# MANATEE COUNTY PUBLIC WORKS DEPARTMENT

## CONTRACT PLANS

## MANATEE COUNTY **PROJECT NUMBER 6094360** CANAL ROAD (16TH AVENUE EAST) SEGMENT 1 - US 301 TO 17TH STREET EAST SIGNALIZATION PLANS

TABULATION OF QUANTITIES T-3 - T-4 GENERAL NOTES PAY ITEM NOTES T-7 - T-9 SIGNALIZATION PLAN LOCATION OF PROJECT T-10 - T-17 INTERCONNECT PLAN GUIDE SIGN WORKSHEET T-18 - T-19 T-20 - T-21 MAST ARM TABULATION SPLICING DIAGRAM Т-22 - Т-23 CABINET, CCTV, MVDS AND BLUETOOTH DETAILS CONCRETE APRON & CABLE ROUTE MARKER DETAILS R-17-R-18-GENERATOR CABINET WIRING DIAGRAM PEDESTRIAN SIGNAL AND CABINET BASE DETAILS MAST ARM DATA TABLE (TO BE INCLUDED IN THE NEXT SUBMITTAL) PALN VI∉ 45 almetto  $\boldsymbol{\mathcal{K}}$ 32 311 3.1 D T-33-5 T-33-S 4 T-34-S T-34-S END SIGNALIZATION STA. 249+58.00 37th St. ٦.  $\bigcirc$ HOMSON セス AIRFIELD 11 8 Ŧŧ 12 MEMPH ٤ Η 13 ШШ END EXCEPTION RAILROAD CROSSING <u>R-17-E</u> R-18-E

STA. 213+35.73

BEGIN SIGNALIZATION

STA. 199+60.00

BEGIN EXCEPTION STA. 213+03.47

STA. 213+67.97

## INDEX OF SIGNALIZATION PLANS

KEY SHEET

SHEET DESCRIPTION

SIGNATURE SHEET

SHEET NO.

T-1 T-2

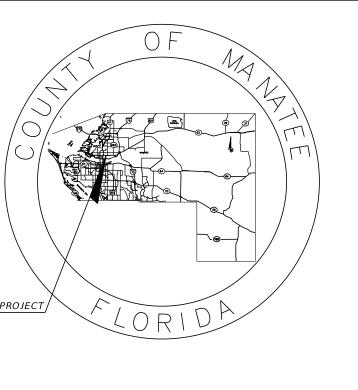
T-5 Т-6

T-24

T-25

T-26 T-27

T-28



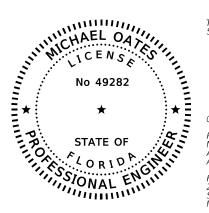
## SIGNALIZATION PLANS ENGINEER OF RECORD: MICHAEL J. OATES, P.E.

P.E. NO.: 49282 HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232 VENDOR NO. 47-0680568



MANATEE CO. PROJECT MANAGER: MICHAEL L. STURM, P.E.

FISCAL	SHEET
YEAR	NO.
21	T-1



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 MICHAEL OATES, P.E. NO. 49282

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

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-4	TABULATION OF QUANTITIES
T-5	GENERAL NOTES
Т-6	PAY ITEM NOTES
T-7 - T-9	SIGNALIZATION PLAN
T-10 - T-17	INTERCONNECT PLAN
T-18 - T-19	GUIDE SIGN WORKSHEET
T-20 - T-21	MAST ARM TABULATION
T-22 - T-23	SPLICING DIAGRAM
T-24	CABINET, CCTV, MVDS AND BLUETOOTH DETAILS
T-25	CONCRETE APRON & CABLE ROUTE MARKER DETAILS
T-26	GENERATOR CABINET WIRING DIAGRAM

No 70756 \* \* \* \* \*

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

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HDR ENGINEERING, INC. 2601 CATTLEMEN ROAD, SUITE 400 SARASOTA, FLORIDA 34232-6212 CHESTER A. SMITH III, P.E. NO. 70756

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61615-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-27 T-28	PEDESTRIAN SIGNAL AND CABINET BASE DETAILS MAST ARM DATA TABIF
1-20	(TO BE INCLUDED IN THE NEXT SUBMITTAL)

				SCALE AS NOTED		HDR Engineering, Inc.	DATE				DESIGN ENGINEE
				DESIGNED BY MO	כר	2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	12/2021	Manatee	MANATEE C	OUNTY	MICHAEL J. OATE
				DRAWN BY	ノヽ		PROJECT NO.	County	PUBLIC W		FL. LICENSE NO.
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	SHEET
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TABULATION OF QUANTITIES SHEET NUMBERS PAY ITEM DESCRIPTION UNIT T - 7 T - 8 T - 9 T - 10 T - 11 NO. PLAN FINAL PLAN FINAL PLAN FINAL PLAN FINAL PLAN FINAL PLAN CONDUIT, FURNISH & INSTALL, OPEN TRENCH 530-2-11 LF 190 325 360 605 CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE LF 240 305 530-<u>2-12</u> 110 532-7-1 SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL ΡI 533-1-121 FIBER OPTIC CABLE, F&I, UNDERGROUND.2-12 FIBERS LF 540 FIBER OPTIC CABLE, F&I, UNDERGROUND,49-96 FIBERS LF 533-1-123 FIBER OPTIC CABLE, RELOCATE, UNDERGROUND 533-1-420 LE FIBER OPTIC CONNECTION, INSTALL, SPLICE 633-2-31 ΕA FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE 533-3-11 EΑ 533-3-12 FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY ΕA FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL 633-3-15 ΕA 35-2-11 PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE EΑ 12 2' 535-2-12 PULL & SPLICE BOX, F&I, 24" x 36" COVER SIZE FΑ PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE 535-2-13 ΕA ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR 39-1-122 AS 539-1-620 ELECTRICAL POWER SERVICE. REMOVE UNDERGROUND AS ELECTRICAL SERVICE WIRE, FURNISH & INSTALL LF 39-2-1 65 65 EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY ΕA 539-4-6 PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE 541-2-12 FΑ 641-2-60 PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE ΕA 546-1-11 ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL ΕA ALUMINUM SIGNALS POLE, REMOVE 646-1-60 FA 549-21-3 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40' ΕA 649-21-6 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50' ΕA STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60' 649-21-10 FΑ 549-21-13 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50' ΕA 549-21-21 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78 ΕA 549-26-5 STEEL MAST ARM ASSEMBLY, REMOVE, DEEP FOUNDATION- BOLT ON ATTACHMENT ΕA 550-1-14 VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY AS 50-1-16 VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY AS VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY AS 550-1-19 553-1-11 PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY AS 560-3-11 VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT FΔ VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT ΕA 560-3-12 560-6-121 VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT ΕA VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT 660-6-122 ΕA PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD 665-1-11 EΑ TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION 570-5-111 AS 670-5-600 TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET AS 682-1-113 ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION ΕA 684-1-1 MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL ΕA 585-1-12 UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION ΕA 700-3-201 SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF EΑ 00-5-22 INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF ΕA 700-11-391 ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT AS AC POWERED, BLANK OUT SIGN, UP TO 12 SF DESIGN ENGINEER DATE AS NOTED HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 12/2021 MICHAEL J. OATES **Manatee** MANATEE COUNTY ΜΟ Sarasota, FL 34232-6233 County PUBLIC WORKS PROJECT NO. FL. LICENSE NO. SМ

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DATE BY

REVISIONS 12/9/2021

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SHEET NUMBERS PAY ITEM DESCRIPTION UNIT T - 14 T - 17 T - 15 T - 16 NO. PLAN FINAL PLAN FINAL PLAN FINAL PLAN FINAL PLAN FINAL CONDUIT, FURNISH & INSTALL, OPEN TRENCH 595 530-2-11 LF 592 701 417 CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE LF 530-2-12 87 88 532-7-1 SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL ΡI 533-1-121 FIBER OPTIC CABLE, F&I, UNDERGROUND,2-12 FIBERS LF 270 533-1-123 FIBER OPTIC CABLE, F&I, UNDERGROUND,49-96 FIBERS LF 200 FIBER OPTIC CABLE, RELOCATE, UNDERGROUND 533-1-420 LE 357 751 732 555 FIBER OPTIC CONNECTION, INSTALL, SPLICE 633-2-31 ΕA 16 FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE 533-3-11 EΑ 533-3-12 FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY ΕA FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL 633-3-15 ΕA 35-2-11 PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE EΑ 535-2-12 PULL & SPLICE BOX, F&I, 24" x 36" COVER SIZE FΑ PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE 535-2-13 ΕA ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR 39-1-122 AS 539-1-620 ELECTRICAL POWER SERVICE. REMOVE UNDERGROUND AS ELECTRICAL SERVICE WIRE, FURNISH & INSTALL LF 39-2-1 EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY ΕA 539-4-6 541-2-12 PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE FΑ 641-2-60 PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- PEDESTAL/SERVICE POLE ΕA 546-1-11 ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL ΕA ALUMINUM SIGNALS POLE, REMOVE 646-1-60 FΑ STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40' 549-21-3 ΕA 649-21-6 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50' ΕA STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60' 549-21-10 FΑ 549-21-13 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50' ΕA 549-21-21 STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78 ΕA 549-26-5 STEEL MAST ARM ASSEMBLY, REMOVE, DEEP FOUNDATION- BOLT ON ATTACHMENT ΕA 550-1-14 VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY AS 50-1-16 VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY AS AS 550-1-19 VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY 553-1-11 PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY AS 560-3-11 VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT FΔ VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT ΕA 560-3-12 560-6-121 VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT ΕA VEHICLE DETECTION SYSTEM- AVI. BLUETOOTH. FURNISH & INSTALL. ABOVE GROUND EQUIPMENT 660-6-122 ΕA PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD 665-1-11 EΑ TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION 570-5-111 AS 670-5-600 TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET AS 682-1-113 ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION ΕA 684-1-1 MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL ΕA 585-1-12 UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION ΕA 700-3-201 SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF EΑ 00-5-22 INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF ΕA 700-11-391 ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT-AS AC POWERED, BLANK OUT SIGN, UP TO 12 SF SCALE AS NOTED DATE DESIGN ENGINEER UDB Engineering In

TABULATION OF QUANTITIES

			DESIGNED BY	MO	LDD 2601 Suite	Engineering, Inc. Cattlemen Road 400 sota, FL 34232-6233	12/2021	Manatee	MANATEE	COUNT
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REVISIONS	DATE	BY	CHECKED BY	IR			6094360			
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MICHAEL J. OATES ANATEE COUNTY FL. LICENSE NO. 49282

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## GENERAL NOTES

- THE CONTRACTOR SHALL CONTACT THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S PROJECT MANAGEMENT DIVISION BEFORE STARTING WORK.
- 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 DELEVANT TO ANY CHEL MODIFICATION TO THE APPENDER 2. RELEVANT TO ANY FIELD MODIFICATIONS THAT ARE NECESSARY.
- AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, PERMITTEE TO CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON: 3.

MANATEE COUNTY PROJECT MANAGEMENT DIVISION MICHAEL STURM, P.E. 1022 26TH AVENUE EAST BRADENTON, FLORIDA 34208 PHONE: 941-708-7450 EXT. 7332

ONE WEEK PRIOR TO THE BEGINNING OF THE TRAFFIC SIGNAL INSTALLATION OR TURN ON OF A NEW SIGNAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER: 4.

MANATEE COUNTY PROJECT MANAGEMENT DIVISION 1022 26TH AVENUE EAST BRADENTON, FLORIDA 34208 PHONE: 941-708-7450 EXT. 7332

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION VISHAL KAKKAD 2101 47TH TERRACE EAST BRADENTON, FLORIDA 34203 PHONE: 941-749-3500 EXT. 7812

AT THE COMPLETION OF THE PROJECT, PROVIDE AS-BUILT PLANS IN 5. ELECTRONIC FORM (PDF) TO:

FDOT TRAFFIC OPERATIONS LUIS RUIZ, P.E., TSM&O ENGINEER - ARTERIALS 801 N. BROADWAY AVE 801 N. BROADWAY AVE P.O. BOX 1249 BARTOW, FL 33830-1249 EMAIL: LUISRUIZ@DOT.STATE.FL.US PHONE: 863-519-2216

- DELIVER THREE SETS OF RECORD DRAWINGS, TWO SETS OF IMSA INSPECTION FORMS AND ONE COMPACT DISC OF RECORD DRAWINGS TO MR. AARON BURKETT, THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION MANAGER AT 2904 12TH ST CT E, BRADENTON, FL 34208. RECORD DRAWINGS MUST BE DELIVERED TO THE COUNTY 5 BUSINESS 6. DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.
- 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 7. THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.
- 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. PROMOTE PROJECT COMPLETION WITHIN CONTRACT TIME.
- 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. CONSTRUCTION.
- 10. 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.

- 11. 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
- 12. THE CONTRACTOR IS TO DE-WATER THE POLE FOUNDATION EXCAVATION IF THE ELEVATION OF WATER IS HIGHER THAN THE ELEVATION OF THE FOUNDATION BASE
- 13. 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.
- 14. #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.
- 15. 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
- 16. GROUNDING: ALL COSTS FOR GROUNDING SHALL BE INCLUDED IN THE COST OF THE ITEM BEING GROUNDED. ALL GROUND ROD ASSEMBLIES FOR POLES, SERVICES, CABINETS, AND OTHER RELATED EQUIPMENT SHALL BE BONDED TOGETHER TO FORM AN INTEGRATED GROUNDING SYSTEM USING #6 AWG THHN COPPER WIRE. THE UPPER END GROUNDING SYSTEM USING #6 AWG THHN COPPER WIRE. THE UPPER EN. OF ALL GROUND RODS SHALL BE 18 INCHES BELOW GROUND ELEVATION. 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. GROUNDING CONDUCTOR MUST BE #6 OR LARGER INSULATED COPPER.

CONNECTING DEVICES SHALL BE NON-CORROSIVE SPLIT BOLTS, CLAMPS, PRESSURE CONNECTORS, OR OTHER APPROVED MEANS TO ENSURE A POSITIVE CONNECTION.

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.

- 17. 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 TOP OF FOUNDATION ELEVATION ON "MAST ARM TABULATION" SHEET.
- 18. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR BORING.
- 19. CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO THE ENGINEER PRIOR TO CONSTRUCTION FOR APPROVAL.
- 20. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/ FOUNDATIONS SHALL MEET THE FOLLOWING REQUIREMENTS: I) 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.
- 21. CONTRACTOR SHALL UTILIZE FDOT STANDARD PLANS INDEX 102-600, 102-604, 102-615 AND 102-660 AS APPLICABLE DURING MAINTENANCE OF TRAFFIC OPERATIONS.
- 22. EXISTING SPEED LIMITS ARE AS FOLLOWS: 40/35 MPH ON 16TH AVENUE E (CANAL ROAD) 45 MPH ON US 301 40/30 MPH ON 17TH STREET E
- 23. 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
- 24. 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.
- 25. 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.
- 26. CONTRACTOR TO CONTACT TRAFFIC ENGINEERING DIVISION: MUKUNDA GOPALAKRISHNA (941-749-3500 EXT. 7813) TO OBTAIN IP ADDRESSES FOR FIELD DEVICES AND ETHERNET SWITCH CONFIGURATION INFORMATION.

- 29.

## CONDUIT NOTES

- OR FUSION SPLICE.
- ANY DAMAGE TO ANY UTILITY.
- 5.
- THE PLANS.
- 7.
- 8. THE SAME DAY/ NIGHT OPERATION.
- CATHODIC REACTION.
- 9.

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1					NOTED	2601 Cattlemen Road		NUL.		1
				DESIGNED BY	МО	Suite 400	12/2021	Manatee MAN	ATEE COUNTY	MICHAEL J. OATES
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## PAY ITEM NOTES

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.

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 AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE SPECIFIED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.

FOUR SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL MAST ARMS. THE SPARE CONDUIT SHALL BE CAPPED IN THE NEAREST PULL BOX. THERE SHALL BE A MINIMUM OF FOUR RUNS OF 2" CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET & THE CONTROLLER CABINET, ITSELF.

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 MANATE 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.

### З. 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.

STANDARD PULL BOX DIMENSIONS SHALL BE 17" X 30" X 12" AND THE LID SHALL BE STAMPED "MANATEE COUNTY TRAFFIC SIGNAL" ON THE COVER. STANDARD FIBER OPTIC COMMUNICATIONS PULL BOX DIMENSIONS SHALL BE 24" X 36" X 24" 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 FLECTRIC SERVICE LINES AND MONITOR WORK WHILE LINES ARE REROUTED ONTO THE NEW SERVICE POLE WILL BE INCLUDED UNDER THIS PAY ITEM.

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 - ONE 15 AMP FOR INTERNALLY FOR CONTROLLER CABINET MAIN BREAKER. ONE 15 AMP FOR FUTURE USE AND ONE 60 AMP FOR CONTROLLER CABINET MAIN BREAKER. ONE 15 AMP BREAKER FOR INTERNALLY ILLUMINATED SIGNS, ONE SIGNAL BREAKER AND SURGE SUPPRESSION BREAKER (FUTURE ÚSE) SHOULD BE INSTALLED.

5. 639-4-6

MANATEE COUNTY WILL NOT FURNISH THIS ITEM. THE CONTRACTOR SHALL FURNISH AND INSTALL THE HOUSING AND FOUNDATION / PAD. ALL COSTS FOR THE HOUSING FOUNDATION / PAD IS INCLUDED IN THE COST OF THIS PAY ITEM. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY TO OBTAIN THE DESIRED HOUSING DIMENSIONS.

649-21-3, 649-21-6, 649-21-10, 649-21-13 & 649-21-21: 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.

7. 650-1-14, 650-1-16 & 650-1-19:

USE SIGNAL HEAD SUPPORTING HANGER THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 15'

ALL SIGNAL HEADS SHALL HAVE ALUMINUM LOUVERED BACKPLATES INSTALLED BACKPLATES SHALL BE MANUFACTURED FOR THE SIGNAL HEADS USED & INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. THE BACKPLATE 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

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

9. 660-3-11:

SHALL INCLUDE ALL NECESSARY WAVETRONIX CLICKS UNITS FOR A COMPLETE AND OPERATIONAL SETUP.

10. 660-3-12:

SHALL INCLUDE WAVETRONIX SMARTSENSOR HD MATRIX OR HD ADVANCE MVDS 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.

11. 660-6-121 & 660-6-122:

THE CONTRACTOR SHALL FURNISH AND INSTALL BLUETOAD (BLUETOOTH UNIT) SPECTRA WITH RSU, POE UNIT AS SHOWN IN THE PLANS. (COORDINATE WITH THE VENDOR)

12. 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. STREET NAMES SHALL BE IN ACCORDANCE WITH THE STREET NAMES ON THE PLAN SHEETS.

## 13. 670-5-111:

670-5-111: USE A NEMA TS2 TYPE 1 CONTROLLER, P-44 CABINET ASSEMBLY 7006-TS2/FL TYPE 6 ENCLOSURE AS SHOWN IN TABLE 7-1 OF THE 2003 NEMA STANDARD TS2. THE NAZTEC ATC CONTROLLER SHALL COME EQUIPPED WITH 6 SERIAL PORTS AND ONE ETHERNET PORT. ALL CONTROLLER EQUIPMENT TO BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING ATMS SYSTEM (NAZTEC'S ATMS.NOW) AND SYNCHROGREEN TRAFFIC CONTROLLER SOFTWARE. THE CABINET SHALL COME EQUIPPED WITH A ETHERNET SWITCH PAID UNDER A SEPARATE PAY ITEM NUMBER AND ALL THE NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO AN ETHERNET-BASED FIBER OPTIC NETWORK, CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.

### TRAFFIC SIGNAL CONTROLLER BASE:

THIS ITEM SHALL INCLUDE THE INSTALLATION OF A CONCRETE BASE FOR THE CONTROLLER ASSEMBLY. THE CONTROLLER ASSEMBLY FOUNDATION SHALL HAVE A MINIMUM OF FOUR (4) - 2" CONDUIT SPARES. TWO (2) OF THE SPARES SHALL BE TERMINATED IN THE NEAREST PULL BOX AND FITTED WITH A WEATHERPROOF CAP. THE OTHER TWO (2) SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES. 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. ALL COSTS OF LABOR, CONCRETE, AND OTHER MATERIALS FOR THE CONTROLLER ASSEMBLY. TECHNICIAN PADS. STEPS AS REQUIRED. ARE INCLUDED IN THIS ITEM

INSTALL A PVC SLEEVE TO PREVENT THE GROUND ROD FROM DIRECT EMBEDMENT IN THE SLAB. EXTEND CONDUITS FOR FUTURE USE AT LEAST I8-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.

THE CONTROLLER BASE SHALL BE AT LEAST 2' HIGH OR THE SAME ELEVATION AS THE CROWN OF THE ROADWAY, WHICHEVER IS GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24". THE CABINET DOORS SHALL OPEN TOWARDS OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.

- TRAFFIC CONTROLLER: NAZTEC TS2 TYPE 1 980 ATC. - TRAFFIC CONTROLLER: NAZTEC TS2 TYPE 1, SIZE: TYPE - VI WITH FRONT AND BACK DOOR ACCESS.

### 14. 682-1-113:

THE CCTV CAMERA UNIT SHALL BE BOSCH ITS 7000 STARLITE SERIES 1080P 30x40.

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				DESIGNED BY	MO	Suite 400	12/2021	Manatee	MANATEE COUNTY	MICHAEL J. OATES	ĺ
				DD AWAY DV	МО	Sarasota, FL 34232-6233					1
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15. 684-1-1:

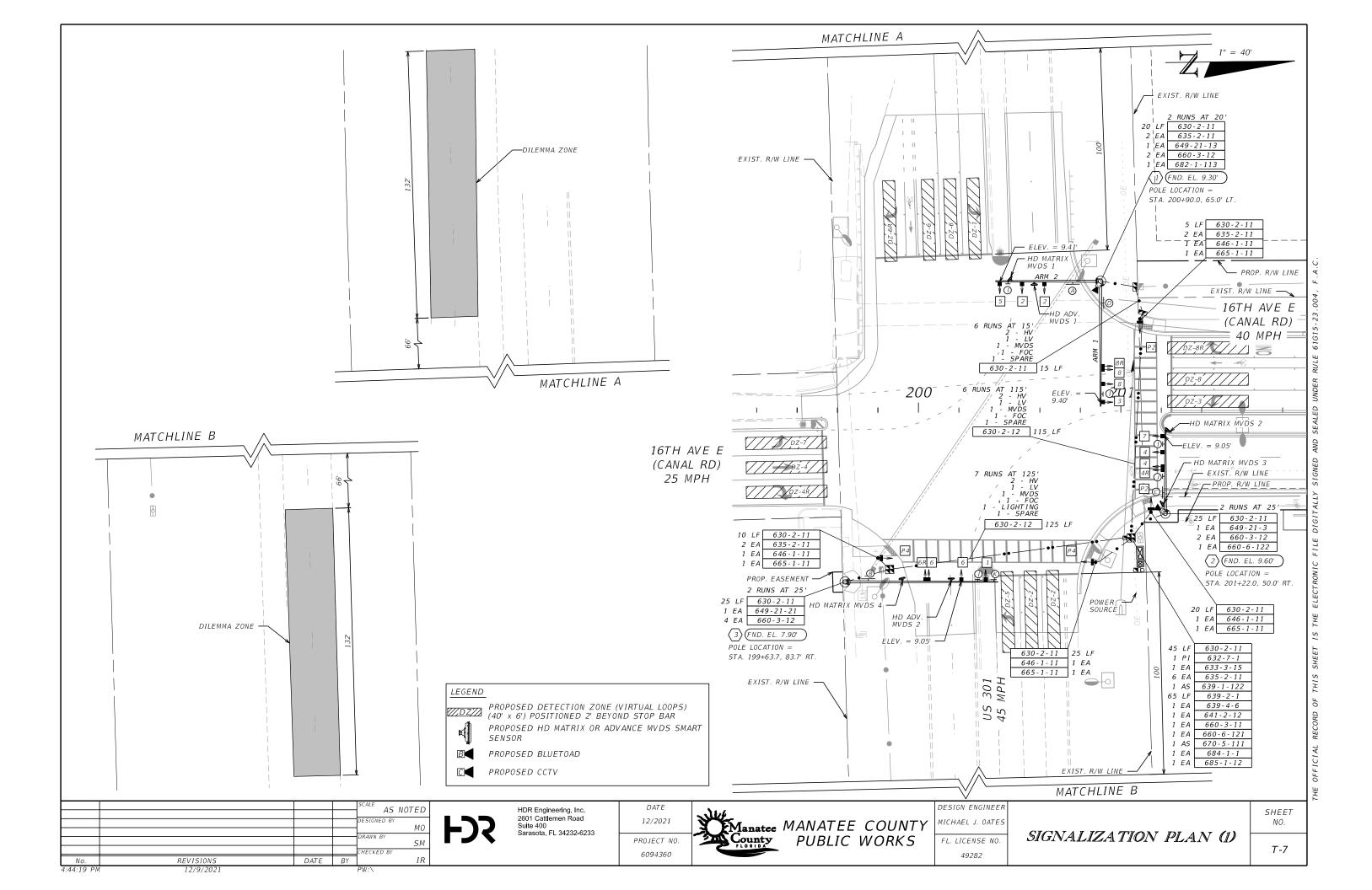
16. 685-1-12: SHALL INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) MODEL NO. ALPHA FXM 1100 EQUIPPED WITH AN ETHERNET PORT. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT. THE UPS SHALL BE SIZED TO ACCOMMODATE THE MAXIMUM CONNECTED LOAD. THE BATTERY BANK SHALL BE SIZED TO PROVIDE A MINIMUM 8 HOURS RUN TIME UNDER FULL LOAD.

17. 700-5-22:

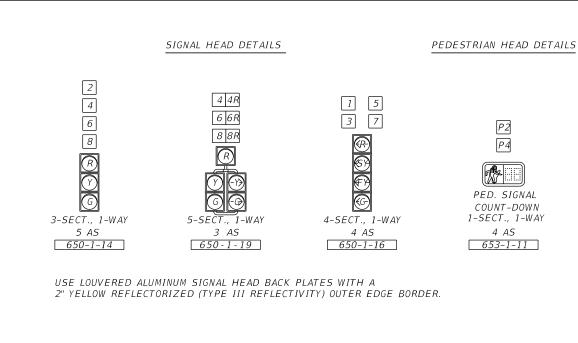
THE ETHERNET SWITCH SHALL BE A RUGGEDCOM SWITCH MODEL NUMBER RSG920P, PART NUMBER 6GK6092-0PS23-0BA0-ZA05+B05+C02+D02.

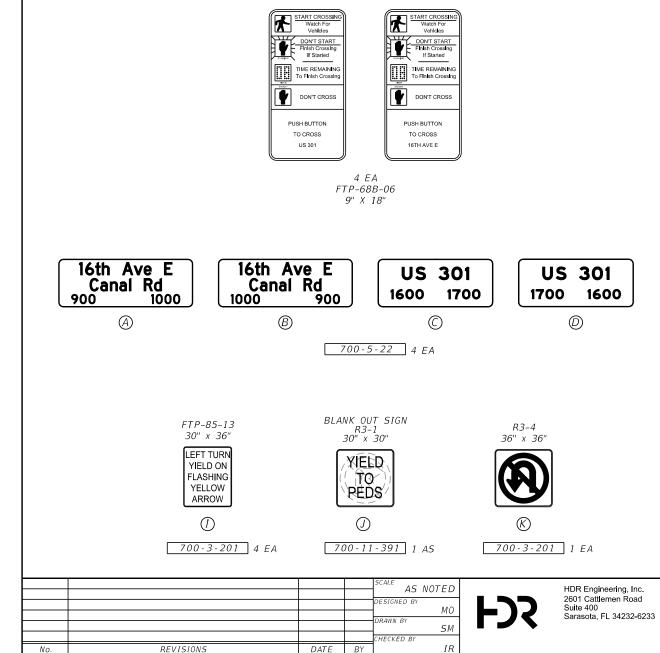
ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE EDGE LIT LED TYPE AND SHALL BE LISTED IN THE FDOT APPROVED PRODUCT LIST. THE COST OF THIS ITEM SHALL INCLUDE PROPERLY DESIGNED AND SIZED ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND ALL MISCELLANEOUS HARDWARE NECESSARY TO MOUNT THE SIGNS AS SHOWN IN THE PLANS. THE SIGNS SHALL BE POWERED USING IMSA 50-2 CABLE. THIS ITEM SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOCELL ON THE SERVICE POLE OR INSIDE SIGNAL CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE 120 VOLT LED BULBS. BULB TUBES LESS THAN 8 FEET SHALL HAVE 28.5 WATTS POWER CONSUMPTION AT 1900 LUMENS AND TUBES 8 FOOT OR GREATER SHALL HAVE 38 WATTS POWER CONSUMPTION AT 2600 LUMENS.

SHEET NO.



S.O.P. 10



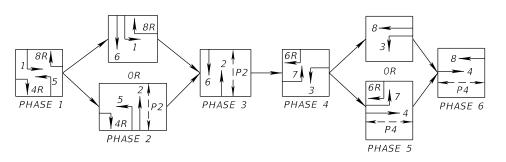


BY

REVISIONS

12/9/2021

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CONTROLLER OPERATIONS:

- MAJOR STREET IS US 301 (MOVEMENTS 1, 2, 5 AND 6) AND MINOR STREET IS 16TH AVE E (CANAL RD) (MOVEMENTS 3, 4, 7 AND 8).
- WHILE IN FLASH MODE, MOVEMENTS 2 & 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED. 2.
- 3 CONTROLLER CABINET SHALL BE WIRED AS AN SOP 10 (WITH RIGHT TURN OVERLAPS) WITH THE FOLLOWING: CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS 2 (P2) AND 4 (P4).
- REQUEST UPDATED SIGNAL TIMINGS FROM FDOT TSM&O ENGINEER ARTERIALS (863-519-2216) WHEN ALL LANES, STRIPING, SIGNALS AND PEDESTRIAN FACILITIES ARE IN THEIR FINAL CONFIGURATION AND THE SIGNAL IS OPERATING AS DESIGNED. PROVIDE FDOT WITH ALL 'AS-BUILT' INFORMATION NECESSARY TO DEVELOP THE BASIC SIGNAL TIMING PARAMETERS AND ALLOW THREE (3) WEEKS FOLLOWING THE REQUEST FOR FDOT TO DEVELOP THE UPDATED TIMINGS. PROGRAM THE CONTROLLER PER THE TIMINGS PROVIDED BY 4 FD0T.
- PROGRAM PHASE RESTRICTIONS TO OMIT MOVEMENT 1 AND REDIRECT CALLS FROM MOVEMENT 1 TO MOVEMENT 6, WHEN MOVEMENT 2 IS GREEN, AND TO OMIT MOVEMENT 5 AND REDIRECT CALLS FROM MOVEMENT 5 TO 5. MOVEMENT 2, WHEN MOVEMENT 6 IS GREEN.
- OVERLAP PHASES AND NOTES: 6. 4R = 5 WITH MINIMUM GREEN = 7 SEC., YELLOW = 4.8 SEC., ALL RED = 2.0 SEC. 6R = 7 WITH MINIMUM GREEN = 7 SEC., YELLOW = 4.4 SEC., ALL RED = 3.1 SEC. 8R = 1 WITH MINIMUM GREEN = 7 SEC., YELLOW = 4.8 SEC., ALL RED = 2.0 SEC.
- PROGRAM A START-UP DELAY OF 2 SECONDS FOR THE FLASHING YELLOW ARROW ON MOVEMENTS 1, 3, 5 AND 7 (RELATIVE TO THE OPPOSING THROUGH MOVEMENTS). 7.

## SIGNALIZATION NOTES:

- COUNTY REPRESENTATIVE OR ENGINEER OF RECORD SHALL FIELD LOCATE PEDESTRIAN SIGNAL POLES.
- POWER SERVICE METER BASE AND DISCONNECT SHALL BE INSTALLED ON THE CONCRETE SERVICE POLE AS 2. SHOWN ON THE PLANS AND PER STANDARD PLANS INDEX NUMBERS 639-001 AND 639-002.
- FLORIDA POWER AND LIGHT (FPL) EXISTING TRANSFORMER SHALL BE USED FOR POWER SERVICE. THE 3 CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY AND THE POWER COMPANY REGARDING THE EXACT LOCATION AND TIMING OF INSTALLATION.
- 4. INTERNALLY ILLUMINATED SIGNS SHALL BE RIGID MOUNTED TO MAST ARMS.

	CON	TROL	LER	TIMIN	GS (S	ECON	DS)		
MOVEMENT # 'CONTROLLER PHASE ⊘)	1	2	3	4	5	6	7	8	NOTES
DIRECTION	EBL	WB	SBL	NB	WBL	EB	NBL	SB	
TURN TYPE	PROT/ PERM		PROT/ PERM		PROT/ PERM		PROT/ PERM		
MIN GREEN	7	20	7	10	7	20	7	10	
EXT	3	3	3	3	3	3	3	3	
YELLOW	4.8	4.8	4.4	4.4	4.8	4.8	4.4	4.4	
ALL RED	2.0	2.0	3.1	3.1	2.0	2.0	3.1	3.1	
MAX I	25	50	25	30	25	50	25	30	
MAX II	—	-	-	-	-	-	—	-	
WALK	—	7	—	7	-	-	—	-	
FLASHING DON'T WALK	—	23	—	28	-	_	—	—	
DETECTOR MEMORY									
DET. CROSS SWITCH									
DUAL ENTRY		ON		ON		ON		ON	
VEHICLE RECALL	—	MIN	—	-	-	MIN	—	—	
CNA									
REST IN WALK									

THE ENGINEER.

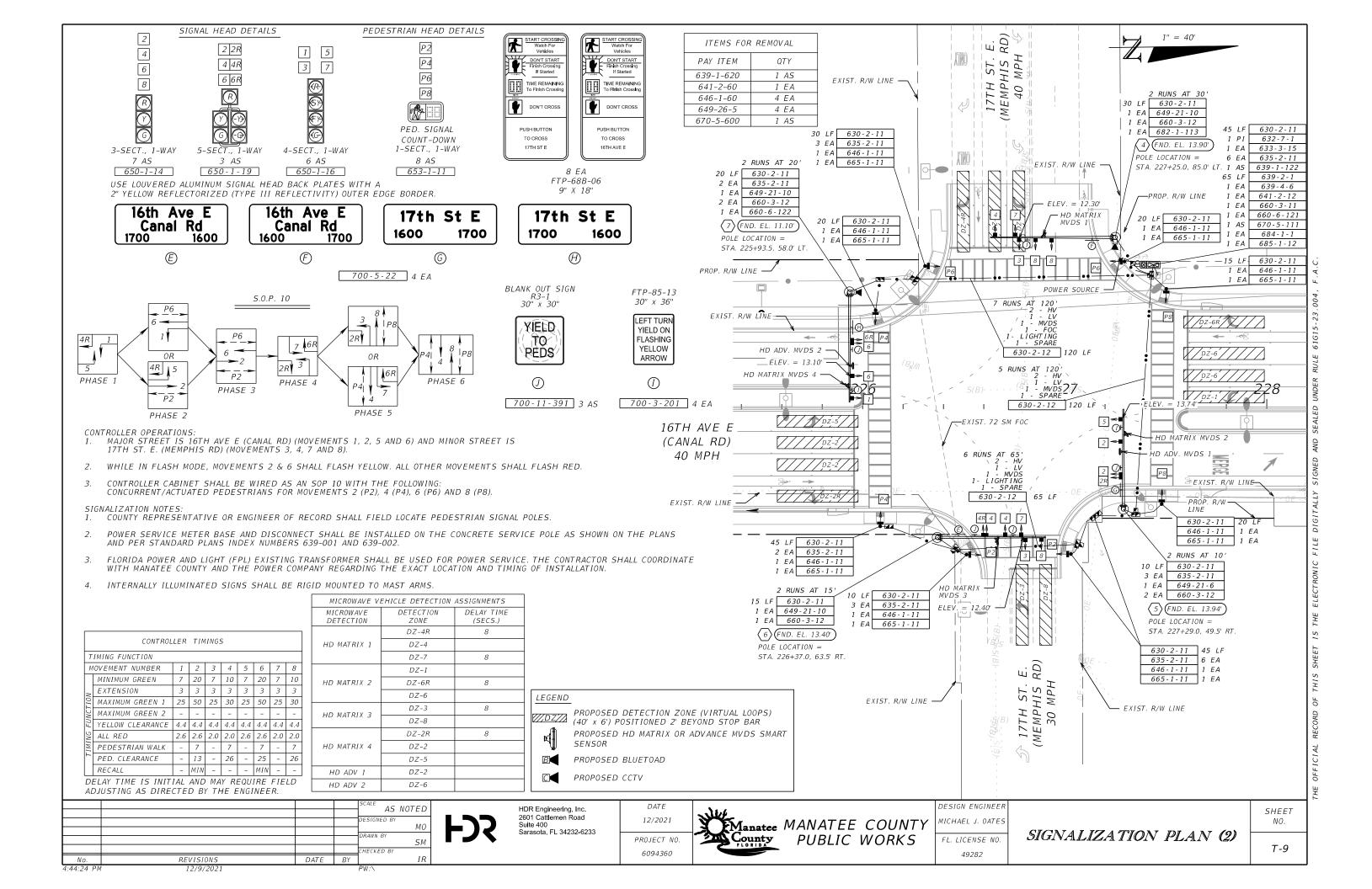
DESIGN ENGINEER DATE 114 12/2021 MICHAEL J. OATES Manatee MANATEE COUNTY County PUBLIC WORKS PROJECT NO. FL. LICENSE NO. 6094360 49282

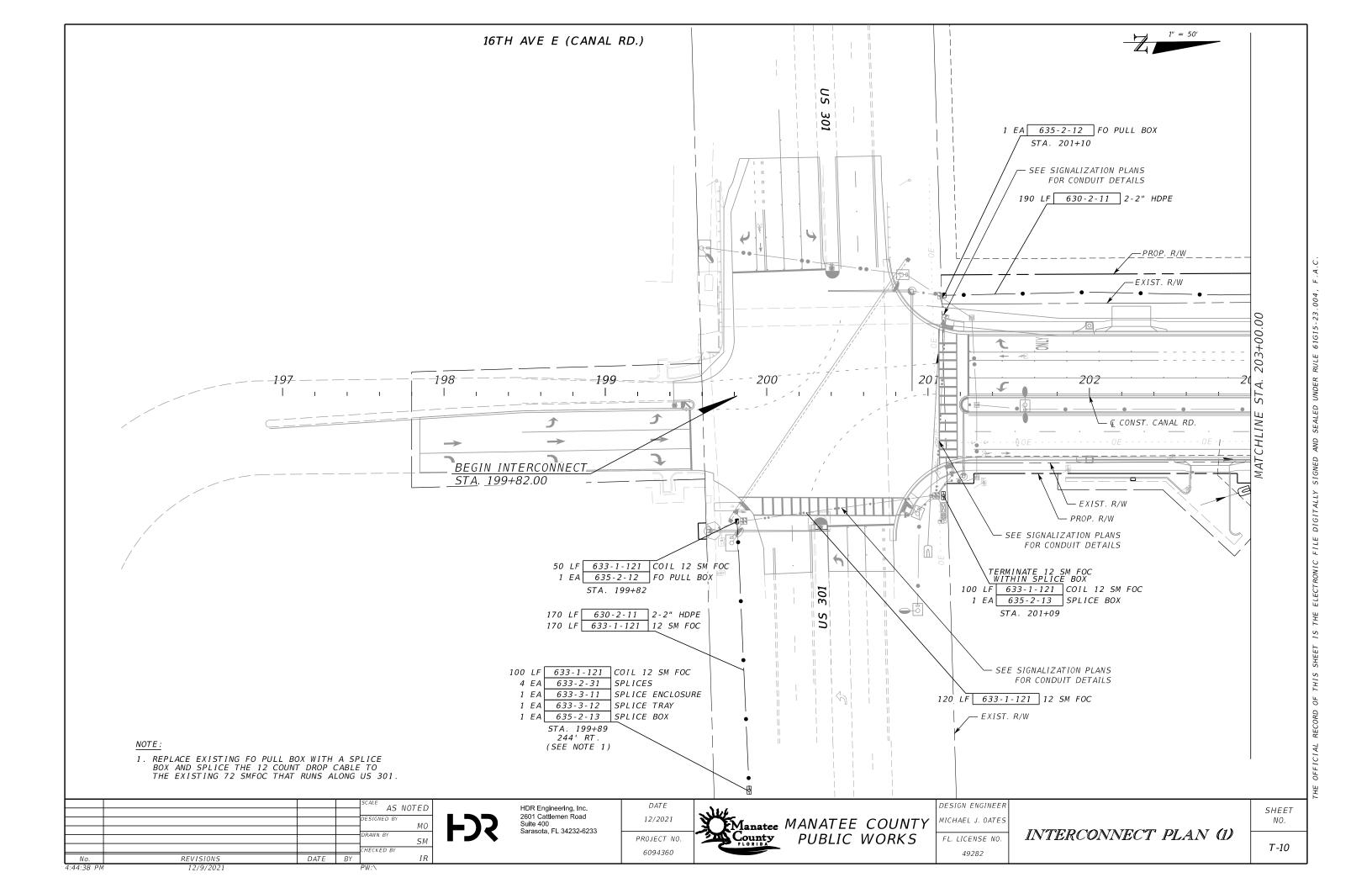
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MICROWAVE DETECTION	DETECTION ZONE	DELAY TIME (SECS.)
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HD MATRIX 1	DZ-6R	8
	DZ-6	
	DZ-3	
HD MATRIX 2	DZ-8R	8
	DZ-8	
	DZ-2	
HD MATRIX 3	DZ-5	
	DZ-4R	8
HD MATRIX 4	DZ-4	
	DZ-7	
HD ADV. 1	DZ-2	
HD ADV. 2	DZ-6	

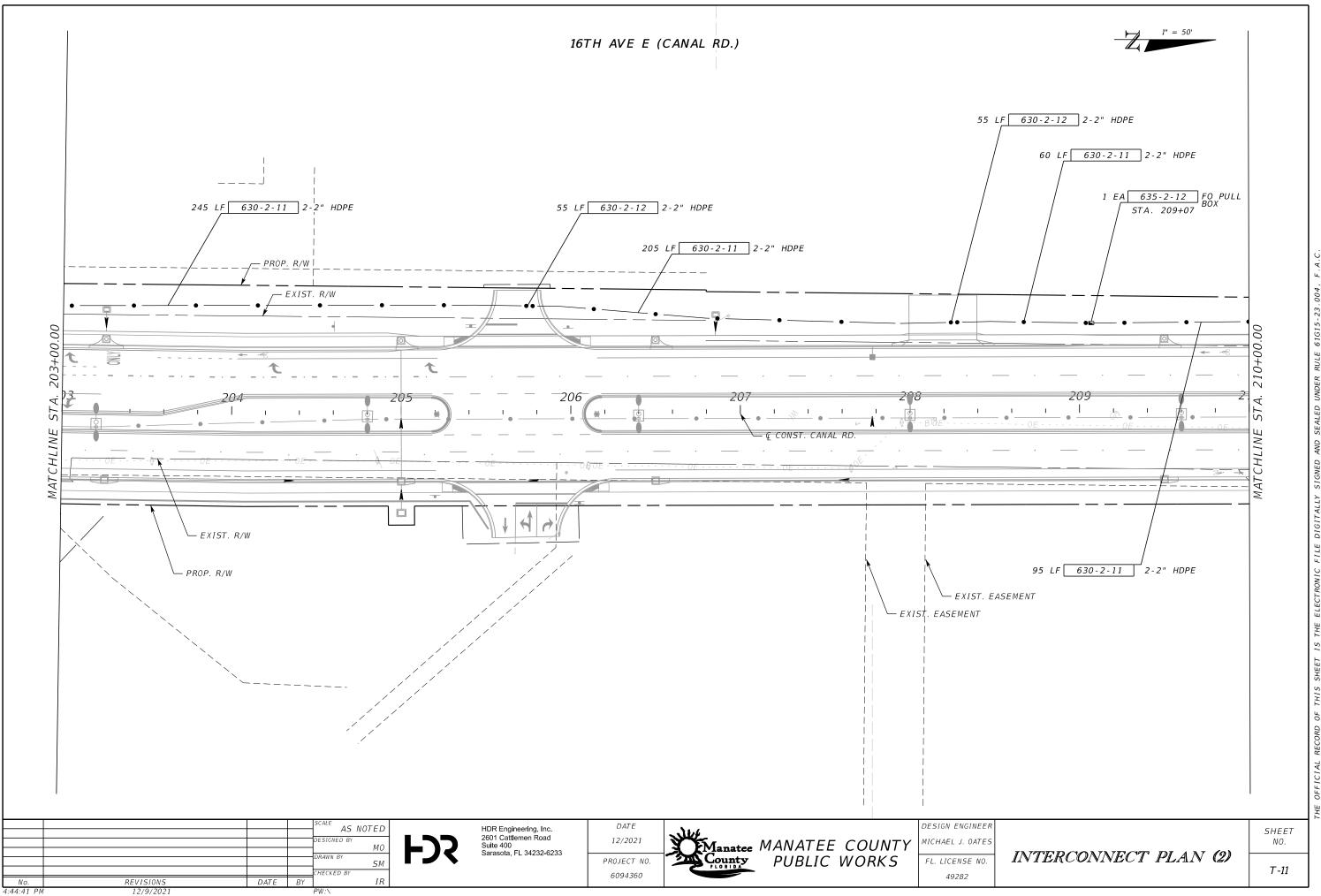
SIGNALIZATION PLAN (1A)

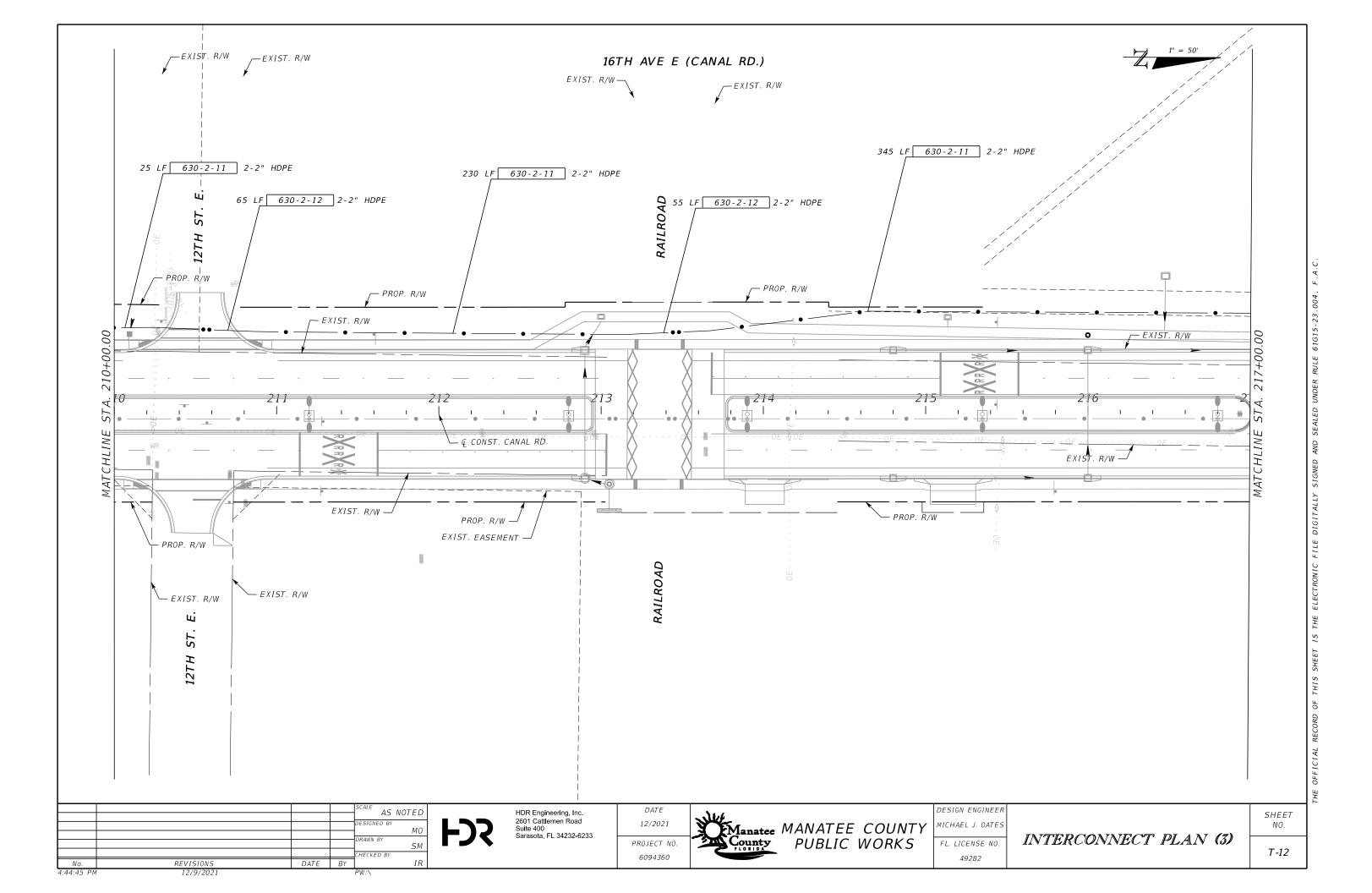
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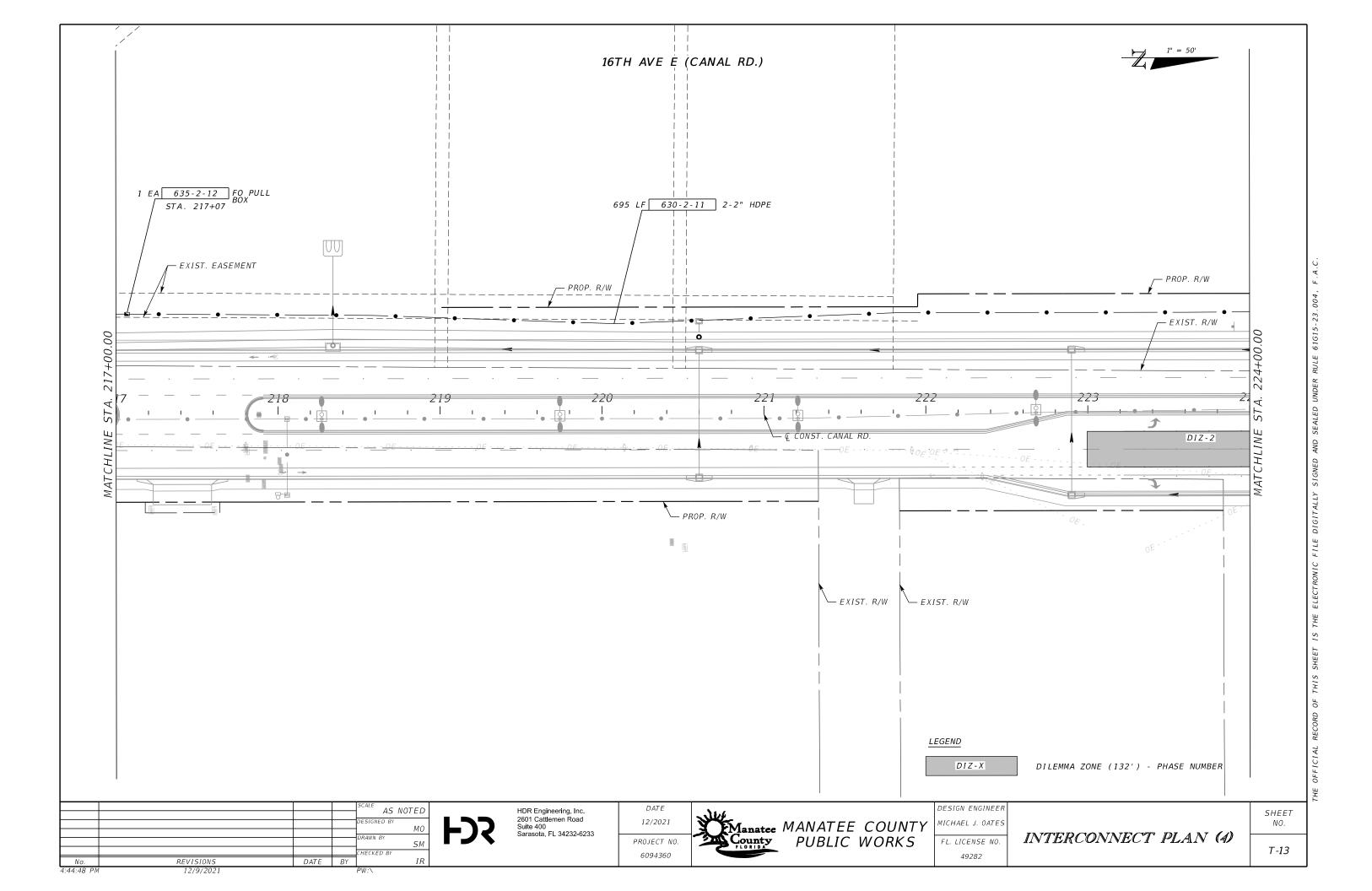
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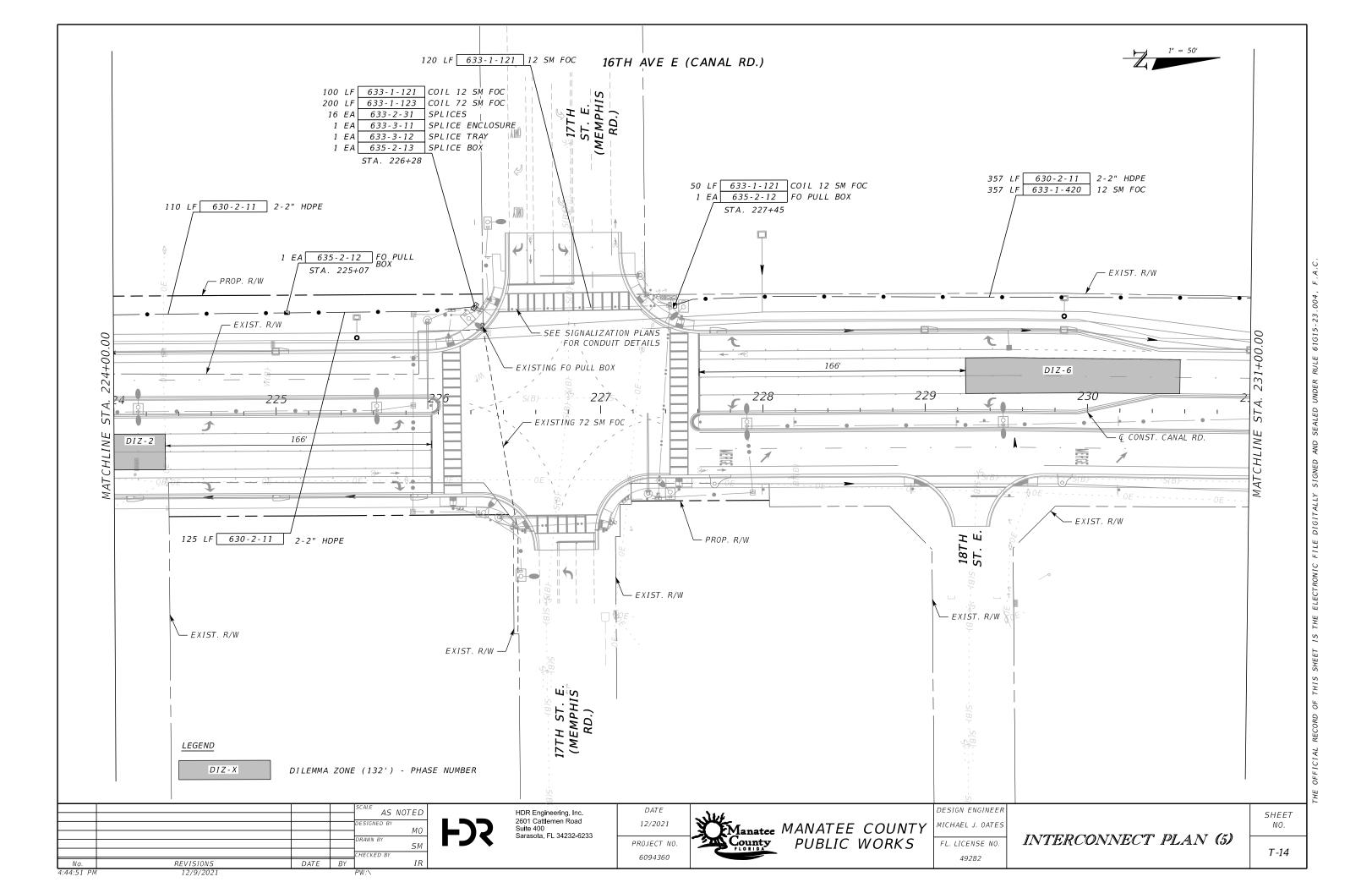


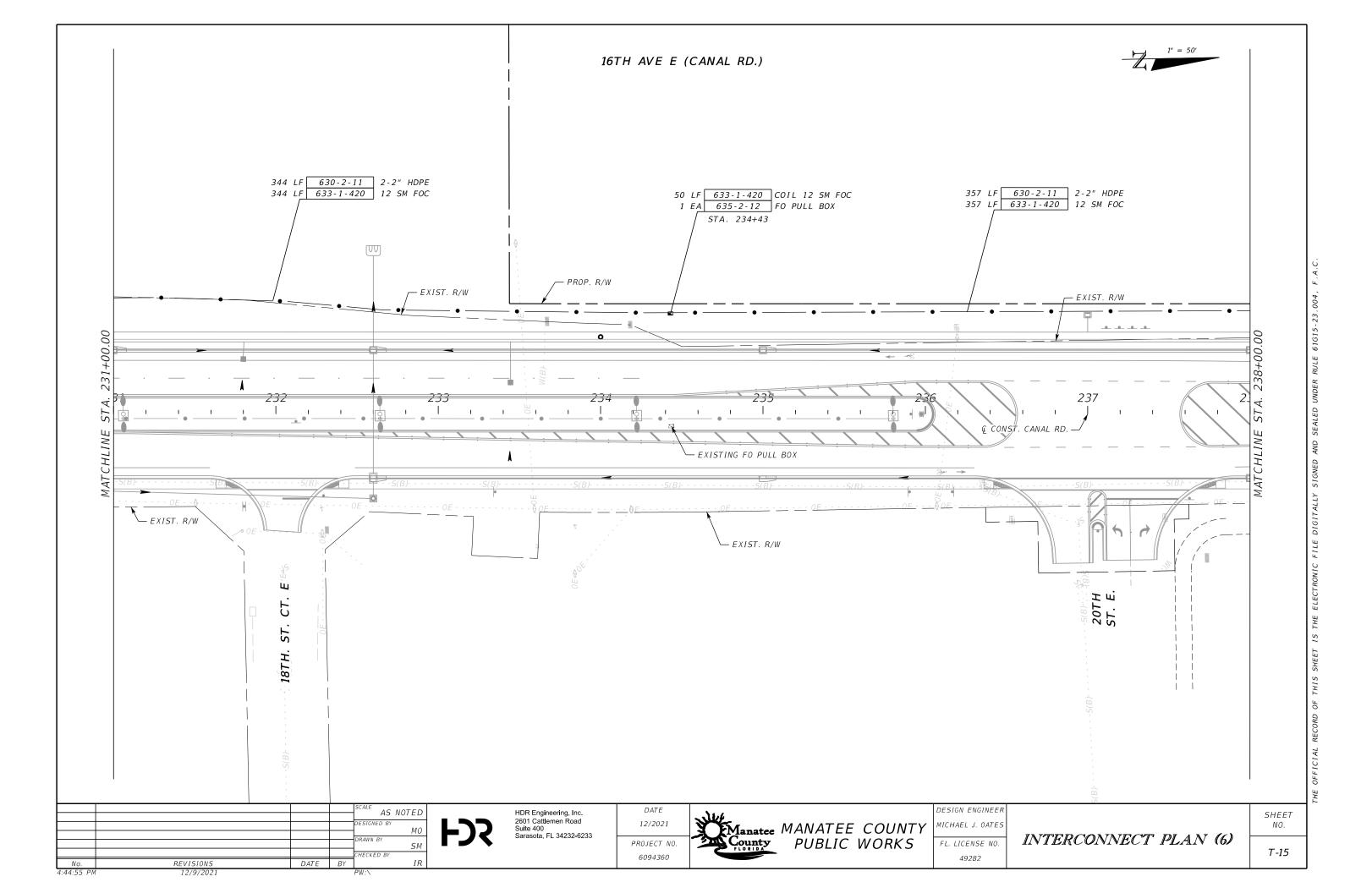


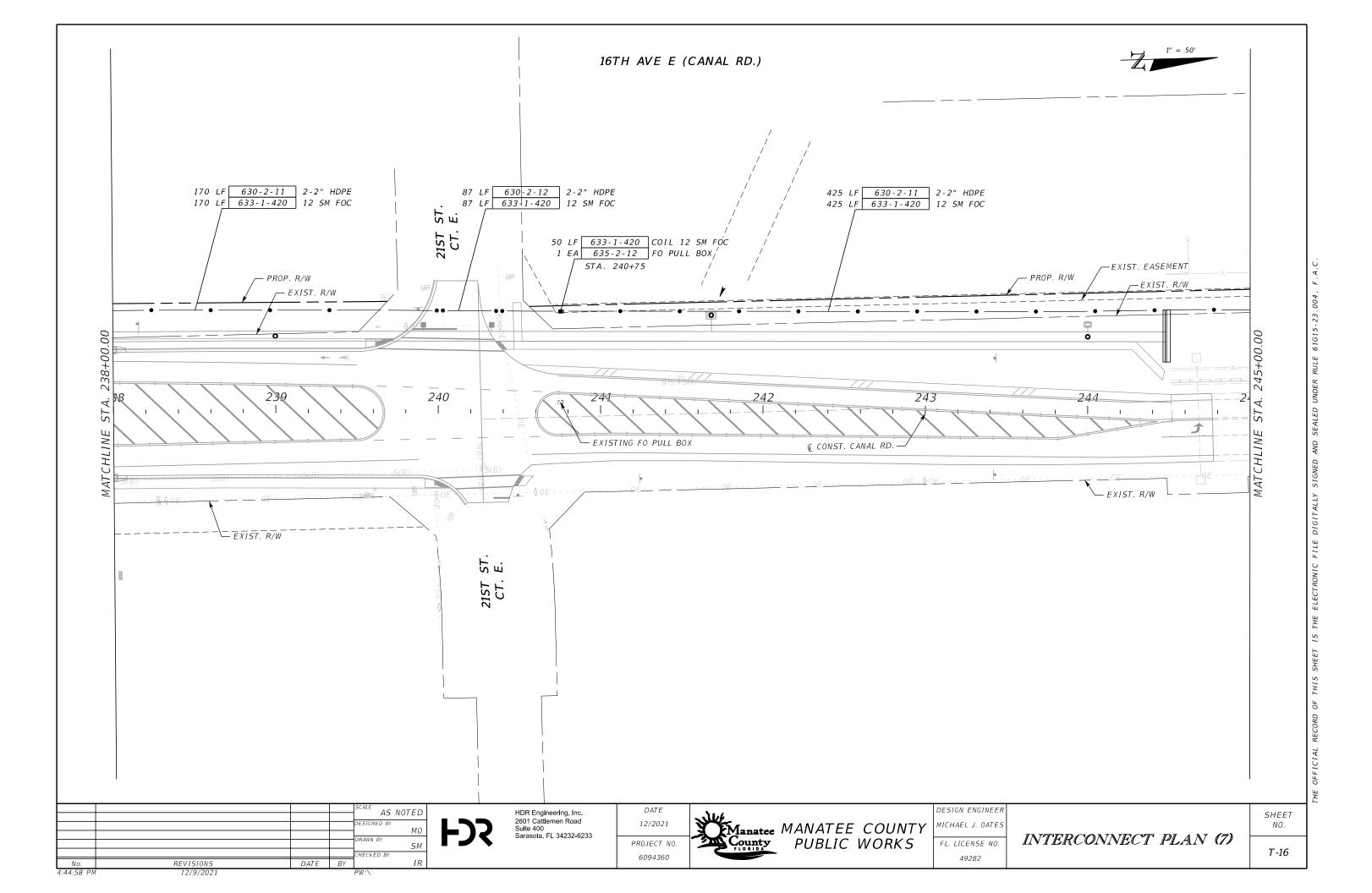


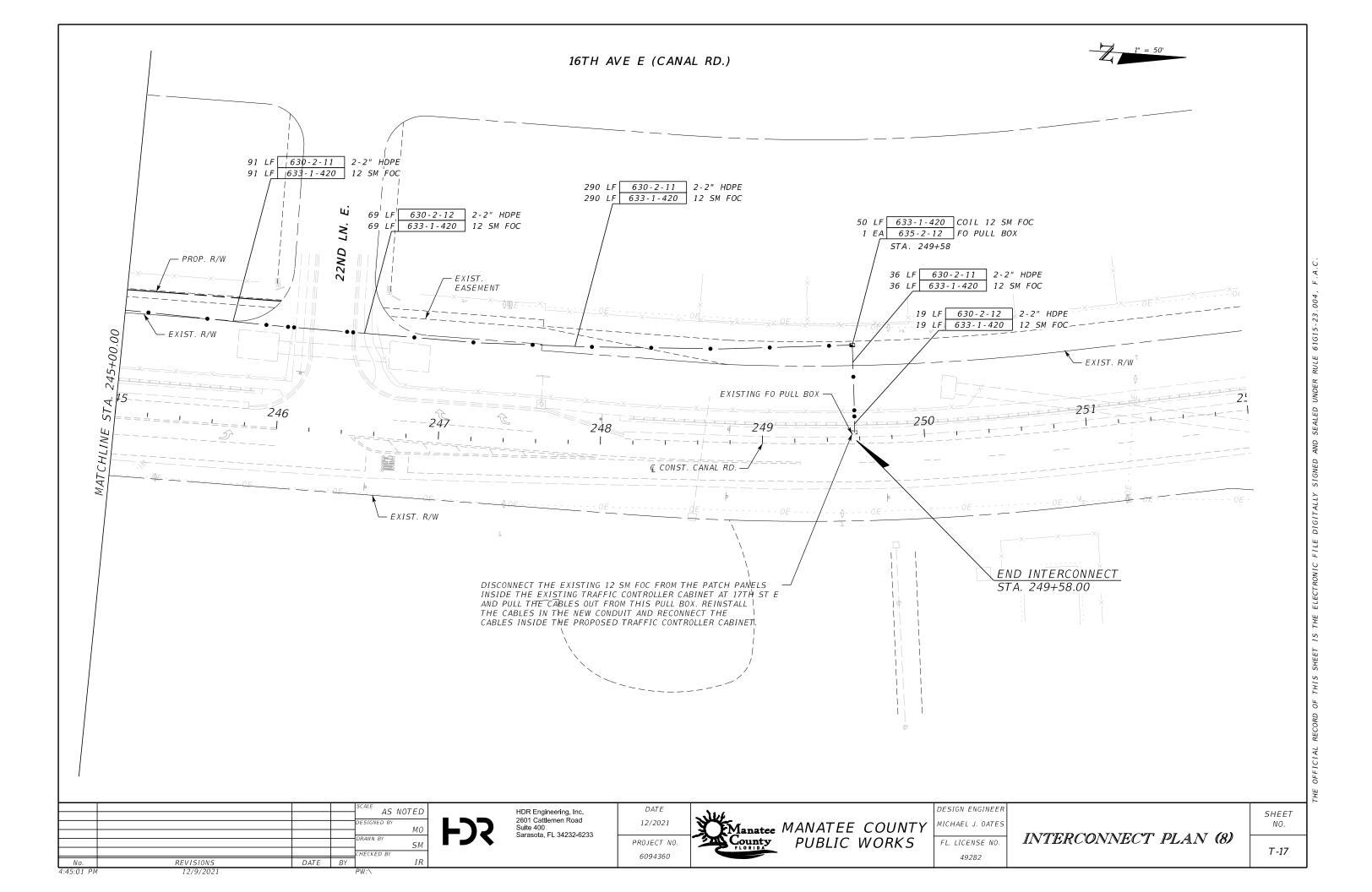




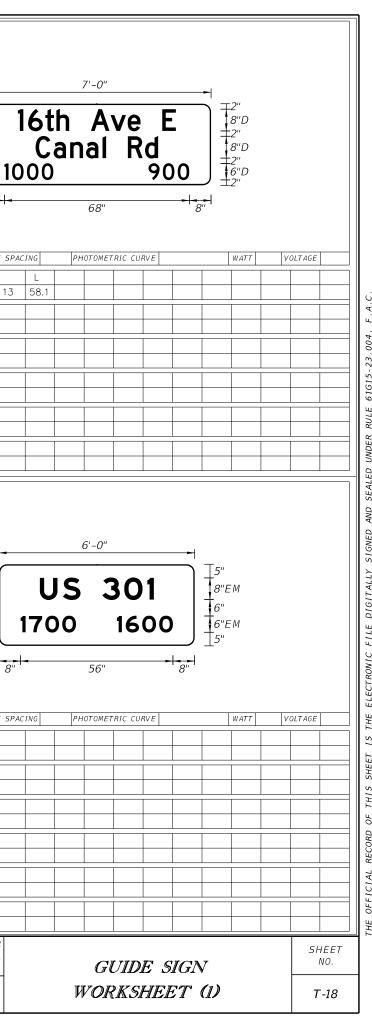




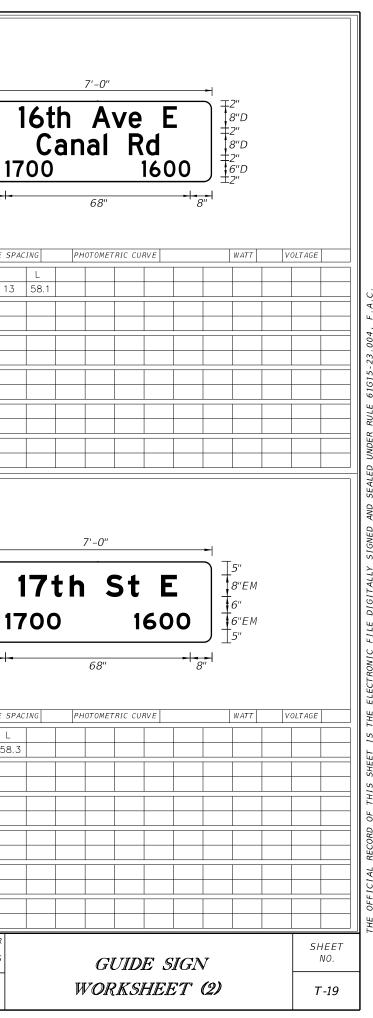


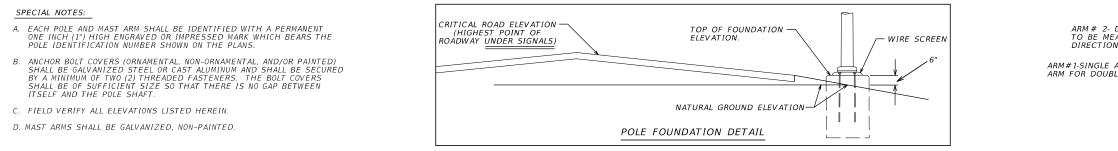


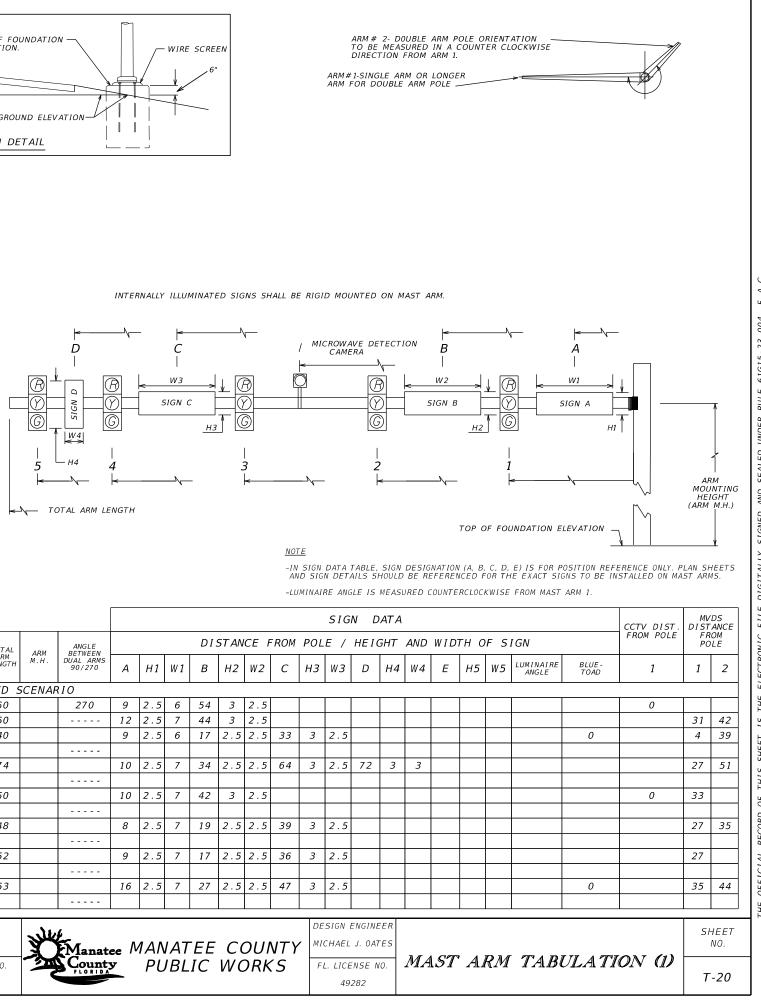
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LEGEND White COLOR White COLOR Green	-	2'-6"	+		JS	30				LEGEND <sub>W</sub>	hite reen	COLOR	White	Ŷ	WID	HT			2'-6"	+
LEGEND White COLOR White COLOR Green	-		6"EM			30	<b>D1</b> 700			LEGEND <sub>W</sub>	hite reen	COLOR	White	Y	WID	HT				19" 6"EM
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       ANGLE     X     Y       WID     HT			+		JS	30				LEGEND W, COLOR G, SYMBOL(	hite reen (S) Al	COLOR NGLE	X		WID	HT				+
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE			6"EM		JS	30				LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X	Y UMN SIZE	AV	'ERAGE				+
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       ANGLE     X     Y       WID     HT			6"EM	16	JS 00	<b>30</b> 17				LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al	COLOR NGLE	X		AV					+
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE			6"EM		JS 00	30		5" 5" 6"EM 5"		LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X		AV	'ERAGE				+
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE			6"EM	16	JS 00	<b>30</b> 17				LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X		AV	'ERAGE				+
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE			6"EM	16	JS 00	<b>30</b> 17		5" 5" 6" 6" 5"		LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X		AV	'ERAGE				+
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LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE			6"EM	16 	JS 00	<b>30</b> 17	700	5"		LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X		AV	'ERAGE			2	6"EM
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       CLEARANCE     COLUMN SIZE	NO. OF LIGHT		6"EM	16	JS 00	<b>30</b> 17	700	5" 5" 6" 6" 5" WATT	VOLTAGE	LEGEND W, COLOR G. SYMBOL(	hite reen (S) Al		X		AV	'ERAGE	N0. 0F	LIGHT		6"EM
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       OF POSTS     Edge of Land       LENGTH     LENGTH	NO. OF LIGHT	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL(	hite reen (S) Al	COLOR NGLE	White X			ERAGE INGTH	NO. OF	LIGHT	2	6"EM
LEGEND white       COLOR white         COLOR Green       SYMBOL(S)         SYMBOL(S)       ANGLE       X       Y       WID       HT         SYMBOL(S)       ANGLE       X       Y       WID       HT         SIGN       NUMBER       CLEARANCE       COLUMN SIZE       AVERAGE         NUMBER       OF POSTS       Edge of Land       LENOTH         LEO       LENOTH       LENOTH       LENOTH         COPY       U       S       3       O	1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL(	hite reen 5) Al 9 10 10 10 10 10 10 10 10 10 10 10 10 10		X		AV. 	I ERAGE NGTH	NO. OF		2	6"EM
LEGEND white     COLOR white       COLOR Green     SYMBOL(S)       SYMBOL(S)     ANGLE       X     Y       WID     HT       SIGN     NUMBER       OF POSTS     Edge of Land       LENGTH     LENGTH	1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL(	hite reen 5) Al 9 10 10 10 10 10 10 10 10 10 10 10 10 10	COLOR NGLE	White X			ERAGE INGTH	NO. OF	LIGHT	2	6"EM
LEGEND white       COLOR white         COLOR Green       SYMBOL(S)         SYMBOL(S)       ANGLE       X       Y       WID       HT         SYMBOL(S)       ANGLE       X       Y       WID       HT         SIGN       NUMBER       CLEARANCE       COLUMN SIZE       AVERAGE         NUMBER       OF POSTS       Edge of Land       LENOTH         LEO       LENOTH       LENOTH       LENOTH         COPY       U       S       3       0	1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"		LEGEND W. COLOR G. SYMBOL(	hite reen 5) Al 9 10 10 10 10 10 10 10 10 10 10 10 10 10		White X COL		AV. 	I ERAGE NGTH	1		FIXTURES	6"EM
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LEGEND white         COLOR white           COLOR Green	1 2.4 15 L	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"		LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF STACE COPY	hite reen (S) Al (S) Al (C) Al	COLOR NGLE	White           X           X           COL           COL           S           6.5           7	UMN SIZE	AV LE 3 8.1	ERAGE NGTH	1 2.4 L		FIXTURES	6"EM
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LEGEND         White         COLOR         White           COLOR         Green         SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land         LENGTH           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land         LENGTH         LENGTH           START         START         START         START         START           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         S         S         43         S	1 2.4 15 L	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"		LEGEND W. COLOR G. SYMBOL( SYMBOL( SIGN N. NUMBER OF COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>3 8.1 0 5</td><td>ERAGE NGTH</td><td>1 2.4 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	3 8.1 0 5	ERAGE NGTH	1 2.4 L		FIXTURES	6"EM
LEGEND         White         COLOR         White           COLOR         Green         V         V         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land         LENOTH         LENOTH           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SOUTH         OF POSTS         Edge of Land         LENOTH         LENOTH           SOUTH         S         3         O         SPACE         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5         S           COPY         1         6         O         S         S         43.           COPY         1         7         O         O         S         43.	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
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LEGEND         White         COLOR         White           COLOR         Green         SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Lane         Image: Column Size         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.6         3         O           SPACE         43.6         3         6.1         6.2         5         8         8	1 2.4 15 L	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"		LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White           COLOR         Green         SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Lane         Image: Column Size         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.6         3         O           SPACE         43.6         3         6.1         6.2         5         8         8	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           Symbol         O         Sign         NUMBER         COLUMN SIZE         AVERACE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERACE         LENGTH           Sign         OF POSTS         Edge of Lane         COLUMN SIZE         AVERACE         LENGTH           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         0         O         SPACE         43.6         3         6.1 <t< td=""><td>1           2.4         15           L         4           20.6         1</td><td>FIXTURES</td><td>6"EM</td><td>16 </td><td>JS 00</td><td><b>30</b> 17</td><td>700</td><td>5"</td><td>VOLTAGE</td><td>LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF NUMBER OF SPACE COPY SPACE COPY SPACE COPY</td><td>hite reen (S) Al (S) Al (C) Al (C</td><td>COLOR NGLE</td><td>White           X           X           COL           COL      <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<></td></t<>	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF NUMBER OF SPACE COPY SPACE COPY SPACE COPY	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND white         COLOR white           COLOR Green         SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERACE           NUMBER         CLEARANCE         COLUMN SIZE         AVERACE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERACE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERACE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.6         3         6.1         6.2         5         43.           COPY         1         7         O         O         SPACE         5         8         8.1         8.5	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         Wnite         COLOR         Wnite           COLOR         Green              SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land              SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land             SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land             SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SO         SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         0         0         SPACE         43.6         3	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         Wnite         COLOR         Wnite           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land         Image: Column Size         AVERAGE           NUMBER         OF POSTS         Edge of Land         Image: Column Size         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.           COPY         1         7         O         O         SPACE         8         3.2         6.1         6.2         5         8           COPY         1         7         0         O         SPACE         S         8	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         Wnite         COLOR         Wnite           COLOR         Green              SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land              SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land             SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land             SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SO         SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         0         0         SPACE         43.6         3	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE           Image: Image	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White         Image: Color of the state of the	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE           Image: Image	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         Wnite         COLOR         Wnite           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         OF POSTS         Edge of Land         Image: Column Size         AVERAGE           NUMBER         OF POSTS         Edge of Land         Image: Column Size         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.           COPY         1         7         O         O         SPACE         8         3.2         6.1         6.2         5         8           COPY         1         7         0         O         SPACE         S         8	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         1         7         0         0         SPACE         SPACE         SPACE         SPACE         S	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF SYMBOL COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White         Image: Color of the state of the	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 	JS 00	<b>30</b> 17	700	5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>FIXTURES</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		FIXTURES	6"EM
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM 5"			<b>30</b> 17				LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SYMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>Image: Constraint of the second se</td><td>6"EM 5"</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		Image: Constraint of the second se	6"EM 5"
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM	16 		<b>30</b> 17		5"	VOLTAGE	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SYMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR NGLE	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>AW           LE           3           8.1           0           5           0</td><td>0 8.5 43.6</td><td>1 2.4 L 20.3 L</td><td></td><td>Image: Constraint of the second se</td><td>6"EM</td></t<>	UMN SIZE	AW           LE           3           8.1           0           5           0	0 8.5 43.6	1 2.4 L 20.3 L		Image: Constraint of the second se	6"EM
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM 5"			<b>30</b> 17	700 CURVE			LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( SYMBOL( COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR           NGLE           CLEARANCE           dge OF Lane           dge OF Lane           1           3           1           3.2	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>3 8.1 0 5 0 5</td><td>Image: Constraint of the second sec</td><td>1 2.4 20.3 L 20.6</td><td></td><td>FIXTURES       L       41.9      </td><td>6"EM 5"</td></t<>	UMN SIZE	3 8.1 0 5 0 5	Image: Constraint of the second sec	1 2.4 20.3 L 20.6		FIXTURES       L       41.9	6"EM 5"
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM 5"			<b>30</b> 17	700			LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( SYMBOL( COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (5) Al (1) (1) (1) (1) (1) (1) (1) (1)	COLOR           NGLE           CLEARANCE           dge OF Lane           dge OF Lane           1           3           1           3.2	White           X           X           COL           COL <t< td=""><td>UMN SIZE</td><td>3 8.1 0 5 0 5</td><td>Image: Constraint of the second sec</td><td>1 2.4 L 20.3 L 20.6</td><td></td><td>FIXTURES       L       41.9      </td><td>6"EM 5"</td></t<>	UMN SIZE	3 8.1 0 5 0 5	Image: Constraint of the second sec	1 2.4 L 20.3 L 20.6		FIXTURES       L       41.9	6"EM 5"
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM 5"			<b>30</b> 17	700		DATE 12/2021	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE CLEARANCE dage of Lane U 8.5 1 3 1 3.2 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 1 1 1 1 1 1 1 1 1 1	x x cou	UMN SIZE	AV AV AV AV AV AV AV AV AV AV	© RAGE NGTH 0 8.5 43.6 8	1 2.4 20.3 L 20.6	15 15	FIXTURES	6"EM 5" FIXTURE
LEGEND         White         COLOR         White         Here           SYMBOL(S)         ANGLE         X         Y         WID         HT           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           SIGN         NUMBER         CLEARANCE         COLUMN SIZE         AVERAGE           COPY         U         S         3         O           SPACE         15         8.5         6.5         8         8.1         8.5           COPY         1         6         O         O         SPACE         43.         COPY         1         7         O         O           SPACE         43.6         3         6.1         6.2         5         8         COPY         SPACE         SPA	1           2.4         15           L         4           20.6         1	FIXTURES	6"EM 5"			<b>30</b> 17	700			LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR           NGLE           CLEARANCE           dge OF Lane           dge OF Lane           1           3           1           3.2	x x cou	UMN SIZE	AV AV AV AV AV AV AV AV AV AV	© RAGE NGTH 0 8.5 43.6 8	1 2.4 20.3 L 20.6	15 15	FIXTURES	6"EM 5"
LEGEND       White       COLOR       White       White         SYMBOL(S)       ANGLE       X       Y       WID       HT         Symbol       Second       Second       Second       Second       Second       Second         Sign       NUMBER       CLEARANCE       COLUMN SIZE       AVERAGE       LENGTH         Sign       OF POSTS       Edge of Lane       Second       LENGTH       Second       Second         COPY       U       S       3       O       Second	1       2.4     15       L     20.6       20.3	FIXTURES	6"E M 5" 5"			<b>30</b> 17	700		DATE 12/2021 PROJECT NO.	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE CLEARANCE dage of Lane U 8.5 1 3 1 3.2 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 1 1 1 1 1 1 1 1 1 1	x x cou	UMN SIZE	AV AV AV AV AV AV AV AV AV AV	© RAGE NGTH 0 8.5 43.6 8	1 2.4 20.3 L 20.6	15 15	FIXTURES	6"EM 5" 6"EM 5" 6"EM 5" 6"EM 5" 6"EM 6"EM 6"EM 6"EM 6"EM 6"EM 6"EM 6"E
LEGEND         White         COLOR         White         Image: Color of the symbol	1       2.4     15       L     20.6       20.3	FIXTURES	6"E M 5" 5"			<b>30</b> 17	700		DATE 12/2021	LEGEND W. COLOR G. SYMBOL( SYMBOL( SYMBOL( NUMBER OF SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE COPY SPACE	hite reen (S) Al (S) Al (C) Al (C	COLOR NGLE CLEARANCE dage of Lane U 8.5 1 3 1 3.2 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 3.2 1 1 1 1 1 1 1 1 1 1 1 1 1	x x cou	UMN SIZE	AV AV AV AV AV AV AV AV AV AV	© RAGE NGTH 0 8.5 43.6 8	1 2.4 20.3 L 20.6	15 15	FIXTURES	6"EM 5" FIXTURE



SIGN NAME SIGN E       QTY 1       SIGN NUMBER STATION(S)         PANEL       BORDER         WIDTH 7'-0"       WIDTH 0.5"         HEIGHT 2'-6"       RADII 3"         LEGEND White       COLOR White         COLOR Blue       Image: SYMBOL(S)         SYMBOL(S)       ANGLE       X         SIGN       NUMBER       CLEARANCE         NUMBER       COLUNN SIZE       AVERAGE         NUMBER       COLAR BLUE       LENGTH	$\int_{a_{n}}^{a_{n}} \int_{a_{n}}^{22''} \int_{a_{n}}^{a_{n}} \frac{16th Ave E}{Canal Rd} \int_{a_{n}}^{22''} \int_{a_{n}}^{22'''} \int_{a_{n}}^{22'''} \int_{a_{n}}^{22''''} \int_{a_{n}}^{22''''''''''''''''''''''''''''''''''$	SIGN NAME SIGN F       0TY 1       NUMBER STATION(S)         PANEL       BORDER         WIDTH 7'-0"       WIDTH 0.5"         HEIGHT 2'-6"       RADII         LEGEND White       COLOR White         COLOR Blue       Image: Color bare         SYMBOL(S)       ANGLE       X         SYMBOL(S)       ANGLE       X         SIGN NUMBER       CLEARANCE       COLUMN SIZE         SIGN NUMBER       CLEARANCE       COLUMN SIZE         SIGN NUMBER       CLEARANCE       COLUMN SIZE         MUMBER       CLEARANCE       COLUMN SIZE         SIGN NUMBER       CLEARANCE       COLUMN SIZE         SIGN NUMBER       CLEARANCE       COLUMN SIZE
	NO. OF LIGHT FIXTURES FIXTURE SPACING PHOTOMETRIC CURVE WATT VOLTAGE	NO. OF LIGHT FIXTURES FIXTURE
<i>COPY</i> 1 6 t h	A v e E L .	COPY         1         6         t         h         A         v         e         E
SPACE         13         3.8         6.3         4.1         4.7         8	7.2 6.3 4.7 8 5 13 58.1	SPACE         13         3.8         6.3         4.1         4.7         8         7.2         6.3         4.7         8         5         1
COPY C a n a l	R d L .	COPY C a n a I R d L
SPACE         19.5         6.6         6.1         5.8         6.1         1.3	8 6.3 4.8 19.5 45	SPACE         19.5         6.6         6.1         5.8         6.1         1.3         8         6.3         4.8         19.5         45
<i>COPY</i> 1 6 0 0		COPY 1 7 0 0 L
SPACE         8         2.8         5.3         5.5         4.3         58.2	17.8	SPACE         8         2.6         5.1         5.5         4.3         58.5         17.5         Image: Contract of the second sec
COPY         1         7         0         0		COPY         1         6         0         0         L
SPACE         58.5         2.6         5.1         5.5         4.3         8	17.5	SPACE         58.2         2.8         5.3         5.5         4.3         8         17.8
СОРУ		
SPACE SPACE		SPACE SPACE
COPY           SPACE		COPY
SIGN NAME SIGN G QTY I NUMBER STATION(S)		SIGN NAME     SIGN H     QTY     I     SIGN     STATION(S)
WIDTH       7'-O"       WIDTH       0.5"         HEIGHT       2'-6"       RADII       3"         LEGEND       white       COLOR       white         COLOR       Green	$\sum_{i=1}^{3} \int_{a_{i}}^{19^{\prime\prime}} \int_{a_{i}}^{19^{\prime\prime}} \int_{a_{i}}^{19^{\prime\prime}} \int_{a_{i}}^{17^{\prime}} \int_{a_{i}}^{17^{$	WIDTH     7'-0"     WIDTH     0.5"       HEIGHT     2'-6"     RADII     3"       LEGEND     white     COLOR     Image: COLOR white       COLOR     Green     Image: COLOR       SYMBOL(S)     ANGLE     X     Y       WID     HT       SYMBOL(S)     ANGLE     X       Image: Sign of posts     Clearance     COLUMN SIZE       Sign of posts     Clearance     COLUMN SIZE       Image: Sign of posts     Clearance     Sign of posts
	NO. OF LIGHT FIXTURES FIXTURE SPACING PHOTOMETRIC CURVE WATT VOLTAGE	NO. OF LIGHT FIXTURES FIXTURE
COPY         1         7         t         h		COPY         1         7         t         h         S         t         E
SPACE         12.8         4         8.1         6.7         5.3         8	S         L <thl< th=""> <thl< th=""> <thl< th=""> <thl< th=""></thl<></thl<></thl<></thl<>	SPACE         12.8         4         8.1         6.7         5.3         8         8.2         4.2         8         5.9         12.8         5
COPY         1         6         0         0		
SPACE         8         3.2         6.1         6.2         5         55.4	20.6	SPACE         8         3         6.1         6.2         5         55.6         20.3
COPY         1         7         0         0		COPY         1         6         0         L         I
SPACE         55.6         3         6.1         6.2         5         8	20.3	SPACE         55.4         3.2         6.1         6.2         5         8         20.6
СОРҮ		СОРУ
SPACE SPACE		SPACE SPACE
СОРҮ		СОРУ
SPACE SPACE		SPACE SPACE
SPACE	SCALE     AS NOTED       DESIGNED BY     MO       DRAWN BY     SM       DRAWN BY     SM       CHECKED BY     IR	SPACE DESIGN ENGINEER MANATEE COUNTY PUBLIC WORKS FL. LICENSE NO. 49282







** DEN	OTES F	OUNDAT	ION IS DESI	GNED AS 0.5	' ABOVE G	RADE				S	IGN	4 <i>L [</i>	DATA	4																	SIG	N D	ATA
STRUCT .	POLE	SHEET	LOCATION	TOP OF	CRITICAL	RDWY	SIGNAL	BACK	PED.			DIS	TAN	ICE F	ROM	POL	Ε			TOTAL		ANGLE BETWEEN	DISTANCE FROM POLE					.E /	HEI	GHT			
ID NO.	ID NO.	NO.	BY STA.	FOUNDATION ELEV .	ROAD ELEV .	RDWY ARM NO.	V/H	PLATES Y/N	SIGNAL Y/N	1	*	2	*	3	*	4	*	5	*	ARM LENGTH	М.Н.	DUAL ARMS 90/270	Α	Н1	W 1	В	Н2	W2	С	НЗ	W3	D	н
								•										PR	OPO.	SED S	SCENAI	RIO											
	1	T - 7	200+90.0	**9.30'	9.41'	1	V	Y	N	41	5	49	3	58	4					60		270	9	2.5	6	54	3	2.5					
					9.40'	2	V	Y	N	26	3	37	3	48	4					50			12	2.5	7	44	3	2.5					
	2	T - 7	201+22.0	**9.60'	9.05'	1	V	Y	N	21	5	29	3	37	4					40			9	2.5	6	17	2.5	2.5	33	3	2.5		
	3	T - 7	199+63.7	**7.90'	9.05'	1	V	Y	N	39	5	56	3	68	4					74			10	2.5	7	34	2.5	2.5	64	3	2.5	72	3
																												<u> </u>					
	4	T - 8	227+25.0	**13.90'	12.30'	1	V	Y	N	30	3	38	3	46	4	48	4	58	3	60			10	2.5	7	42	3	2.5					
																												$\square'$					
	5	T - 8	227+29.0	**13.94'	13.74'	1	V	Y	N	15	5	32	3	43	4					48			8	2.5	7	19	2.5	2.5	39	3	2.5		
																												$\square'$			<u> </u>	<u> </u>	
	6	T - 8	226+37.0	**13.40'	12.40'	1	V	Y	N	22	5	32	3	40	4	42	4	50	3	52			9	2.5	7	17	2.5	2.5	36	3	2.5	<u> </u>	
																												<u>                                     </u>			<u> </u>	<u> </u>	
	7	T - 8	225+93.5	**11.10'	13.10'	1	V	Y	N	23	5	40	3	51	4					53			16	2.5	7	27	2.5	2.5	47	3	2.5	<b> </b>	<u> </u>
							SCAI	AS N	OTED				HDB	Engine	erina l	20			DATE	-	•									DE	SIGN	ENGINE	EER
							DES	IGNED BY	мо	Ľ	17		2601 Suite	Cattler 400 sota, FL	ien Ro	ad		i	12/20.	21	3 m	EX .	ee N	1AN	VAT	ΈE	С	วบเ	VTY	• MI	CHAEL	. J. OAT	ES
								WN BY	SM				Sara	sola, FL	34232	-0233		PR	OJECT	- NO.	20		У					) RK			L. LICE	ENSE N	10.
No.			REVISION	16		ATE	BY	CKED BY	IR									6	50943	60											49	282	

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	* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY											Y																									
No.       N	** DENOTES FOUNDATION IS DESIGNED AS 0.5' ABOVE GRADE SIGNAL DATA														SIGN DATA										CCTV DIST.	MVDS DISTANCE											
1       1					TOP OF	CRITICAL	PDWY		BACK	PED			DIS	TANC	E FRC	ЭМ РС	DLE			TOTAL	ANGLE		DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN												FROM		
1       7       3006       3       3       4       3       3       4       5       3       5       3       5       3       5       3       5       3       5       3       5       3       5       5       3       5	STRUCT. ID NO.	POLE ID NO.	SHEET NO.	BY STA.	FOUNDATION ELEV.	ROAD ELEV .	ARM NO.	SIGNAL V/H	PLATES Y/N	SIGNAL Y/N		*	2	*	3 *	* 4	*				DUAL ARMS 90/270	5	H1 W	1 В	H2	W2	С	НЗ	W3 D	H4 W4	4 E	H5	W5 <sup>1</sup>	UMINAIRE ANGLE	BLUE - TOAD	1	1 2
1       1		1	T 7	200,000,0	**0 201	0 411	1		V	N	41	F	40	2 4	<u> </u>	1		F	- <i>UTU</i>				256	<b>E 1</b>	5	2 5						<u>т</u> т				0	
						-	-	-			-	_																								0	31 42
x       x		2	T - 7	201+22.0	**9.60'	9.05'		V	Ŷ	N										40							33	3	2.5						0		
1       1								N N	V	Λ/	20	F	FG	2 0	60 1	1				7.4			257	24	2 5	2 5	6.4		2 5 72	2 2							27 51
<ul> <li></li></ul>								V	I I	//	39	5	50	3 0	00 4	*				74			2.5 /	54	2.5	2.5	04	5	2.5 72	3 3							27 51
<ul> <li></li></ul>		4	T - 8		**13.90'	12.30'	1	V	Ŷ	N	30	5	38	3 4	46 4	4 48	4	58	3	60		10	2.5 7	25	2.5	2.5	42	3	2.5							0	33
								V	v	N	15	5	32	3	13 1	1				18		8	257	10	2 5	2 5	30	3	2.5								27 35
Image: Normal and State S								V		71	15		52		45 4	*				40			2.5 7	15	2.5	2.5	55		2.5								27 55
1       7		6	T - 8	226+37.0	**13.40'	12.40'	1	V	Ŷ	N	22	5	32	3 4	40 4	4 42	2 4	50	3	52		9	2.5 7	17	2.5	2.5	36	3	2.5								27
								N/	V	Λ/	22		40	2	E1 A	1	_			52		16	257	27	2 5	2 5	47		2.5						0		25 44
Image: constraint of the constr							-	V	r	/\	23	5	40	3 3	51 4	+				53		-	2.5 /		2.5	2.5	47	3	2.5						0		35 44
Montal Distance     Montal Distance     Manatee     <									AS N	OTED				HDR Er 2601 C	ngineerin	ıg, Inc.				1	kt.																SHEET
No.         REVISIONS         DATE         BY         IR         6094360         49282								DR.	AWN BY		Γ.	]	5	Sarasot	ta, FL 342	232-6233	3	PR	ROJEC	т по.	Count	tee / <sup>,</sup> ty	PUB	LIC	WC	DRK	S				AST	' Al	RM	TAB	ULA TI	ON (2)	
	No.			REVISION			DATE		ECKED BY												FLORID						-										T-21

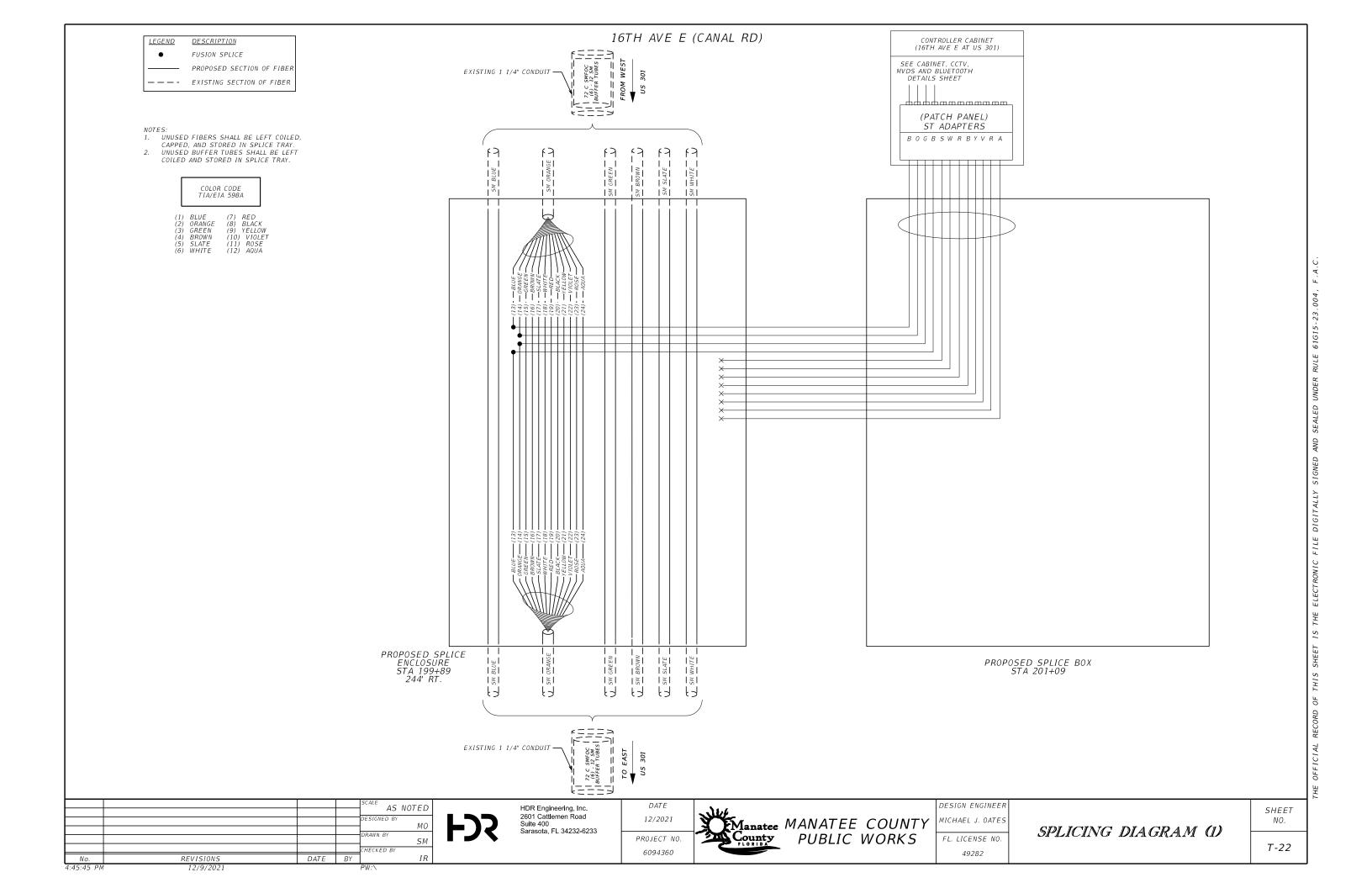
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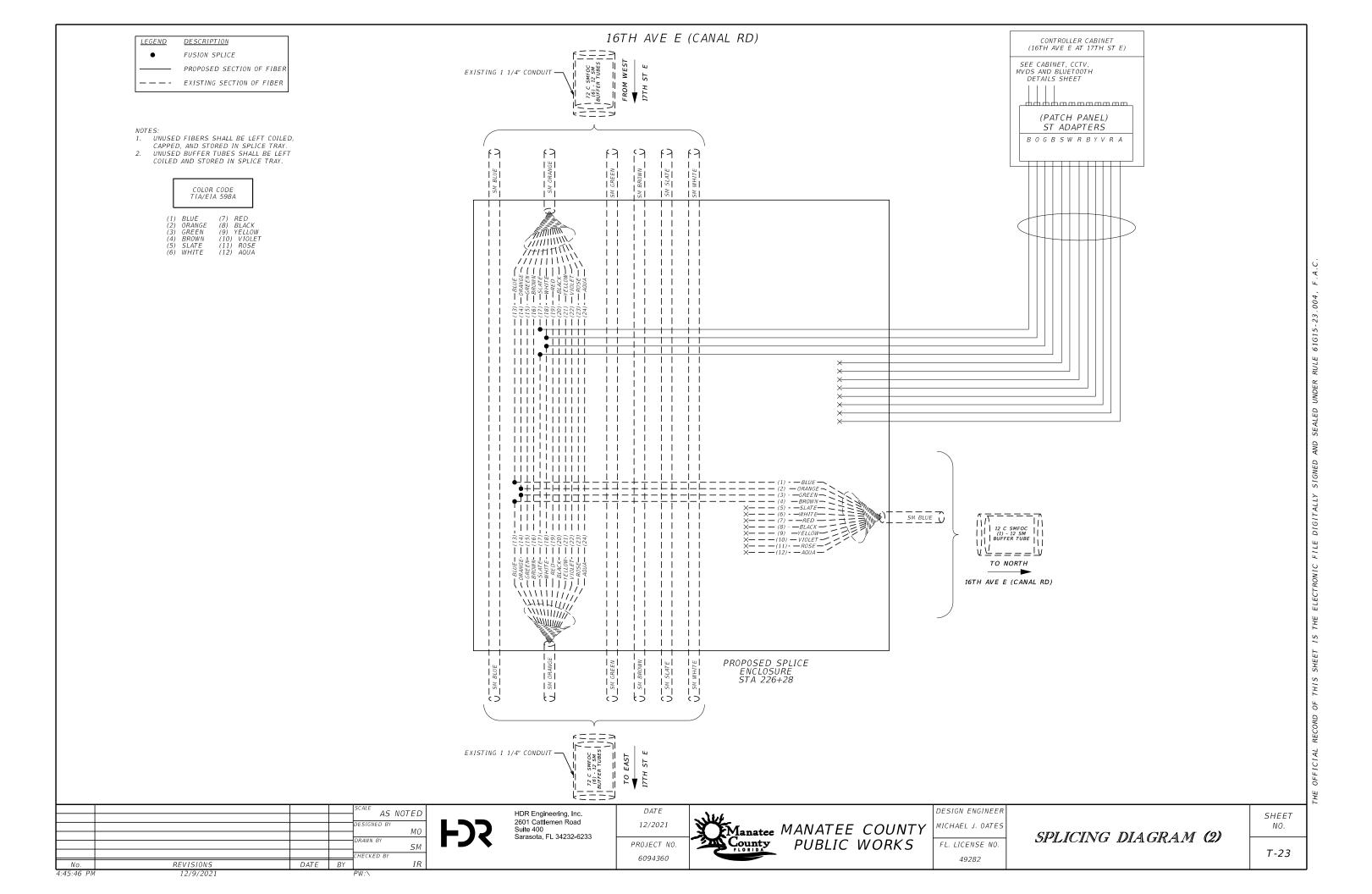
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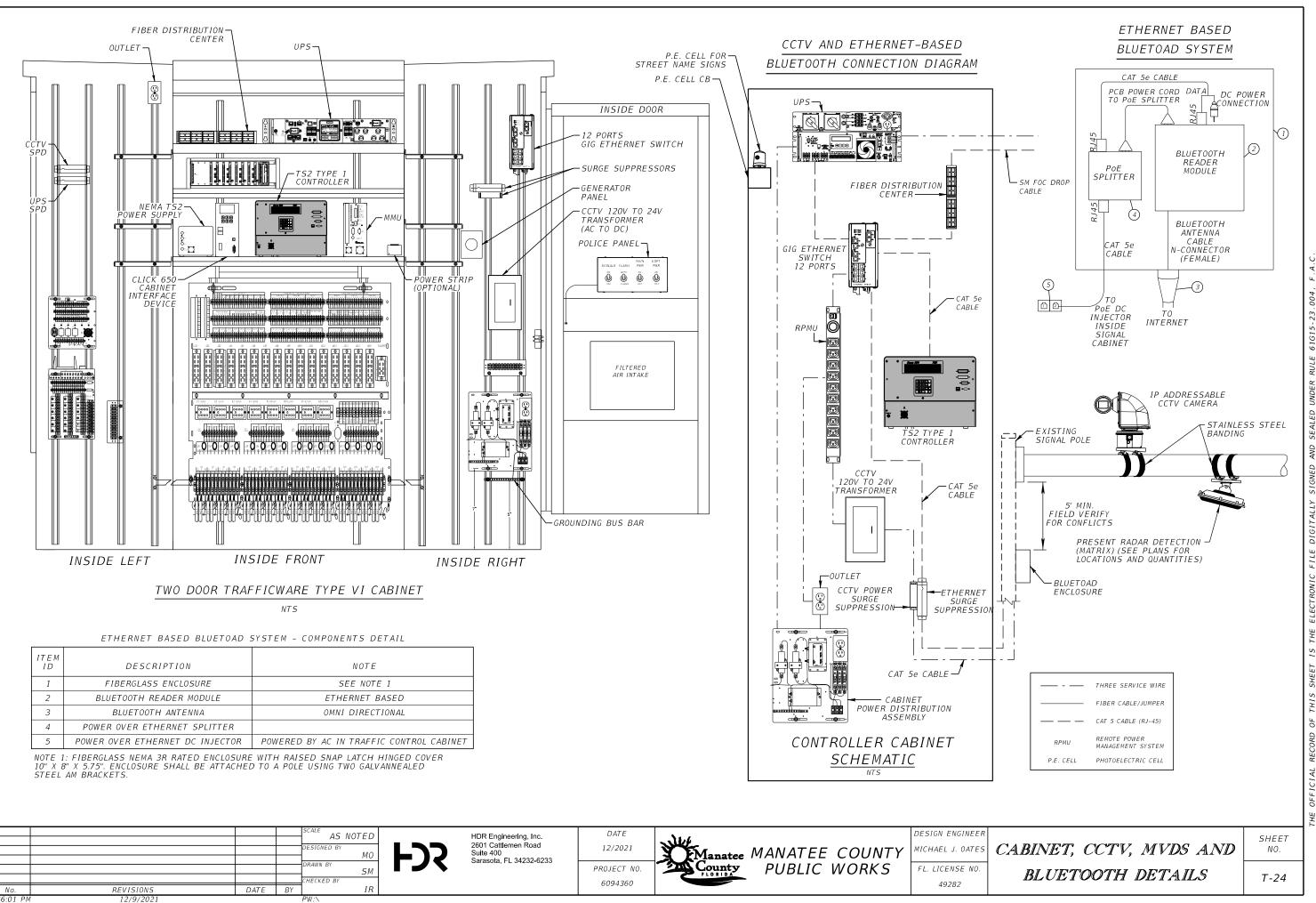
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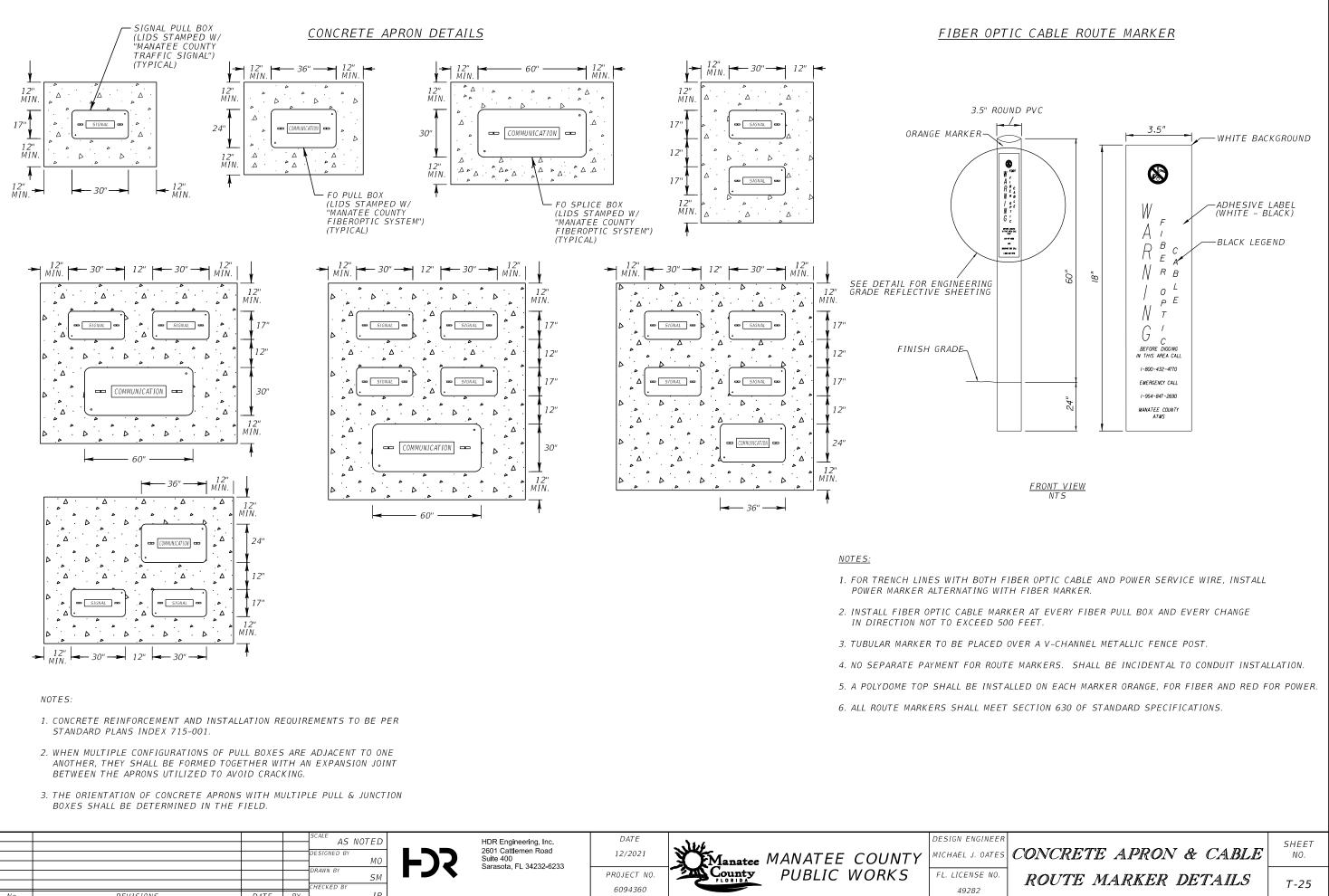


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				SCALE AS NOTE	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE 12/2021 PROJECT NO.	Manatee	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER MICHAEL J. OATES FL. LICENSE NO.	
No. 4:46:05 PM	REVISIONS 12/9/2021	DATE	BY	S CHECKED BY PW:\		6094360	FLORIDA	FUBLIC WORKS	49282	

