STATE OF FLORIDA

INDEX OF SIGNALIZATION PLANS

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PLANS OF PROPOSED ERIE RD. AND SR 62 IMPROVEMENTS PARRISH, FLORIDA MC PROJECT No. 850-6094060 FDOT JPA 445308-1-58-01 FDOT MILE POST 11.175





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

FLORIDA P.E. # 49282

UNP SIGNED FILE DIGITALLY

SHEET NO.

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. 4830 W. KENNEDY BLVD., SUITE 400 TAMPA, FL 33609-2548 MICHAEL J. OATES, PE NO. 49282

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 T-2 T-3 T-4 T-5 T-6 T-7	KEY SHEET SIGNATURE SHEET TABULATION OF QUANTITIES GENERAL NOTES PAY ITEM NOTES SIGNALIZATION PLAN GUIDE SIGN WORKSHEET
Τ-8	MAST ARM TABULATION



SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-9	STANDARD MAST ARM DATA TABLES

				SCALE AS NOTED		HDR Engineering, Inc. 4830 W Kennedy Blvd	DATE	where	MANATEE COUNTY	DESIGN ENGINEER	
				MO	FJ	Suite 400 Tampa, FL 33609–2548	10/2021	Manatee	PIRIIC WORKS	OATES	
				GS			PROJECT NO.	FLORIDA	TODETC WORKS	FL. LICENSE NO.	
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	SHEET
SIGNATURE SHEET	T-2
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PAY ITEM NO	DESCRIPTION	UNIT	T -	· 6		SF	HEET I	NUMBERS				TOTAL THIS SHEET	GRA TOT	ND AL
630-2-11	CONDULT FURNISH & INSTALL OPEN TRENCH	<i>I F</i>	PLAN 170	FINAL	PLAN FINAL PL	AN FINAL	PLAN	FINAL PLAN	FINAL PLAN	FINAL	PLAN FINAL	PLAN FINAL	PLAN 170	FINAL
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	355									355	355	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1									1	1	
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	13									13	13	
635-2-12	PULL & SPLICE BOX, F&I, 24" x 36" COVER SIZE	EA	1									1	1	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1									1	1	
639-2-1 639-4-6	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY	LF EA	400									400	400	
641 2 12		ΕΛ	1									1	7	
041-2-12													1	(
646 - 1 - 11	ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTAL	EA	7									7	7	•
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	1									1	1	;
649-21-10 649-21-19	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60' STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 70'-60'	EA	1									1	1	
650-1-14	TRAFFIC SIGNAL FURNISH & INSTALL ALUMINUM 3 SECTION 1 WAY	45	10									10	10	
650-1-16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	A5 A5	4									4	4	
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS	2									2	2	L
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	6									6	6	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNIDOWN, 2 WAYS	AS	1										1	L
660-3-11 660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA EA	1									1	1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	8									8	8	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1									1	1	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA	1											
684 - 1 - 1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1									1	1	
684-6-12	WIRELESS COMMUNICATION DEVICE, FURNISH & INSTALL ETHERNET SUBSCRIBER UNIT	EA	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	4									4	4	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL OVERHEAD MOUNT, 12-18 SF	EA	4									4	4	
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No.	REVISIONS DATE BY IR)-45-39 AM	10/14/2021		PW/·\						

GENERAL NOTES

- THE CONTRACTOR SHALL CONTACT THE ENGINEER, IN CONJUNCTION 1 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 RELEVANT TO ANY FIELD MODIFICATIONS THAT ARE NECESSARY. 2.
- 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 L. 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 MICHAEL L. STURM, P.E. 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 ELECTRONIC FORM (PDF) TO: 5.

FDOT TRAFFIC OPERATIONS RENJAN JOSEPH, P.E., TSM&O ENGINEER - ARTERIALS 801 N. BROADWAY AVE P.O. BOX 1249 BARTOW, FL 33830-1249 EMAIL: RENJAN.JOSEPH@DOT.STATE.FL.US PHONE: 863-519-2746

- 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 3420 RECORD DRAWINGS MUST BE DELIVERED TO THE COUNTY 48 HOURS PRIOR TO SCHEDULING THE FINAL INSPECTION. 6. 34203
- UPON PASSING THE FINAL INSPECTION THE CONTRACTOR SHALL SEND A 7 WRITTEN REQUEST TO THE PROJECT MANAGEMENT DIVISION AND 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL 8. 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.
- THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE 9 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
- 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 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. GROUNDING CONDUCTOR MUST BE #6 OR LARGER INSULATED COPPER

CONNECTING DEVICES SHALL COMPLY WITH FDOT STANDARDS.

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 FOUNDATION OUT OF GROUND (#) 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: 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. EXISTING SPEED LIMITS ARE AS FOLLOWS:
 - 45 MPH ON US 301 40 MPH ON SR 62
 - 30 MPH ON ERIE ROAD
- 22. 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.
- 23. 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.
- 24. 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 SUBMITTAL DATA.

CONDUIT NOTES

- ALL HDPE CONDUIT CONNECTIONS SHALL BE JOINED WITH A FUSION COUPLER OR FUSION SPLICE. 1.
- ANY DAMAGE TO ANY UTILITY.
- 4.
- 5.
- EXCEPT AS SPECIFIED ON THE PLANS.
- 7. EXISTING UTILITIES AND OBSTRUCTIONS.
- 8.

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			DESI	AS NOTED	ר ר	HDR Engineering, Inc. 4830 W Kennedy Blvd, Suite 400 Tampa EL 33600 2548	DATE 10/2021	Manatee	MANATEE COUNT	DESIGN ENGINEE MICHAEL J. OATES
			DRAV	WN BY GS		Tampa, TE 55009-2548	PROJECT NO.	County	PUBLIC WURKS	FL. LICENSE NO.
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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.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL ABOVEGROUND AND UNDERGROUND CONFLICTS IN ADVANCE OF THE PLACEMENT OF ANY CONDUIT OR OTHER FACILITIES. 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.

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

THE CONDUIT DETAILS GIVEN ARE MEANT TO BE SCHEMATIC IN NATURE. DUE TO ACTUAL FIELD CONDITIONS AND/OR NEEDS, DEVIATIONS MAY BE NECESSARY. DIMENSIONAL DISTANCES FOR CONDUIT LOCATIONS ARE PROVIDED TO ASSIST THE CONTRACTOR WITH CONDUIT PLACEMENT. THE CONTRACTOR SHALL TAKE THIS INTO ACCOUNT WHEN PLACING CONDUIT. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING CONDUIT AROUND

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.

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".

GENERAL NOTES

SHEET NO. T-4

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.

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.

TWO 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 TWO 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 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.

З. 635-2-11

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.

4.

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. 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
- 6. 649-21-6, 649-21-10, & 649-21-19: 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.

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

653-1-11 & 653-1-12: 8.

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 ADVANCE 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. 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

12.670-5-111

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 COMTROLLER EQUIPMENT TO BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING ATMS SYSTEM (NAZTEC'S ATMS.NOW). 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.

<u>CONTACTS:</u> MANATEE COUNTY PUBLIC WORKS DEPARTMENT INFRASTRUCTURE ENGINEERING CHRIS MOWBRAY, P.E. 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7450 EAY: (941) 708-7451	MANATEE COUNTY HEALTH DEPARTMENT HARRY MESSICK 410 GTH AVENUE EAST BRADENTON, FL 34208 (941) 748-0747 EXT. 1355 FAX: (941) 750-9364	FRONTIER COMMUNICATIONS DENISE HUTTON 1701 RINGLING BLVD SARASOTA, FL 34236 (941) 906-6722 denise.hutton@ftr.com	
MANATEE COUNTY PUBLIC WORKS DEPARTMENT UTILITY ENGINEERING SCOTT MAY, P.E. 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7450 EXT. 7650 FAX: (941) 708-7415 MANATEE COUNTY PUBLIC WORKS DEPARTMENT TRAFFIC ENGINEERING VISHAL KAKKAD. P.E. (941) 749-3500 EXT. 7812 FAX: (941) 749-3517	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 DEPT OF ENVIRONMENTAL PROTECTION STEPHANIE BARIOS 13051 N. TELECOM PKWY TEMPLE TERRACE, FL 33637 (813) 632-7600, EXT. 408 FAX: (813) 632-7662	CHARTER COMMUNICATIONS JAMES CRUZAN 5413 E. STATE ROAD 64 BRADENTON, FL 34208-5535 (727) 329-2846 James.Cruzan@charter.com CENTURYLINK MARK MATHIS (813) 245-6645 (720) 888-1089	

10/14/2021

PW:

10:45:52 AM

				SCALE AS NOTED	HDR Engineering Inc	DATE	N1.4		DESIGN ENGINEER
				ASNOTED	4830 W Kennedy Blvd	10/2021	NHC-	MANATEE COUNTY	ΜΙCΗΔΕΙ Ι
				DESIGNED BY	Suite 400	10/2021	Y M anatee	MANAILL COUNTI	OATES
				140	Tampa, FL 33609-2548			DIIRITC MINDKS	0/11/23
				GS		PROJECT NO.	County	FUDLIC WURKS	FL. LICENSE NO.
				CHECKED BY		850-6094060	FLORIDA		10202
No.	REVISIONS	DATE	BY	l IR		050 0054000			49202

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 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. 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 THE CCTV CAMERA UNIT SHALL BE BOSCH ITS 7000 STARLITE SERIES -1080 30 X 40 THE ETHERNET SWITCH SHALL BE A RUGGEDCOM SWITCH MODEL NUMBER RSG920P, PART NUMBER 6GK6092-0PS23-0BA0-Z A05+B05+C02+D02. 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. 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 PHOTOCELL 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. FLORIDA GAS TRANSMISSION FLORIDA POWER & LIGHT FLORIDA POWER & LIGHI GREG COKER 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 723-4430 FAX: (941) 723-4430 SAFETY HARBOR TEAM 7804 ANDERSON ROAD TAMPA, FL 33634 JOSEPH SANCHEZ (813) 466-3327 CELL: (727) 639-7512 EMERGENCY. 1-800-4-0UTAGE joseph.e.sanchez@sug.com Greg_Coker@fpl.com TECO/PEOPLE GAS CO. DAN SHANAHAN 8261 VICO COURT SARASOTA, FL 34240 PEACE RIVER ELECTRIC COOPERATIVE, INC. P.O. BOX 1310 (813) 645–2700 FAX: (941) 342–4011 EMERGENCY: 1–877–832–6911 WACHULA, FL 33873 DAVID MCCLINTOCK (863) 767-4621 David.McClintock@preco.coop d jshanahan@tecoenergy.com SUNSHINE STATE ONE CALL OF FLORIDA 1 (800) 432-4770 SHEET NO. PAY ITEM NOTES T-5

13. 682-1-113: 14. 684-1-1 15. 685-1-12. 16. 700-5-22:



SIGN NAME A QTY I SIGN NO. STATION(S PANEL BORDER	$ \begin{array}{c} & & & & & & & & & & & & & & & & & & &$	SIGN NAME B OTY I SIGN NO. STATION(S) PANEL BORDER WIDTH O" WIDTH 6'-O" WIDTH O" HEIGHT 2'-O" RADII O" LEGEND White COLOR Green COLOR Green Image: Color Green Image: Color Green SYMBOL(S) ANGLE X Y WID SIGN NO. OF EDGE OF Image: Column SIZE AVERAGE SIGN NO. OF COLGRANCE Image: Column SIZE AVERAGE	<i>5.0</i> , <i>1</i>
	NO. OF LIGHT FIXTURES FIXTURE SPACING PHOTOMETRIC CURVE WATT VOLTAGE		NO. OF LIGHT FIXTURES FIXTURE
COPY U S 3 0		COPY U S 3 0	1 L
SPACE 15 8.5 6.5 8 8.1 8.5	2.4 15 41.9	SPACE 15 8.5 6.5 8 8.1 8.5	2.4 15 41.9
COPY 1 2 3 3 0 COPY 5 7 57 57 50 5	1 2 3 3 4 L .	COPY 1 2 3 4	
SPACE 6 3 5.7 5.7 5.9 5	9.1 5 5.7 5.7 5.0 6 60		
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СОРҮ		СОРҮ	
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SIGN NAME C QIY I NO. STATION(S PANEL BORDER Image: Station of the state of the st	$ \begin{array}{c} \hline & & & \\ \hline \\ & & \\ \hline \\ & & \\ \hline \\ & & \\ \hline \\ \hline$	SIGN NAME D DIY SNO. SIATION(S) PANEL BORDER	₹ ₹ ₹ 8"1
	NO. OF LIGHT FIXTURES FIXTURE SPACING PHOTOMETRIC CURVE WATT VOLTAGE		NO. OF LIGHT FIXTURES FIXTURE
COPY t r i e SPACE 29.7 8.1 5.9 4.1 5.3 8	r a L a	COPY S R 6 2 SPACE 36.7 8.5 6.5 8 8.2 6.5	9.7 37.6
COPY S R 6 2			R d L
SPACE 9.7 8.5 6.5 8 8.2 6.5	36.7 37.6	SPACE 9.7 8.1 5.9 4.1 5.3 8	7.9 5.3 29.7 44.6
СОРҮ		СОРҮ	
SPACE SPACE		SPACE	
COPY		COPY	
SPACE		SPACE	
SPACE		SPACE	
No. REVISIONS	SCALE AS NOTED DESIGNED BY MO DRAWN BY GS CHECKED BY IR DATE DATE DATE BY DATE DATE	Manatee Manatee PUBLIC V	COUNTY NORKS IL DESIGN ENGINEER MICHAEL J. OATES FL. LICENSE NO. 49282
		10:46:28 AM 10/14/2021	PW:\







								-1107 -	5 1101	DEN	07	0101	101						JEME		1																			
** DE	ΝΟΤ	ES FOUNDA	ATION IS DESIG	NED AS 0.5	' ABOVE G	GRADE						SIGI	VAL	DA	TΑ															S	I GN	DA	ТА							MVDS
STRUCT .	РС	DLE SHEET	LOCATION	TOP OF	CRITICAL	RDWY	SIGNAL	BACK	PED.			DISTANCE FROM POLE							TOTAL	ARM	ANGLE		DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN									OM POLE								
ID NO.	ÎD	NO. NO.	BY STA.	FOUNDATION ELEV.	ROAD ELEV .	ARM NO.	V/H	Y/N	SIGNAL Y/N	1	*	2	*	3	*	4	* 5	*	6	*	ARM LENGTH	<i>М.</i> Н.	DUAL ARMS 90/270	A	H1	W 1	В	42	W2	C	13 V	/3	DH	4 W4	E	H5	W5	CCTV	1	2 3
13M178		1 T-6	107+91.0	**44.60'	43.83'	1	V	Y	N	32	3	44	3	56	4	58.	3				60	19.75	NA	12	2	7	48	3	3										5	36 40
13M178		2 T-6	108+03.0	**44.40'	43.60'	1	V	Y	N	8	3	24	5	32	3	40 ·	4				45	19.75	NA	12	2	6	36	3.	2.5									18		
13M178		3 T-6	106+71.0	**44.10'	43.87'	1	V	Y	N	35	3	45	4	54	3	63 :	5				67	20.25	270	12	2	6	49	3 .	2.5											
					43.51'	2	V	Y	N	34	3	46	3	56	3	58 4	4				60	20.25		12	2	7	50	3	3										31	38 42
																							NA																	
		FUTURE SCE	NARIO																																					
13M178		1 T-6	107+91.0	**44.60'	43.83'	1	V	Y	N	25	5	44	3	56	4	58.	3				60	19.75	NA	12	2	7	31	3	3	48	3	3	52 3	2.5					5	36 40
13M178		2 T-6	108+03.0	**44.40'	43.60'	1	V	Y	N	8	3	24	5	32	3	40	4				45	19.75	NA	12	2	6	36	3 .	2.5	43	3	3						18		
13M178		3 T-6	106+71.0	**44.10'	43.87'	1	V	Y	N	35	3	45	4	54	3	63 .	5				67	20.25	270	12	2	6	49	3.	2.5											
					43.51'	2	V	Y	N	34	3	46	3	56	3	58 -	4				60	20.25		12	2	7	27	3	3	50	3	3	54 3	2.5					31	38 42

* DENOTES NUMBED OF SECTIONS IN SIGNAL HEAD ASSEMBLY

				AS NOTED	HDR Engineering, Inc.	DATE	with .		DESIGN ENGINEER
				DESIGNED BY MO	4830 W Kennedy Blvd, Suite 400	10/2021	Manatee	MANATEE COUNTY	OATES
				DRAWN BY	Tampa, FL 33609-2548	PROJECT NO.	County	PUBLIC WORKS	FL. LICENSE NO.
No	REVISIONS	DATE	BY	CHECKED BY		850-6094060	FLORIDA		49282
	ALCH STONS	BARE	51				10:46:42 AM	10/14/2021	PW:\

-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.

MAST ARM TABULATION

SHEET NO.

H

T-8

STANDARD MAST ARM ASSEMBLIES DATA TABLE												
STRUCTURE ID NUMBERS	POLE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM				POLE			DRILLED
			ARM ID	FAA (ft.)	ARM ID	SAA (ft.)	(deg)	(deg)	POLE ID	UAA (ft.)	UB (ft.)	SHAFT ID
13M178	POLE 1	A70/S/H-P5/S	A70/S/H	28					P5/S	22.75	19.75	**
	POLE 2	A50/S/H-P3/S	A50/S/H	27.5					P3/5	22.75	19.75	**
	POLE 3	A70/D-A70/D-P6/D	A70/D	35	A70/D	28	270		P6/D	23.25	20.25	**

NOTES:

- 1. 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.
- 2. 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.
- 3. 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.
- 4. Work with Index 649-030 and 649-031.
- 5. Due to the proposed loading for Pole 1 Arm 1 the A70/S/H arm is specified to be used for satisfying design requirements with FAA = 28 ft. resulting in 60 ft. arm length. Similarly Pole 3 Arm 2 is specified as A70/D arm with SAA = 28 ft. to satisfy design requirements.

POLE ID

NUMBERS

POLE 1

POLE 2

POLE 3

FOUNDATION NOTE:

FOUNDATION DESIGN PARAMETERS										
POLE ID NUMBERS	SOIL LAYER THICKNESS (ft.)	SOIL FRICTION ANGLE (deg)	SOIL WEIGHT (pcf) (1)	SOIL TYPE (2)	WEIGHTED AVERAGE N-VALUE (3)					
POLE 1	30	28	43	SAND	9					
POLE 2	30	29	43	SAND	6					
POLE 3	30	29	43	SAND	12					

(1) Design water table is 0 ft. below surface

			SCALE AS NOTED		DATE			DESIGN ENGINEER
			AJ NUTLD	2601 Cattlomon Road	10/2021	NUM -		CHESTER A
			DESIGNED BY RT	Suite 400 Sarasota, FL 34232-6233	10/2021	MANA [*]	MANATEE COUNTY	SMITH III
						Alvianatee MANA	LL COUNT	30000
			DRAWN BY KE		PROJECT NO.	County PUB	IC WORKS	FL. LICENSE NO.
			CHECKED BY		950 6001060	FLORIDA		70756
No.	REVISIONS	DATE BY	CAS		850-0094000			/0/56
					10:13:23 AM	10/26/2021		PW:\

A ECIME FOONDATION DATA TABLE										
SHAFT AND REINFORCEMENT										
DA (ft.)	DB (ft.)	RA	RB	RC	RD (in.)	RE	RF (in.)			
22	5	11	18	10	8	-	-			
22	4.5	11	16	10	8	-	-			
22	5	11	18	10	8	-	-			

**** SPECIAL FOUNDATION DATA TABLE**

Assumptions and Values used in design:

(2) Soil type is sand (cohesionless) or clay (cohesive) (3) This value is determined over the length of the drilled shaft 'DA'

STANDARD MAST ARM DATA TABLES

SHEET NO.

T-9