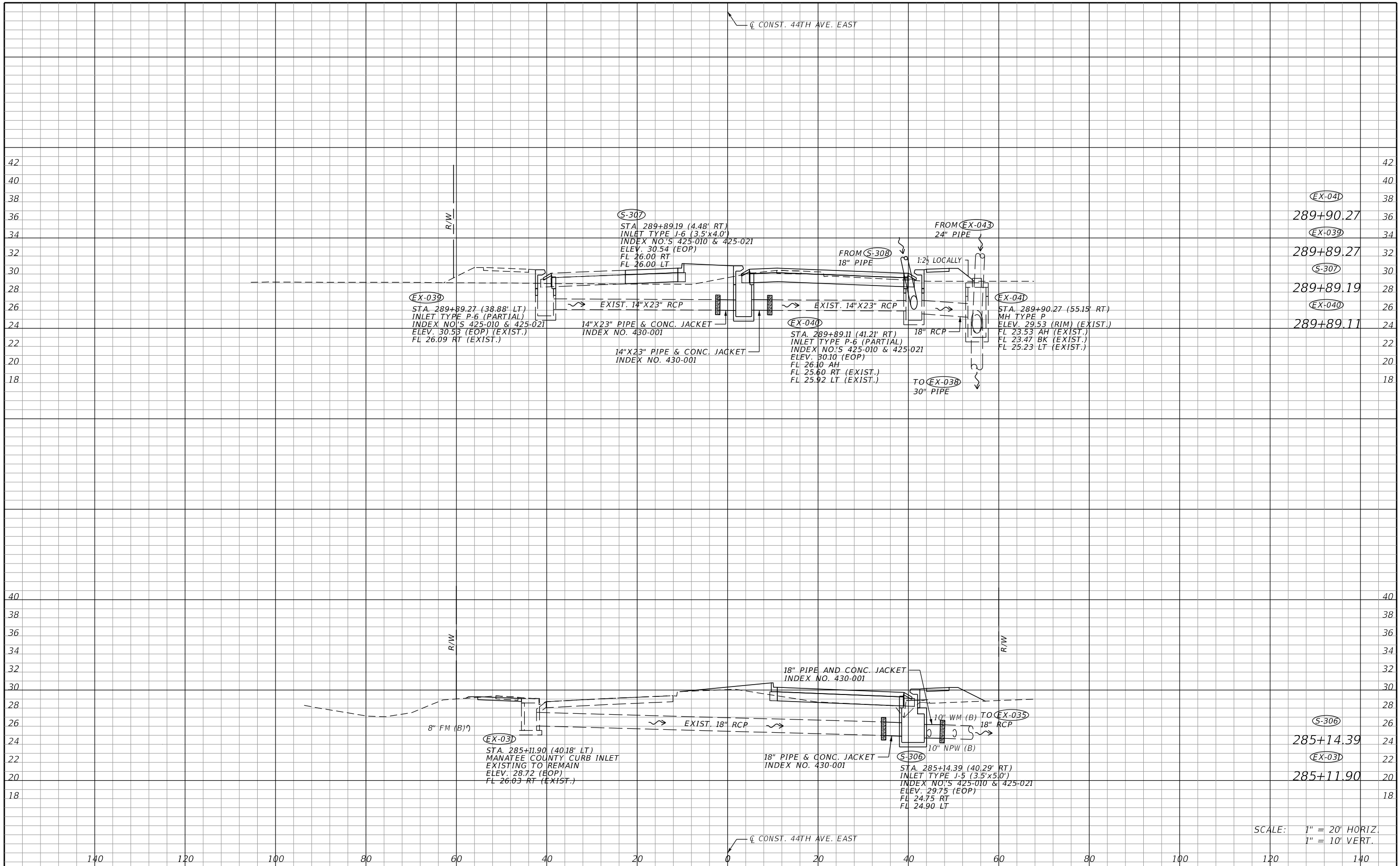
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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (8) | | SHEET NO. 32 | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |

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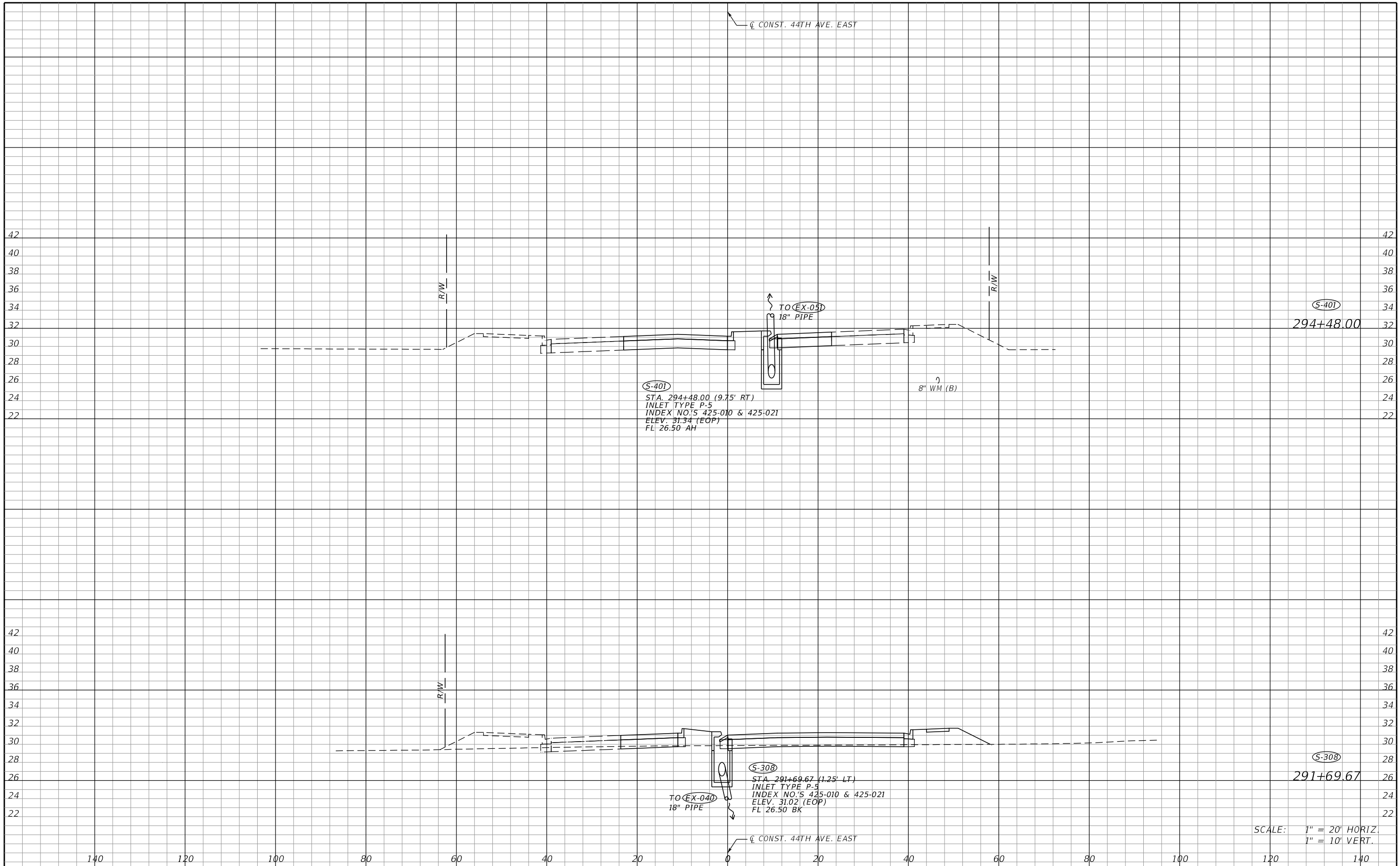
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| | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | DRAINAGE STRUCTURES (9) | SHEET NO. 33 |
| No. | REVISIONS | DATE | BY | LAZ | | | |



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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | SHEET NO. 34 | |
| No. REVISIONS DATE BY | | | | | | | | | | | |

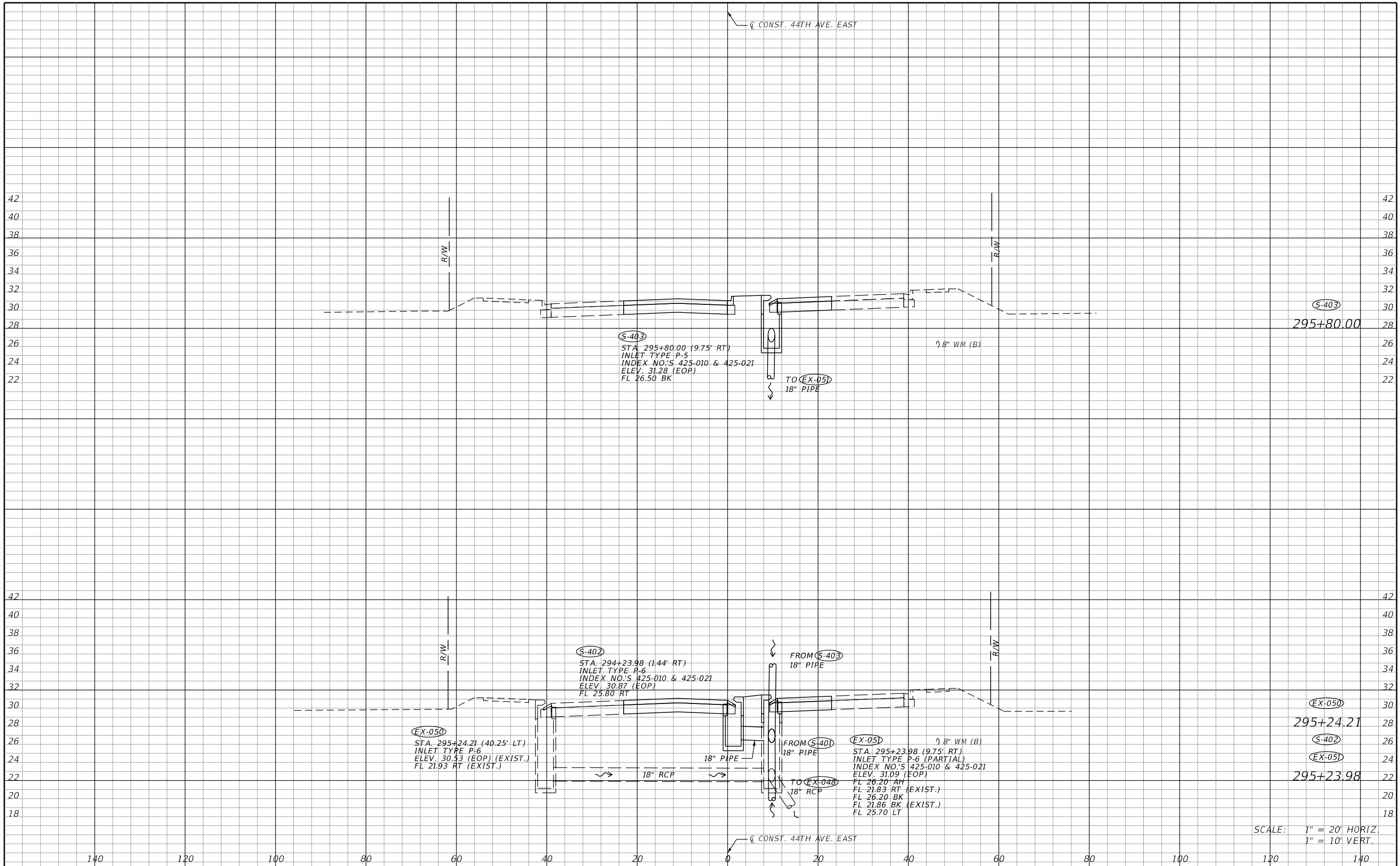
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



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

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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 35 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (II) | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | 16:08:54 | | 09/20/2019 | | | |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\DRXSRD01.dgn | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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



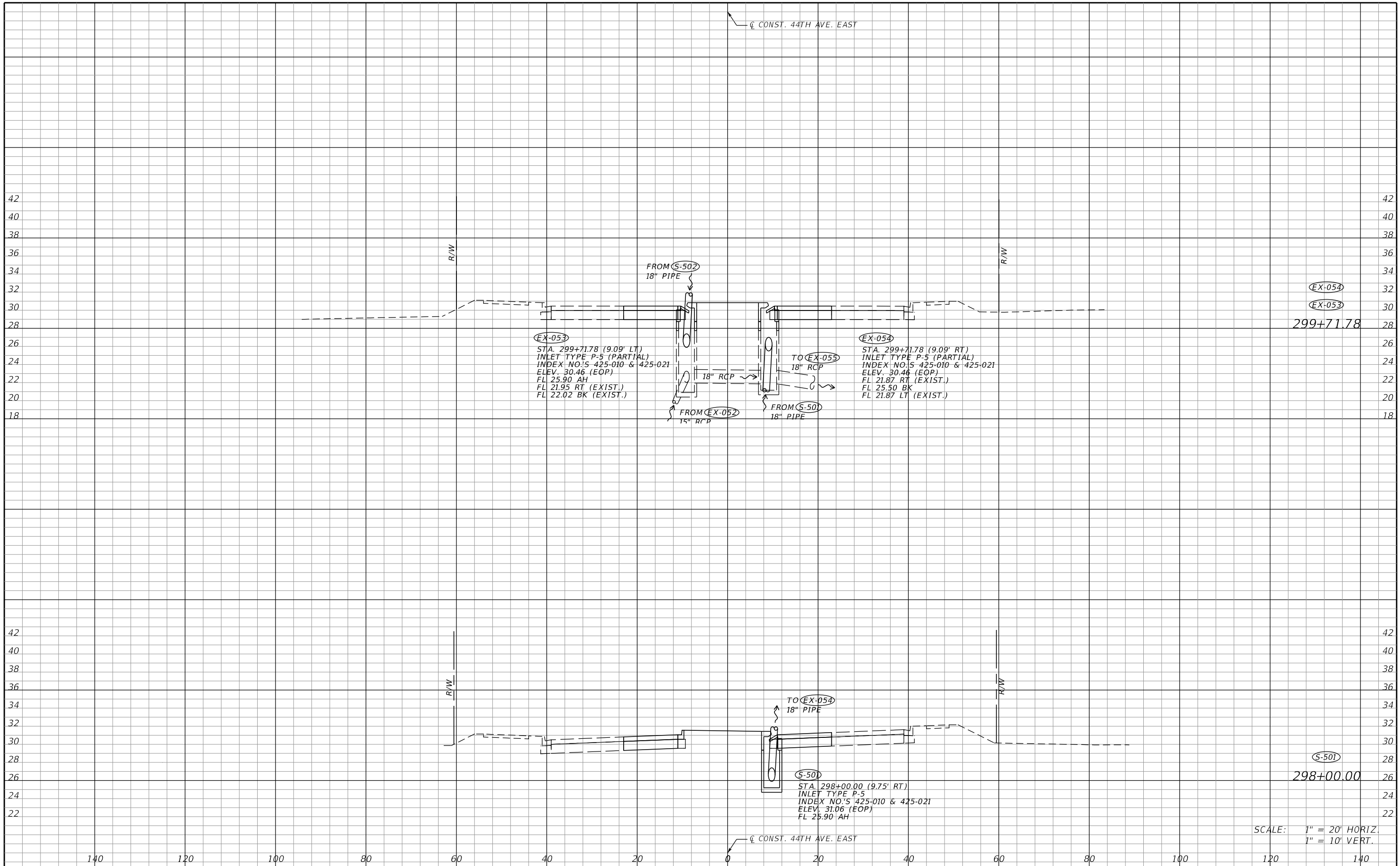
SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 36 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (12) | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (12) | |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (12) | |
| No. | REVISIONS | DATE | BY | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (12) | |


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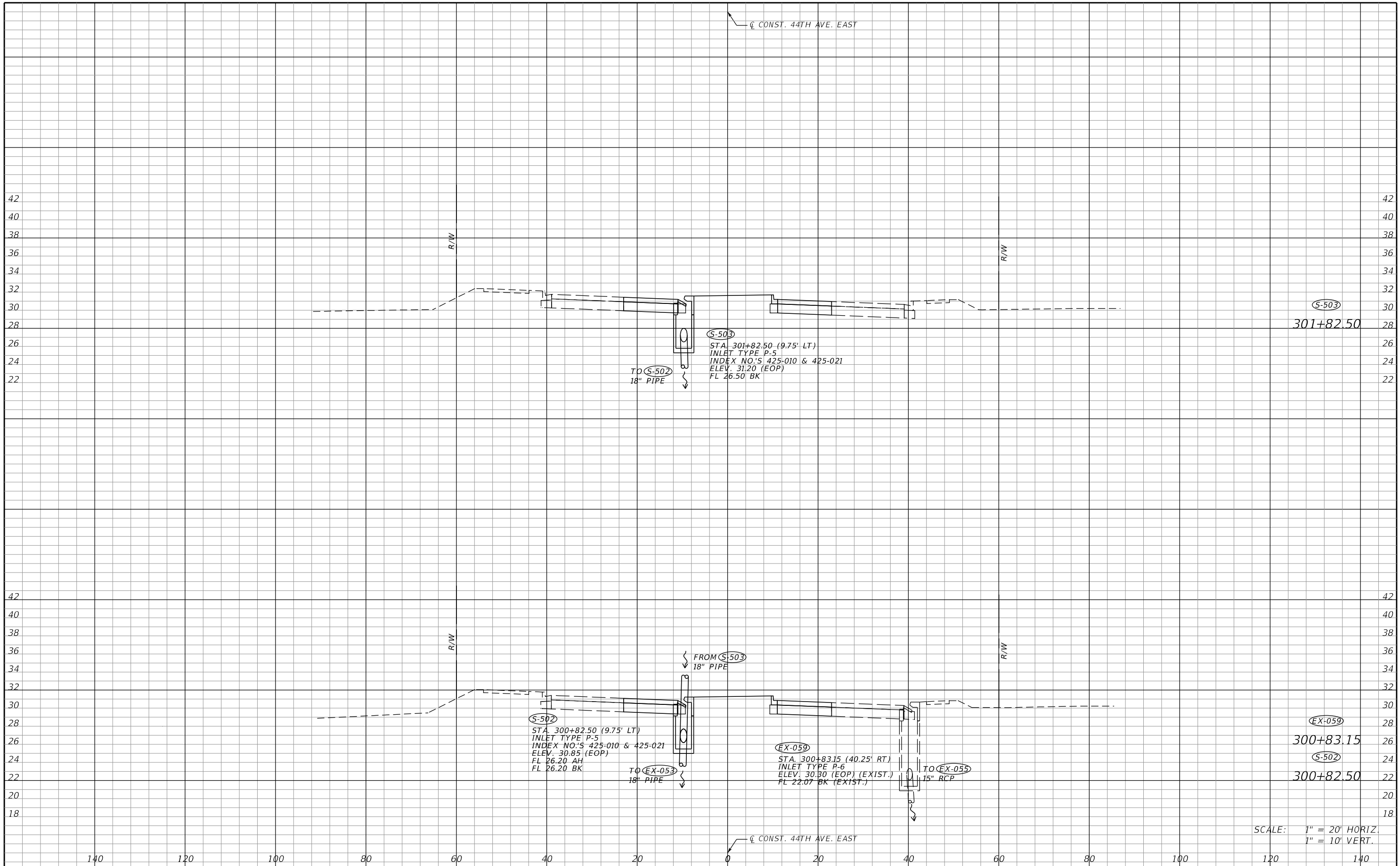
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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (13) SHEET NO. 37 | |
| No. | REVISIONS | DATE | BY | | | | | | |

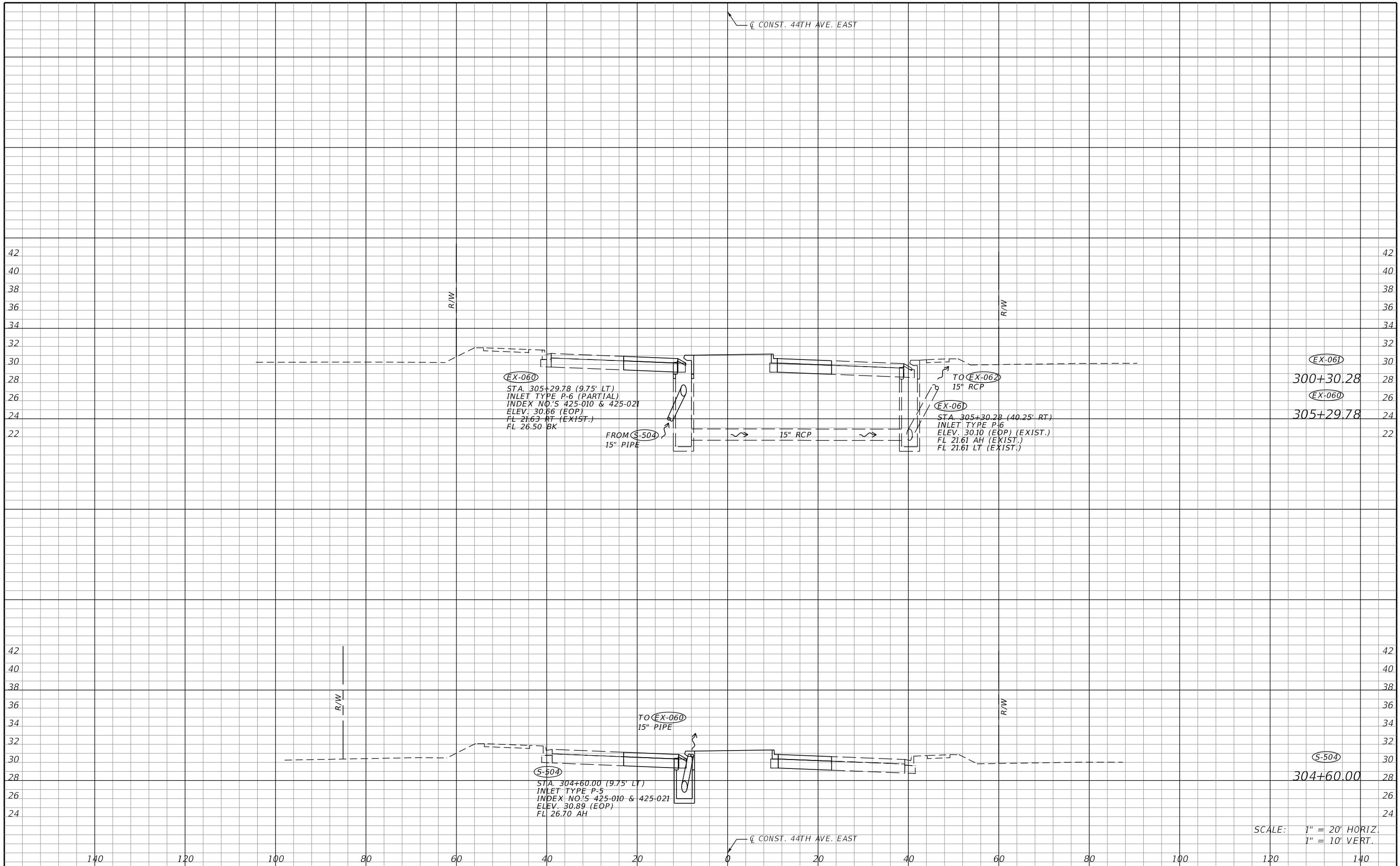
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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 38 |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DRAINAGE STRUCTURES (14) |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | |
| No. | REVISIONS | DATE | BY | | | | | |

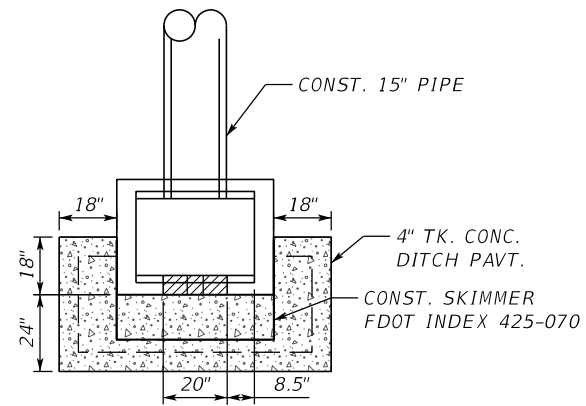
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SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

| | | | | | | | | | |
|---|-----------|---|----|-------------------------------------|--|---|--|---|--|
| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | DRAINAGE STRUCTURES (15) SHEET NO. 39 | |
| No. | REVISIONS | DATE | BY | | | | | | |

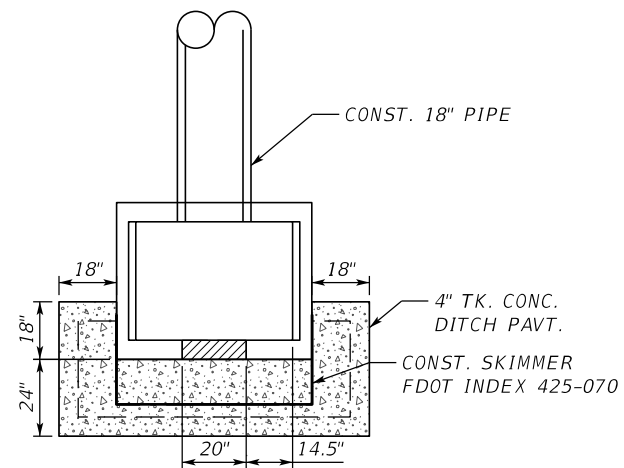
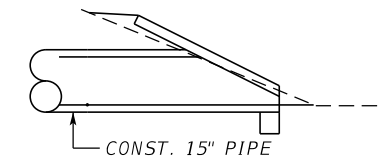
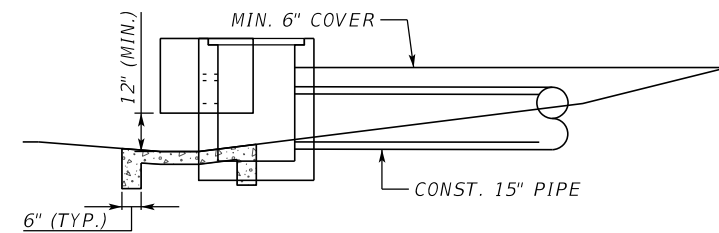
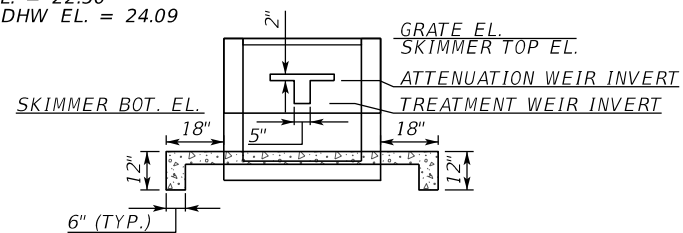
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



S-210
 STA. 279+89.50 (113.54' LT)
 CONST. DBI TYPE C (MODIFY)
 SKIMMER TOP EL. 24.20
 GRATE EL. 24.20
 ATTENUATION WEIR EL. 23.10
 TREATMENT WEIR EL. 22.50
 SKIMMER BOT. EL. 22.25
 INDEX NO.'S 425-001, 425-010, AND 425-052
 FL 21.50

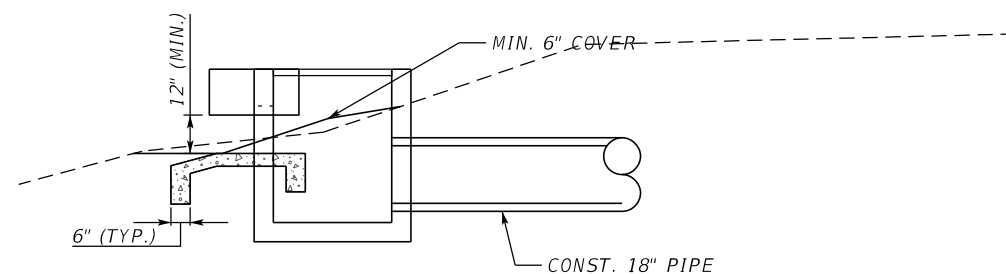
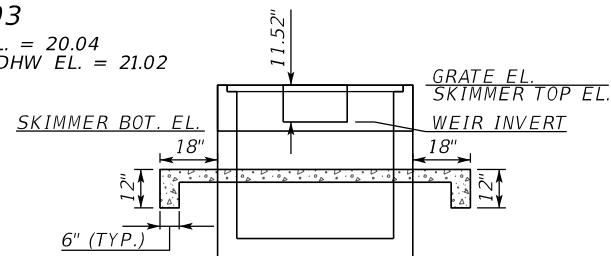
S-211
 STA. 280+65.70 (103.47' LT)
 CROSS DRAIN MES (1:2)
 INDEX NO. 430-021
 FL 21.40


SMF07B
 NWL EL. = 22.50
 25-YR DHW EL. = 24.09

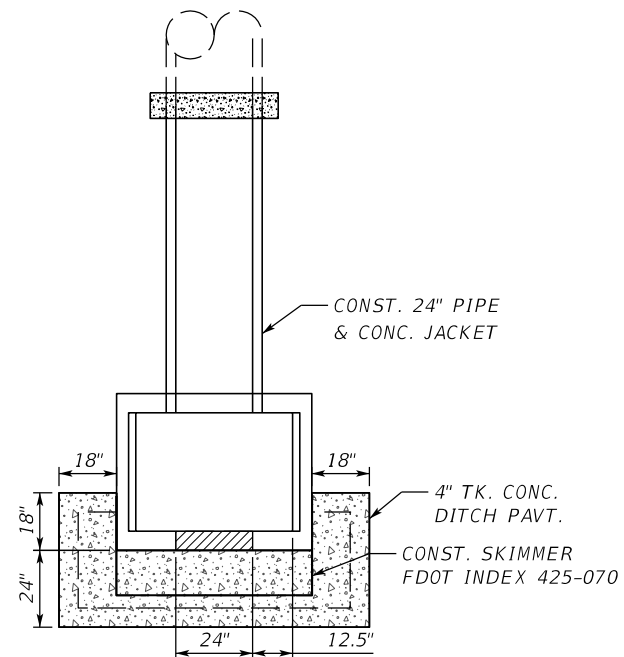
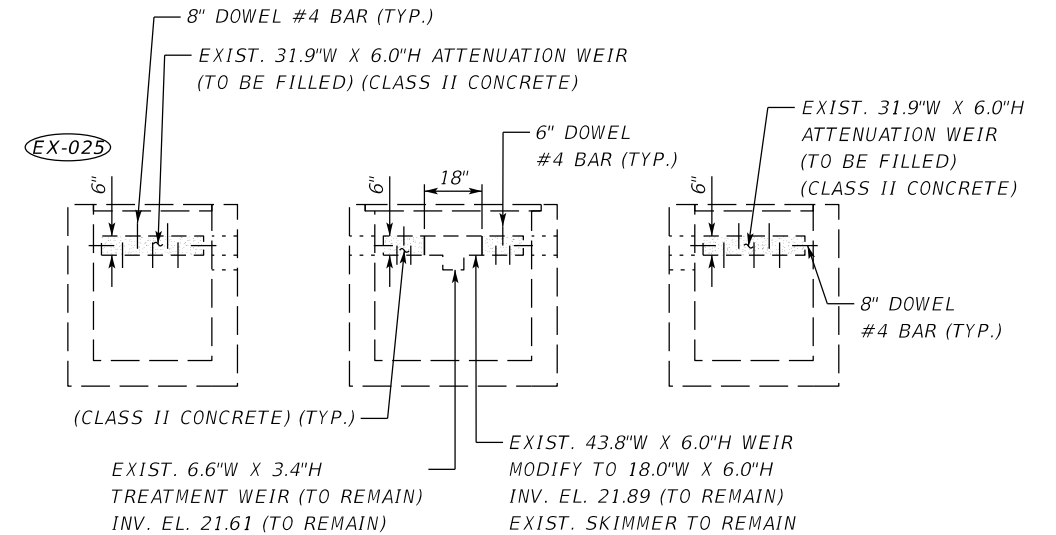
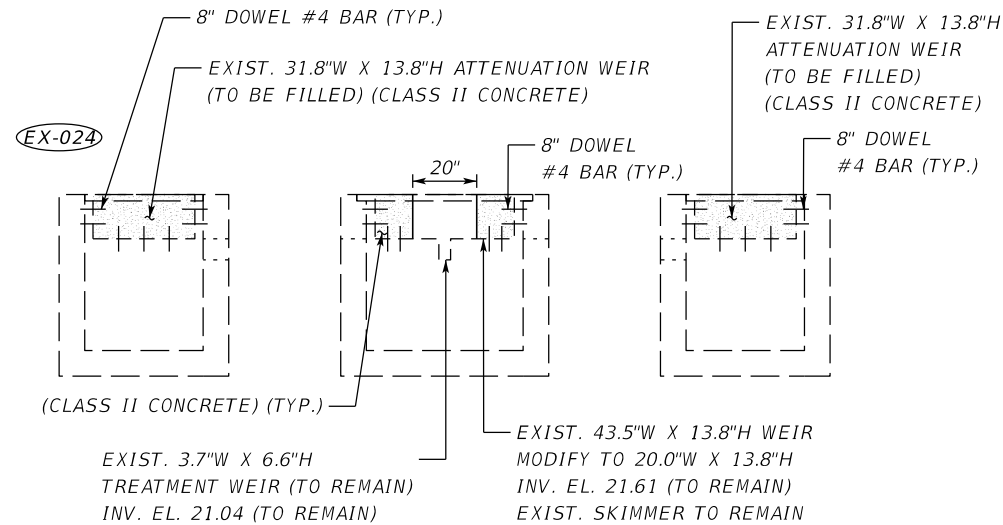
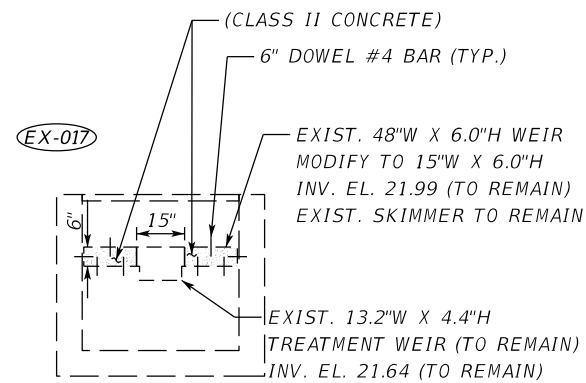


S-114
 STA. 268+09.80 (98.82' RT)
 CONST. DBI TYPE D (MODIFY)
 SKIMMER TOP EL. 21.00
 GRATE EL. 21.00
 WEIR EL. 20.04
 SKIMMER BOT. EL. 19.80
 INDEX NO.'S 425-001, 425-010, AND 425-052
 FL 17.50

SMF03
 NWL EL. = 20.04
 25-YR DHW EL. = 21.02

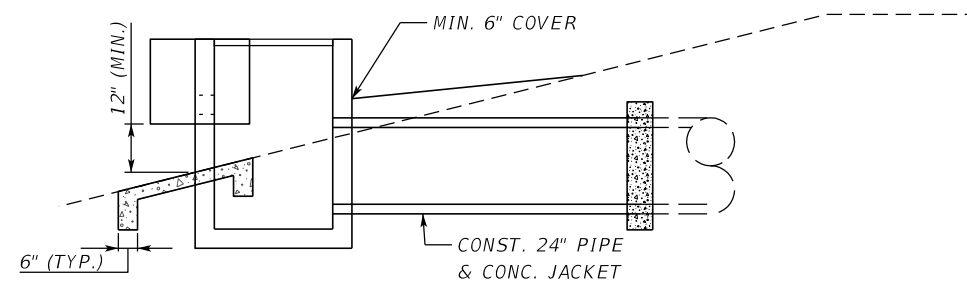
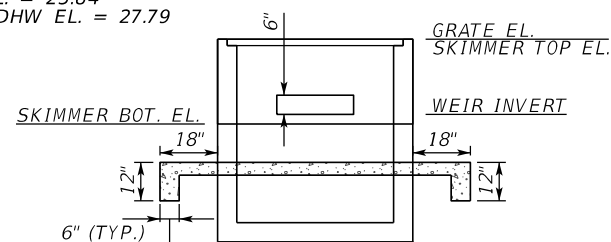


| | | | | | | | | | | |
|-----|-----------|------|----|-------------------|---|--------------------------|--|---------------------------------------|-----------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER LISANDRO A. ZAPATA | DRAINAGE DETAILS (1) | SHEET NO. 40 |
| | | | | CHECKED BY LAZ | PROJECT NO. 6045662 | FL. LICENSE NO. 58822 | | | | |



S-305
 STA. 286+36.74 (275.08' RT)
 CONST. DBI TYPE D (MODIFY)
 SKIMMER TOP EL. 27.80
 GRATE EL. 27.80
 WEIR EL. 25.84
 SKIMMER BOT. EL. 25.59
 INDEX NO.'S 425-001, 425-010, AND 425-052
 FL 23.60

SMF09
 NWL EL. = 25.84
 25-YR DHW EL. = 27.79



| | | | | | | | | |
|-----|-----------|------|----|-----------------|-----------------------------------|---------------------|------------------------------------|--------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | DESIGN ENGINEER LISANDRO A. ZAPATA | SHEET NO. 41 |
| | | | | DESIGNED BY LAZ | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | FL. LICENSE NO. 58822 | |
| | | | | DRAWN BY GAC | SARASOTA, FLORIDA 34232 | | | |
| | | | | CHECKED BY LAZ | CERTIFICATE OF AUTHORIZATION 4213 | | | |

SMF04

MODIFY EXIST. CONTROL
STRUCTURE TOP (SEE
DRAINAGE DETAILS SHEET)

**MANATEE COUNTY
CONSERVATION/DRAINAGE
EASEMENT**
0.65 AC

| ID | STA. | OFFSET |
|----|-----------|-----------|
| 1 | 277+28.30 | 80.00 LT |
| 2 | 277+28.30 | 115.00 LT |
| 3 | 277+13.19 | 147.65 LT |
| 4 | 278+26.77 | 140.45 LT |
| 5 | 278+16.29 | 174.42 LT |
| 6 | 278+37.43 | 143.79 LT |
| 7 | 278+78.14 | 199.17 LT |
| 8 | 278+93.10 | 167.53 LT |
| 9 | 279+14.31 | 195.37 LT |
| 10 | 279+03.62 | 164.30 LT |
| 11 | 279+51.83 | 134.24 LT |
| 12 | 279+53.60 | 132.76 LT |
| 13 | 279+69.35 | 153.44 LT |
| 14 | 279+63.00 | 128.23 LT |
| 15 | 279+87.48 | 148.87 LT |
| 16 | 279+78.92 | 114.93 LT |
| 17 | 279+78.90 | 79.93 LT |
| 18 | 279+20.82 | 101.35 LT |
| 19 | 278+87.47 | 111.77 LT |
| 20 | 278+76.88 | 115.00 LT |
| 21 | 278+76.88 | 80.00 LT |

| DESIGN WATER LEVELS | |
|---------------------|-------|
| NWL | 22.50 |
| SHGWT | 22.50 |
| SWFWMD 25-YR | 24.09 |

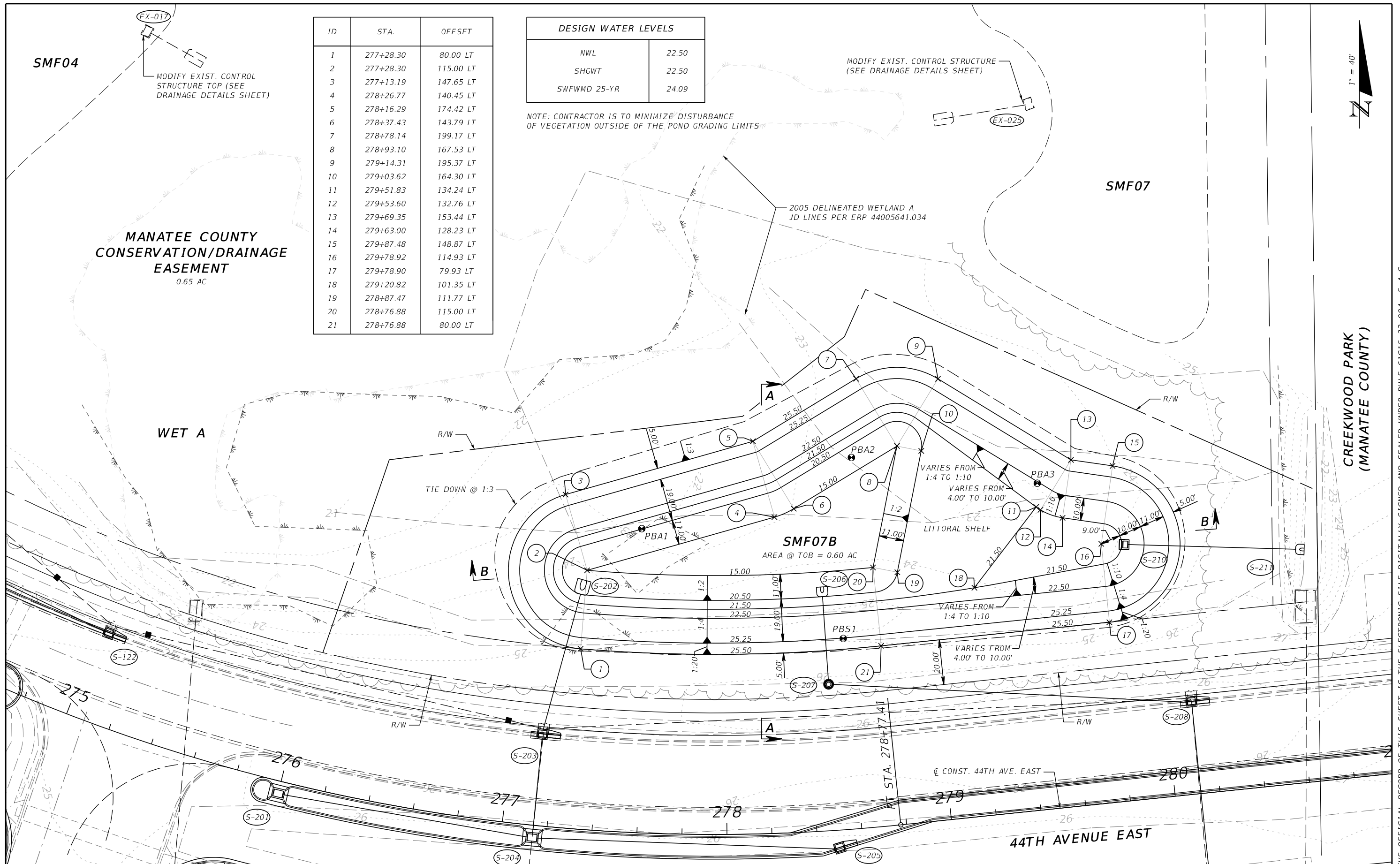
NOTE: CONTRACTOR IS TO MINIMIZE DISTURBANCE
OF VEGETATION OUTSIDE OF THE POND GRADING LIMITS

MODIFY EXIST. CONTROL STRUCTURE
(SEE DRAINAGE DETAILS SHEET)

SMF07

2005 DELINEATED WETLAND A
JD LINES PER ERP 44005641.034

CREEKWOOD PARK
(MANATEE COUNTY)



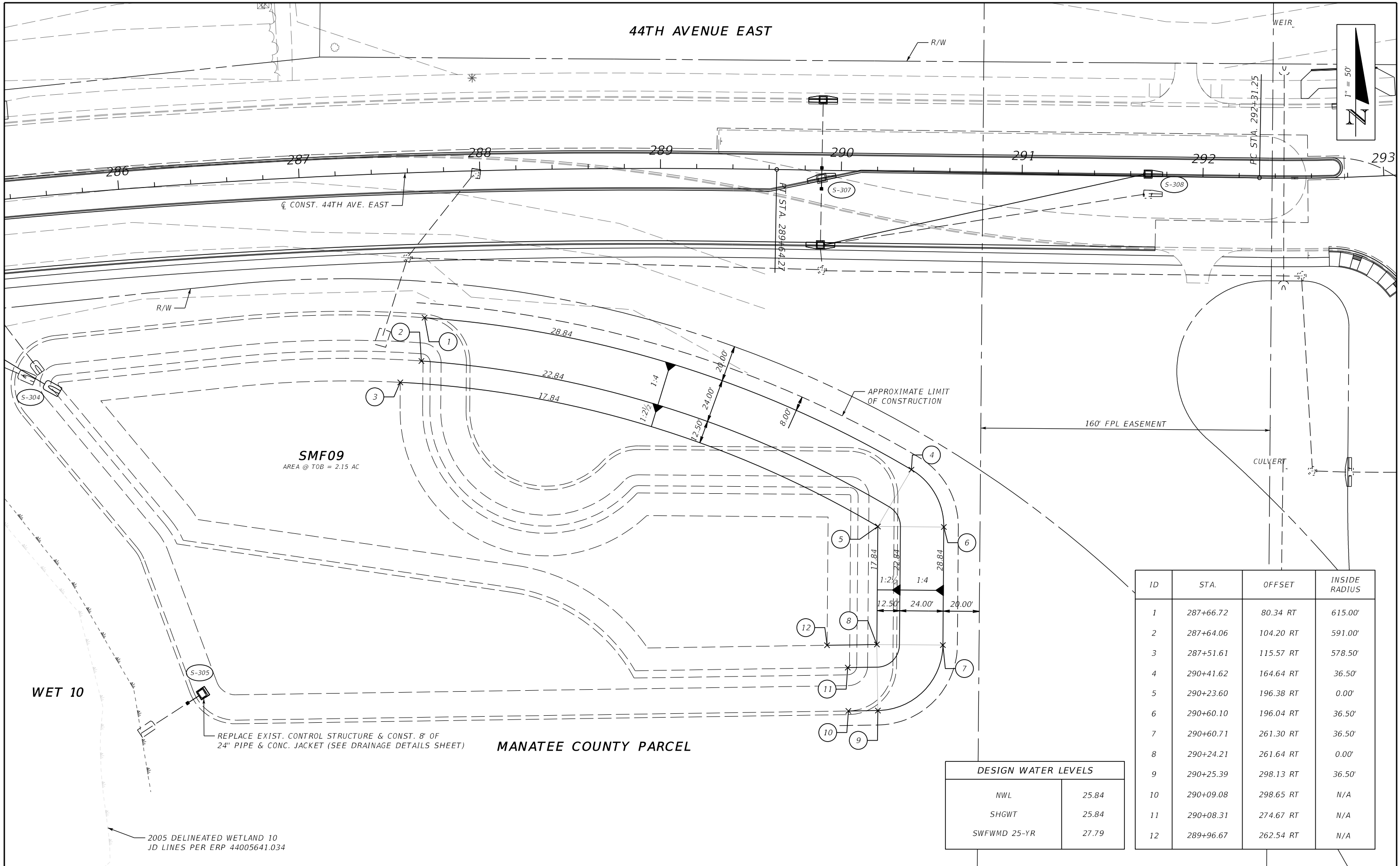
| | | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|-----------------------------|--|------------------------------------|--|--------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 42 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | 16:09:58 | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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



**MANATEE COUNTY
PUBLIC WORKS**

POND PLAN (1)



| ID | STA. | OFFSET | INSIDE RADIUS |
|----|-----------|-----------|---------------|
| 1 | 287+66.72 | 80.34 RT | 615.00' |
| 2 | 287+64.06 | 104.20 RT | 591.00' |
| 3 | 287+51.61 | 115.57 RT | 578.50' |
| 4 | 290+41.62 | 164.64 RT | 36.50' |
| 5 | 290+23.60 | 196.38 RT | 0.00' |
| 6 | 290+60.10 | 196.04 RT | 36.50' |
| 7 | 290+60.71 | 261.30 RT | 36.50' |
| 8 | 290+24.21 | 261.64 RT | 0.00' |
| 9 | 290+25.39 | 298.13 RT | 36.50' |
| 10 | 290+09.08 | 298.65 RT | N/A |
| 11 | 290+08.31 | 274.67 RT | N/A |
| 12 | 289+96.67 | 262.54 RT | N/A |

| DESIGN WATER LEVELS | |
|---------------------|-------|
| NWL | 25.84 |
| SHGWT | 25.84 |
| SWFWMD 25-YR | 27.79 |

REPLACE EXIST. CONTROL STRUCTURE & CONST. 8" OF 24" PIPE & CONC. JACKET (SEE DRAINAGE DETAILS SHEET)

SMF09
AREA @ TOB = 2.15 AC

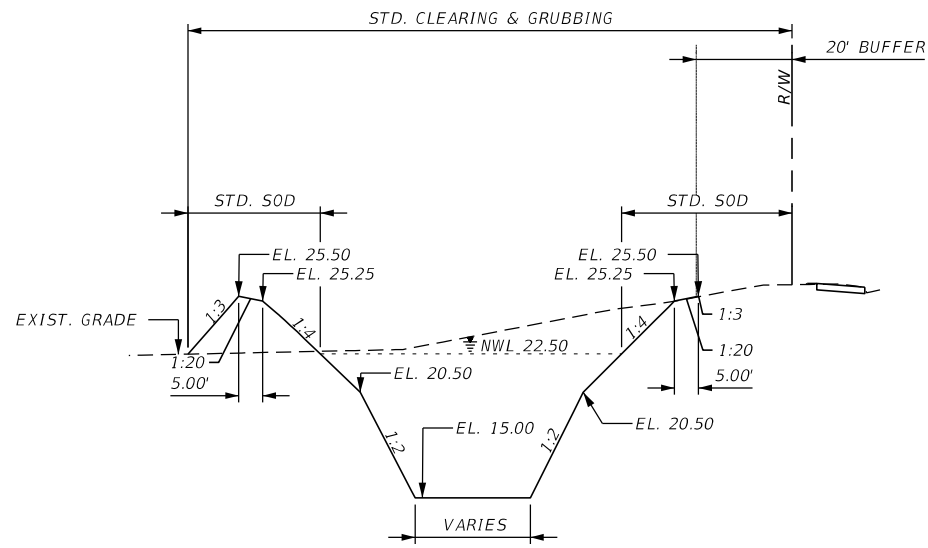
WET 10

2005 DELINEATED WETLAND 10
JD LINES PER ERP 44005641.034

MANATEE COUNTY PARCEL

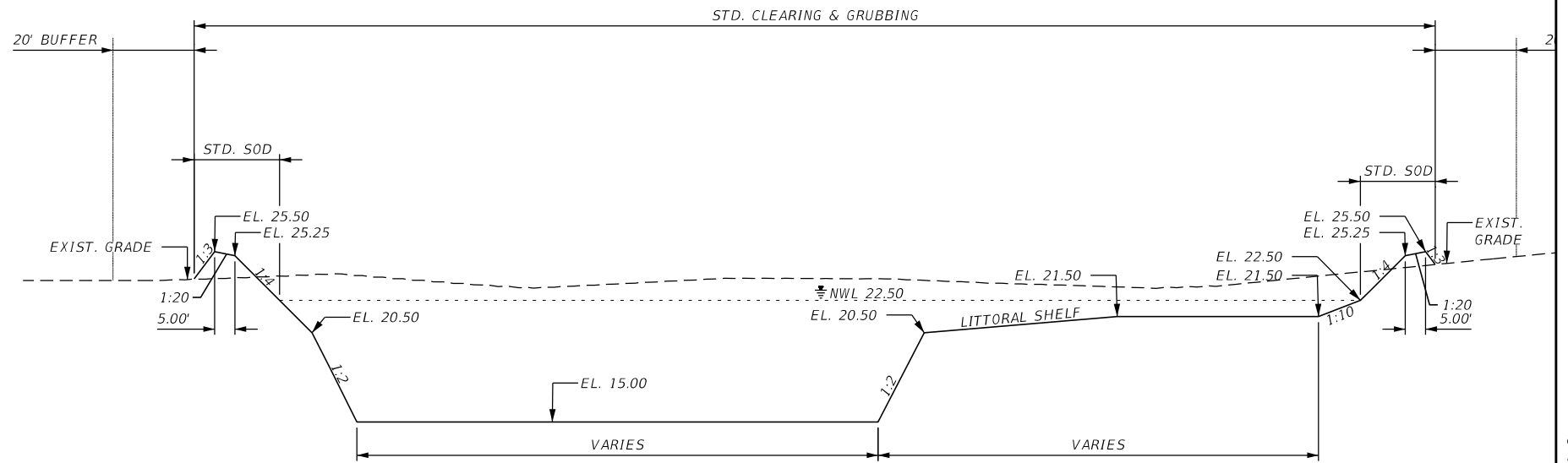
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|-----------------|-----------|-----------------------------------|----|---------------------|--|--|--|---------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 43 | |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | POND PLAN (2) | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | 16:10:03 | | 09/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\PDPLRD02.DGN | | | |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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



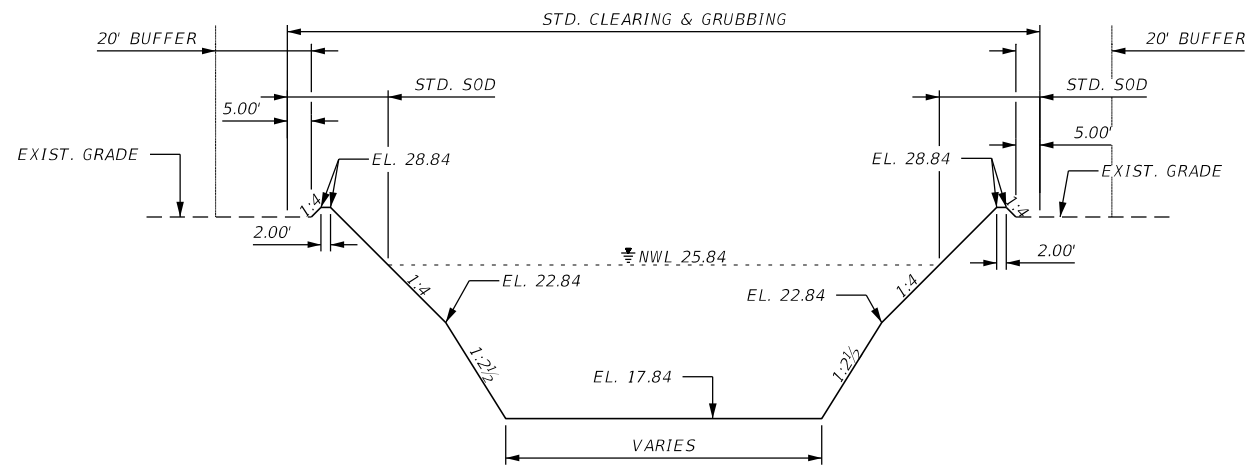
SMF07B A-A TYP. SECTION

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 10'




SMF07B B-B TYP. SECTION

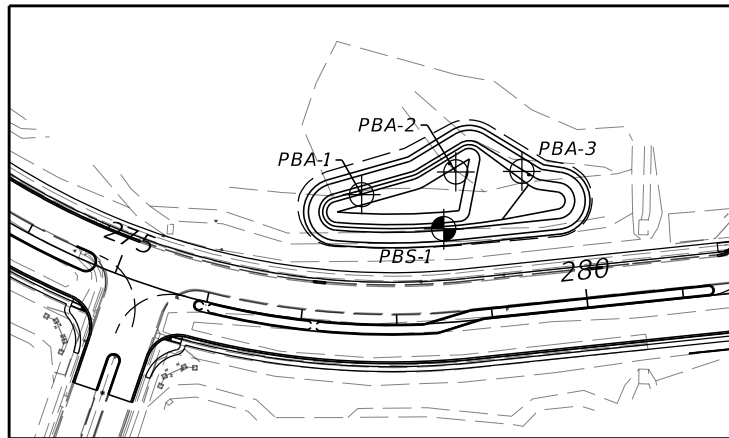
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 10'



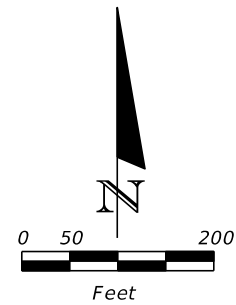
SMF09 TYPICAL SECTION

HORIZONTAL: 1" = 40'
VERTICAL: 1" = 10'

| | | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|--|-----------------|--------------------|------------------------------|-----------|----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | POND TYPICAL SECTIONS | SHEET NO. | 44 |
| | | | | DESIGNED BY | LAZ | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | | |
| | | | | DRAWN BY | GAC | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | LAZ | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |



BORING LOCATION PLAN



LEGEND

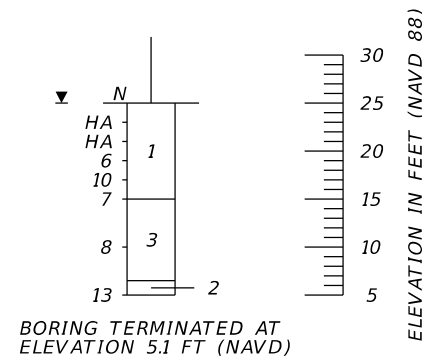
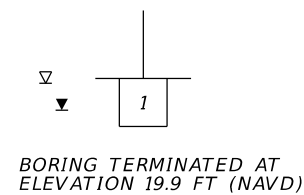
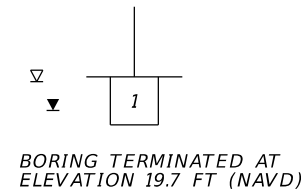
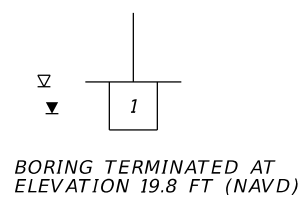
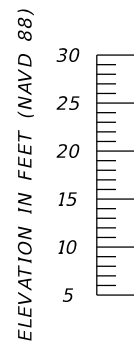
| | |
|----------|--|
| 1. | GRAY TO BROWN SAND TO SAND WITH SILT (A-3) |
| 2. | GRAY SILTY SAND (A-2-4) |
| 3. | LIGHT BROWN TO GRAY CLAYEY SAND (A-2-4/A-2-6) |
| 4. | PALE BROWN TO GRAY CLAYEY SAND TO SANDY CLAY (A-4/A-6/A-7-5/A-7-6) |
| 5. | LIGHT BROWN TO GREEN CLAY (A-7-5/A-7-6) |
| A-3 | AASHTO 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). |
| HA | HAND AUGERED TO VERIFY UTILITY CLEARANCE |
| NAVD 88 | NORTH AMERICAN VERTICAL DATUM OF 1988 |
| ▽ | 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. |

BOR # PBA-1
EASTING 503013
NORTHING 1136605
ELEV. 22.73
DATE 4/16/2019

BOR # PBA-2
EASTING 503111
NORTHING 1136629
ELEV. 23.26
DATE 4/16/2019

BOR # PBA-3
EASTING 503180
NORTHING 1136629
ELEV. 23.08
DATE 4/16/2019

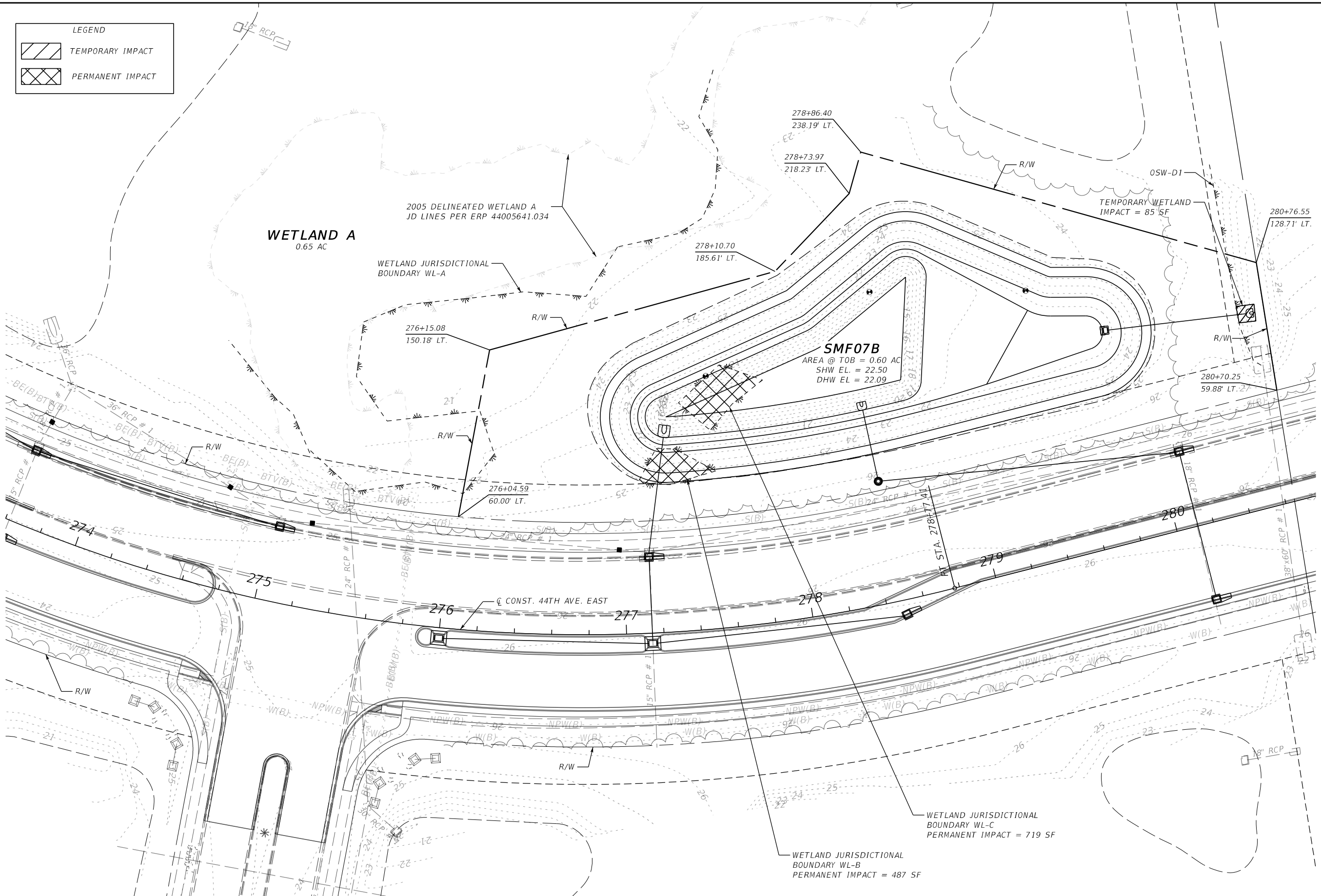
BOR # PBS-1
EASTING 503098
NORTHING 1136569
ELEV. 25.01
DATE 5/3/2019
DRILLER D. STAKELIN
HAMMER AUTOMATIC
D-25



| | 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 |

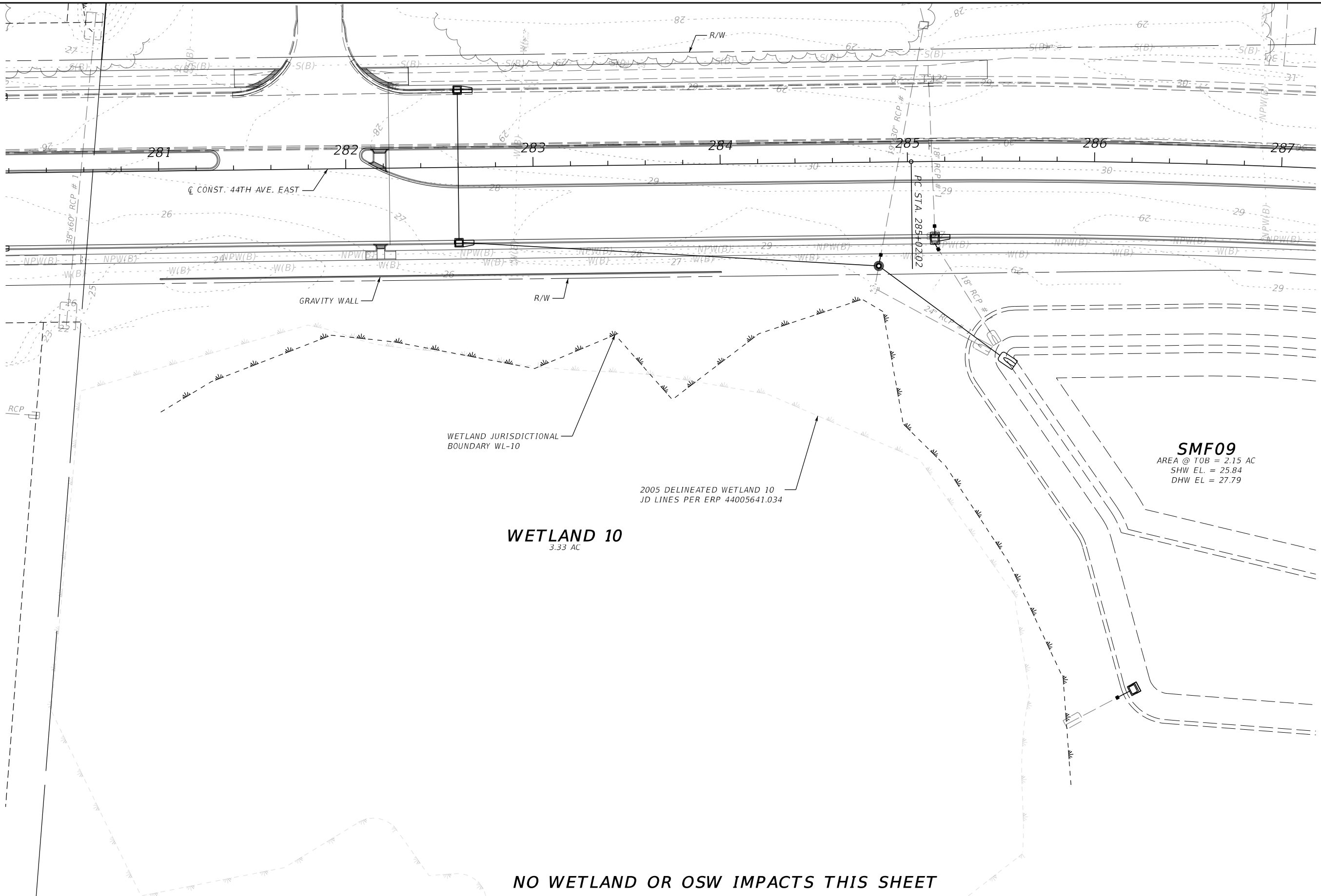
| | | | | | | | |
|-----------------|-----------|-----------------------------------|---------------------|------------------------------------|--------------------------------|--|-----------|
| SCALE AS NOTED | | TIERRA, INC. | DATE 06/19 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER DANIEL R. RUEL | <p style="text-align: center;">POND SOIL SURVEY</p> | SHEET NO. |
| DESIGNED BY DRR | | 7351 TEMPLE TERRACE HIGHWAY | PROJECT NO. 6045662 | | FL. LICENSE NO. 82404 | | GR-1 |
| DRAWN BY BJS | | TAMPA, FLORIDA 33637 | | | | | |
| CHECKED BY DRR | | CERTIFICATE OF AUTHORIZATION 6486 | | | | | |
| No. | REVISIONS | DATE | BY | | | | |

| LEGEND | |
|--------|------------------|
| | TEMPORARY IMPACT |
| | PERMANENT IMPACT |




| | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|---------------------|--|------------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER LISANDRO A. ZAPATA | | SHEET NO. 45 |
| DESIGNED BY LAZ | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| DRAWN BY GAC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | 45 |
| CHECKED BY LAZ | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | |
| No. | REVISIONS | DATE | BY | | | | | |

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



WETLAND 10
3.33 AC

NO WETLAND OR OSW IMPACTS THIS SHEET

| | | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|--|-----------------|--------------------|----------------------------|-----------|----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | WETLAND IMPACTS (2) | SHEET NO. | 46 |
| | | | | DESIGNED BY | LAZ | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | | |
| | | | | DRAWN BY | GAC | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |

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

**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

DATE OF SURVEY: JUNE 2017-AUGUST 2019
 SURVEY MADE BY: TIERRA, INC.
 SUBMITTED BY: DANIEL R. RUEL, P.E.

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

| STRATUM NO. | ORGANIC CONTENT | | MOISTURE CONTENT | | SIEVE ANALYSIS RESULTS PERCENT PASS (%) | | | | | ATTERBERG LIMITS (%) | | | DESCRIPTION | CORROSION TEST RESULTS | | | | | | |
|-------------|-----------------|-----------|------------------|------------------|---|---------|---------|---------|----------|----------------------|--------------|--------------|-------------|-------------------------|--|--------------|--------------------|--------------|--------------|---------|
| | 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 | 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 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 | -- | -- | -- | -- | -- |


EMBANKMENT AND SUBGRADE MATERIAL

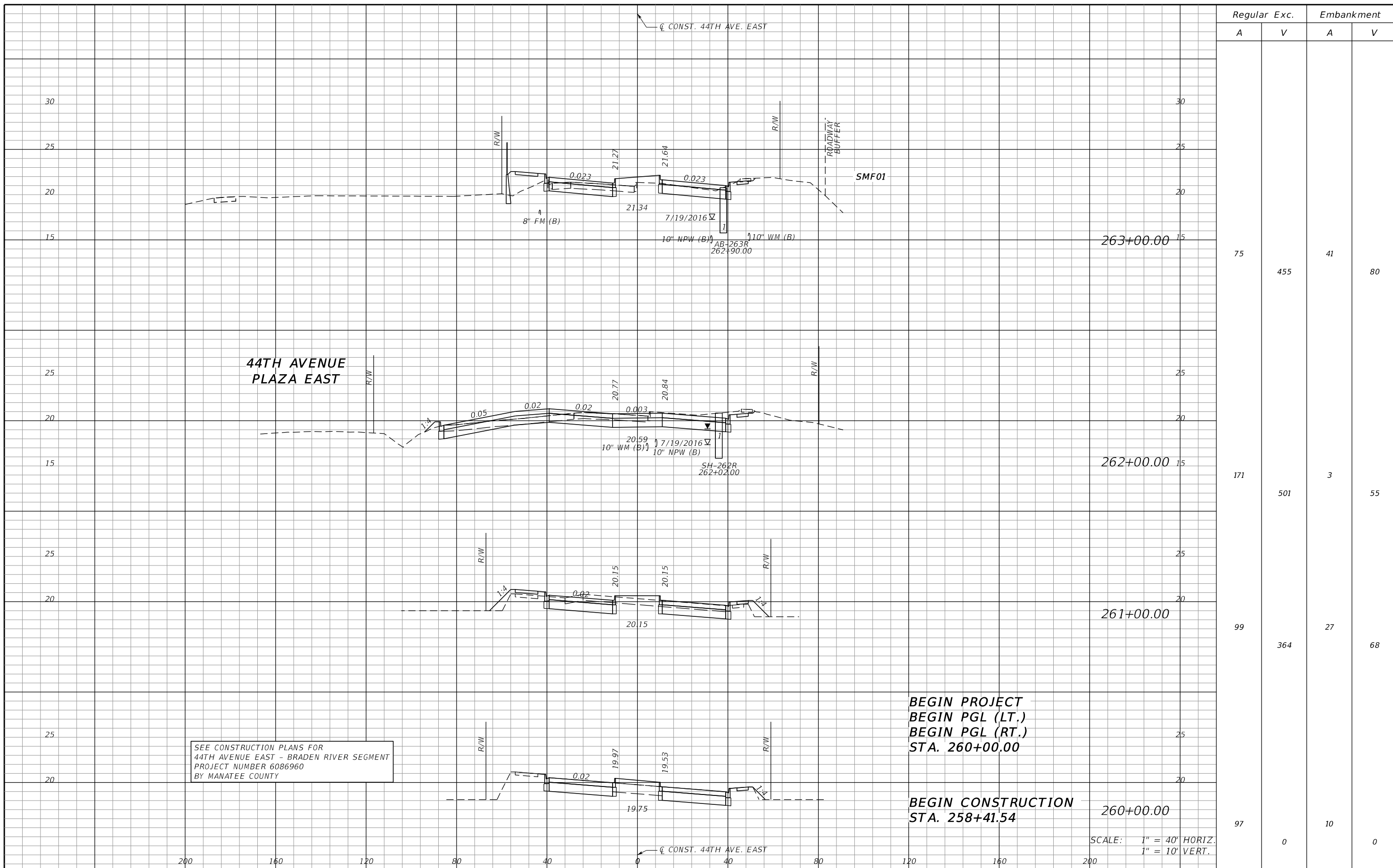
STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING.

NOTES:

- THE MATERIAL FROM STRATUM 1 (A-3) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
- 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.
- 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.
- 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.

- ∇ - WATER TABLE ENCOUNTERED
- ▼ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GNE - GROUNDWATER NOT ENCOUNTERED
- GNA - GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID
- NP - NON-PLASTIC

| | | | | | | | |
|-----------------|-----------|-----------------------------------|---------------------|--|--------------------------------|----------------------------|----------------|
| SCALE AS NOTED | | TIERRA, INC. | DATE 6/2017 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER DANIEL R. RUEL | ROADWAY SOIL SURVEY | SHEET NO. GR-2 |
| DESIGNED BY DRR | | 7351 TEMPLE TERRACE HIGHWAY | PROJECT NO. 6045662 | | FL. LICENSE NO. 82404 | | |
| DRAWN BY BJS | | TAMPA, FLORIDA 33637 | | | | | |
| CHECKED BY DRR | | CERTIFICATE OF AUTHORIZATION 6486 | | | | | |
| No. | REVISIONS | DATE | BY | | | | |



| Regular | | Exc. | | Embankment | |
|---------|-----|------|----|------------|---|
| A | V | A | V | A | V |
| 75 | 455 | 41 | 80 | | |
| 171 | 501 | 3 | 55 | | |
| 99 | 364 | 27 | 68 | | |
| 97 | 0 | 10 | 0 | | |

SEE CONSTRUCTION PLANS FOR
44TH AVENUE EAST - BRADEN RIVER SEGMENT
PROJECT NUMBER 6086960
BY MANATEE COUNTY

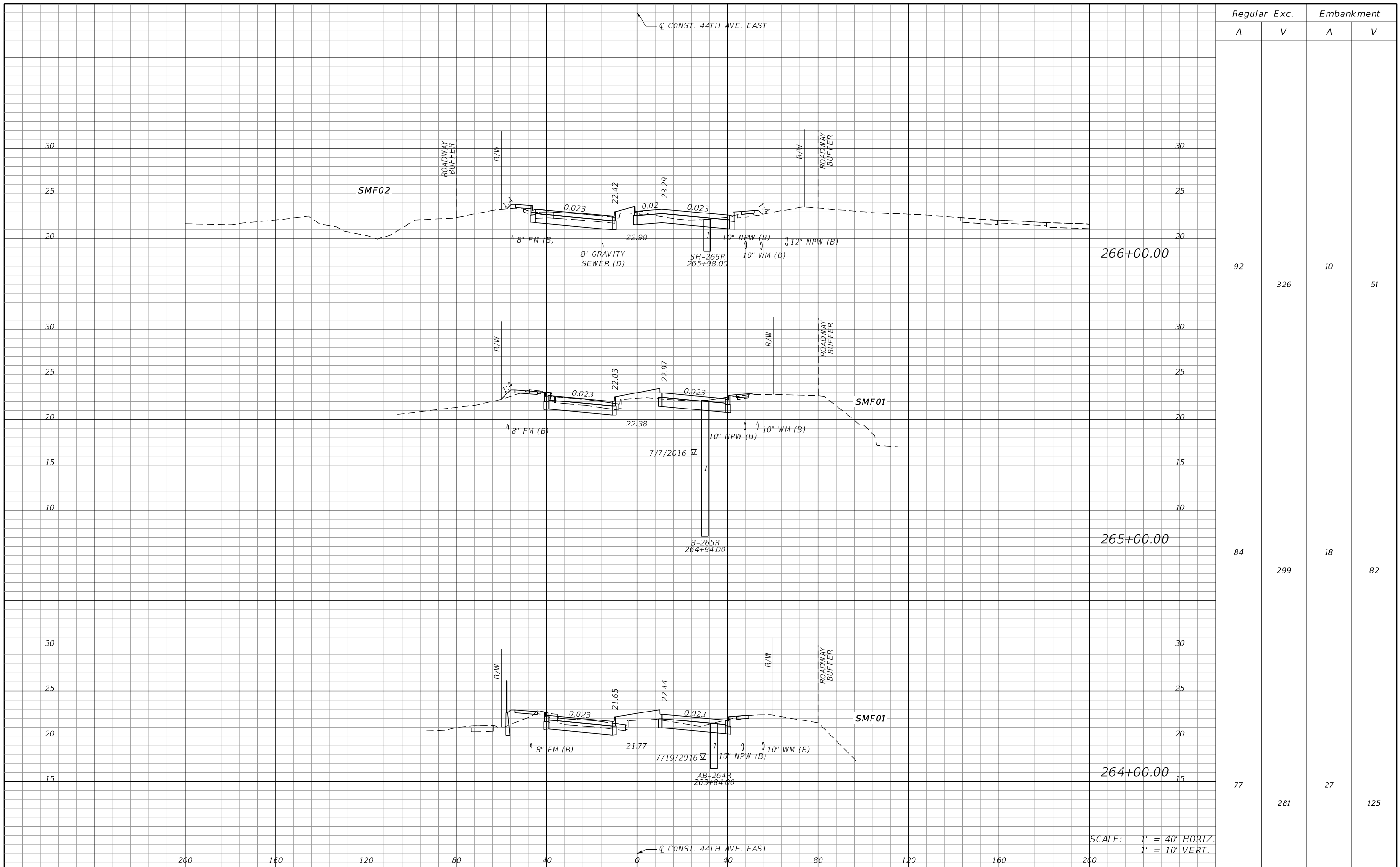
BEGIN PROJECT
BEGIN PGL (LT.)
BEGIN PGL (RT.)
STA. 260+00.00

BEGIN CONSTRUCTION
STA. 258+41.54

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

| | | | | | | | | | | | |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | PROJECT NO. 6045662 | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | MANATEE COUNTY PUBLIC WORKS | ROADWAY CROSS SECTION (1) | SHEET NO. 47 |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|

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

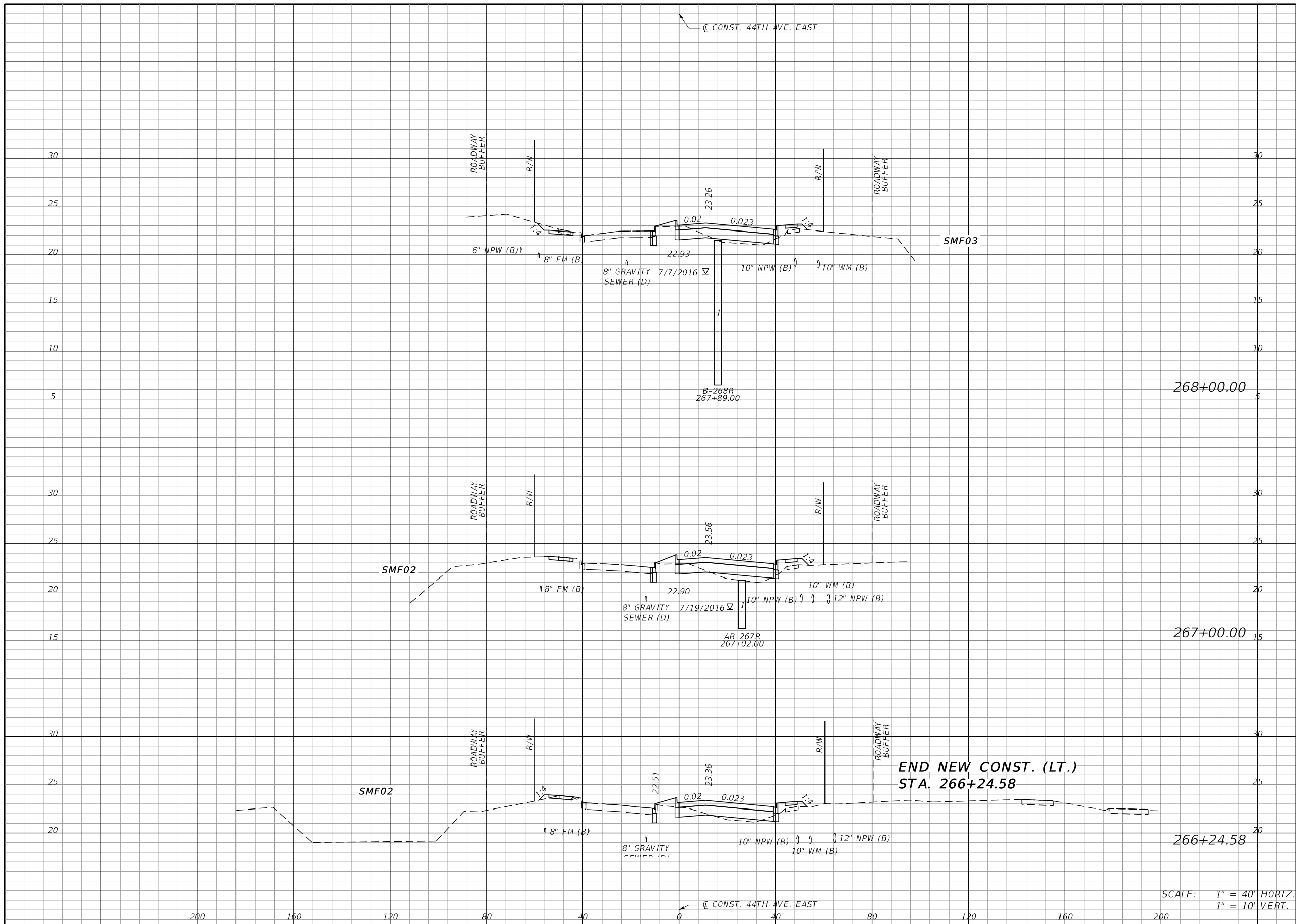


| Regular | | Exc. | | Embankment | |
|---------|-----|------|---|------------|---|
| A | V | A | V | A | V |
| 92 | 326 | 10 | | 51 | |
| 84 | 299 | 18 | | 82 | |
| 77 | 281 | 27 | | 125 | |

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

| | | | | | | | | |
|-----------------|--|-----------------------------------|--|---------------------|--|--------------------------------|--|---------------------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 48 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | ROADWAY CROSS SECTION (2) |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |

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

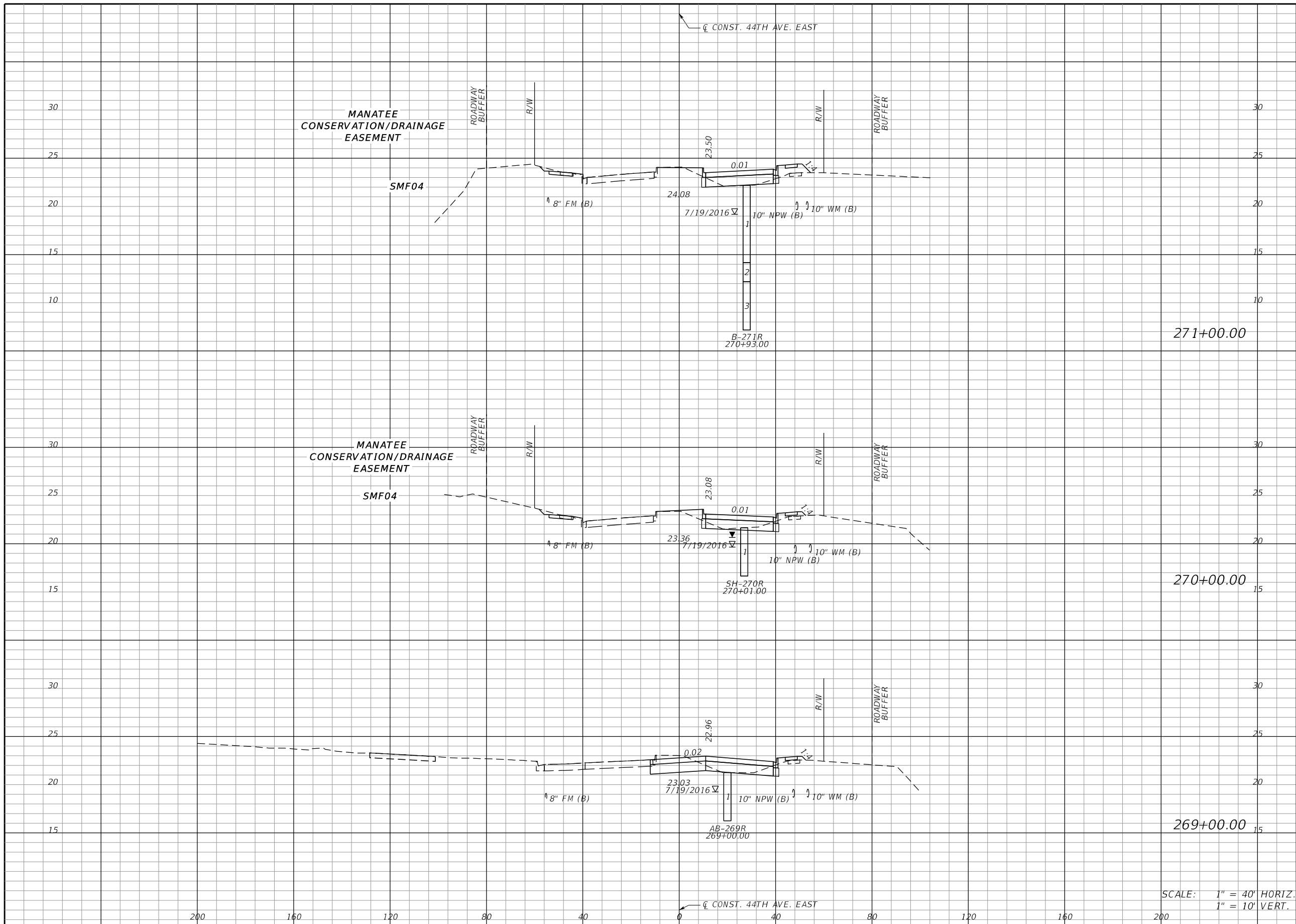


| Regular | | Exc. | | Embankment | |
|---------|----|------|----|------------|---|
| A | V | A | V | A | V |
| 26 | 81 | 14 | 68 | | |
| 18 | 49 | 23 | 54 | | |
| 17 | 49 | 16 | 12 | | |

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

| | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|---------------------|--|--------------------------------|--|---------------------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 49 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | ROADWAY CROSS SECTION (3) |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | |
| No. | REVISIONS | DATE | BY | | | | | |

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

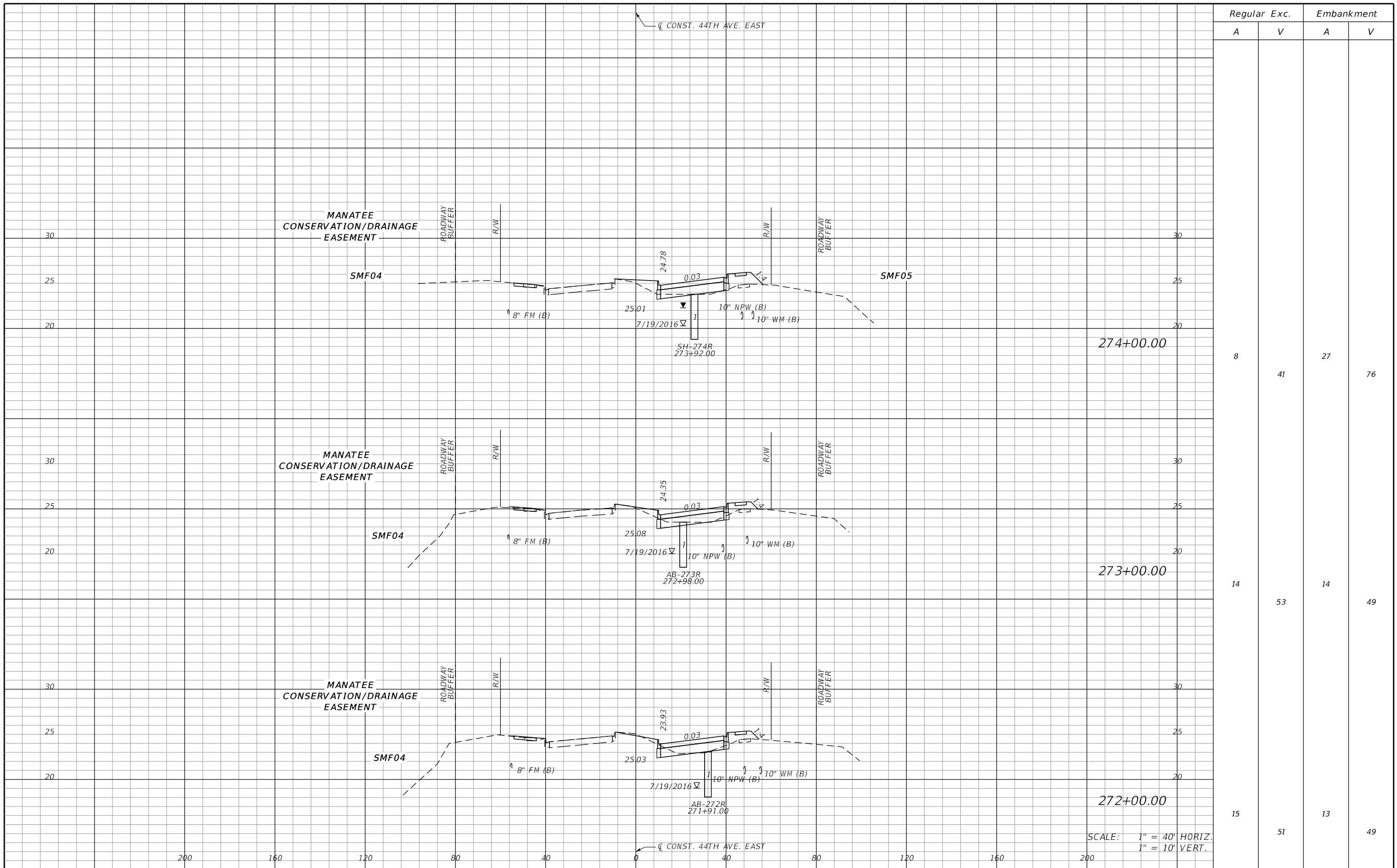


| Regular | | Exc. | | Embankment | |
|---------|-----|------|----|------------|---|
| A | V | A | V | A | V |
| 13 | 59 | 14 | 45 | | |
| 19 | 118 | 10 | 24 | | |
| 45 | 130 | 3 | 32 | | |

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

| | | | | | | | | | |
|-----|-----------|------|----|-----------------|-----------------------------------|---------------------|--------------------------------|---|--------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | DESIGN ENGINEER JASON L. STARR | MANATEE COUNTY PUBLIC WORKS FL. LICENSE NO. 70171 | SHEET NO. 50 |
| | | | | DESIGNED BY JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | | | |
| | | | | DRAWN BY JHC | SARASOTA, FLORIDA 34232 | | | | |
| | | | | CHECKED BY DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | |

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

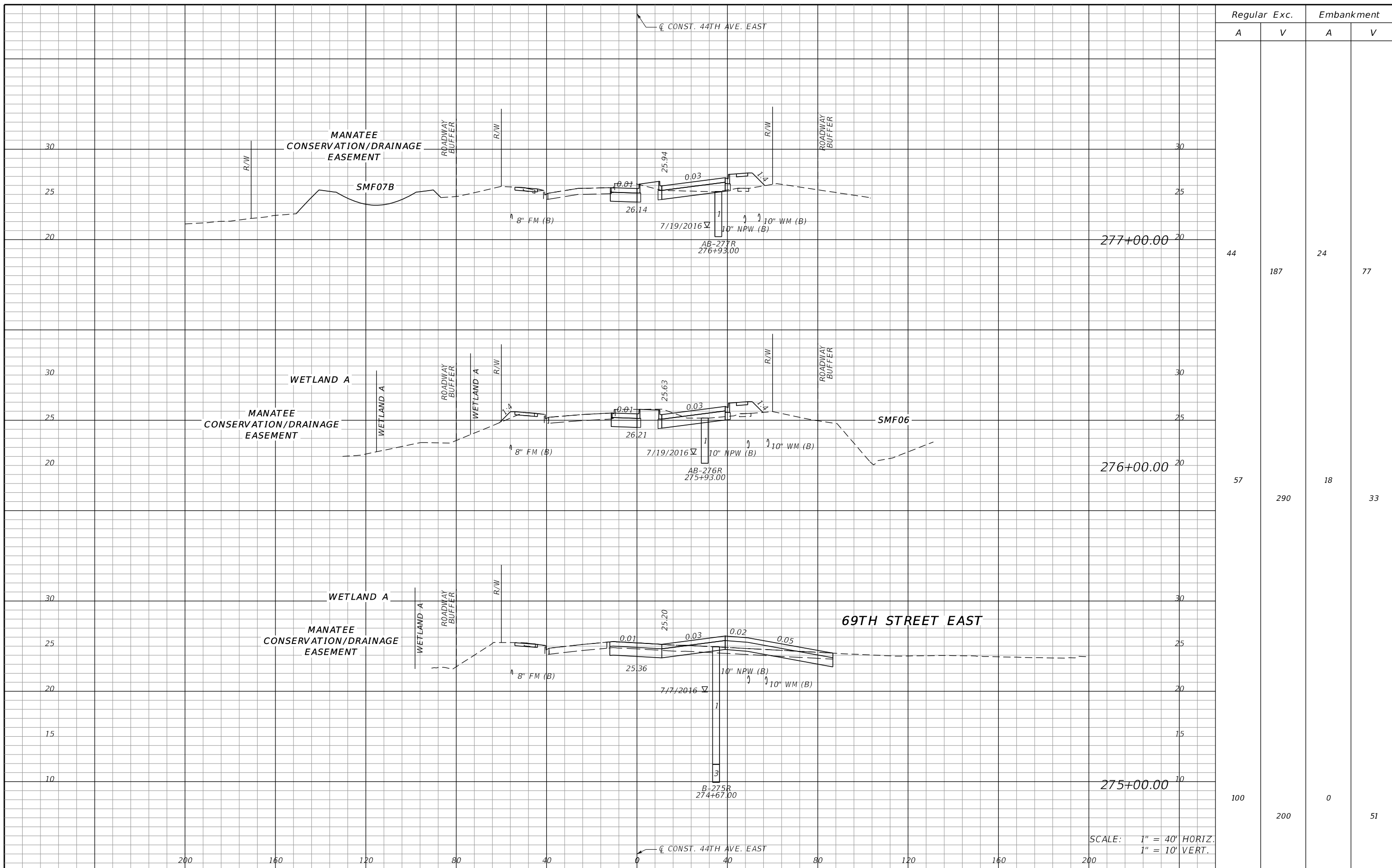


| Regular | | Exc. | | Embankment | |
|---------|----|------|----|------------|---|
| A | V | A | V | A | V |
| 8 | 41 | 27 | 76 | | |
| 14 | 53 | 14 | 49 | | |
| 15 | 51 | 13 | 49 | | |

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


| | | | | | | | | | | | |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | PROJECT NO. 6045662 | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | MANATEE COUNTY PUBLIC WORKS | ROADWAY CROSS SECTION (5) | SHEET NO. 51 |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|

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

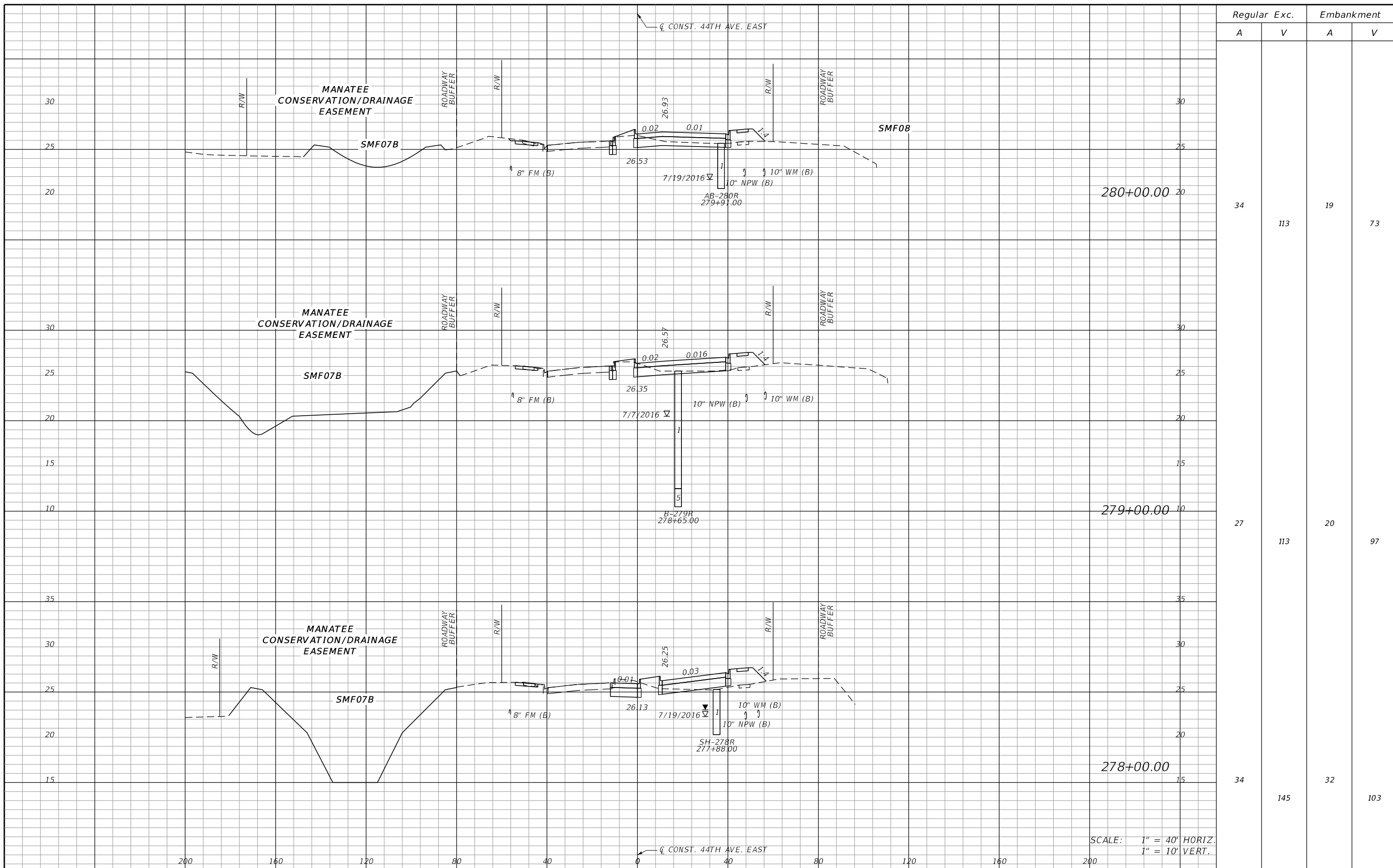


| Regular | | Exc. | | Embankment | |
|---------|-----|------|---|------------|---|
| A | V | A | V | A | V |
| 44 | 187 | 24 | | 77 | |
| 57 | 290 | 18 | | 33 | |
| 100 | 200 | 0 | | 51 | |

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


| | | | | | | | | | | | | | |
|---|-----------|---|----|-------------------------------------|--|--|--|---|--|----------------------------------|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | ROADWAY CROSS SECTION (6) | | SHEET NO. 52 | |
| No. | REVISIONS | DATE | BY | | | | | | | | | | |

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

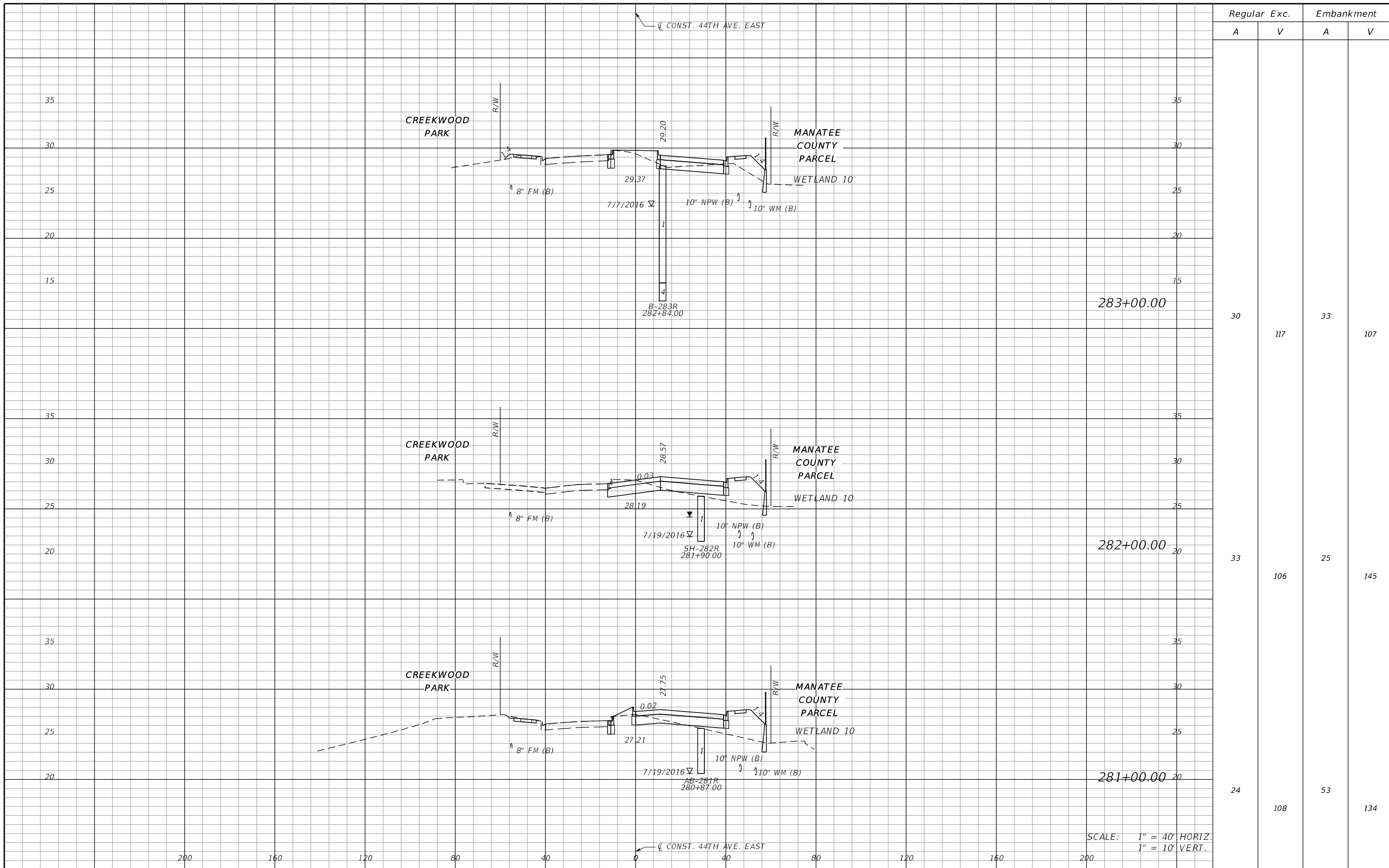


| Regular | | Exc. | | Embankment | |
|---------|-----|------|-----|------------|---|
| A | V | A | V | A | V |
| 34 | 113 | 19 | 73 | | |
| 27 | 113 | 20 | 97 | | |
| 34 | 145 | 32 | 103 | | |

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

| | | | | | | | | | | |
|---|-----------|---|----|-------------------------------------|--|---|--|----------------------------------|--|--------------|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | ROADWAY CROSS SECTION (7) | | SHEET NO. 53 |
| No. | REVISIONS | DATE | BY | | | | | | | |

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

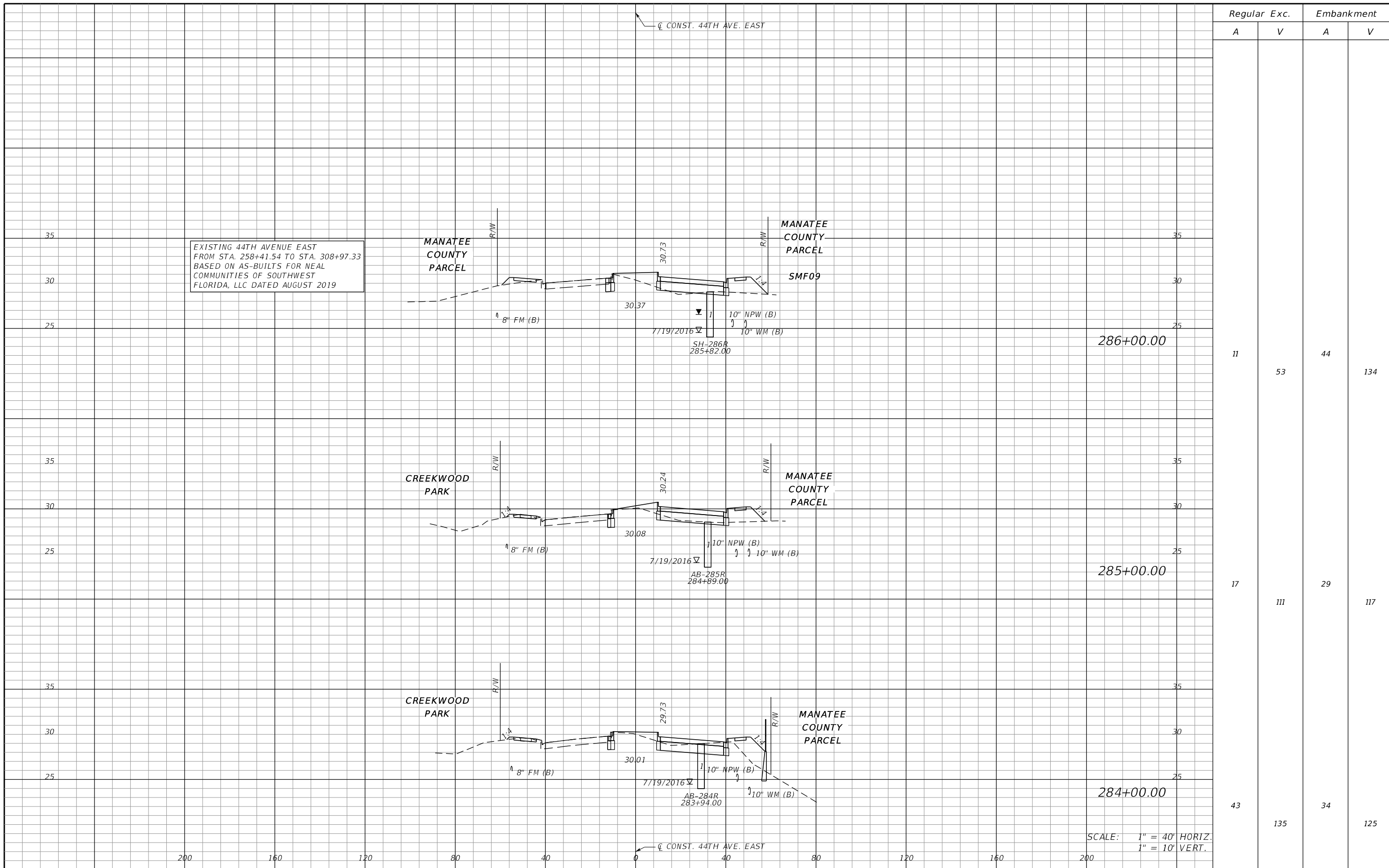


| Regular | | Exc. | | Embankment | |
|---------|-----|------|-----|------------|---|
| A | V | A | V | A | V |
| 30 | 117 | 33 | 107 | | |
| 33 | 106 | 25 | 145 | | |
| 24 | 108 | 53 | 134 | | |

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

| | | | | | | | | | | |
|-----|-----------|------|----|-----------------|-----------------------------------|---------------------|--------------------------------|--|--|-----------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | DESIGN ENGINEER JASON L. STARR | MANATEE COUNTY PUBLIC WORKS | ROADWAY CROSS SECTION (B) | SHEET NO. |
| | | | | DESIGNED BY JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | FL. LICENSE NO. 70171 | | | 54 |
| | | | | DRAWN BY JHC | SARASOTA, FLORIDA 34232 | | | | | |
| | | | | CHECKED BY DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

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



EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019

286+00.00

285+00.00

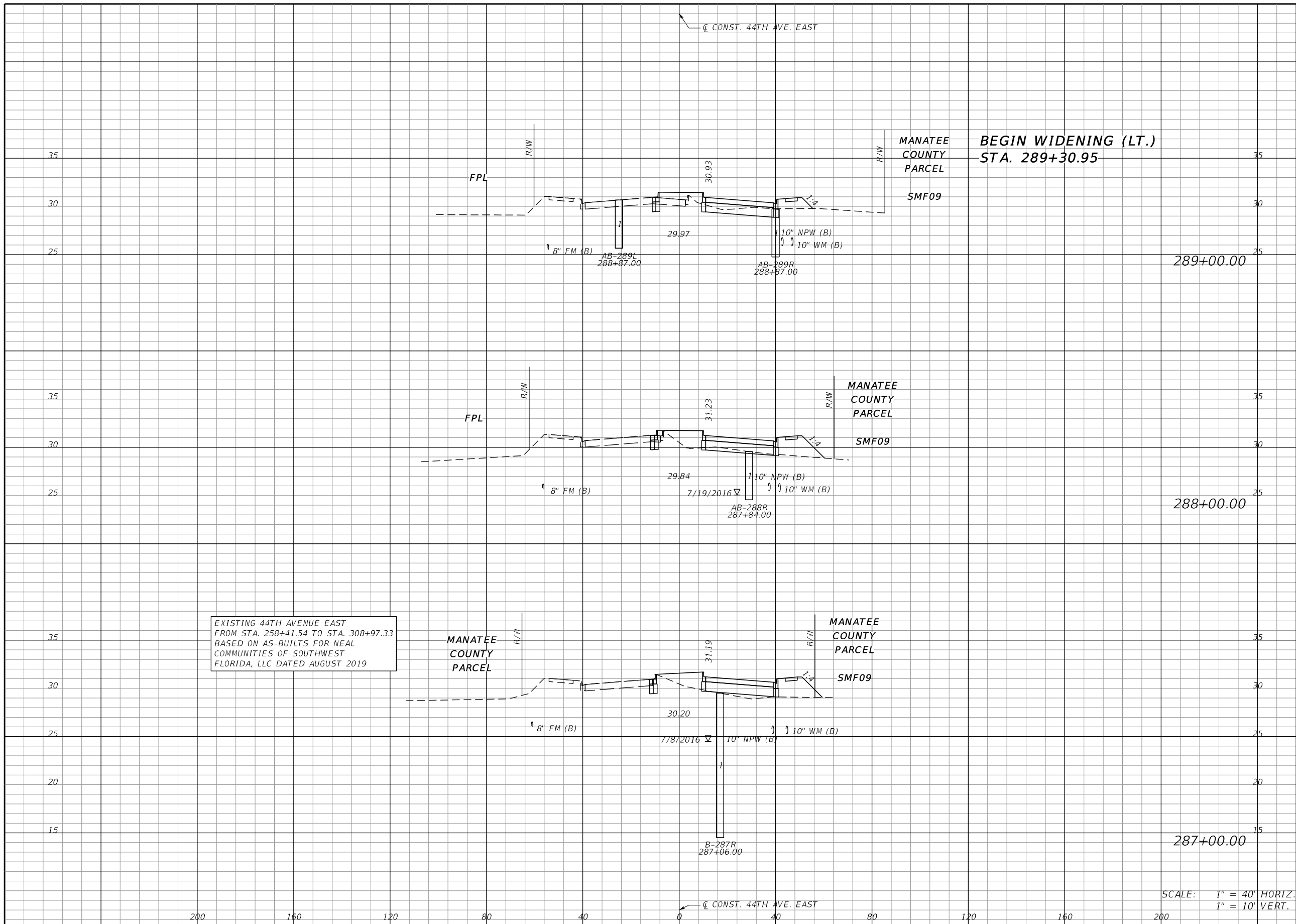
284+00.00

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

| Regular | | Exc. | | Embankment | |
|---------|---|------|-----|------------|-----|
| A | V | A | V | A | V |
| 11 | | | 53 | 44 | |
| 17 | | 111 | | 29 | 117 |
| 43 | | | 135 | 34 | 125 |

| | | | | | | | | | | | |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | PROJECT NO. 6045662 | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | MANATEE COUNTY PUBLIC WORKS | ROADWAY CROSS SECTION (9) | SHEET NO. 55 |
|-----|-----------|------|----|----------------|---|-----------------|------------------------|---|--------------------------------|------------------------------|-----------------|

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

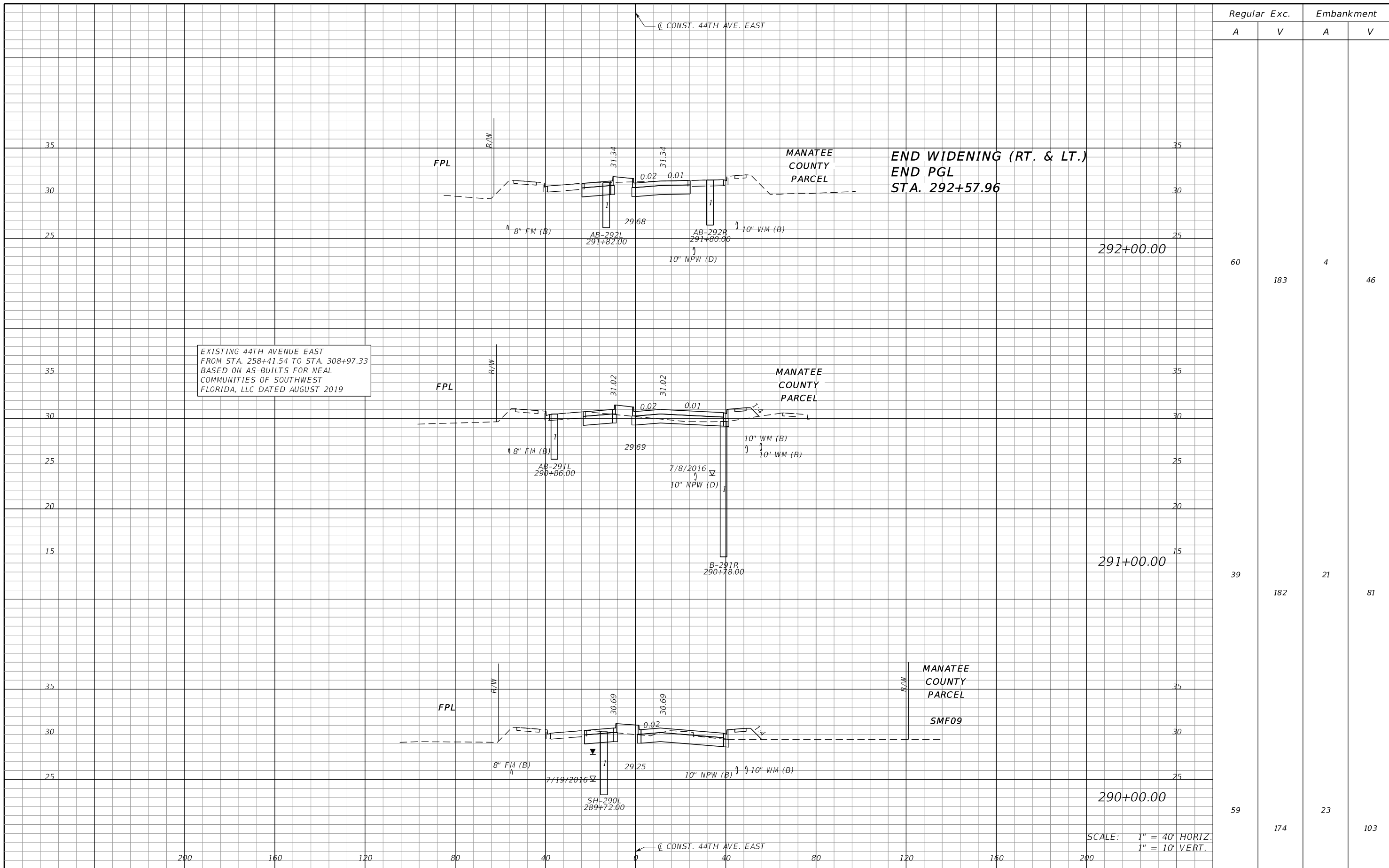


| Regular | | Exc. | | Embankment | |
|---------|----|------|---|------------|-----|
| A | V | A | V | A | V |
| 35 | | | | 33 | |
| | 90 | | | | 156 |
| 14 | | | | 51 | |
| | 36 | | | | 193 |
| 5 | | | | 52 | |
| | 31 | | | | 178 |

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

| | | | | | | | | |
|-----------------|--|-----------------------------------|--|-----------------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 56 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | ROADWAY CROSS SECTION (10) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | Manatee County Florida | | | | |

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



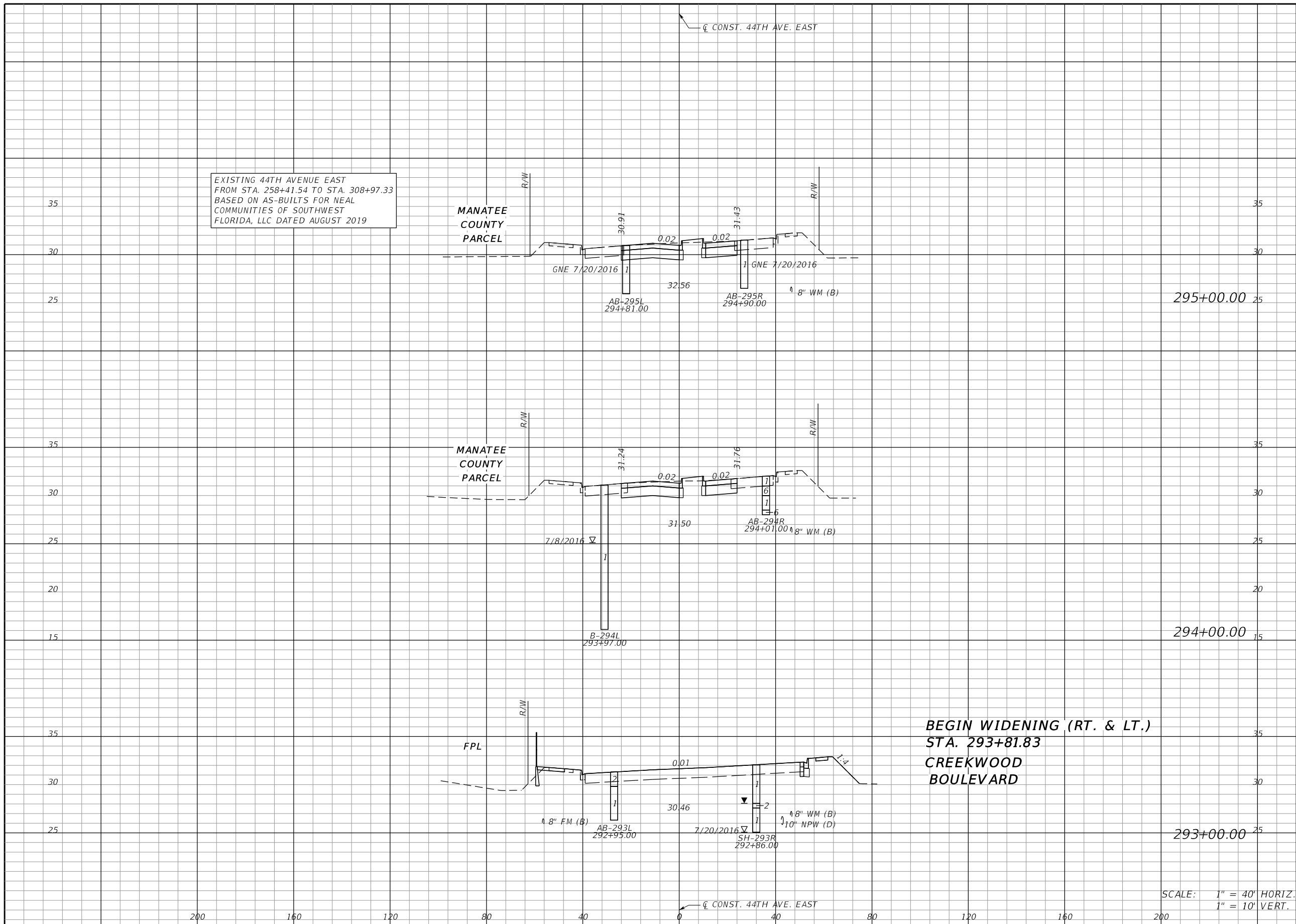
EXISTING 44TH AVENUE EAST
 FROM STA. 258+41.54 TO STA. 308+97.33
 BASED ON AS-BUILTS FOR NEAL
 COMMUNITIES OF SOUTHWEST
 FLORIDA, LLC DATED AUGUST 2019

| Regular | | Exc. | | Embankment | |
|---------|-----|------|-----|------------|---|
| A | V | A | V | A | V |
| 60 | 183 | 4 | 46 | | |
| 39 | 182 | 21 | 81 | | |
| 59 | 174 | 23 | 103 | | |

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

| | | | | | | | | |
|-----------------|--|-----------------------------------|--|-----------------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 57 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | ROADWAY CROSS SECTION (II) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY PARCEL SMF09 | | | | |

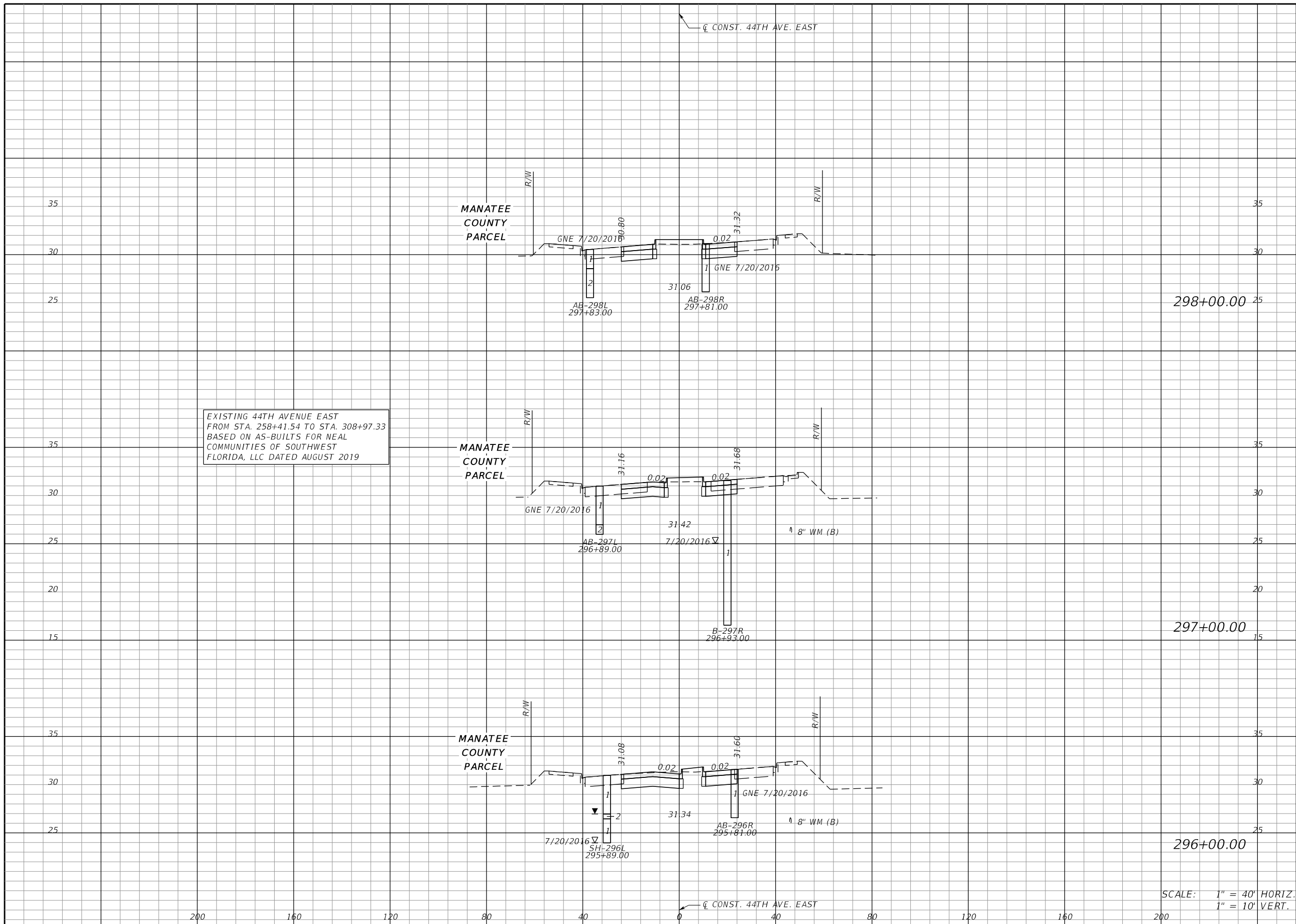
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



| Regular | | Exc. | | Embankment | |
|---------|-----|------|----|------------|---|
| A | V | A | V | A | V |
| 62 | 227 | 3 | 10 | | |
| 61 | 57 | 3 | 2 | | |
| 12 | 96 | 0 | 4 | | |

| | | | | | | | | |
|-----------------|--|-----------------------------------|--|---------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 58 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |

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

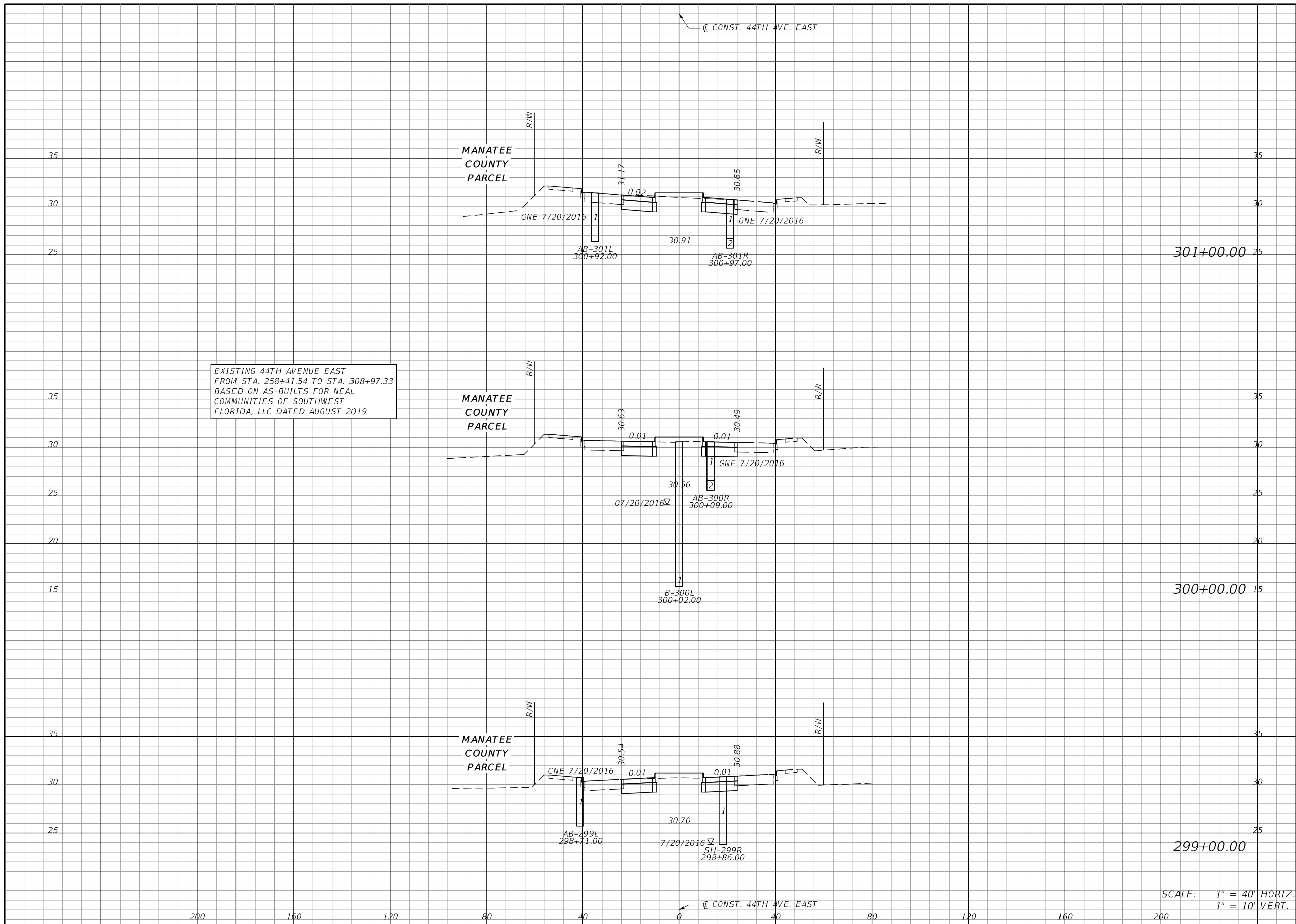


| Regular | | Exc. | | Embankment | |
|---------|-----|------|----|------------|---|
| A | V | A | V | A | V |
| 44 | 177 | 9 | 29 | | |
| 51 | 208 | 7 | 18 | | |
| 61 | 228 | 3 | 11 | | |

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

| | | | | | | | | |
|-----------------|-----------|--------------------------------|----|-----------------------------------|--|-----------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 59 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | ROADWAY CROSS SECTION (13) | | |
| CHECKED BY DRH | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | |

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 | A | V |
| 44 | 163 | 9 | 35 | | |
| 44 | 161 | 10 | 37 | | |
| 43 | 162 | 10 | 36 | | |

| | | | | | | | | |
|-----------------|--|-----------------------------------|--|---------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 60 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | ROADWAY CROSS SECTION (14) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | 16:12:18 | | | | |

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

EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019

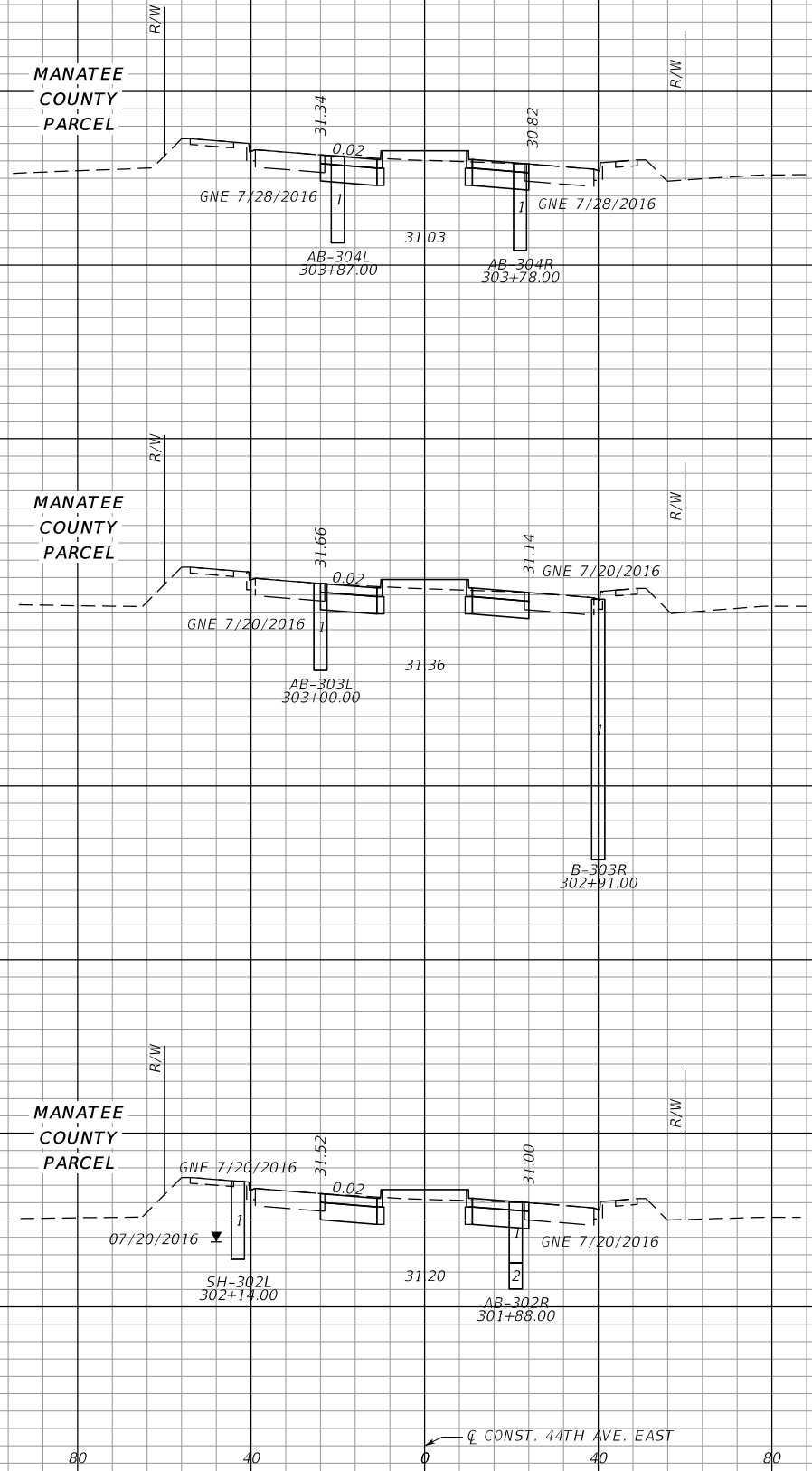
MANATEE
COUNTY
PARCEL

MANATEE
COUNTY
PARCEL

MANATEE
COUNTY
PARCEL

CL CONST. 44TH AVE. EAST

CL CONST. 44TH AVE. EAST



304+00.00

303+00.00

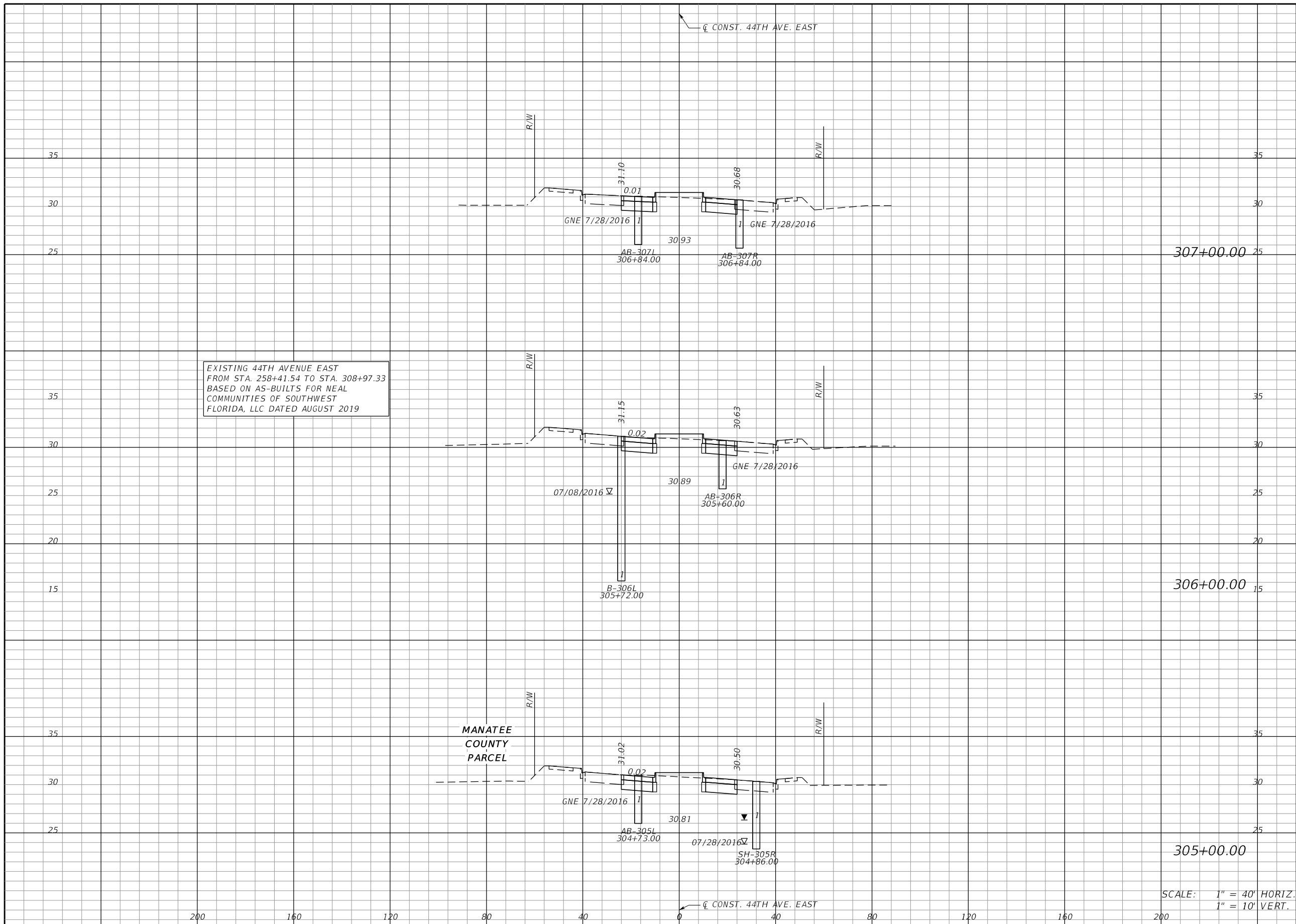
302+00.00

| Regular | | Exc. | | Embankment | |
|---------|-----|------|----|------------|---|
| A | V | A | V | A | V |
| 43 | 160 | 11 | 39 | | |
| 43 | 160 | 10 | 39 | | |
| 43 | 162 | 11 | 37 | | |

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

| | | | | | | | | | | |
|-----|-----------|------|----|-----------------|-----------------------------------|---------------------|------------------------------------|--------------------------------|-----------------------------------|--------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER JASON L. STARR | ROADWAY CROSS SECTION (15) | SHEET NO. 61 |
| | | | | DESIGNED BY JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| | | | | DRAWN BY JHC | SARASOTA, FLORIDA 34232 | | | | | |
| | | | | CHECKED BY DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

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 | A | V |
| 43 | 160 | 10 | | 36 | |
| 43 | 163 | 10 | | 34 | |
| 45 | 162 | 9 | | 36 | |

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

| | | | | | | | | | | |
|-----|-----------|------|----|-------------------|---|--------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER JASON L. STARR | ROADWAY CROSS SECTION (16) | SHEET NO. 62 |
| | | | | CHECKED BY DRH | PROJECT NO. 6045662 | FL. LICENSE NO. 70171 | | | | |

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

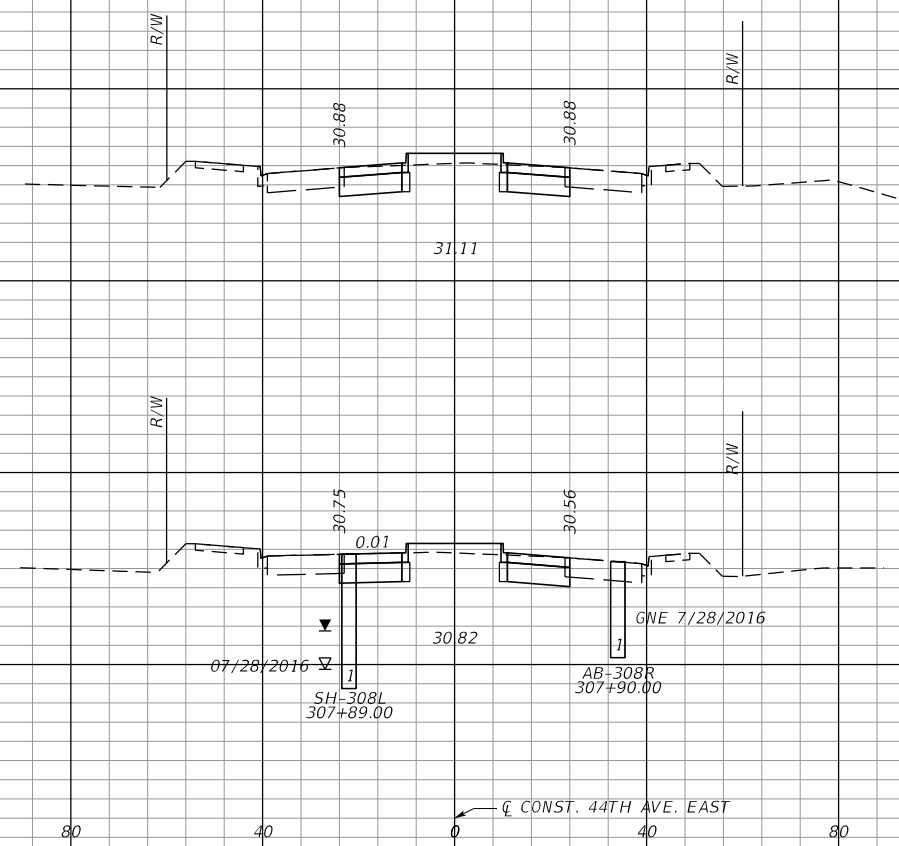
Regular Exc. Embankment

A V A V

| SUMMARY OF EARTHWORK | |
|----------------------|----------|
| TOTAL EXCAVATION | 7,989 CY |
| TOTAL EMBANKMENT | 3,301 CY |

END PROJECT
END CONSTRUCTION
STA. 308+97.33

EXISTING 44TH AVENUE EAST
FROM STA. 258+41.54 TO STA. 308+97.33
BASED ON AS-BUILTS FOR NEAL
COMMUNITIES OF SOUTHWEST
FLORIDA, LLC DATED AUGUST 2019



308+97.32

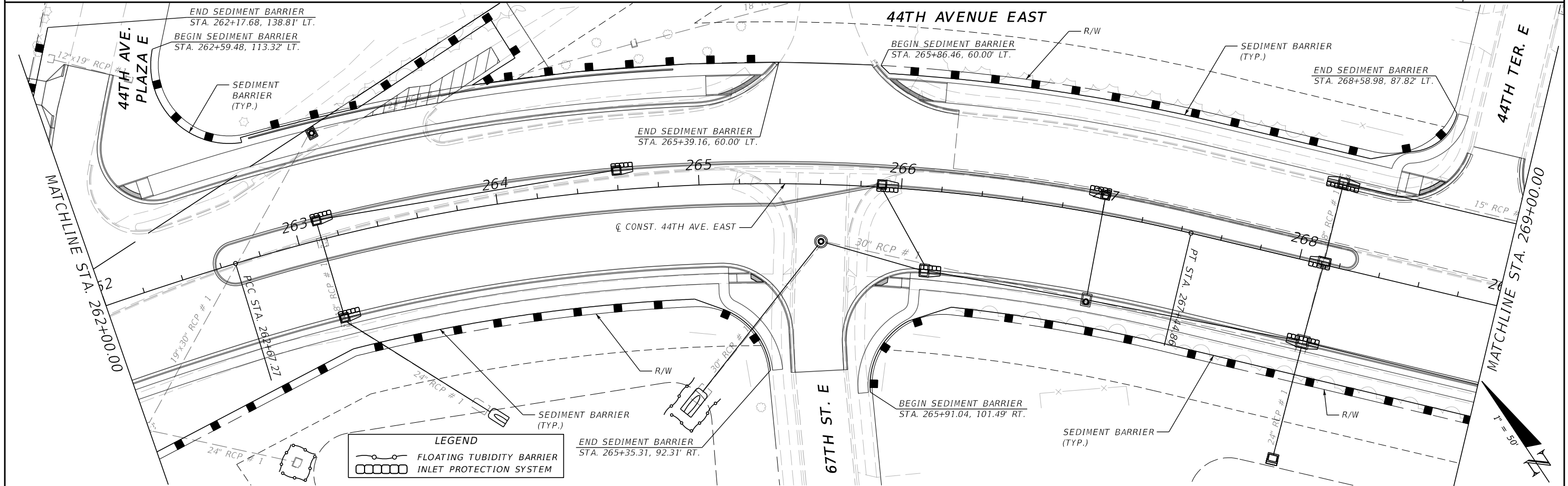
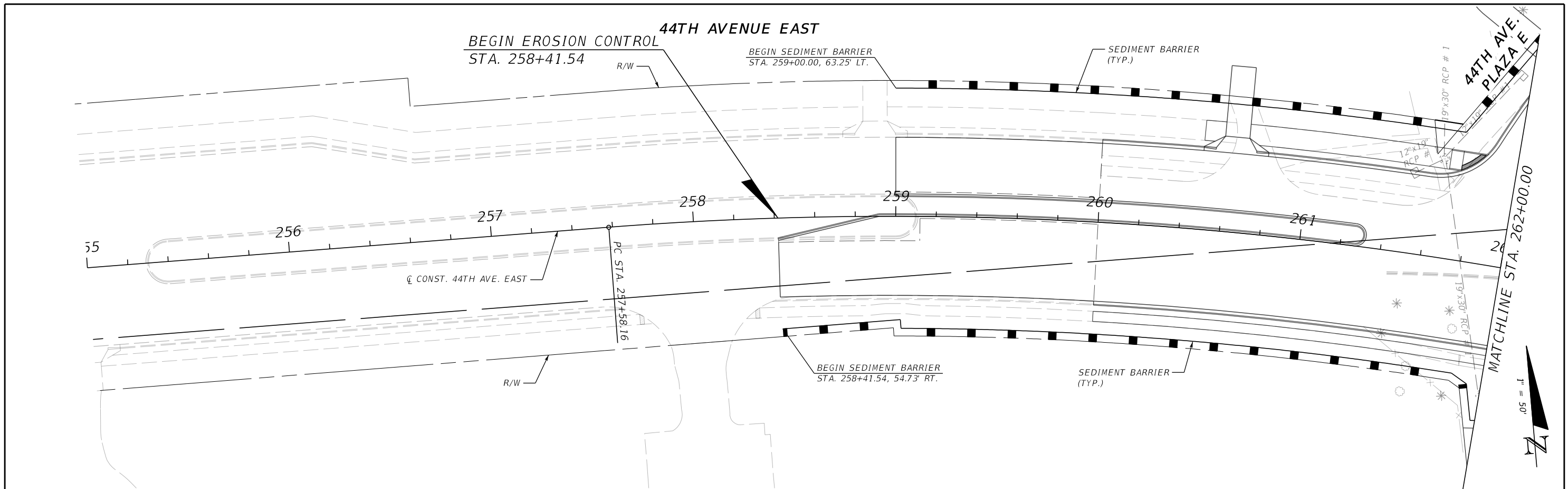
308+00.00

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

| | | | |
|----|-----|----|----|
| 42 | 153 | 11 | 37 |
| 43 | 159 | 10 | 37 |

| | | | | | | | | | | | |
|-----------------|-----------|-----------------------------------|----|-----------------------------|--|--------------------------------|--|--|--|--------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | <p style="text-align: center;">ROADWAY CROSS SECTION (17)</p> | | SHEET NO. 63 | |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | | | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | | |

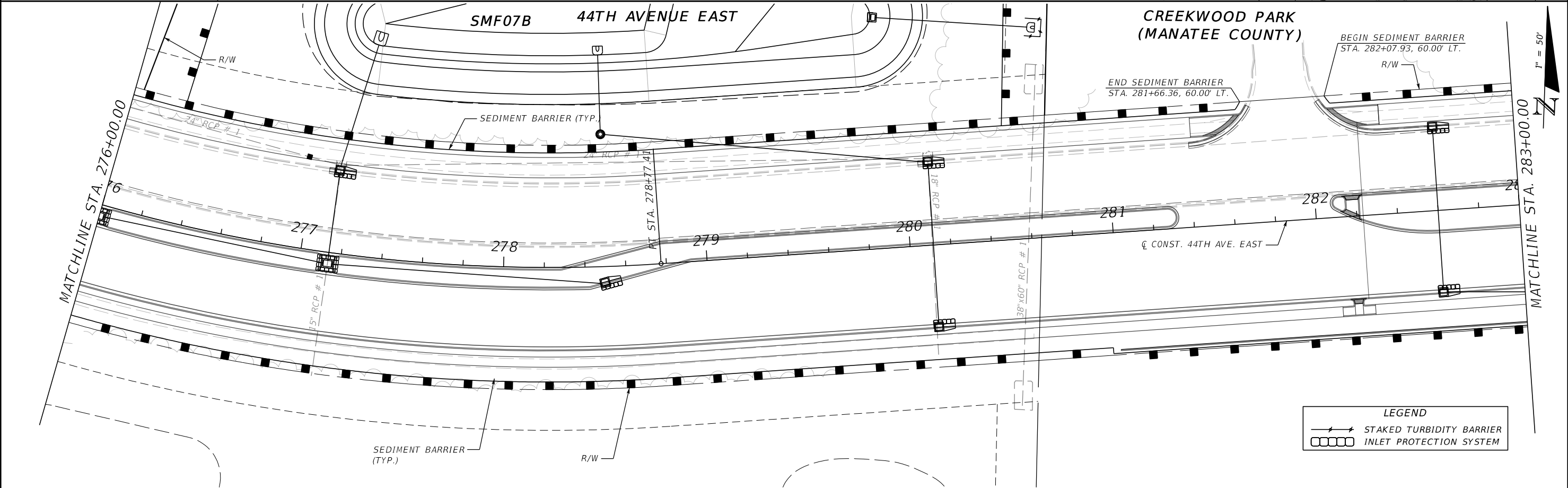
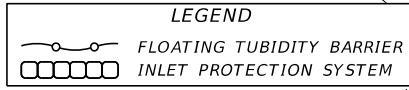
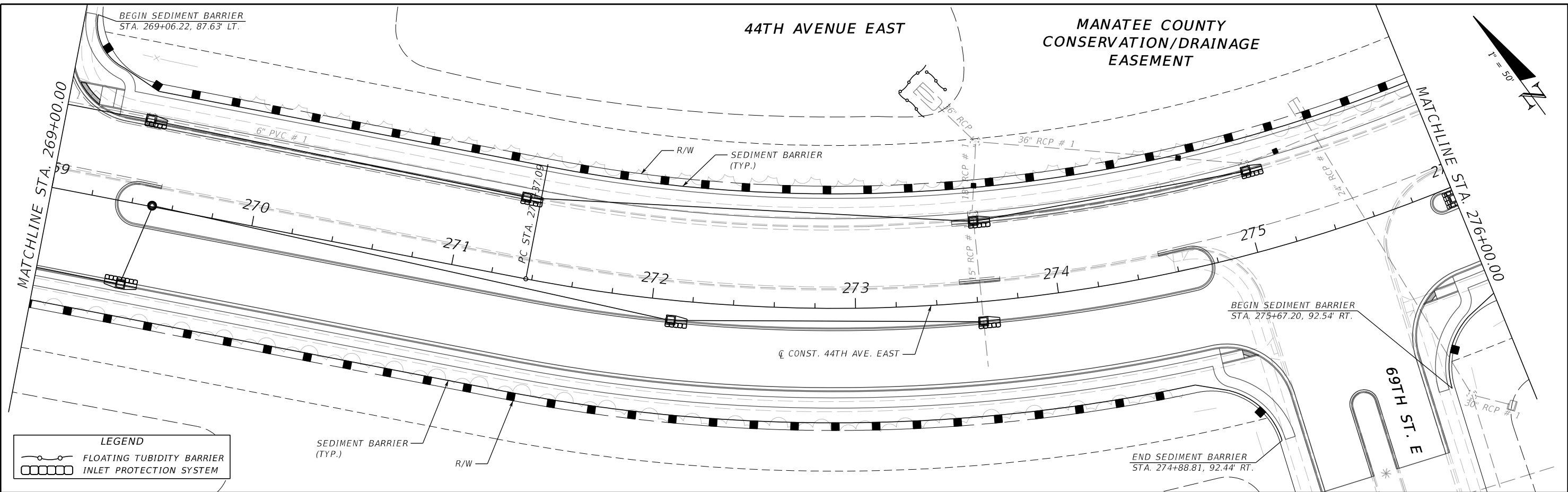
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.




| LEGEND | |
|--------|---------------------------|
| | FLOATING TUBIDITY BARRIER |
| | INLET PROTECTION SYSTEM |

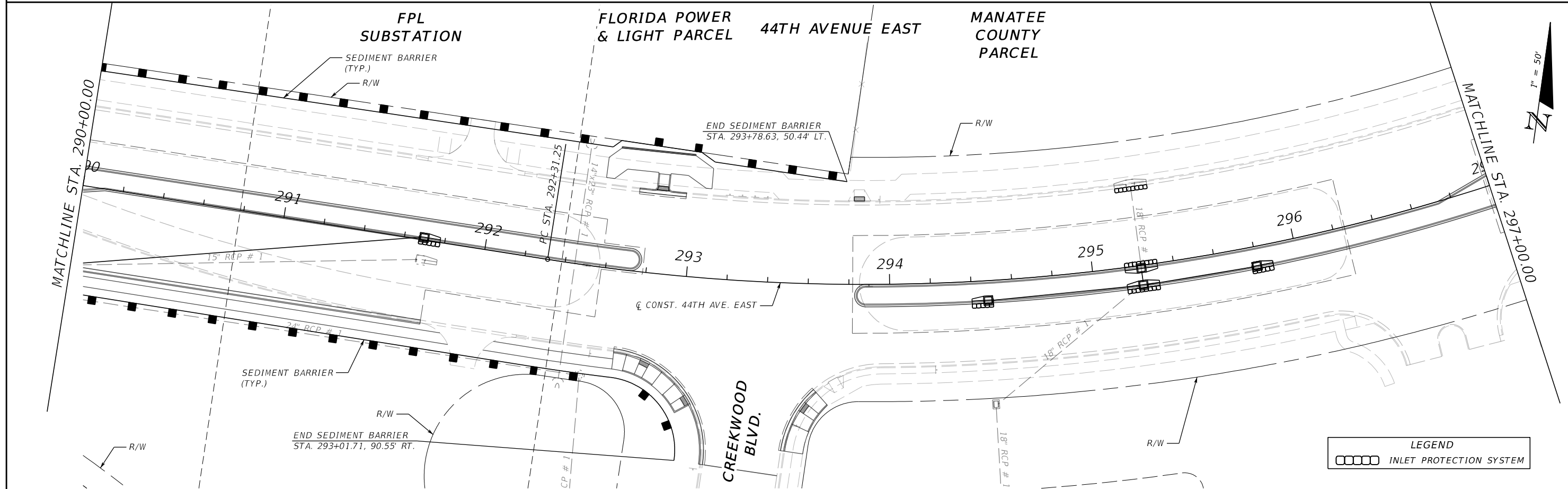
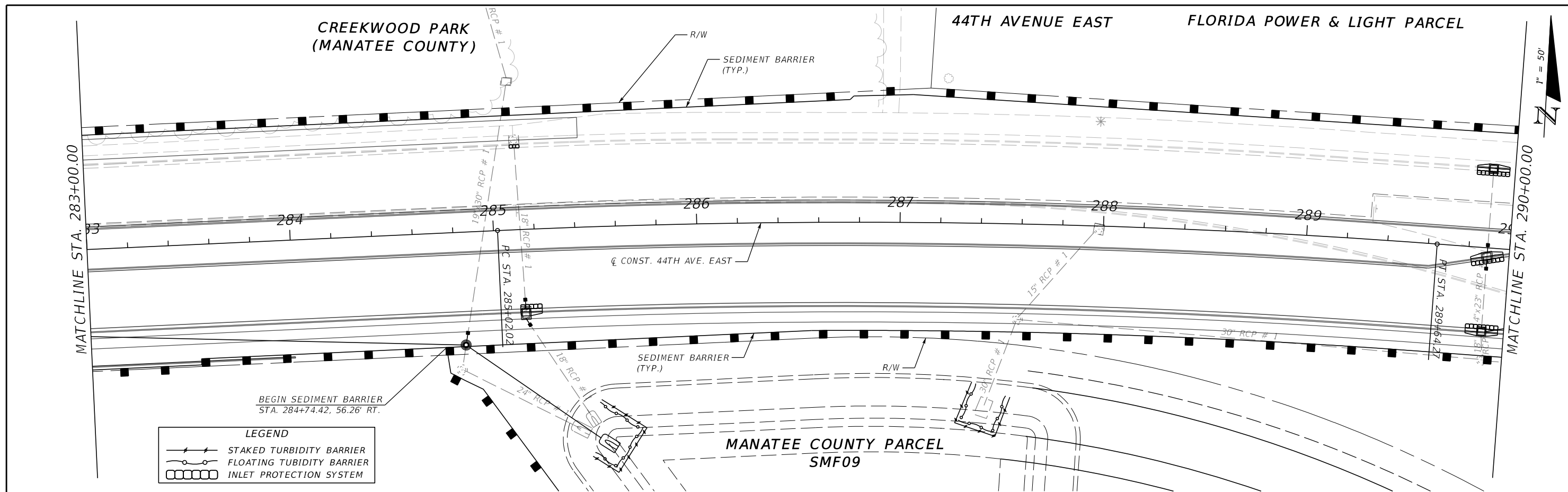
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|-----|-----------|------|----|-------------|----------|---|-------------|---------|------------------------------------|-----------------|--------------------|---------------------------------|-----------------|
| No. | REVISIONS | DATE | BY | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | EROSION CONTROL PLAN (I) | SHEET NO. 64 |
| | | | | DESIGNED BY | LAZ | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | |

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 | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | EROSION CONTROL PLAN (2) | SHEET NO. 65 |
| | | | | DESIGNED BY | LAZ | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | |

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



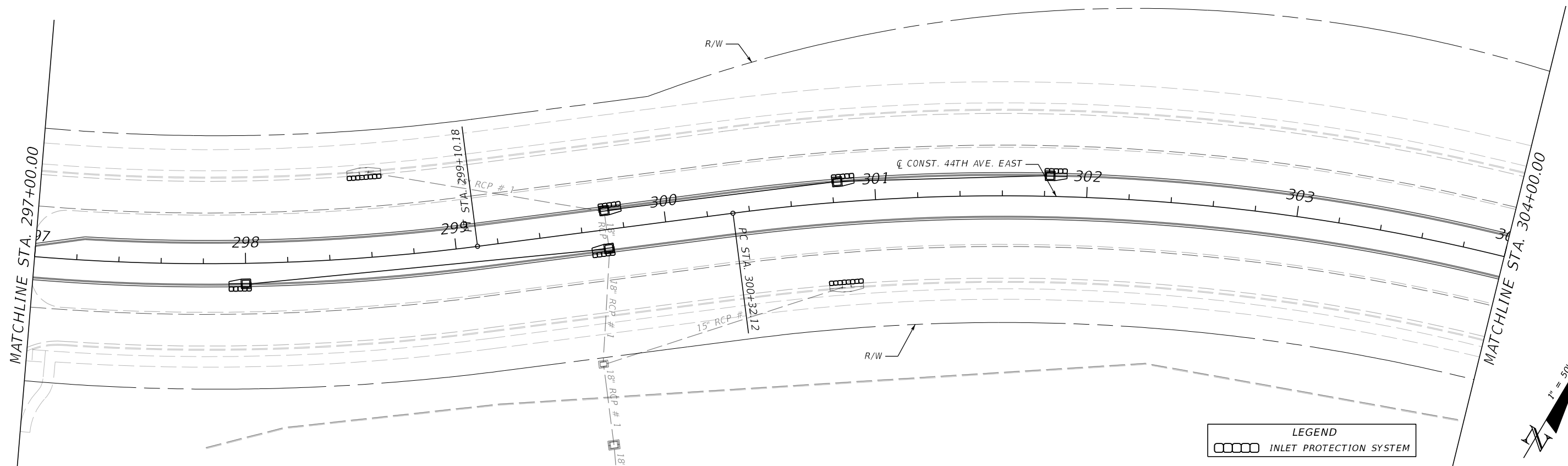
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|-----|-----------|--|--|-------------|----------|---|-------------|---------|------------------------------------|-----------------|--------------------|---------------------------------|-----------------|
| No. | REVISIONS | | | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | EROSION CONTROL PLAN (3) | SHEET NO. 66 |
| | | | | DESIGNED BY | LAZ | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | |
| | | | | DRAWN BY | GAC | | | | | | | | |
| | | | | CHECKED BY | LAZ | | | | | | | | |

16:13:06

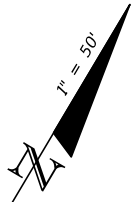
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THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

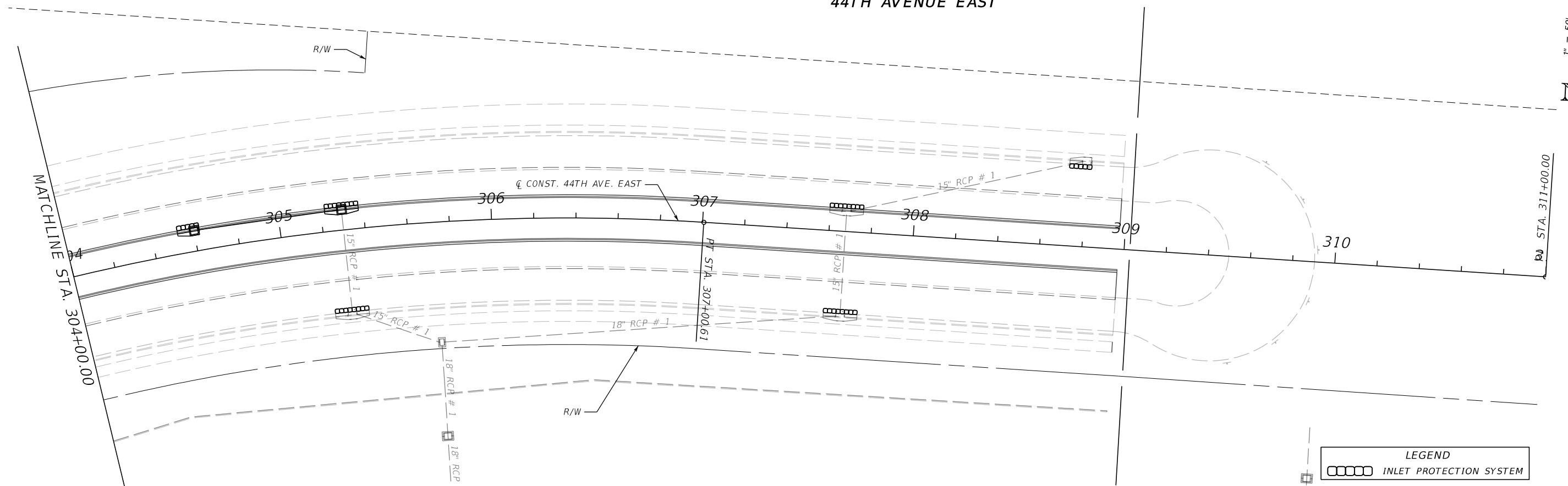
44TH AVENUE EAST



LEGEND
 [Symbol] INLET PROTECTION SYSTEM




44TH AVENUE EAST



LEGEND
 [Symbol] INLET PROTECTION SYSTEM



| | | | | | | | | | | | | | |
|---|--|--|--|---|--|-------------------------------------|--|--|--|---|--|--------------|--|
| SCALE AS NOTED DESIGNED BY LAZ DRAWN BY GAC CHECKED BY LAZ | | | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | |  MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER LISANDRO A. ZAPATA FL. LICENSE NO. 58822 | | SHEET NO. 67 | |
| EROSION CONTROL PLAN (A) | | | | | | | | | | | | | |

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SMF04

MANATEE COUNTY CONSERVATION/DRAINAGE EASEMENT

SMF07

WETLAND A

SMF07B

1" = 50'
CREEKWOOD PARK
(MANATEE COUNTY)

BEGIN SEDIMENT BARRIER
STA. 276+28.09, 56.25' LT.

END SEDIMENT BARRIER
STA. 280+95.88, 115.24' LT.

BEGIN SEDIMENT BARRIER
STA. 280+51.10, 119.58' LT.

END SEDIMENT BARRIER
STA. 280+48.76, 56.14' LT.

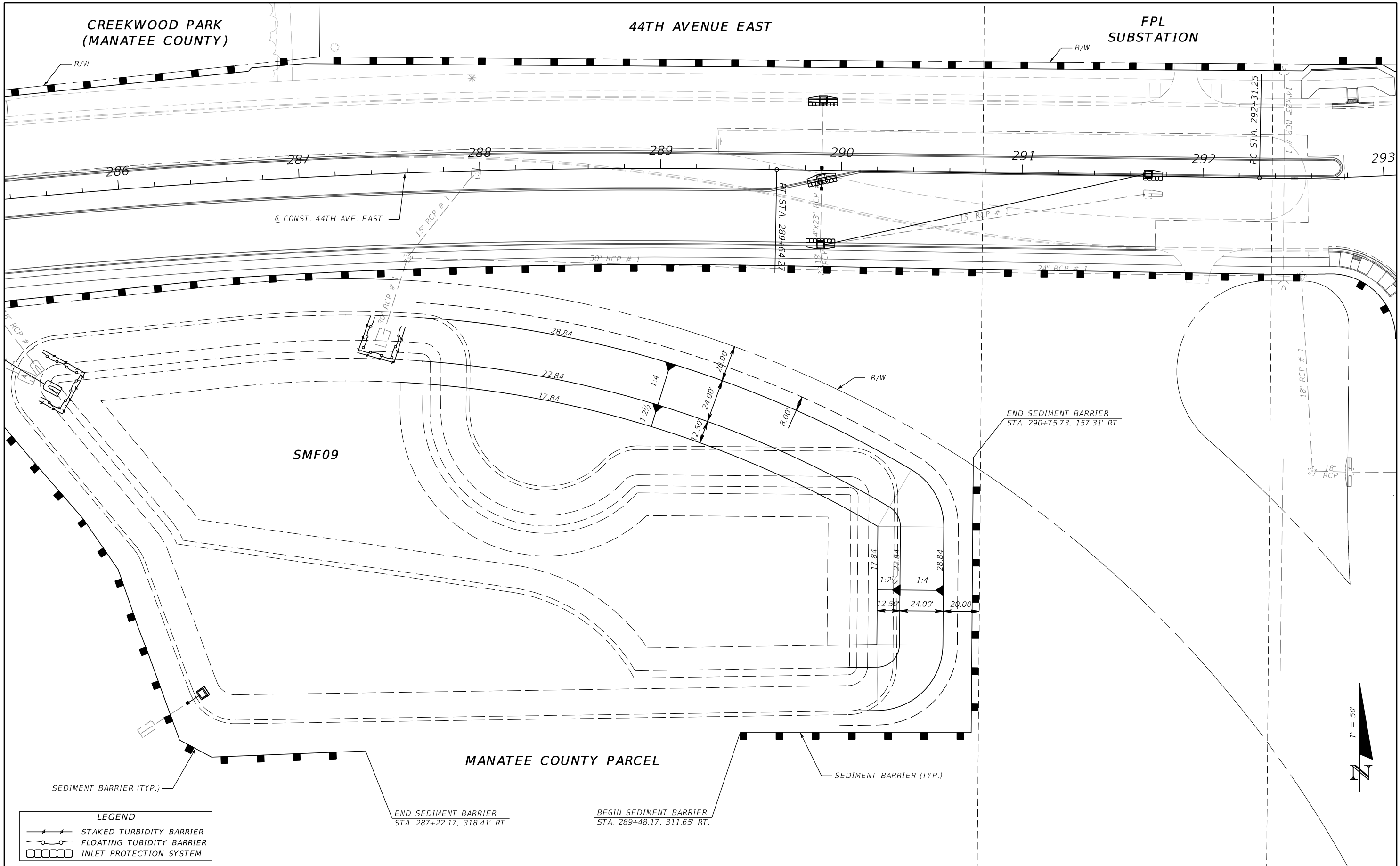
| LEGEND | |
|--------|--------------------------|
| | STAKED TURBIDITY BARRIER |
| | INLET PROTECTION SYSTEM |

| | | | | | | | | | | |
|-----|-----------|------|----|--------------------|---|------------------------|--|---------------------------------------|---------------------------------|--------------|
| No. | REVISIONS | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER LISANDRO A. ZAPATA | EROSION CONTROL PLAN (5) | SHEET NO. |
| | | | | DESIGNED BY LAZ | | PROJECT NO. 6045662 | | FL. LICENSE NO. 58822 | | 68 |

16:13:31

09/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\drainage\SWPPRD04.DGN

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



LEGEND

| | |
|--|----------------------------|
| | STAKED TURBIDITY BARRIER |
| | FLOATING TURBIDITY BARRIER |
| | INLET PROTECTION SYSTEM |

END SEDIMENT BARRIER
STA. 287+22.17, 318.41' RT.

BEGIN SEDIMENT BARRIER
STA. 289+48.17, 311.65' RT.

END SEDIMENT BARRIER
STA. 290+75.73, 157.31' RT.



| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|---|-------------|---------|------------------------------------|-----------------|--------------------|---------------------------------|-----------|----|
| No. | REVISIONS | | | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | LISANDRO A. ZAPATA | EROSION CONTROL PLAN (6) | SHEET NO. | 69 |
| | | | | DESIGNED BY | LAZ | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 58822 | | | |
| | | | | DRAWN BY | GAC | | | | | | | | | |
| | | | | CHECKED BY | LAZ | | | | | | | | | |

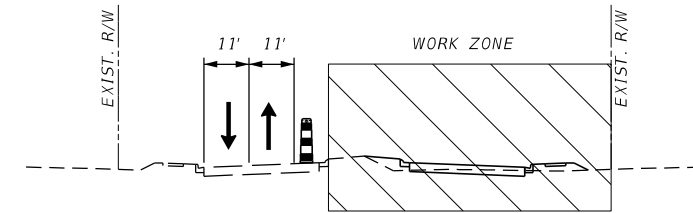
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TRAFFIC CONTROL GENERAL NOTES

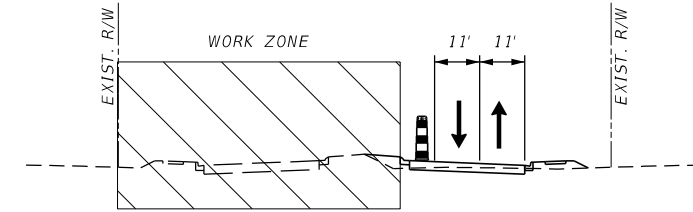
1. EXISTING SPEED LIMIT TO BE MAINTAINED ON 44TH AVENUE EAST.
2. THE COST OF MAINTENANCE OF TRAFFIC OPERATIONS SHALL BE INCLUDED UNDER THE LUMP SUM PAY ITEM, UNLESS A SEPARATE PAY ITEM IS PROVIDED.
3. CONTRACTOR SHALL MAINTAIN SUFFICIENT TRAVEL WAYS TO PROVIDE INGRESS AND EGRESS FOR ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009) AND FDOT STANDARD PLANS (FY 2019-20).
4. 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.
5. 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.
6. TRAFFIC CONTROL PLANS SHOW CONNECTIONS TO EXISTING 44TH AVENUE EAST TO THE EAST OF 44TH AVENUE PLAZA EAST. CONTRACTOR SHALL COORDINATE THE WORK ZONES BETWEEN THIS PROJECT AND ADJACENT PROJECT TO MINIMIZE LANE SHIFTS.

TRAFFIC CONTROL PHASING NOTES

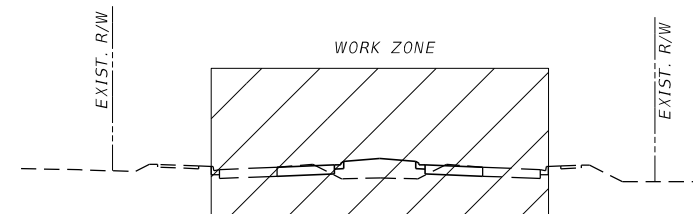
- PHASE 1: THE INTENT OF PHASE 1:**
 CONSTRUCT PROPOSED EB TRAVEL LANES.
 CONSTRUCT PROPOSED MEDIAN WIDENING.
 CONSTRUCT DRAINAGE IMPROVEMENTS AND STORMWATER MANAGEMENT FACILITIES.
- STAGE 1:**
 - INSTALL ADVANCE WARNING SIGNS AND TEMPORARY TRAFFIC CONTROL DEVICES PER FDOT STANDARD PLANS ALONG 44TH AVENUE EAST, CREEKWOOD BLVD., AND ALL SIDE STREETS.
 - CONSTRUCT TEMPORARY PAVEMENT FOR TRANSITION TO ADJACENT PROJECT WORK ZONE IF NEEDED.
- STAGE 2:**
 - ADJUST/INSTALL TEMPORARY TRAFFIC CONTROL DEVICES.
 - CONSTRUCT PROPOSED EB ROADWAY FROM BEGIN PROJECT TO CREEKWOOD BLVD.
 - CONSTRUCT INSIDE WIDENING ALONG EB AND WB FROM CREEKWOOD BLVD. TO END PROJECT.
 - CONSTRUCT PROPOSED PONDS SMF07B AND SMF09.
 - CONSTRUCT PROPOSED DRAINAGE IMPROVEMENTS.
- PHASE 2: THE INTENT OF PHASE 2:**
 CONSTRUCT PROPOSED OUTSIDE WIDENING AND PROPOSED SIDEWALK ALONG THE WB TRAVEL LANES.
 CONSTRUCT MILLING AND RESURFACING.
 COMPLETE CONSTRUCTION OF ALL PROPOSED DRAINAGE SYSTEMS AND ALL OTHER ROADWAY COMPONENTS.
 CONSTRUCT SIGNAL AT CREEKWOOD BLVD.
- STAGE 1:**
 - ADJUST TEMPORARY TRAFFIC CONTROL DEVICES.
 - CONSTRUCT TEMPORARY PAVEMENT FOR TRANSITION TO ADJACENT PROJECT WORK ZONE IF NEEDED.
 - INSTALL TEMPORARY PAVEMENT MARKINGS ON NEWLY CONSTRUCTED TRAVEL LANES.
- STAGE 2:**
 - CONSTRUCT PROPOSED OUTSIDE WIDENING INCLUDING PROPOSED SIDEWALK ALONG WB TRAVEL LANES.
 - COMPLETE CONSTRUCTION OF PROPOSED DRAINAGE SYSTEMS.
 - COMPLETE CONSTRUCTION OF ALL PROPOSED ROADWAY COMPONENTS.
 - MILL AND RESURFACE 44TH AVENUE EAST AND CREEKWOOD BLVD.
- PHASE 3: INSTALL FRICTION COURSE AND FINAL PAVEMENT MARKINGS.**




SEGMENT I - PHASE 1 - FROM BEGIN PROJECT TO CREEKWOOD BLVD.

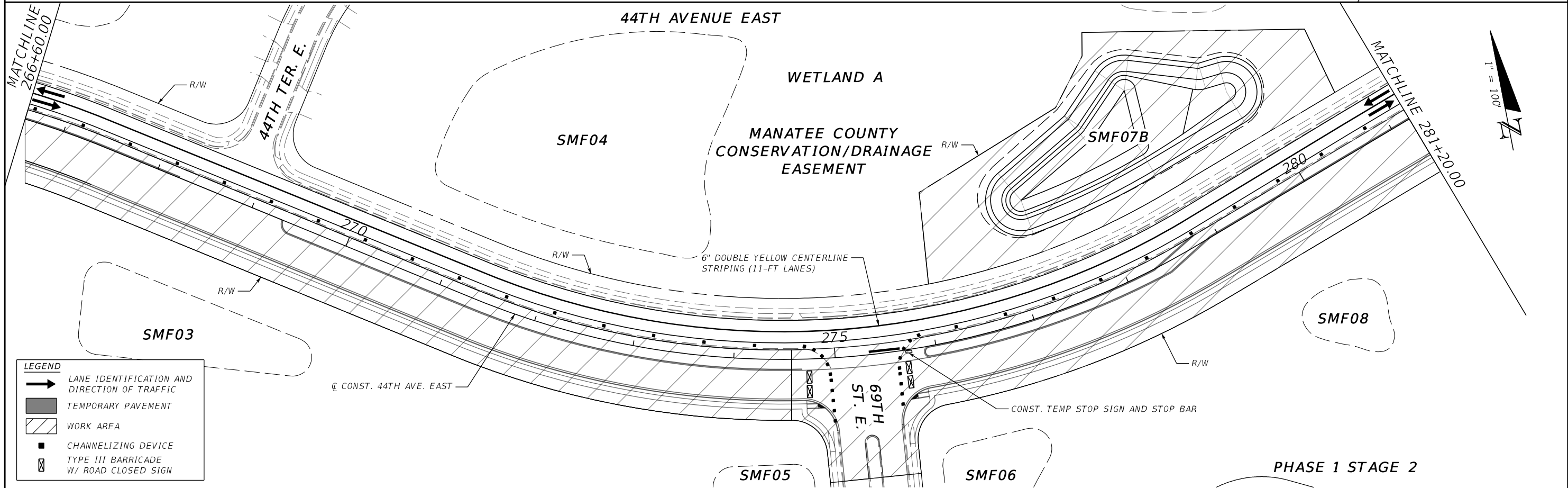
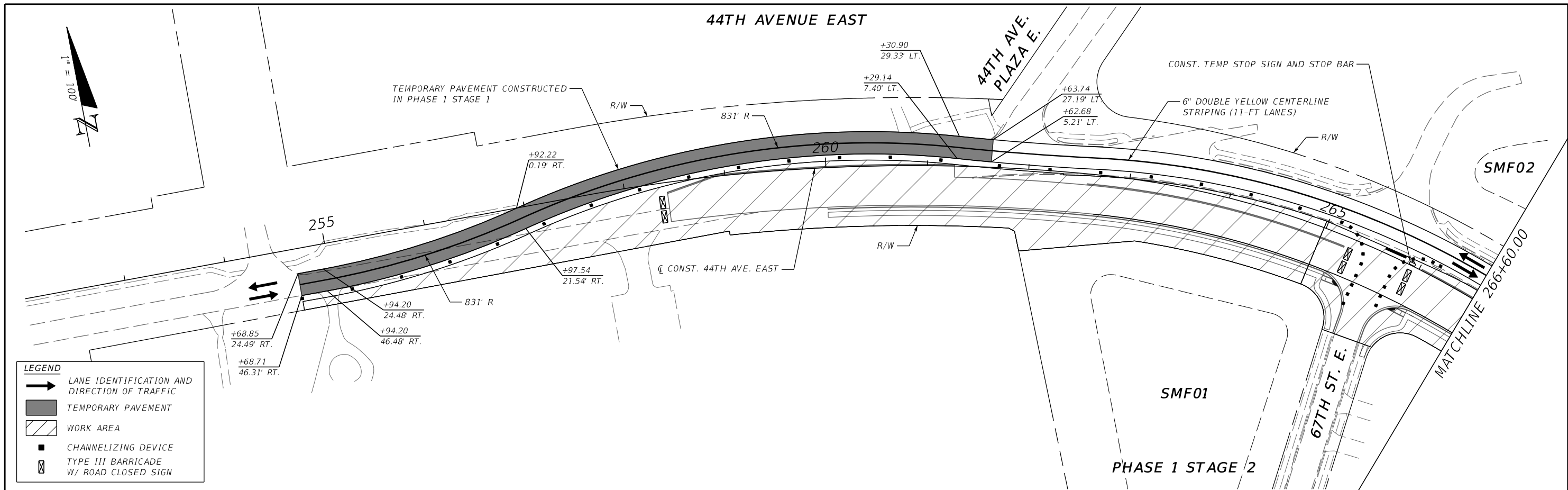


SEGMENT I - PHASE 2 - FROM BEGIN PROJECT TO CREEKWOOD BLVD.

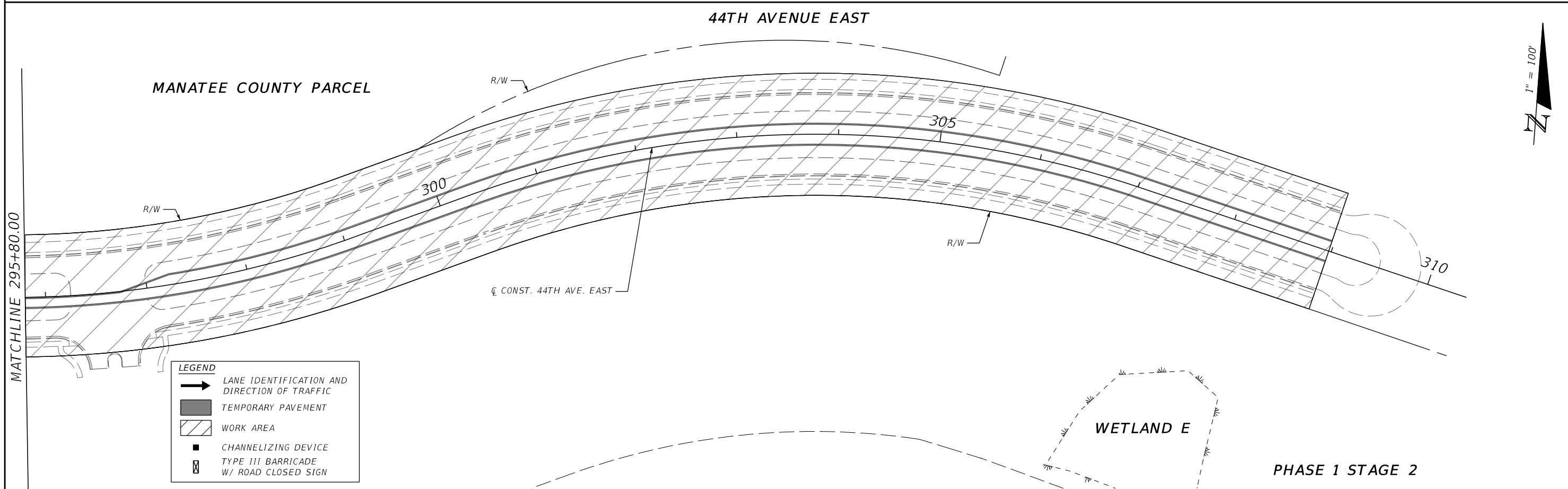
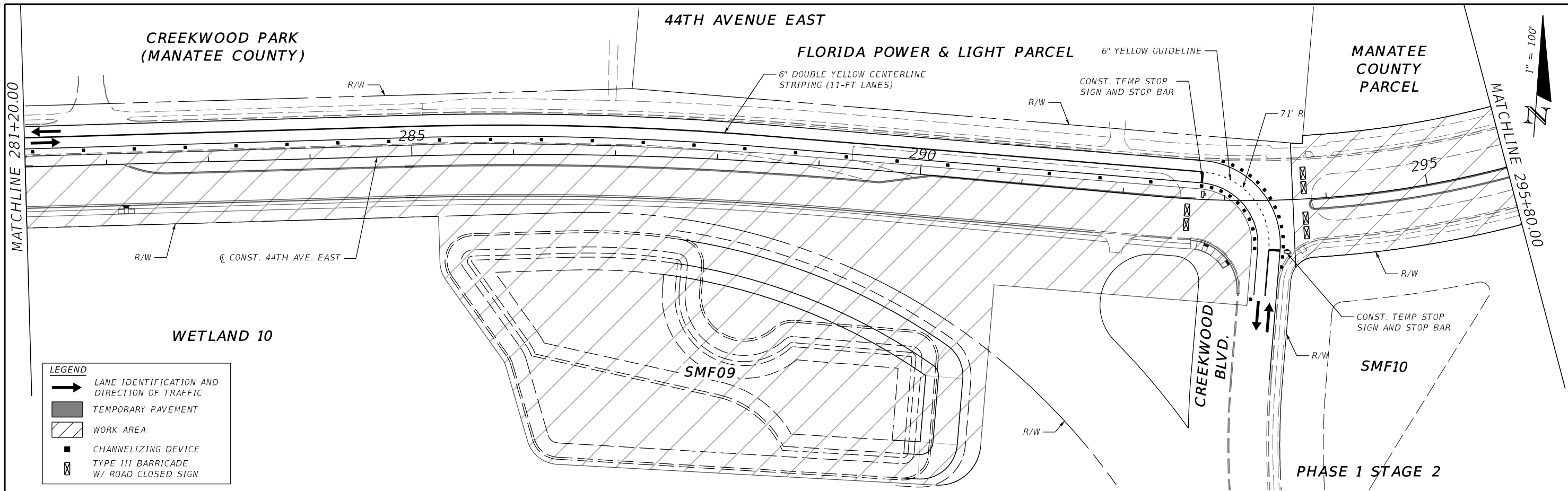


SEGMENT II - FROM CREEKWOOD BLVD. TO END PROJECT

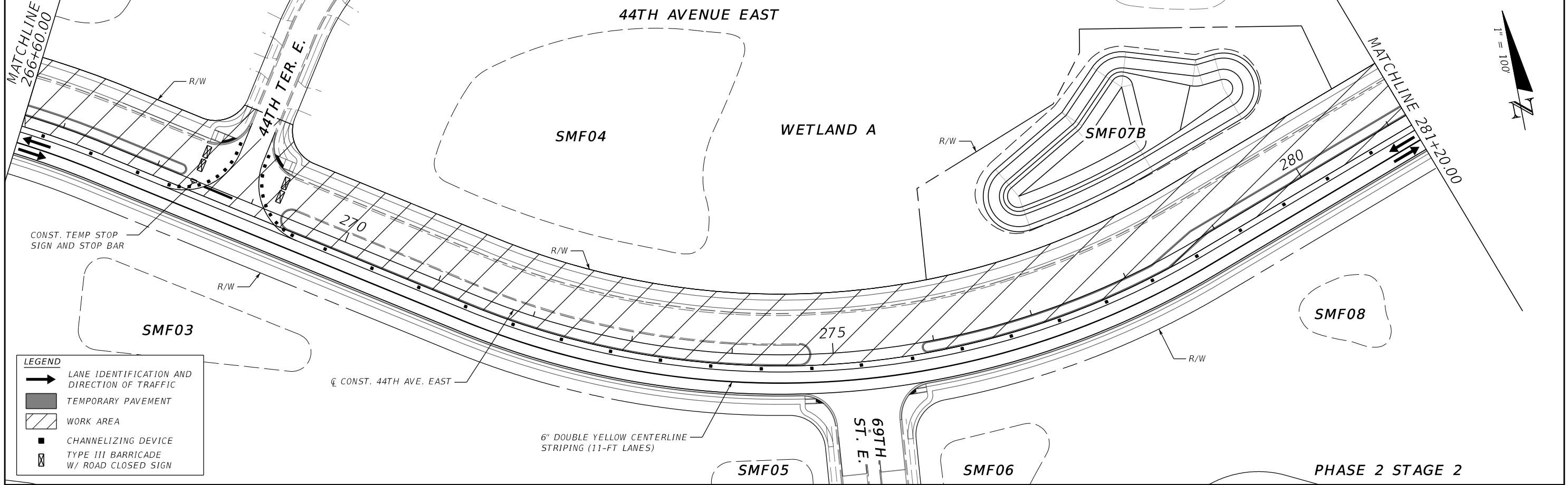
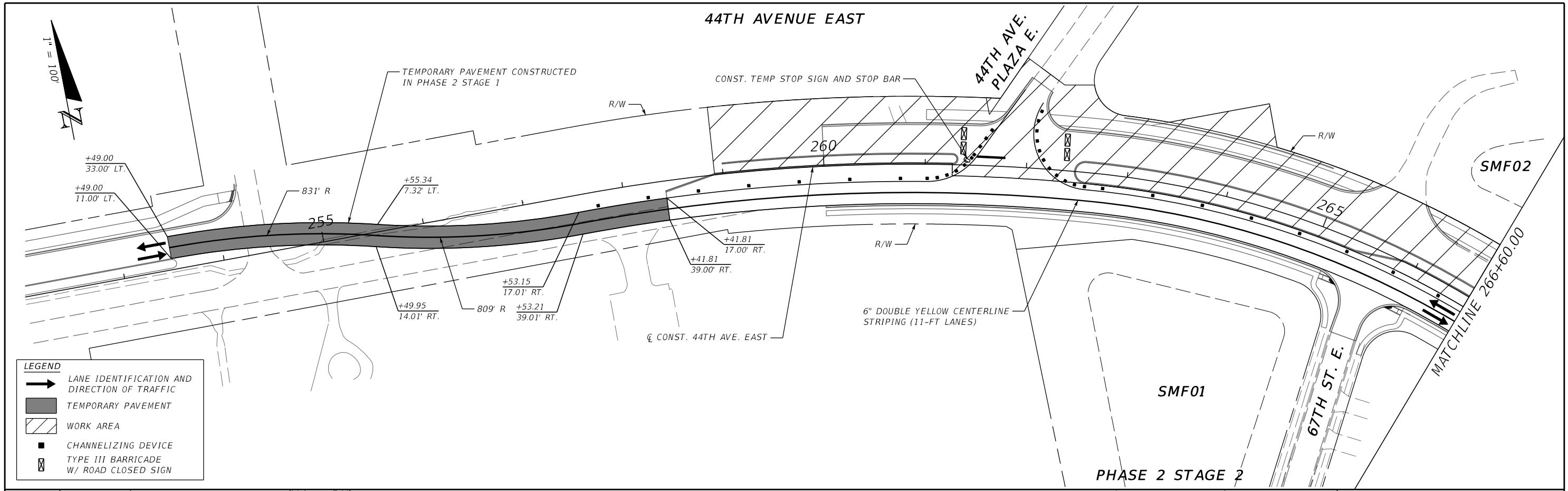
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|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|--|-----------------|----------------|--|-----------|----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | JASON L. STARR | <p align="center">TRAFFIC CONTROL GENERAL NOTES</p> | SHEET NO. | 70 |
| | | | | DESIGNED BY | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 70171 | | | |
| | | | | DRAWN BY | JHC | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |



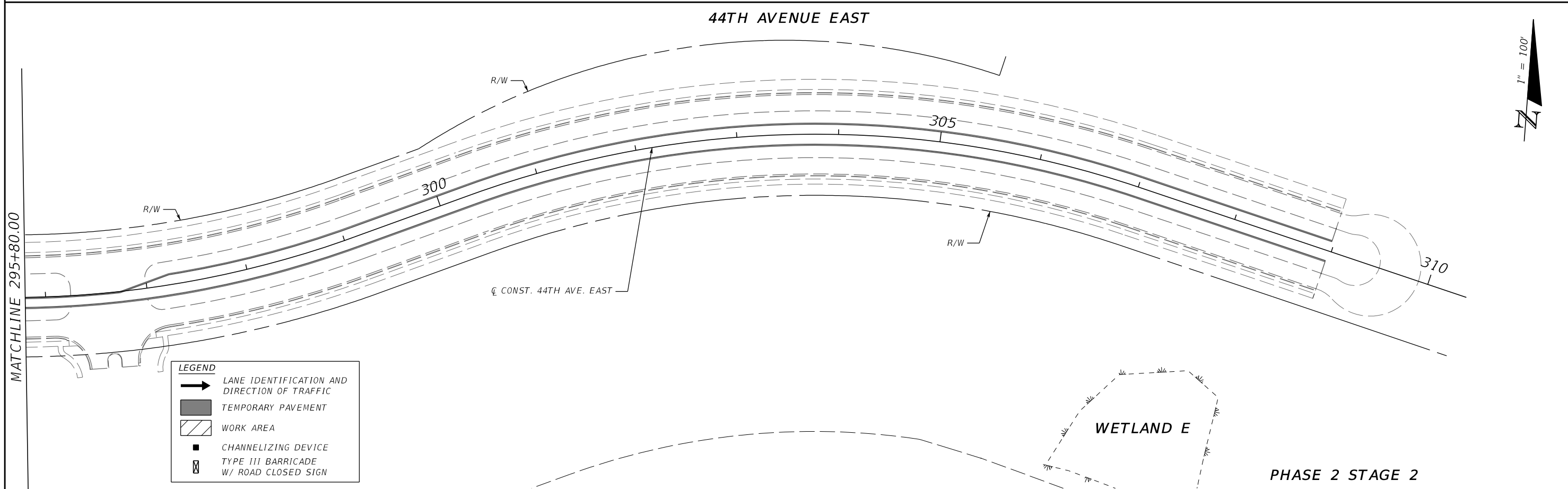
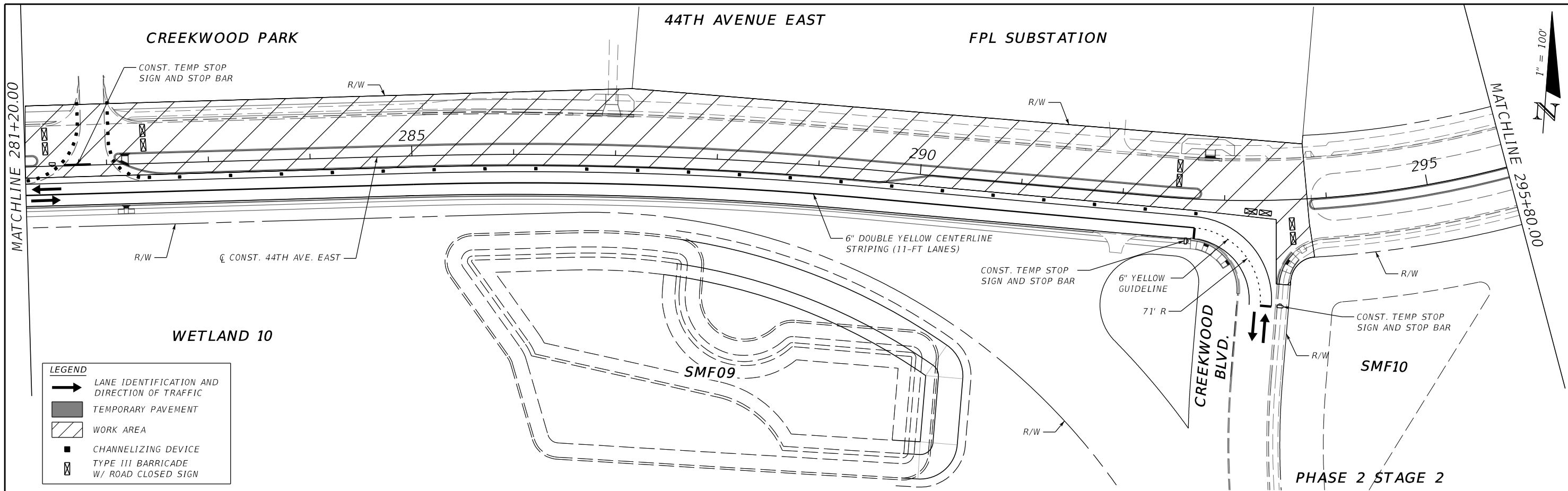
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| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 71 | |
| DESIGNED BY JLS | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 225338 | | FL. LICENSE NO. 70171 | | TRAFFIC CONTROL PLANS (I) | |
| DRAWN BY JHC | | | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| CHECKED BY DRH | | | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | | |



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|-------------|-----------|----------|-----------------------------------|--|-----------------------------|--|---------|--|---------------------------|--|----------------|--|-----------|--|
| SCALE | | AS NOTED | HDR ENGINEERING, INC. | | DATE | | 09/2019 | | DESIGN ENGINEER | | JASON L. STARR | | SHEET NO. | |
| DESIGNED BY | | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | | 225338 | | FL. LICENSE NO. | | 70171 | | 72 | |
| DRAWN BY | | JHC | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | TRAFFIC CONTROL PLANS (2) | | | | | |
| CHECKED BY | | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY FLORIDA | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | | | | | |



| | | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|------------------------------------|-----------------|----------------|----------------------------------|-----------|----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | JASON L. STARR | TRAFFIC CONTROL PLANS (3) | SHEET NO. | 73 |
| | | | | DESIGNED BY | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 225338 | | FL. LICENSE NO. | 70171 | | | |
| | | | | DRAWN BY | JHC | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |



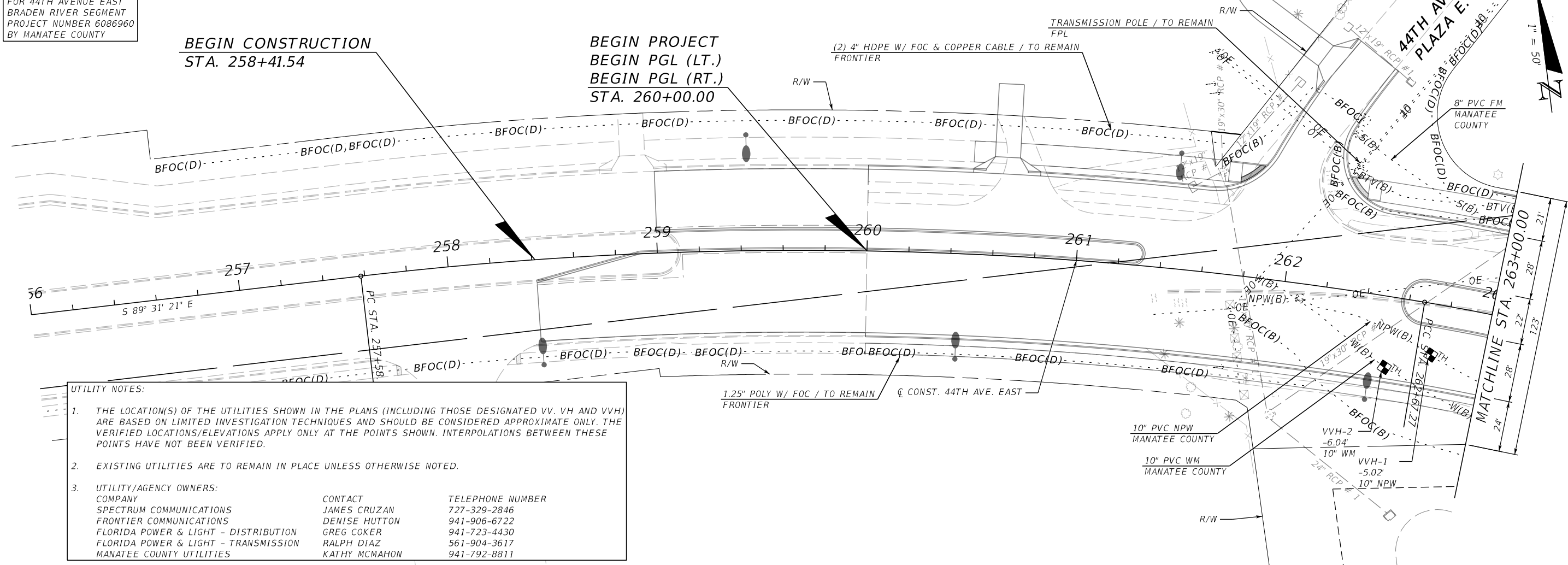
| | | | | | | | | | |
|---|-----------|------|----|---|---|------------------------------------|---|----------------------------------|--------------|
| LEGEND LANE IDENTIFICATION AND DIRECTION OF TRAFFIC TEMPORARY PAVEMENT WORK AREA CHANNELIZING DEVICE TYPE III BARRICADE W/ ROAD CLOSED SIGN | | | | SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 PROJECT NO. 225338 | MANATEE COUNTY PUBLIC WORKS DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | TRAFFIC CONTROL PLANS (4) | SHEET NO. 74 |
| No. | REVISIONS | DATE | BY | | | | | | |

SEE CONSTRUCTION PLANS FOR 44TH AVENUE EAST BRADEN RIVER SEGMENT PROJECT NUMBER 6086960 BY MANATEE COUNTY

44TH AVENUE EAST

BEGIN CONSTRUCTION STA. 258+41.54

BEGIN PROJECT
BEGIN PGL (LT.)
BEGIN PGL (RT.)
STA. 260+00.00



UTILITY NOTES:

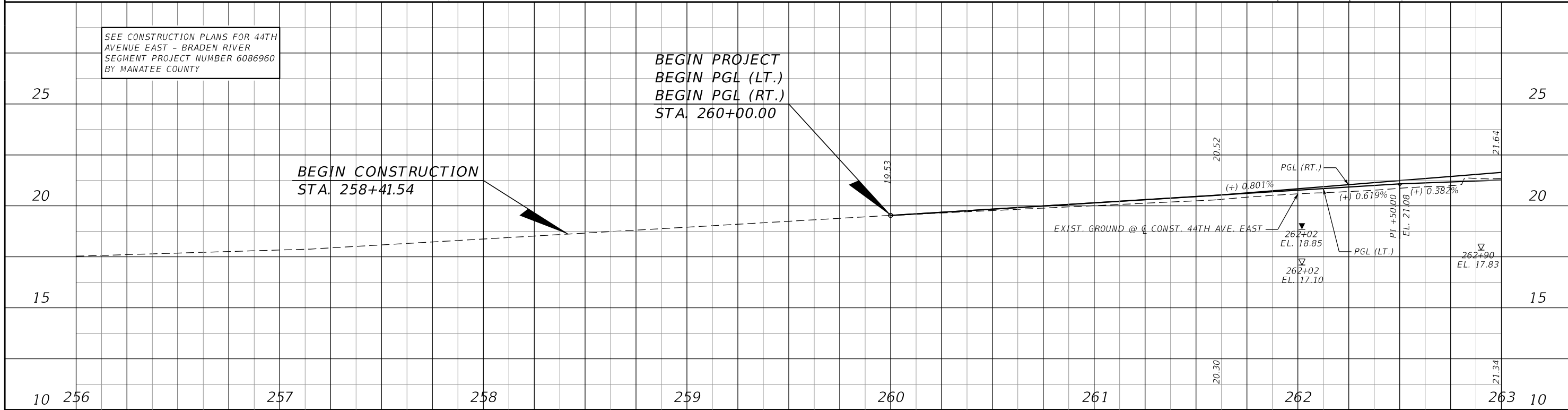
- THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
- EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
- 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 | 561-904-3617 |
| MANATEE COUNTY UTILITIES | KATHY MCMAHON | 941-792-8811 |

SEE CONSTRUCTION PLANS FOR 44TH AVENUE EAST - BRADEN RIVER SEGMENT PROJECT NUMBER 6086960 BY MANATEE COUNTY

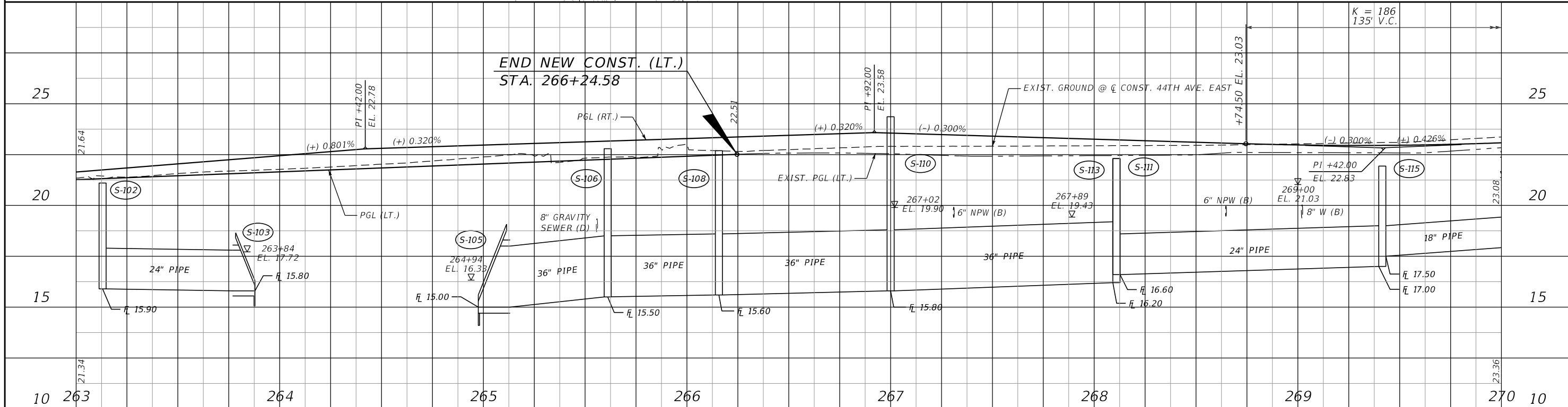
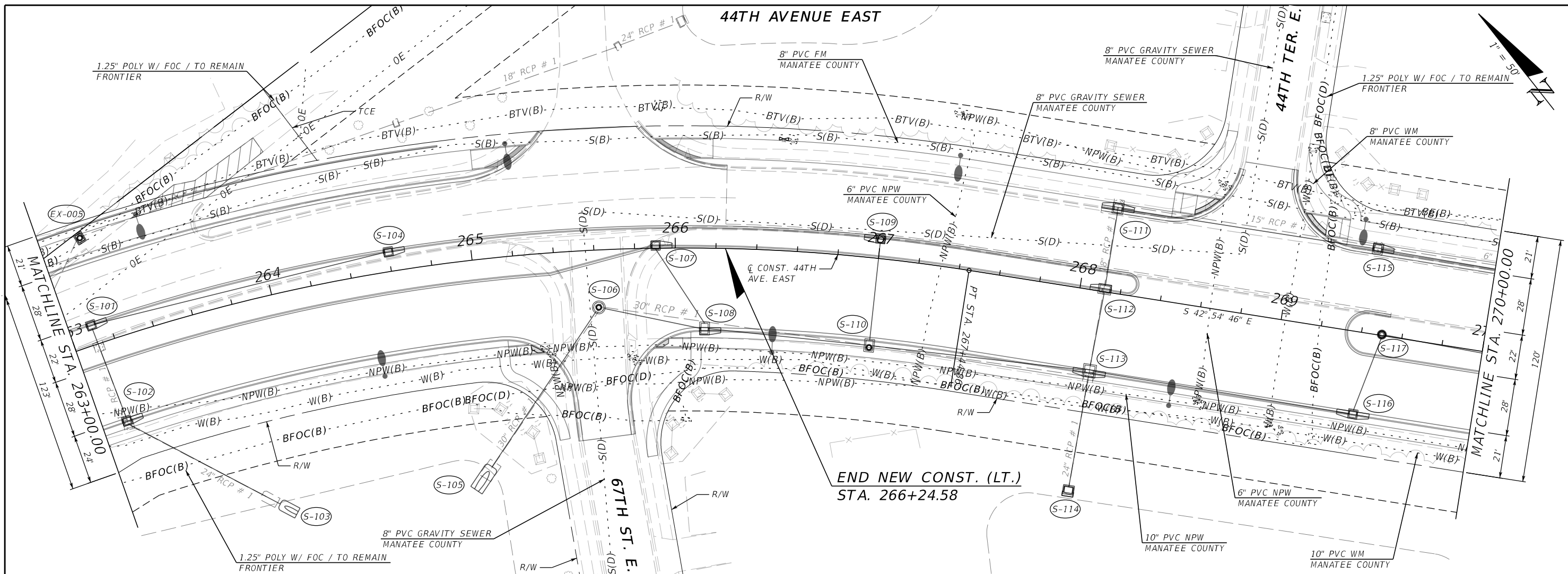
BEGIN PROJECT
BEGIN PGL (LT.)
BEGIN PGL (RT.)
STA. 260+00.00

BEGIN CONSTRUCTION STA. 258+41.54



| | | | | | | | | | |
|-----|-----------|------|----|-----------------------------------|----------|-----------------------------|-------------|-----------------------|-----------|
| No. | REVISIONS | DATE | BY | SCALE | AS NOTED | DATE | PROJECT NO. | DESIGN ENGINEER | SHEET NO. |
| | | | | DESIGNED BY | JLS | | | | |
| | | | | HDR ENGINEERING, INC. | | MANATEE COUNTY PUBLIC WORKS | | | |
| | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | 6045662 | | FL. LICENSE NO. 70171 | |
| | | | | SARASOTA, FLORIDA 34232 | | 6045662 | | 70171 | |
| | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 6045662 | | 70171 | |
| | | | | CHECKED BY DRH | | 6045662 | | 70171 | |

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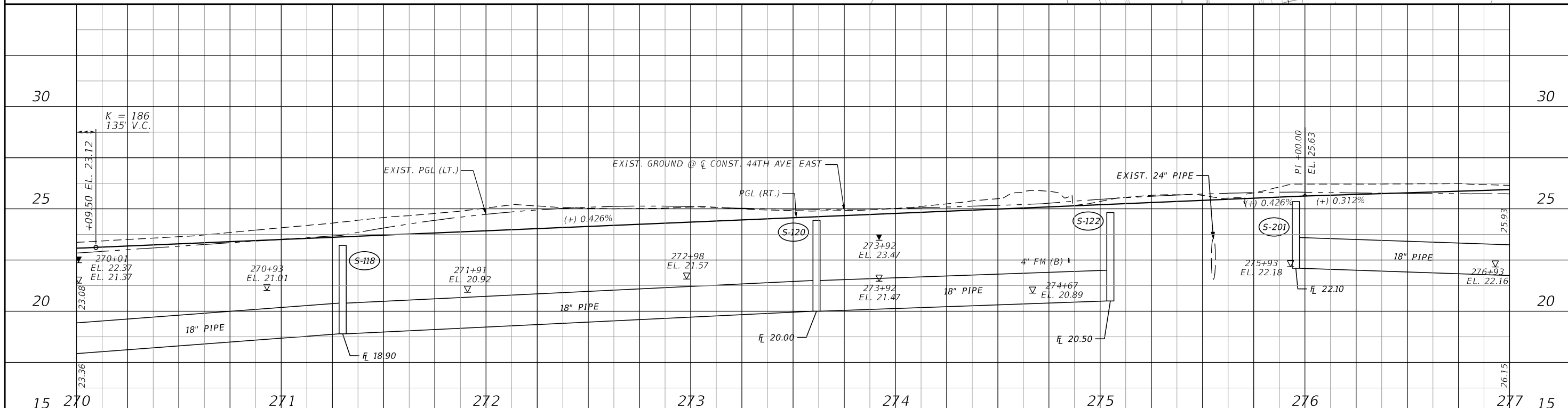
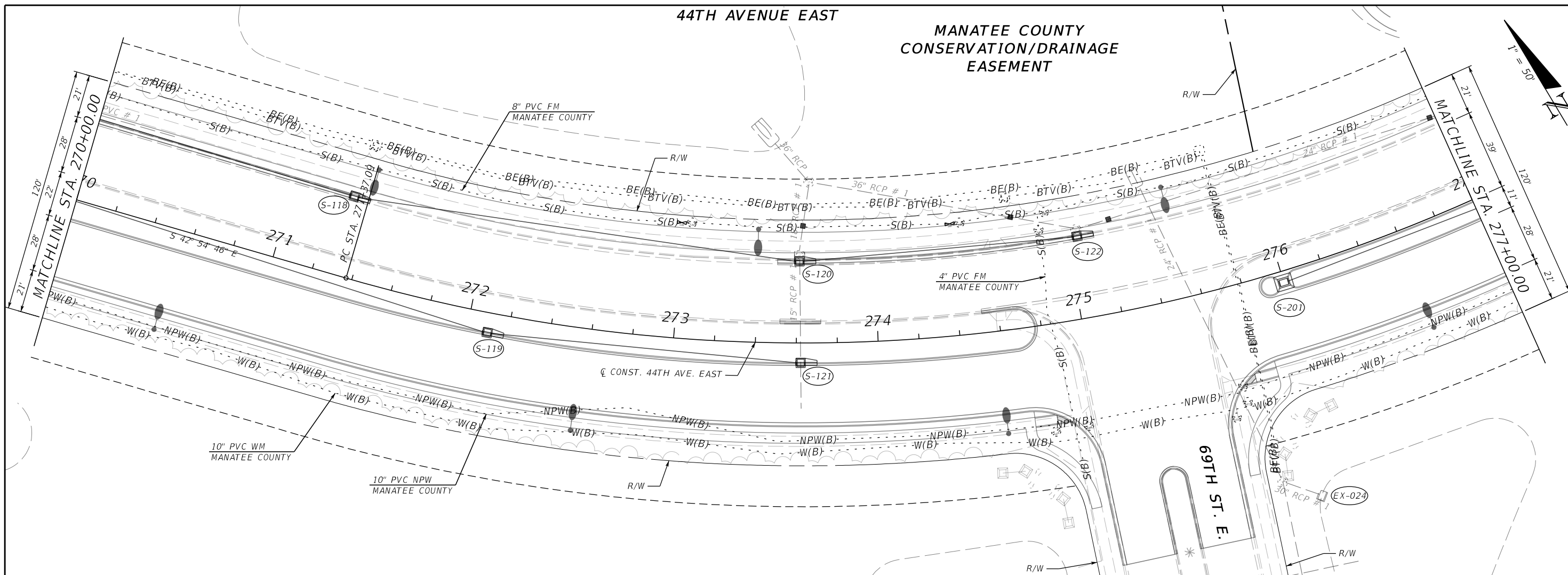


| | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|-----------------------------|----------|------------------------|----------------|-----------|
| No. | REVISIONS | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/20/19 | DESIGN ENGINEER | JASON L. STARR | SHEET NO. |
| | | | | DESIGNED BY | JLS | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 70171 | |
| | | | | DRAWN BY | JHC | SARASOTA, FLORIDA 34232 | MANATEE COUNTY PUBLIC WORKS | | UTILITY ADJUSTMENT (2) | | |
| | | | | CHECKED BY | DRH | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

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

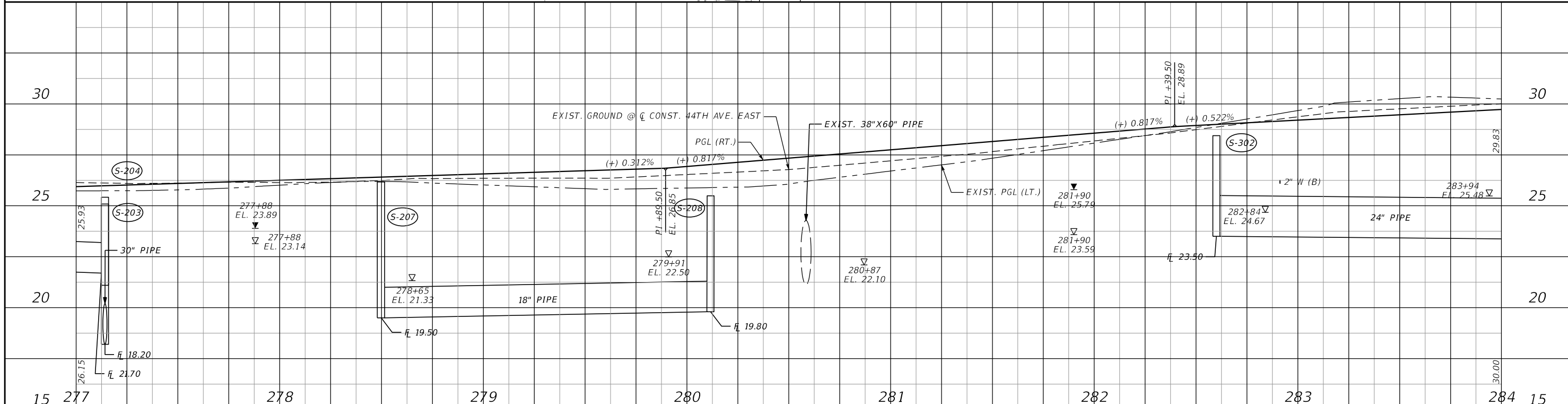
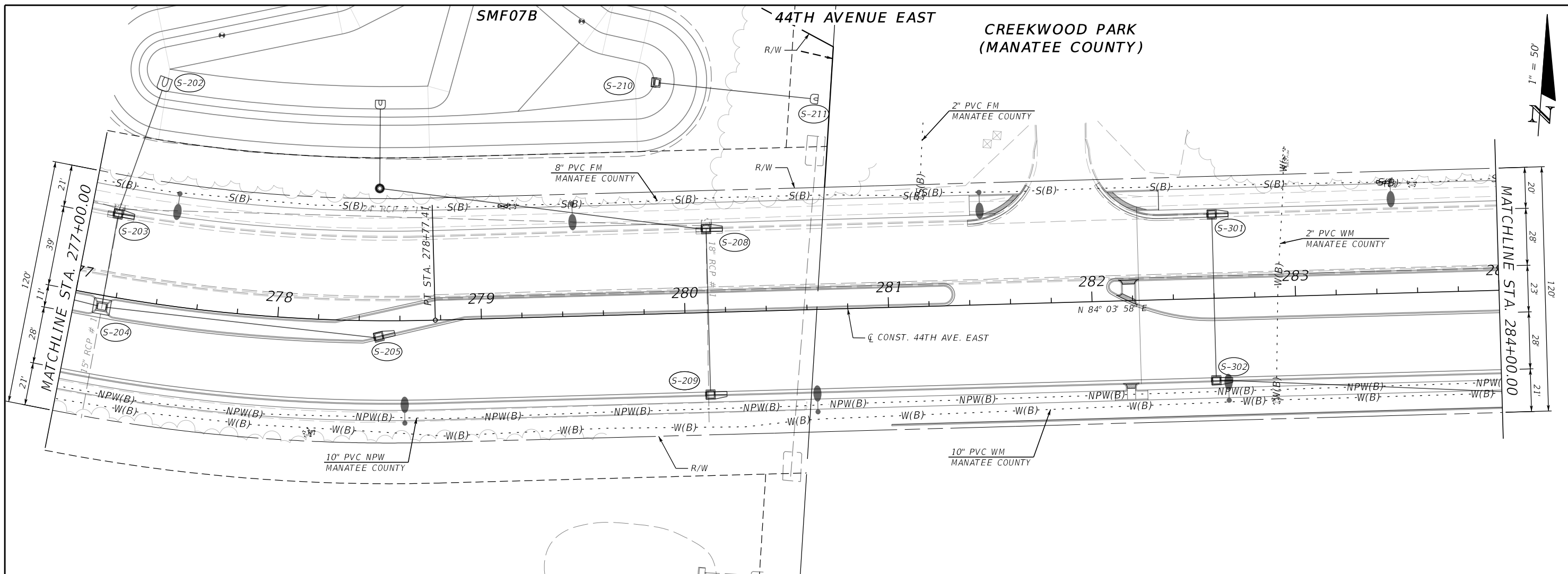
44TH AVENUE EAST

MANATEE COUNTY
CONSERVATION/DRAINAGE
EASEMENT



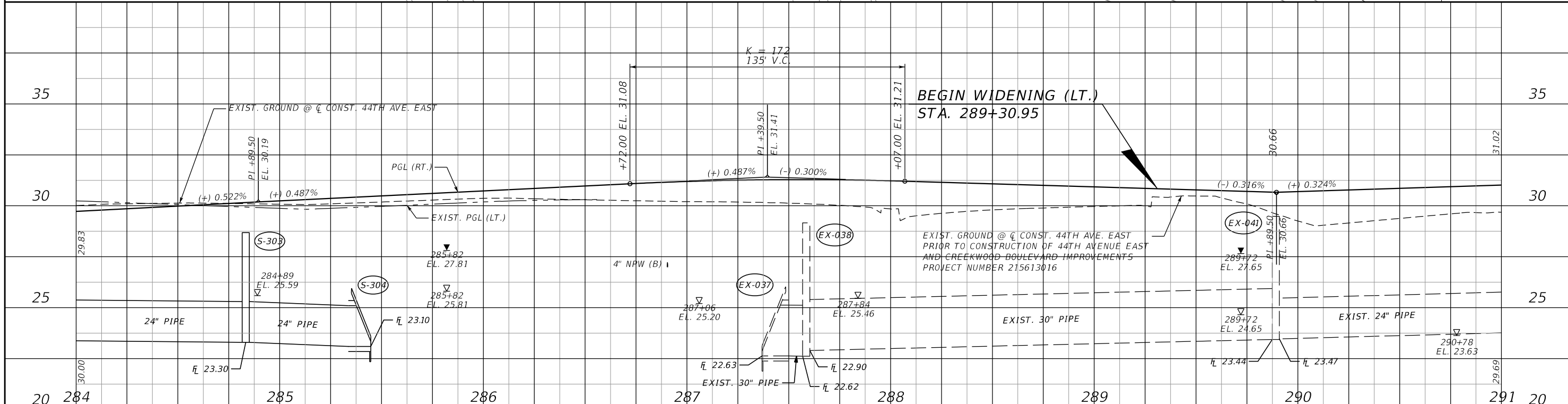
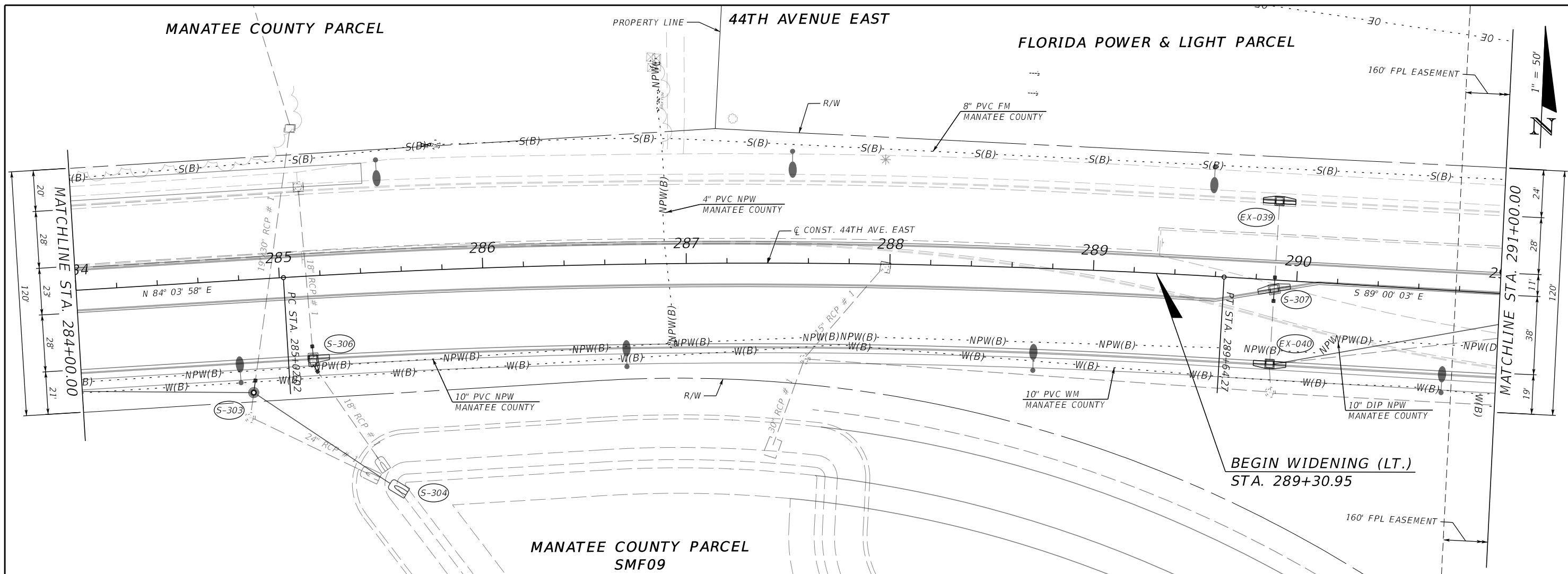
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|-----------------|--|--------------------------------|--|-----------------------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 77 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | UTILITY ADJUSTMENT (3) | | |
| CHECKED BY DRH | | | | | | | | |

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



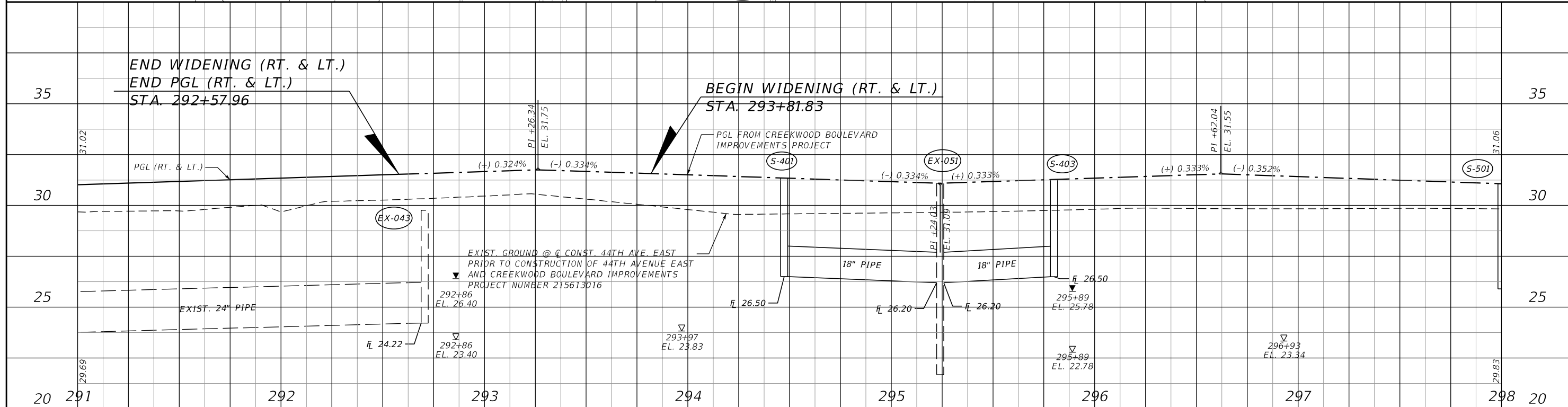
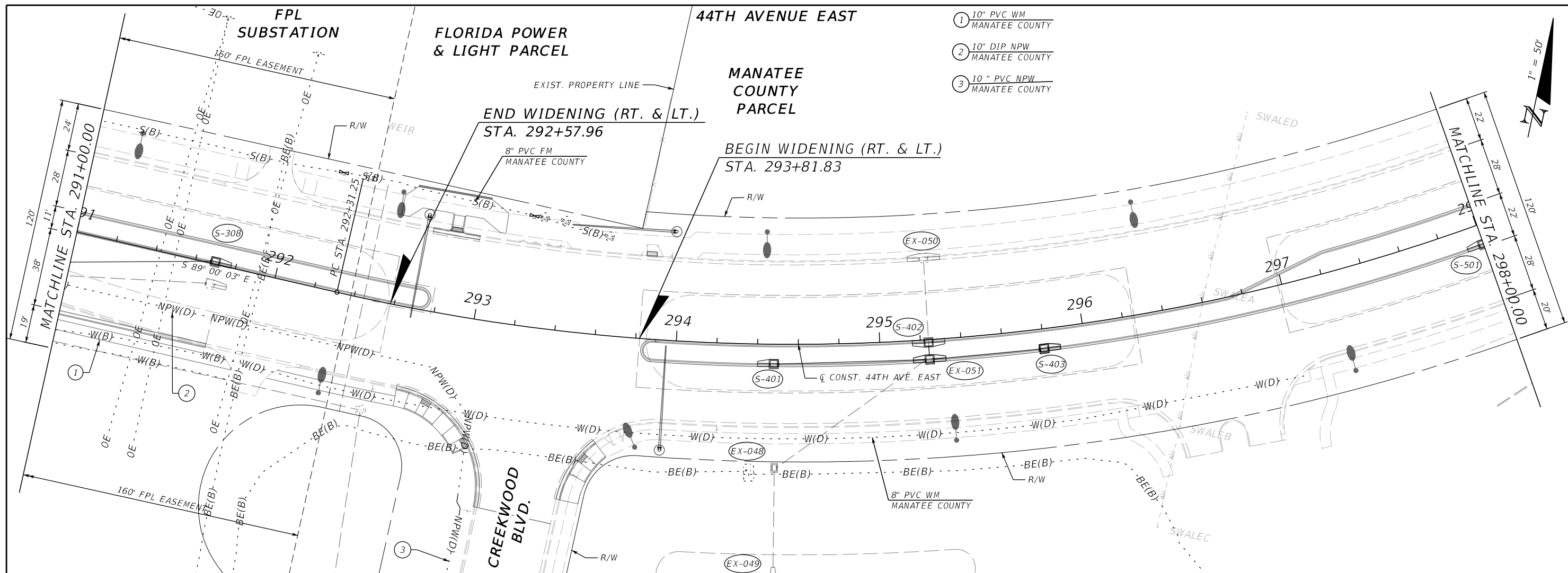
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|---|--|---|--|-------------------------------------|--|------------------------------------|--|---|--|-------------------------------|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | UTILITY ADJUSTMENT (4) | | SHEET NO. 78 | |
|---|--|---|--|-------------------------------------|--|------------------------------------|--|---|--|-------------------------------|--|--------------|--|

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



| | | | | | | | | | |
|---|--|---|--|-------------------------------------|--|---|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | SHEET NO. 79 | |
| No. REVISIONS DATE BY | | MANATEE COUNTY PUBLIC WORKS UTILITY ADJUSTMENT (5) | | | | | | | |

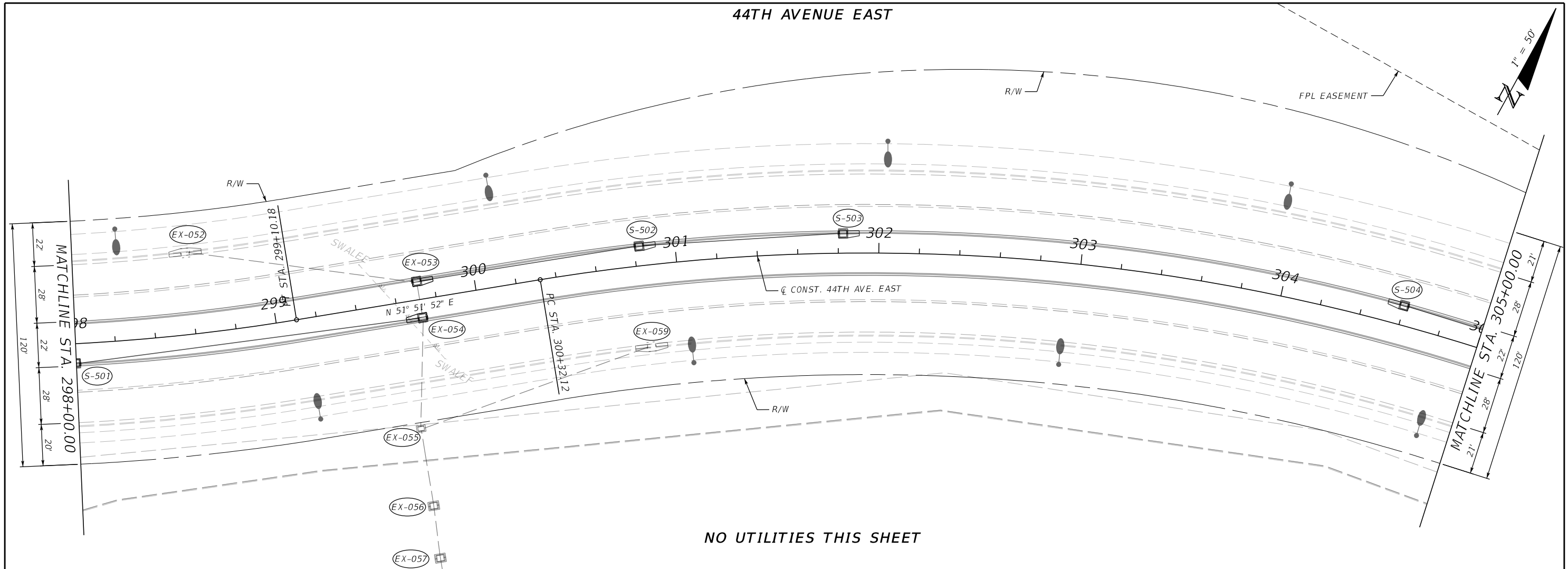
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



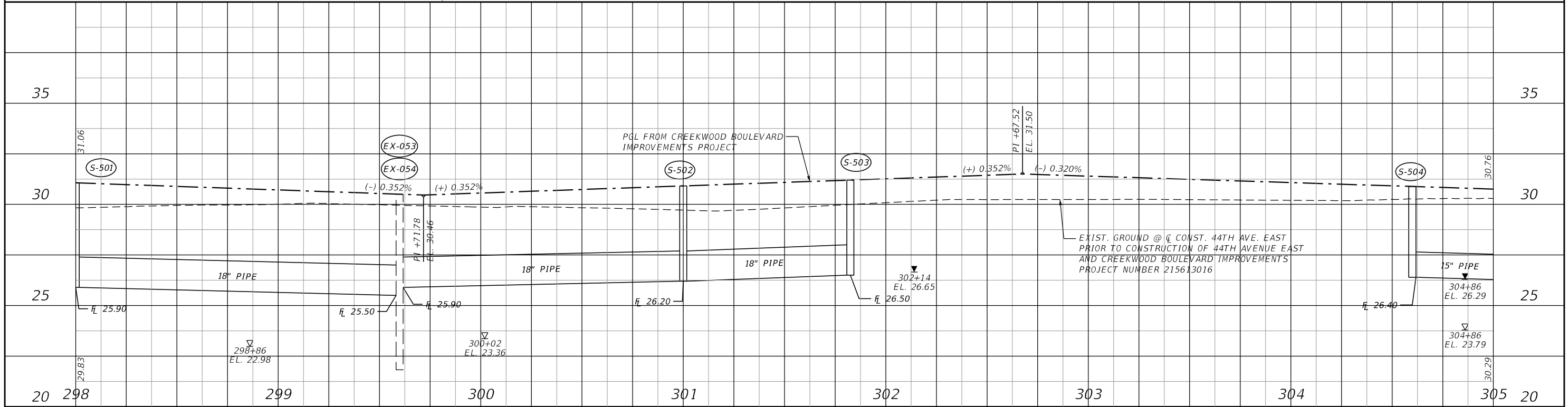
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|---|--|---|--|-------------------------------------|--|--------------------------------|--|---|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | SHEET NO. 80 | |
| UTILITY ADJUSTMENT (6) | | | | | | | | | | | |

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

44TH AVENUE EAST



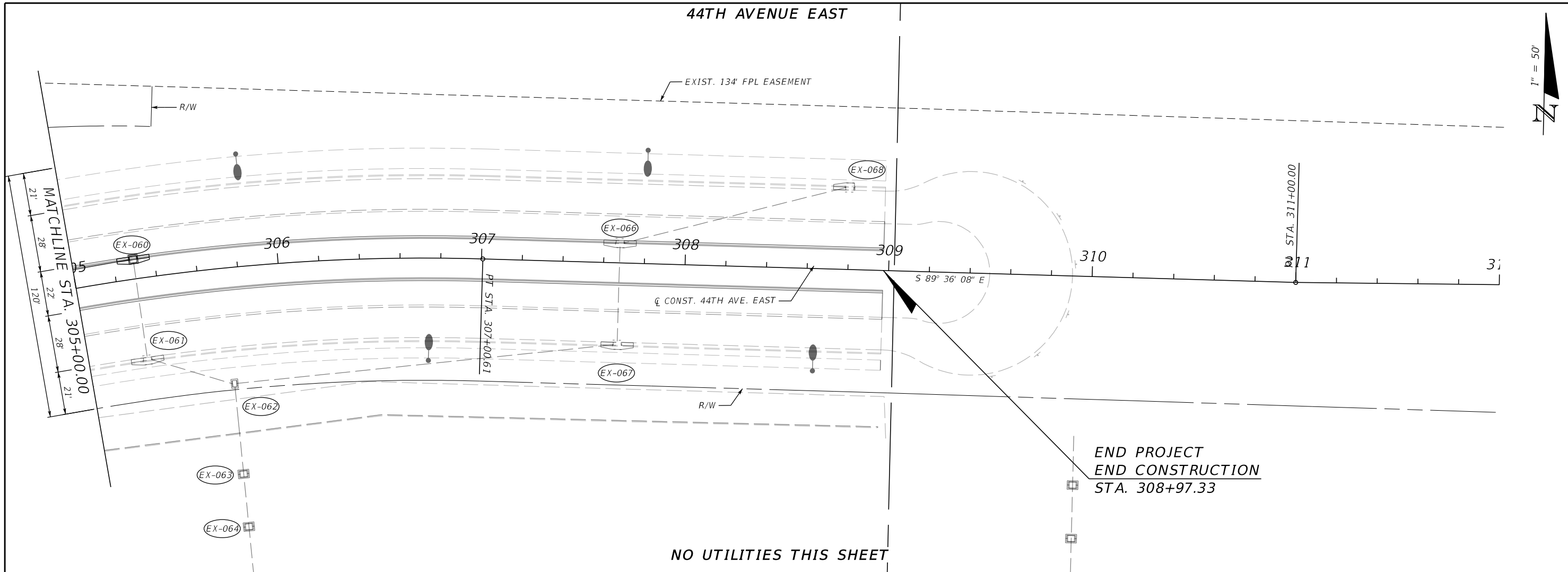
NO UTILITIES THIS SHEET



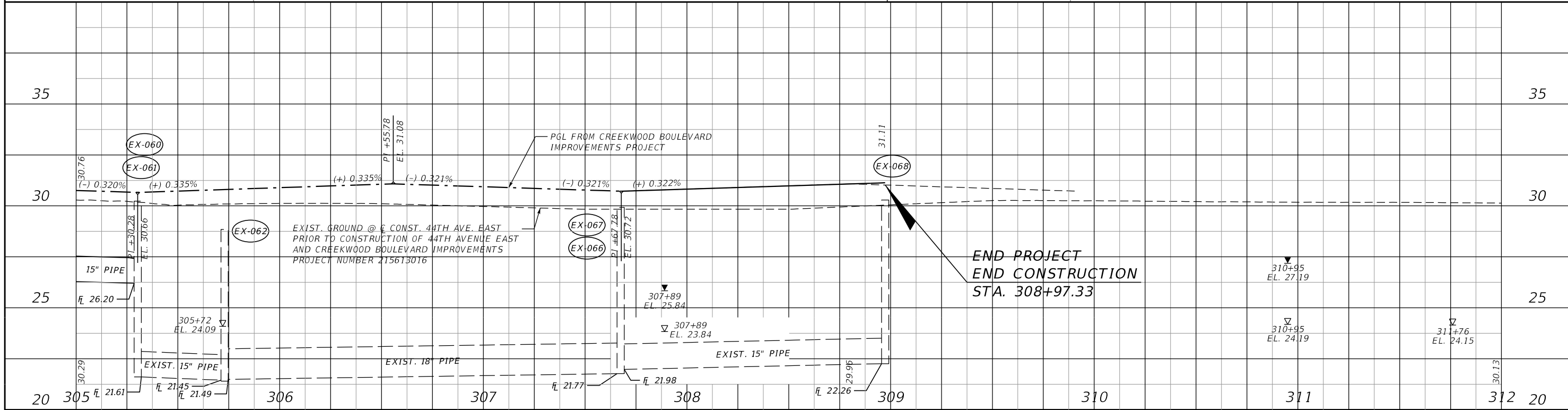
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|-----------------|-----------|-----------------------------------|----|-----------------------------|--|--------------------------------|--|--------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER JASON L. STARR | | SHEET NO. 81 |
| DESIGNED BY JLS | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70171 | | |
| DRAWN BY JHC | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | UTILITY ADJUSTMENT (7) | | |
| CHECKED BY DRH | | CERTIFICATE OF AUTHORIZATION 4213 | | Manatee County Florida | | | | |
| No. | REVISIONS | DATE | BY | | | | | |

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

44TH AVENUE EAST



NO UTILITIES THIS SHEET



| | | | | | | | | | | | |
|---|--|---|--|-------------------------------------|--|-----------------------------|--|---|--|--------------|--|
| SCALE AS NOTED DESIGNED BY JLS DRAWN BY JHC CHECKED BY DRH | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER JASON L. STARR FL. LICENSE NO. 70171 | | SHEET NO. 82 | |
| UTILITY ADJUSTMENT (8) | | | | | | | | | | | |

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

**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

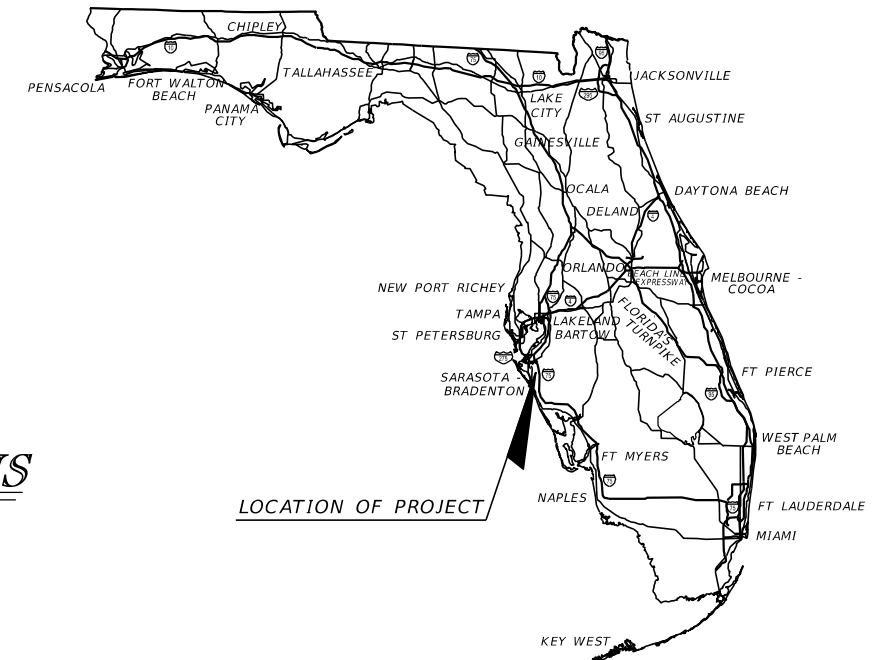
**MANATEE COUNTY
PROJECT NUMBER 6045662
44TH AVENUE EAST
PHASE I**

FROM 44TH AVENUE PLAZA EAST TO I-75

SIGNING AND PAVEMENT MARKING PLANS

**INDEX OF SIGNING AND
PAVEMENT MARKING PLANS**

| SHEET NO. | SHEET DESCRIPTION |
|----------------|-----------------------------------|
| S-1 | KEY SHEET |
| S-2 | SIGNATURE SHEET |
| S-3 THRU S-4 | TABULATION OF QUANTITIES |
| S-5 | GENERAL NOTES |
| S-6 THRU S-13 | SIGNING AND PAVEMENT MARKING PLAN |
| S-14 THRU S-16 | GUIDE SIGN WORKSHEET |
| S-17 THRU S-18 | SIGN CROSS SECTION |



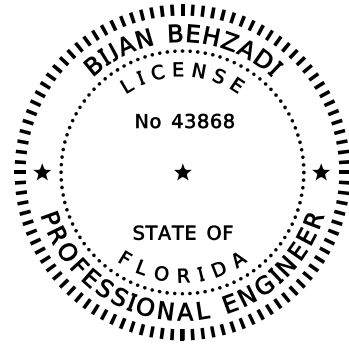
**FINAL SUBMITTAL
09/2019**

**SIGNING AND PAVEMENT
MARKING PLANS
ENGINEER OF RECORD:**
 BIJAN BEHZADI, P.E.
 P.E. NO.: 43868
 HDR ENGINEERING, INC.
 2601 CATTLEMEN ROAD, SUITE 400
 SARASOTA, FLORIDA 34232
 FBPR CERTIFICATE OF AUTHORIZATION NO. 4213
 VENDOR NO. 47-0680568
 CONTRACT NO. C9480

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

| FISCAL YEAR | SHEET NO. |
|----------------|--------------|
| 19 | S-1 |

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



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL


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

HDR ENGINEERING, INC.
4830 W KENNEDY BLVD, SUITE 400
TAMPA, FLORIDA 33609-2548
CERTIFICATE OF AUTHORIZATION NO. 4213
BIJAN BEHZADI, P.E. NO. 43868

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

SIGNING AND PAVEMENT MARKING PLANS


| SHEET NO. | SHEET DESCRIPTION |
|----------------|-----------------------------------|
| S-1 | KEY SHEET |
| S-2 | SIGNATURE SHEET |
| S-3 THRU S-4 | TABULATION OF QUANTITIES |
| S-5 | GENERAL NOTES |
| S-6 THRU S-13 | SIGNING AND PAVEMENT MARKING PLAN |
| S-14 THRU S-16 | GUIDE SIGN WORKSHEET |
| S-17 THRU S-18 | SIGN CROSS SECTION |

| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|--|-----------------|---------------|------------------------|-----------|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | SIGNATURE SHEET | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | S-2 |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|---|------|---------------|-------|-------|-------|------|-------|-------|-------|------|-------|------|-------|------|---|------------------|-------|-------------|-------|
| | | | S-6 | | S-7 | | S-8 | | S-9 | | S-10 | | S-11 | | S-12 | | PLAN | FINAL | PLAN | FINAL |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | | | | |
| 654-2-21 | RECTANGULAR RAPID FLASHING BEACON, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION | AS | | | | | | | 2 | | | | | | | | 2 | | | |
| 654-2-22 | RECTANGULAR RAPID FLASHING BEACON, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- BACK TO BACK | AS | | | | | | | 1 | | | | | | | | 1 | | | |
| 700-1-11 | SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF | AS | 1 | 6 | 4 | 7 | 3 | 7 | 5 | | | | | | | | 33 | | | |
| 700-1-12 | SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF | AS | | 4 | 2 | 2 | 1 | | | | | | | | | | 9 | | | |
| 700-1-13 | SINGLE POST SIGN, F&I GROUND MOUNT, 21-30 SF | AS | 1 | 2 | 1 | 1 | | | | | | | | | | | 5 | | | |
| 700-1-50 | SINGLE POST SIGN, RELOCATE | AS | 1 | | | | | | | | | 2 | | | | | 3 | | | |
| 700-1-74 | SINGLE POST SIGN, F&I CUSTOM, 31+ SF | AS | | | | | | | | | | 1 | | | | | 1 | | | |
| 700-2-14 | MULTI- POST SIGN, F&I GROUND MOUNT, 31-50 SF | AS | | | | | | | | 1 | | | | | 1 | | 2 | | | |
| 700-3-601 | SIGN PANEL, REMOVE, UP TO 12 SF | EA | 2 | | | | | | | | | | | 1 | | | 3 | | | |
| 705-10-1 | OBJECT MARKER, TYPE 1 | EA | 3 | | 3 | 3 | | | | | | | | 5 | | | 14 | | | |
| 705-11-1 | DELINEATOR, FLEXIBLE TUBULAR, YELLOW - YELLOW | EA | 2 | 2 | 2 | 2 | | | | | | | | | | | 8 | | | |
| 710-11-290 | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE | SF | 23 | 23 | 33 | 32 | | | | | | | 14 | | | | 124 | | | |
| 710-90 | PAINTED PAVEMENT MARKINGS, FINAL SURFACE | LS | | | | | | | | | | | | | | | | | | |
| * | RETRO-REFLECTIVE PAVEMENT MARKERS | EA | | | | | | | | | | | | | | | | | | |
| * | (WHITE/RED) | | 30 | 46 | 44 | 54 | | 38 | 58 | | | 36 | | | | | 306 | | | |
| * | (YELLOW/YELLOW) | | 4 | 14 | 8 | | | | 2 | | | | | | | | 28 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6" | GM | 0.299 | 0.272 | 0.413 | 0.539 | | 0.540 | 0.373 | | | 0.530 | | | | | 2.966 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR CROSSWALK AND ROUNDABOUT, 12" | LF | 109 | 350 | 174 | 232 | | | 583 | | | | | | | | 1448 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR STOP LINE, 24" | LF | 11 | 58 | 24 | 73 | | | 124 | | | | | | | | 290 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE | GM | 0.154 | 0.264 | 0.268 | 0.226 | | 0.265 | 0.181 | | | 0.265 | | | | | 1.622 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 DOTTED EXTENSION, 6" | GM | 0.066 | 0.170 | 0.089 | 0.055 | | | 0.165 | | | | | | | | 0.545 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS | EA | | | | | | | | | | | | | | | | | | |
| * | RIGHT | | | 2 | 1 | | | | 1 | | | | | | | | 4 | | | |
| * | LEFT | | 3 | 3 | 2 | 5 | | 1 | 7 | | | | | | | | 21 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6" | GM | 0.154 | 0.313 | 0.244 | 0.222 | | 0.265 | 0.230 | | | 0.265 | | | | | 1.693 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID FOR DIAGONAL OR CHEVRON, 18" | LF | | | 29 | | | | | | | | | | | | 29 | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, 2-4 DOTTED GUIDELINE/6-10 DOTTED EXTENSION, 6" | GM | 0.052 | 0.052 | 0.046 | 0.036 | | | | | | | | | | | 0.186 | | | |
| 711-11-123 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT | LF | 109 | 350 | 174 | 232 | | | 583 | | | | | | | | 1448 | | | |
| 711-11-125 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE | LF | 11 | 58 | 24 | 73 | | | 124 | | | | | | | | 290 | | | |
| 711-11-141 | THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6" | GM | 0.066 | 0.170 | 0.089 | 0.055 | | | 0.165 | | | | | | | | 0.545 | | | |
| 711-11-170 | THERMOPLASTIC, STANDARD, WHITE, ARROW | EA | | | | | | | | | | | | | | | | | | |
| | RIGHT | | | 2 | 1 | | | | 1 | | | | | | | | 4 | | | |
| | LEFT | | 3 | 3 | 2 | 5 | | 1 | 7 | | | | | | | | 21 | | | |
| | MERGE | | | | | | | | | | | | | | | 2 | 2 | | | |
| | ARROWS (MERGE) | | | | | | | | | | | | | | 1 | 1 | 1 | | | |
| 711-11-224 | THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON | LF | | | 29 | | | | | | | | | | | | 29 | | | |
| 711-11-241 | THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6" | GM | 0.052 | 0.052 | 0.046 | 0.036 | | | | | | | | | | | 0.186 | | | |
| 711-14-125 | THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK | LF | | | | 121 | | | 405 | | | | | | | | 526 | | | |
| 711-14-160 | THERMOPLASTIC, PREFORMED, WHITE, BIKE MESSAGE | EA | 1 | 3 | 1 | 1 | | | 2 | | | | | | | | 8 | | | |
| 711-14-170 | THERMOPLASTIC, PREFORMED, WHITE, BIKE ARROW | EA | 1 | 3 | 1 | 1 | | | 2 | | | | | | | | 8 | | | |
| 711-16-101 | THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6" | GM | 0.299 | 0.272 | 0.413 | 0.539 | | 0.540 | 0.373 | | | 0.530 | | | | | 2.966 | | | |
| 711-16-131 | THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6",10-30 SKIP OR 3-9 LANE DROP | GM | 0.154 | 0.264 | 0.268 | 0.226 | | 0.265 | 0.181 | | | 0.265 | | | | | 1.622 | | | |
| 711-16-201 | THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6" | GM | 0.154 | 0.313 | 0.244 | 0.222 | | 0.265 | 0.230 | | | 0.265 | | | | | 1.693 | | | |

* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION: SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED.


| | | | | | | | | | | | |
|-----|-------------|----------|---|-------------|---------|--|-----------------|---------------|-------------------------------------|-----------|-----|
| No. | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | TABULATION OF QUANTITIES (I) | SHEET NO. | S-3 |
| | DESIGNED BY | BB | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| | DRAWN BY | GS | | | | | | | | | |
| | CHECKED BY | MO | | | | | | | | | |

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

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|---|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|--|--|------------------|-------|-------------|-------|
| | | | S-13 | | | | | | | | | | | | | | PLAN | FINAL | PLAN | FINAL |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | | | | |
| 654-2-21 | RECTANGULAR RAPID FLASHING BEACON, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION | AS | | | | | | | | | | | | | | | | | | 2 |
| 654-2-22 | RECTANGULAR RAPID FLASHING BEACON, F&I- SOLAR POWERED, COMPLETE SIGN ASSEMBLY- BACK TO BACK | AS | | | | | | | | | | | | | | | | | | 1 |
| 700-1-11 | SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF | AS | 3 | | | | | | | | | | | | | | | | 3 | 36 |
| 700-1-12 | SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF | AS | | | | | | | | | | | | | | | | | | 9 |
| 700-1-13 | SINGLE POST SIGN, F&I GROUND MOUNT, 21-30 SF | AS | | | | | | | | | | | | | | | | | | 5 |
| 700-1-50 | SINGLE POST SIGN, RELOCATE | AS | | | | | | | | | | | | | | | | | | 3 |
| 700-1-74 | SINGLE POST SIGN, F&I CUSTOM, 31+ SF | AS | | | | | | | | | | | | | | | | | | 1 |
| 700-2-14 | MULTI- POST SIGN, F&I GROUND MOUNT, 31-50 SF | AS | | | | | | | | | | | | | | | | | | 2 |
| 700-3-601 | SIGN PANEL, REMOVE, UP TO 12 SF | EA | | | | | | | | | | | | | | | | | | 3 |
| 705-10-1 | OBJECT MARKER, TYPE 1 | EA | | | | | | | | | | | | | | | | | | 14 |
| 705-11-1 | DELINEATOR, FLEXIBLE TUBULAR, YELLOW - YELLOW | EA | | | | | | | | | | | | | | | | | | 8 |
| 710-11-290 | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE | SF | | | | | | | | | | | | | | | | | | 124 |
| 710-90 | PAINTED PAVEMENT MARKINGS, FINAL SURFACE | LS | | | | | | | | | | | | | | | | | | 1 |
| * | RETRO-REFLECTIVE PAVEMENT MARKERS | EA | 29 | | | | | | | | | | | | | | | | 29 | 363 |
| * | (WHITE/RED) | | 10 | | | | | | | | | | | | | | | | 10 | |
| * | (YELLOW/YELLOW) | | 19 | | | | | | | | | | | | | | | | 19 | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6" | GM | 0.318 | | | | | | | | | | | | | | | 0.318 | | 3.284 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR CROSSWALK AND ROUNDABOUT, 12" | LF | | | | | | | | | | | | | | | | | | 1448 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR STOP LINE, 24" | LF | | | | | | | | | | | | | | | | | | 290 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE | GM | 0.084 | | | | | | | | | | | | | | | 0.084 | | 1.706 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 DOTTED EXTENSION, 6" | GM | | | | | | | | | | | | | | | | | | 0.545 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS | EA | | | | | | | | | | | | | | | | | | 25 |
| * | RIGHT | | | | | | | | | | | | | | | | | | | |
| * | LEFT | | | | | | | | | | | | | | | | | | | |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6" | GM | 0.159 | | | | | | | | | | | | | | | 0.159 | | 1.852 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID FOR DIAGONAL OR CHEVRON, 18" | LF | 227 | | | | | | | | | | | | | | | 227 | | 256 |
| * | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, 2-4 DOTTED GUIDELINE/6-10 DOTTED EXTENSION, 6" | GM | | | | | | | | | | | | | | | | | | 0.186 |
| 711-11-123 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT | LF | | | | | | | | | | | | | | | | | | 1448 |
| 711-11-125 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE | LF | | | | | | | | | | | | | | | | | | 290 |
| 711-11-141 | THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6" | GM | | | | | | | | | | | | | | | | | | 0.545 |
| 711-11-170 | THERMOPLASTIC, STANDARD, WHITE, ARROW | EA | | | | | | | | | | | | | | | | | | 25 |
| | RIGHT | | | | | | | | | | | | | | | | | | | |
| | LEFT | | | | | | | | | | | | | | | | | | | |
| | MERGE | | 1 | | | | | | | | | | | | | | | | 1 | |
| | ARROWS (MERGE) | | 1 | | | | | | | | | | | | | | | | 1 | |
| 711-11-224 | THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON | LF | 227 | | | | | | | | | | | | | | | 227 | | 256 |
| 711-11-241 | THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6" | GM | | | | | | | | | | | | | | | | | | 0.186 |
| 711-14-125 | THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK | LF | | | | | | | | | | | | | | | | | | 526 |
| 711-14-160 | THERMOPLASTIC, PREFORMED, WHITE, BIKE MESSAGE | EA | | | | | | | | | | | | | | | | | | 8 |
| 711-14-170 | THERMOPLASTIC, PREFORMED, WHITE, BIKE ARROW | EA | | | | | | | | | | | | | | | | | | 8 |
| 711-16-101 | THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6" | GM | 0.318 | | | | | | | | | | | | | | | 0.318 | | 3.284 |
| 711-16-131 | THERMOPLASTIC, OTHER SURFACES, WHITE, SKIP, 6",10-30 SKIP OR 3-9 LANE DROP | GM | 0.084 | | | | | | | | | | | | | | | 0.084 | | 1.706 |
| 711-16-201 | THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6" | GM | 0.159 | | | | | | | | | | | | | | | 0.159 | | 1.852 |

* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION: SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED.


| | | | | | | | | |
|----------------|-----------|-----------------------------------|----|-------------|--|-----------------|---|--------------------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | TABULATION OF QUANTITIES (2) | SHEET NO. |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | 09/2019 | | BIJAN BEHZADI | | FL. LICENSE NO. 43868 |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | PROJECT NO. | | | | |
| CHECKED BY MO | | CERTIFICATE OF AUTHORIZATION 4213 | | 6045662 | | | | |
| No. | REVISIONS | DATE | BY | | | | | |

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

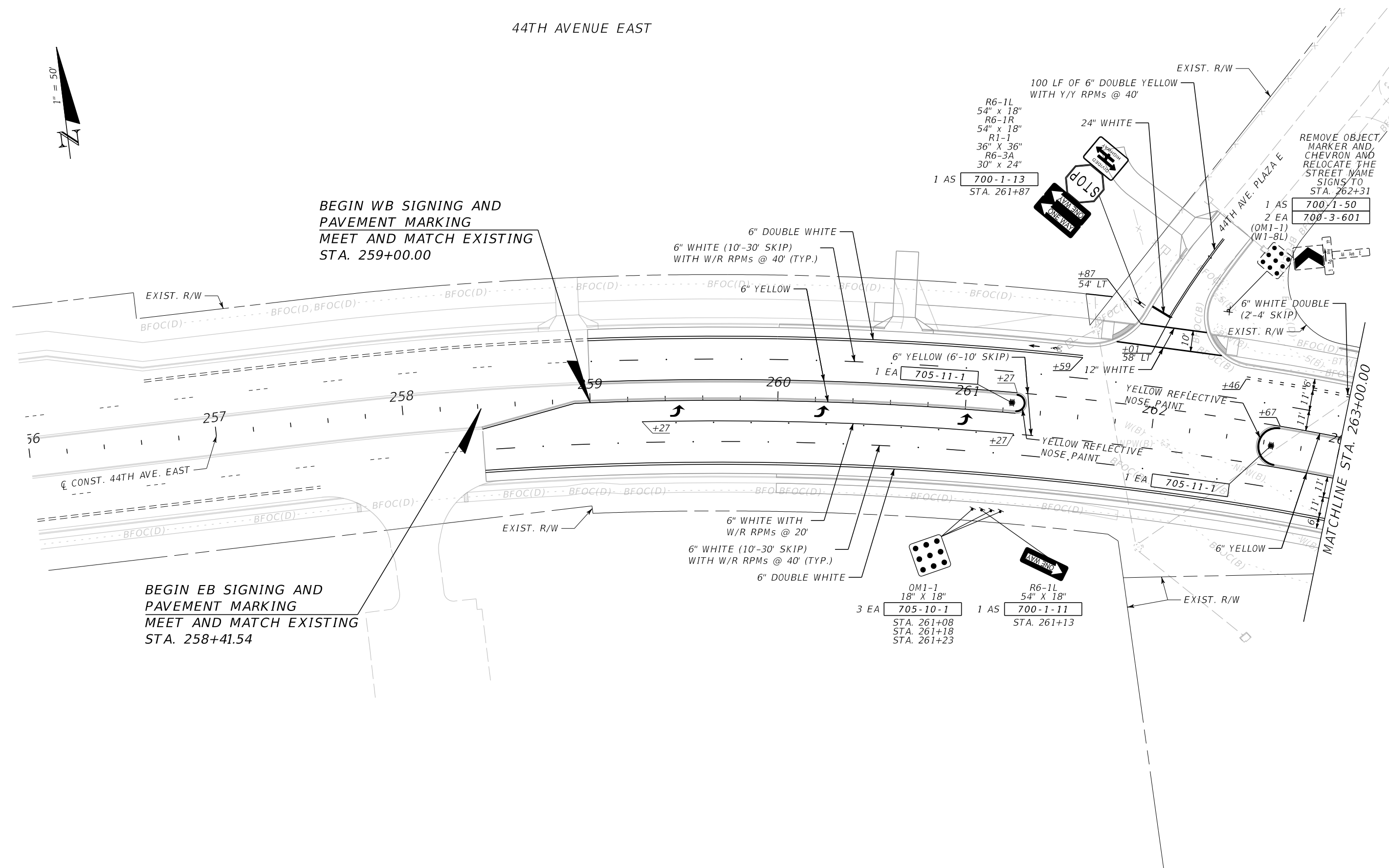
SIGNING AND PAVEMENT MARKING GENERAL NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE MANATEE COUNTY RIGHT-OF-WAY SHALL BE THERMOPLASTIC.
2. REFER TO F.D.O.T. STANDARD PLANS INDEX NO. 706-001 FOR RETRO-REFLECTIVE PAVEMENT MARKER PLACEMENT DETAILS.
3. CAUTION SHALL BE EXERCISED WHILE RELOCATING EXISTING SIGNS SO AS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER, THEY SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
4. THE SIGN LOCATIONS ARE APPROXIMATE AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE ENGINEER.
5. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED DURING CONSTRUCTION OR RELOCATED SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION. COST OF THIS WORK SHALL BE REFLECTED IN THE PAY ITEM NO. 102-1 IN THE SUMMARY OF ROADWAY PAY ITEMS.
6. CONTRACTOR SHALL USE W-SHAPE STEEL POSTS FOR MULTI-POST SIGNS. ALL COLUMNS (POSTS) FOR SINGLE COLUMN SIGNS SHALL BE U-CHANNEL POST, UNLESS OTHERWISE INDICATED IN THE PLANS.
7. ALL SINGLE COLUMN SIGNS WITHIN THE LIMITS OF CLEARING AND GRUBBING SHALL BE REMOVED UNLESS OTHERWISE NOTED IN THE PLANS. PAYMENT SHALL BE REFLECTED IN THE PAY ITEM NO. 110-1-1 IN THE SUMMARY OF ROADWAY PAY ITEMS.
8. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO SIGN FOUNDATIONS AS DETERMINED BY THE CONTRACTOR, THE CONTRACTOR SHALL HAND DIG THE FIRST FOUR FEET OF THE HOLE FOR THE MULTI POST FOUNDATIONS.
9. ALL CROSSWALKS SHALL BE SIX FEET (6') OR TEN FEET (10') IN WIDTH AS SHOWN IN PLANS. MEASUREMENTS SHALL BE FROM INSIDE TO INSIDE OF 12" STRIPES.
10. FLEXIBLE DELINEATOR POSTS SHALL BE INSTALLED AT ALL MEDIAN NOSES AS SHOWN IN PLANS PER STANDARD PLANS INDEX NO. 711-001.
11. WHERE EXISTING STREET NAME SIGNS ARE RELOCATED ONTO PROPOSED STOP SIGN ASSEMBLIES, THE COST IS TO BE INCLUDED UNDER THE RELATED PAY ITEM.

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

| | | | | | | | | | | |
|-----|-----------|------|----|-------------------|-----------------------------------|------------------------|--|----------------------------------|----------------------|--------------|
| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI | GENERAL NOTES | SHEET NO. |
| | | | | DESIGNED BY BB | 2601 CATTLEMEN ROAD, SUITE 400 | | | FL. LICENSE NO. 43868 | | |
| | | | | DRAWN BY GS | SARASOTA, FLORIDA 34232 | PROJECT NO. 6045662 | | | | |
| | | | | CHECKED BY MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | S-5 |

44TH AVENUE EAST



BEGIN WB SIGNING AND PAVEMENT MARKING MEET AND MATCH EXISTING STA. 259+00.00

BEGIN EB SIGNING AND PAVEMENT MARKING MEET AND MATCH EXISTING STA. 258+41.54

100 LF OF 6" DOUBLE YELLOW WITH Y/Y RPMs @ 40'
 R6-1L 54" x 18"
 R6-1R 54" x 18"
 R1-1 36" x 36"
 R6-3A 30" x 24"
 1 AS 700-1-13 STA. 261+87

REMOVE OBJECT MARKER AND CHEVRON AND RELOCATE THE STREET NAME SIGNS TO STA. 262+31
 1 AS 700-1-50
 2 EA 700-3-601
 (OM1-1) (W1-8L)

6" WHITE WITH W/R RPMs @ 20'
 6" WHITE (10'-30' SKIP) WITH W/R RPMs @ 40' (TYP.)
 6" DOUBLE WHITE
 3 EA 705-10-1 STA. 261+08 STA. 261+18 STA. 261+23
 1 AS 700-1-11 STA. 261+13

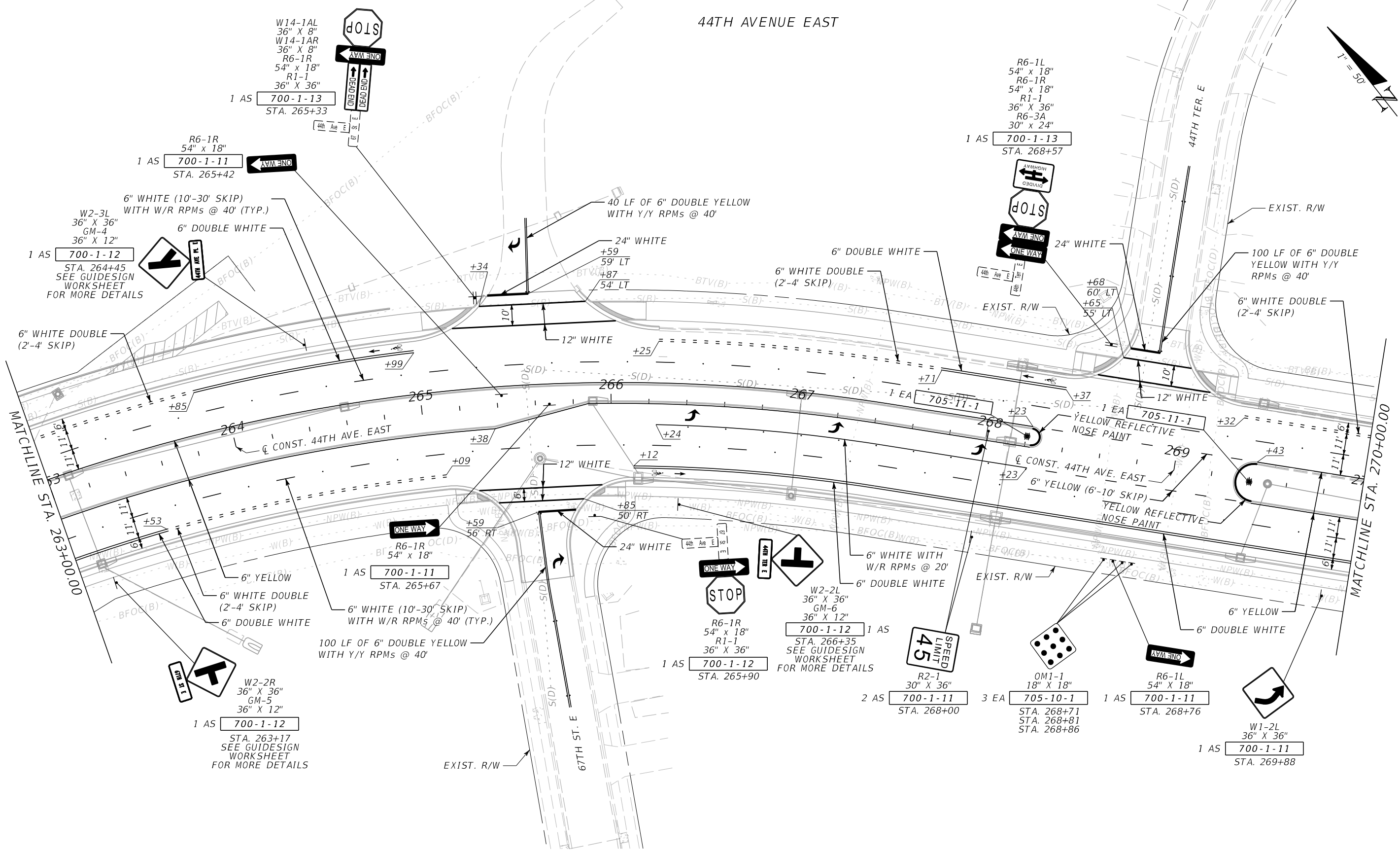
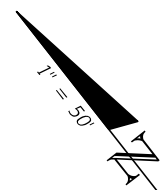
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

| | | | | | | | | | |
|----------------|-----------|-----------------------------------|----|---------------------|--|-------------------------------|--|---------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. S-6 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | | | | |
| CHECKED BY MO | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |



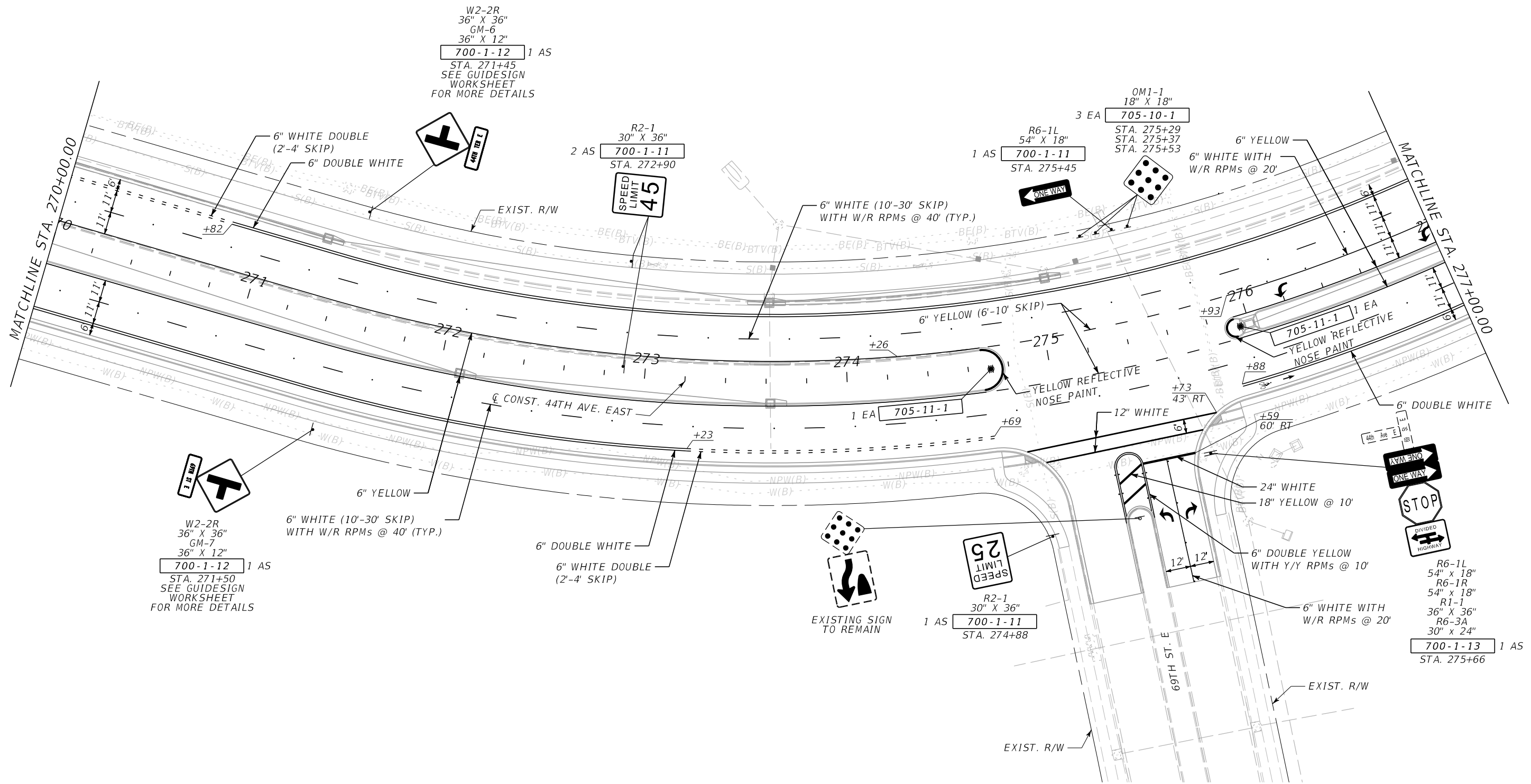
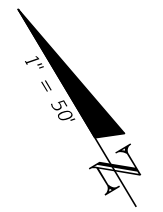
SIGNING AND PAVEMENT MARKING PLAN (I)

44TH AVENUE EAST



| | | | | | | | | | | | | | |
|--|--|--|--|---|--|-------------------------------------|--|--------------------------------|--|--|--|---------------|--|
| SCALE AS NOTED DESIGNED BY BB DRAWN BY GS CHECKED BY MO | | | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER BIJAN BEHZADI FL. LICENSE NO. 43868 | | SHEET NO. S-7 | |
| No. REVISIONS DATE BY | | | | | | | | | | THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C. | | | |

44TH AVENUE EAST



W2-2R
36" X 36"
GM-6
36" X 12"
700-1-12 1 AS
STA. 271+45
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

R2-1
30" X 36"
2 AS 700-1-11
STA. 272+90

OM1-1
18" X 18"
3 EA 705-10-1
R6-1L
54" X 18"
1 AS 700-1-11
STA. 275+45
STA. 275+29
STA. 275+37
STA. 275+53

W2-2R
36" X 36"
GM-7
36" X 12"
700-1-12 1 AS
STA. 271+50
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

R2-1
30" X 36"
1 AS 700-1-11
STA. 274+88

R6-1L
54" X 18"
R6-1R
54" X 18"
R1-1
36" X 36"
R6-3A
30" X 24"
700-1-13 1 AS
STA. 275+66

| | | | | | | | | | | | |
|----------------|--|--|--|-----------------------------------|--|-----------------------------|--|-------------------------------|--|---------------------------------------|--|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. S-8 | |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (3) | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | |
| CHECKED BY MO | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 2:37:23 PM | | | | | |
| REVISIONS | | | | DATE | | BY | | | | | |

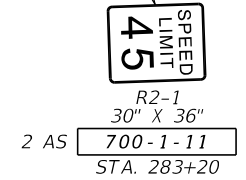
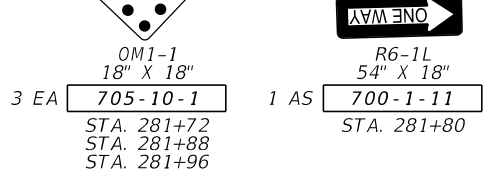
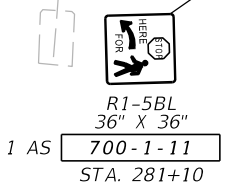
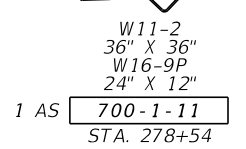
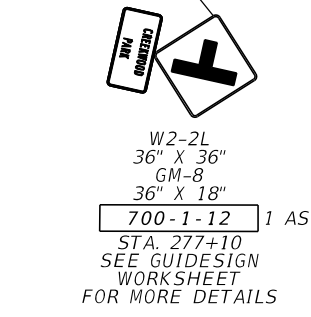
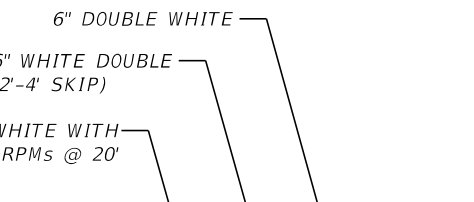
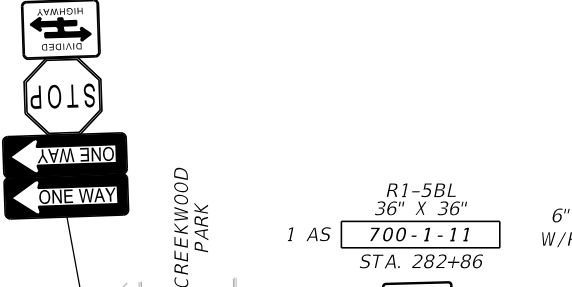
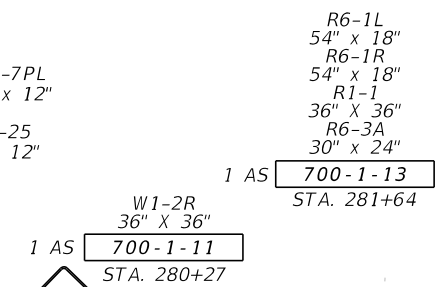
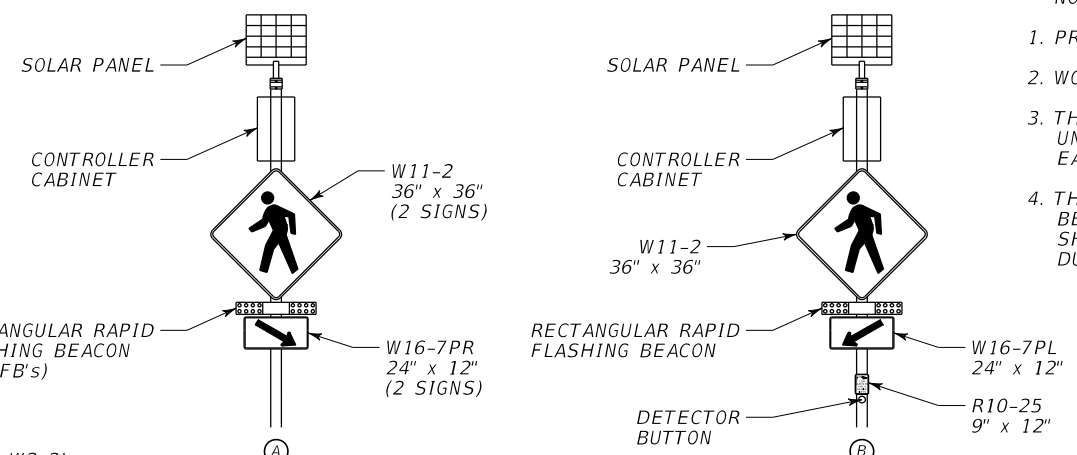
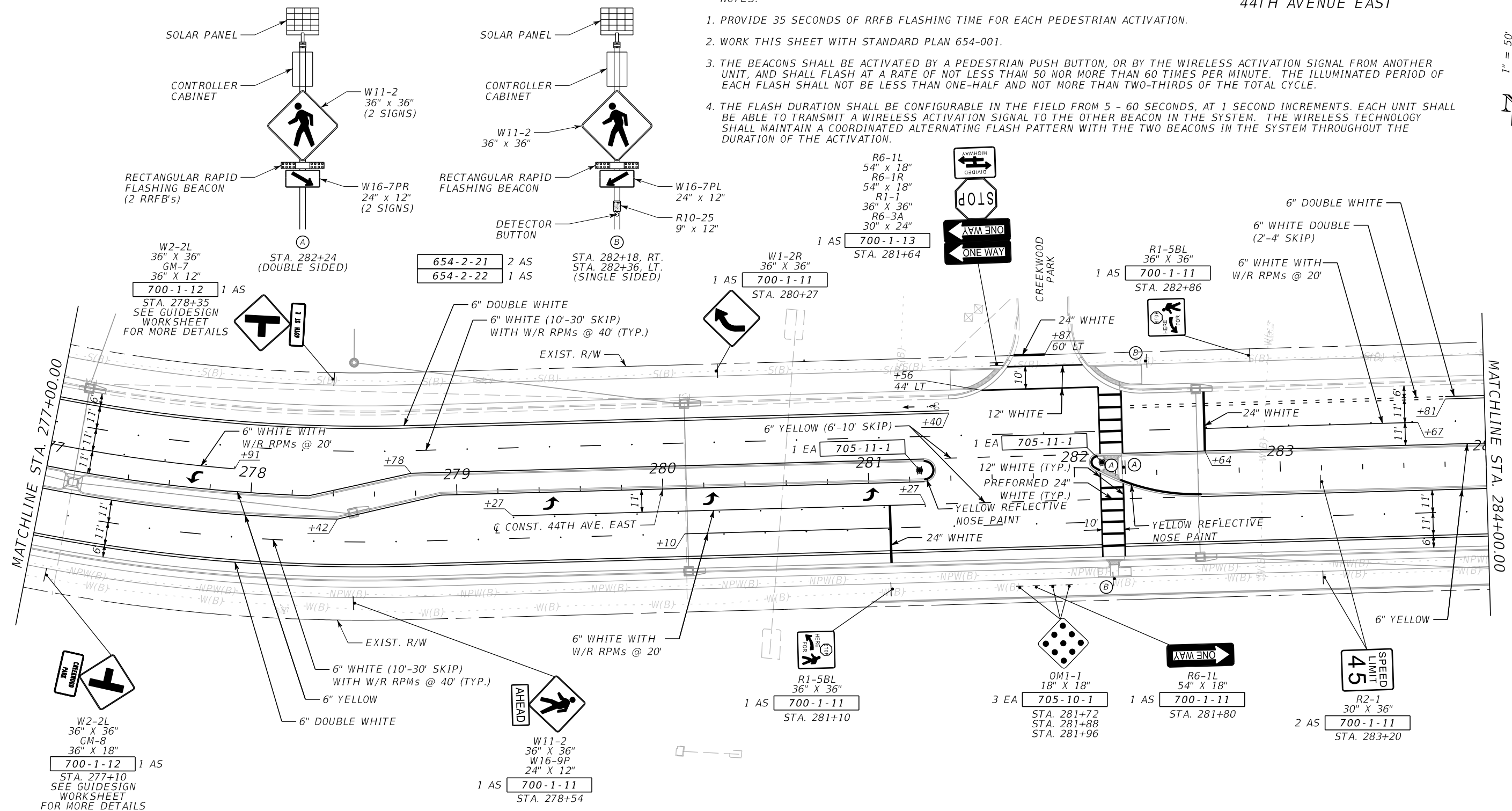
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44TH AVENUE EAST



NOTES:

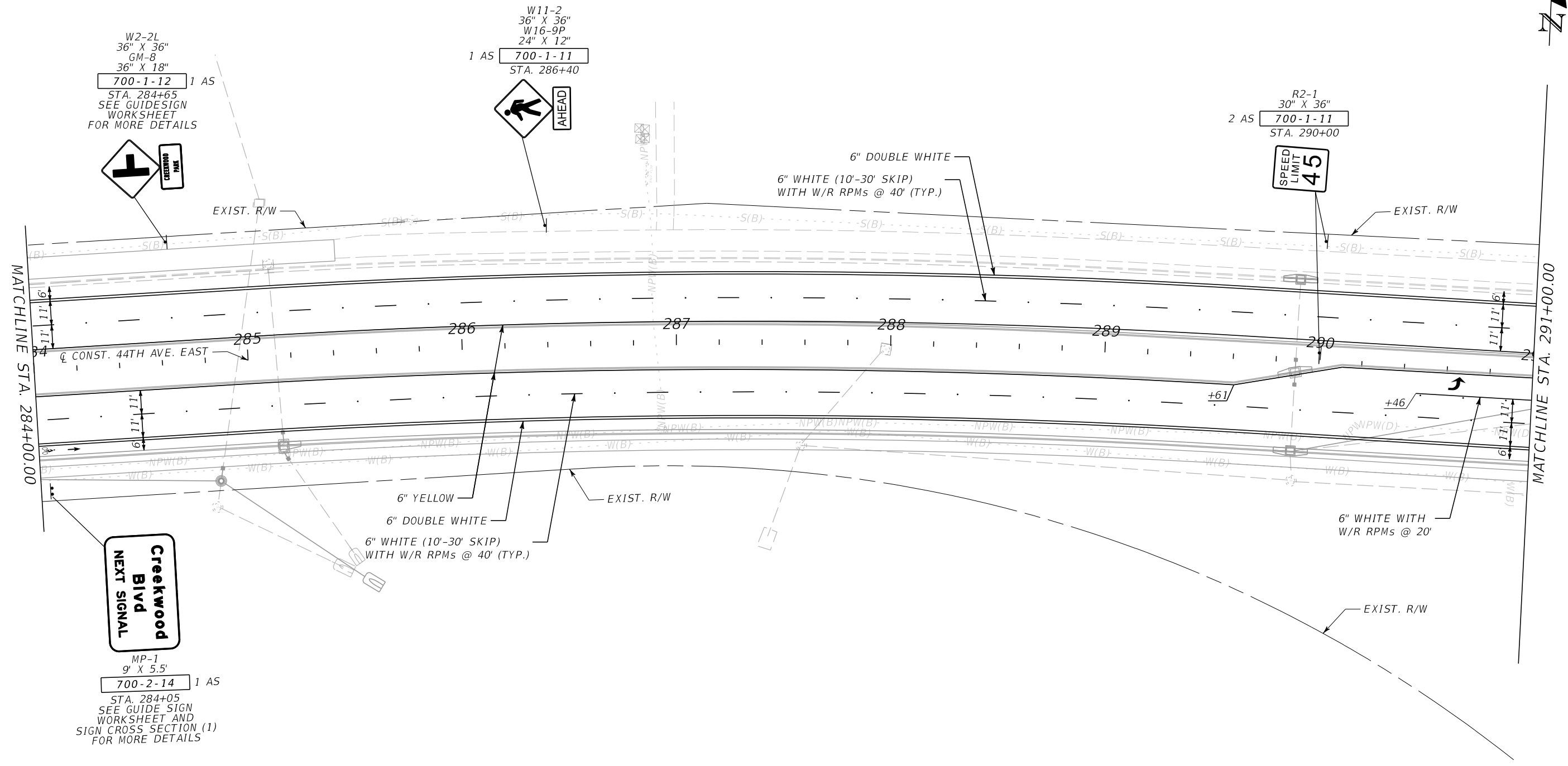
1. PROVIDE 35 SECONDS OF RRFB FLASHING TIME FOR EACH PEDESTRIAN ACTIVATION.
2. WORK THIS SHEET WITH STANDARD PLAN 654-001.
3. THE BEACONS SHALL BE ACTIVATED BY A PEDESTRIAN PUSH BUTTON, OR BY THE WIRELESS ACTIVATION SIGNAL FROM ANOTHER UNIT, AND SHALL FLASH AT A RATE OF NOT LESS THAN 50 NOR MORE THAN 60 TIMES PER MINUTE. THE ILLUMINATED PERIOD OF EACH FLASH SHALL NOT BE LESS THAN ONE-HALF AND NOT MORE THAN TWO-THIRDS OF THE TOTAL CYCLE.
4. THE FLASH DURATION SHALL BE CONFIGURABLE IN THE FIELD FROM 5 - 60 SECONDS, AT 1 SECOND INCREMENTS. EACH UNIT SHALL BE ABLE TO TRANSMIT A WIRELESS ACTIVATION SIGNAL TO THE OTHER BEACON IN THE SYSTEM. THE WIRELESS TECHNOLOGY SHALL MAINTAIN A COORDINATED ALTERNATING FLASH PATTERN WITH THE TWO BEACONS IN THE SYSTEM THROUGHOUT THE DURATION OF THE ACTIVATION.



| | | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|---|--|---------------|--|-----------|-----|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 | <p>MANATEE COUNTY PUBLIC WORKS</p> | DESIGN ENGINEER | BIJAN BEHZADI | <p>SIGNING AND PAVEMENT MARKING PLAN (A)</p> | SHEET NO. | S-9 |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | 2:37:27 PM | | | 9/20/2019 PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\signing\PLANSPO1.dgn | | | | |

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44TH AVENUE EAST



W2-2L
36" X 36"
GM-8
36" X 18"
700-1-12 1 AS
STA. 284+65
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

W11-2
36" X 36"
W16-9P
24" X 12"
1 AS 700-1-11
STA. 286+40

R2-1
30" X 36"
2 AS 700-1-11
STA. 290+00

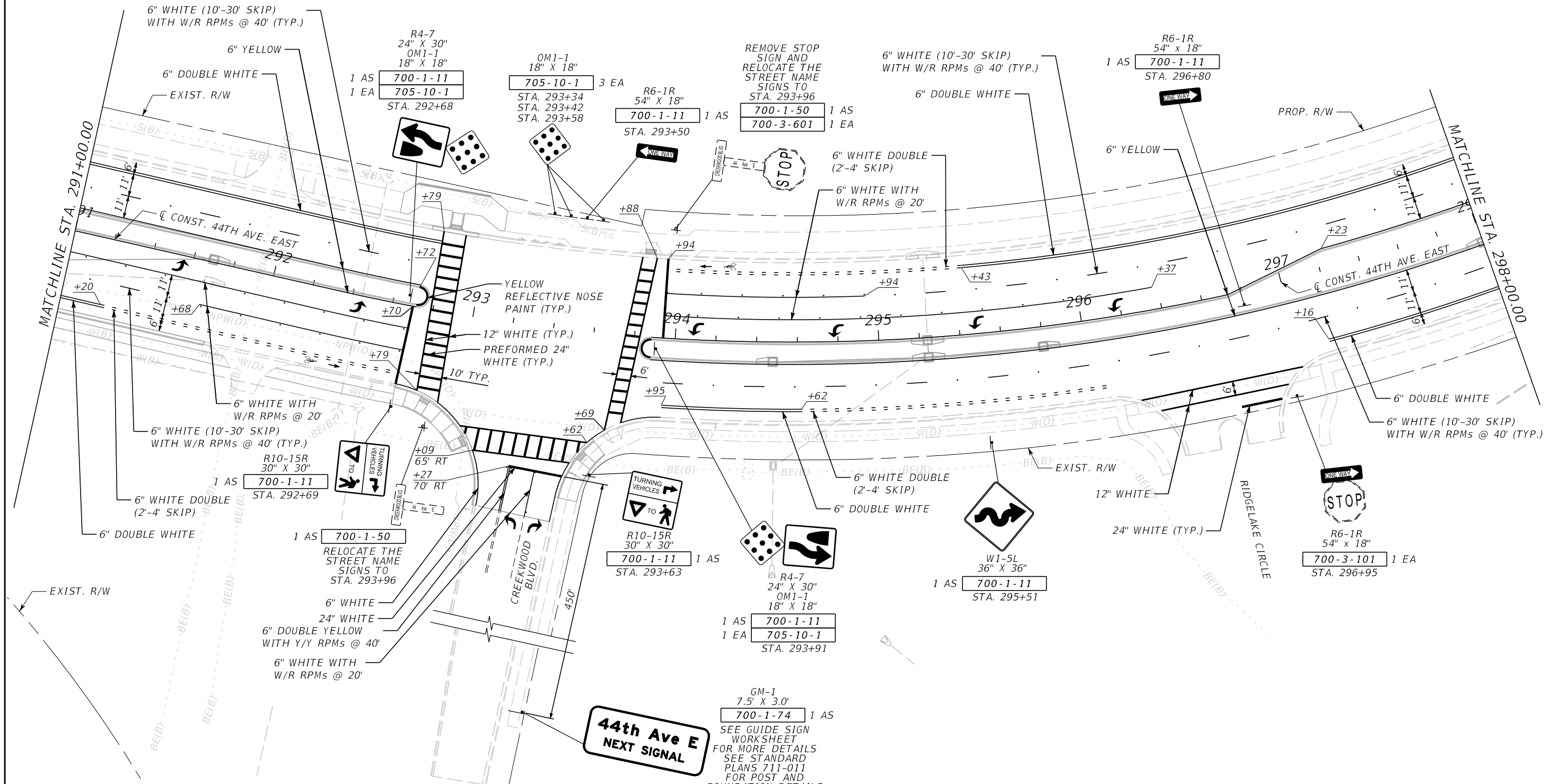
**Creekwood
Bivd
Next Signal**

MP-1
9' X 5.5'
700-2-14 1 AS
STA. 284+05
SEE GUIDE SIGN
WORKSHEET AND
SIGN CROSS SECTION (1)
FOR MORE DETAILS

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

| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|---------------------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. S-10 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (5) | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

44TH AVENUE EAST

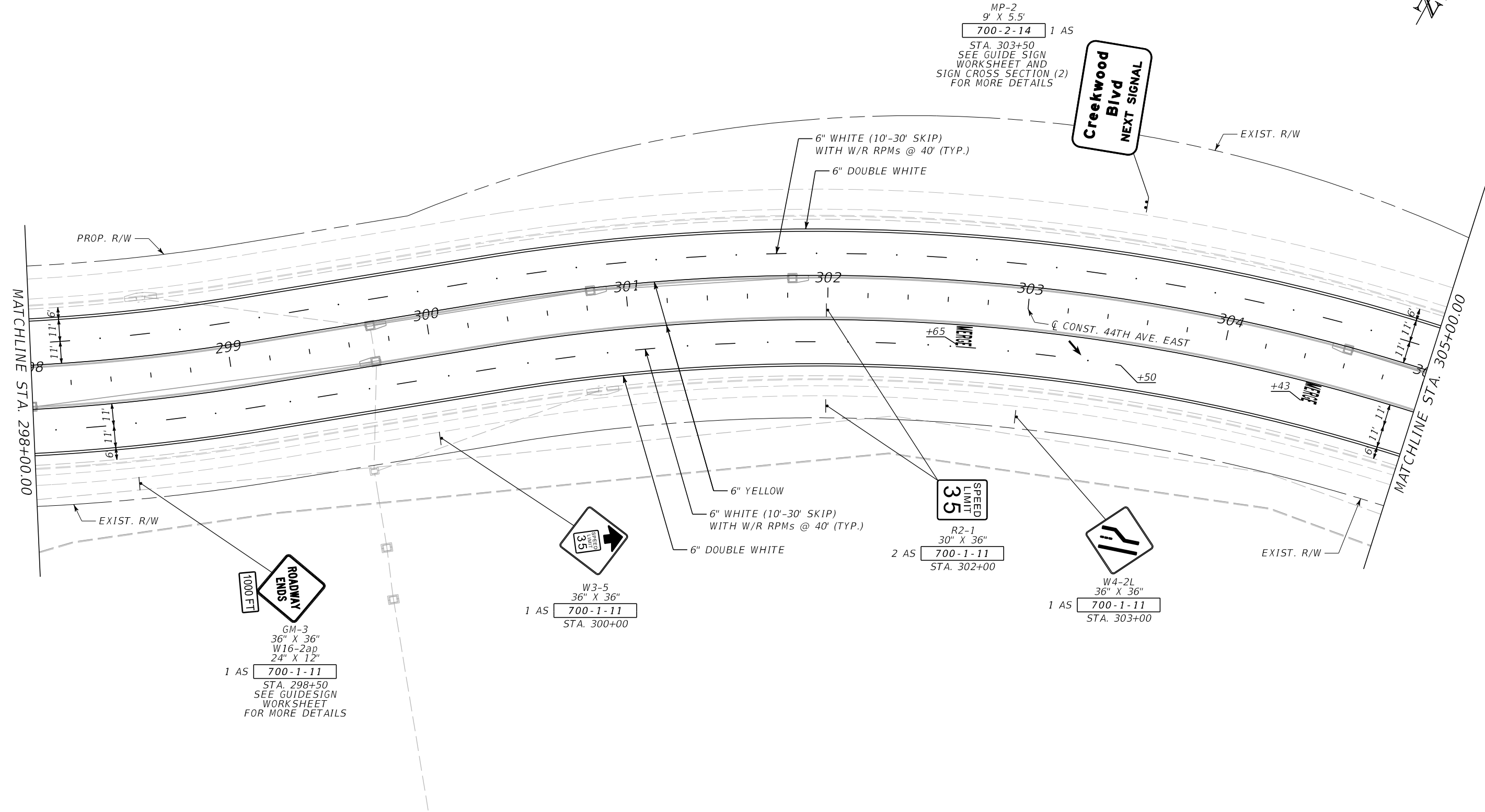
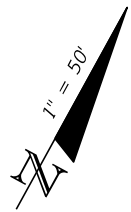


**44th Ave E
NEXT SIGNAL**

| | | | | | | | | | | | |
|----------------|--|--|--|-----------------------------------|--|---------------------|--|-------------------------------|--|---------------------------------------|--|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. S-II | |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (6) | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (6) | |
| CHECKED BY MO | | | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (6) | |
| REVISIONS | | | | DATE | | BY | | NO. | | NO. | |

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

44TH AVENUE EAST



MP-2
9' X 5.5'
700-2-14 1 AS
STA. 303+50
SEE GUIDE SIGN
WORKSHEET AND
SIGN CROSS SECTION (2)
FOR MORE DETAILS

**Creekwood
Blvd
NEXT SIGNAL**

6" WHITE (10'-30' SKIP)
WITH W/R RPMs @ 40' (TYP.)
6" DOUBLE WHITE

6" YELLOW
6" WHITE (10'-30' SKIP)
WITH W/R RPMs @ 40' (TYP.)
6" DOUBLE WHITE

35
SPEED
LIMIT
R2-1
30" X 36"
700-1-11
2 AS
STA. 302+00

1/1
W4-2L
36" X 36"
700-1-11
1 AS
STA. 303+00

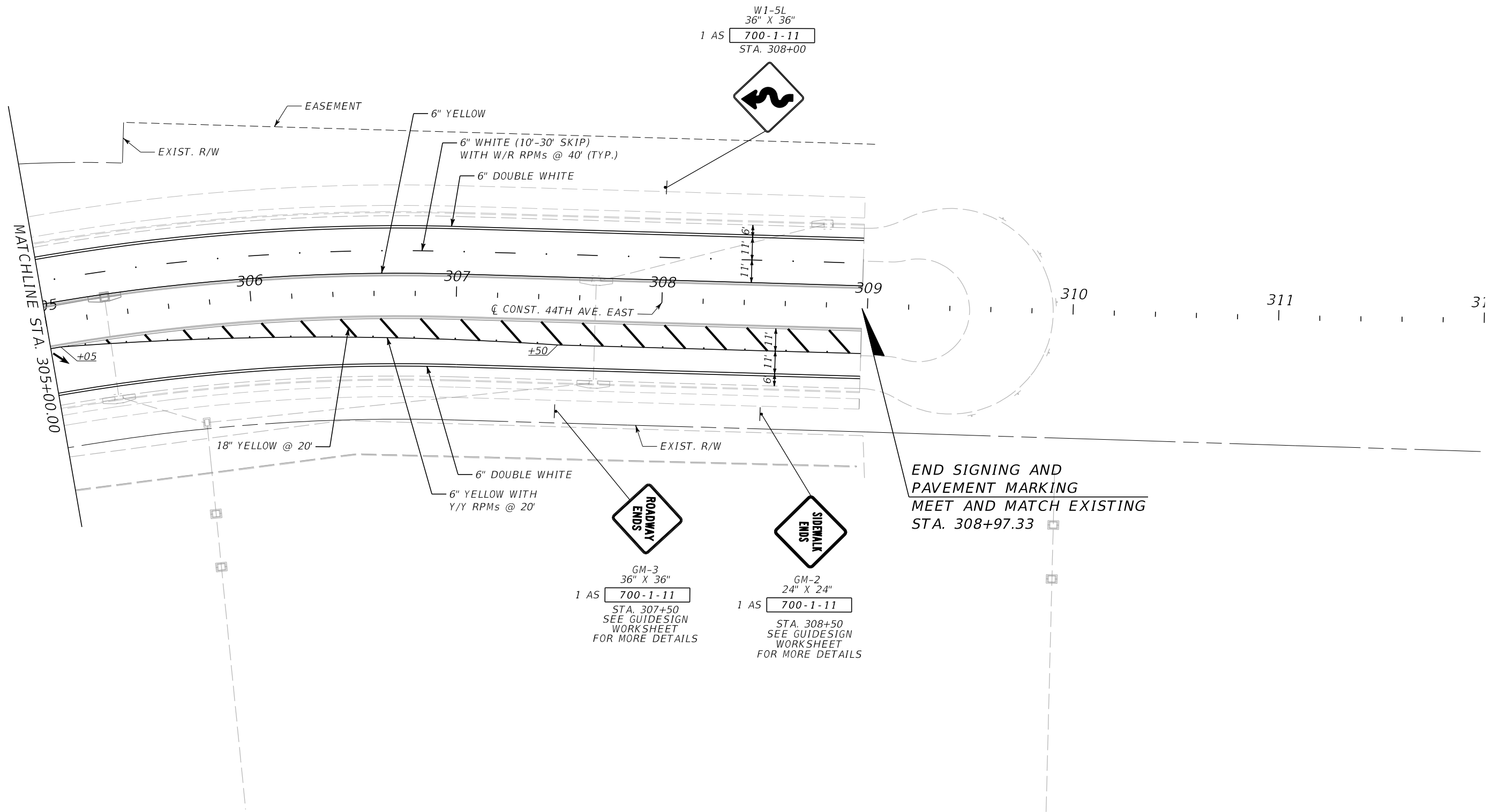
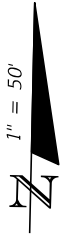
35
W3-5
36" X 36"
700-1-11
1 AS
STA. 300+00

1000 FT
ROADWAY
ENDS
GM-3
36" X 36"
W16-2ap
24" X 12"
700-1-11
1 AS
STA. 298+50
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|---------------------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. S-12 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGNING AND PAVEMENT MARKING PLAN (7) | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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

44TH AVENUE EAST




END SIGNING AND
PAVEMENT MARKING
MEET AND MATCH EXISTING
STA. 308+97.33

W1-5L
36" X 36"
1 AS 700-1-11
STA. 308+00

GM-3
36" X 36"
1 AS 700-1-11
STA. 307+50
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

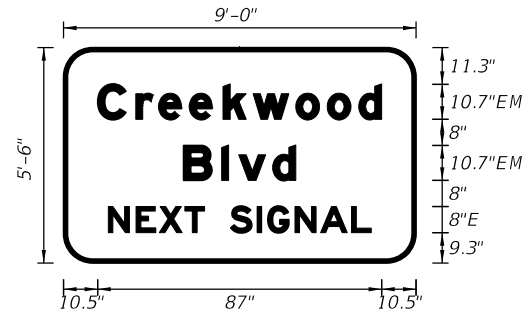
GM-2
24" X 24"
1 AS 700-1-11
STA. 308+50
SEE GUIDESIGN
WORKSHEET
FOR MORE DETAILS

| | | | | | | | | | | |
|-----|-----------|------|----|----------------|-----------------------------------|---------------------|--|----------------------------------|--|-----------|
| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI | SIGNING AND PAVEMENT MARKING PLAN (8) | SHEET NO. |
| | | | | DESIGNED BY BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | S-13 |
| | | | | DRAWN BY GS | SARASOTA, FLORIDA 34232 | | | | | |
| No. | REVISIONS | DATE | BY | CHECKED BY MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

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

| | | | | |
|-------------|-----------------|------------------------|-------------|----------------|
| SIGN NAME | | QTY | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 1 | 284+05 |
| WIDTH | 9'-0" | WIDTH | 1.25" | 2 |
| HEIGHT | 5'-6" | RADII | 9" | |
| LEGEND | White | COLOR | White | |
| COLOR | Green | | | |
| SYMBOL(S) | ANGLE | X | Y | WID |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | AVERAGE LENGTH |
| 1 | 2 | | W6 x 12 | 13.96' |
| 2 | 2 | | W6 x 12 | 13.97' |

MP-1
MP-2

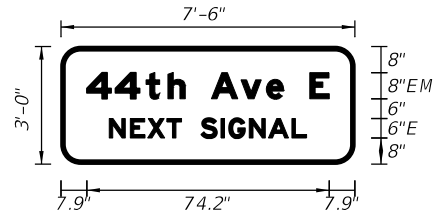


| | | | | | | | | | | | | | | | | | | | | | |
|-------|------|------|-----|------|------|------|------|-----|-----|-----|------|----|------|------|--|--|--|--|--|--|--|
| COPY | | C | r | e | e | k | w | o | o | d | L | | | | | | | | | | |
| SPACE | 10.5 | 11.7 | 7 | 9.4 | 10.4 | 9.2 | 13.1 | 9.6 | 9.6 | 7.1 | 10.5 | 87 | | | | | | | | | |
| COPY | | B | l | v | d | L | | | | | | | | | | | | | | | |
| SPACE | 36.8 | 11.7 | 5.2 | 10.4 | 7.1 | 36.8 | 34.3 | | | | | | | | | | | | | | |
| COPY | | N | E | X | T | S | I | G | N | A | L | L | | | | | | | | | |
| SPACE | 13.7 | 8.6 | 7.1 | 7.8 | 6 | 8 | 8.1 | 3.3 | 8.3 | 7.8 | 9.5 | 6 | 13.7 | 80.6 | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | | |

| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | |
|-------------|-----------------|------------------------|-------------|----------------|
| SIGN NAME | | QTY | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 1 | SEE PLANS |
| WIDTH | 7'-6" | WIDTH | 1.25" | |
| HEIGHT | 3'-0" | RADII | 6" | |
| LEGEND | White | COLOR | White | |
| COLOR | Green | | | |
| SYMBOL(S) | ANGLE | X | Y | WID |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | AVERAGE LENGTH |
| | | | | |

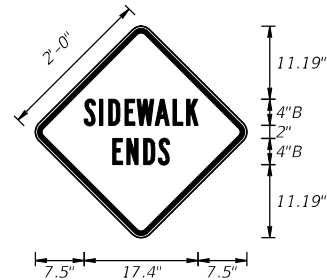
| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |



| | | | | | | | | | | | | | | | | | | | | |
|-------|------|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|------|------|--|--|--|--|--|--|
| COPY | | 4 | 4 | t | h | A | v | e | E | L | | | | | | | | | | |
| SPACE | 7.9 | 8.8 | 9.4 | 6.7 | 5.3 | 8 | 9.1 | 7.8 | 5.3 | 8 | 5.9 | 7.9 | 74.2 | | | | | | | |
| COPY | | N | E | X | T | S | I | G | N | A | L | L | | | | | | | | |
| SPACE | 14.8 | 6.4 | 5.3 | 5.9 | 4.5 | 6 | 6.1 | 2.5 | 6.2 | 5.9 | 7.1 | 4.5 | 14.8 | 60.4 | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | |

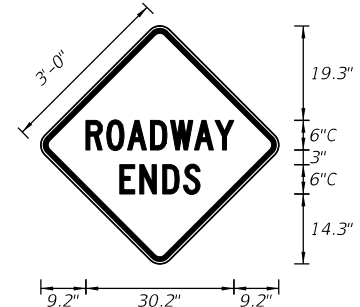
| | | | | |
|-------------|-----------------|------------------------|-------------|----------------|
| SIGN NAME | | QTY | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 1 | 308+50 |
| WIDTH | 2'-0" | WIDTH | 0.63" | |
| HEIGHT | 2'-0" | RADII | 1.5" | |
| LEGEND | Black | COLOR | Black | |
| COLOR | Yellow | | | |
| SYMBOL(S) | ANGLE | X | Y | WID |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | AVERAGE LENGTH |
| | | | | |

INSET: 0.375"



| | | | | |
|-------------|-----------------|------------------------|-------------|----------------|
| SIGN NAME | | QTY | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 1 | 298+50 |
| WIDTH | 3'-0" | WIDTH | 0.88" | 307+50 |
| HEIGHT | 3'-0" | RADII | 2.25" | |
| LEGEND | Black | COLOR | Black | |
| COLOR | Yellow | | | |
| SYMBOL(S) | ANGLE | X | Y | WID |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | AVERAGE LENGTH |
| | | | | |

INSET: 0.625"

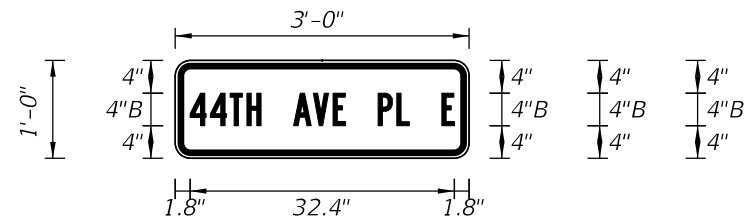


| | | | | | | | | | | | | | | | | | | | | |
|-------|------|-----|-----|-----|-----|------|------|-----|-----|------|--|--|--|--|--|--|--|--|--|--|
| COPY | | R | O | A | D | W | A | Y | L | | | | | | | | | | | |
| SPACE | 9.2 | 4.3 | 4.3 | 4.7 | 4.1 | 4.9 | 4.2 | 3.8 | 9.2 | 30.2 | | | | | | | | | | |
| COPY | | E | N | D | S | L | | | | | | | | | | | | | | |
| SPACE | 16.1 | 4.1 | 4.7 | 4.3 | 3.4 | 16.1 | 16.4 | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|-----------------------|-----------|-------------|----------|--------------------------------|---------|-------------|---------|-------------------------|---------------|-----------------------------------|-------|-----------------------------|------|
| No. | REVISIONS | SCALE | AS NOTED | DATE | 09/2019 | PROJECT NO. | 6045662 | DESIGN ENGINEER | BIJAN BEHZADI | FL. LICENSE NO. | 43868 | SHEET NO. | S-14 |
| | | DESIGNED BY | BB | | | | | | | | | | |
| | | DRAWN BY | GS | | | | | | | | | | |
| | | CHECKED BY | MO | | | | | | | | | | |
| HDR ENGINEERING, INC. | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY PUBLIC WORKS | |

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

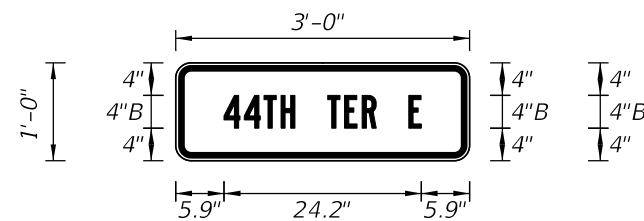
| | | | | | | |
|------------------------|-------|--------|--------|-----|-------------|------------|
| SIGN NAME | | GM-4 | QTY | 1 | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 264+45 | | | |
| WIDTH | 3'-0" | WIDTH | 0.63" | | | |
| HEIGHT | 1'-0" | RADII | 1.5" | | | |
| LEGEND | Black | COLOR | Black | | | |
| COLOR Yellow | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | |
| SIGN NUMBER | | | | | | |
| NUMBER OF POSTS | | | | | | |
| CLEARANCE Edge of Lane | | | | | | |
| COLUMN SIZE | | | | | | |
| AVERAGE LENGTH | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|

| | | | | | | | | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|---|-----|-----|-----|---|-----|-----|---|-----|-----|------|--|--|--|--|--|
| COPY | 4 | 4 | T | H | A | V | E | P | L | E | L | | | | | | | | | | |
| SPACE | 1.8 | 2.5 | 2.4 | 2.1 | 1.7 | 4 | 2.4 | 2.4 | 1.5 | 4 | 2.3 | 1.5 | 4 | 1.5 | 1.8 | 32.4 | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | |
|------------------------|-------|--------|--------|--------|-------------|------------|
| SIGN NAME | | GM-6 | QTY | 2 | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 266+35 | | | |
| WIDTH | 3'-0" | WIDTH | 0.63" | 271+45 | | |
| HEIGHT | 1'-0" | RADII | 1.5" | | | |
| LEGEND | Black | COLOR | Black | | | |
| COLOR Yellow | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | |
| SIGN NUMBER | | | | | | |
| NUMBER OF POSTS | | | | | | |
| CLEARANCE Edge of Lane | | | | | | |
| COLUMN SIZE | | | | | | |
| AVERAGE LENGTH | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|

| | | | | | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|---|-----|-----|-----|---|-----|-----|------|--|--|--|--|--|
| COPY | 4 | 4 | T | H | T | E | R | E | L | | | | | | | | | |
| SPACE | 5.9 | 2.5 | 2.4 | 2.1 | 1.7 | 4 | 2.1 | 2.2 | 1.7 | 4 | 1.5 | 5.9 | 24.2 | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |

| | | | | |
|-------------|-----------|-----------------------------------|-------------------------------|-----------------------|
| SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 |
| DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 |
| DRAWN BY | GS | SARASOTA, FLORIDA 34232 | MANATEE COUNTY PUBLIC WORKS | |
| CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | DESIGN ENGINEER BIJAN BEHZADI | |
| No. | REVISIONS | DATE | BY | FL. LICENSE NO. 43868 |

| | | | |
|-----------------|---------------|----------------------|------|
| DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. | S-15 |
| FL. LICENSE NO. | 43868 | GUIDE SIGN WORKSHEET | |

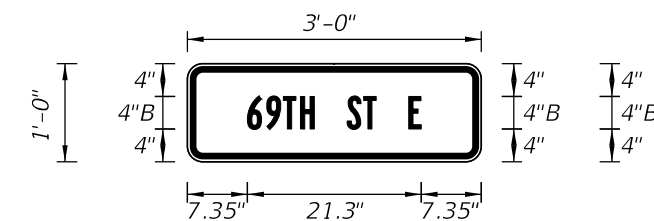
| | | | | | | |
|------------------------|-------|--------|--------|-----|-------------|------------|
| SIGN NAME | | GM-5 | QTY | 1 | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 263+17 | | | |
| WIDTH | 3'-0" | WIDTH | 0.63" | | | |
| HEIGHT | 1'-0" | RADII | 1.5" | | | |
| LEGEND | Black | COLOR | Black | | | |
| COLOR Yellow | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | |
| SIGN NUMBER | | | | | | |
| NUMBER OF POSTS | | | | | | |
| CLEARANCE Edge of Lane | | | | | | |
| COLUMN SIZE | | | | | | |
| AVERAGE LENGTH | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|

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|-------|-----|-----|-----|-----|-----|---|---|-----|---|-----|-----|------|--|--|--|--|--|
| COPY | 6 | 7 | T | H | S | T | E | L | | | | | | | | | |
| SPACE | 7.4 | 2.2 | 2.2 | 2.1 | 1.7 | 4 | 2 | 1.5 | 4 | 1.5 | 7.4 | 21.3 | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |

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|------------------------|-------|--------|--------|--------|-------------|------------|
| SIGN NAME | | GM-7 | QTY | 2 | SIGN NUMBER | STATION(S) |
| PANEL | | BORDER | 271+50 | | | |
| WIDTH | 3'-0" | WIDTH | 0.63" | 278+35 | | |
| HEIGHT | 1'-0" | RADII | 1.5" | | | |
| LEGEND | Black | COLOR | Black | | | |
| COLOR Yellow | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | |
| SIGN NUMBER | | | | | | |
| NUMBER OF POSTS | | | | | | |
| CLEARANCE Edge of Lane | | | | | | |
| COLUMN SIZE | | | | | | |
| AVERAGE LENGTH | | | | | | |



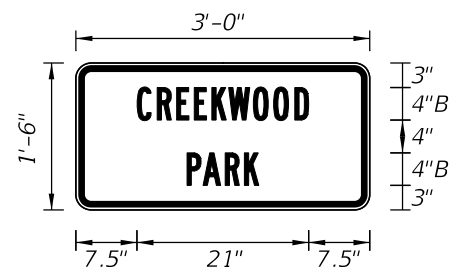
| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|

| | | | | | | | | | | | | | | | | | |
|-------|-----|-----|---|-----|-----|---|---|-----|---|-----|-----|------|--|--|--|--|--|
| COPY | 6 | 9 | T | H | S | T | E | L | | | | | | | | | |
| SPACE | 7.4 | 2.4 | 2 | 2.1 | 1.7 | 4 | 2 | 1.5 | 4 | 1.5 | 7.4 | 21.3 | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |

| | | | |
|-----------------|---------------|----------------------|------|
| DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. | S-15 |
| FL. LICENSE NO. | 43868 | GUIDE SIGN WORKSHEET | |

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

| SIGN NAME | GM-8 | QTY | 2 | SIGN NUMBER | | STATION(S) | |
|-------------|-----------------|------------------------|-------------|-------------|----------------|------------|--|
| PANEL | BORDER | | | | 277+10 | | |
| WIDTH | 3'-0" | WIDTH | 0.63" | 284+65 | | | |
| HEIGHT | 1'-6" | RADII | 1.5" | | | | |
| LEGEND | Black | COLOR | Black | | | | |
| COLOR | Yellow | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| | | | | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | | AVERAGE LENGTH | | |
| | | | | | | | |
| | | | | | | | |



| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|
| | | | | |

| COPY SPACE | | C | 7.5 | R | 2.5 | E | 2.4 | E | 2.2 | K | 2.2 | W | 2.1 | O | 3 | O | 2.5 | D | 2.6 | L | 1.7 | |
|------------|--|---|------|---|-----|---|-----|---|-----|---|-----|---|------|---|-----|---|-----|---|-----|---|-----|--|
| COPY SPACE | | P | 13.6 | A | 2 | R | 2.7 | K | 2.4 | L | 1.8 | L | 13.6 | L | 8.8 | | | | | | | |
| COPY SPACE | | | | | | | | | | | | | | | | | | | | | | |
| COPY SPACE | | | | | | | | | | | | | | | | | | | | | | |
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| COPY SPACE | | | | | | | | | | | | | | | | | | | | | | |

| SIGN NAME | | QTY | | SIGN NUMBER | | STATION(S) | |
|-------------|-----------------|------------------------|-------------|-------------|----------------|------------|--|
| PANEL | BORDER | | | | | | |
| WIDTH | WIDTH | | | | | | |
| HEIGHT | RADII | | | | | | |
| LEGEND | COLOR | | | | | | |
| COLOR | | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| | | | | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | | AVERAGE LENGTH | | |
| | | | | | | | |
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| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|
| | | | | |

| COPY SPACE | | | | | | | | | | | |
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| COPY SPACE | | | | | | | | | | | |

| SIGN NAME | | QTY | | SIGN NUMBER | | STATION(S) | |
|-------------|-----------------|------------------------|-------------|-------------|----------------|------------|--|
| PANEL | BORDER | | | | | | |
| WIDTH | WIDTH | | | | | | |
| HEIGHT | RADII | | | | | | |
| LEGEND | COLOR | | | | | | |
| COLOR | | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| | | | | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | | AVERAGE LENGTH | | |
| | | | | | | | |
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| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|
| | | | | |

| COPY SPACE | | | | | | | | | | | |
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| COPY SPACE | | | | | | | | | | | |

| SIGN NAME | | QTY | | SIGN NUMBER | | STATION(S) | |
|-------------|-----------------|------------------------|-------------|-------------|----------------|------------|--|
| PANEL | BORDER | | | | | | |
| WIDTH | WIDTH | | | | | | |
| HEIGHT | RADII | | | | | | |
| LEGEND | COLOR | | | | | | |
| COLOR | | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| | | | | | | | |
| SIGN NUMBER | NUMBER OF POSTS | CLEARANCE Edge Of Lane | COLUMN SIZE | | AVERAGE LENGTH | | |
| | | | | | | | |
| | | | | | | | |

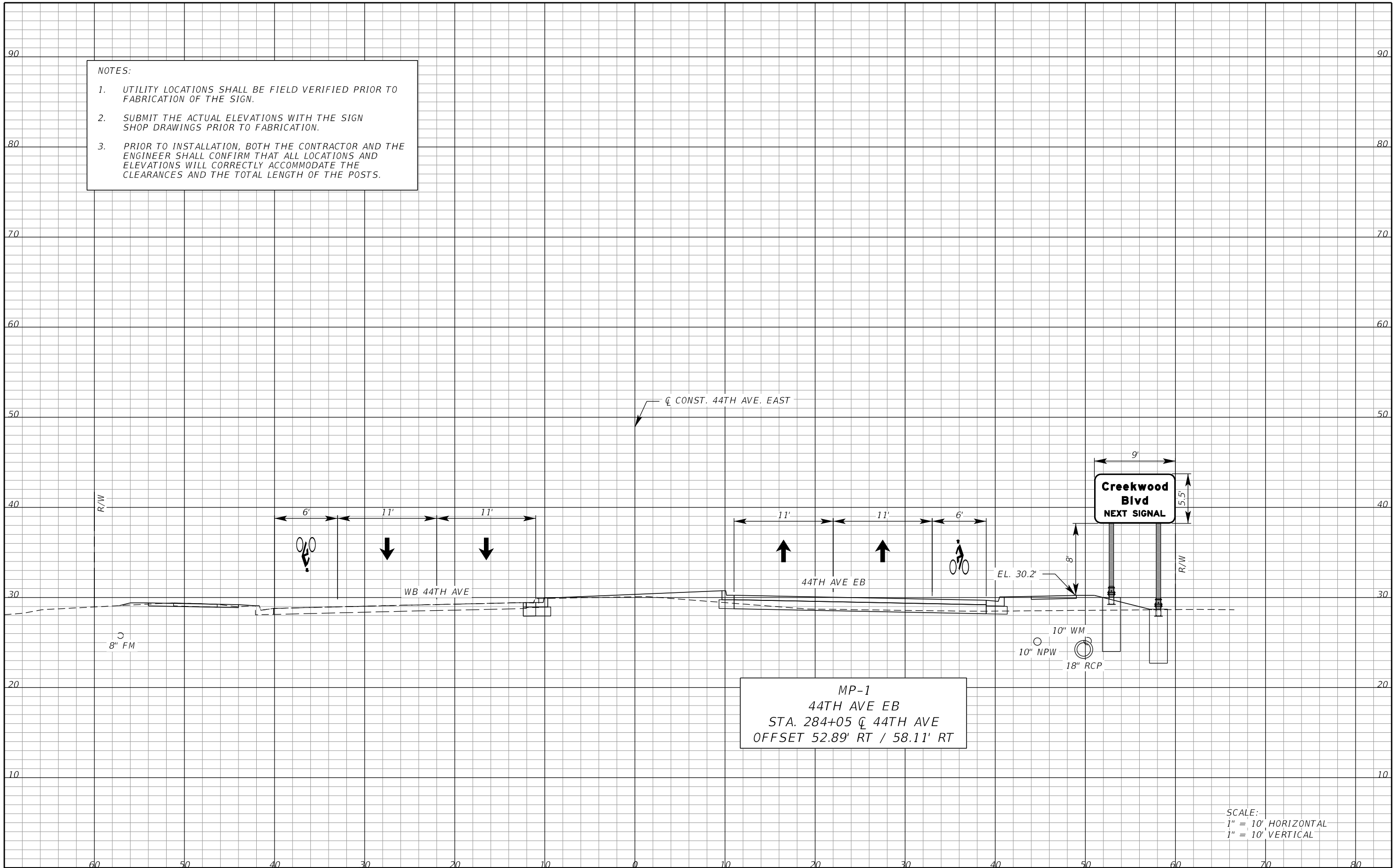
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
|-----------------------|-----------------|-------------------|------|---------|
| | | | | |

| COPY SPACE | | | | | | | | | | | |
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|-----|-----------|-------------|----------|-----------------------------------|-------------|---------|------------------------------------|-----------------|---------------|---|
| | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | GUIDE SIGN WORKSHEET SHEET NO. S-16 |
| | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | |
| | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | |
| No. | REVISIONS | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | |

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

- NOTES:
1. UTILITY LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF THE SIGN.
 2. SUBMIT THE ACTUAL ELEVATIONS WITH THE SIGN SHOP DRAWINGS PRIOR TO FABRICATION.
 3. PRIOR TO INSTALLATION, BOTH THE CONTRACTOR AND THE ENGINEER SHALL CONFIRM THAT ALL LOCATIONS AND ELEVATIONS WILL CORRECTLY ACCOMMODATE THE CLEARANCES AND THE TOTAL LENGTH OF THE POSTS.



MP-1
 44TH AVE EB
 STA. 284+05 Q 44TH AVE
 OFFSET 52.89' RT / 58.11' RT

SCALE:
 1" = 10' HORIZONTAL
 1" = 10' VERTICAL

| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGN CROSS SECTION (1) | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | S-17 | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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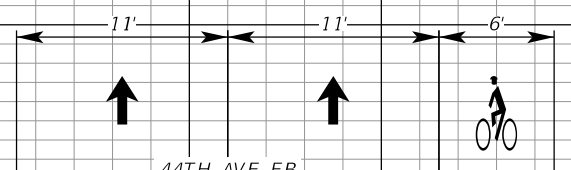
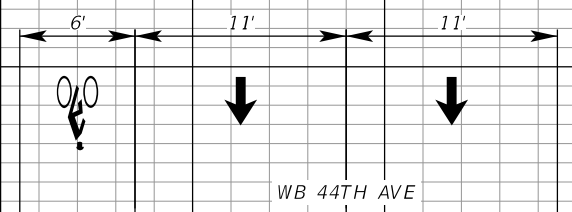
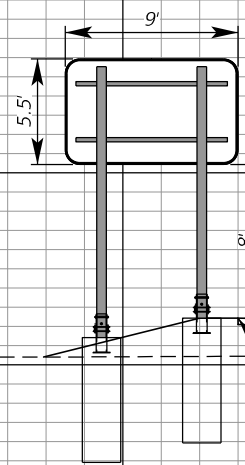
NOTES:

1. UTILITY LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF THE SIGN.
2. SUBMIT THE ACTUAL ELEVATIONS WITH THE SIGN SHOP DRAWINGS PRIOR TO FABRICATION.
3. PRIOR TO INSTALLATION, BOTH THE CONTRACTOR AND THE ENGINEER SHALL CONFIRM THAT ALL LOCATIONS AND ELEVATIONS WILL CORRECTLY ACCOMMODATE THE CLEARANCES AND THE TOTAL LENGTH OF THE POSTS.

SIGN LEGEND

Creekwood Blvd
NEXT SIGNAL

CL CONST. 44TH AVE. EAST



MP-2
44TH AVE WB
STA. 303+50 CL 44TH AVE
OFFSET 55.89' LT / 61.11' LT

SCALE:
1" = 10' HORIZONTAL
1" = 10' VERTICAL

| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | SIGN CROSS SECTION (2) | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | S-18 | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

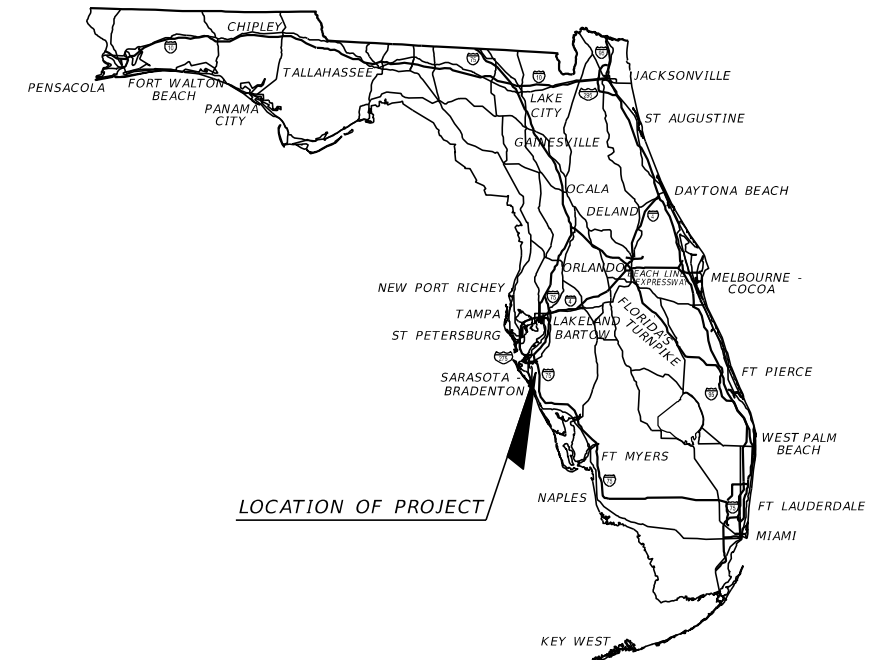
CONTRACT PLANS

**MANATEE COUNTY
PROJECT NUMBER 6045662
44TH AVENUE EAST
PHASE I
FROM 44TH AVENUE PLAZA EAST TO I-75**

SIGNALIZATION PLANS

INDEX OF SIGNALIZATION PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---------------|--|
| T-1 | KEY SHEET |
| T-2 | SIGNATURE SHEET |
| T-3 | TABULATION OF QUANTITIES |
| T-4 | GENERAL NOTES |
| T-5 | PAY ITEM NOTES |
| T-6 THRU T-7 | SIGNALIZATION PLAN |
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| T-13 | MAST ARM TABULATION |
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| T-24 | CABLE ROUTE MARKER DETAIL |
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| T-27 | REPORT OF CORE BORINGS (PENDING SUBMITTAL) |



LOCATION OF PROJECT

**FINAL SUBMITTAL
09/2019**

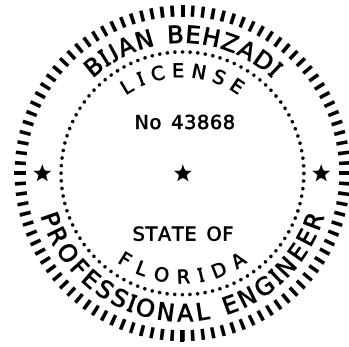
**SIGNALIZATION PLANS
ENGINEER OF RECORD:**

BIJAN BEHZADI, P.E.
P.E. NO.: 43868
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
FBPR CERTIFICATE OF AUTHORIZATION NO. 4213
VENDOR NO. 47-0680568
CONTRACT NO. C9480

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

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 19 | T-1 |

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ON THE DATE ADJACENT TO THE SEAL.

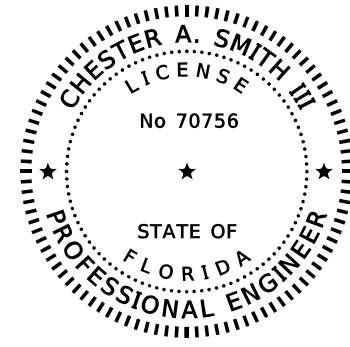
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
CERTIFICATE OF AUTHORIZATION NO. 4213
BIJAN BEHZADI, PE NO. 43868

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

SIGNALIZATION PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---------------|--|
| T-1 | KEY SHEET |
| T-2 | SIGNATURE SHEET |
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| T-25 | SPLICING DIAGRAM |



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ON THE DATE ADJACENT TO THE SEAL.

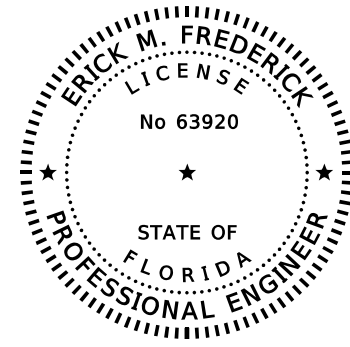
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FL 34232-6212
CERTIFICATE OF AUTHORIZATION 4213
CHESTER A. SMITH III, P.E. NO. 70756

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

SIGNALIZATION PLANS

| SHEET NO. | SHEET DESCRIPTION |
|-----------|------------------------------|
| T-2 | SIGNATURE SHEET |
| T-26 | MAST ARM ASSEMBLY DATA TABLE |



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL.

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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FL 33637
CERTIFICATE OF AUTHORIZATION 6486
ERICK M. FREDERICK, P.E. NO. 63920

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

SIGNALIZATION PLANS


| SHEET NO. | SHEET DESCRIPTION |
|-----------|------------------------|
| T-2 | SIGNATURE SHEET |
| T-27 | REPORT OF CORE BORINGS |

| | | | | | | | | | | |
|-------------|-----------|-----------------------------------|-------------|---------|------------------------------------|-----------------|---------------|------------------------|-----------|-----|
| SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | SIGNATURE SHEET | SHEET NO. | T-2 |
| DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | |
| CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|-------------|-------|
| | | | T-6 | | T-7 | | T-8 | | T-9 | | T-10 | | T-11 | | PLAN | FINAL | PLAN | FINAL |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | | |
| 630-2-11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 256 | | | | | 1307 | | 771 | | | | | | | 3316 | 3316 |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 375 | | | | 128 | | 146 | | 130 | | | | | | 779 | 779 |
| 630-2-14 | CONDUIT, FURNISH & INSTALL, ABOVE GROUND | LF | | | | | | | | | 30 | | | | | | 30 | 30 |
| 632-7-1 | SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL | PI | 1 | | | | | | | | | | | | | | 1 | 1 |
| 633-1-121 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS | LF | | | | | | | | | 220 | | | | | | 220 | 220 |
| 633-1-122 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS | LF | | | | | 1210 | | 1503 | | 1281 | | | | | | 3994 | 3994 |
| 633-2-31 | FIBER OPTIC CONNECTION, INSTALL, SPLICE | EA | | | | | | | | | 8 | | | | | | 8 | 8 |
| 633-3-11 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE | EA | | | | | | | | | 2 | | | | | | 2 | 2 |
| 633-3-12 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY | EA | | | | | | | | | 2 | | | | | | 2 | 2 |
| 633-3-15 | FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL | EA | 1 | | | | | | | | 1 | | | | | | 2 | 2 |
| 633-8-1 | MULTICONDUCTOR COMMUNICATION CABLE, F&I | LF | 430 | | | | | | | | 30 | | | | | | 460 | 460 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 17" X 30" COVER SIZE | EA | 13 | | | | | | | | 2 | | | | | | 15 | 15 |
| 635-2-12 | PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE | EA | | | | | 2 | | 1 | | | | | | | | 3 | 3 |
| 635-2-13 | PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE | EA | | | | | | | | | 2 | | | | | | 2 | 2 |
| 639-1-122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR | AS | 1 | | | | | | | | | | | | | | 1 | 1 |
| 639-2-1 | ELECTRICAL SERVICE WIRE, FURNISH & INSTALL | LF | 12 | | | | | | | | 795 | | | | | | 807 | 807 |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT, F&I POLE MOUNT | EA | | | | | | | | | 1 | | | | | | 1 | 1 |
| 639-4-6 | EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 641-2-12 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 641-2-13 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-III | EA | | | | | | | | | 1 | | | | | | 1 | 1 |
| 646-1-11 | ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL | EA | 6 | | | | | | | | | | | | | | 6 | 6 |
| 649-21-6 | STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50' | EA | 3 | | | | | | | | | | | | | | 3 | 3 |
| 650-1-14 | TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY | AS | | | | 6 | | | | | | | | | | | 6 | 6 |
| 650-1-16 | TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY | AS | | | | 2 | | | | | | | | | | | 2 | 2 |
| 653-1-11 | PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY | AS | | | | 6 | | | | | | | | | | | 6 | 6 |
| 660-3-11 | VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT | EA | 1 | | | | | | | | 1 | | | | | | 2 | 2 |
| 660-3-12 | VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT | EA | 3 | | | | | | | | 1 | | | | | | 4 | 4 |
| 660-6-121 | VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 660-6-122 | VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 663-1-111 | SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, CABINET ELECTRONICS | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 663-1-112 | SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR | EA | 3 | | | | | | | | | | | | | | 3 | 3 |
| 665-1-11 | PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD | EA | 6 | | | | | | | | | | | | | | 6 | 6 |
| 670-5-112 | TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION | AS | 1 | | | | | | | | | | | | | | 1 | 1 |
| 676-2-122 | ITS CABINET, FURNISH & INSTALL, POLE MOUNT WITH SUNSHIELD, 3365, 24" W X 46" H X 22" D | EA | | | | | | | | | 1 | | | | | | 1 | 1 |
| 682-1-113 | ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 684-1-11 | MANAGED FIELD ETHERNET SWITCH, F&I | EA | 1 | | | | | | | | 1 | | | | | | 2 | 2 |
| 684-6-11 | WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL ETHERNET ACCESS POINT | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 684-6-12 | WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL ETHERNET SUBSCRIBER UNIT | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 685-1-11 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE | EA | | | | | | | | | 1 | | | | | | 1 | 1 |
| 685-1-12 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION | EA | 1 | | | | | | | | | | | | | | 1 | 1 |
| 700-3-201 | SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF | EA | | | | 2 | | | | | | | | | | | 2 | 2 |
| 700-5-22 | INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF | EA | | | | 3 | | | | | | | | | | | 3 | 3 |

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| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|---|-------------|---------|--|-----------------|---------------|--|-----------|-----|
| No. | REVISIONS | | | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | <p style="text-align: center;">TABULATION OF QUANTITIES</p> | SHEET NO. | T-3 |
| | | | | DESIGNED BY | BB | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S PROJECT MANAGEMENT DIVISION BEFORE STARTING WORK.
2. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S TRAFFIC ENGINEERING DIVISION (941-749-3502 EXT. 7817), AT LEAST TWO WEEKS, BEFORE ANY CABINET MODIFICATIONS ARE TO BE PERFORMED. THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY ENGINEERING DIVISION PERSONNEL WILL REVIEW, ASSIST AND PROVIDE TECHNICAL SUPPORT RELEVANT TO ANY FIELD MODIFICATIONS THAT ARE NECESSARY.
3. AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON:

MANATEE COUNTY PROJECT MANAGEMENT DIVISION
ERIC S. SHROYER, P.E.
1022 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
PHONE: 941-708-7450 EXT. 7344
4. ONE WEEK PRIOR TO THE BEGINNING OF THE TRAFFIC SIGNAL INSTALLATION OR TURN ON OF A NEW SIGNAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER:

MANATEE COUNTY PROJECT MANAGEMENT DIVISION
ERIC S. SHROYER, P.E.
1022 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
PHONE: 941-708-7450 EXT. 7344

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION
VISHAL KAKKAD
2101 47TH TERRACE EAST
BRADENTON, FLORIDA 34203
PHONE: 941-749-3500 EXT. 7812
5. DELIVER THREE SETS OF RECORD DRAWINGS, TWO SETS OF IMSA INSPECTION FORMS AND ONE COMPACT DISC OF RECORD DRAWINGS TO MR. VISHAL KAKKAD, THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION MANAGER AT 2101 47TH TERRACE EAST BRADENTON, FL 34203. RECORD DRAWINGS MUST BE DELIVERED TO THE COUNTY 48 HOURS PRIOR TO SCHEDULING THE FINAL INSPECTION.
6. UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE PROJECT MANAGEMENT DIVISION AND THE TRANSPORTATION DIVISION TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL POWER COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. ANY FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR THE ELECTRICAL POWER SERVICE ASSEMBLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS OF THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION, INSPECTION AND ENERGIZING OF THE NEW POWER SERVICE IN A TIMELY MANNER IN ORDER TO PROMOTE PROJECT COMPLETION WITHIN CONTRACT TIME.
8. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR, VIA SUNSHINE STATE ONE CALL OF FLORIDA, INC AT 811 OR 1-800-432-4770. IN COORDINATION WITH UNDERGROUND AND OVERHEAD UTILITY OWNERS. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.
9. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND IN ALL CASES WHERE JOINT USE POLES ARE CALLED FOR.

THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLES SUCH AS THE INSTALLATION OF SIGNAL CABLE, FIBERGLASS INSULATORS, AND SIGNAL POLES.

AT LOCATIONS WHERE THE REQUIRED VERTICAL CLEARANCE TO THE POWER LINES CANNOT BE MAINTAINED, A QUALIFIED REPRESENTATIVE FROM THE POWER COMPANY SHALL BE PRESENT DURING ALL WORK UNDER POWER LINES. ANY COST ASSOCIATED WITH THIS SHALL BE INCLUDED IN THE RELATED PAY ITEMS.
10. THE CONTRACTOR SHALL HAND DIG THE FIRST 48 INCHES OF THE HOLE FOR THE POLE FOUNDATION OR CONDUIT RUN WHERE UTILITIES ARE IN CLOSE PROXIMITY.
11. THE CONTRACTOR IS TO DE-WATER THE POLE FOUNDATION EXCAVATION IF THE ELEVATION OF WATER IS HIGHER THAN THE ELEVATION OF THE FOUNDATION BASE.

12. ALL MATERIALS, EQUIPMENT, AND OTHER CONTRACTOR SUPPLIED ITEMS SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY THE ENGINEER.
13. #14 XHHW PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE AT EACH CONDUIT TERMINATION AND SECURED IN THE PULL BOX OR PLACE OF TERMINATION.
14. ALL ELECTRICAL WIRING SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION.
15. GROUNDING: ALL COSTS FOR GROUNDING SHALL BE INCLUDED IN THE COST OF THE ITEM BEING GROUNDED. ALL BONDING AND GROUNDING MUST COMPLY WITH FDOT DESIGN STANDARDS. MARK GROUND ROD LOCATION WITH PERMANENT MARKER SUCH AS AN EPOXIED STICKER LOCATED ON THE NEAREST CURB, AND PROVIDE AS-BUILT DRAWINGS WITH THE LOCATION OF GROUND RODS MARKED.


GROUND RESISTANCE TESTER, OR OTHER APPROVED MEANS SHALL BE USED TO ACQUIRE THE GROUND ROD RESISTANCE. THE ENGINEER, OR A REPRESENTATIVE OF THE ENGINEER FROM THE TRAFFIC OPERATIONS DIVISION STAFF SHALL BE PRESENT DURING THE TEST.
16. ELEVATION OF THE TOP OF THE MAST ARM FOUNDATION SHALL BE SIX INCHES ABOVE EXISTING GRADE, UNLESS LOCATED DIRECTLY AT BACK OF SIDEWALK. IF LOCATED AT BACK OF SIDEWALK, THE FOUNDATION ELEVATION SHALL MATCH SIDEWALK GRADE. SEE FOUNDATION OUT OF GROUND (#) ON "MAST ARM TABULATION" SHEET.
17. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR BORING.
18. CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO THE ENGINEER PRIOR TO CONSTRUCTION FOR APPROVAL.
19. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/ FOUNDATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY; AND
2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS. ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION SHALL BE INCLUDED IN THE RELATED PAY ITEMS.
20. EXISTING SPEED LIMITS ARE AS FOLLOWS:
45 MPH ON 44TH AVENUE EAST
40 MPH ON CREEKWOOD BLVD.
21. UNDER SUPERVISION OF THE COUNTY, THE CONTRACTOR SHALL PERFORM AN INITIAL OPERATION TEST TO ENSURE THE CCTV ASSEMBLY HAS BEEN INSTALLED CORRECTLY AS A COMPLETE AND FUNCTIONALLY ACCEPTABLE INSTALLATION.
22. PRIOR TO ORDERING MATERIALS, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW FOR ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED. THE CONTRACTOR SHALL FURNISH COPIES OF ALL DRAWINGS, SCHEDULES AND COMPLETE DESCRIPTIVE AND TECHNICAL DATA ON ALL ITEMS TO THE PROJECT MANAGER.
23. THE ACCEPTANCE OF ANY SUBMITTED DATA FOR MATERIALS, EQUIPMENT, APPARATUS, DEVICES, ARRANGEMENTS AND/OR LAYOUTS SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING SAME AND PROPER DIMENSIONS, CAPACITIES, SIZES, QUANTITY AND INSTALLATIONS DETAILS TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT. SUCH ACCEPTANCE SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OF ANY SORT ON THE SUBMITTAL DATA.

CONDUIT NOTES

1. ALL HDPE CONDUIT CONNECTIONS SHALL BE JOINED WITH A FUSION COUPLER OR FUSION SPLICE.
2. THE CONTRACTOR SHALL ADJUST THE CONDUIT RUNS, DEVICE POLES, BORES AND SERVICE POLE PLACEMENTS TO AVOID ANY UTILITY CONFLICT IDENTIFY BY THE LOCATES. ANY SIGNIFICANT CHANGE SHALL BE APPROVED BY THE ENGINEER.
3. THE CONDUITS TO BE INSTALLED ARE TO BE PLACED SO AS TO TOTALLY AVOID ANY CONFLICTS WITH EXISTING UTILITIES ALONG THE ROUTE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY INFORMATION REQUIRED TO PLAN THE WORK AHEAD FOR THE INSTALLATION OF THE REQUIRED CONDUITS WITHIN DESIGN OR SPECIFIED PARAMETERS, AND HIS TIME FRAME. THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY OR HORIZONTALLY TO AVOID CONFLICT WITH UNDERGROUND UTILITIES. THE CONTRACTOR SHALL USE HAND EXCAVATION METHODS WHEN EXCAVATING NEAR EXISTING UTILITIES, NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK. EXTREME CAUTION SHALL BE USED BY THE CONTRACTOR WHEN EXCAVATING, INSTALLING, BACK FILLING AND COMPACTING AROUND EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL UNDERGROUND CONFLICTS IN ADVANCE OF THE PLACEMENT OF ANY CONDUIT OR OTHER FACILITIES. ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS, JACK & BORE SLEEVES, AND DIRECTIONAL BORE CONDUITS, ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL FIELD MARK THE PROPOSED ALIGNMENT FOR REVIEW AND CONCURRENCE BY THE ENGINEER PRIOR TO TRENCHING AND/OR PLACEMENT. NO PULL BOXES ALL BE LOCATED IN DRAINAGE SWALES, OR PAVED SHOULDERS.
5. WHEN TRENCHING FOR INSTALLATION, THE CONTRACTOR MAY RUN COMMUNICATIONS AND POWER SERVICE IN THE SAME TRENCH. THE POWER SERVICE SHALL HAVE SEPARATE PULL BOXES FOR ACCESS. THE CONTRACTOR SHALL NOT INSTALL COMMUNICATIONS AND POWER SERVICE IN THE SAME CONDUIT, PULL BOX OR MANHOLE.
6. THE CONTRACTOR SHALL PLACE ALL CONDUITS IN A MANNER THAT MINIMIZES DEFLECTION BOTH HORIZONTALLY AND VERTICALLY, THUS MINIMIZING STRESS ON CABLES DURING CABLE INSTALLATION. CONDUIT FOR FIBER OPTIC CABLE IN TRENCHES SHALL NOT DEFLECT MORE THAN 1-INCH PER FOOT VERTICALLY OR HORIZONTALLY. BENDS SHALL NOT BE PERMITTED EXCEPT AS SPECIFIED ON THE PLANS.
7. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF THE WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CANNOT BE BACKFILLED IN THE SAME DAY/ NIGHT OPERATION.

BRACKETS AND SPACERS WHICH ARE REQUIRED TO OFFSET THE RIGID METAL CONDUIT FROM THE MOUNTING, SHALL BE OF SIMILAR MATERIALS TO PREVENT CATHODIC REACTION.
8. ALL NEW CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 30" UNLESS PLACED IN AN AREA OF NEW FILL, IN WHICH CASE THE CONDUIT SHALL BE 48". DIRECTIONALLY BORED CONDUIT SHALL BE AT A MINIMUM DEPTH OF 48".

| | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|---------|----------------------|---------------|-----------|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | T-4 |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 |  MANATEE COUNTY PUBLIC WORKS | | GENERAL NOTES | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | | | DATE | BY | | 3:20:39 PM | | 9/20/2019 | | PW:\ |

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PAY ITEM NOTES

1. 630-2-11 & 630-2-12:
CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE NOTED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.

#14 XHHW PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE.

FOUR SEPARATE UNDERGROUND CONDUIT RUNS ARE REQUIRED FOR ALL DRILLED SHAFTS:

- 1-SIGNAL
- 1-DETECTION
- 1-SPARE
- 1-GND

2. 632-7-1:
USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLES FOR SIGNAL HEADS AND PEDESTRIAN HEADS.

EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES THE LEFT TURN MOVEMENT WHICH SHALL HAVE CONDUCTORS AVAILABLE FOR EITHER PROTECTED OR PERMISSIVE MOVEMENTS. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH THE MANATEE COUNTY BEFORE ORDERING, AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE AND F.D.O.T. SPECIFICATIONS. THERE SHALL BE ONE NEUTRAL PER APPROACH. THIS PAY ITEM INCLUDES FURNISHING AND INSTALLING THE REQUIRED CABLING FOR THE PROPOSED PEDESTRIAN SIGNAL ASSEMBLIES. ALL PEDESTRIAN DETECTORS SHALL BE WIRED USING SEPARATE CABLE UTILIZING LOW VOLTAGE CONDUIT AND PULL BOXES.

3. 635-2-11, 635-2-12 & 635-2-13:
PULL BOXES SHALL BE TRAFFIC BEARING, ALL POLYMER CONSTRUCTION (NOT CONCRETE), PULL BOXES AND LIDS. (QUAZITE OR ANOTHER EQUIVALENT FDOT APPROVED MANUFACTURER). PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT. THE COST OF CABLE ROUTE MARKERS ARE INCLUDED IN PAY ITEMS 635-2-12 & 635-2-13.

STANDARD PULL BOX DIMENSIONS SHALL BE 17" x 30" x 12" AND THE LID SHALL BE STAMPED "MANATEE COUNTY TRAFFIC SIGNAL" ON THE COVER. FIBER OPTIC PULL BOX DIMENSIONS SHALL BE 24" x 36" x 36" AND FIBER OPTIC SPLICE BOX DIMENSIONS SHALL BE 30" x 60" x 48". FIBER OPTIC PULL AND SPLICE BOX LIDS SHALL BE STAMPED "MANATEE COUNTY FIBER OPTIC SYSTEM" ON THE COVER.

4. 639-1-122:
THIS PAY ITEM SHALL INCLUDE THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION. ANY CHARGES BY FPL (FLORIDA POWER AND LIGHT) TO BE ON SITE TO DE-ENERGIZE ELECTRIC SERVICE LINES AND MONITOR WORK WHILE LINES ARE REROUTED ONTO THE NEW SERVICE POLE WILL BE INCLUDED UNDER THIS PAYMENT ITEM.

IT SHALL ALSO INCLUDE THE COST OF INSTALLING SERVICE RISER ON FP&L SERVICE POLE. THE SERVICE RISER MUST HAVE A WEATHERHEAD TERMINATING AT A POINT 40" MINIMUM BELOW THE BOTTOM OF PRECO TRANSFORMER.

THIS PAY ITEM INCLUDES METER BASE AND SERVICE DISCONNECT.

ELECTRICAL SERVICE DISCONNECT SHALL BE COMPRISED OF SIX (6) CIRCUIT DISCONNECT BOX WITH THREE CIRCUIT BREAKERS (LIGHTING, SURGE, CONTROLLER) SIZED APPROPRIATELY PER NEC.

5. 649-21-6:
THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL ELEVATIONS PRIOR TO ORDERING MAST ARM ASSEMBLIES.

USE THREE 2" AND ONE 3/4" CONDUIT STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEALED.

THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLES. SUCH WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE INSTALLATION OF SIGNAL CABLE, INSTALLATION OF MAST ARM FOUNDATIONS OR POLES.

6. 650-1-14, 650-1-16:
USE SIGNAL HEAD SUPPORTING HANGER THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5'.

ALL SIGNAL HEADS SHALL HAVE ALUMINUM LOUVERED BACK PLATES INSTALLED. BACKPLATES SHALL BE MANUFACTURED FOR THE SIGNAL HEADS USED & INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. THE BACK PLATE SHALL HAVE A 2" YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER UNLESS SPECIFIED OTHERWISE IN THE PLANS.

THE EXTERNAL COLOR OF SIGNAL HOUSING SHALL BE BLACK. ALL TRAFFIC SIGNAL HEAD INDICATIONS SHALL BE 12" LED. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS. THE COST FOR THE TUNNEL VISORS SHALL BE INCLUDED UNDER THIS PAY ITEM.

7. 653-1-11:
PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, LED COUNTDOWN TYPE. USE LOCKING COLLARS FOR MOUNTING PEDESTRIAN SIGNAL HEADS TO PEDESTRIAN PEDESTALS. USE BREAKAWAY ALUMINUM SQUARE BASE WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS.

8. 660-3-11:
SHALL INCLUDE ALL NECESSARY WAVETRONIX CLICKS UNITS FOR A COMPLETE AND OPERATIONAL SETUP.

9. 660-3-12:
SHALL INCLUDE WAVETRONIX SMART SENSOR ADVANCE FOR MAINLINE AND SMART SENSOR MATRIX FOR THE SIDE STREET AS NOTED IN PLANS. THIS PAY ITEM WILL INCLUDE ALL NECESSARY MOUNTING BRACKETS AND CLAMPING EQUIPMENT. SHALL INCLUDE ANY COST ASSOCIATED WITH PHYSICAL INSTALLATION OF SENSOR AND ANY SOFTWARE NECESSARY TO PROGRAM THE SENSOR. EACH MVDS SHALL INCLUDE THE COST OF 100 LF COMPOSITE (SENSOR) CABLE.

10. 660-6-121 AND 122:
SHALL INCLUDE ALL ITEMS NECESSARY FOR A COMPLETE INSTALLATION OF BLUETOOTH SPECTRA RSU, POE UNIT PER MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE PLANS.

11. 665-1-11:
SHALL INCLUDE ADDITIONAL COST OF LABOR AND MATERIALS REQUIRED FOR INSTALLATION OF PEDESTRIAN SIGNAL SIGN FTP-68B-06. THIS SIGN SHALL BE MOUNTED ABOVE EACH PEDESTRIAN DETECTOR. ALL PEDESTRIAN PUSH BUTTONS SHALL BE A.D.A. COMPLIANT.

12. 670-5-112:
USE A NEMA TS2 TYPE 1 AS DESCRIBED IN THE 2003 NEMA STANDARD TS2 PUBLICATION. THE CONTROLLER SUPPLIED WITH THE CABINET SHALL BE A NAZTEC 980 TS2 TYPE 1. THE NAZTEC 980 ATC CONTROLLER SHALL COME EQUIPPED WITH 4 SERIAL PORTS AND ONE ETHERNET PORT. THE CABINETS SHALL BE TYPE VI AND FULLY COMPATIBLE WITH MANATEE COUNTIES ATMS (NAZTEC'S ATMS.NOW). THE CABINETS SHALL COME EQUIPPED WITH A RUGGEDCOM SWITCH MODEL NUMBER RSG920P (6GK6092-OPS23-0BA0-Z A05+B05+C02+D02) AND ALL THE NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO AN ETHERNET BASED FIBER OPTIC NETWORK. INSTALL A 30A SINGLE POLE BRANCH CIRCUIT BREAKER INSIDE THE SIGNAL CABINET TO FEED THE MVDS.

TRAFFIC SIGNAL CONTROLLER BASE:

THE CABINET BASE WHEN SECURED TO THE CONCRETE SLAB WITH CONTROLLER CABINET ATTACHED MUST WITHSTAND A MINIMUM WIND LOAD OF 130 MPH OR A 850 LB FORCE APPLIED AT 49" ABOVE THE BOTTOM OF THE BASE WITHOUT CAUSING THE BASE OR CABINET TO COME OUT OF THEIR ANCHORED POSITION OR CAUSE ANY PERMANENT DEFORMATION.

INSTALL A PVC SLEEVE TO PREVENT THE GROUND ROD FROM DIRECT EMBEDMENT IN THE SLAB. EXTEND CONDUITS FOR FUTURE USE AT LEAST 18-INCHES FROM THE EDGE OF THE SLAB. TERMINATE UNDERGROUND WITH A COUPLING AND CAP AND SEAL SO THAT THE SEAL CAN BE REMOVED WITHOUT DAMAGING THE COUPLING. ANCHOR THE CONTROLLER CABINET TO THE BASE USING FOUR STAINLESS STEEL 1/2" -13 NC BOLTS.

GENERATOR CABINET BASE:


THE PORTABLE GENERATOR CABINET BASE SHALL BE INSTALLED APPROXIMATELY 2' NEXT TO THE SIGNAL CABINET BASE WITH THE GENERATOR CABINET INSTALLATION SIMILAR TO THE SIGNAL CONTROLLER CABINET.

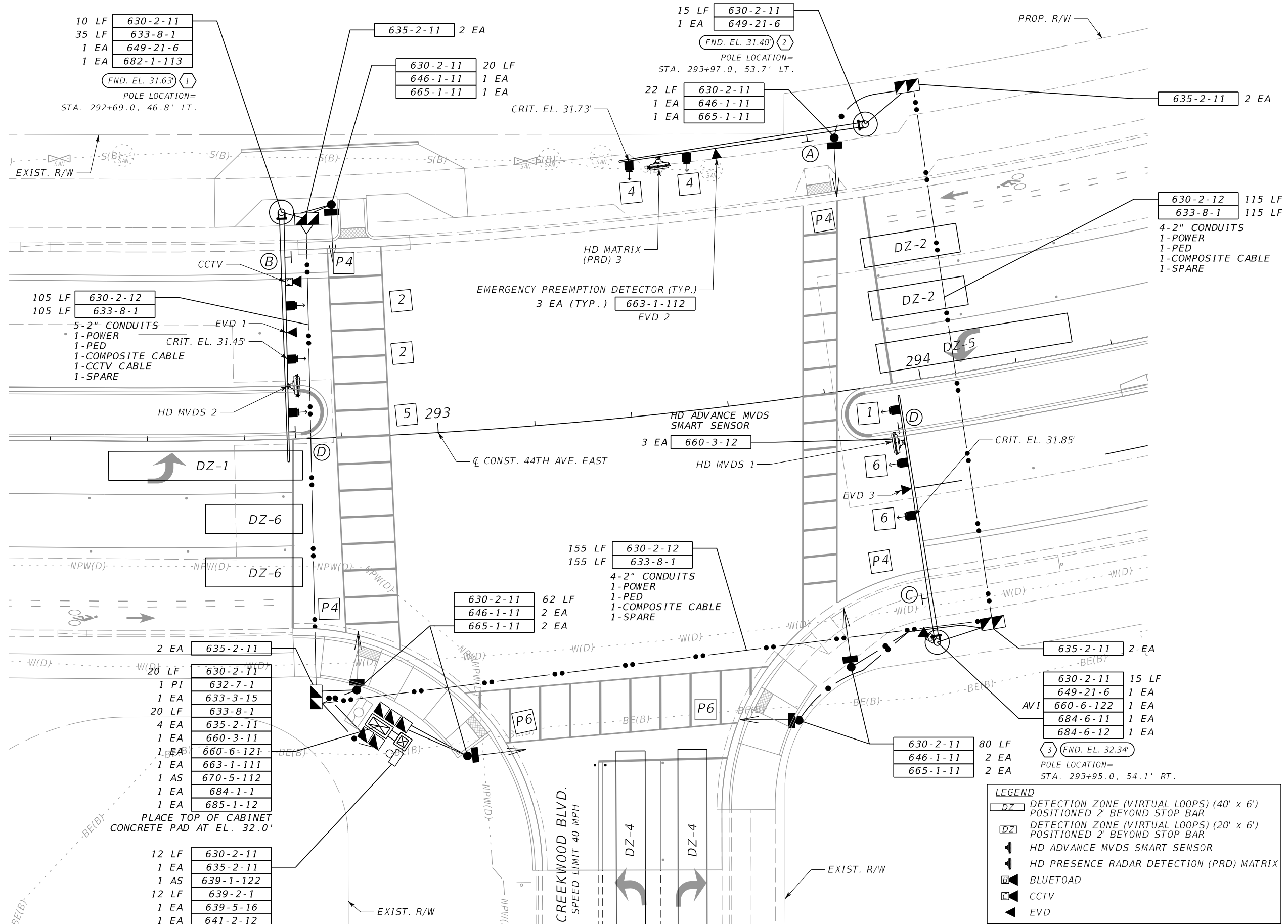
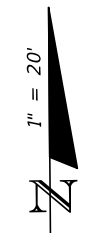
13. 685-1-12:
SHALL INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) MODEL NO. ALPHA FXM 1100 EQUIPPED WITH AN ETHERNET PORT. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT. THE UPS SHALL BE SIZED TO ACCOMMODATE THE MAXIMUM CONNECTED LOAD. THE BATTERY BANK SHALL BE SIZED TO PROVIDE A MINIMUM 8 HOURS RUN TIME UNDER FULL LOAD.

14. 700-5-22:
ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE EDGE LIT LED TYPE AND SHALL BE LISTED IN THE FDOT APPROVED PRODUCT LIST. THE COST OF THIS ITEM SHALL INCLUDE PROPERLY DESIGNED AND SIZED ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND ALL MISCELLANEOUS HARDWARE NECESSARY TO RIGID MOUNT THE SIGNS AS SHOWN IN THE PLANS. THE SIGNS SHALL BE POWERED USING IMSA 50-2 CABLE. THIS ITEM SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOCCELL ON THE SERVICE POLE OR INSIDE SIGNAL CABINET.

INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE 120 VOLT LED BULBS. THE WATTAGE AND VOLTAGE SHALL BE NOTED ON THE AS-BUILT PLANS FOR EACH SIGN.

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| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | T-5 |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 |  MANATEE COUNTY PUBLIC WORKS | | PAY ITEM NOTES | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | |



44TH AVE E
SPEED LIMIT
45 MPH

CREEKWOOD BLVD.
SPEED LIMIT 40 MPH

| LEGEND | |
|--------|--|
| | DETECTION ZONE (VIRTUAL LOOPS) (40' x 6') POSITIONED 2' BEYOND STOP BAR |
| | DETECTION ZONE (VIRTUAL LOOPS) (20' x 6') POSITIONED 2' BEYOND STOP BAR |
| | HD ADVANCE MVDS SMART SENSOR |
| | HD PRESENCE RADAR DETECTION (PRD) MATRIX |
| | BLUETOAD |
| | CCTV |
| | EVD |

| | | | | | | | | |
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| No. | REVISIONS | DATE | BY | SCALE | AS NOTED | DATE | DESIGN ENGINEER | SHEET NO. |
| | | | | DESIGNED BY | BB | | | |
| | | | | DRAWN BY | GS | PROJECT NO. | FL. LICENSE NO. | T-6 |
| | | | | CHECKED BY | MO | 6045662 | 43868 | |

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213



DESIGN ENGINEER
BIJAN BEHZADI
FL. LICENSE NO.
43868

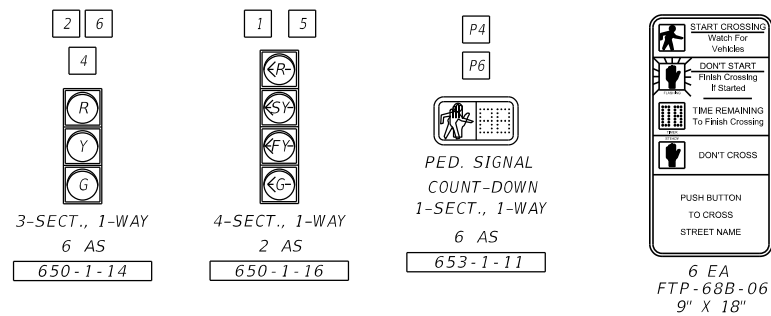
SIGNALIZATION PLAN

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9/20/2019

PW:\



44th Ave E
7200 7300

Creekwood Blvd
← 4400

Creekwood Blvd
4400 →

FTP-85-13
30" x 36"

LEFT TURN
YIELD ON
FLASHING
YELLOW
ARROW

CONSTRUCTION NOTES:

- CALIBRATE AND CONFIGURE THE SMART SENSOR ADVANCE ON 44TH AVENUE E. FOR 600 FEET ADVANCE DETECTION ZONES FOR MOVEMENTS 2 AND 6.
- CALIBRATE AND CONFIGURE PRESENCE RADAR DETECTION (MATRIX) FOR MOVEMENT 4.
- ALL STATIONS AND OFFSETS FOR THE SIGNAL MAST ARM POLES AND DRILLED SHAFTS ARE MEASURED FROM THE CONSTRUCTION BASELINE OF 44TH AVENUE E.

CONTROLLER OPERATIONS:

- MAJOR STREET IS 44TH AVENUE EAST (MOVEMENTS 1, 2, 5 AND 6) AND MINOR STREET IS CREEKWOOD BOULEVARD (MOVEMENT 4).
- THE CABINET SHALL BE PRE-WIRED TO FLASH PHASES 2 AND 6 YELLOW AND ALL OTHER PHASES AND OVERLAPS RED.
- CONTROLLER CABINET SHALL BE WIRED AS AN S.O.P. 10 AND OPERATED WITH S.O.P 7 MODIFIED AS SHOWN WITH THE FOLLOWING: CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENT 2 (P2), 4 (P4) AND 6 (P6).

SIGNALIZATION NOTES:

- POWER SERVICE METER BASE AND DISCONNECT SHALL BE INSTALLED ON THE CONCRETE SERVICE POLE AS SHOWN ON THE PLANS AND PER STANDARD PLANS INDEX NUMBERS 639-001 AND 639-002.
- FLORIDA POWER AND LIGHT (FPL) TRANSFORMER FOR POWER SERVICE TO BE PLACED IN SW QUADRANT. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY AND THE POWER COMPANY REGARDING THE EXACT LOCATION AND TIMING OF INSTALLATION.
- THE CONTROLLER CABINET SHALL BE PROVIDED WITH A GPS DOME MOUNTED ON THE TOP RIGHT REAR OF THE CONTROLLER CABINET AND PROPERLY SEALED TO PREVENT WATER INTRUSION. THIS GPS DOME SHALL BE COMPATIBLE WITH THE EXISTING MANATEE COUNTY CONTROLLER AND CENTRAL OPERATING SYSTEM AND WIRED TO PROVIDE A DB-9 MALE CONNECTOR AVAILABLE IN THE CABINET TO ALLOW IT TO BE PLUGGED INTO THE FRONT OF THE CONTROLLER. THIS GPS DOME IS UTILIZED BY THE CONTROLLER TO ENSURE AN ACCURATE TIME OF DAY PLAN IS ACHIEVED.

MAIN PANEL CONFIGURATION:

ALL MAIN PANELS SHALL BE PRE-WIRED FOR A 516L MALFUNCTION MANAGEMENT UNIT CAPABLE OF FLASHING YELLOW ARROW (FYA) OPERATION USING NEMA CONFIGURATION H AS IDENTIFIED IN THE NEMA AMENDMENT 4-2012 FOR THE FLASHING YELLOW ARROW (FYA).

ILLUMINATED SIGN / STREET LIGHTING PHOTOCELL CONTROL:

- EVERY CABINET SHALL BE WIRED FOR USE WITH A PHOTOCELL FOR STREET NAME SIGN(S) AND STREET LIGHTING. THE PHOTOCELL SHALL BE MOUNTED ON A SEPARATE PANEL. THE SIGN/STREET LIGHT PANEL SHALL BE WIRED SO THAT AN ON/OFF/AUTO SWITCH CAN BE UTILIZED FOR MAINTENANCE PERSONNEL TO SEPARATELY CONTROL EITHER THE ILLUMINATED SIGNS OR STREET LIGHTS. A 2" TO 2-1/2" HOLE, COVERED WITH PLEXIGLASS, SHALL BE INSTALLED IN THE CONTROLLER CABINET FOR THE PHOTOCELL.
- A SIGN PANEL SHALL BE POWERED BY A BREAKER SPECIFICALLY FOR THE ILLUMINATED STREET NAME SIGNS LOCATED ON THE POWER PANEL OF THE CONTROLLER CABINET AND SHALL BE LABELED ACCORDINGLY. THE ILLUMINATED SIGN/STREET LIGHT PANEL SHALL HAVE A DEDICATED BREAKER FOR THE STREET LIGHT PORTION OF THE PANEL AND LABELED ACCORDINGLY.
- THE POWER OUTPUT FOR THE STREET LIGHTING SHALL BE FROM A MINIMUM 60 AMP ELECTRONIC RELAY OR EQUIVALENT. THE PHOTOCELL CONTROL PANEL SHALL BE WIRED SUCH THAT THE POWER IS NOT PROVIDED TO THIS PANEL IF THE CABINET IS RUNNING OFF OF A UPS UNIT OR GENERATOR. THERE SHALL BE SUFFICIENT TERMINATIONS TO ACCOMMODATE UP TO FOUR ILLUMINATED SIGNS. A TERMINAL STRIP SHALL BE PROVIDED TO TERMINATE UP TO FOUR STREET LIGHTS WITH WIRE SIZE UP TO #10 AWG. EACH INDIVIDUAL ILLUMINATED SIGN SHALL HAVE A DEDICATED BREAKER.

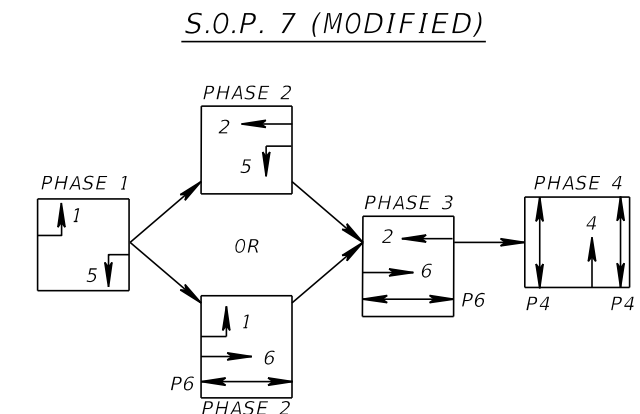
| CONTROLLER TIMINGS | | | | | | | | |
|--------------------|-----|-----|---|-----|-----|-----|---|---|
| TIMING FUNCTION | | | | | | | | |
| MOVEMENT NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| MINIMUM GREEN | 7 | 20 | — | 7 | 7 | 20 | — | — |
| EXTENSION | 3 | 3 | — | 3 | 3 | 3 | — | — |
| MAXIMUM GREEN 1 | 20 | 50 | — | 30 | 20 | 50 | — | — |
| MAXIMUM GREEN 2 | — | — | — | — | — | — | — | — |
| YELLOW CLEARANCE | 4.8 | 4.8 | — | 4.8 | 4.8 | 4.8 | — | — |
| ALL RED | 4.4 | 2.4 | — | 2.2 | 4.4 | 2.4 | — | — |
| PEDESTRIAN WALK | — | — | — | 7 | — | 7 | — | — |
| PED. CLEARANCE | — | — | — | 25 | — | 17 | — | — |
| RECALL | — | — | — | — | — | MIN | — | — |

| PREEMPTION TIMING PLAN | | |
|---------------------------------------|-----------|--------|
| | 1 (EB/WB) | 2 (NB) |
| PRIORITY | 2 | 2 |
| DELAY BEFORE PREEMPTION (SEC) | 0 | 0 |
| MINIMUM GREEN BEFORE PREEMPTION (SEC) | * | * |
| LOCK CALL | OFF | OFF |
| MAXIMUM PRESENCE (SEC) | 120 | 120 |
| YELLOW CLEARANCE (SEC) | 4.8 | 4.8 |
| RED CLEARANCE (SEC) | 2.4 | 2.2 |
| DWELL PHASE(S) | 2 & 6 | 4 |
| MINIMUM DWELL (SEC) | 10 | 10 |
| YELLOW CLEARANCE (SEC) | 4.8 | 4.8 |
| RED CLEARANCE (SEC) | 2.4 | 2.2 |
| EXIT PHASES | 2&4&6 | 2 & 6 |

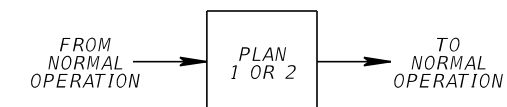
* ENTRY INTO PREEMPTION SHALL NOT VIOLATE MINIMUM GREEN OR PEDESTRIAN CLEARANCE INTERVALS.

| MICROWAVE VEHICLE DETECTION ASSIGNMENTS | | |
|---|----------------|--------------------|
| HD MVDS DETECTION | DETECTION ZONE | DELAY TIME (SECS.) |
| HD MVDS 1 | DZ-1, DZ-6 | |
| HD MVDS 1 | DZ-2, DZ-5 | |
| HD MATRIX (PRD) 3 | DZ-4 | 8 |

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE ENGINEER.



EMERGENCY VEHICLE PREEMPTION DWELL PHASES



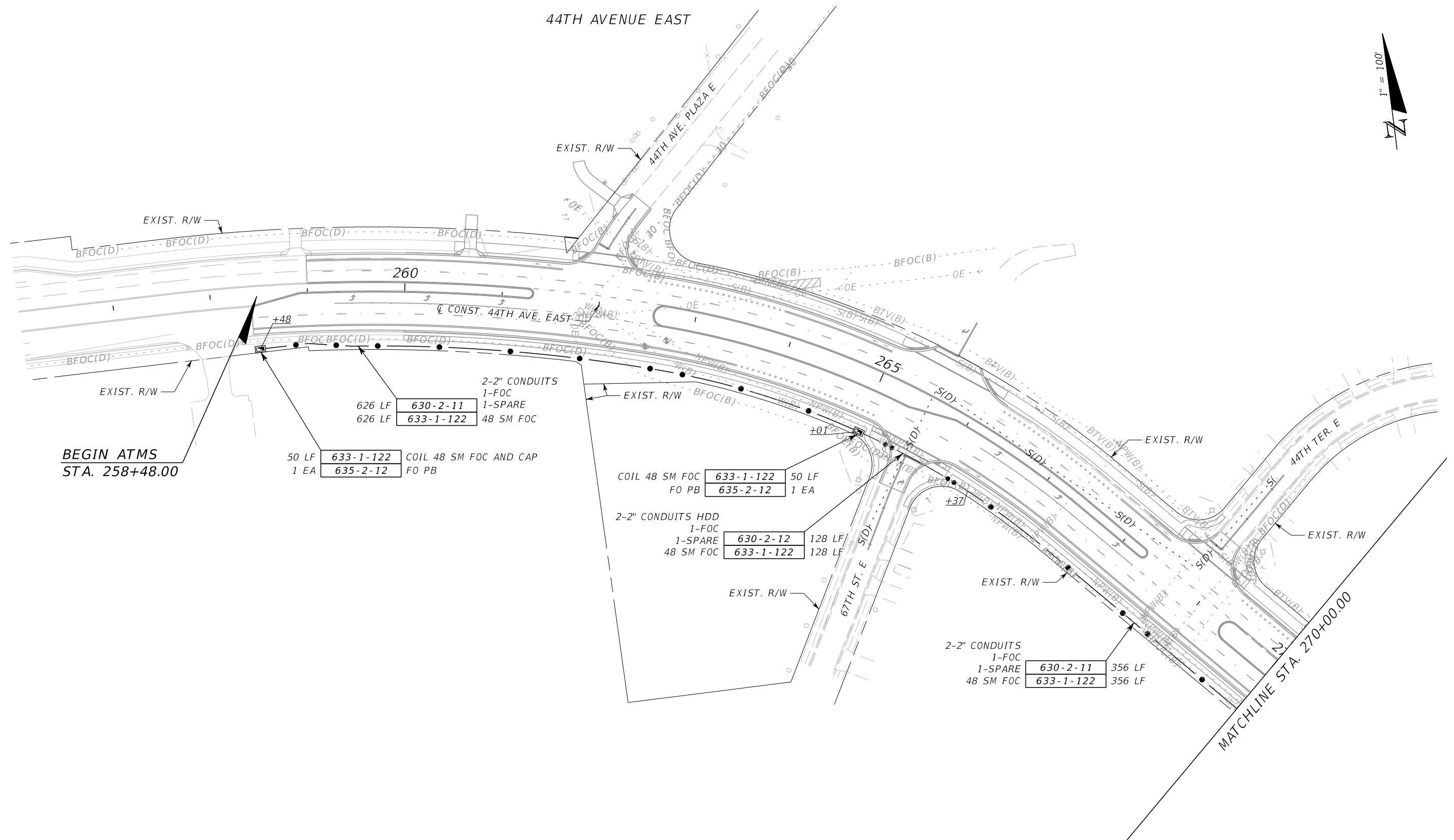
| | | | | | | | |
|-------------|----------|-----------------------------------|-------------|---------|-----------------|---------------|-----------|
| SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | |
| DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | T-7 |
| CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

3:21:12 PM

9/20/2019

PW:\

44TH AVENUE EAST



BEGIN ATMS
STA. 258+48.00

2-2" CONDUITS
1-FOC
1-SPARE
48 SM FOC

| | | |
|--------|-----------|-----------|
| 626 LF | 630-2-11 | 1-FOC |
| 626 LF | 633-1-122 | 1-SPARE |
| | | 48 SM FOC |

50 LF 633-1-122 COIL 48 SM FOC AND CAP
1 EA 635-2-12 FO PB


2-2" CONDUITS HDD
1-FOC
1-SPARE
48 SM FOC

| | | |
|----------------|-----------|-------|
| COIL 48 SM FOC | 633-1-122 | 50 LF |
| FO PB | 635-2-12 | 1 EA |

| | | |
|--------|-----------|-----------|
| 128 LF | 630-2-12 | 1-FOC |
| 128 LF | 633-1-122 | 1-SPARE |
| | | 48 SM FOC |

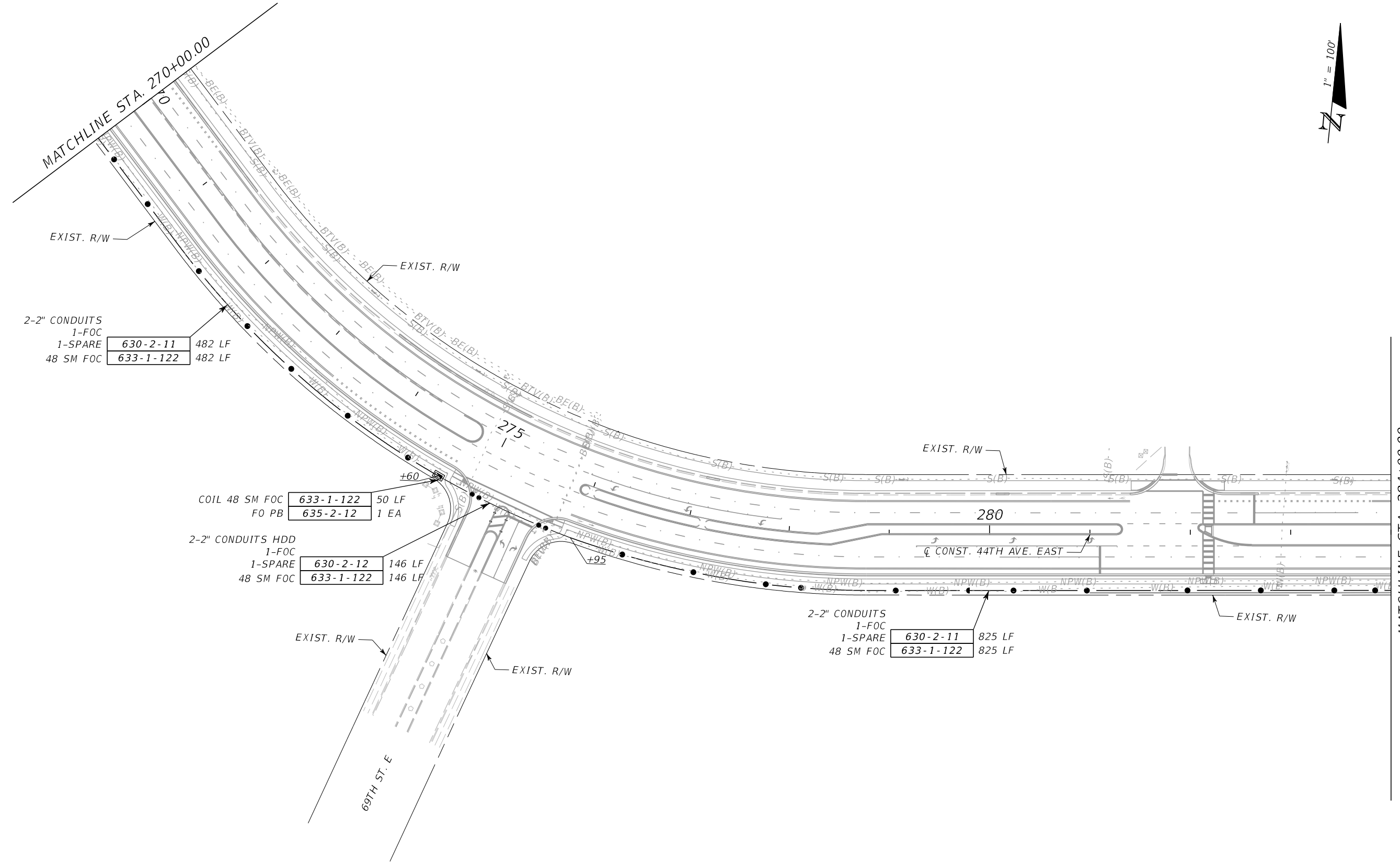
2-2" CONDUITS
1-FOC
1-SPARE
48 SM FOC

| | | |
|--------|-----------|-----------|
| 356 LF | 630-2-11 | 1-FOC |
| 356 LF | 633-1-122 | 1-SPARE |
| | | 48 SM FOC |

| | | | | | | | | | | | | | |
|-----|-----------|------|----|----|-------------------|---|-----------------|------------------------|------------|--|--|-----------------------------|------------------|
| No. | REVISIONS | DATE | BY | MO | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | PROJECT NO. 6045662 | 3:21:30 PM |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI FL. LICENSE NO. 43868 | <p>ATMS PLAN (1)</p> | SHEET NO. T-8 |
|-----|-----------|------|----|----|-------------------|---|-----------------|------------------------|------------|--|--|-----------------------------|------------------|

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

44TH AVENUE EAST



2-2" CONDUITS

| | | |
|-----------|-----------|--------|
| 1-FOC | 630-2-11 | 482 LF |
| 1-SPARE | 633-1-122 | 482 LF |
| 48 SM FOC | 633-1-122 | 482 LF |

COIL 48 SM FOC

| | |
|----------------|-------|
| 633-1-122 | 50 LF |
| FO PB 635-2-12 | 1 EA |

2-2" CONDUITS HDD

| | | |
|-----------|-----------|--------|
| 1-FOC | 630-2-12 | 146 LF |
| 1-SPARE | 633-1-122 | 146 LF |
| 48 SM FOC | 633-1-122 | 146 LF |

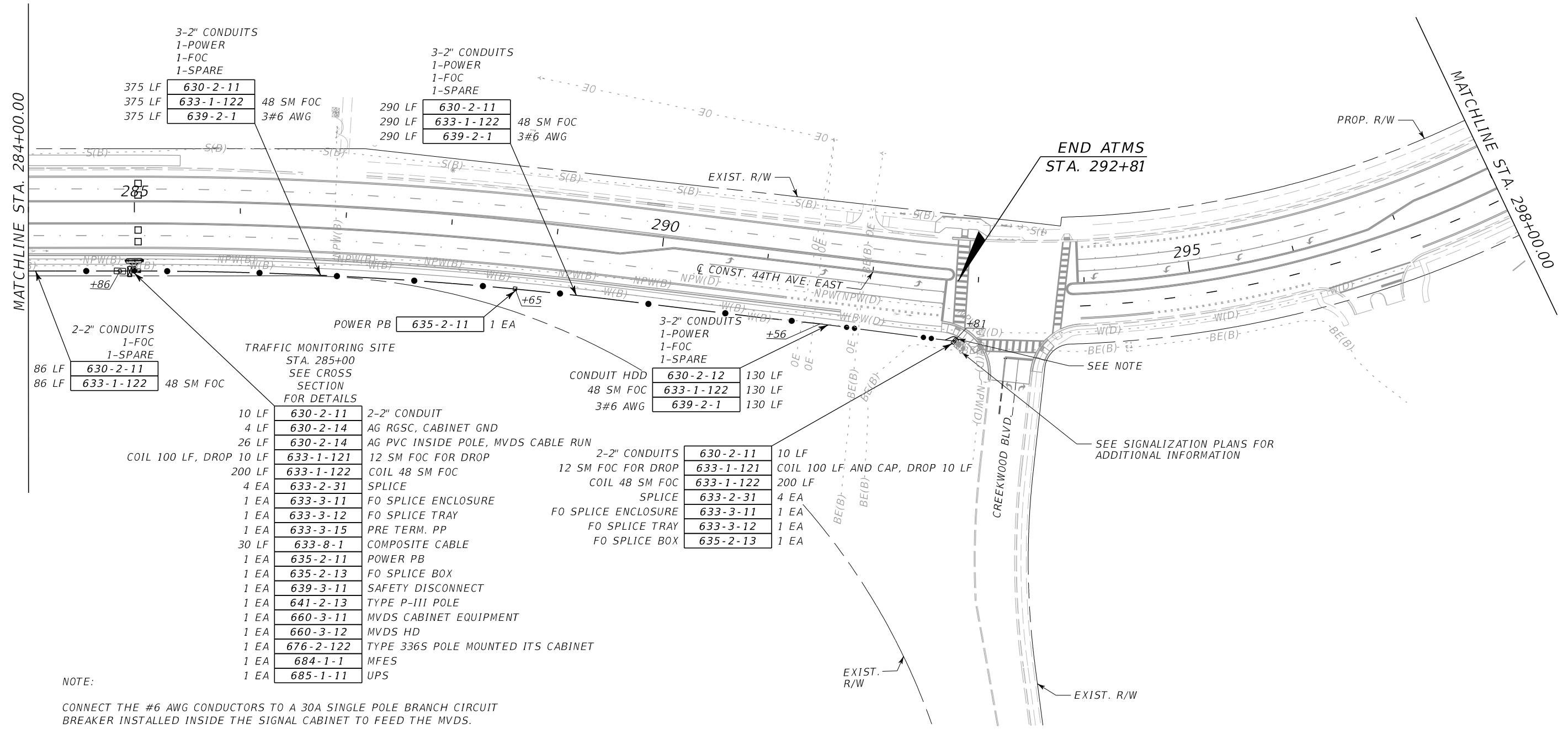
2-2" CONDUITS

| | | |
|-----------|-----------|--------|
| 1-FOC | 630-2-11 | 825 LF |
| 1-SPARE | 633-1-122 | 825 LF |
| 48 SM FOC | 633-1-122 | 825 LF |

| | | | | | | | | | | |
|----------------|-----------|------|----|-----------------------------------|--|-----------------------------|--|-------------------------------|--|---------------|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. T-9 |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | ATMS PLAN (2) | | |
| CHECKED BY MO | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 3:21:33 PM 9/20/2019 | | | | PW:\ |
| No. | REVISIONS | DATE | BY | | | | | | | |

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

44TH AVENUE EAST



NOTE:

CONNECT THE #6 AWG CONDUCTORS TO A 30A SINGLE POLE BRANCH CIRCUIT BREAKER INSTALLED INSIDE THE SIGNAL CABINET TO FEED THE MVDS.

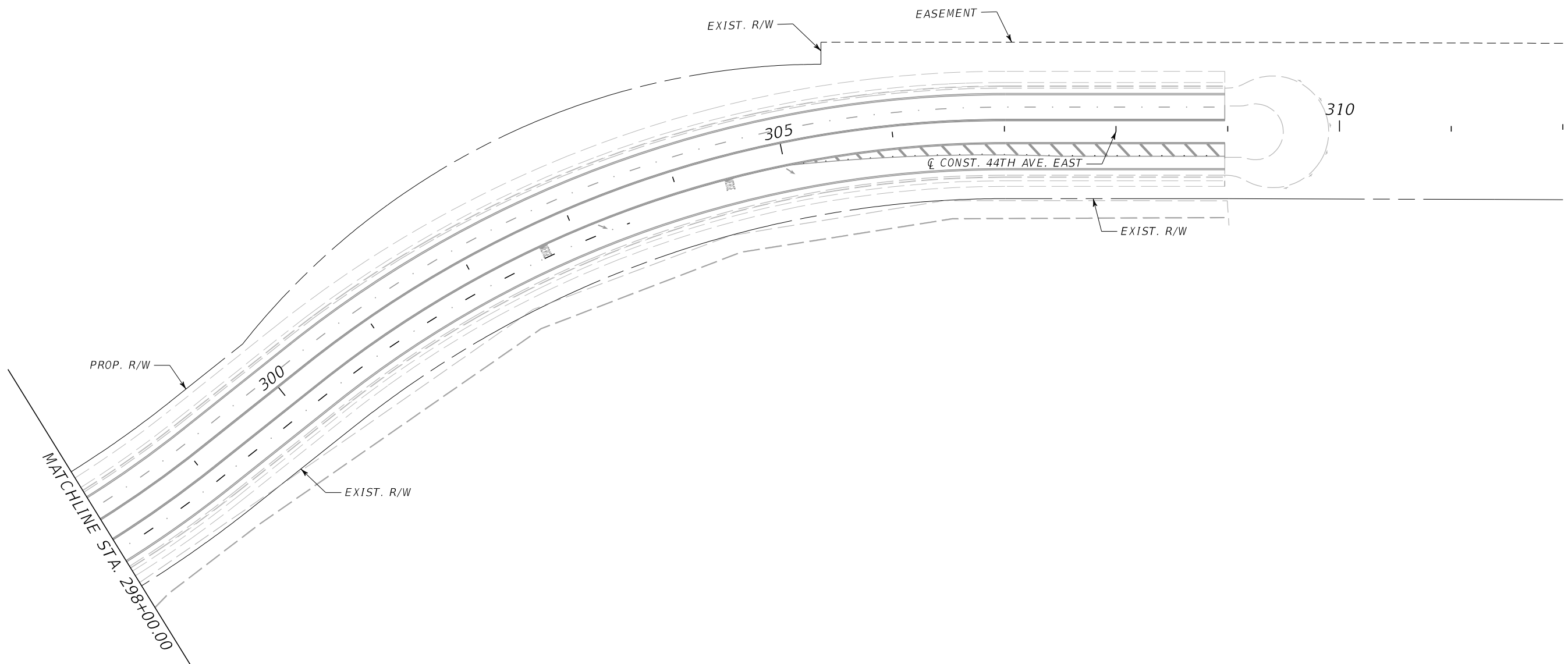
- TRAFFIC MONITORING SITE
STA. 285+00
SEE CROSS SECTION FOR DETAILS
- 10 LF 630-2-11 2-2" CONDUIT
 - 4 LF 630-2-14 AG RGSC, CABINET GND
 - 26 LF 630-2-14 AG PVC INSIDE POLE, MVDS CABLE RUN
 - COIL 100 LF, DROP 10 LF 633-1-121 12 SM FOC FOR DROP
 - 200 LF 633-1-122 COIL 48 SM FOC
 - 4 EA 633-2-31 SPLICE
 - 1 EA 633-3-11 FO SPLICE ENCLOSURE
 - 1 EA 633-3-12 FO SPLICE TRAY
 - 1 EA 633-3-15 PRE TERM. PP
 - 30 LF 633-8-1 COMPOSITE CABLE
 - 1 EA 635-2-11 POWER PB
 - 1 EA 635-2-13 FO SPLICE BOX
 - 1 EA 639-3-11 SAFETY DISCONNECT
 - 1 EA 641-2-13 TYPE P-III POLE
 - 1 EA 660-3-11 MVDS CABINET EQUIPMENT
 - 1 EA 660-3-12 MVDS HD
 - 1 EA 676-2-122 TYPE 336S POLE MOUNTED ITS CABINET
 - 1 EA 684-1-1 MFES
 - 1 EA 685-1-11 UPS

- CONDUIT HDD
48 SM FOC
3#6 AWG
- 630-2-11 130 LF
 - 633-1-122 130 LF
 - 639-2-1 130 LF
- 2-2" CONDUITS
12 SM FOC FOR DROP
COIL 48 SM FOC
SPLICE
FO SPLICE ENCLOSURE
FO SPLICE TRAY
FO SPLICE BOX
- 630-2-11 10 LF
 - 633-1-121 10 LF
 - 633-1-122 200 LF
 - 633-2-31 4 EA
 - 633-3-11 1 EA
 - 633-3-12 1 EA
 - 635-2-13 1 EA

| | | | | | | | | | | | |
|----------------|-----------|--|--|--------------------------------|----|-----------------------------------|--|-------------------------------|--|----------------|--|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. T-10 | |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | ATMS PLAN (3) | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\ | | | |
| CHECKED BY MO | | | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | |

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

44TH AVENUE EAST

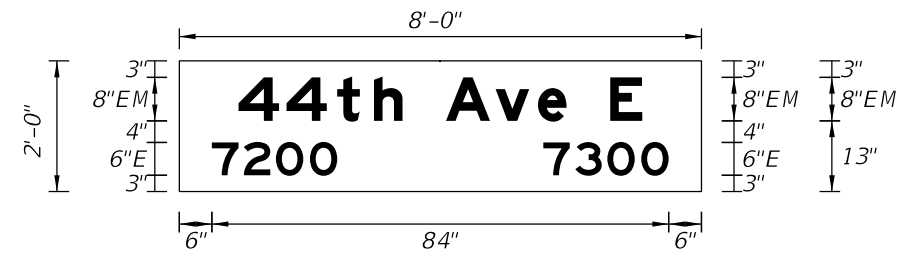


NOTE:
THIS SHEET IS FOR INFORMATION ONLY.

| | | | | | | | | | | | | | | | |
|-------------|-----------|----------|----|-----------------------------------|--|----------------|--|--------------|--|-----------------|--|---------------|--|-----------|--|
| SCALE | | AS NOTED | | HDR ENGINEERING, INC. | | DATE | | 09/2019 | | DESIGN ENGINEER | | BIJAN BEHZADI | | SHEET NO. | |
| DESIGNED BY | | BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | T-II | |
| DRAWN BY | | GS | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY | | PUBLIC WORKS | | ATMS PLAN (4) | | | | | |
| CHECKED BY | | MO | | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY | | FLORIDA | | | | | | | |
| No. | REVISIONS | DATE | BY | | | 3:21:40 PM | | 9/20/2019 | | PW:\ | | | | | |

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

| | | | | | |
|-----------|--------------|------------------------|-------------|----------------|------------|
| SIGN NAME | A | | QTY | SIGN NO. | STATION(S) |
| PANEL | BORDER | | | | |
| WIDTH | 8'-0" | WIDTH | 0" | | |
| HEIGHT | 2'-0" | RADII | 0" | | |
| LEGEND | White | COLOR | Green | | |
| COLOR | Green | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT |
| | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | |
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|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | |
|-----------|--------------|------------------------|-------------|----------------|------------|
| SIGN NAME | | | QTY | SIGN NO. | STATION(S) |
| PANEL | BORDER | | | | |
| WIDTH | WIDTH | | | | |
| HEIGHT | RADII | | | | |
| LEGEND | COLOR | | | | |
| COLOR | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT |
| | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | |
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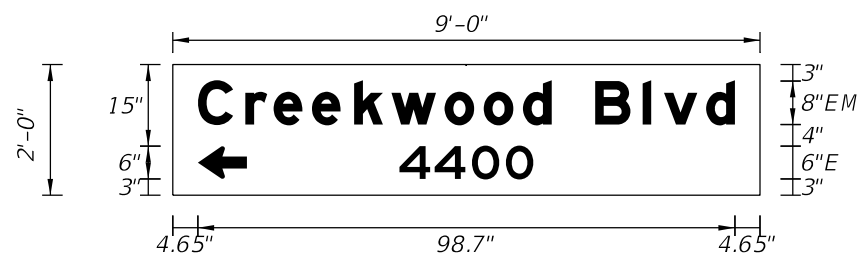
THIS SPACE INTENTIONALLY LEFT BLANK

| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | | | | | | | |
|-------|------|-----|-----|-----|-----|----|-----|-----|-----|---|-----|------|------|
| COPY | 4 | 4 | t | h | A | v | e | E | L | | | | |
| SPACE | 10.9 | 8.8 | 9.4 | 6.7 | 5.3 | 8 | 9.1 | 7.8 | 5.3 | 8 | 5.9 | 10.9 | 74.2 |
| COPY | 7 | 2 | 0 | 0 | L | | | | | | | | |
| SPACE | 6 | 5.9 | 5.9 | 6.2 | 5 | 67 | 23 | | | | | | |
| COPY | 7 | 3 | 0 | 0 | L | | | | | | | | |
| SPACE | 66.9 | 5.9 | 5.9 | 6.2 | 5 | 6 | 23 | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |

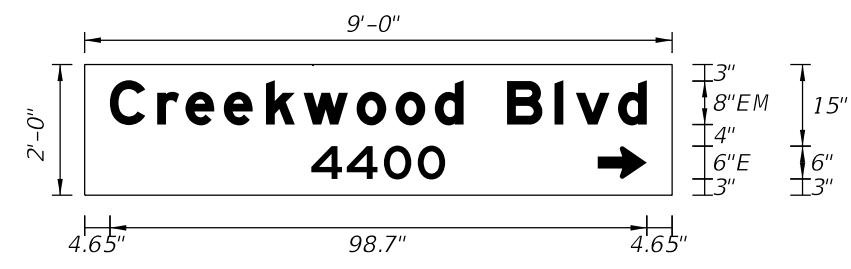
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|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |
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| SPACE | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | |

| | | | | | |
|-----------|--------------|------------------------|-------------|----------------|------------|
| SIGN NAME | B | | QTY | SIGN NO. | STATION(S) |
| PANEL | BORDER | | | | |
| WIDTH | 9'-0" | WIDTH | 0" | | |
| HEIGHT | 2'-0" | RADII | 0" | | |
| LEGEND | White | COLOR | Green | | |
| COLOR | Green | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT |
| AR_Type D | 90 | 4.6 | 3 | 6 | 9 |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | |
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|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | |
|-----------|--------------|------------------------|-------------|----------------|------------|
| SIGN NAME | C | | QTY | SIGN NO. | STATION(S) |
| PANEL | BORDER | | | | |
| WIDTH | 9'-0" | WIDTH | 0" | | |
| HEIGHT | 2'-0" | RADII | 0" | | |
| LEGEND | White | COLOR | Green | | |
| COLOR | Green | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT |
| AR_Type D | 270 | 94.4 | 3 | 6 | 9 |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | |
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|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | | | | | | | | | | | |
|-------|------|-----|-----|-----|-----|------|------|-----|-----|-----|---|-----|-----|-----|-----|-----|------|
| COPY | C | r | e | e | k | w | o | o | d | B | l | v | d | L | | | |
| SPACE | 4.6 | 8.7 | 5.2 | 7 | 7.8 | 6.9 | 9.8 | 7.2 | 7.2 | 5.3 | 8 | 8.7 | 3.9 | 7.8 | 5.3 | 4.6 | 98.7 |
| COPY | 4 | 4 | 0 | 0 | L | | | | | | | | | | | | |
| SPACE | 41.7 | 6.5 | 6.8 | 6.2 | 5 | 41.7 | 24.6 | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |

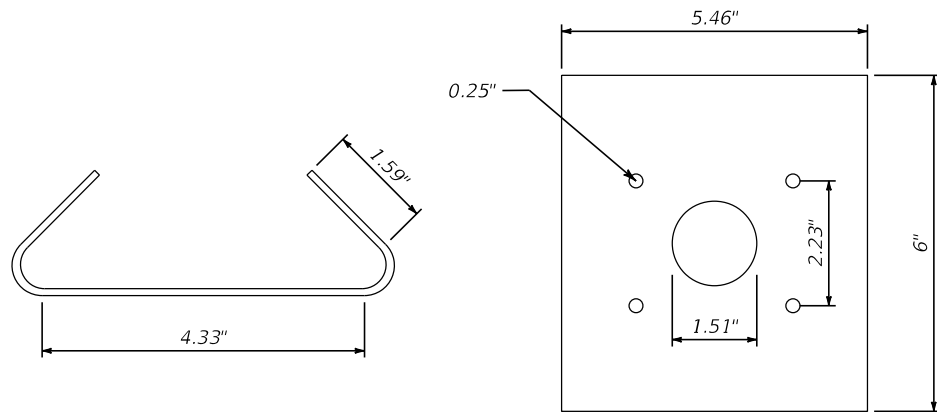
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|-------|------|-----|-----|-----|-----|------|------|-----|-----|-----|---|-----|-----|-----|-----|-----|------|
| COPY | C | r | e | e | k | w | o | o | d | B | l | v | d | L | | | |
| SPACE | 4.6 | 8.7 | 5.2 | 7 | 7.8 | 6.9 | 9.8 | 7.2 | 7.2 | 5.3 | 8 | 8.7 | 3.9 | 7.8 | 5.3 | 4.6 | 98.7 |
| COPY | 4 | 4 | 0 | 0 | L | | | | | | | | | | | | |
| SPACE | 41.7 | 6.5 | 6.8 | 6.2 | 5 | 41.7 | 24.6 | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | |

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|-----|-------------|----------|---|-------------|---------|------------------------------------|-----------------|---------------|-------------------------------------|
| No. | SCALE | AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | GUIDE SIGN WORKSHEET T-12 |
| | DESIGNED BY | BB | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | |
| | DRAWN BY | GS | | | | | | | |
| | CHECKED BY | MO | | | | | | | |

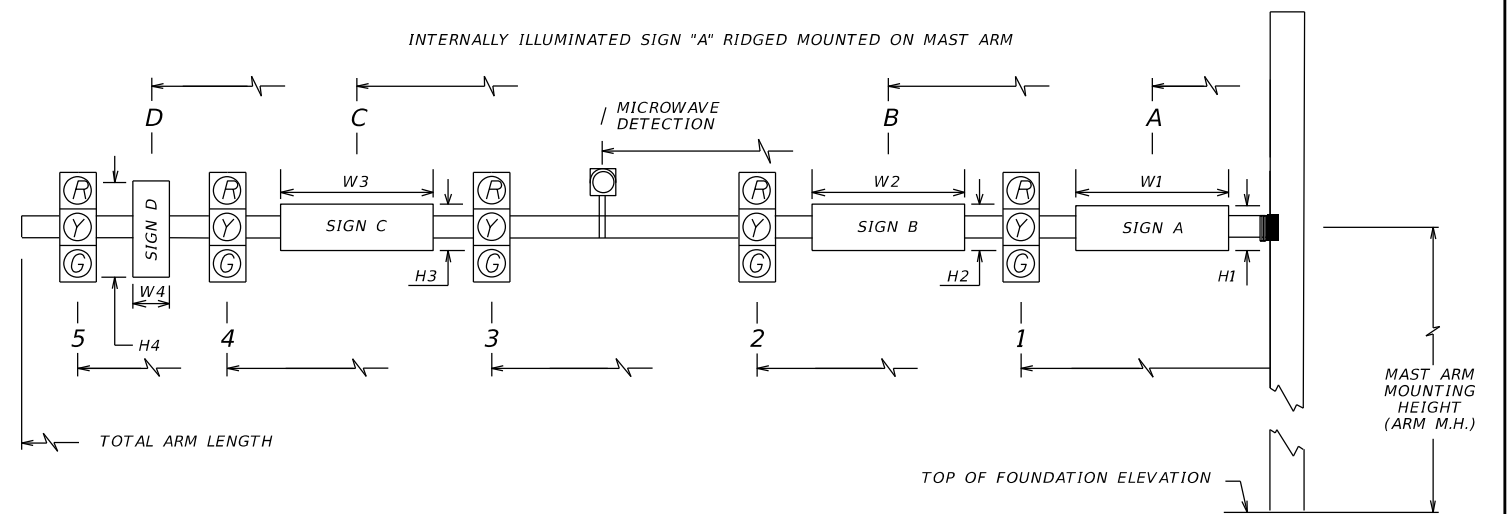
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SPECIAL NOTES:

- A. ANCHOR BOLT COVERS (ORNAMENTAL, NON-ORNAMENTAL, AND/OR PAINTED) SHALL BE GALVANIZED STEEL OR CAST ALUMINUM AND SHALL BE SECURED BY A MINIMUM OF TWO (2) THREADED FASTENERS. THE BOLT COVERS SHALL BE OF SUFFICIENT SIZE SO THAT THERE IS NO GAP BETWEEN ITSELF AND THE POLE SHAFT.
- B. FIELD VERIFY ALL ELEVATIONS LISTED HEREIN PRIOR TO INSTALLING THE DRILL SHAFTS AND ORDERING THE MAST ARM POLES.
- C. MAST ARMS SHALL BE GALVANIZED, NON-PAINTED.
- D. PRIOR TO DRILLED SHAFT INSTALLATIONS, BOTH THE CONTRACTOR AND THE ENGINEER SHALL CONFIRM THAT ALL LOCATIONS AND ELEVATIONS WILL CORRECTLY ACCOMMODATE THE CLEARANCES AND TOTAL LENGTH OF THE UPRIGHT AS SHOWN IN THE PLANS.



COMPACT MAST ARM MOUNTED CCTV CAMERA ADAPTER
(DIMENSIONS VARY BASED ON CAMERA MANUFACTURER)



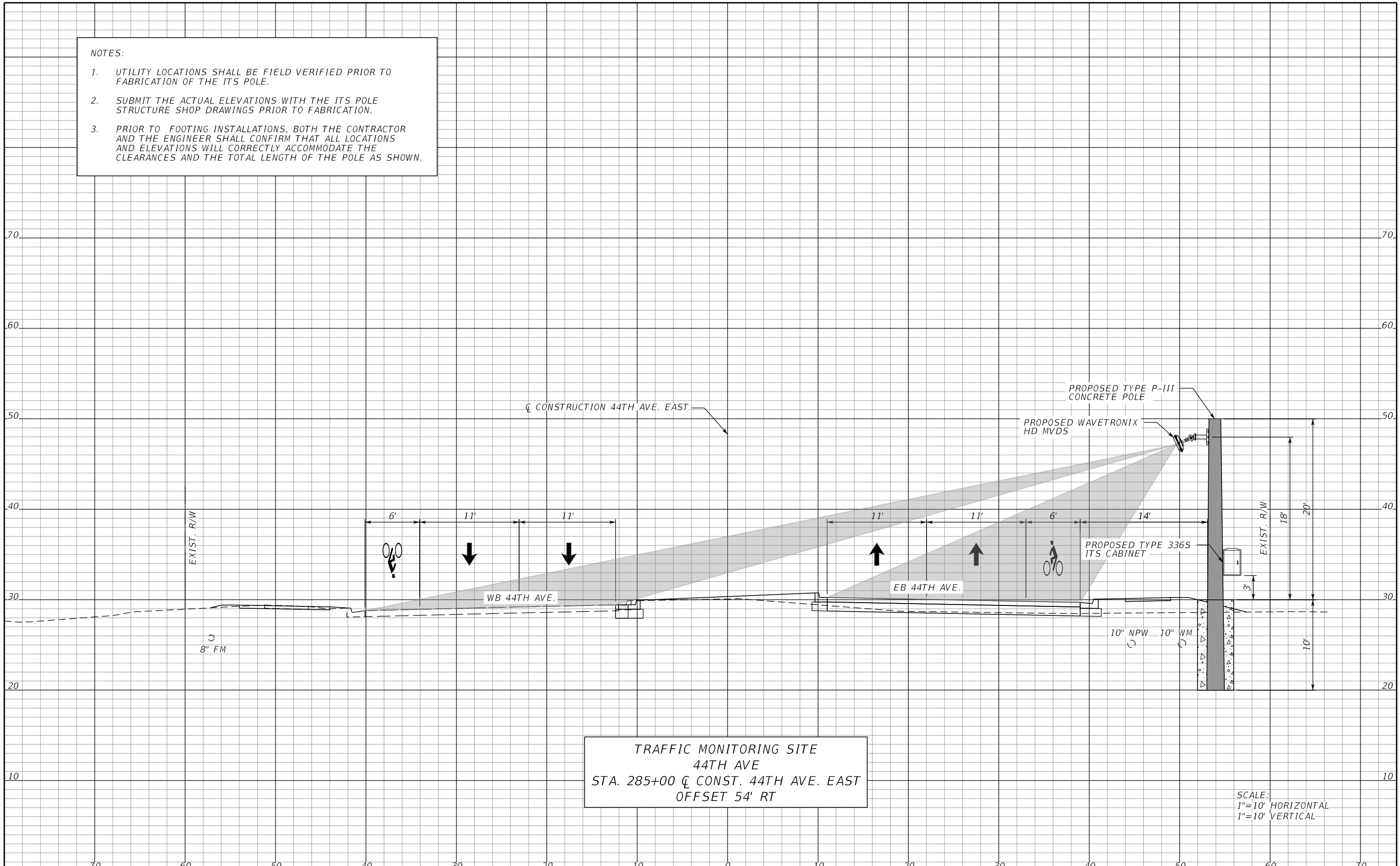
NOTE
-IN SIGN DATA TABLE, SIGN DESIGNATION (A, B, C, D, E) IS FOR POSITION REFERENCE ONLY. PLAN SHEETS AND SIGN DETAILS SHOULD BE REFERENCED FOR THE EXACT SIGNS TO BE INSTALLED ON MAST ARMS.

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

| STRUCT. ID NO. | POLE ID NO. | SHEET NO. | LOCATION BY STA. | CRITICAL ROAD ELEV. | FOUNDATION OUT OF GROUND | FOUNDATION ELEVATION | ROWY ARM NO. | SIGNAL V/H | BACK PLATES Y/N | PED. SIGNAL Y/N | SIGNAL DATA | | | | | | | | | | | | | | | | TOTAL ARM LENGTH | ARM M.H. | ANGLE BETWEEN DUAL ARMS 90/270 | SIGN DATA | | | | | | | | MVDS DISTANCE FROM POLE | CCTV DISTANCE FROM POLE | EVD DISTANCE FROM POLE | | | | | | | | | | | | | | | | | |
|----------------|-------------|-----------|------------------|---------------------|--------------------------|----------------------|--------------|------------|-----------------|-----------------|--------------------|---|------|---|------|---|---|---|---|---|---|---|---|---|---|---|------------------|----------|--------------------------------|---|----|----|---|----|----|----|----|-------------------------|-------------------------|------------------------|-----|---|----|----|---|---|---|----|------|---|----|--|--|--|----|------|--|
| | | | | | | | | | | | DISTANCE FROM POLE | | | | | | | | | | | | | | | | | | | DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | * | 2 | * | 3 | * | 4 | * | 5 | * | 6 | * | 7 | * | 8 | * | | | | A | H1 | W1 | B | H2 | W2 | C | H3 | | | | W3 | D | H4 | W4 | 1 | 2 | 1 | 2 | 1 | 2 | | | | | | | |
| | 1 | T-6 | 292+69.0 | 31.45 | 0.0 | 31.63 | 1 | V | Y | N | 18 | 3 | 29 | 3 | 40 | 4 | | | | | | | | | | | | | | | | | | 50 | NA | 8 | 2 | 9 | 44 | 3 | 2.5 | | | | | | | | 34.5 | | 13 | | | | | 23.5 | |
| | 2 | T-6 | 293+97.0 | 31.73 | 0.0 | 31.40 | 1 | V | Y | N | 36 | 3 | 48 | 3 | | | | | | | | | | | | | | | | | | | | 50 | NA | 11 | 2 | 8 | | | | | | | | | | 42 | | | | | | | 30 | | |
| | 3 | T-6 | 293+95.0 | 31.85 | 0.5 | 32.34 | 1 | V | Y | N | 25.5 | 3 | 36.5 | 3 | 47.5 | 4 | | | | | | | | | | | | | | | | | | 50 | NA | 8 | 2 | 9 | 44 | 3 | 2.5 | | | | | | | | 40.5 | | | | | | | 31 | |

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|-----------------|--|--------------------------------|--|-----------------------------------|--|------------------------------------|--|--------------------------------|--|----------------------------|--|-----------|--|
| SCALE: AS NOTED | | HDR ENGINEERING, INC. | | DATE: 09/2019 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER: BIJAN BEHZADI | | MAST ARM TABULATION | | SHEET NO. | |
| DESIGNED BY: BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO.: 6045662 | | | | FL. LICENSE NO.: 43868 | | | | T-13 | |
| DRAWN BY: GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\ | | | | | | | |
| CHECKED BY: MO | | | | | | 3:22:08 PM | | 9/20/2019 | | | | | |

- NOTES:
1. UTILITY LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF THE ITS POLE.
 2. SUBMIT THE ACTUAL ELEVATIONS WITH THE ITS POLE STRUCTURE SHOP DRAWINGS PRIOR TO FABRICATION.
 3. PRIOR TO FOOTING INSTALLATIONS, BOTH THE CONTRACTOR AND THE ENGINEER SHALL CONFIRM THAT ALL LOCATIONS AND ELEVATIONS WILL CORRECTLY ACCOMMODATE THE CLEARANCES AND THE TOTAL LENGTH OF THE POLE AS SHOWN.



TRAFFIC MONITORING SITE
 44TH AVE
 STA. 285+00 Q̄ CONST. 44TH AVE. EAST
 OFFSET 54' RT

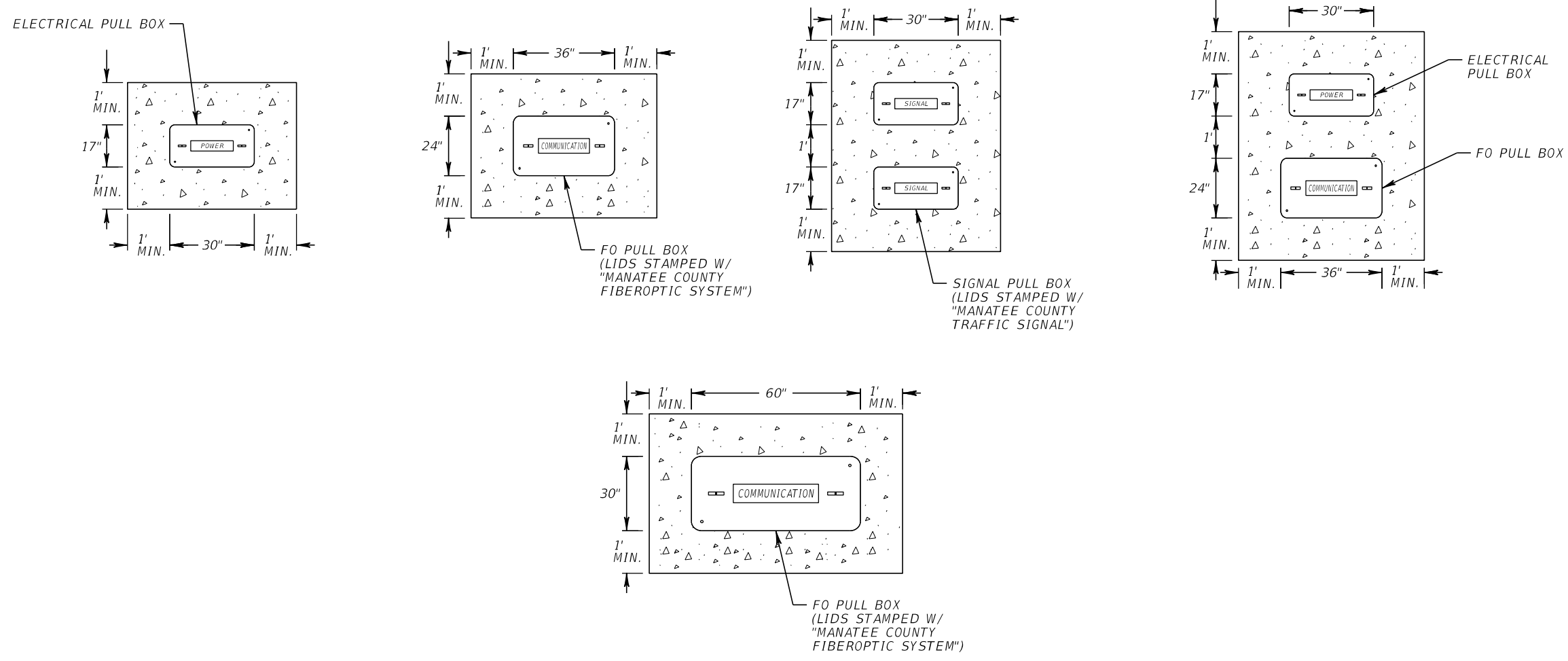
SCALE:
 1"=10' HORIZONTAL
 1"=10' VERTICAL

| | | | | | | | | | | |
|----------------|--|--------------------------------|--|-----------------------------------|--|-------------------------------|--|---------------------------------------|--|----------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 08/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | TRAFFIC MONITORING SITE CROSS SECTION | | SHEET NO. T-14 |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\ | | | | |
| CHECKED BY MO | | | | | | | | | | |
| REVISIONS | | DATE | | BY | | | | | | |

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9/20/2019



NOTES:

1. CONCRETE REINFORCEMENT AND INSTALLATION REQUIREMENTS TO BE PER STANDARD PLANS INDEX 715-001.
2. WHEN MULTIPLE CONFIGURATIONS OF PULL BOXES ARE ADJACENT TO ONE ANOTHER, THEY SHALL BE FORMED TOGETHER WITH AN EXPANSION JOINT BETWEEN THE APRONS UTILIZED TO AVOID CRACKING.
3. THE ORIENTATION OF CONCRETE APRONS WITH MULTIPLE PULL & JUNCTION BOXES SHALL BE DETERMINED IN THE FIELD.

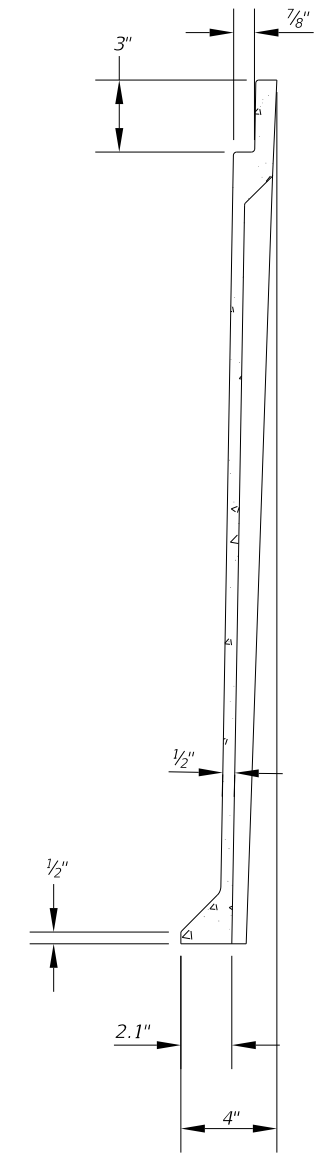
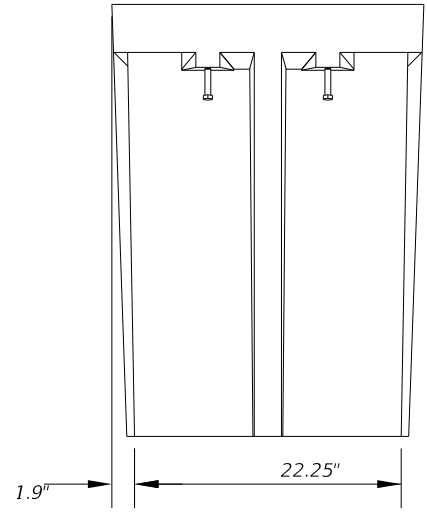
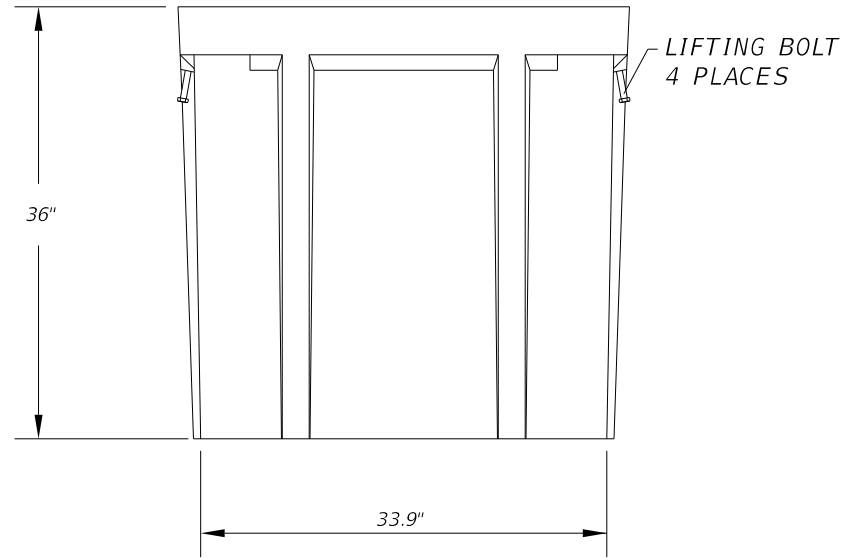
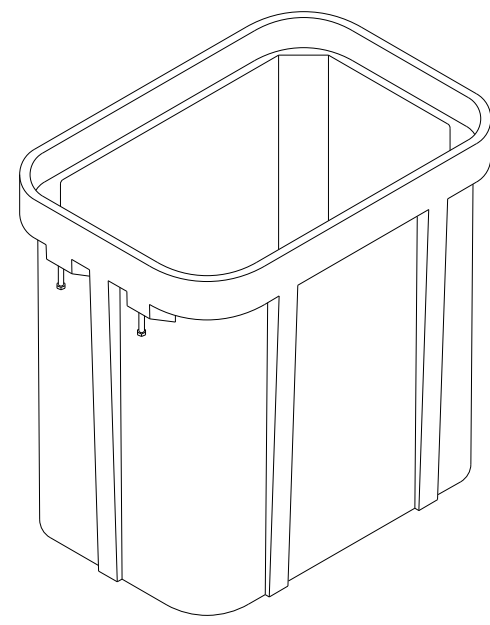
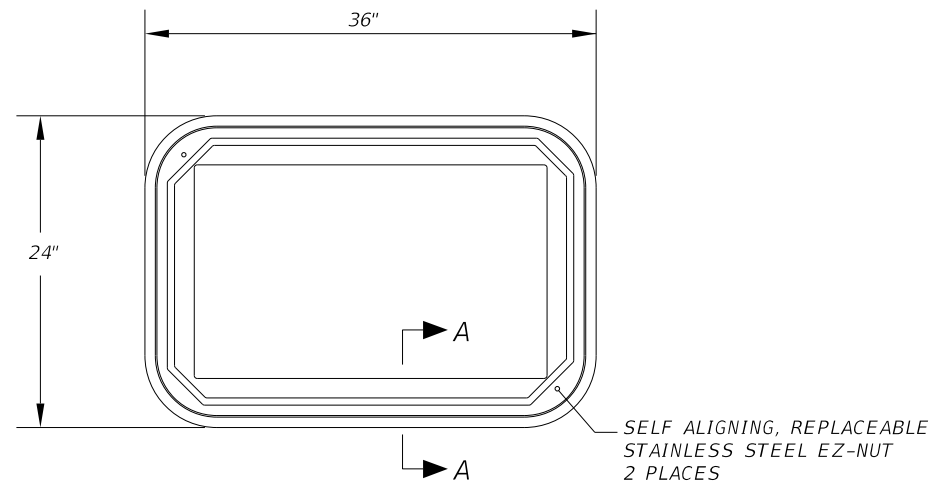
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| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | CONCRETE APRON DETAILS | SHEET NO. | T-15 |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | | | | | |

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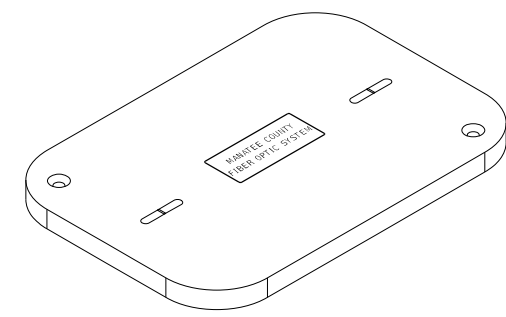
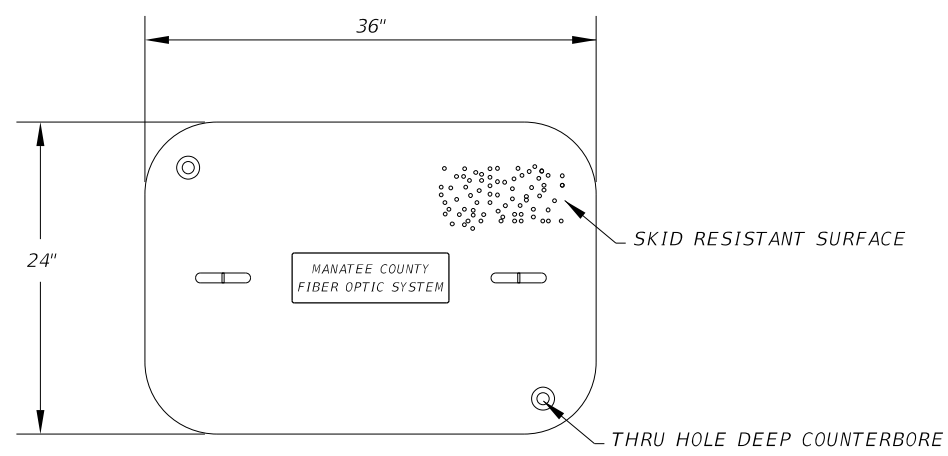
9/20/2019


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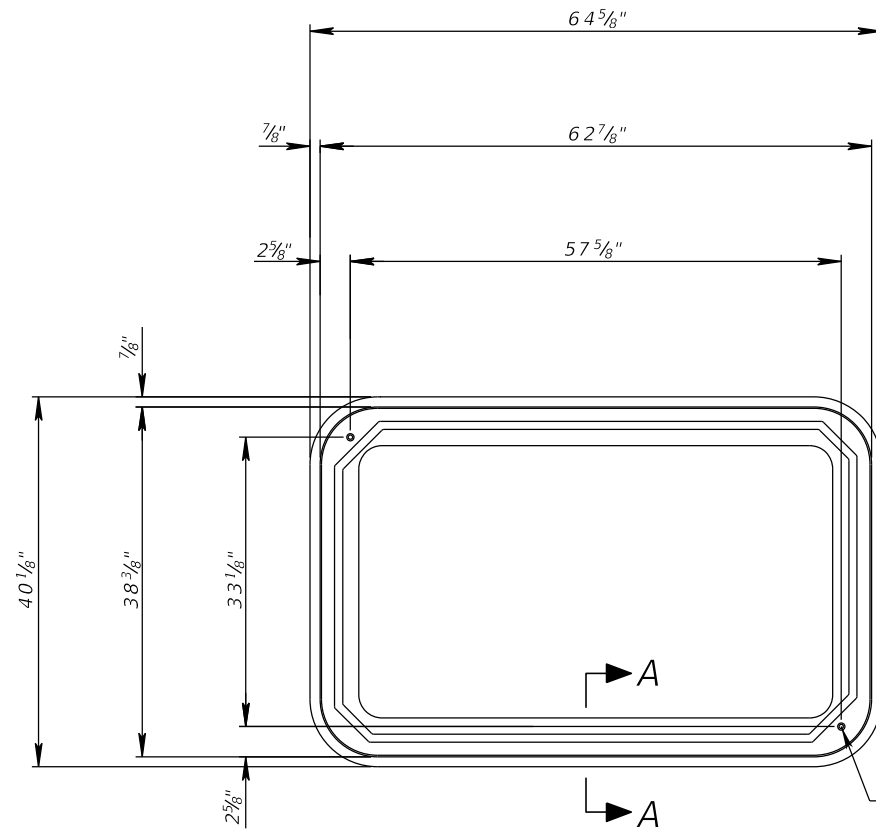


SECTION A-A

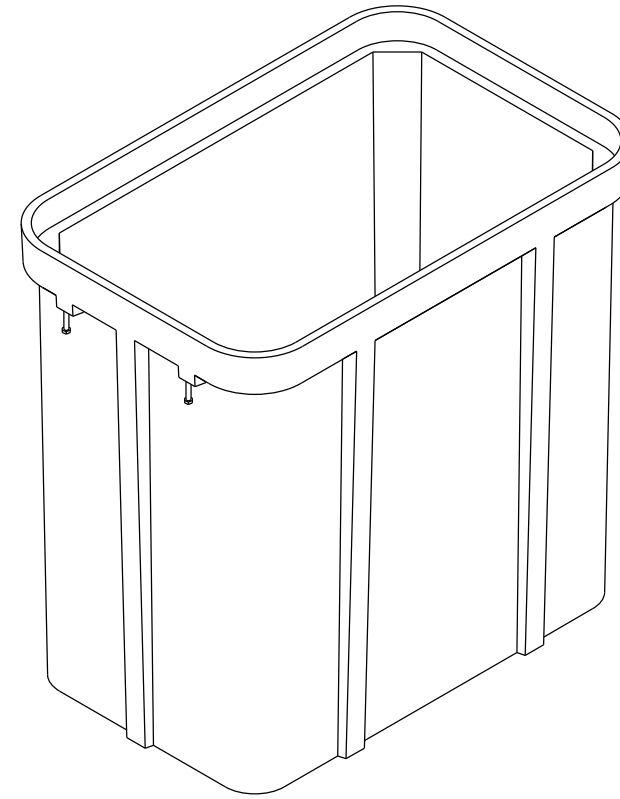


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| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | FIBER OPTIC PULL BOX DETAILS | SHEET NO. | T-16 |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | | | 3:23:20 PM | 9/20/2019 | PW:\ | | | | | |

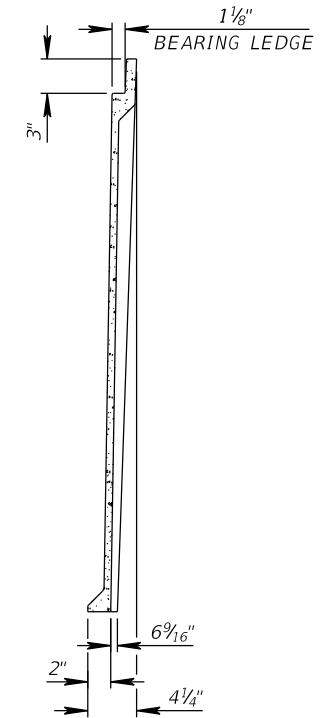
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



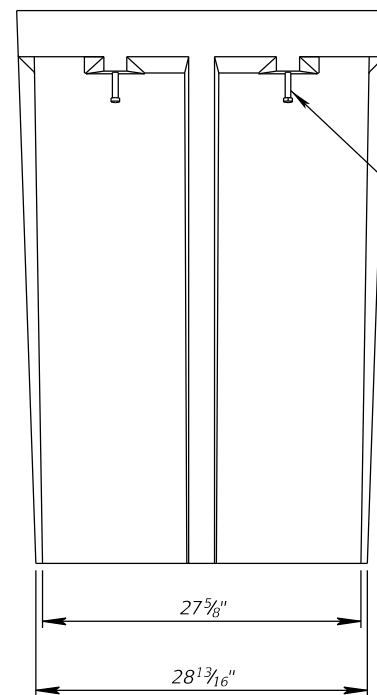
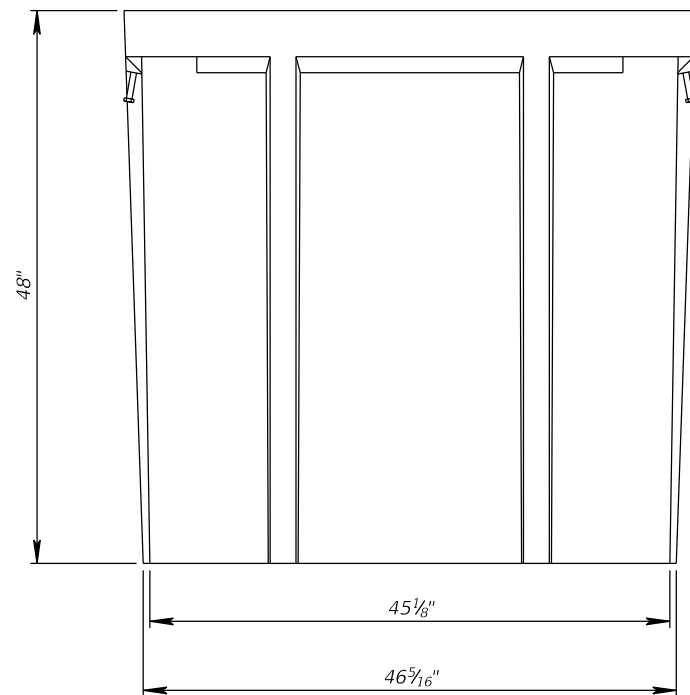
3/8"-7 SELF ALIGNING,
REPLACEABLE S.S. EZ-NUT
(2 PLACES)




30" W x 60" L x 48" D
DESIGN LOAD: 22,500 LBS



SECTION A-A



1/2"-13 UNC
LIFTING BOLT
4 PLACES

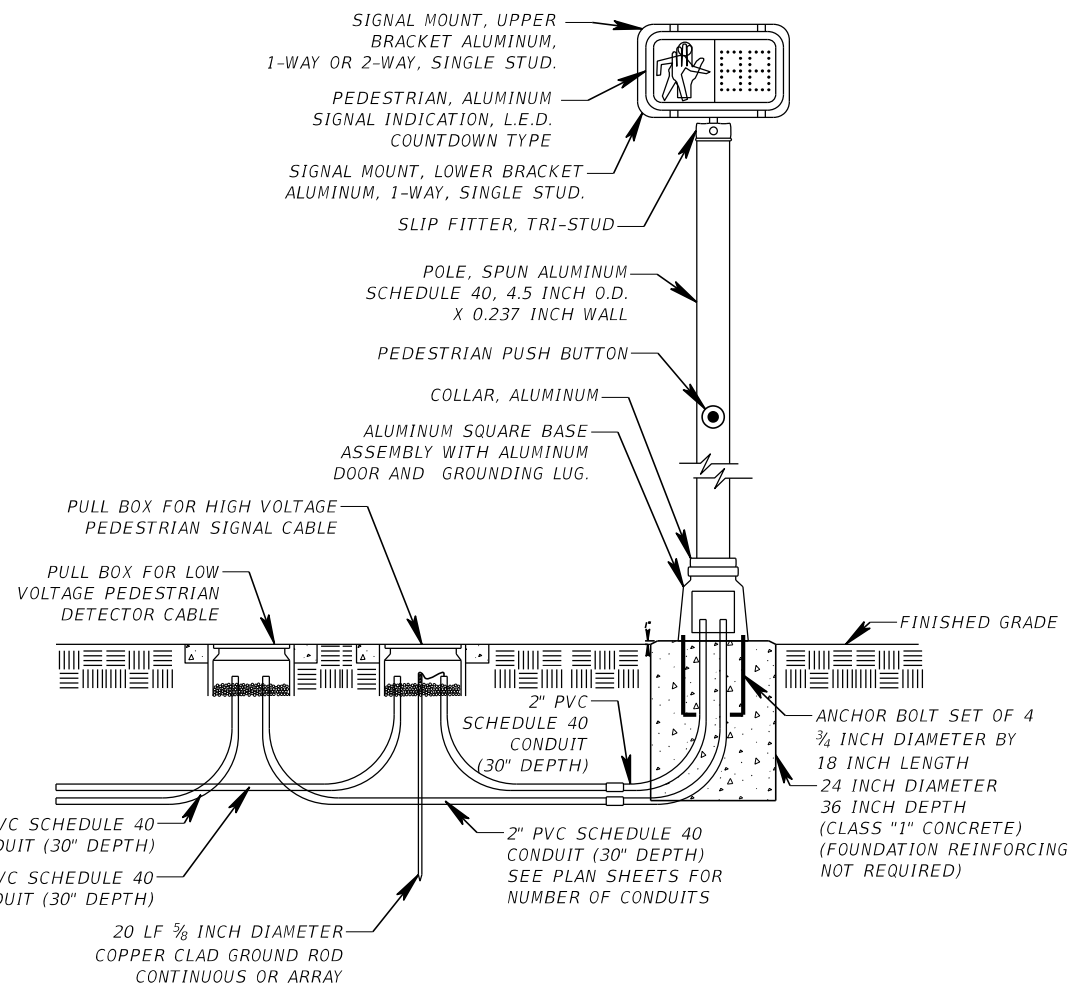
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| No. | | REVISIONS | | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI | FIBER OPTIC SPLICE BOX DETAILS | SHEET NO. T-17 |
| | | | | | | DESIGNED BY BB | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | |

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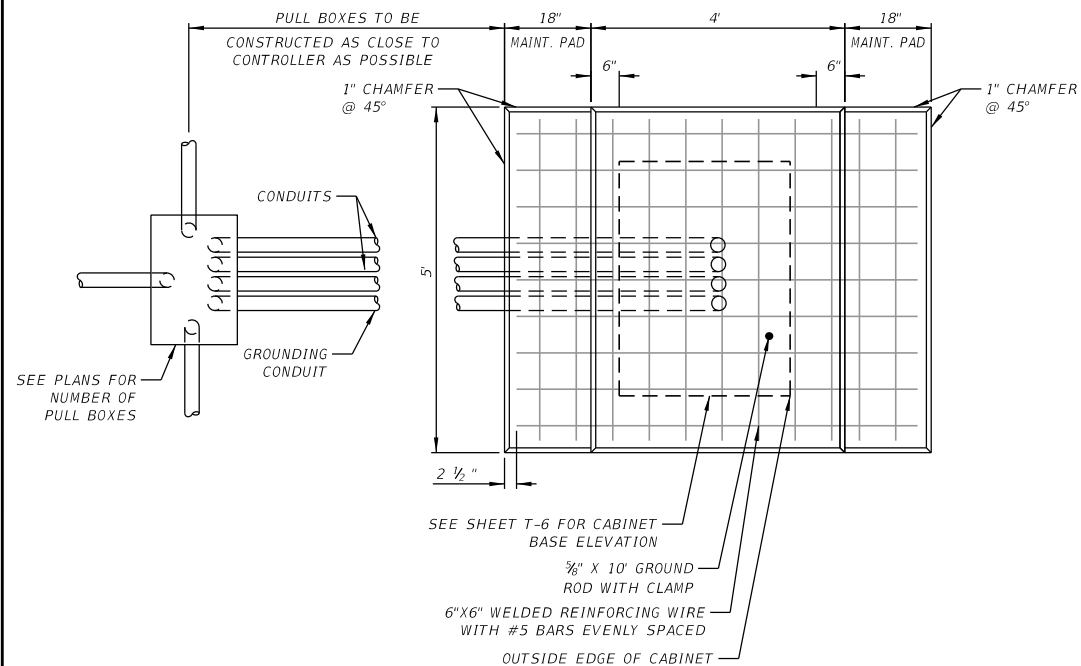
9/20/2019

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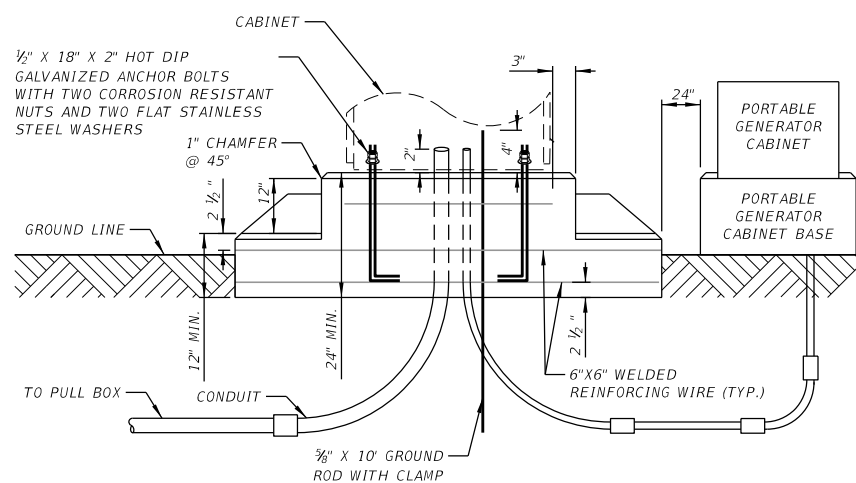
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TYPICAL PEDESTRIAN SIGNAL DETAIL
NTS



TOP VIEW



SIDE VIEW

CONCRETE PAD DETAIL FOR TWO DOOR CONTROLLER CABINET

NTS

NOTE:
THE CABINET FOUNDATION WILL HAVE 13-2" PVC CONDUITS (4-HIGH VOLTAGE, 4-LOW VOLTAGE, 3-SPARE, 2-COMM) ALONG WITH 2-1" PVC CONDUITS (1-GROUND, 1-POWER). THE CONTRACTOR SHALL CONTACT MANATEE COUNTY FOR THE PROPER LAYOUT OF THE CONDUITS IN THE CONTROLLER FOUNDATION PRIOR TO POURING THE FOUNDATION.

TYPICAL CONTROLLER CABINET INSTALLATION

NTS

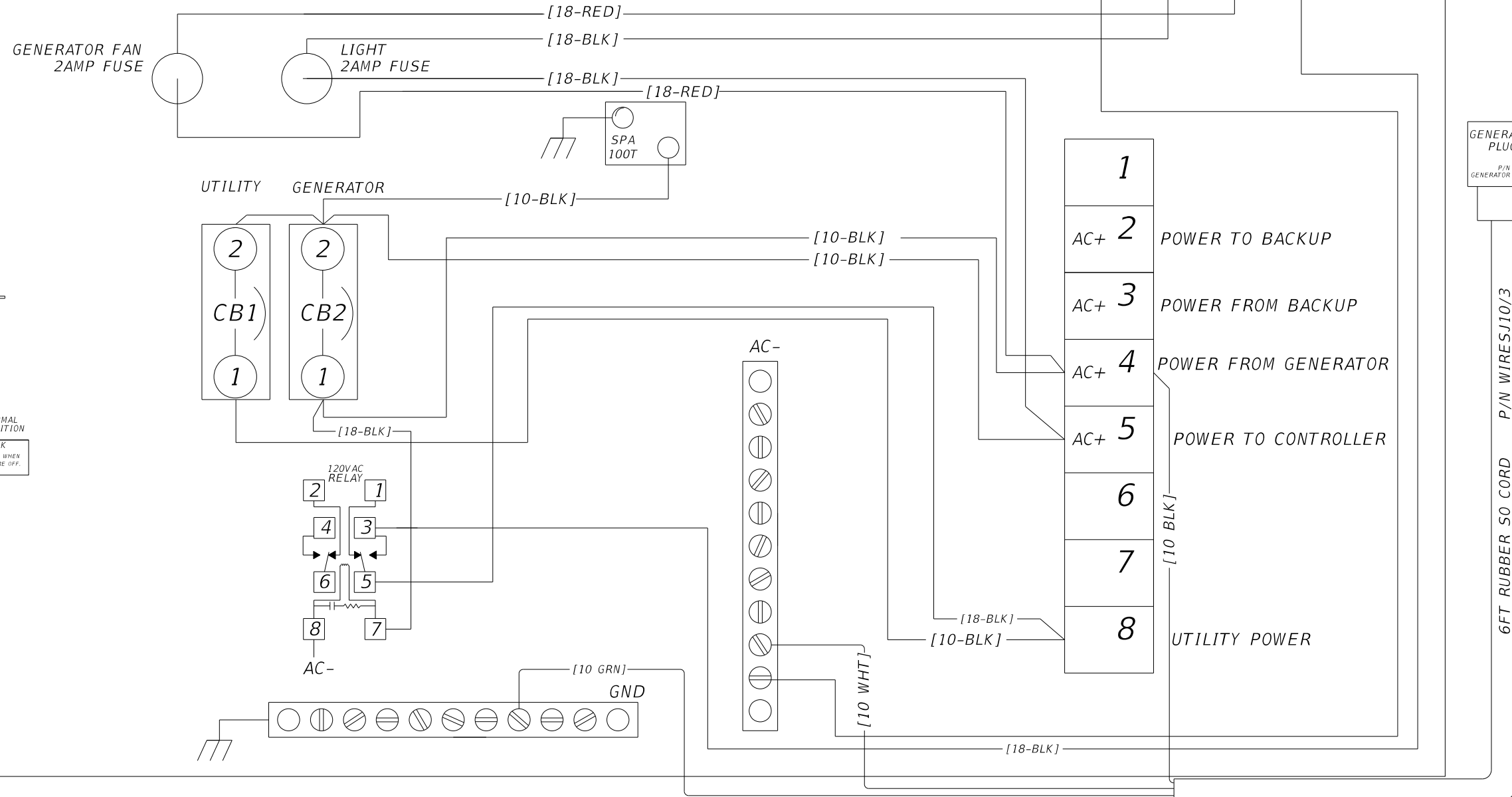
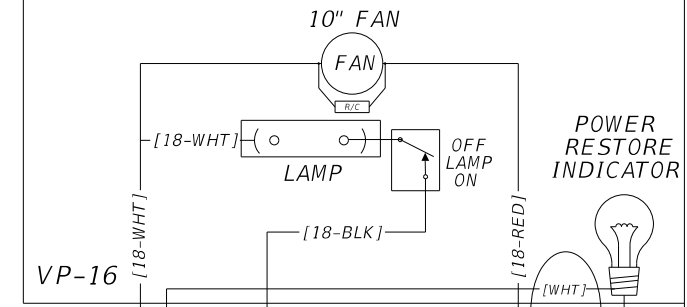
MATERIAL SPECIFICATIONS

- A. MATERIALS REQUIRED FOR THE CONTROLLER CABINET FOUNDATION, AND ALL PERTINENT EQUIPMENT AND ASSEMBLY IS INCLUDED IN THE PRICE BID FOR THE CONTROLLER.
- B. THE CONTROLLER CABINET FOUNDATION SHALL BE CLASS "1" CONCRETE & 6" X 6" WELDED REINFORCING WIRE WITH 3 #5 BARS EVENLY SPACED.
- C. A MINIMUM OF 4 EXPANSION BOLTS ARE REQUIRED. STAINLESS STEEL KWIK BOLT WITH A MIN. EMBEDMENT OF 18", SHALL BE USED TO MOUNT THE CONTROLLER CABINET TO THE CONCRETE PAD.

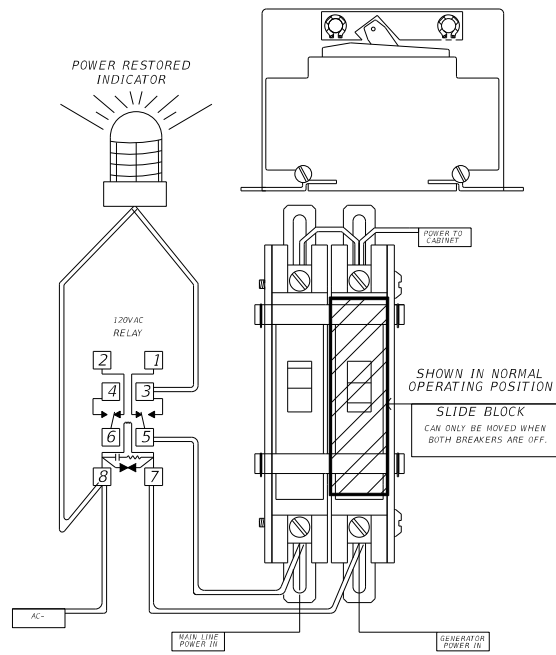
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|----------------|-----------|------|----|-----------------------------------|--|-----------------------------|--|-------------------------------|--|--|--|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. T-18 | |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | PEDESTRIAN SIGNAL AND CABINET BASE DETAILS | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | |
| CHECKED BY MO | | | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | | | |

MANATEE COUNTY GENERATOR WITHOUT UPS

CB#1-40 AMP MAIN POWER
 CB#2-40 AMP GENERATOR POWER
 MALE 6' COORD TO GENERATOR



GENERATOR UTILITY
 SLIDE BLOCK
 CAN ONLY BE MOVED WHEN
 BOTH BREAKERS ARE OFF.



MANATEE COUNTY POWER PANEL

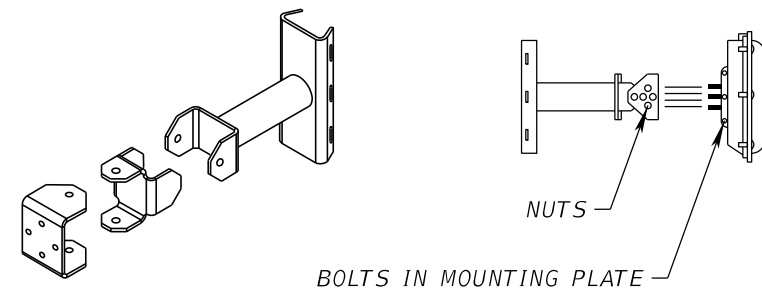
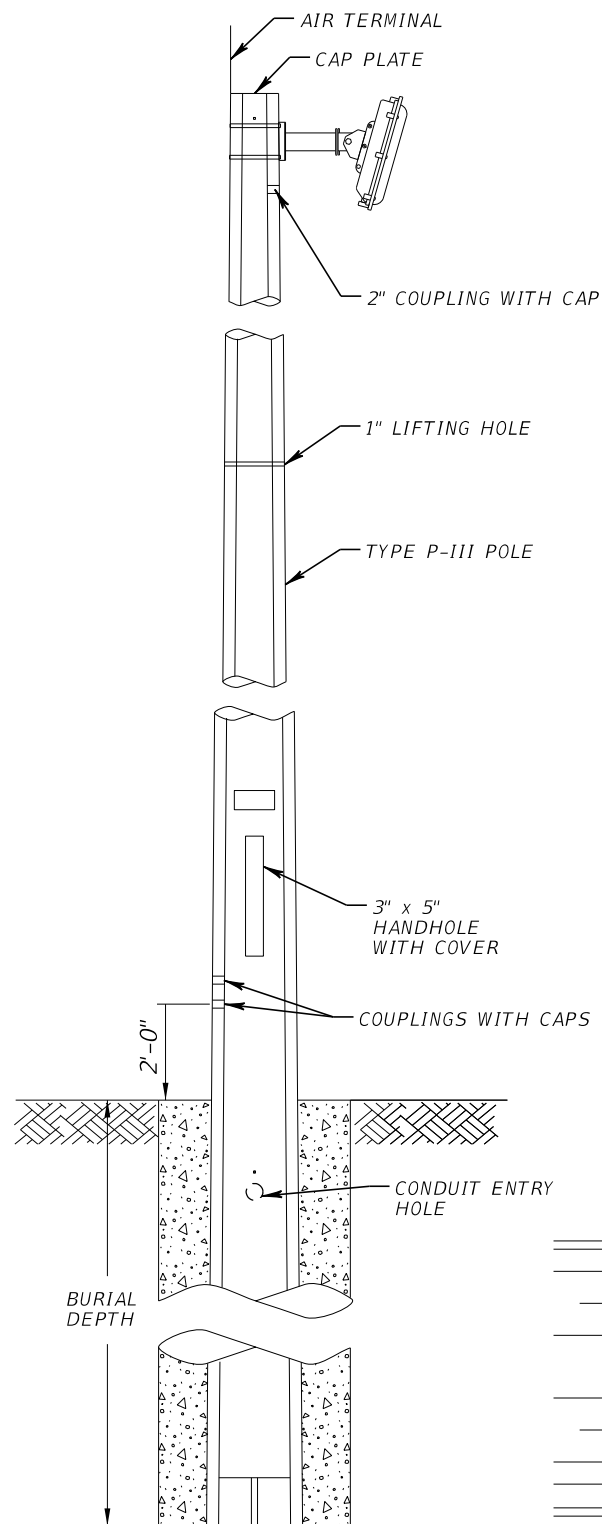
- 1
- AC+ 2 POWER TO BACKUP
- AC+ 3 POWER FROM BACKUP
- AC+ 4 POWER FROM GENERATOR
- AC+ 5 POWER TO CONTROLLER
- 6 [10 BLK]
- 7 [10 BLK]
- 8 UTILITY POWER

GENERATOR PLUG
 P/N GENERATOR PLUG2

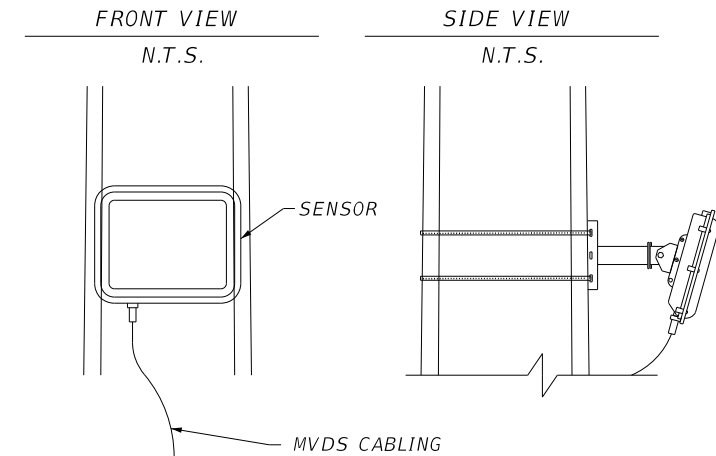
6FT RUBBER SO CORD P/N WIRESJ10/3

| | | | | | | | | | | |
|-----|-----------|--|--|----------------|-----------------------------------|---------------------|------------------------------------|-------------------------------|---|-----------|
| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI | GENERATOR CABINET WIRING DIAGRAM | SHEET NO. |
| | | | | DESIGNED BY BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | T-19 |
| | | | | DRAWN BY GS | SARASOTA, FLORIDA 34232 | | | | | |
| | | | | CHECKED BY MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
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SMART SENSOR ADVANCE
ATTACHMENT DETAIL
NTS



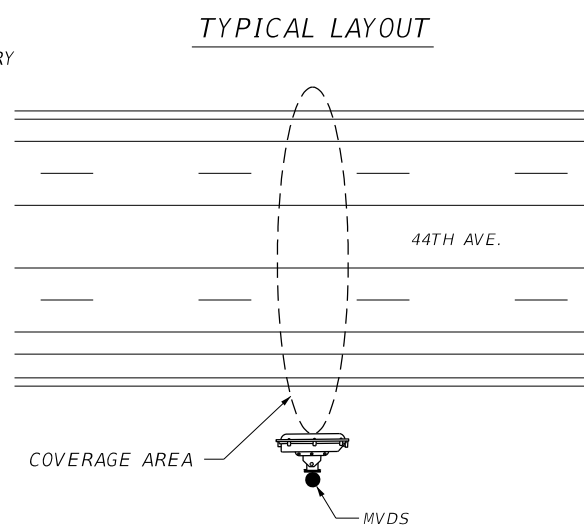
HD MVDS MOUNTING DETAILS
NTS

GROUNDING NOTES:

1. ALL EXOTHERMIC WELDS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
2. USE EXOTHERMIC WELD MOLDS RECOMMENDED BY THE MANUFACTURER SPECIFIC TO EACH WELD APPLICATION. MOLDS SHALL BE APPROVED BY THE MANUFACTURER FOR #2 AWG TIN-PLATED SOLID CONDUCTOR WIRE.
3. THE STRUCTURE SHALL BE CONNECTED TO THE GROUNDING ARRAY.
4. GROUND WIRE LEADS SHALL BE BONDED TO EQUIPMENT CABINETS WITH A COPPER GROUND BAR. BOND SHALL BE LOCATED ON THE INSIDE OF THE CABINET WITH THE EARTH WIRE TERMINATED IN A CABLE LUG, BOLTED TO THE GROUND BAR AND PROTECTED WITH NO-OX COMPOUND.
5. THE GROUNDING SYSTEM SHALL MEET THE REQUIREMENT OF 5 OHMS OR LESS AS MEASURED FROM THE SIGN STRUCTURE USING THE THREE-POINT GROUND MEASUREMENT TECHNIQUE. REFER TO STANDARD SPEC. 630 FOR MORE DETAILS ON GROUNDING INSTALLATION REQUIREMENTS.
6. GROUNDING CONDUCTOR SHALL BE BONDED AT TOP AND BOTTOM OF RIGID GALVANIZED CONDUIT PER N.E.C.
7. ALL GROUNDING MATERIALS SHALL MEET THE REQUIREMENTS OF SECTION 630 OF THE FDOT SPECIFICATIONS UNLESS OTHERWISE NOTED.
8. 5/8" x 24" ZINC ANODE ROD. INSTALL A COMPRESSION FITTING TO ZINC ANODE ROD TO DIRECTLY CONNECT # 2 AWG TIN-PLATED BARE COPPER WIRE TO MAIN GROUND ROD.
9. INSTALL GROUND ENHANCEMENT MATERIALS PER MANUFACTURER'S RECOMMENDATION AT GROUNDING ARRAYS.

NOTES:

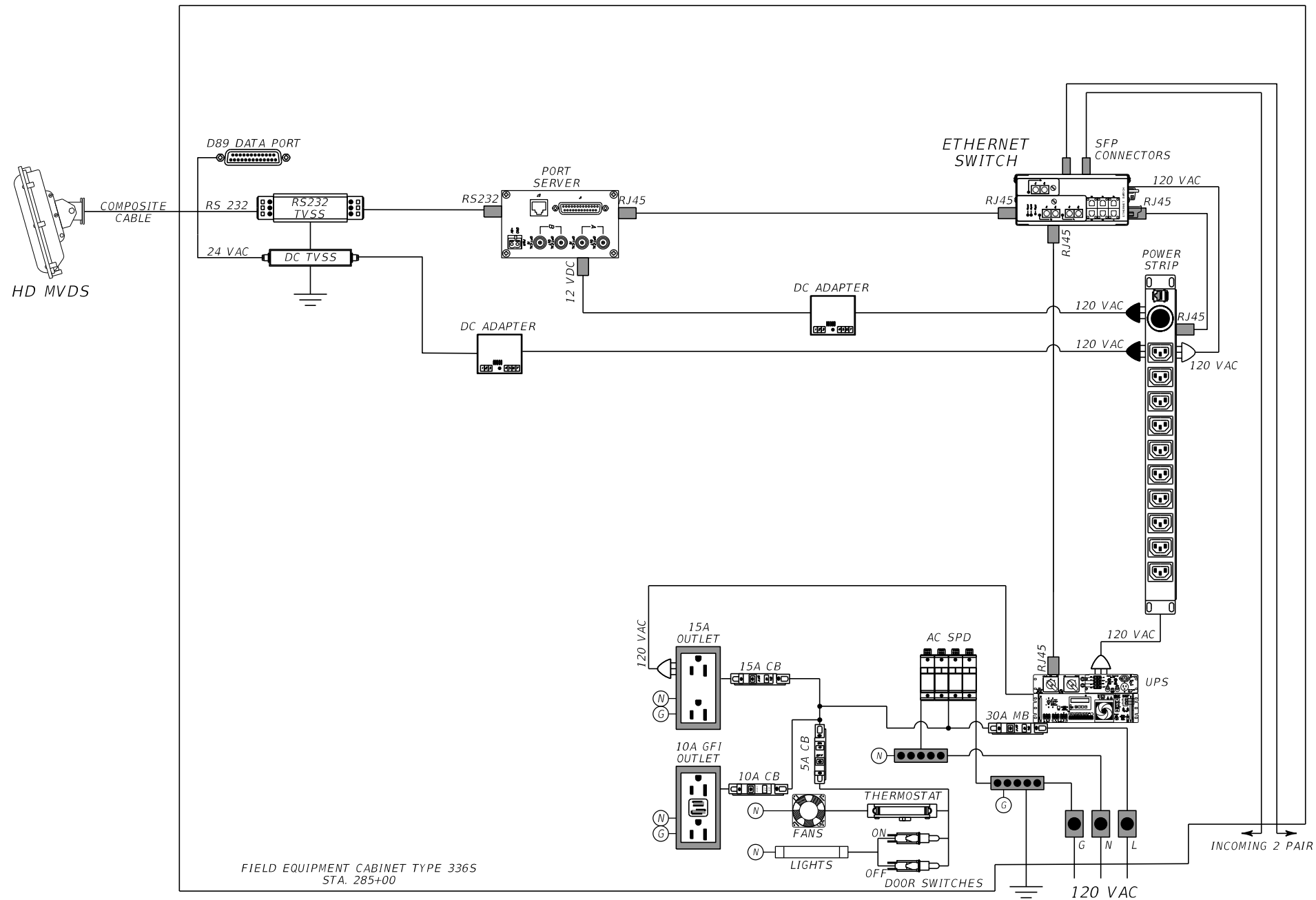
1. COMPONENT ARMS FOR THE MVDS ARE TO BE ATTACHED TO THE POLE USING 1/2" OR GREATER STAINLESS STEEL BANDING.
2. SET UP VIRTUAL SPEED PAIRS ACCORDING TO THE REQUIREMENTS OF THE MVDS USER MANUAL.
3. FABRICATE AND INSTALL THE TYPE P-III POLE ENSURING THE HAND HOLE WITH COVER, THE CONDUIT ENTRY HOLE, AND THE COUPLERS ARE IN CONFORMANCE WITH THE STANDARD PLANS INDEX 641-010, AND ACCEPTABLE ITS CABINET MOUNTING IS ACHIEVED.
4. INSTALL THE ITS CABINET, GROUND ROD ARRAY, AND AIR TERMINAL IN CONFORMANCE WITH THE STANDARD PLANS INDEX 641-020.
5. ALL ABOVE GROUND CONDUITS SHALL BE INSIDE THE POLE EXCEPT FOR THE GROUNDING CONDUIT.



| | | | | | | | | |
|-----|-----------|------|----|----------------|-----------------------------------|---------------------|-------------------------------|----------------|
| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | DESIGN ENGINEER BIJAN BEHZADI | SHEET NO. T-20 |
| | | | | DESIGNED BY BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | FL. LICENSE NO. 43868 | |
| | | | | DRAWN BY GS | SARASOTA, FLORIDA 34232 | | | |
| | | | | CHECKED BY MO | CERTIFICATE OF AUTHORIZATION 4213 | | | |
| No. | REVISIONS | DATE | BY | | | | | |



MVDS CONNECTION DIAGRAM



| | | | | | | | | | |
|-----|-----------|-------------|----------|-----------------------------------|-------------|---------|-----------------|---------------|-----------|
| | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | T-21 |
| | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | |
| | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | |

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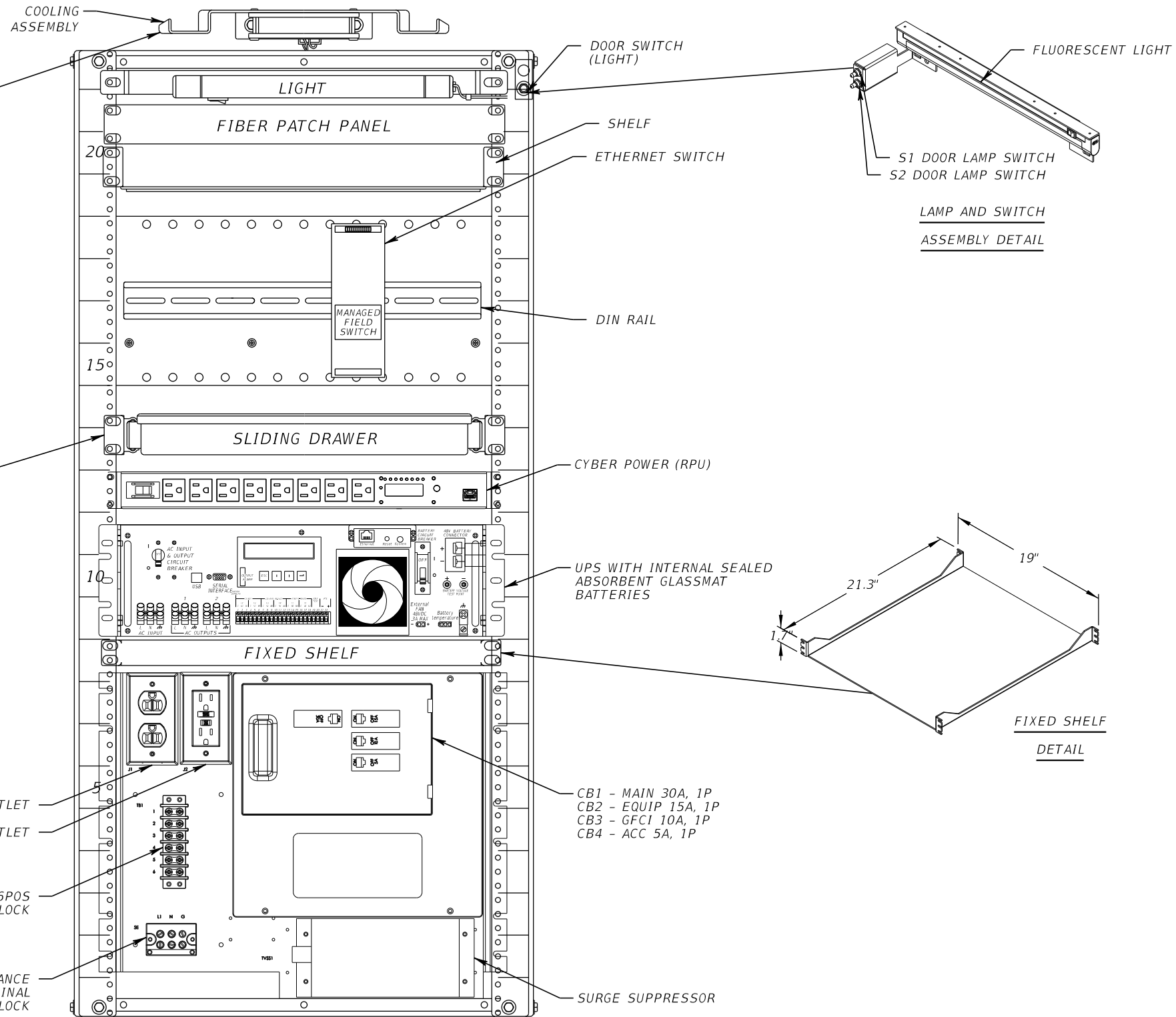
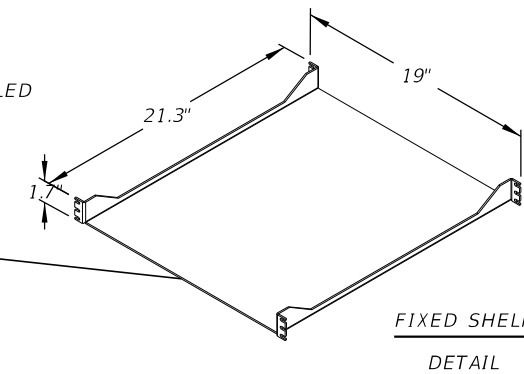
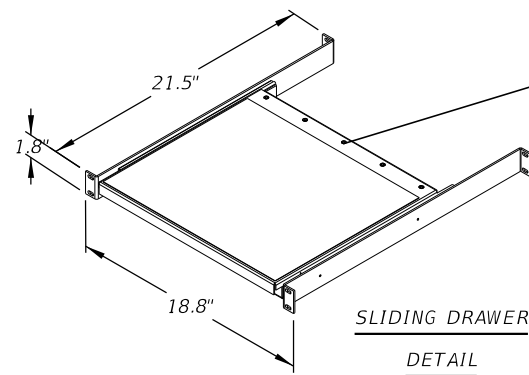
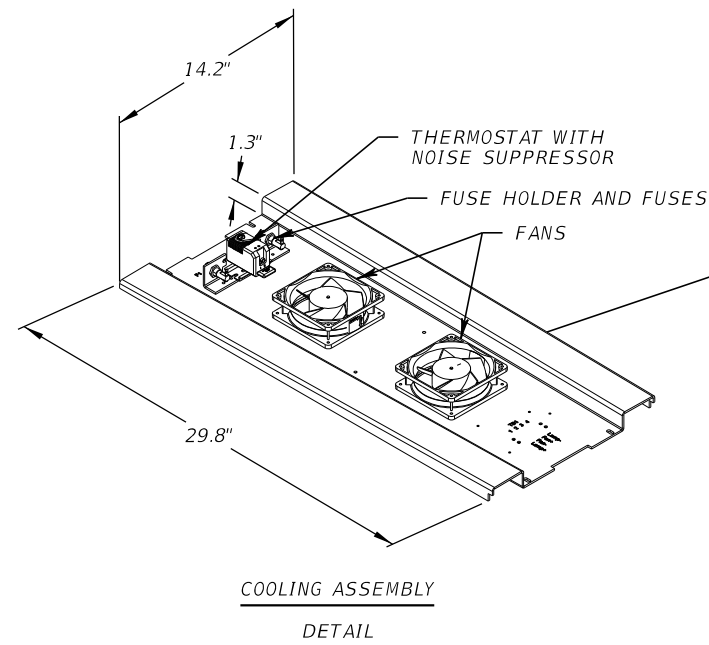
9/20/2019

PW:\



MVDS BLOCK DIAGRAM

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- NOTES:**
- LABEL ALL ELECTRICAL RECEPTACLES EXCEPT GFCI AS "ELECTRONIC EQUIPMENT ONLY". LABEL GFCI RECEPTACLES AS "CONVENIENCE RECEPTACLES".
 - ALL DIN RAILS SHALL BE GROUNDED AS PART OF THE CABINET GROUNDING SYSTEM.

FIELD EQUIPMENT CABINET FOR MVDS
(TYPE 336S)

| | | | | | | | | | |
|-------------|-----------|----------|-----------------------------------|----|-----------------------------|-----------|---------------------------|---------------|-----------|
| SCALE | | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/20/19 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| DESIGNED BY | | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | |
| DRAWN BY | | GS | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | TYPE 336S CABINET DETAILS | | T-22 |
| CHECKED BY | | MO | CERTIFICATE OF AUTHORIZATION 4213 | | MANATEE COUNTY FLORIDA | | PW:\ | | |
| No. | REVISIONS | DATE | BY | MO | 3:24:09 PM | 9/20/2019 | | | |

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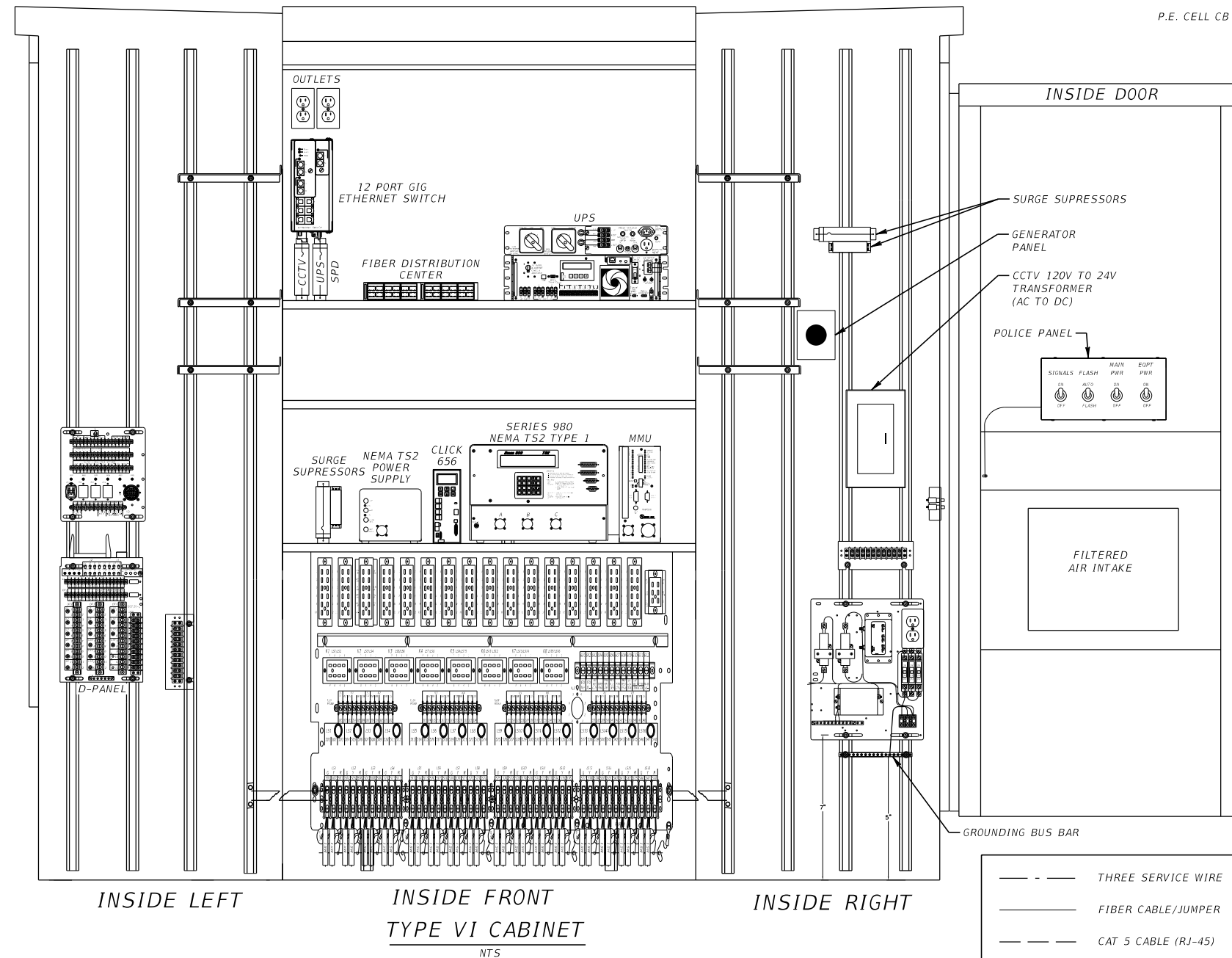
ETHERNET BASED BLUETOOTH SYSTEM - COMPONENTS DETAIL

| ITEM ID | DESCRIPTION | NOTE |
|---------|---------------------------------|--------------------------|
| 1 | FIBERGLASS ENCLOSURE | SEE NOTE 1 |
| 2 | BLUETOOTH READER MODULE | ETHERNET BASED |
| 3 | BLUETOOTH ANTENNA | OMNI DIRECTIONAL |
| 4 | POWER OVER ETHERNET SPLITTER | |
| 5 | POWER OVER ETHERNET DC INJECTOR | POWERED BY AC IN CABINET |

NOTE 1: FIBERGLASS NEMA 3R RATED ENCLOSURE WITH RAISED SNAP LATCH HINGED COVER 10.7" X 9.7" X 3.5". ENCLOSURE SHALL BE ATTACHED TO A POLE USING TWO GALVANNEALED STEEL AM BRACKETS.

BLUE TOAD STANDARD COMPLIANCE:

1. FURNISH AND INSTALL BLUE TOAD SPECTRA DSRC ROADSIDE UNIT, 2.4 GHz WITH DSRC 5.9 GHz.
2. OPERATING POWER VOLTAGE 15-37 -57 VDC, POE, AND 110/220 VAC SUPPLY TO INJECTOR.
3. INTERFACE OPTIONS ARE POE-ETHERNET 10 BASE-T/100 BASE-T, IPV6 WITH DUAL ANTENNA SINGLE AND DUAL CHANNEL MODES.
4. OMNI DIRECTIONAL ANTENNA SHALL BE 2-9 dBi (5 GHz DSRC ANTENNAS).

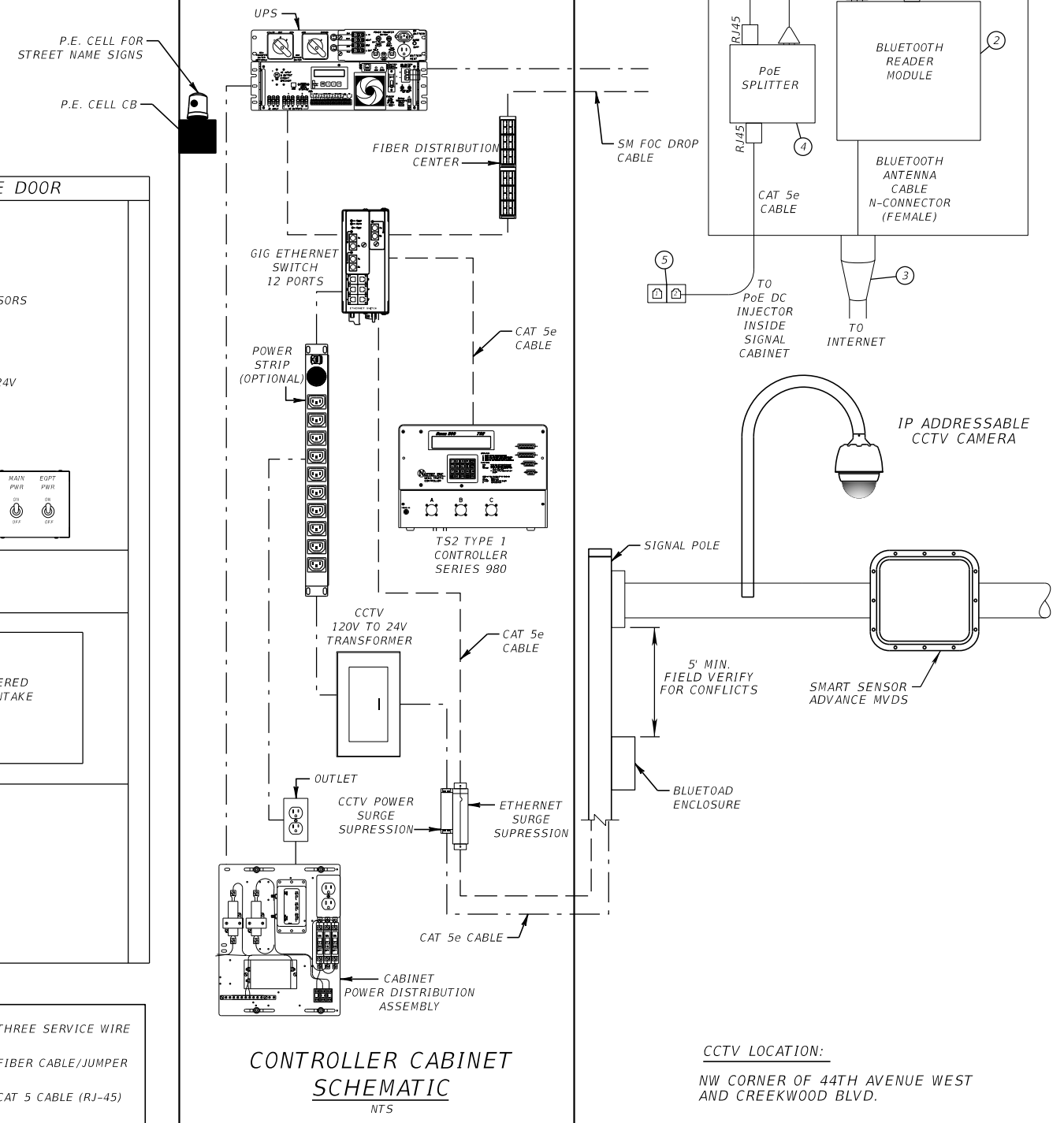


THE CABINET DIMENSIONS SHALL BE APPROXIMATELY 26" TO 28" DEEP, 44" WIDE, AND 74" TO 77" TALL. ALL DIMENSIONS SHALL BE + OR - 2". THE CABINET SHALL BE PROVIDED WITH A FRONT AND REAR DOOR. BOTH DOORS SHALL BE THE SAME SIZE AND DESIGN. BOTH DOORS SHALL BE HINGED ON THE SAME SIDE OF THE CABINET AS SUCH:



ETHERNET BASED BLUETOOTH SYSTEM

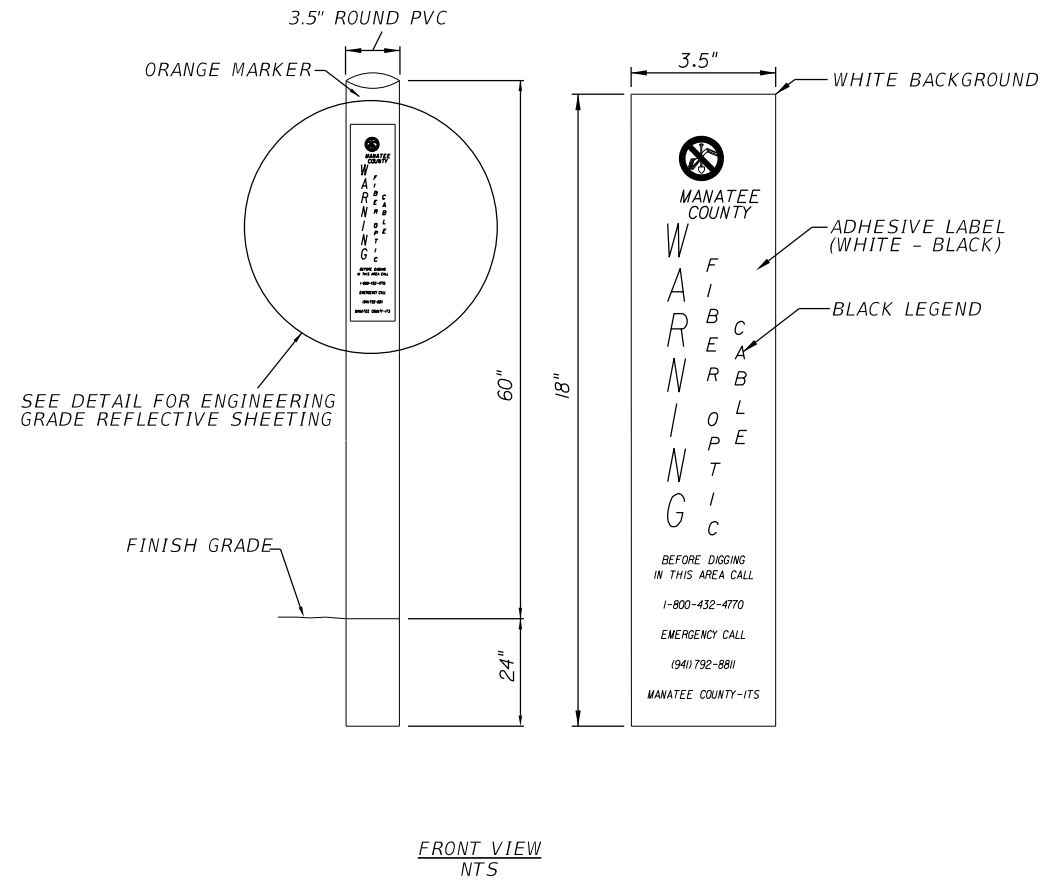
CCTV CONNECTION DIAGRAM



| | | | | | | | | | | | |
|----------------|-----------|--|--|-----------------------------------|----|---------------------|--|-------------------------------|--|----------------|--|
| SCALE AS NOTED | | | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. T-23 | |
| DESIGNED BY BB | | | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | |
| DRAWN BY GS | | | | SARASOTA, FLORIDA 34232 | | 9/20/2019 | | PW\ | | | |
| CHECKED BY MO | | | | CERTIFICATE OF AUTHORIZATION 4213 | | 3:24:15 PM | | | | | |
| No. | REVISIONS | | | DATE | BY | | | | | | |


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FIBER OPTIC CABLE ROUTE MARKER



NOTES:

1. FOR TRENCH LINES WITH BOTH FIBER OPTIC CABLE AND POWER SERVICE WIRE, INSTALL POWER MARKER ALTERNATING WITH FIBER MARKER.
2. INSTALL FIBER OPTIC CABLE MARKER AT EVERY FIBER PULL BOX AND EVERY CHANGE IN DIRECTION NOT TO EXCEED 500 FEET.
3. TUBULAR MARKER TO BE PLACED OVER A V-CHANNEL METALLIC FENCE POST.
4. NO SEPARATE PAYMENT FOR ROUTE MARKERS. SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.
5. A POLYDOME TOP SHALL BE INSTALLED ON EACH MARKER ORANGE FOR FIBER.
6. ALL ROUTE MARKERS SHALL MEET SECTION 630 OF STANDARD SPECIFICATIONS.

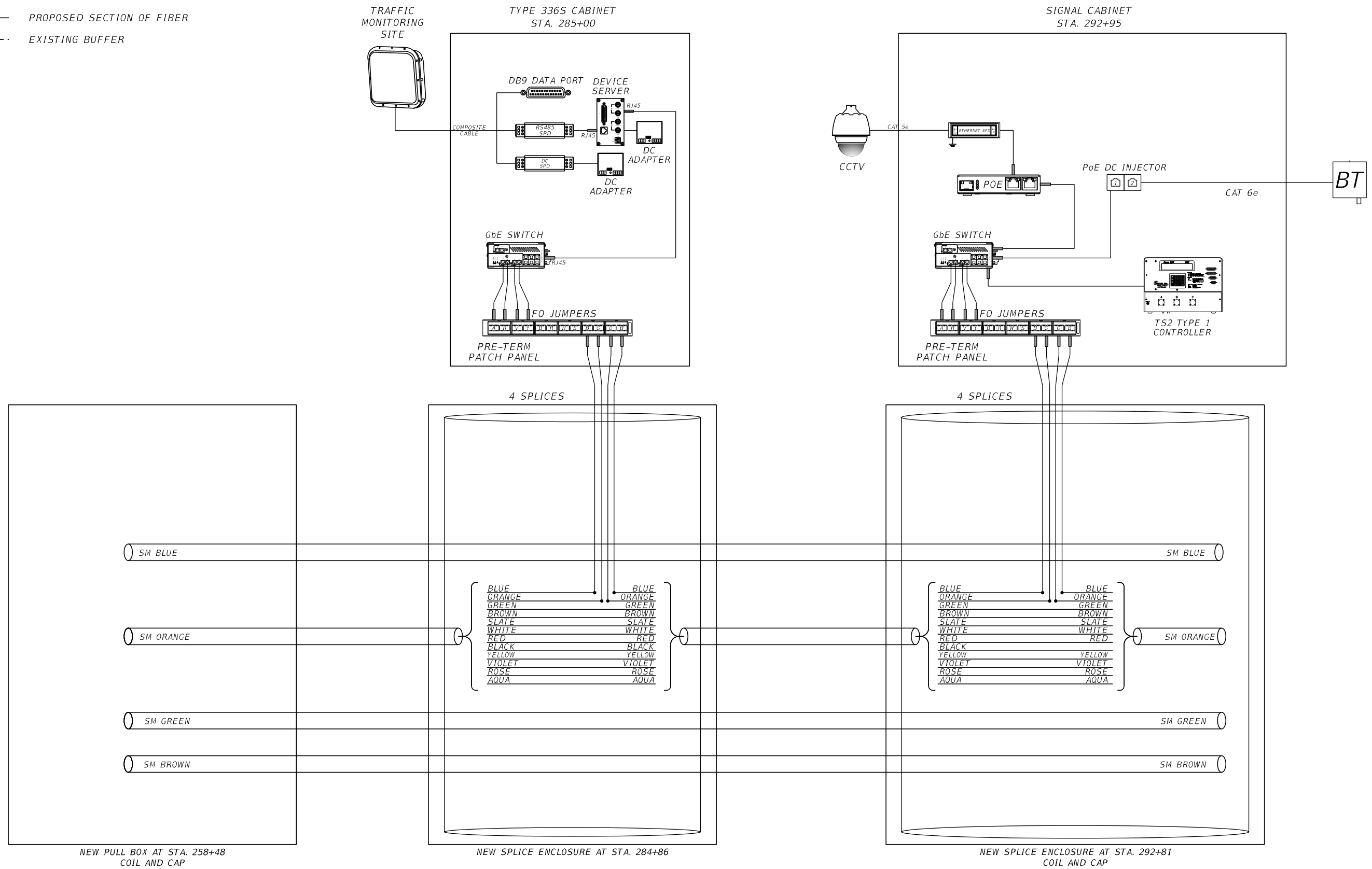
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|-----|-----------|--|--|-------------|----------|-----------------------------------|--|---------|----------------------------------|---------------|-----------|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | T-24 |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 |  MANATEE COUNTY PUBLIC WORKS | | CABLE ROUTE MARKER DETAIL | | |
| No. | REVISIONS | | | DATE | BY | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |

3:24:21 PM

9/20/2019

PW:\

| LEGEND | DESCRIPTION |
|---------|---------------------------|
| • | FUSION SPLICE |
| — | PROPOSED SECTION OF FIBER |
| - - - - | EXISTING BUFFER |



| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----------|------|----|-------------|----------|-----------------------------------|----|----------|----|------------|----|------|------------|-------------|---------|-----------------|-----------------|-----------------|---------------|-----------|------|
| No. | REVISIONS | DATE | BY | SCALE | AS NOTED | DESIGNED BY | BB | DRAWN BY | GS | CHECKED BY | MO | DATE | 09/20/2019 | PROJECT NO. | 6045662 | DESIGN ENGINEER | BIJAN BEHZADI | FL. LICENSE NO. | 43868 | SHEET NO. | T-25 |
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | | | | | DATE | 09/20/2019 | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | | | | | | | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |
| | | | | | | | | | | | | | | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |
| | | | | | | | | | | | | | | PROJECT NO. | | 6045662 | DESIGN ENGINEER | | BIJAN BEHZADI | SHEET NO. | |

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



SPLICING DIAGRAM

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

| STANDARD MAST ARM ASSEMBLIES DATA TABLE | | | | | | | | | | Table Date 11-01-16 | |
|---|-------------|-----------|-----------|------------|-----------|----------|----------|---------|-----------|---------------------|------------------|
| POLE ID NUMBERS | DESIGNATION | FIRST ARM | | SECOND ARM | | UF (deg) | LL (deg) | POLE | | | DRILLED SHAFT ID |
| | | ARM ID | FAA (ft.) | ARM ID | SAA (ft.) | | | POLE ID | UAA (ft.) | UB (ft.) | |
| POLE 1 | A50/S-P3/S | A50/S | | | | | | P3/S | 23.0 | 20.0 | * |
| POLE 2 | A50/S-P3/S | A50/S | | | | | | P3/S | 23.0 | 20.0 | * |
| POLE 3 | A50/S-P3/S | A50/S | | | | | | P3/S | 23.0 | 20.0 | * |

| * SPECIAL FOUNDATION DATA TABLE | | | | | | | | |
|---------------------------------|-------------------------|----------|----|----|----|----------|----|----------|
| POLE ID NUMBERS | SHAFT AND REINFORCEMENT | | | | | | | |
| | DA (ft.) | DB (ft.) | RA | RB | RC | RD (in.) | RE | RF (in.) |
| POLE 1 | 21.0 | 4.5 | 11 | 16 | 8 | 12 | - | - |
| POLE 2 | 21.0 | 4.5 | 11 | 16 | 8 | 12 | - | - |
| POLE 3 | 21.0 | 4.5 | 11 | 16 | 8 | 12 | - | - |

NOTES [Notes Date 11-01-16]:


- If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
- If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
- Arm mounting height UB must be between 18-22 feet.
- Pole types P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole types P5 and larger require a minimum 5.0 foot diameter drilled shaft.
- Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.
- Work with Index 649-030 and 649-031.

FOUNDATION NOTE:

Assumptions and Values used in design:

| FOUNDATION DESIGN PARAMETERS | | | | |
|------------------------------|----------------------------|---------------------------|-----------------------|---------------|
| POLE ID NUMBERS | SOIL LAYER THICKNESS (ft.) | SOIL FRICTION ANGLE (deg) | SOIL WEIGHT (pcf) (1) | SOIL TYPE (2) |
| POLE 1 | 40 | 29 | 43.0 | SAND |
| POLE 2 | 40 | 29 | 43.0 | SAND |
| POLE 3 | 40 | 29 | 43.0 | SAND |

- (1) Design water table is 0 ft. below surface
 (2) Soil type is sand (cohesionless) or clay (cohesive)

| | | | | | | | | |
|-----------------|-----------|--------------------------------|----|---------------------|--|-----------------------|----------------------------|-----------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | MAST ARM DATA TABLE | SHEET NO. |
| DESIGNED BY CAS | | 2601 CATTLEMEN ROAD, SUITE 400 | | 09/2019 | | CHESTER A. SMITH III | | T-26 |
| DRAWN BY DRA | | SARASOTA, FLORIDA 34232 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 70756 | | |
| No. | REVISIONS | DATE | BY | CHECKED BY SK | CERTIFICATE OF AUTHORIZATION 4213 | | | |

**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

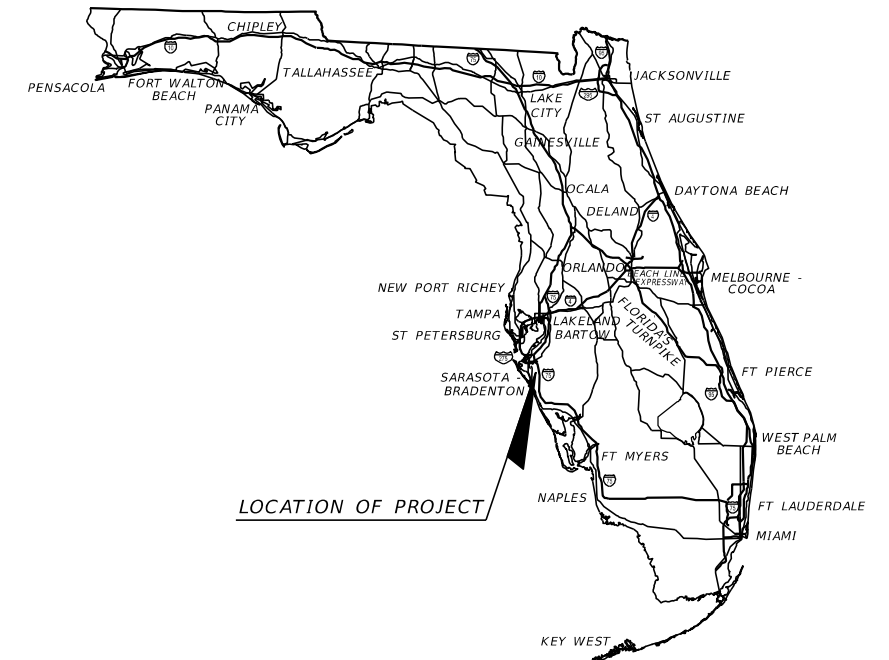
CONTRACT PLANS

**MANATEE COUNTY
PROJECT NUMBER 6045662
44TH AVENUE EAST
PHASE I
FROM 44TH AVENUE PLAZA EAST TO I-75**

LIGHTING PLANS

INDEX OF LIGHTING PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---------------|-----------------------------------|
| L-1 | KEY SHEET |
| L-2 | SIGNATURE SHEET |
| L-3 THRU L-4 | TABULATION OF QUANTITIES |
| L-5 | GENERAL NOTES |
| L-6 | POLE DATA AND LEGEND |
| L-7 THRU L-14 | LIGHTING PLAN |
| L-15 | SERVICE CENTER DETAILS |
| L-16 | LOAD CENTER ENCLOSURE DETAILS |
| L-17 | DISTRIBUTION PANEL WIRING DIAGRAM |



LOCATION OF PROJECT

**FINAL SUBMITTAL
09/2019**

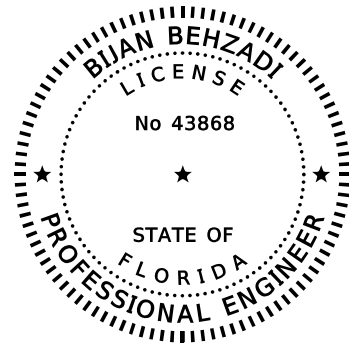
**LIGHTING PLANS
ENGINEER OF RECORD:**

BIJAN BEHZADI, P.E.
P.E. NO.: 43868
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
FBPR CERTIFICATE OF AUTHORIZATION NO. 4213
VENDOR NO. 47-0680568
CONTRACT NO. C9480

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

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 19 | L-1 |

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



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL.


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

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232-6212
CERTIFICATE OF AUTHORIZATION NO. 4213
BIJAN BEHZADI, P.E. NO. 43868

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

LIGHTING PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---------------|-----------------------------------|
| L-1 | KEY SHEET |
| L-2 | SIGNATURE SHEET |
| L-3 THRU L-4 | TABULATION OF QUANTITIES |
| L-5 | GENERAL NOTES |
| L-6 | POLE DATA AND LEGEND |
| L-7 THRU L-14 | LIGHTING PLAN |
| L-15 | SERVICE CENTER DETAILS |
| L-16 | LOAD CENTER ENCLOSURE DETAILS |
| L-17 | DISTRIBUTION PANEL WIRING DIAGRAM |

| | | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|--|-------------|---------|--|-----------------|---------------|------------------------|-----------|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | SIGNATURE SHEET | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | L-2 |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | |
| No. | REVISIONS | | | DATE | BY | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|---|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|--|------------------|-------|-------------|-------|
| | | | L-7 | | L-8 | | L-9 | | L-10 | | L-11 | | L-12 | | L-13 | | PLAN | FINAL | PLAN | FINAL |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | | | | |
| 630-2-11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 695 | | 1045 | | 1245 | | 1295 | | 1350 | | 615 | | 1405 | | 7650 | | | |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 125 | | 360 | | 155 | | 105 | | 185 | | 835 | | | | 1765 | | | |
| 635-2-11 | PULL & SPLICE BOX, FURNISH & INSTALL, 13" x 24" COVER SIZE | EA | 5 | | 7 | | 7 | | 7 | | 10 | | 9 | | 8 | | 53 | | | |
| 715-1-12 | LIGHTING CONDUCTORS, FURNISH & INSTALL, INSULATED, NO.8 - 6 | LF | 2820 | | 4551 | | 4536 | | 4536 | | 5624 | | 4902 | | 4791 | | 31760 | | | |
| 715-1-13 | LIGHTING CONDUCTORS, FURNISH & INSTALL, INSULATED, NO 4 TO NO 2 | LF | | | | | | | | | 500 | | | | | | 500 | | | |
| 715-4-13 | LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT | EA | 5 | | | | | | | | | | 5 | | 8 | | 18 | | | |
| 715-4-23 | LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE SPECIAL FOUNDATION, 40' MOUNTING HEIGHT | EA | | | 7 | | 7 | | 7 | | 7 | | 3 | | | | 31 | | | |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | | | | | | | | | 1 | | | | | | 1 | | | |
| 715-11-111 | LUMINAIRE, FURNISH & INSTALL, ROADWAY, COBRAHEAD | EA | 2 | | | | | | | | | | | | | | 2 | | | |
| 715-500-1 | POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL | EA | 5 | | 7 | | 7 | | 7 | | 7 | | 8 | | 8 | | 49 | | | |


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| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|-------------------------------------|---------------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | TABULATION OF QUANTITIES (1) | SHEET NO. L-3 |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | DATE | BY | MO | | | | | |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|---|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|-------------|-------|
| | | | L - 14 | | | | | | | | | | | | | | | | | |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL |
| 630-2-11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 645 | | | | | | | | | | | | | | 645 | | 8295 | |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | | | | | | | | | | | | | | | | | | 1765 |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE | EA | 4 | | | | | | | | | | | | | | 4 | | 57 | |
| 715-1-12 | LIGHTING CONDUCTORS, F&I, INSULATED, NO.8 - 6 | LF | 2223 | | | | | | | | | | | | | | 2223 | | 33983 | |
| 715-1-13 | LIGHTING CONDUCTORS, F&I, INSULATED, NO 4 TO NO 2 | LF | | | | | | | | | | | | | | | | | | 500 |
| 715-4-13 | LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT | EA | 4 | | | | | | | | | | | | | | 4 | | 22 | |
| 715-4-23 | LIGHT POLE COMPLETE, FURNISH & INSTALL STANDARD POLE SPECIAL FOUNDATION, 40' MOUNTING HEIGHT | EA | | | | | | | | | | | | | | | | | | 31 |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | | | | | | | | | | | | | | | | | | 1 |
| 715-11-111 | LUMINAIRE, FURNISH & INSTALL, ROADWAY, COBRAHEAD | EA | | | | | | | | | | | | | | | | | | 2 |
| 715-500-1 | POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL | EA | 4 | | | | | | | | | | | | | | 4 | | 53 | |

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

| | | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|--|-------------------------------------|-----------|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | |  MANATEE COUNTY PUBLIC WORKS | TABULATION OF QUANTITIES (2) | SHEET NO. |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | | L-4 |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | |
| No. | REVISIONS | DATE | BY | CHECKED BY MO | | | | | | |

1. CONTACT THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S PROJECT MANAGEMENT DIVISION BEFORE STARTING WORK.
2. ONE WEEK PRIOR TO THE BEGINNING OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY:

MANATEE COUNTY PROJECT MANAGEMENT DIVISION
ERIC S. SHROYER, P.E.
1022 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
PHONE: 941-708-7450 EXT. 7344

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION
VISHAL KAKKAD
2101 47TH TERRACE EAST
BRADENTON, FLORIDA 34203
PHONE: 941-749-3500 EXT. 7812
3. FOR A LIST OF UTILITY OWNERS, SEE "UTILITY CONTACTS" LISTED BELOW.
4. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR, VIA SUNSHINE STATE ONE CALL OF FLORIDA, INC AT 811 OR 1-800-432-4770, IN COORDINATION WITH UNDERGROUND AND OVERHEAD UTILITY OWNERS. A MINIMUM OF 2 FULL BUSINESS DAYS PRIOR TO DIGGING IS REQUIRED.
5. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN 2' TO THE LIGHTING POLE FOUNDATIONS AS DETERMINED BY THE ENGINEER, HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND/OR CONDUIT RUN(S).
6. PRIOR TO ORDERING MATERIALS, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW FOR ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED.
7. THE ACCEPTANCE OF ANY SUBMITTED DATA FOR MATERIALS, AND EQUIPMENT SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING SAME AND PROPER DIMENSIONS, CAPACITIES, SIZES, QUANTITY AND INSTALLATIONS DETAILS TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT. SUCH ACCEPTANCE SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OF ANY SORT ON THE SUBMITTAL DATA.
8. VERIFY POLE LENGTHS REQUIRED IN ORDER TO ACHIEVE THE PROPER MOUNTING HEIGHT FOR EACH LUMINAIRE. THIS VERIFICATION SHALL OCCUR PRIOR TO THE SUBMISSION OF SHOP DRAWINGS. MOUNTING HEIGHTS ARE DETERMINED FROM THE BOTTOM OF THE LUMINAIRE HOUSING VERTICALLY TO PAVEMENT GRADE.
9. THE CONTRACTOR SHALL RETURN ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS WITHIN 72 HOURS OF THE CONSTRUCTION ACTIVITY, INCLUDING BUT NOT LIMITED TO: RESTORATION OF GRADE; REMOVAL OF CONSTRUCTION TRASH; REPLACEMENT OF SIDEWALK; RESTORATION OF LANDSCAPE IRRIGATION, ETC. THE CONTRACTOR SHALL VERIFY THE LOCATION AND FUNCTION OF EXISTING IRRIGATION LINES PRIOR TO INITIALIZING CONSTRUCTION.
10. THE CONTRACTOR SHALL INSTALL ALL PROJECT INFRASTRUCTURE AND FIELD ELEMENTS WITHIN THE RIGHT-OF-WAY.
11. ALL AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE SODDED AS DIRECTED BY THE COUNTY. SEEDING AND MULCHING SHALL BE APPLIED ONLY WHERE DIRECTED BY THE COUNTY.
12. ALL SPLICES SHALL BE MADE IN PULL BOXES ONLY WHEN NECESSARY WITH WATER PROOF SOLDERLESS CONNECTORS OR COMPRESSION SLEEVES AS PER CURRENT FDOT STANDARD SPECIFICATIONS. SPLICES AND CONNECTIONS MADE IN PULL BOXES SHALL BE LIMITED TO THE SERVICE POINT AND CONDUIT JUNCTION WITH MULTI-DIRECTIONAL CIRCUIT RUNS AS INDICATED ON PLANS. ALL SPLICE LOCATIONS SHALL BE NOTED ON THE AS-BUILT PLANS.
13. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. BEFORE EXCAVATING STAKE ALL POLE LOCATIONS AND TAKE RESPONSIBILITY FOR NOTIFYING THE UTILITY COMPANY OWNER(S) AND REQUEST THEM TO LOCATE AND STAKE THEIR UNDERGROUND FACILITIES.

UTILITY CONTACTS:

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
INFRASTRUCTURE ENGINEERING
CHRIS MOWBRAY, P.E.
1022 26TH AVENUE EAST
BRADENTON, FL 34208
(941) 708-7450
FAX: (941) 708-7431

TECO/PEOPLE GAS CO.
DAN SHANAHAN
8261 VICO COURT
SARASOTA, FL 34240
(813) 645-2700
FAX: (941) 342-4011
EMERGENCY:
1-877-832-6911
djshanahan@tecoenergy.com

FRONTIER COMMUNICATIONS
DENISE HUTTON
1701 RINGLING BLVD
SARASOTA, FL 34236
(941) 906-6722
denise.hutton@ftr.com

FLORIDA POWER & LIGHT
GREG COKER
1253 12TH AVENUE EAST
PALMETTO, FL 34221
(941) 723-4430
FAX: (941) 723-4430
EMERGENCY:
1-800-4-OUTAGE
Greg_Coker@fpl.com

MANATEE COUNTY HEALTH DEPARTMENT
HARRY MESSICK
410 6TH AVENUE EAST
BRADENTON, FL 34208
(941) 748-0747 EXT. 1355
FAX: (941) 750-9364

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
SARASOTA SERVICE OFFICE
STEVE LOPES, P.E.
6750 FRUITVILLE ROAD
SARASOTA, FL 34240
(941) 377-3722
FAX: (941) 373-7660

FLORIDA GAS TRANSMISSION SAFETY HARBOR TEAM
7804 ANDERSON ROAD
TAMPA, FL 33634
JOSEPH SANCHEZ
(813) 466-3327
CELL: (727) 639-7512
joseph.e.sanchez@sug.com

CHARTER COMMUNICATIONS
JAMES CRUZAN
5413 E. STATE ROAD 64
BRADENTON, FL 34208-5535
(727) 329-2846
James.Cruzan@charter.com

DEPT OF ENVIRONMENTAL PROTECTION
STEPHANIE BARIOS
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
(813) 632-7600, EXT. 408
FAX: (813) 632-7662

PEACE RIVER ELECTRIC COOPERATIVE, INC.
P.O. BOX 1310
WACHULA, FL 33873
DAVID McCLINTOCK
(863) 767-4621
David.McClintock@preco.coop

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING
VISHAL KAKKAD, P.E.
(941) 749-3500 EXT. 7812
FAX: (941) 749-3517

SUNSHINE STATE ONE CALL OF FLORIDA
1 (800) 432-4770

14. IF THE LUMINAIRE USED IS DIFFERENT THAN DESIGNED, THE CONTRACTOR SHALL PROVIDE SUBMITTAL DATA WHICH INCLUDES A COMPUTER PRINTOUT SHOWING HORIZONTAL FOOTCANDLE LEVELS TO BE OBTAINED, USING THE SUBMITTED LUMINAIRES THAT ARE NOT THE BASIS OF DESIGN, ON THIS PROJECT. AT FINAL INSPECTION, VERIFY THE HORIZONTAL FOOTCANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER.
15. IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
16. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED.
17. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND SHALL BE INCLUDED IN PAY ITEM NO. 715-4-13.
18. PREPARE ACCURATELY DIMENSIONED "AS-BUILT" PLANS OF THE FINAL POLE AND LOAD CENTER LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED. UPON FINAL ACCEPTANCE OF THE PROJECT, FORWARD A COMPLETE SET OF AS-BUILT PLANS WITH ALL CHANGES MARKED IN RED TO THE ENGINEER.
19. PULL BOXES SHALL NOT BE INSTALLED WITHIN ANY DITCHES OR AREAS THAT MAY CAUSE WATER INTRUSION.


CONDUIT NOTES

1. ALL HDPE CONDUIT CONNECTIONS SHALL BE JOINED WITH A FUSION COUPLER OR FUSION SPLICE.
2. ADJUST THE CONDUIT RUNS TO AVOID ANY UTILITY CONFLICT IDENTIFIED BY THE LOCATES. ANY SIGNIFICANT CHANGE SHALL BE APPROVED BY THE ENGINEER.
3. THE CONDUITS TO BE INSTALLED ARE TO BE PLACED SO AS TO TOTALLY AVOID ANY CONFLICTS WITH EXISTING UTILITIES ALONG THE ROUTE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY INFORMATION REQUIRED TO PLAN THE WORK AHEAD FOR THE INSTALLATION OF THE REQUIRED CONDUITS WITHIN DESIGN OR SPECIFIED PARAMETERS, AND HIS TIME FRAME. THE CONTRACTOR SHALL ADJUST CONDUIT VERTICALLY OR HORIZONTALLY TO AVOID CONFLICT WITH UNDERGROUND UTILITIES. THE CONTRACTOR SHALL USE HAND EXCAVATION METHODS WHEN EXCAVATING NEAR EXISTING UTILITIES, NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK. EXTREME CAUTION SHALL BE USED BY THE CONTRACTOR WHEN EXCAVATING, INSTALLING, BACK FILLING AND COMPACTING AROUND EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL ABOVE GROUND AND UNDERGROUND CONFLICTS IN ADVANCE OF THE PLACEMENT OF ANY POLES OR OTHER FACILITIES. THE CONTRACTOR SHALL FIELD MARK THE PROPOSED ALIGNMENT FOR REVIEW AND CONCURRENCE BY THE ENGINEER PRIOR TO TRENCHING AND/OR PLACEMENT.
5. ALL NEW CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 30" UNLESS PLACED IN AN AREA OF NEW FILL, IN WHICH CASE THE CONDUIT SHALL BE 48". DIRECTIONALLY BORED CONDUIT SHALL BE AT A MINIMUM DEPTH OF 48".
6. DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL AVOID LANDSCAPING WHICH MIGHT BE AFFECTED BY SUCH OPERATIONS.

PAY ITEM NOTES

1. 630-2-11 & 630-2-12: CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE NOTED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.
2. 715-7-11: INCLUDES NEMA 3R INDIVIDUALLY MOUNTED ENCLOSED CIRCUIT BREAKER ON LOAD SIDE OF METER, METER BASE, SERVICE POLE INSULATORS, WEATHERHEADS, CONTROL POWER TRANSFORMERS, ENCLOSURES, PANEL BOARDS, BREAKERS, FUSES, LIGHTING CONTACTOR, LIGHTNING ARRESTER, PHOTO-ELECTRIC ASSEMBLY, CONDUIT & FEEDER CONDUCTORS FROM POWER COMPANY POINT OF SERVICE TO LOAD CENTER, PULL BOX AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE INSTALLATION AS PER PLANS AND STANDARD PLANS INDEX 639-001 DETAIL "B". INCLUDES THE COST OF FURNISHING AND INSTALLING 12' TYPE P-II PRESTRESSED CONCRETE POLE.
3. 715-11-111: PROVIDE TWO (2) SPARE LUMINAIRES TO MANATEE COUNTY.
4. 715-500-1: INCLUDES THE COST OF BREAK-AWAY WATERTIGHT, IN-LINE FUSE HOLDERS, THE STRAIN RELIEF AND THE SURGE ARRESTOR PER STANDARD PLANS INDEX 715-001.

| | | | | | | | | | | | | | |
|-----|-----------|--|--|-------------|----------|-----------------------------------|-------------|--|--|-----------------|--|--|-----------|
| | | | | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE |  MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER | | | SHEET NO. |
| | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | 09/2019 | | | BIJAN BEHZADI | | | |
| | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | PROJECT NO. | | | FL. LICENSE NO. | | | |
| | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | 6045662 | | | 43868 | | | L-5 |
| No. | REVISIONS | | | DATE | BY | | | | | | | | |

GENERAL NOTES

CONVENTIONAL LIGHTING DESIGN CRITERIA FOR ROADWAYS



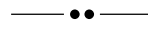


DESIGN WIND SPEED 140 MPH
 AVERAGE INITIAL ILLUMINATION 1.0 H.F.C.
 AVERAGE TO MIN. 4 : 1 OR LESS
 MAX TO MIN. 10 : 1 OR LESS
 VEILING LUMINANCE RATIO 0.3: 1 OR LESS

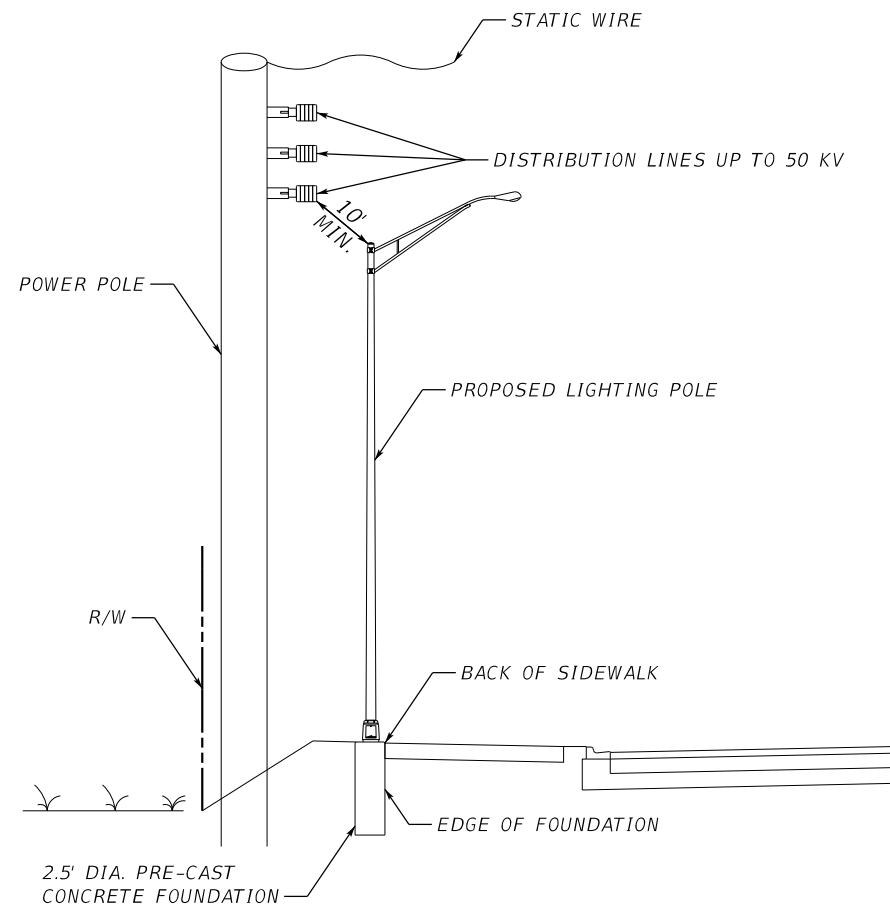
POLE DATA

LEGEND

SYMBOLS

DESCRIPTION

-  133 WATT LED LUMINAIRE ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING AMERICAN ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ATB2_40BLEDE10_XXXXX_R3_3K_HSS AT 13221 LUMENS. POLE MOUNTING HEIGHT IS 40 FT AND ARM LENGTH IS 8 FT. SYMBOL INCLUDES LUMINAIRE WITH HOUSE SIDE SHIELD, ARM, POLE WITH STANDARD OR SPREAD FOOTER FOUNDATION, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM TYPE III DISTRIBUTION WITH ZERO TILT.
-  CONDUIT INSTALLED BY OPEN TRENCH METHOD WITH CONDUCTORS INSIDE. RUN ONE (1) COPPER GROUND BONDING CONDUCTOR (GREEN INSULATION) INSIDE WITH OTHER CONDUCTORS.
-  TWO CONDUITS (ONE SPARE) INSTALLED BY DIRECTIONAL BORE METHOD WITH CONDUCTORS INSIDE. RUN ONE (1) COPPER GROUND BONDING CONDUCTOR (GREEN INSULATION) INSIDE WITH OTHER CONDUCTORS.
-  PROPOSED TYPICAL FDOT SHOULDER MOUNTED LIGHTING PULL BOX WITH MODIFIED CONCRETE SLAB OF 36" X 36". PULL BOX COVER SIZE 13" X 24" UNLESS OTHERWISE NOTED.
-  PROPOSED LOAD CENTER "A" 240/ 480 VOLT, SINGLE PHASE, 3 WIRE, PER FDOT STANDARD PLANS AND SPECIFICATIONS INCLUDING THE METER ENCLOSURE WITH BASE AND SERVICE DISCONNECT PER FP&L REQUIREMENTS. INCLUDE A MANUAL BYPASS SWITCH TO THE METER BASE PER FP&L REQUIREMENTS.



TYPICAL POLE SETBACK DETAIL & OVERHEAD OSHA CLEARANCE REQUIREMENT

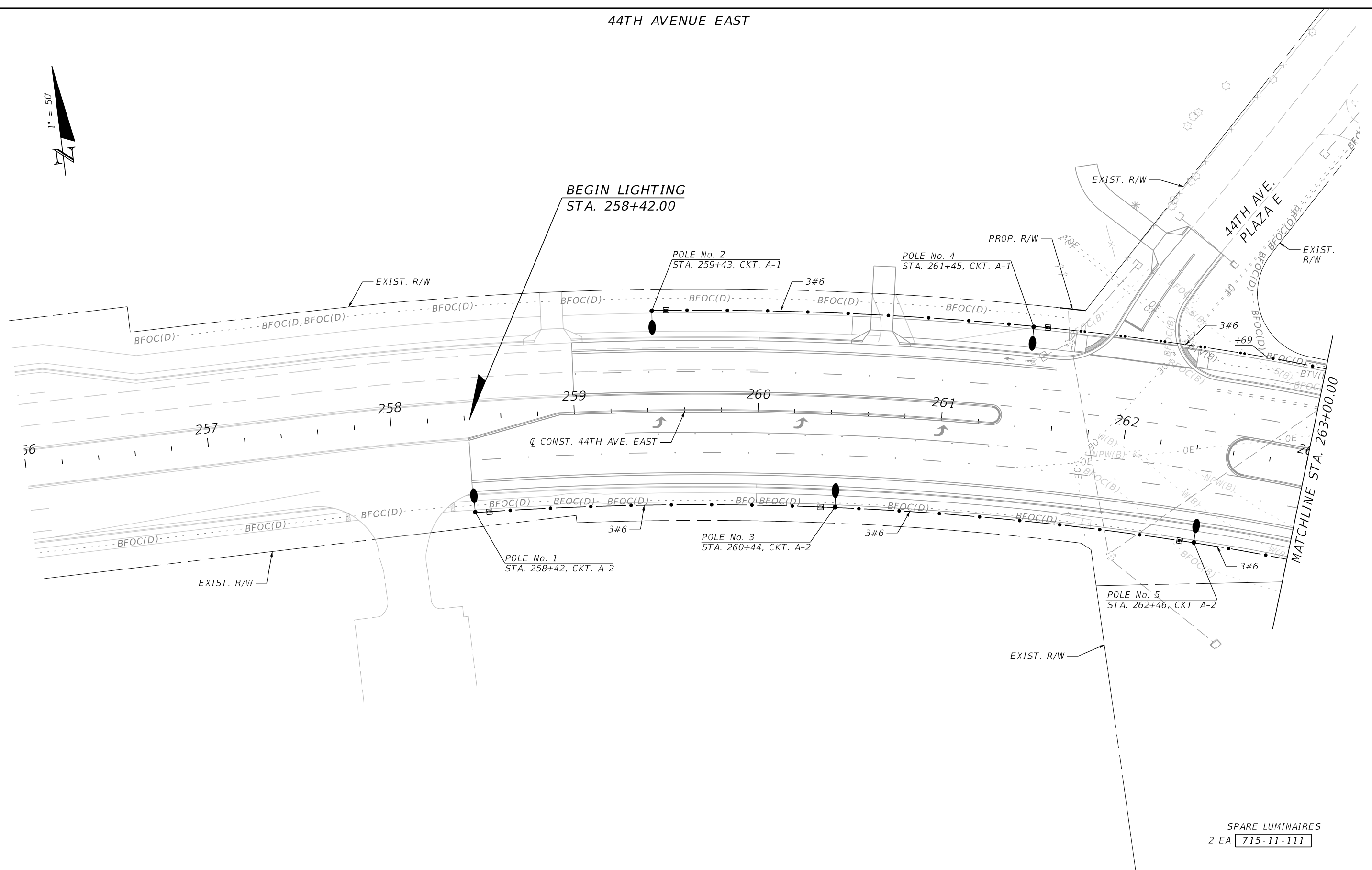
N.T.S.

| POLE NO. | CIRCUIT | STATION | DIST. OR ARM | LUMINAIRE WATTAGE | MOUNTING HEIGHT | POLE SETBACK | PAY ITEM |
|----------|---------|------------|--------------|-------------------|-----------------|---------------------------|----------|
| 1 | A-2 | 258+42, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 2 | A-1 | 259+43, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 3 | A-2 | 260+44, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 4 | A-1 | 261+45, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 5 | A-2 | 262+46, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 6 | A-1 | 263+47, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 7 | A-2 | 264+48, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 8 | A-1 | 265+21, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 9 | A-2 | 266+50, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 10 | A-1 | 267+33, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 11 | A-2 | 268+52, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 12 | A-1 | 269+33, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 13 | A-2 | 270+54, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 14 | A-1 | 271+38, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 15 | A-2 | 272+56, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 16 | A-1 | 273+40, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 17 | A-2 | 274+58, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 18 | A-1 | 275+53, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 19 | A-2 | 276+60, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 20 | A-1 | 277+44, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 21 | A-2 | 278+62, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 22 | A-1 | 279+46, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 23 | A-2 | 280+64, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 24 | A-1 | 281+46, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 25 | A-2 | 282+66, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 26 | A-1 | 283+48, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 27 | A-2 | 284+78, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 28 | A-1 | 285+50, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 29 | A-2 | 286+70, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 30 | A-1 | 287+52, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 31 | A-2 | 288+72, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 32 | A-3 | 289+57, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 33 | A-4 | 290+74, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 34 | A-3 | 291+21, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 35 | A-4 | 292+33, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 36 | A-3 | 292+53, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-23 |
| 37 | A-4 | 293+83, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 38 | A-3 | 294+44, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 39 | A-4 | 295+34, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 40 | A-3 | 296+34, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 41 | A-4 | 297+24, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 42 | A-3 | 298+24, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 43 | A-4 | 299+14, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 44 | A-3 | 300+14, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 45 | A-4 | 301+04, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 46 | A-3 | 302+04, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 47 | A-4 | 302+94, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 48 | A-3 | 303+94, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 49 | A-4 | 304+84, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 50 | A-3 | 305+84, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 51 | A-4 | 306+74, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 52 | A-3 | 307+80, LT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |
| 53 | A-4 | 308+64, RT | 8' | 133 | 40' | EDGE OF FOUNDATION AT BOS | 715-4-13 |

BOS - BACK OF SIDEWALK

| | | | | | | | | |
|-----|-----------|------|----|----------------|-----------------------------------|-----------------------------|-------------------------------|----------------------|
| | | | | SCALE AS NOTED | HDR ENGINEERING, INC. | DATE 09/2019 | DESIGN ENGINEER BIJAN BEHZADI | SHEET NO. L-6 |
| | | | | DESIGNED BY BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. 6045662 | FL. LICENSE NO. 43868 | |
| | | | | DRAWN BY GS | SARASOTA, FLORIDA 34232 | MANATEE COUNTY PUBLIC WORKS | | POLE DATA AND LEGEND |
| | | | | CHECKED BY MO | CERTIFICATE OF AUTHORIZATION 4213 | | | |
| No. | REVISIONS | DATE | BY | | | | | |

44TH AVENUE EAST

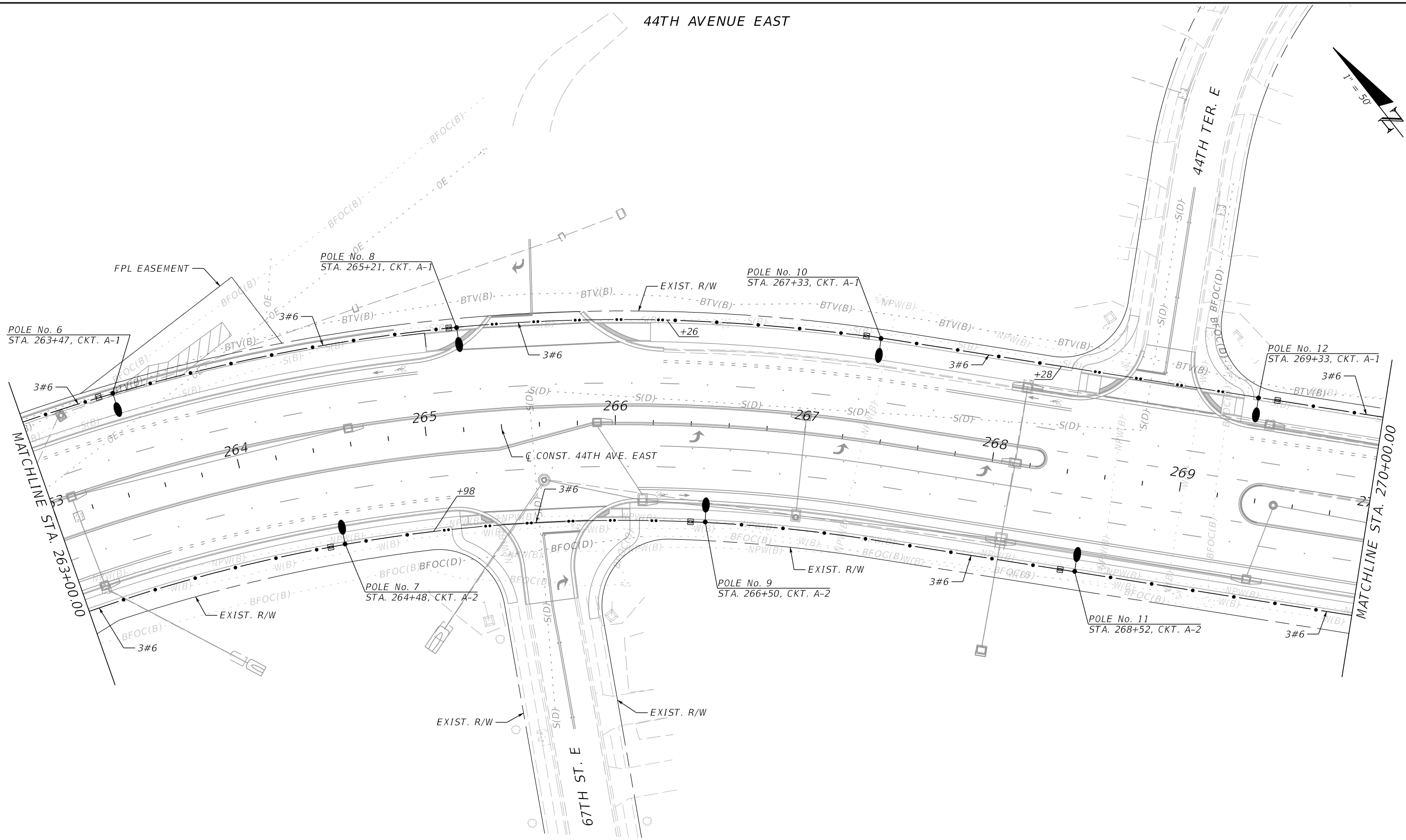
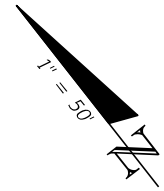



SPARE LUMINAIRES
2 EA 715-11-111

| | | | | | | | | | |
|----------------|-----------|-----------------------------------|----|-----------------------------|--|-------------------------------|--|---------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. L-7 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY PUBLIC WORKS | | | | | |
| CHECKED BY MO | | CERTIFICATE OF AUTHORIZATION 4213 | | 3:37:06 PM 9/20/2019 | | PW:\ | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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44TH AVENUE EAST



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|-----|--|-----------|--|------|----|-------------|----------|-----------------------------------|-------------|---------|--|-----------------|---------------|-----------|
| No. | | REVISIONS | | DATE | BY | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| | | | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | |
| | | | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | |
| | | | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | |

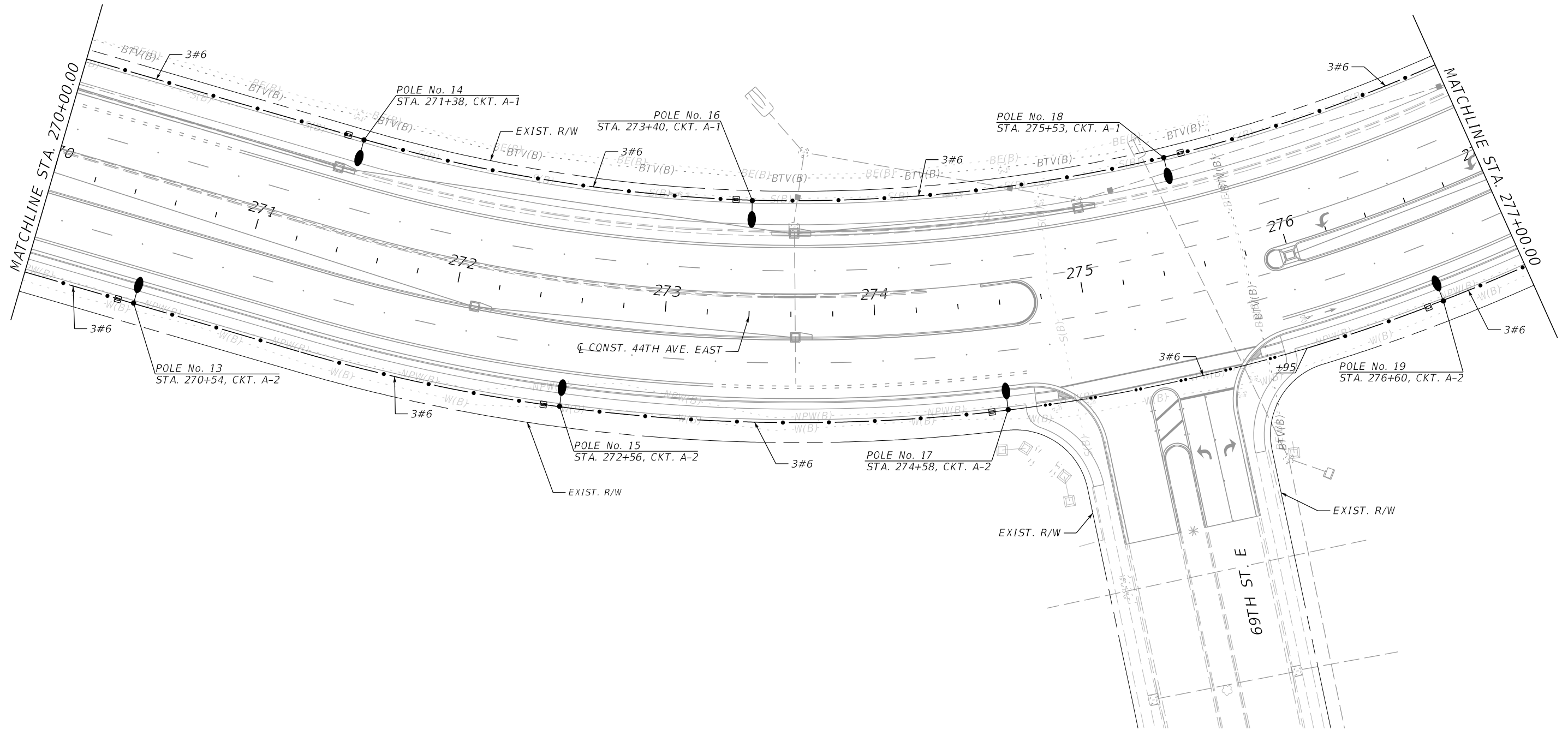
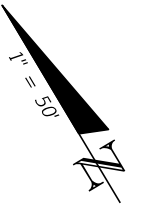
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44TH AVENUE EAST



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|-----|--|-----------|--|------|----|-------------------|---|--------------------------|--|----------------------------------|--------------------------|------------------|
| No. | | REVISIONS | | DATE | BY | SCALE AS NOTED | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | DATE 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER BIJAN BEHZADI | LIGHTING PLAN (3) | SHEET NO. L-9 |
| | | | | | | DESIGNED BY BB | PROJECT NO. 6045662 | FL. LICENSE NO. 43868 | | | | |
| | | | | | | DRAWN BY GS | | | | | | |
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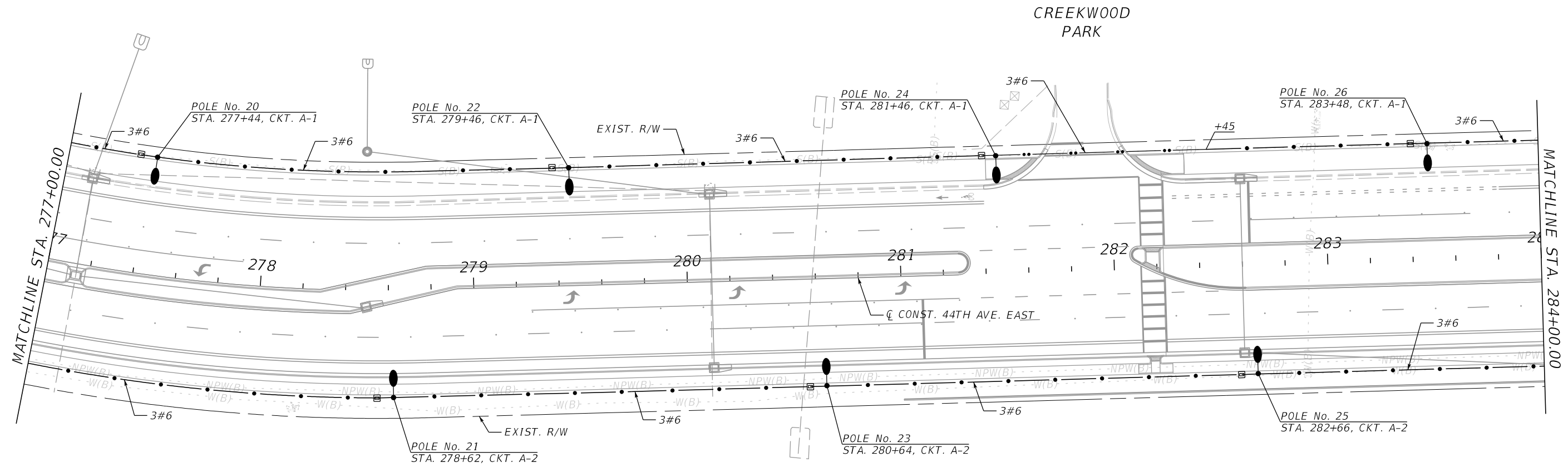
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44TH AVENUE EAST



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|-------------|-----------|----------|--|-----------------------------------|----|-------------|--|---------|--|-----------------|--|---------------|--|-----------|--|
| SCALE | | AS NOTED | | HDR ENGINEERING, INC. | | DATE | | 09/2019 | | DESIGN ENGINEER | | BIJAN BEHZADI | | SHEET NO. | |
| DESIGNED BY | | BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | L-10 | |
| DRAWN BY | | GS | | SARASOTA, FLORIDA 34232 | | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | L-10 | |
| CHECKED BY | | MO | | CERTIFICATE OF AUTHORIZATION 4213 | | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | L-10 | |
| No. | REVISIONS | | | DATE | BY | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | L-10 | |

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9/20/2019

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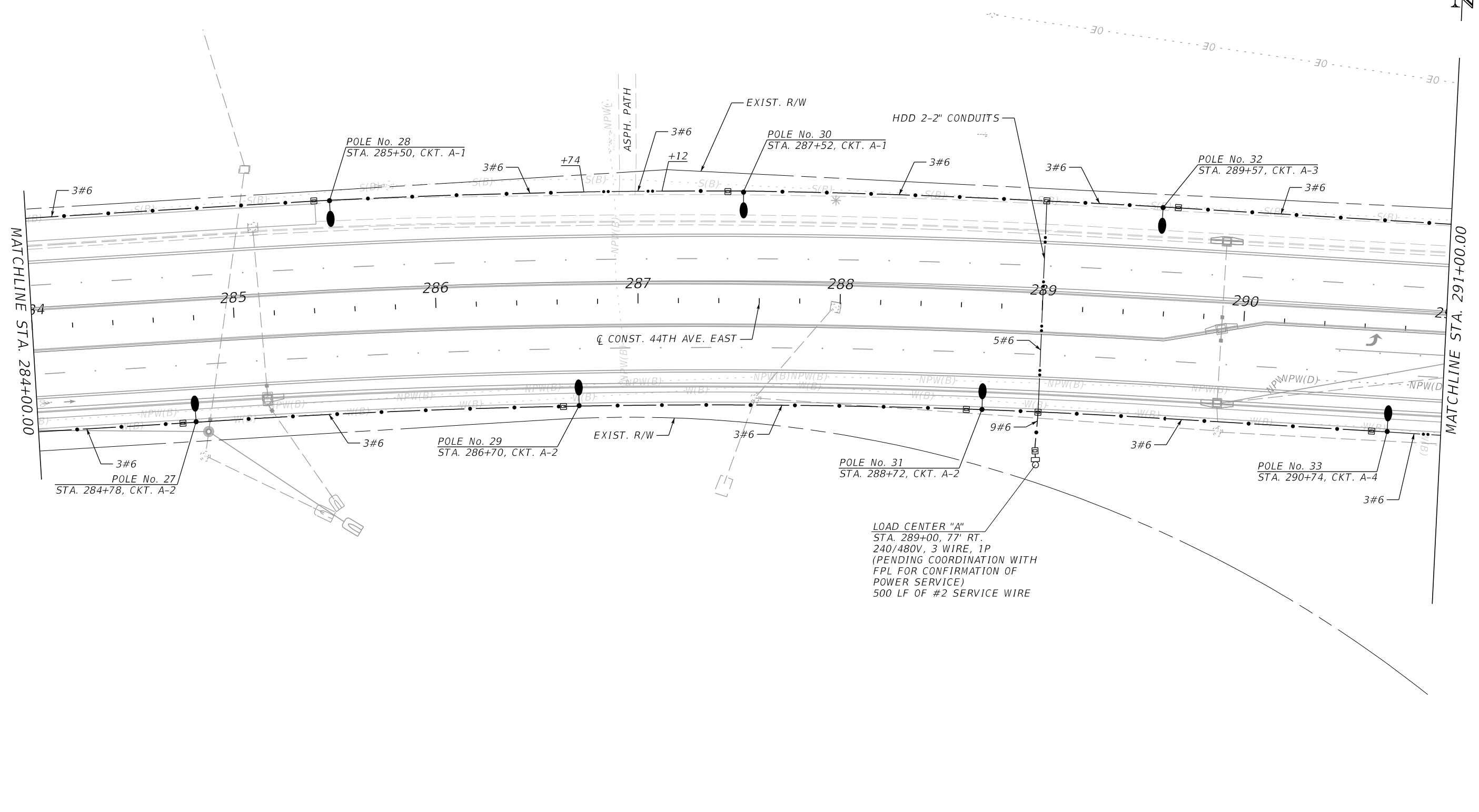
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**MANATEE COUNTY
PUBLIC WORKS**

LIGHTING PLAN (A)

44TH AVENUE EAST

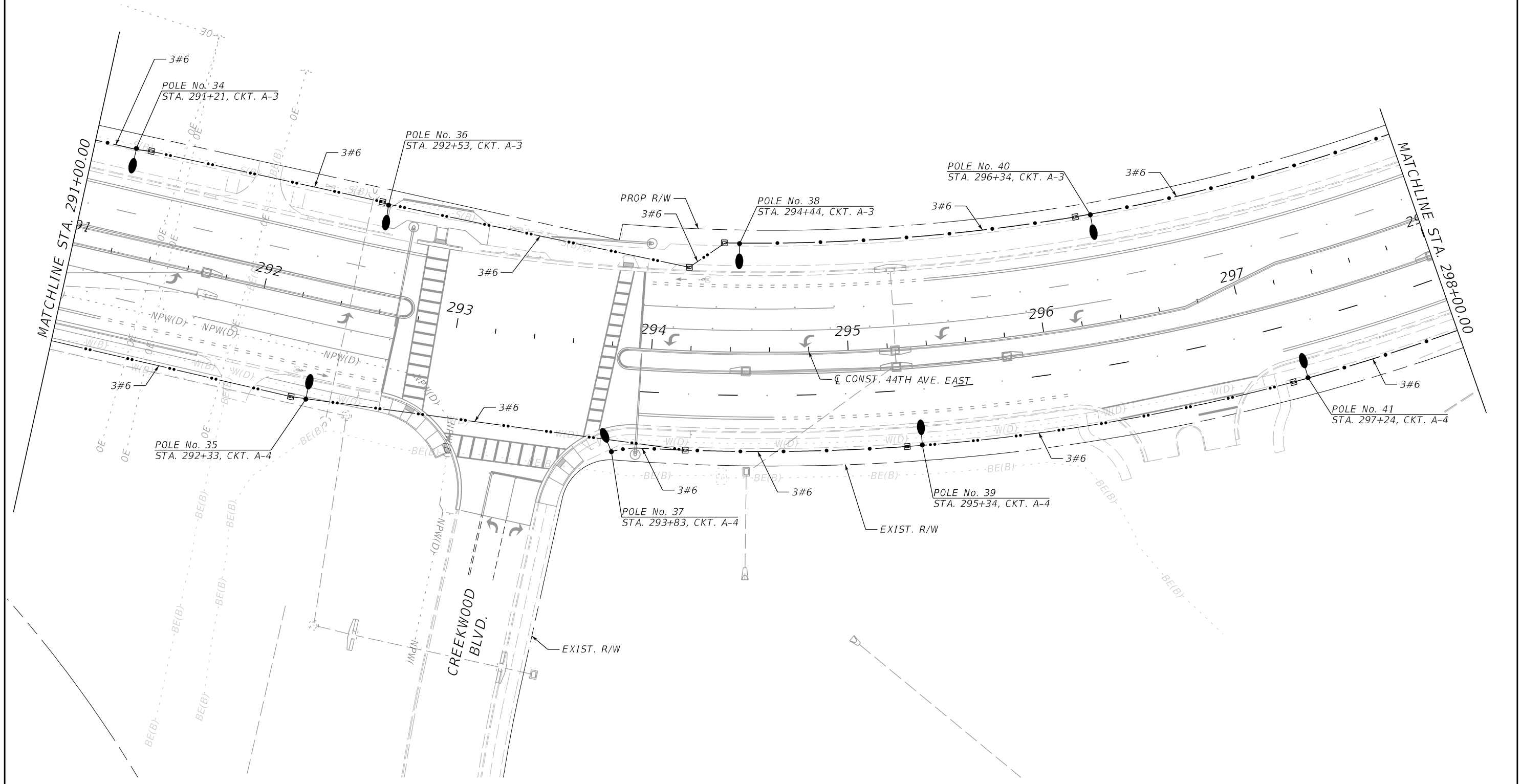


LOAD CENTER "A"
 STA. 289+00, 77' RT.
 240/480V, 3 WIRE, 1P
 (PENDING COORDINATION WITH
 FPL FOR CONFIRMATION OF
 POWER SERVICE)
 500 LF OF #2 SERVICE WIRE

| | | | | | | | | | | | | | |
|--|--|--|--|---|--|-------------------------------------|--|--------------------------------|--|--|--|-------------------|--|
| SCALE AS NOTED DESIGNED BY BB DRAWN BY GS CHECKED BY MO | | | | HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 CERTIFICATE OF AUTHORIZATION 4213 | | DATE 09/2019 PROJECT NO. 6045662 | | MANATEE COUNTY PUBLIC WORKS | | DESIGN ENGINEER BIJAN BEHZADI FL. LICENSE NO. 43868 | | SHEET NO. L-II | |
| REVISIONS No. DATE BY | | | | | | 3:37:22 PM 9/20/2019 | | PW:\ | | LIGHTING PLAN (5) | | | |

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44TH AVENUE EAST



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| No. | | REVISIONS | | DATE | BY | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | LIGHTING PLAN (6) | SHEET NO. |
| | | | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | L-12 |
| | | | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | |
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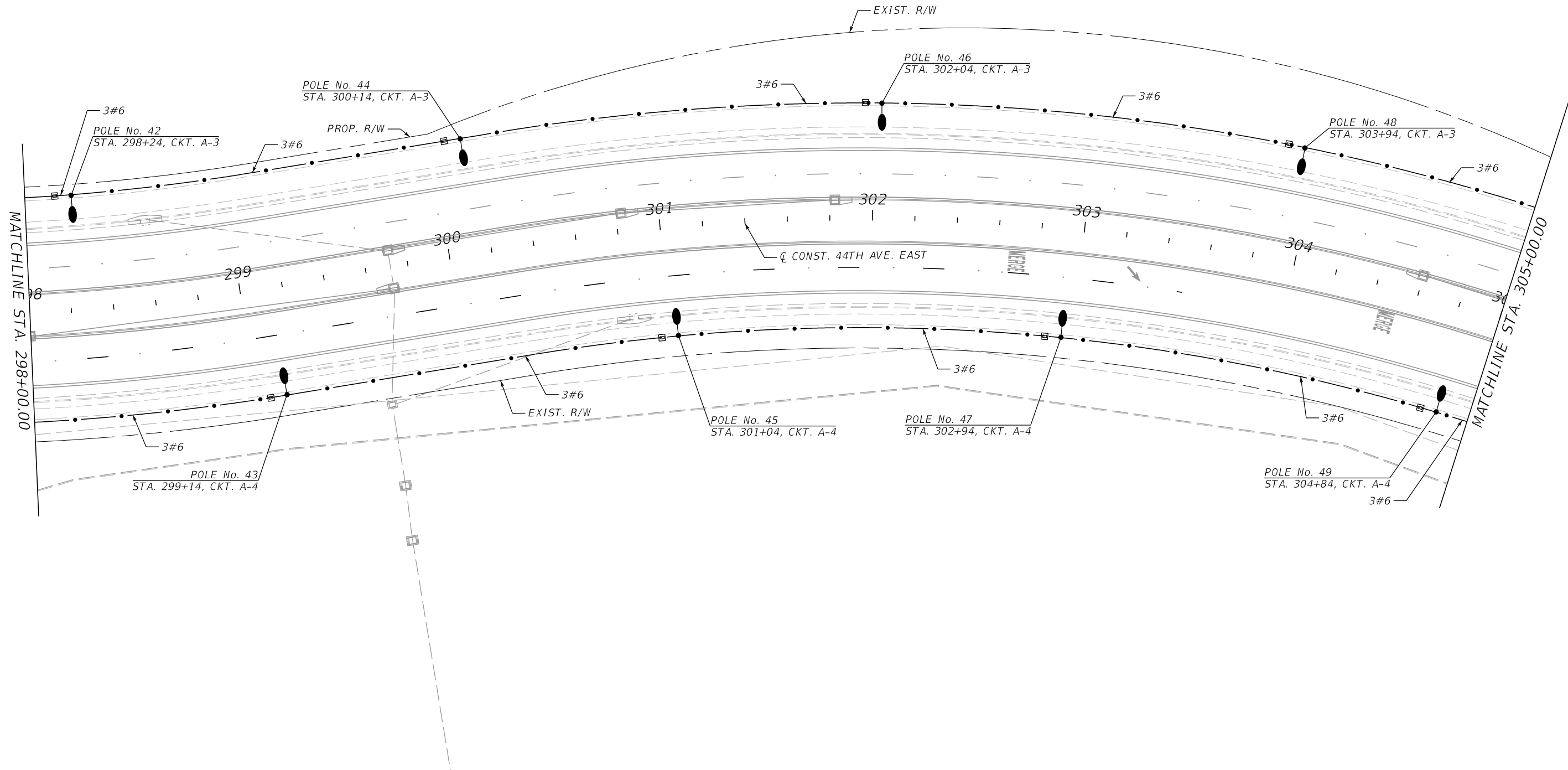
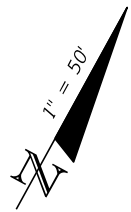
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9/20/2019

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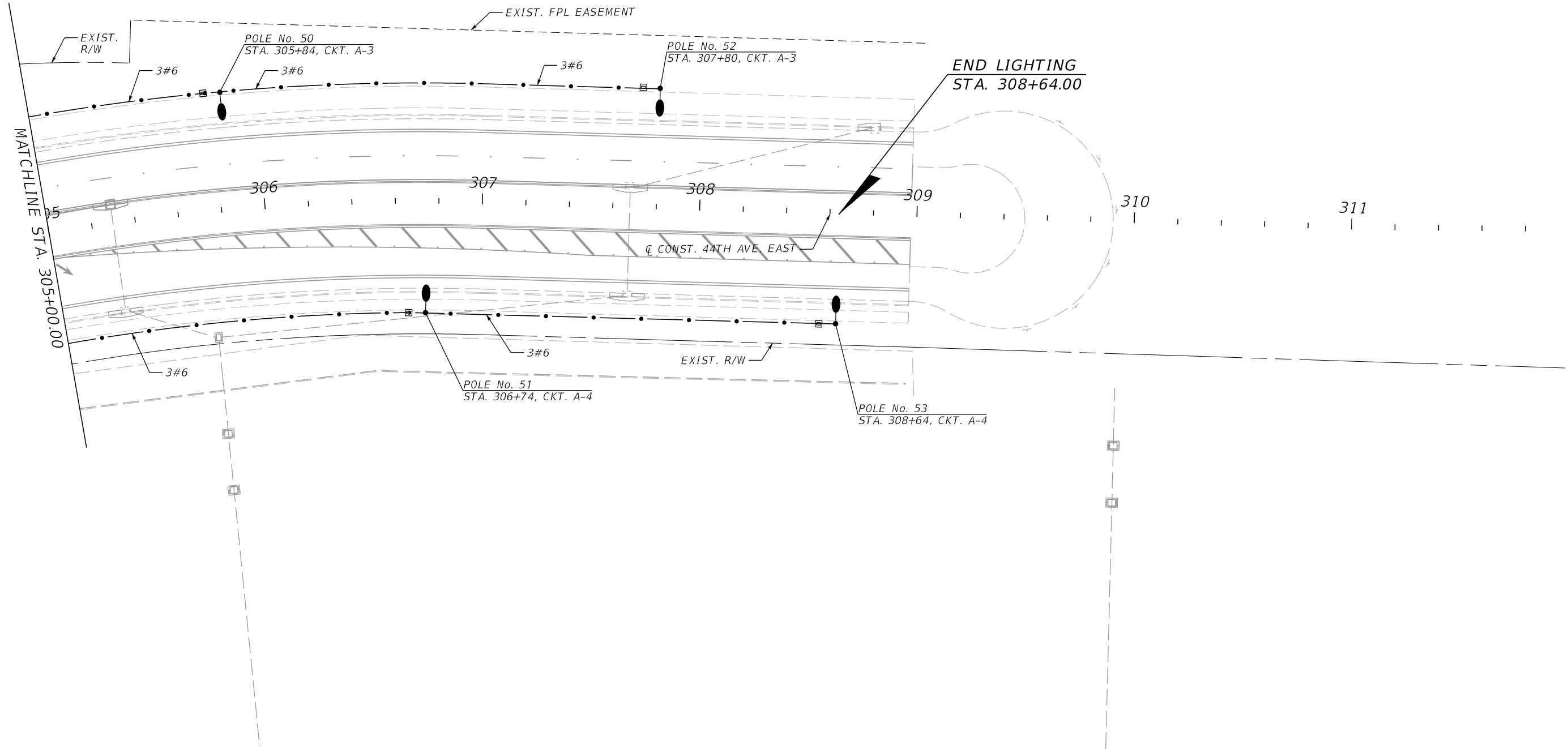
44TH AVENUE EAST




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|-------------|-----------|----------|--|-----------------------------------|----|----------------|--|--------------|--|-------------------|--|---------------|--|-----------|--|
| SCALE | | AS NOTED | | HDR ENGINEERING, INC. | | DATE | | 09/2019 | | DESIGN ENGINEER | | BIJAN BEHZADI | | SHEET NO. | |
| DESIGNED BY | | BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. | | 6045662 | | FL. LICENSE NO. | | 43868 | | L-13 | |
| DRAWN BY | | GS | | SARASOTA, FLORIDA 34232 | | MANATEE COUNTY | | PUBLIC WORKS | | LIGHTING PLAN (7) | | | | | |
| CHECKED BY | | MO | | CERTIFICATE OF AUTHORIZATION 4213 | | Manatee County | | FLORIDA | | | | | | | |
| No. | REVISIONS | | | DATE | BY | 3:37:29 PM | | 9/20/2019 | | PW:\ | | | | | |

44TH AVENUE EAST



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| No. | | REVISIONS | | DATE | BY | SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 |  MANATEE COUNTY PUBLIC WORKS | DESIGN ENGINEER | BIJAN BEHZADI | LIGHTING PLAN (8) | SHEET NO. | L-14 |
| | | | | | | DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | | FL. LICENSE NO. | 43868 | | | |
| | | | | | | DRAWN BY | GS | SARASOTA, FLORIDA 34232 | | | | | | | | |
| | | | | | | CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | | | | |

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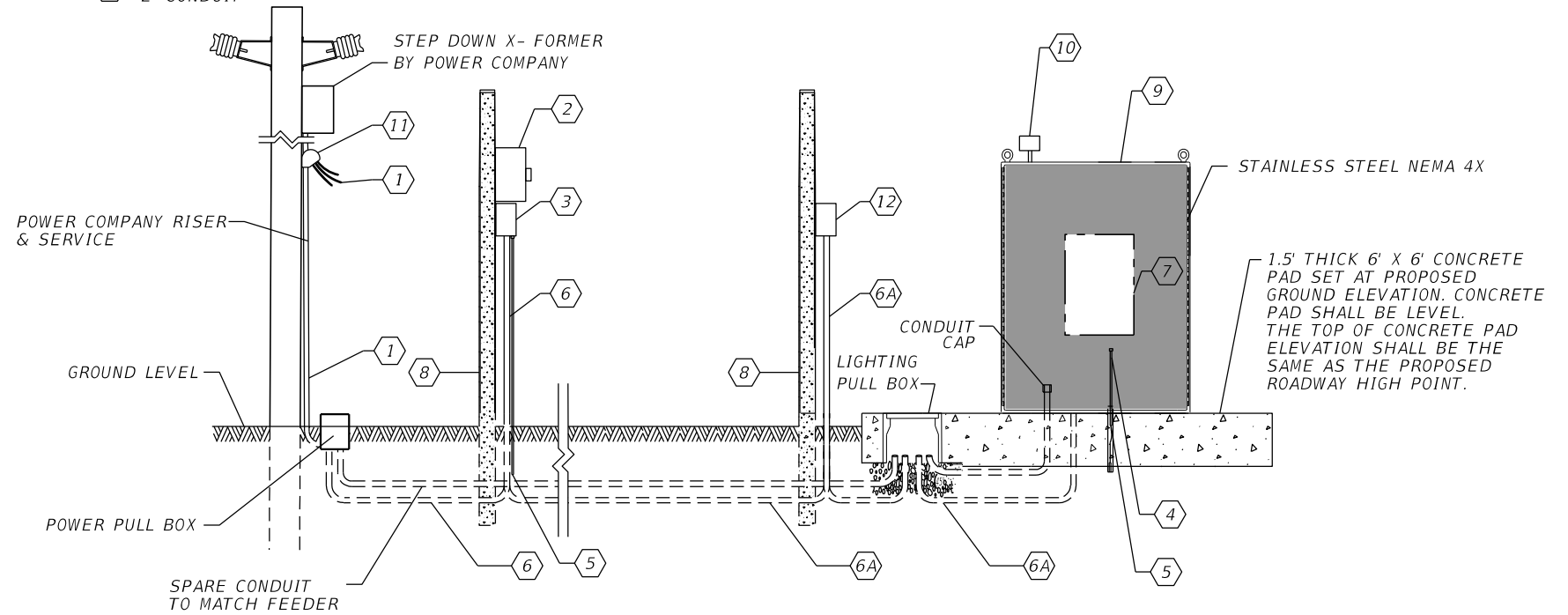
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**LIGHTING CONTROL PANEL
SCHEMATIC DETAILS FOR DISTRIBUTION POINT 'A'**


| DISTRIBUTION SCHEDULE | | | | | |
|-----------------------|-----------------------------|------------------------------|---|----------------|--------------|
| DISTRIBUTION POINT | UNDERGROUND SERVICE FEEDER | CONTROL PANEL MAIN CKT. BKR. | BRANCH CIRCUIT BREAKER | LTG. CONTACTOR | SERVICE MAIN |
| LIGHTING PANEL "A" | THREE # 2 AWG IN 2" CONDUIT | 100 A FRAME 100 A TRIP | CKT A-1 : 30 A, 2-POLE CKT A-2 : 30 A, 2-POLE CKT A-3 : 30 A, 2-POLE CKT A-4 : 30 A, 2-POLE CKT A-5 : 30 A, 2-POLE (SPARE) CKT A-6 : SPACE | 100 A | 100 A |

KEY NOTES:

- ① 240/480V SINGLE PHASE 3-WIRE POWER COMPANY UNDERGROUND SERVICE FEEDER, BY POWER COMPANY.
- ② METER SOCKET BY CONTRACTOR. METER BY POWER COMPANY.
- ③ SERVICE MAIN - 480 VOLT, MINIMUM 25,000 AIC, 2 POLE, SOLID NEUTRAL NEMA 4X ENCLOSED CIRCUIT BREAKER RATED FOR SERVICE ENTRANCE. BOND NEUTRAL TO GROUND.
- ④ #2 INSULATED COPPER GROUND WIRE IN 3/4" RIGID GALVANIZED STEEL CONDUIT. BOND THE SERVICE NEUTRAL TO GROUND
- ⑤ TWO TEN FOOT COPPER CLAD GROUND ROD 5/8" DIA.
- ⑥ UNDERGROUND FEEDER SIZE IN RIGID GALVANIZED STEEL CONDUIT. - SEE MAIN SERVICE PANEL DETAILS.
- ⑥A LIGHTING CONTROL PANEL FEEDER 3 - #2 AWG AND 1 - #6 AWG (GND.) IN 2" CONDUIT
- ⑦ PANEL BOARD "A", 480V, SINGLE PHASE, 3-WIRE WITH GROUND BUS IN NEMA 1 ENCLOSURE, WITH 2-POLE, 25,000 AIC BRANCH CIRCUIT BREAKERS. NUMBER AND RATING OF BRANCH CIRCUIT BREAKERS SHALL BE AS INDICATED ON DISTRIBUTION SCHEDULE.
- ⑧ TYPE P-II CONCRETE POLE, 12 FEET HIGH TO SUPPORT ELECTRICAL
- ⑨ LIGHTING CONTROL PANEL NEMA 4X ENCLOSURE. DIMENSIONS AS NECESSARY FOR EQUIPMENT INSIDE. ALL WIRING BETWEEN ENCLOSURES SHALL BE IN RIGID GALVANIZED STEEL CONDUIT (RGSC).
- ⑩ PHOTO ELECTRIC SWITCH, 120 V RATED, SHOWN OUTSIDE FOR CLARITY.
- ⑪ WEATHERHEAD BY POWER COMPANY.
- ⑫ NON-FUSED SAFETY SWITCH, 100A, 2P, 600V.

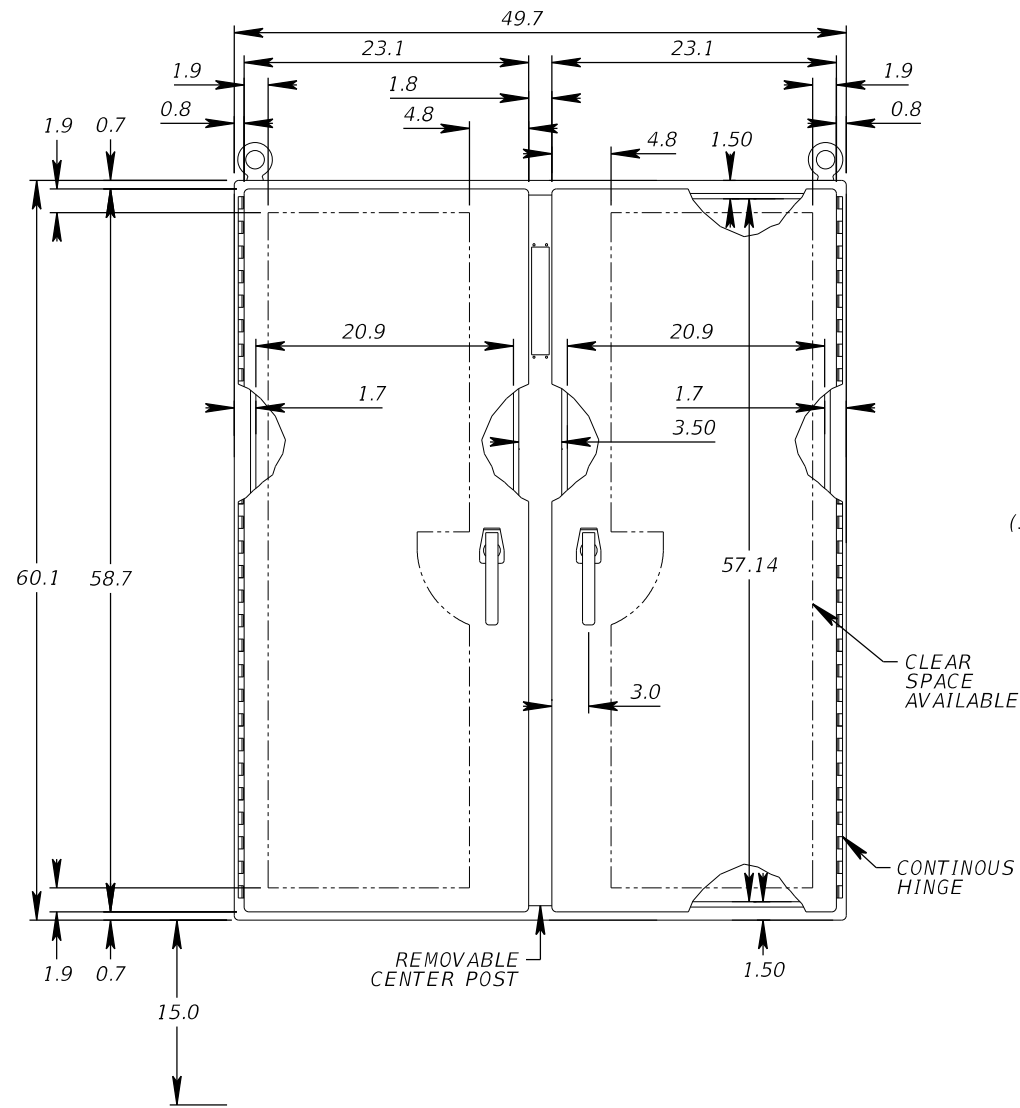


GENERAL NOTE:
ALL ELECTRICAL EQUIPMENT INCLUDING SERVICE, MAIN CIRCUIT BREAKER, LIGHTING CONTROL PANEL LOAD CENTER, POWER TRANSFORMER, LIGHTING CONTACTOR SHALL BE PROVIDED WITH 75° C TERMINAL LUG CONNECTORS.

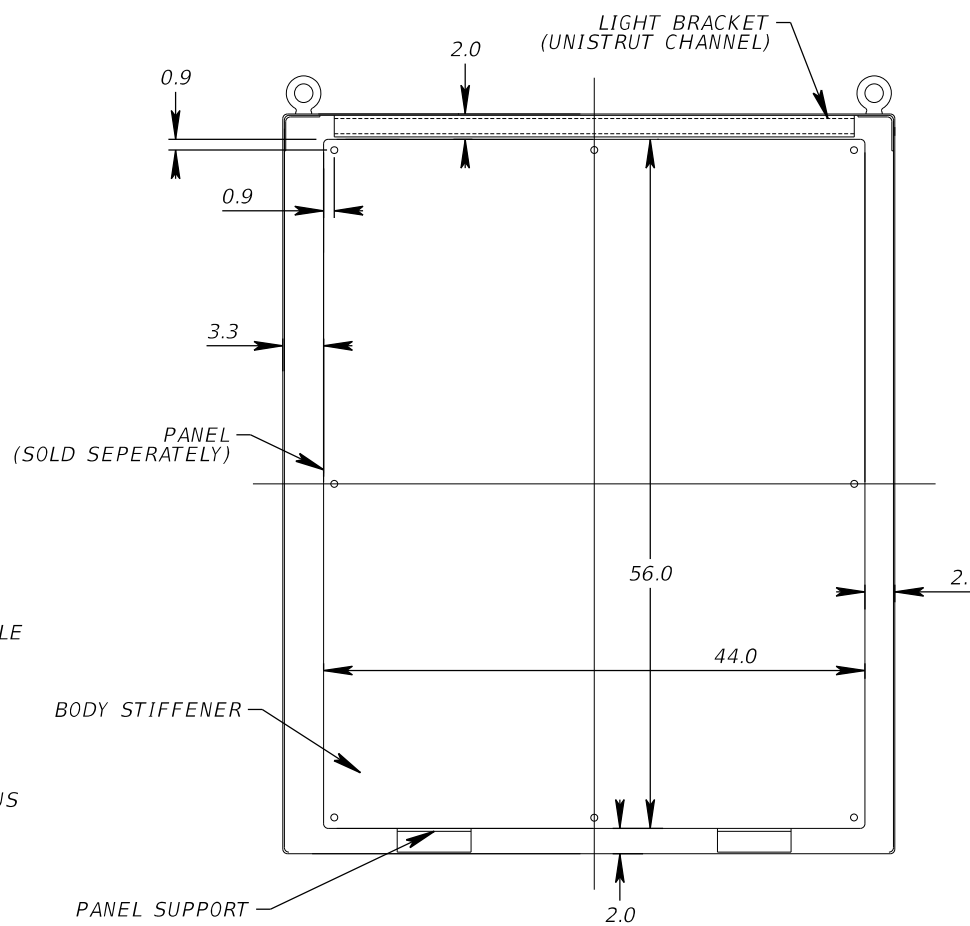
| | | | | | | | |
|-------------|-----------|-----------------------------------|--|---------|-------------------------------|---------------|-----------|
| SCALE | AS NOTED | HDR ENGINEERING, INC. | DATE | 09/2019 | DESIGN ENGINEER | BIJAN BEHZADI | SHEET NO. |
| DESIGNED BY | BB | 2601 CATTLEMEN ROAD, SUITE 400 | PROJECT NO. | 6045662 | FL. LICENSE NO. | 43868 | L-15 |
| DRAWN BY | GS | SARASOTA, FLORIDA 34232 |  MANATEE COUNTY PUBLIC WORKS | | SERVICE CENTER DETAILS | | |
| CHECKED BY | MO | CERTIFICATE OF AUTHORIZATION 4213 | | | | | |
| No. | REVISIONS | DATE | BY | MO | | | |

CONSTRUCTION NOTES:

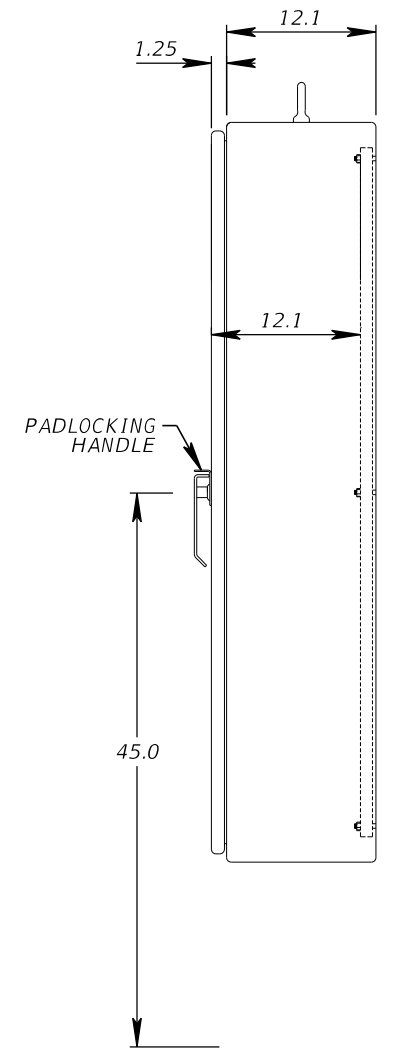
1. 10 GAUGE STAINLESS STEEL OR ALUMINUM BODIES AND DOORS.
2. CONTINUOUS WELDED SEAMS GROUND SMOOTH.
3. HEAVY GAUGE CONTINUOUS HINGES TO SECURE DOORS.
4. HEAVY DUTY 3-POINT PADLOCKING HANDLES ON ALL DOORS.
5. PRINT POCKET AND PANEL SUPPORTS.
6. 15-INCH FLOOR STANDS WELDED TO ENCLOSURE.
7. DOORS WITH CLOSED CELL NEOPRENE GASKET.
8. HEAVY DUTY LIFTING EYES AND PROVISIONS FOR FLUORESCENT LIGHTING.
9. GROUNDING PROVISIONS.
10. KEY AND LOCKS. PROVIDE FOUR (4) KEYS TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION.
11. ANSI 61 GRAY POLYESTER POWDER INSIDE AND OUT OVER PHOSPHATIZED SURFACES.
12. UL 508 LISTED.



FRONT VIEW



SECTION Y-Y



SIDE VIEW

ALL UNITS ARE MEASURED IN INCHES.

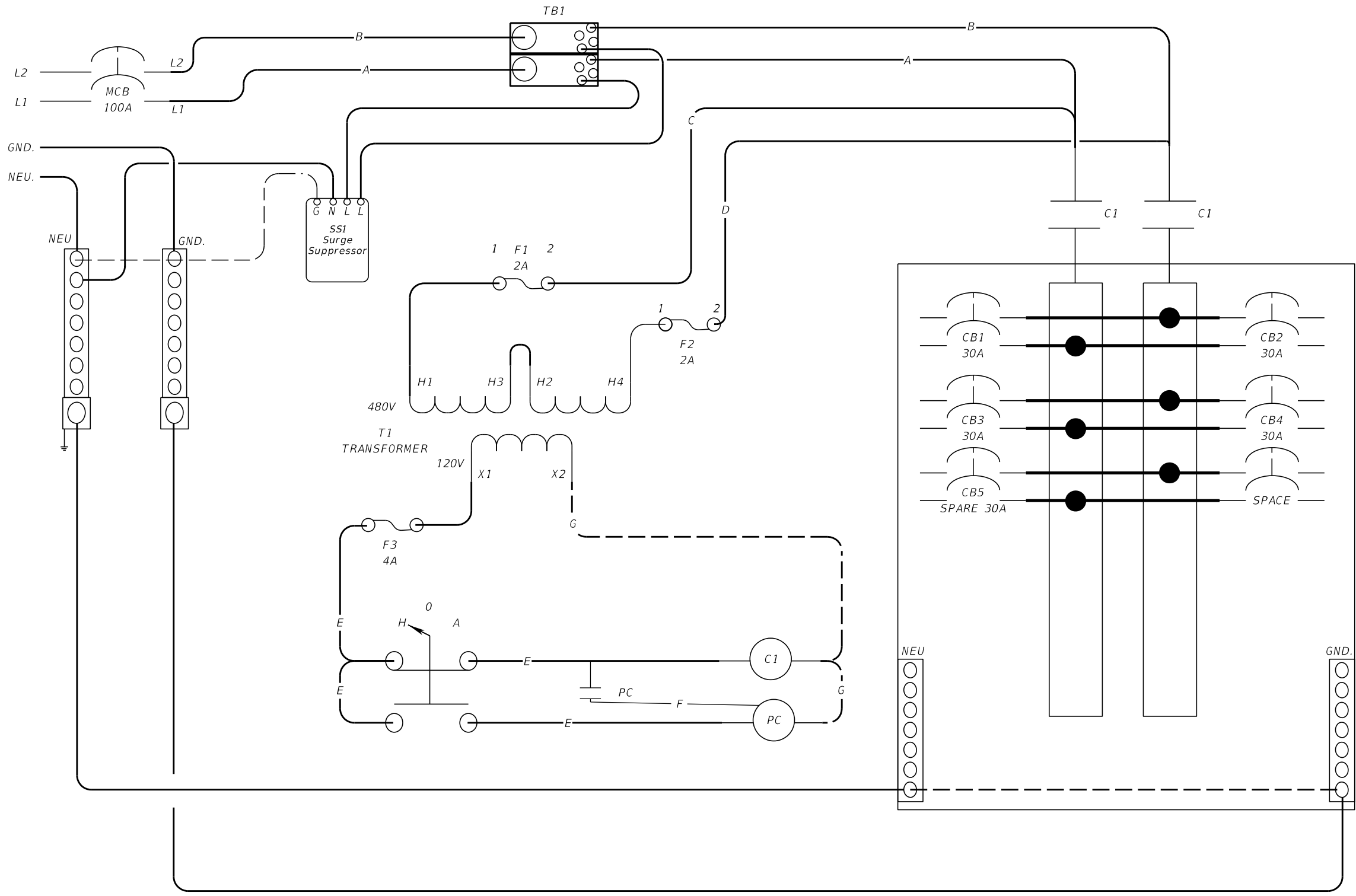
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| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. L-16 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | LOAD CENTER ENCLOSURE DETAILS | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\ | | | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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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.



| | AWG | COLOR |
|---|-----|--------|
| A | #2 | BROWN |
| B | #2 | ORANGE |
| C | #12 | BROWN |
| D | #12 | ORANGE |
| E | #12 | BLACK |
| F | #12 | RED |
| G | #12 | WHITE |

| | | | | | | | | | |
|----------------|-----------|--------------------------------|----|-----------------------------------|--|-------------------------------|--|-----------------------------------|--|
| SCALE AS NOTED | | HDR ENGINEERING, INC. | | DATE 09/2019 | | DESIGN ENGINEER BIJAN BEHZADI | | SHEET NO. L-17 | |
| DESIGNED BY BB | | 2601 CATTLEMEN ROAD, SUITE 400 | | PROJECT NO. 6045662 | | FL. LICENSE NO. 43868 | | DISTRIBUTION PANEL WIRING DIAGRAM | |
| DRAWN BY GS | | SARASOTA, FLORIDA 34232 | | CERTIFICATE OF AUTHORIZATION 4213 | | PW:\ | | | |
| CHECKED BY MO | | | | | | | | | |
| No. | REVISIONS | DATE | BY | | | | | | |

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MANATEE COUNTY PUBLIC WORKS