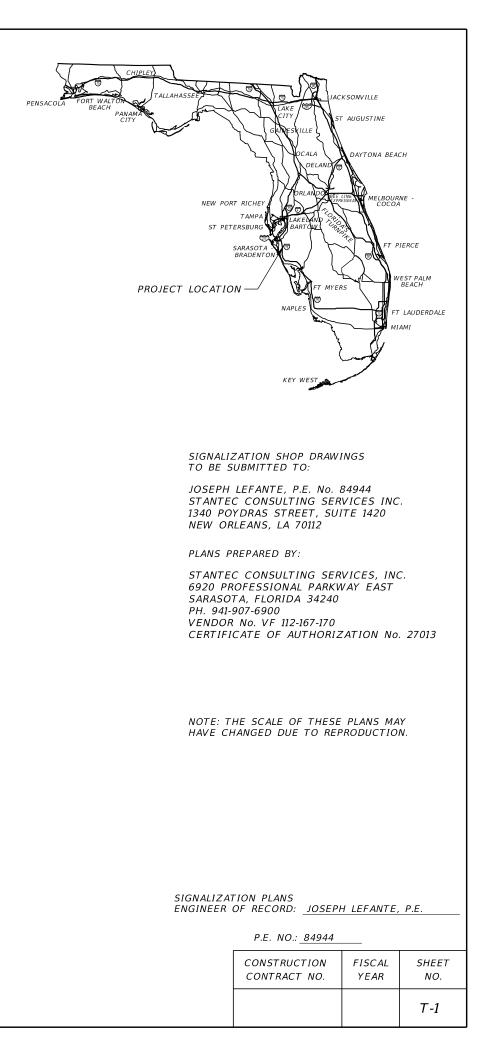
MANATEE COUNTY PUBLIC WORKS DEPT. ENGINEERING SERVICES



CONTRACT PLANS

PROJECT NUMBER 215617222

MOCCASIN WALLOW SEGMENT 3

I-75 TO U.S. 301

SIGNALIZATION PLANS

INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
SHEET NO.	SHEET DESCRIPTION
T - 1	KEY SHEET
T - 2	SIGNATURE SHEET
T - 3	TABULATION OF QUANTITIES
T-4 - T-7	GENERAL NOTES
T-8 - T-11	SIGNALIZATION PLAN
T-12 - T-13	GUIDE SIGN WORK SHEET AND DETAILS
T - 14	STANDARD MAST ARM TABULATION
T - 15	SPECIAL MAST ARM ASSEMBLIES TABLE
T - 16	BORING DATA SHEETS - MAST ARMS
T-17 - T-25	INTERCONNECT PLAN
Т-26	SPLICE DIAGRAM
T - 27	MVDS DETAILS

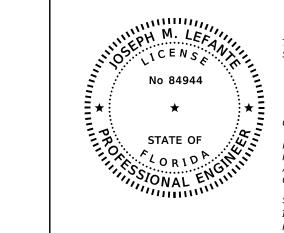
GOVERNING DESIGN STANDARDS:

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

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

GOVERNING STANDARD SPECIFICATIONS:

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



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STANTEC CONSULTING SERVICES INC. 1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112 JOSEPH M. LEFANTE, P.E. NO. 84944

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

SIGNALIZATION PLANS

T - 1

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STANTEC CONSULTING SERVICES INC. 2056 VISTA PARKWAY, SUITE 100 WEST PALM BEACH, FL 33411 JOSE M. ROQUE, P.E. NO. 92313

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

T - 15 SPECIAL MAST ARM ASSEMBLIES TABLE SIGNALIZATION PLANS

T - 16

T - 2	SIGNATURE SHEET
T - 3	TABULATION OF QUANTITIES
T-4 - T-7	GENERAL NOTES
T-8 - T-11	SIGNALIZATION PLAN
T-12 - T-13	GUIDE SIGN WORK SHEET AND DETAILS
T - 14	STANDARD MAST ARM TABULATION
T-17 - T-25	INTERCONNECT PLAN
Т - 26	SPLICE DIAGRAM
T - 27	MVDS DETAILS

KEY SHEET

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	REVI	SIONS		ENGINEER OF RECORD	MANAT	EE COUNTY PUBL	IC WORKS DEPT.
DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E. P.E. LICENSE NUMBER 84944		ENGINEERING S	
				STANTEC CONSULTING SERVICES INC.	ROAD NO.	COUNTY	STANTEC PROJECT NO.
				1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	MOCCASIN WALLOW RD	MANATEE	215617222

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BORING DATA SHEETS - MAST ARMS

SIGNATURE SHEET	SHEET NO.
SIGNAIORE SILLEI	T-2

TABULATION OF QUANTITIES

				5	Summary of	Signalizatior	n Items						
			Sheet Numbers										
Pay Item Number	Pay Item Description	Unit of Measure	T-8		T-10	T-17	T-18	T-19	T-20	T-21	T-22	T-23	Т
Number		measure	PLAN	VAL PI	LAN FINAL	PLAN FINAL	PLAN FINAL	PLAN FINAL	PLAN FINA	PLAN FINAL	PLAN FINAL	PLAN FINAL	ŀ
630-2-11	Conduit, Furnish & Install, Open Trench	LF	210	2	236	874	1222	1305	1797	1226	1307	1336	t
630-2-12	Conduit, Furnish & Install, Directional Bore	LF	467	4	197 :	333	305 !	357	822 !	283	193		t
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish & Install	PI	1		1		i i	1	1	1	1	-	t
633-1-121	Fiber Optic Cable, F&I, Underground,2-12 Fibers	LF					126		323				t
	Fiber Optic Cable, F&I, Underground, 13-48 Fibers	LF				1278	1851	1701	1902	1750	1700	1586	t
633-2-31	Fiber Optic Connection, Install, Splice	EA	1			48	4		4			48	t
	Fiber Optic Connection Hardware, F&I, Splice Enclosure	EA	1			1	1		1		1	1	t
633-3-12	Fiber Optic Connection Hardware, F&I, Splice Tray	EA				1	1		1	1		1 '	t
	Fiber Optic Connection Hardware, F&I, Preterminated Connector Assembly	EA					1		1				t
	Fiber Optic Connection Hardware, F&I, Preterminated Patch Panel	EA	1				1		1				+
	Multi-Conductor Communication Cable, Furnish & Install	LF				313	1603	579	3108	948			t
	Pull & Splice Box, F&I, 24" X 36" Cover Size	EA	1			5	3 '	5	7	5	4	3	t
	Pull & Splice Box, F&I, 30" X 60" Rectangular Or 36" Round Cover Size	EA	-		1		1		1	1			t
	Pull & Splice Box, F&I, 17" X 30" Cover Size	EA	6		6							+ :	t
	Electrical Power Service, F&I, Underground, Meter Furnished By Contractor	AS	1		1	1	1					+	t
	Electrical Service Wire, Furnish & Install	LE	8		8		i	i .	i	1	1	+ ;	+
	Electrical Service Disconnect, F&I, Pole Mount	EA	1		1	1	1	1	1	1	-	+	+
	Emergency Generator Cab - Install Housing Only	EA	1		1							+	t
	Prestressed Concrete Pole, F&I, Type P-II Service Pole	EA	1		1				1		1 :	+ :	+
	Prestressed Concrete Pole, F&I, Type P-III	EA				1	;	2	 ;	1	;	+	+
	Aluminum Signals Pole, Furnish & Install, Pedestal	EA	8 '		8 '		1		1				+
	Mast Arm Assembly, Furnish & Install, Single Arm 60'	EA	1			1				1	-		+
	Mast Arm Assembly, Furnish & Install, Single Arm 70'	EA	1		1								+
	Mast Arm Assembly, Furnish & Install, Double Arm 70'-50'	EA	1				i	+ i	- i	- i	- i	+	+
	Mast Arm Assembly, Furnish & Install, Double Arm 70-50	EA	1			1	1	1	1	1	1		+
	Mast Arm Assembly, Furnish & Install, Single Arm 78'	EA	1		3 '	1	1	1	1	1	-	-	+
	Mast Arm Assembly, Furnish & Install, Jouble Arm 78 Mast Arm Assembly, Furnish & Install, Double Arm 78'-78'	EA	1		2 '					+ :	<u> </u>	+ :	+
	Webschaft Traffic Signal, Furnish & Install Polycarbonate, 3 Section, 1 Way	AS	22		24								+
	Venicular Traffic Signal, Furnish & Install Polycarbonate, 5 Section, 1 Way Vehicular Traffic Signal, Furnish & Install Polycarbonate, 5 Section Cluster, 1 Way	AS	22		4	1		1	1	-	-	+	+
	Pedestria Signal, Furnish & Install Led Countdown, 1 Way	AS	8 '		8 '	1	1	1	1	1	1	+	+
	Vehicle Detector System - Microwave, Furnish & Install, Cabinet Equipment	EA	6 '		8 '		2		4		+ +		+
	Venicle Detector System - Microwave, Furnish & Instail, Cabre Cryunnent	EA	6		8	1	2	2	4	1		+	+
	Pedestrian Detector, Furnish & Install, Standard	EA	8		8		; · · ·		+ ; · · ·		+ ;		+
	Traffic Controller Assembly, F&I, NEMA	AS	1 '		1	1	1	1	1	1	1		+
	ITS CCTV Camera, F&I, Dome PTZ Enclosure - Pressurized, IP, High Definition	EA	1 1		1 1	1	1	1	1	1	1	+ :	+
		EA	1		1					-			+
	Managed Field Ethernet Switch, Furnish & Install Uninterruptible Power Supply, Furnish And Install, Online/Double Conversion With Cabinet	EA	-		-		,			+			+
		EA	1		1	1	1	1	1	1	1	-	+
	Remote Power Management Unit- RPMU, Furnish And Install	EA	1		1		1	1	+ :	+	+ :		+
	Sign Panel, Furnish & Install Overhead Mount, Up To 12 SF		8		10			-	+	+	+	+	+
	Internally Illuminated Sign, Furnish & Install, Overhead Mount, 12-18 SF	EA	4		· ·		· · ·	+	+	+	+ · · · · · · · · · · · · · · · · · · ·	+	+
/00-141-//1	Enhanced Highway Sign Assembly, AC Powered, Install, w/EDS And Beacon, Up To 12 SF Of Static Sign Panels	EA	1		1	1	1	1	1	1	1	-	+



1	REVI	SIONS		ENGINEER OF RECORD	MANATEE COUNTY PUBLIC WORKS DEPT.			
DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E. P.E. LICENSE NUMBER 84944		ENGINEERING SI	ERVICES	
				STANTEC CONSULTING SERVICES INC.	ROAD NO.	COUNTY	STANTEC PROJECT NO.	TABU
				1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	MOCCASIN WALLOW RD	MANATEE	215617222	

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SIGNALIZATION GENERAL NOTES:

- 1. THE CONTRACTOR SHALL CONTACT THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION BEFORE STARTING WORK
- THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, IN 2. CONJUNCTION WITH MANATEE COUNTY'S TRAFFIC ENGINEERING DIVISION, AT LEAST TWO WEEKS BEFORE ANY CABINET MODIFICATIONS ARE TO BE PERFORMED. THE ENGINEER, IN CONJUNCTION WITH MANATEE COUNTY'S TRAFFIC ENGINEERING DIVISION PERSONNEL WILL REVIEW, ASSIST AND PROVIDE TECHNICAL SUPPORT RELEVANT TO ANY FIELD MODIFICATIONS THAT ARE NECESSARY
- 3. AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING DEPARTMENTS TO INFORM THEM OF CONSTRUCTION OPERATIONS.

MANATEE COUNTY TRAFFIC OPERATIONS DIVISION MR. AARON BURKETT 2904 12TH STREET COURT EAST BRADENTON, FLORIDA 34208 PHONE #: (941) 708-7450, EXT. 7509

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION MR. VISHAL KAKKAD, P.E. PTOE 2101 47TH TERRACE EAST BRADENTON, FLORIDA 34208 PHONE #: (941) 749-3500 EXT. 7812

4. FORTY-EIGHT (48) HOURS PRIOR TO CONTRACT START DATE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES IN WRITING GIVING THE LOCATION, START DATE AND EMERGENCY NUMBERS FOR AFTER HOURS REPAIRS.

FLORIDA HIGHWAY PATROL POST OFFICE BOX 20009 BRADENTON, FLORIDA 34203 PHONE #: (941) 751-7646

MANATEE SHERRIFF'S OFFICE 515 11TH STREET WEST BRADENTON, FLORIDA 34205 PHONE #: (941) 747-3011

- THE CONTRACTOR SHALL HAVE AN IMSA CERTIFIED LEVEL II 5. (ELECTRONICS OR ELECTRICAL TECHNICIAN) ON THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. ALL SIGNAL INSTALLATION TECHNICIANS SHALL HAVE A MINIMUM OF IMSA LEVEL I CERTIFICATION
- 6. DELIVER THREE (3) SETS OF AS-BUILT PLANS TO SR. PROJECT ENGINEER IN TRAFFIC ENGINEERING DIVISION:

MR. MUKUNDA GOPALAKRISHNA, P.E. PTOE 2101 47TH TERRACE EAST BRADENTON, FLORIDA 34208 PHONE #: (941) 749-3500 EXT. 7813

DELIVER THREE (3) SETS OF RECORD DRAWINGS, TWO (2) SETS OF IMSA INSPECTION FORMS AND ONE (1) COMPACT DISC OF RECORD DRAWINGS TO MR. AARON BURKETT, THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION MANAGER AT 2904 12TH ST CT E, BRADENTON, FLORIDA 34208. RECORD DRAWINGS MUST BE DELIVERED FIVE (5) BUSINESS DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.

- PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL CONTACT THE 7. TRAFFIC OPERATIONS DIVISION AND VERIFY THE CURRENT COLOR CODES TO BE USED FOR SIGNAL AND INTERCONNECT CABLE.
- AT LEAST FIVE (5) WORKING DAYS PRIOR TO SCHEDULING THE TRAFFIC 8. SIGNAL FINAL INSPECTION, THE CONTRACTOR SHALL SUBMIT A COMPLETED IMSA INSPECTION CHECKLIST FORM TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION

- UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN FIVE (5) WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.
- 10. 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
- 11. 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 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.
- 12. 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.

ALL LOCATIONS WHERE THE REQUIRED VERTICAL CLEARANCE TO THE POWER LINE 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.

- 13. 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.
- 14. THE CONTRACTOR IS TO DE-WATER THE POLE FOUNDATION EXCAVATION IF THE ELEVATION OF WATER IS HIGHER THAN THE ELEVATION OF THE FOUNDATION BASE .
- 15. 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.
- 16. #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 .
- 17. 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.

CONNECTING DEVICES SHALL BE NON-CORROSIVE SPLIT BOLT, 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 BE PRESENT DURING THE TEST

- HORIZONTALLY; AND
- OF TRAFFIC OPERATIONS
- 23. EXISTING SPEED LIMITS ARE AS FOLLOW: 45 MPH ON MOCCASIN WALLOW RD

- ARM TABULATION SHEET"
- FLORIDA 34208.

11		REVI:	SIONS		ENGINEER OF RECORD	MANATEE COUNTY PUBLIC WORKS DEPT.			
SVFDC	DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E.]	ENGINEERING SI		
-19 :sets					P.E. LICENSE NUMBER 84944 STANTEC CONSULTING SERVICES INC.	ROAD NO.	COUNTY	STANTEC PROJECT NO.	
2024-08 C:\Work					STANTEC CONSULTING SERVICES INC. 1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	MOCCASIN WALLOW RD	MANATEE	215617222	

18. 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 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

19. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR BORING.

20. CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO THE ENGINEER, PRIOR TO CONSTRUCTION, FOR APPROVAL.

21. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS SHALL MEET THE FOLLOWING REQUIREMENT. A) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND

B) 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.

22. CONTRACTOR SHALL UTILIZE THE FDOT STANDARD PLANS INDEX 102 SERIES FOR TRAFFIC CONTROL THROUGH WORK ZONES, AS APPLICABLE, DURING MAINTENANCE

24. UNDER COUNTY'S SUPERVISION, THE CONTRACTOR SHALL PERFORM AN INITIAL OPERATION TEST TO ENSURE THE CCTV ASSEMBLY HAS BEEN INSTALLED CORRECTLY AS A COMPLETE AND FUNCTIONALLY ACCEPTABLE INSTALLATION

25. THE SIGNAL CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO TROUBLE CALLS TWENTY-FOUR (24) A DAY, SEVEN DAYS A WEEK FOR THE DURATION OF THE PROJECT. THE PRIME CONTRACTOR SHALL PROVIDE CONTACT NUMBERS FOR THE SIGNAL CONTRACTOR TO THE TRAFFIC OPERATIONS DIVISION AT COMMENCEMENT OF THE PROJECT. FURTHERMORE, WITHIN TWO (2) HOURS OF NOTIFICATION OR DOCUMENTED ATTEMPTED NOTIFICATIONS, THE SIGNAL CONTRACTOR SHALL BE ON SITE MAKING NEEDED REPAIRS OR MODIFICATIONS. FAILURE TO MEET THE TIME REQUIREMENTS SHALL GIVE THE COUNTY, AT ITS DISCRETION, THE RIGHT TO REQUEST ASSISTANCE FROM THE MANATEE COUNTY SHERRIFF'S DEPARTMENT TO CONTROL TRAFFIC FOR THE PERIOD OF TIME UNTIL THE CONTRACTOR RESPONDS AND MAKES THE NEEDED REPAIRS. THE COST FOR MANATEE COUNTY SHERIFF'S OFFICE SHALL BE THE RESPONSIBILITY OF THE PRIME CONTRACTOR.

26. ELEVATION OF THE TOP OF THE MAST ARM FOUNDATION SHALL BE SIX (6) INCHES ABOVE EXISTING GRADE, UNLESS LOCATED DIRECTLY AT THE BACK OF SIDEWALK. IF LOCATED AT BACK OF SIDEWALK, THE FOUNDATION ELEVATION SHALL MATCH SIDEWALK GRADE. SEE TOP OF FOUNDATION ELEVATION ON "MAST

27. 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 MR. AARON BURKETT, THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION MANAGER AT 2904 12TH ST CT E, BRADENTON,

GENERAL NOTES	SHEET NO.
GENERAL INVILO	T-4

- 28. 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.
- 29. CONTACTOR TO CONTACT TRAFFIC ENGINEERING DIVISION: MR. MUKUNDA GOPALAKRISHNA (941-749-3500 EXT. 7813) TO OBTAIN IP ADDRESSES FOR FIELD DEVICES AND ETHERNET SWITCH CONFIGURATION INFORMATION.
- 30. WHEN A CONTRACTOR IS WORKING ON A SIGNAL IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, LOOPS, HOME RUNS OR TURNING ON OF A NEW SIGNAL) WHERE A LANE IS CLOSED, THE ENGINEER MAY REQUIRE AN OFF-DUTY LAW ENFORCEMENT OFFICER TO DIRECT TRAFFIC. THE HOURLY RATE FOR AN OFF-DUTY LAW ENFORCEMENT OFFICER TO DIRECT, CAN BE OBTAINED FROM THE LOCAL LAW ENFORCEMENT OFFICE. THE COST OF THE OFFICER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN PAY ITEM 102-1 (MAINTENANCE OF TRAFFIC).
- 31. CONTRACTOR SHALL COORDINATE PAVEMENT MARKINGS AND SIGNAGE WORK WITH SCHEDULING OF SIGNAL ACTIVATION. THE SIGNAL SHALL NOT BE FULLY ACTIVATED UNTIL ALL PROPOSED STOP BARS, CROSSWALKS, RAMPS AND PAVEMENT REMOVAL WORK IS COMPLETE. THE EXISTING STOP SIGNS SHALL BE REMOVED UPON FULL SIGNAL ACTIVATION.
- 32. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TWO PORTABLE 4' X 8' VARIABLE MESSAGE SIGNS (VMS) FOR A PERIOD OF TWO WEEKS. THE VMS WILL BE LOCATED AT AN APPROPRIATE DISTANCE IN ADVANCE OF EACH APPROACH TO THE NEW SIGNALIZED INTERSECTION AS SPECIFIED BY THE MAINTAINING AGENCY'S ENGINEER. THE VMS WILL BE PROVIDED (1) WEEK PRIOR TO THE SCHEDULED ACTIVATION TO FULL COLOR OPERATION AND SHALL REMAIN IN PLACE FOR ONE (1) WEEK FOLLOWING ACTIVATION. COST OF FURNISHING VMS TO BE INCLUDED UNDER THE ASSOCIATED PAY ITEM FOR MAINTENANCE OF TRAFFIC.

PRIOR TO ACTIVATION, THE VMS SIGN SHALL BE: (PANEL ONE - LINE 1) "TRAFFIC" (PANEL ONE - LINE 2) "SIGNAL" (PANEL ONE - LINE 3) "WILL BE" (PANEL TWO - LINE 1) "ACTIVATED" (PANEL TWO - LINE 2) "ON DAY" (PANEL TWO - LINE 3) "MONTH XX"	
SUBSTITUTION FOR THE WORD "DAY" SHALL BE AS FOLLOWS: SUNDAY AS "SUN" MONDAY AS "MON" TUESDAY AS "TUES" WEDNESDAY AS "WED" THURSDAY AS "THUR" FRIDAY AS "FRI" SATURDAY AS "SAT"	
SUBSTITUTION FOR THE WORD "MONTH" SHALL BE AS FOLLOWS: JANUARY AS "JAN" FEBRUARY AS "FEB" MARCH AS "MAR" APRIL AS "APR" MAY AS "MAY" JUNE AS "JUN" JULY AS "JUN" AUGUST AS "JUL" AUGUST AS "AUG" SEPTEMBER AS "SEP" OCTOBER AS "OCT" NOVEMBER AS "NOV" DECEMBER AS "DEC"	
SUBSTITUTION FOR THE WORD "XX" SHALL BE AS FOLLOWS:	

THE NUMERICAL DAY OF THE MONTH, FROM ONE (1) TO THIRTY-ONE (31). DATES LESS THAN TEN (10) SHALL BE PROCEEDED BY A ZERO (0). FOR EXAMPLE, "JAN 03" FOR JANUARY 3RD. AFTER THE TURN-ON, THE VMS SHALL BE CHANGED TO:

(PANEL	ONE	_	LINE	1)	"TRAFFIC"
(PANEL	ONE	-	LINE	2)	"SIGNAL"
(PANEL	ΤWΟ	-	LINE	1)	" NOW "
(PANEL	ΤWΟ	-	LINE	2)	" ACT IVE "

PANEL TWO, LINE 1 AND LINE 2, SHALL FLASH THREE (3) TIMES BEFORE REVERTING TO PANEL ONE.

33. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE SIGNAL MAINTENANCE, TIMING AND OPERATION OF ANY AND ALL SIGNALS AND SIGNAGE FROM COMMENCEMENT TO ACCEPTANCE OF THE PROJECT (I.E.: EXISTING LOOPS CUT, SYSTEM COMMUNICATION TERMINATED, LANE OR PAVEMENT MODIFICATIONS, PEDESTRIAN MODIFICATIONS, TRAFFIC SIGNAL SCHOOL FLASHER, WARNING FLASHER, ROADWAY LIGHTING, COUNT STATIONS, AND ANY OTHER TRAFFIC RELATED DEVICE LOCATED WITHIN THE CONSTRUCTION ZONE).

TRAFFIC CONTROLLER CABINET AND CONTROLLER ASSEMBLY

- 1. ALL TRAFFIC SIGNAL CONTROLLER CABINETS SUPPLIED, SHOULD BE TYPE VI.
- 2. ALL SIGNAL CONTROLLER CABINETS SHALL HAVE A FRONT AND BACK ACCESS DOOR.
- 3. PROVIDE ONE (1) PHOTOCELL OUTSIDE THE RESPECTIVE DISCONNECT BOX FOR THE INTERNALLY ILLUMINATED STREET NAME SIGNS AND LUMINAIRES.
- 4. ELECTRICAL SERVICE DISCONNECT IS 100 AMP, COMPRISING OF A SIX (6) CIRCUIT DISCONNECT BOX WITH THREE (3) CIRCUIT BREAKERS -ONE (1) 40 AMP/120 VOLT FOR CONTROLLER CABINET AND TWO (2) 15 AMP/120 VOLT FOR FUTURE USE.
- 5. CONTROLLER CABINET SHOULD BE WIRED FOR SOP 10 REGARDLESS OF THE PROPOSED SIGNAL OPERATION AT THE PROJECT'S INTERSECTION. HOWEVER, THE CONTROLLER SHALL BE PROGRAMMED ACCORDING TO THE PROPOSED SOP AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
- 6. CONTROLLER CABINET FOUNDATIONS SHALL BE BUILT TO THE LATEST FDOT STANDARDS. ONE FOUNDATION FOR BOTH, TRAFFIC CONTROLLER CABINET AND GENERATOR CABINET CAN BE DESIGNED IF THERE ARE NO RIGHT-OF-WAY RESTRICTIONS AND IF INTERSECTION SIGHTLINES ARE CLEAR.
- 7. THE MOUNTING SURFACE OF THE CONTROLLER CABINET SHOULD BE ORIENTED TO ENSURE THE MAIN CABINET DOOR WILL OPEN AWAY FROM ONCOMING TRAFFIC.
- 8. THE CONTROLLER CABINET SHALL BE LOCATED AWAY FROM DRAINAGE DITCHES, SWALES, APEX OF CURVES. THE DESIGNER SHALL MAKE EVERY ATTEMPT TO LOCATE THE CONTROLLER CABINET IN AN EFFORT TO MINIMIZE EXPOSURE TO ERRANT VEHICLES.
- 9. ALL CONTROLLER CABINET DOOR DIAGRAMS SHALL REFLECT THE CURRENT, CORRECT DATA AND DOCUMENTATION.
- 10. THE UPS SHALL BE MOUNTED TO THE SIDE OF THE TRAFFIC SIGNAL CONTROLLER CABINET IN A MANNER THAT DOES NOT OBSTRUCT ACCESS TO NEARBY TRAFFIC SIGNAL EQUIPMENT.
- 11. THE PROJECT IS TO FURNISH AND INSTALL A COMPLETE UPS ASSEMBLY THAT INCLUDES A CABINET AND BATTERIES THAT MEET COUNTY SPECIFICATIONS.
- 12. PROVIDE ONE (1) UNINTERRUPTABLE POWER SUPPLY (UPS) MODEL NO. APC 1300 EQUIPPED WITH AN ETHERNET PORT. ALL UPS'S SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT
- 13. TRAFFIC CONTROLLER SHALL BE NAZTEC 980 ATC, COMPATIBLE WITH MANATEE COUNTY ATMS.NOW SYSTEM. THE CONTROLLER SUPPLIED WITH THE CABINET SHALL COME EQUIPPED WITH FOUR (4) SERIAL PORTS, ONE (1) ETHERNET PORT AND ONE (1) USB PORT.

SIGNAL HEADS AND INTERNALLY ILLUMINATED SIGNS

- 1. USE ALUMINUM LOUVE BACK PLATES SHALL REFLECTIVITY) OUTE
- 2. PEDESTRIAN RAMP DE COMPLY WITH THE LA AND WITH THE LATES
- 3. USE BREAKAWAY ALUM PEDESTALS.
- 4. USE LOCKING COLLAR PEDESTRIAN PEDESTA
- 5. INTERNALLY ILLUMIN ARM AS SHOWN ON TH

<u>DETECTION</u>

- 1. STOP BAR VEHICLE D MATRIX SENSOR.
- 2. THE CONTRACTOR SHA WAVETRONIX AND SUB
- 3. THE SYSTEM INSTALL CABLE AT EACH BRAC AND SECURED TO THE
- 4. A MINIMUM OF 10 FE EACH PULL BOX LOCA
- 5. IN ADDITION TO STO SHALL BE PROVIDED COLLECTION TO SUPP MEASURES (SPMS). T ADVANCE VEHICLE DE ENGINEERING DIVISI
- 6. VERIFY THE MANATEE DETECTION ZONES SE

CONDUIT NOTES

- 1. ALL HDPE CONDUIT C FUSION SPLICE.
- 2. THE CONTRACTOR SHA SERVICE POLE PLACE THE LOCATES. ANY S
- 3. THE CONDUITS TO BE ANY CONFLICTS WITH CONTRACTOR'S RESPO REQUIRED TO PLAN T CONDUITS WITHIN DE THE CONTRACTOR SHA AVOID CONFLICT WIT HAND EXCAVATION ME SEPARATE PAYMENT S BE USED BY THE CON AND COMPACTING ARC RESPONSIBLE FOR AN
- 4. IT SHALL BE THE CC ABOVEGROUND AND UN ANY CONDUIT OR OTH PROPOSED ALIGNMENT TO TRENCHING AND/C DRAINAGE SWALES OR

	REVI	SIONS		ENGINEER OF RECORD	MANATEE COUNTY PUBLIC WORKS DEPT. ENGINEERING SERVICES			
DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E. P.E. LICENSE NUMBER 84944				
1				STANTEC CONSULTING SERVICES INC.	ROAD NO.	COUNTY	STANTEC PROJECT NO.	
				1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	MOCCASIN WALLOW RD	MANATEE	215617222	

RNALLY ILLUMINATED SIGNS	
ERED BACK PLATES ON ALL VEHICULAR SIGNAL HEA INCLUDE A 2" YELLOW REFLECTORIZED (TYPE III ER EDGE BORDER.	
ESIGNS, PUSHBUTTON HEIGHTS AND ORIENTATION S ATEST AMERICAN DISABILITIES ACT (ADA) REQUIR ST FDOT STANDARDS.	
MINUM SQUARE BASE WITH ALUMINUM DOORS FOR PE	DESTRIAN
RS FOR MOUNTING PEDESTRIAN SIGNAL HEADS TO ALS.	
NATED SIGNS SHALL BE RIGIDLY ATTACHED TO THE HE PLANS.	MAST
DETECTION SHALL BE RADAR DETECTION USING WAV	ET RON I X
ALL REQUEST DETECTION SYSTEM OVERLAYS FROM BMIT THEM TO COUNTY'S REVIEW PRIOR TO FIELD	INSTALL .
LER SHALL LEAVE A MINIMUM OF 30 INCHES OF SP CKET. THE SLACK SHALL BE NEATLY FORMED INTO E SENSOR.	
EET OF SENSOR CABLE SLACK SHALL BE NEATLY ST ATION WITH A CONDUIT RUN.	ORED AT
OP BAR PRESENCE DETECTION, ADVANCE VEHICLE D FOR ALL MAJOR STREET APPROACHES TO ENABLE D PORT PURDUE/UTAH AUTOMATED SIGNAL PERFORMANC THE WAVETRONIX SMARTSENSOR ADVANCE SHALL BE ETECTION, UNLESS OTHERWISE APPROVED BY TRAFF ION.	ATA E USED FOR
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CONNECTIONS SHALL BE JOINED WITH A FUSION CO	UPLER OR
ALL ADJUST THE CONDUIT RUNS, DEVICE POLES, B EMENT TO AVOID ANY UTILITY CONFLICTS IDENTIF SIGNIFICANT CHANGE SHALL BE APPROVED BY THE	IED BY
E INSTALLED ARE TO BE PLACED SO AS TO TOTALL H EXISTING UTILITIES ALONG THE ROUTE. IT IS ONSIBILITY TO OBTAIN THE NECESSARY INFORMATI THE WORK AHEAD FOR THE INSTALLATION OF THE R ESIGN OR SPECIFIED PARAMETERS AND HIS TIME F ALL ADJUST CONDUIT VERTICALLY OR HORIZONTALL TH UNDERGROUND UTILITIES. THE CONTRACTOR SHA ETHODS WHEN EXCAVATING NEAR EXISTING UTILITI SHALL BE MADE FOR THIS WORK. EXTREME CAUTION NTRACTOR WHEN EXCAVATING, INSTALLING, BACK F OUND EXISTING UTILITIES. THE CONTRACTOR SHAL NY DAMAGE TO ANY UTILITY.	THE ON EQUIRED RAME. Y TO .LL USE ES, NO 'SHALL ILLING
ONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE A NDERGROUND CONFLICTS IN ADVANCE OF THE PLACE HER FACILITIES. THE CONTRACTOR SHALL FIELD M T FOR REVIEW AND CONCURRENCE BY THE ENGINEER OR PLACEMENT. NO PULL BOXES SHALL BE LOCATED R PAVED SHOULDERS.	MENT OF ARK THE PRIOR
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- 5. WHEN TRENCHING FOR INSTALLATION, THE CONTRACTOR MAY RUN COMMUNICATIONS AND POWER SERVICE IN THE SAME TRENCH. THE POWER SERVICE SHALL HAVE SEPARATE PULL BOXES FOR ACCESS. THE CONTRACTOR SHALL NOT INSTALL COMMUNICATIONS AND POWER SERVICE IN THE SAME CONDUIT, PULL BOX OR MANHOLE.
- 6. THE CONTRACTOR SHALL PLACE ALL CONDUITS IN A MANNER THAT MINIMIZES DEFLECTION BOTH HORIZONTALLY AND VERTICALLY. THUS, MINIMIZES STRESS ON CABLES DURING CABLE INSTALLATION. CONDUIT FOR FIBER OPTIC CABLE IN TRENCHES SHALL NOT DEFLECT MORE THAN 1 INCH PER FOOT VERTICALLY OR HORIZONTALLY. BENDS SHALL NOT BE PERMITTED EXCEPT AS SPECIFIED ON THE PLANS.
- 7. 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 EXISTING UTILITIES AND OBSTRUCTIONS.
- 8. 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.

9. ALL NEW CONDUIT SHALL BE PLACED AT A MINIMUM DEPTH OF 30 INCHES UNLESS PLACED IN AN AREA OF NEW FILL, IN WHICH CASE THE CONDUIT SHALL BE 48 INCHES. DIRECTIONALLY BORED CONDUIT SHALL BE AT A MINIMUM DEPTH OF 48 INCHES.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.	15-23.004, F.,
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GENERAL NOTES	SHEET NO.
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PAY ITEM NOTES:

630-2-11 & 630-2-12: CONDUIT 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.

CONTRACTOR SHALL INSTALL SIGNAL CONDUIT IN CONJUNCTION WITH LIGHTING CONDUIT. MAST ARM MOUNTED LUMINAIRES ARE TO BE POWERED FROM THE TRAFFIC SIGNAL'S ELECTRICAL SERVICE DISCONNECT WITH #10 AWG CONDUCTORS. LIGHTING CONDUCTORS ARE TO UTILIZE SEPARATE CONDUIT AND PULL BOXES FROM TRAFFIC SIGNAL WIRING. DO NOT RUN LIGHTING CONDUCTORS THROUGH THE TRAFFIC SIGNAL CONTROLLER CABINET.

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.

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.

633-8-1: WAVETRONIX MULTI-CONDUCTOR COMMUNICATION CABLE.

635-2-12, 635-2-13, & 635-2-14:

PULL BOXES SHALL BE TRAFFIC BEARING, ALL POLYMER CONTRUCTION (NOT CONCRETE), PULL BOXES AND LIDS (QUAZITE OR ANOTHER EQUIVALENT F.D.O.T 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 THE LID SHALL BE STAMPED "MANATEE COUNTY COMMUNICATIONS" ON THE COVER. FIBER OPTIC SPLICE VAULT DIMENSIONS SHALL BE 30" X 60" X 36" AND THE LID SHALL BE STAMPED "MANATEE COUNTY COMMUNICATIONS" ON THE COVER.

639-1-122 & 639-3-11:

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 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 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 USE) SHOULD BE INSTALLED.

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.

649-21-15, 649-21-21, & 649-21-27:

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.

650-1-34 & 650-1-39:

USE SIGNAL HEAD SUPPORTING HANGER THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5'.

ALL SIGNAL HEADS SHALL HAVE ALUMINUM LOUVERED BACKPLATES INSTALLED. BACKPLATES SHALL BE MANUFACTURED FOR THE SIGNAL HEADS USED & INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. 650-1-34 & 650-1-39 (CONTINUED):

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.

653-1-11

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

660-3-11 AND 660-3-12:

PROVIDE WAVETRONIX SMARTSENSOR HD MICROWAVE VEHICLE DETECTION SYSTEM (MVDS) AS SHOWN ON SHEETS T-14 THROUGH T-22. MVDS (MID-BLOCK) SHALL BE A WAVETRONIX EXPANSE SYSTEM WITH MULTIPLE XP 20/MATRIX/ADVANCE SENSORS CONNECTED TO AN ARC-6 DEVICE IN THE CABINET. RUN THE MULTI-CONDUCTOR COMMUNICATION CABLE FROM THE MVDS TO THE CONTROLLER CABINET AT THE INTERSECTION. ITEMS INCLUDE ALL INCIDENTAL MATERIALS NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION AS DETERMINED BY THE COUNTY AND AS DETAILED ON SHEET T-24. COORDINATE FINAL PRODUCT SELECTION WITH WAVETRONIX AND MANATEE COUNTY. CONRACTOR TO COORDINATE WITH THE VENDOR AND PROVIDE DETECTION OVERLAY PLANS FOR COUNTY'S REVIEW, PRIOR TO FINALIZING SENSOR INSTALLATION LOCATIONS IN THE FIELD.

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.

670-5-110:

USE A NEMA TS2 TYPE 1 CONTROLLER, P-44 CABINET ASSEMBLY 7006-T52/FL TYPE 6 ENCLOSURE AS SHOWN IN TABLE 7-1 OF THE 2003 NEMA STANDARD TS2. THE NAZTEC ATC CONTROLLER SHALL COME EQUIPPED WITH SIX SERIAL PORTS AND ONE ETHERNET PORT. ALL CONTROLLER EQUIPMENT TO BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING ATMS SYSTEM (NAZTEC'S ATMS.NOW). THE CABINET SHALL COME EQUIPPED WITH AN 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 SHAL INCLUDE THE INSTALLATION OF A CONCRETE BASE FOR THE CONTROLLER ASSEMBLY. THE CONTROLLER ASSEMBLY FOUNDATION SHALL HAVE A MINUMUM 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 AN 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 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 COUPING. 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 CABINET: NAZTEC TS2 TYPE 1, SIZE: TYPE - VI WITH FRONT AND BACK DOOR ACCESS.

682-1-113:

THE CCTV CAMERA UNIT SHALL BE BOSCH ITS 7000 STARLITE SERIES 1080P 30x40. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) CCTV CAMERA UNIT AS SHOWN IN THE PLANS.

684-1-1:

RUGGEDCOM SWITCH MODEL NUMBER RSG920P (6GK6092-0PS23-0BAO-Z A05+B05+C02+D02). SWITCH REQUIRES EXTERNAL POWER SUPPLY RUGGEDCOM RPS 1300.

685 - 1 - 12:

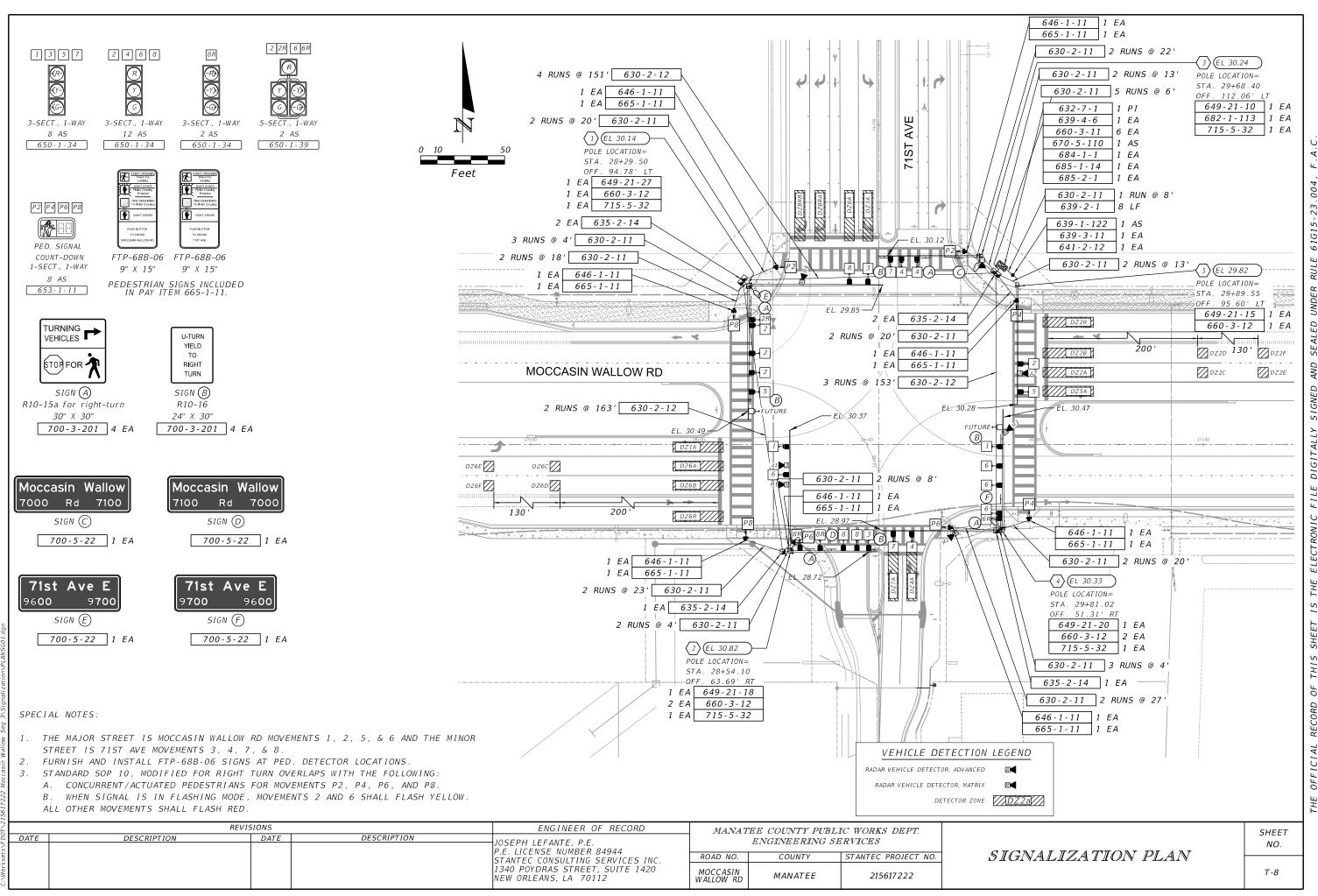
SHALL INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) MODEL NO. APC 1300 EQUIPPED WITH AN ETHERNET PORT. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT. THE UPS SHALL BE SIZED TO ACCOMODATE THE MAXIMUM CONNECTED LOAD. THE BATTERY BANK SHALL BE SIZED TO PROVIDE A MINIMUM 8 HOURS RUN TIME UNDER FULL LOAD.

700-5-22:

ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE EDGE LIT LED TYPE AND SHALL BE LISTED IN THE FDOT APPROVED PRODUCT LIST. THE COST OF THIS ITEM SHALL INCLUDE PROPERLY DESIGNED AND SIZED ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND ALL MISCELLANEOUS HARDWARE NECESSARY TO 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 SEVICE 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.

07/2	REVISIONS				ENGINEER OF RECORD	MANATEE COUNTY PUBLIC WORKS DEPT.				
s \FD(DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E. P.E. LICENSE NUMBER 84944	ENGINEERING SERVICES				
set					STANTEC CONSULTING SERVICES INC. 1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	ROAD NO.	COUNTY	STANTEC PROJECT NO.		
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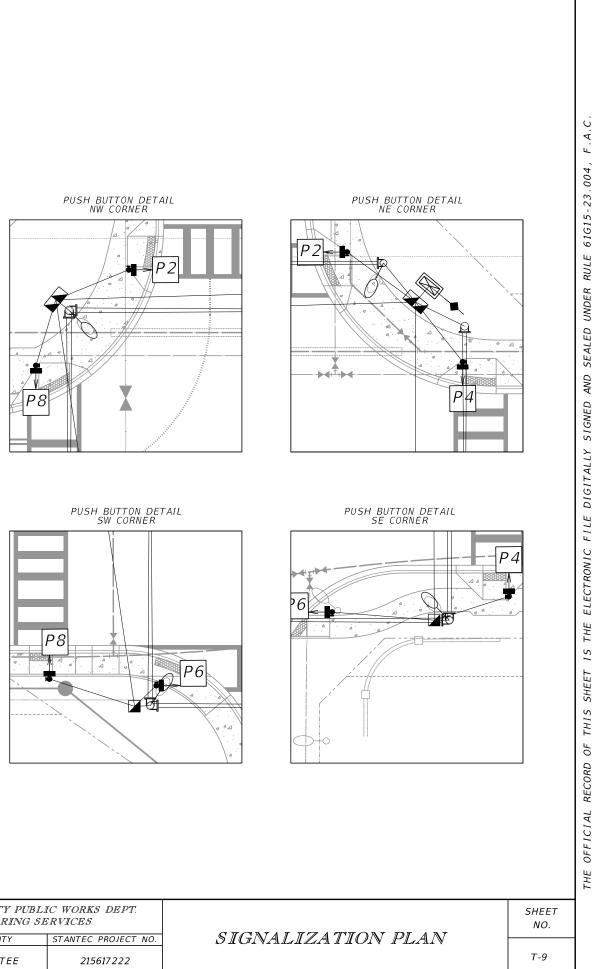
GENERAL NOTES	SHEET NO.
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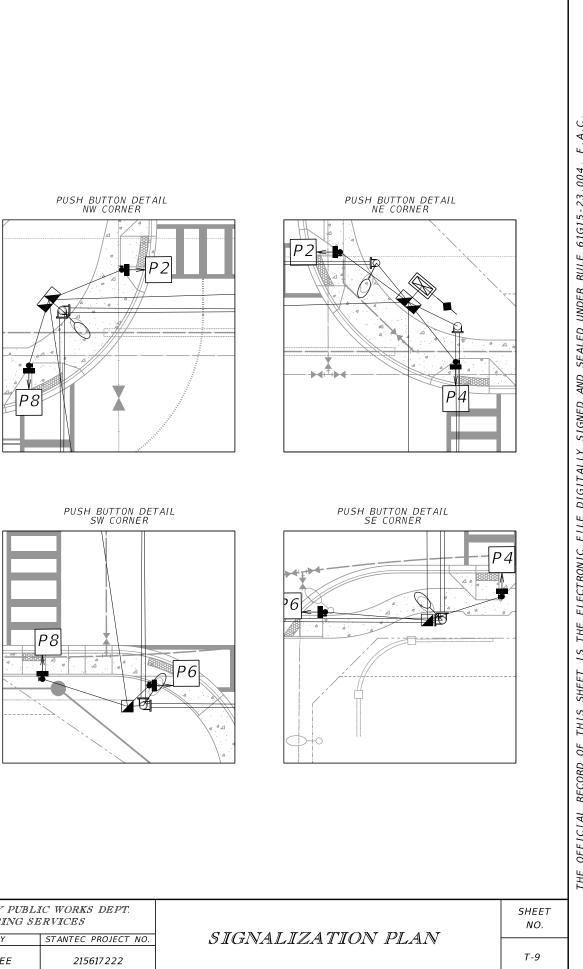


WAVETRO	NIX MATRIX VEHIC ASSIGNMENTS		N .
DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
	1A	TF 1	
M 1	6A, 6B	TF 6	
	6R	TF 6	10
М2	7 <i>A</i>	TF 7	
IM Z	4A	TF 4	
	5A	TF 5	
M3	2A, 2B	TF 2	
	2R	TF 2	10
	3A	TF 3	
Μ4	8A	TF 8	
	8RA, 8RB	TF 8	10
A1	6C, 6D, 6E, 6F	TF 6	
A2	2C, 2D, 2E, 2F	TF 2	

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY PROJECT ENGINEER.

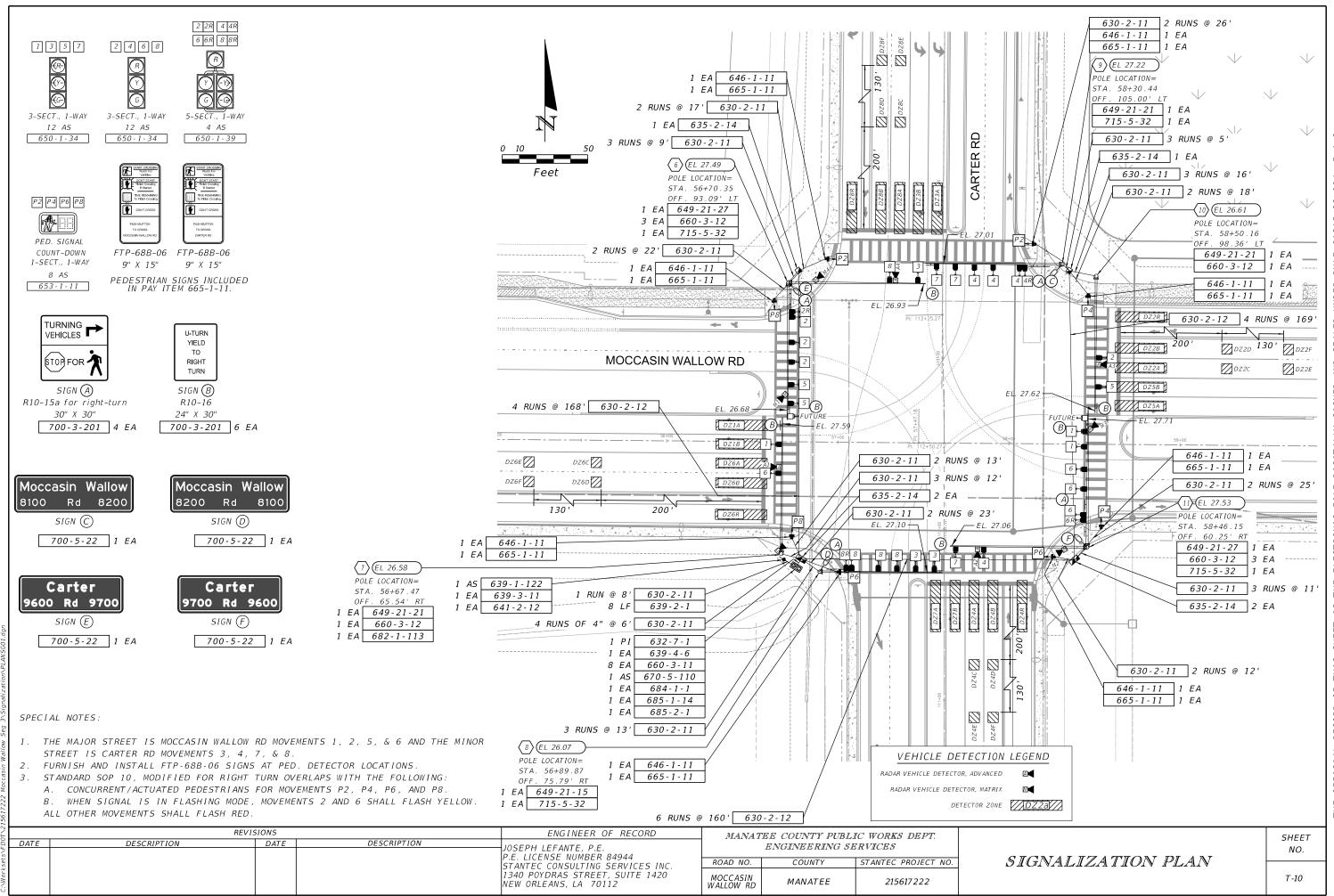
	CONTROLLER TIMINGS									
ΤI	MING FUNCTION	TF 1	TF2	TF3	TF4	TF5	TF6	TF7	TF8	
MOVEMENT NUMBER		1	2	3	4	5	6	7	8	
	MINIMUM GREEN	8	20	8	12	8	20	8	12	
Z	EXTENSION	3	5	3	3	3	5	3	3	
FUNCTION	MAXIMUM GREEN 1	20	70	20	30	20	70	20	30	
NC NC	MAXIMUM GREEN 2									
FL	YELLOW CLEARANCE	3.4	4.8	3.4	3.4	3.4	4.8	3.4	4.0	
NG	ALL RED	3.7	2.4	3.4	3.4	3.8	1.9	3.4	3.2	
TIMING	PEDESTRIAN WALK		7		8		7		8	
	PED. CLEARANCE		24		30		17		31	
	RECALL		MIN				MIN			





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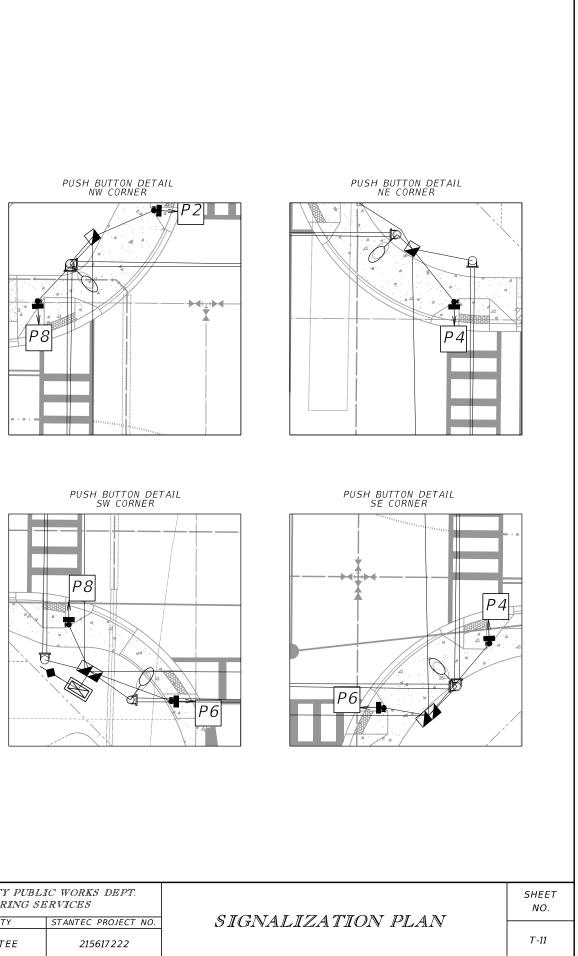
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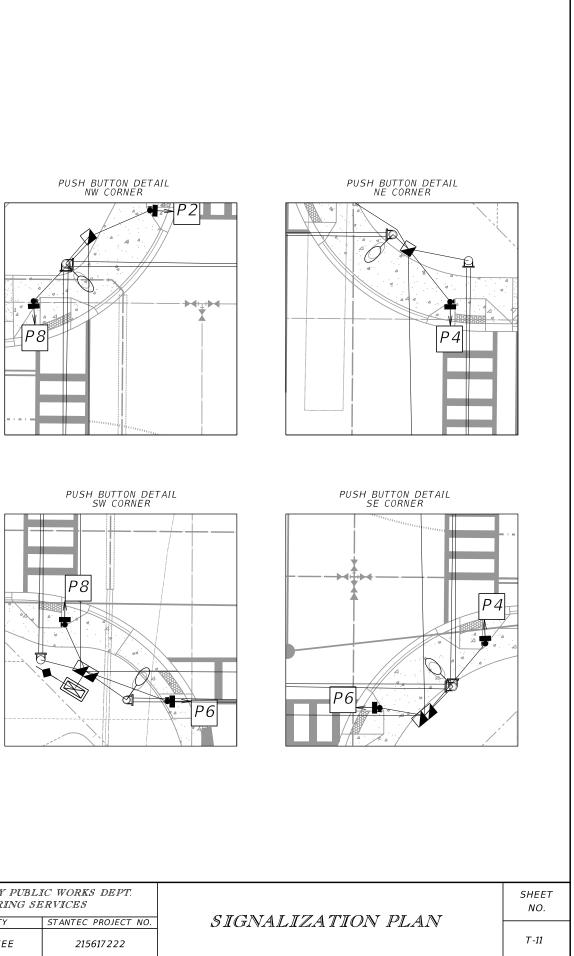
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	NIX MATRIX VEHIC ASSIGNMENTS		
DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
	1A, 1B	TF 1	
M 1	6A, 6B	TF 6	
	6R	TF 6	10
	7A, 7B	TF 7	
M2	4A, 4B	TF 4	
	4R	TF 4	10
	5A, 5B	TF 5	
M3	2A, 2B	TF 2	
	2R	TF 2	10
	3A, 3B	TF 3	
M4	8A, 8B	TF 8	
	8R	TF 8	10
A1	6A, 6B, 6C, 6D	TF 2	
A2	4C, 4D, 4E, 4F	TF 4	
A3	2A, 2B, 2C, 2D	TF 6	
A4	8C, 8D, 8E, 8F	TF 8	

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY PROJECT ENGINEER.

	CONTROLLER TIMINGS										
TIMING FUNCTION TF1 TF2 TF3 TF4 TF5 TF6 TF7 TF								TF8			
MOVEMENT NUMBER		1	2	3	4	5	6	7	8		
	MINIMUM GREEN	8	20	8	12	8	20	8	12		
S	EXTENSION	3	5	3	3	3	5	3	3		
FUNCTION	MAXIMUM GREEN 1	20	70	20	30	20	70	20	30		
INC	MAXIMUM GREEN 2										
	YELLOW CLEARANCE	3.4	4.8	3.4	4.8	3.4	4.8	3.4	4.8		
TIMING	ALL RED	3.9	2.4	4.3	2.4	4.0	2.6	4.0	2.6		
IM	PEDESTRIAN WALK		8		8		8		8		
F	PED. CLEARANCE		34		31		33		33		
	RECALL		MIN				MIN				





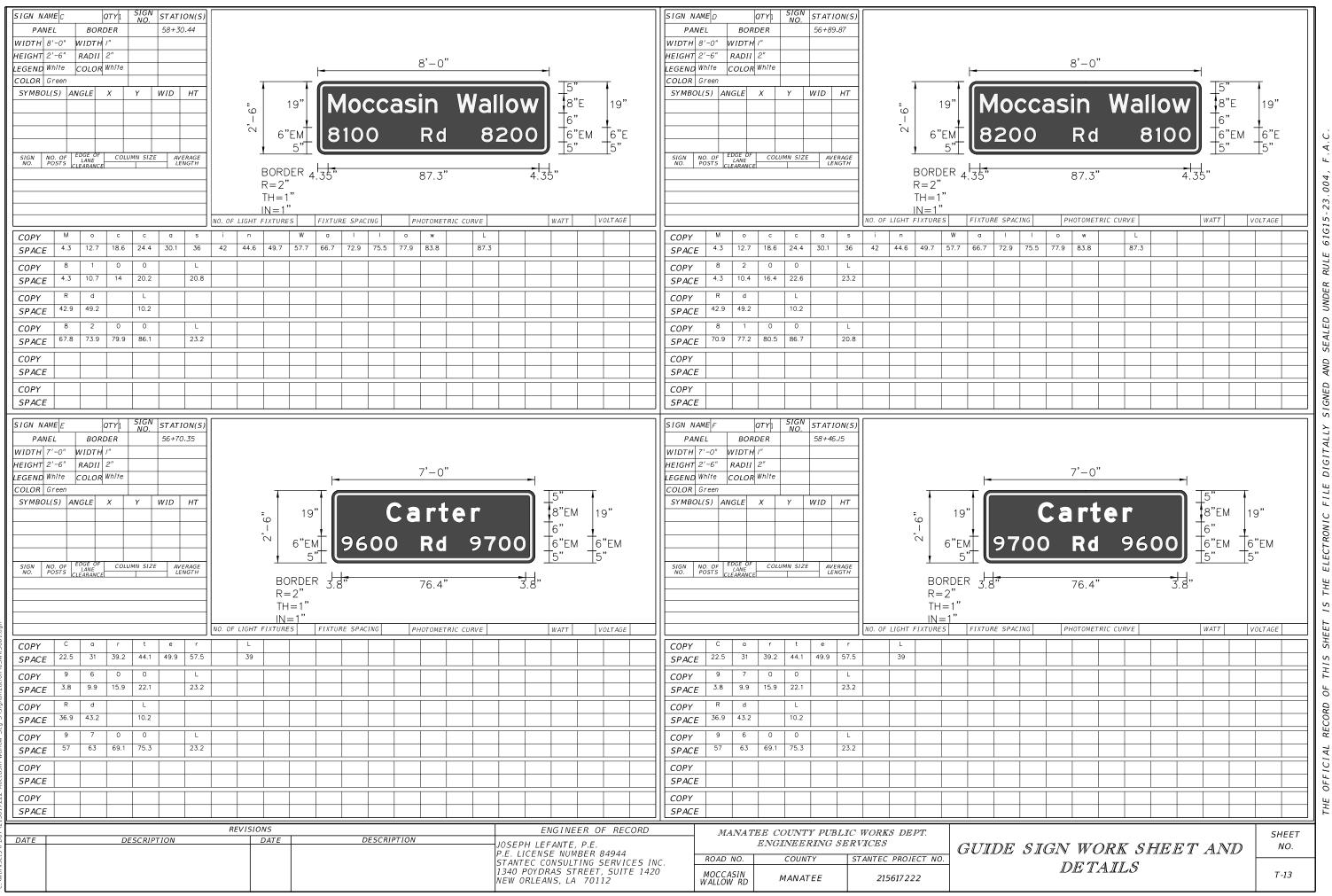
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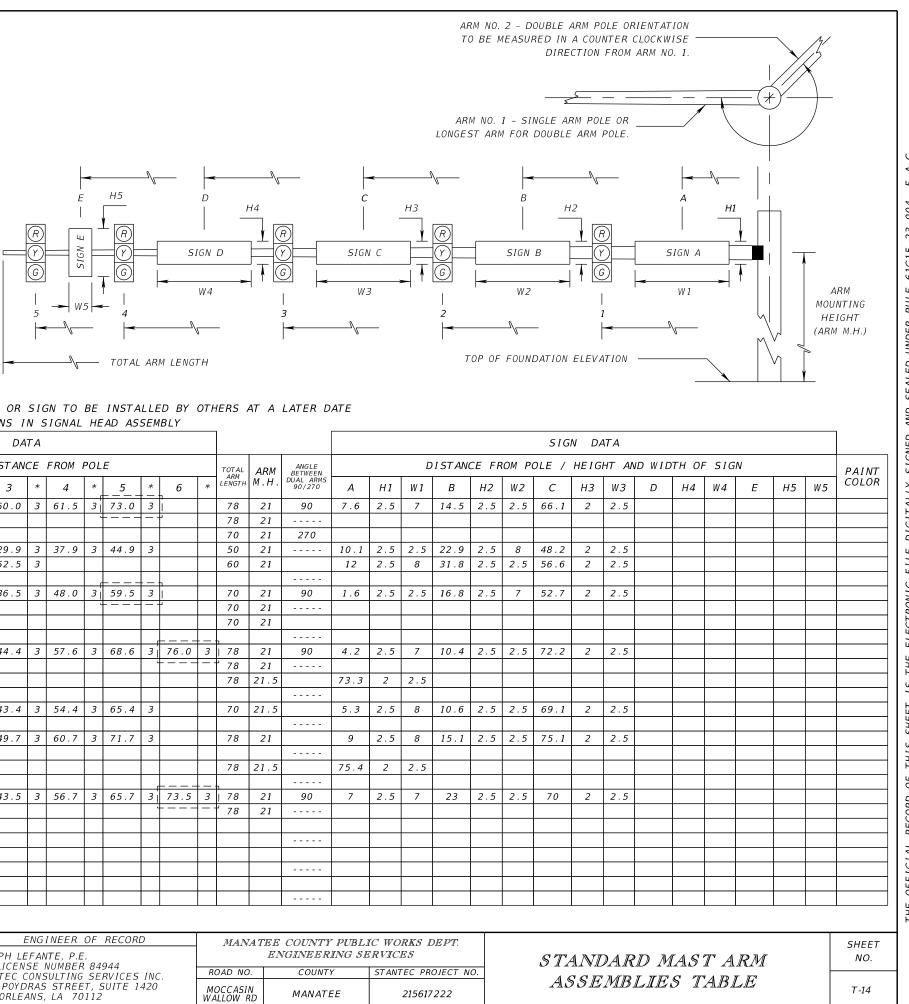
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[__] DENOTES FUTURE SIGNAL HEAD OR SIGN TO BE INSTALLED BY OTHERS AT A LATER DATE * DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

													SI	GNA	AL DA	ΤA																
ID	SHEET	LOCATION	TOP OF FOUND.	RDWY ARM NO.	CROWN	LUMI - NAIRE Y/N	TERM. COMP.	SIGNAL	BACK	PED. SIGNAL				D	ISTAN	CE	FROM	POL	LE				TOT AL ARM	ARM	ANGLE BETWEEN			Ľ	ISTAN	CE F	ROM P	OLI
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1	T - 8	28+29.50	30.14	1	30.49	Y	N	V	Y	N	20.2	5	38.5	3	50.0	3	61.5	3	73.0	3			78	21	90	7.6	2.5	7	14.5	2.5	2.5	6
				2	29.85			V	Y	N	58.1	3	69.1	3					÷		1		78	21								
2	T - 8	28+54.10	30.82	1	30.37	Y	N	V	Y	N	43.6	3	60.4	3									70	21	270							
				2	28.72	Y	N	V	Y	N	4.0	3	16.0	3	29.9	3	37.9	3	44.9	3			50	21		10.1	2.5	2.5	22.9	2.5	8	48
3	T - 8	29+68.40	30.24	1	30.12	Y	N	V	Y	N	37.0	3	46.2	3	52.5	3							60	21		12	2.5	8	31.8	2.5	2.5	56
				2																												
4	T - 8	29+81.02	30.33	1	30.47	Y	N	V	Y	N	6.7	5	25.0	3	36.5	3	48.0	3	59.5	3			70	21	90	1.6	2.5	2.5	16.8	2.5	7	5.
				2	28.97	Y	N	V	Y	N	52.2	3	63.2	3					+		J		70	21								
5	T - 8	29+89.55	29.82	1	30.28	N	N	V	Y	N	45.9	3	62.6	3									70	21								
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6	T - 10	56+70.35	27.49	1	26.68	Y	N	V	Y	N	16.5	5	32.9	3	44.4	3	57.6	3	68.6	3	76.0	3	78	21	90	4.2	2.5	7	10.4	2.5	2.5	72
				2	26.93			V	Y	N	57.1	3	73.6	3									78	21								
7	T - 10	56+67.47	26.58	1	27.59	N	N	V	Y	N	45.2	3	62.2	3									78	21.5		73.3	2	2.5				
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8	T - 10	56+89.87	26.07	1	27.10	Y	N	V	Y	N	15.4	5	32.4	3	43.4	3	54.4	3	65.4	3			70	21.5		5.3	2.5	8	10.6	2.5	2.5	6
				2																												
9	T - 10	58+30.44	27.22	1	27.01	Y	N	V	Y	N	21.7	5	38.7	3	49.7	3	60.7	3	71.7	3			78	21		9	2.5	8	15.1	2.5	2.5	7:
				2																												
10	T - 10	58+50.16	26.61	1	27.62	N	N	V	Y	N	46.0	3	63.0	3									78	21.5		75.4	2	2.5				
				2																												1
11	T - 10	58+46.15	27.53	1	27.71	Y	N	V	Y	N	15.4	5	32.0	3	43.5	3	56.7	3	65.7	3	73.5	3	78	21	90	7	2.5	7	23	2.5	2.5	7
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sets					P.E. LICENSE NUMBER 84944 STANTEC CONSULTING SERVICES INC.	ROAD NO.	COUNTY	STANTEC PROJECT NO.	
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STRUCTURE		FIRST	- ARM	SECON	D ARM		LL (deg)			DRILLE	
ID NUMBERS	DESIGNATION	ARM ID	FAA (ft.)	ARM ID	SAA (ft.)	UF (deg)		POLE ID	UAA (ft.)	UB (ft.)	SHAFT ID
б.	A78/D-A78/D-P7/D/L-DS/20/5	A78/D		A78/D		90		P7/D/L		21.0	DS/20/5
7.	A78/5-P6/5/L-D5/14/5	A78/S						P6/S/L		21.0	D5/14/5
8.	A70/5-P5/S-DS/16/5	A70/5						P5/S		21.0	DS/16/5
9.	A78/S-P6/S/L-DS/16/5	A78/S						P6/S/L		21.0	DS/16/5
10.	A78/S-P6/S-DS/14/5	A78/5						P6/5		21.0	DS/14/5
11.	A78/D-A78/D-P7/D/L-D5/18/5	A78/D		A78/D		90		P7/D/L		21.0	DS/18/5

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. ARM MOUNTING HEIGHT UB MUST BE BETWEEN 18-22 FEET.
- 4. POLE TYPES P2 AND LARGER REQUIRE A MINIMUM 4.5 FOOT DIAMETER DRILLED SHAFT. POLE TYPES P5 AND LARGER REQUIRE A MINIMUM 5.0 FOOT DIAMETER DRILLED SHAFT.
- 5. 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.

6. WORK WITH INDEX 649-030 AND 649-031.

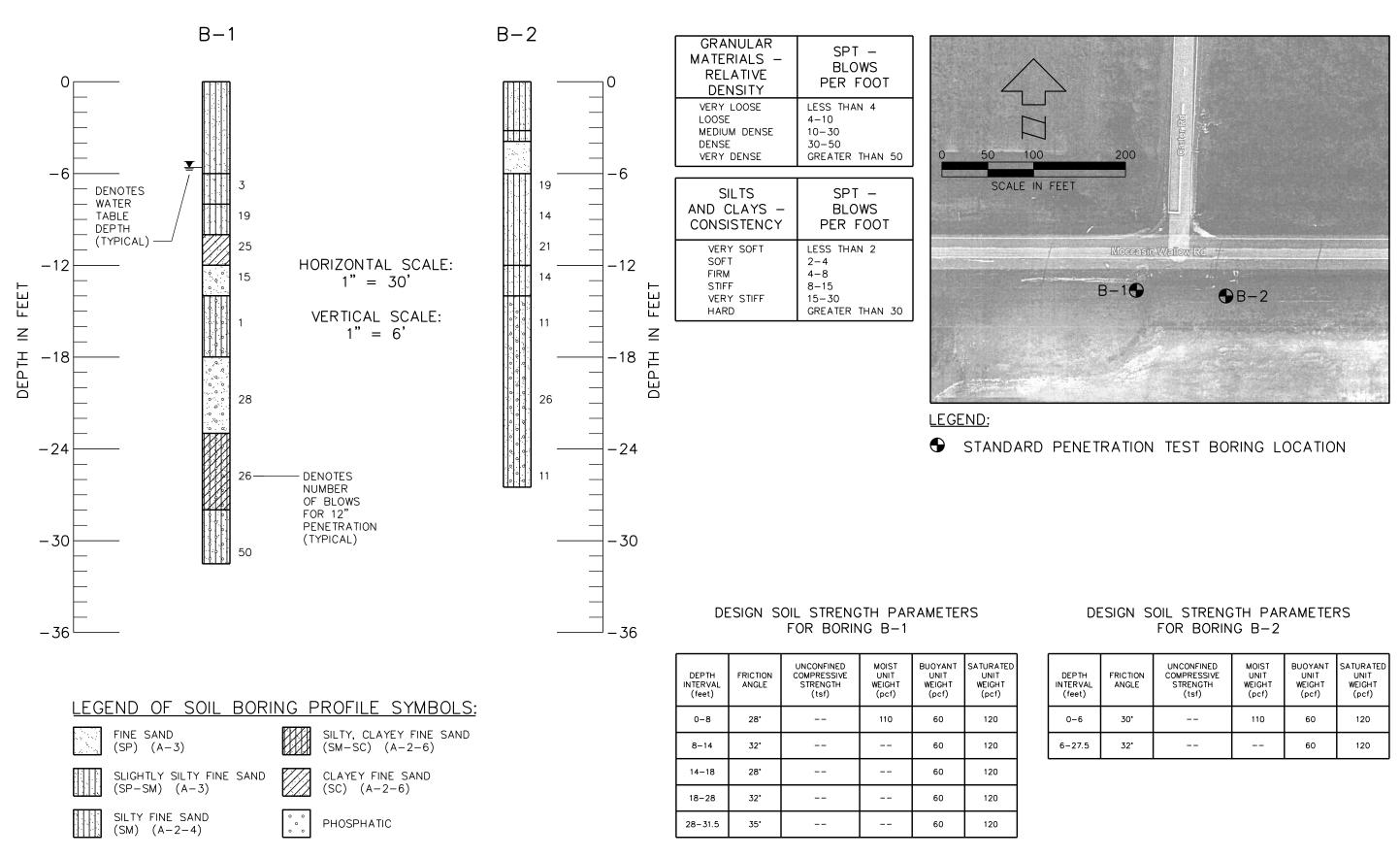
7. CALCULATIONS ARE BASED ON STANDARD PLANS INSTRUCTIONS FOR INDEXES 649-030 AND 649-031 SOIL CLASSIFICATION: SAND FRICTION ANGLE: 30 DEGREES UNIT WEIGHT: 50 PCF N-BLOW COUNT >=15

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LFD(DATE	DESCRIPTION	DATE	DESCRIPTION	STANTEC CONSULTING SERVICES, INC.	ENGINEERING SERVICES				
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C:\Work					P.E. License No. 38166 4651 Salisbury Rd., Suite 350 Jacksonville, Florida 32256 (904) 247-0787	MOCCASIN WALLOW RD	MANATEE	215617222	-	

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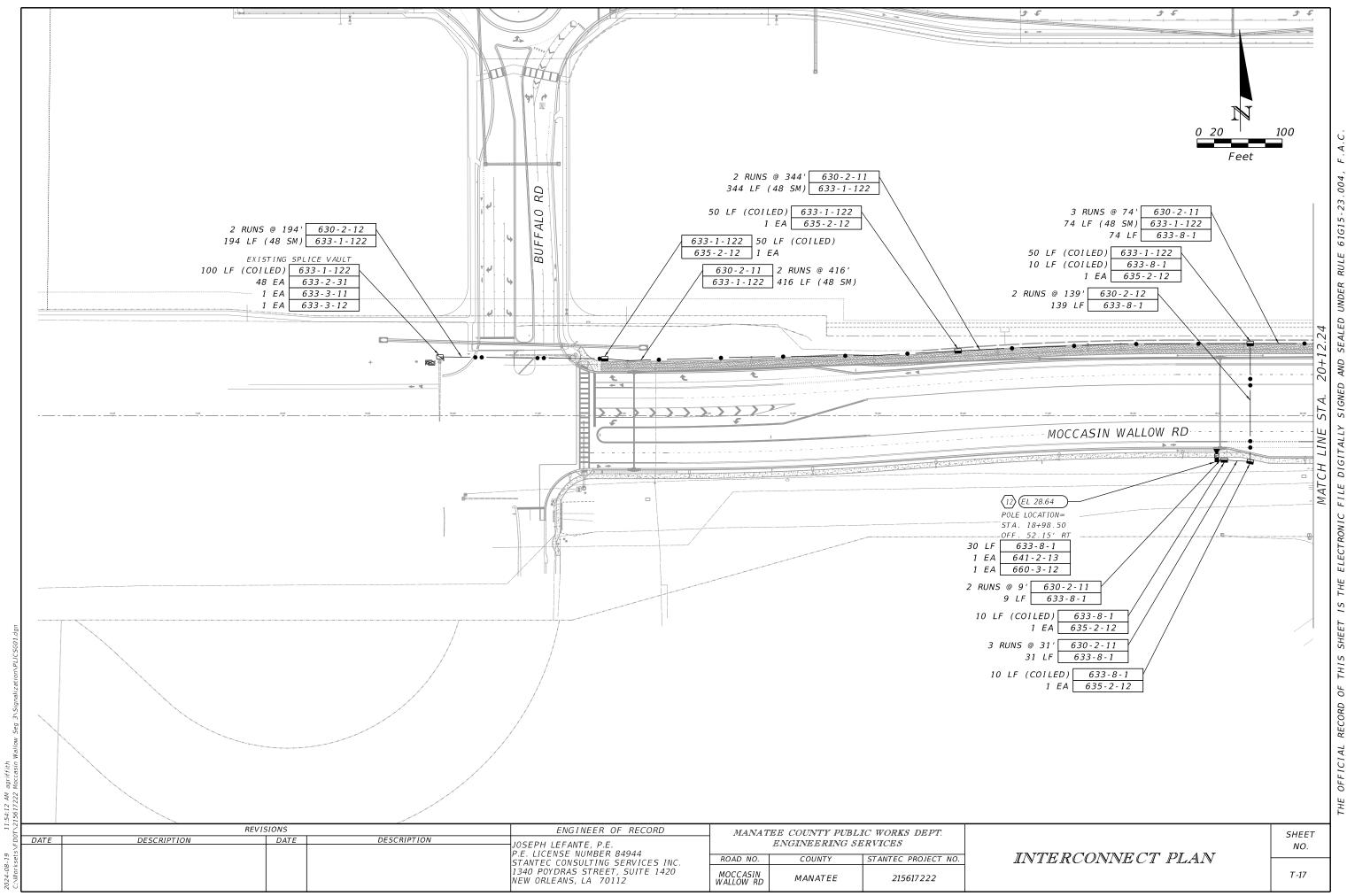
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STANDARD MAST ARM	SHEET NO.	
ASSEMBLIES TABLE	T-15	

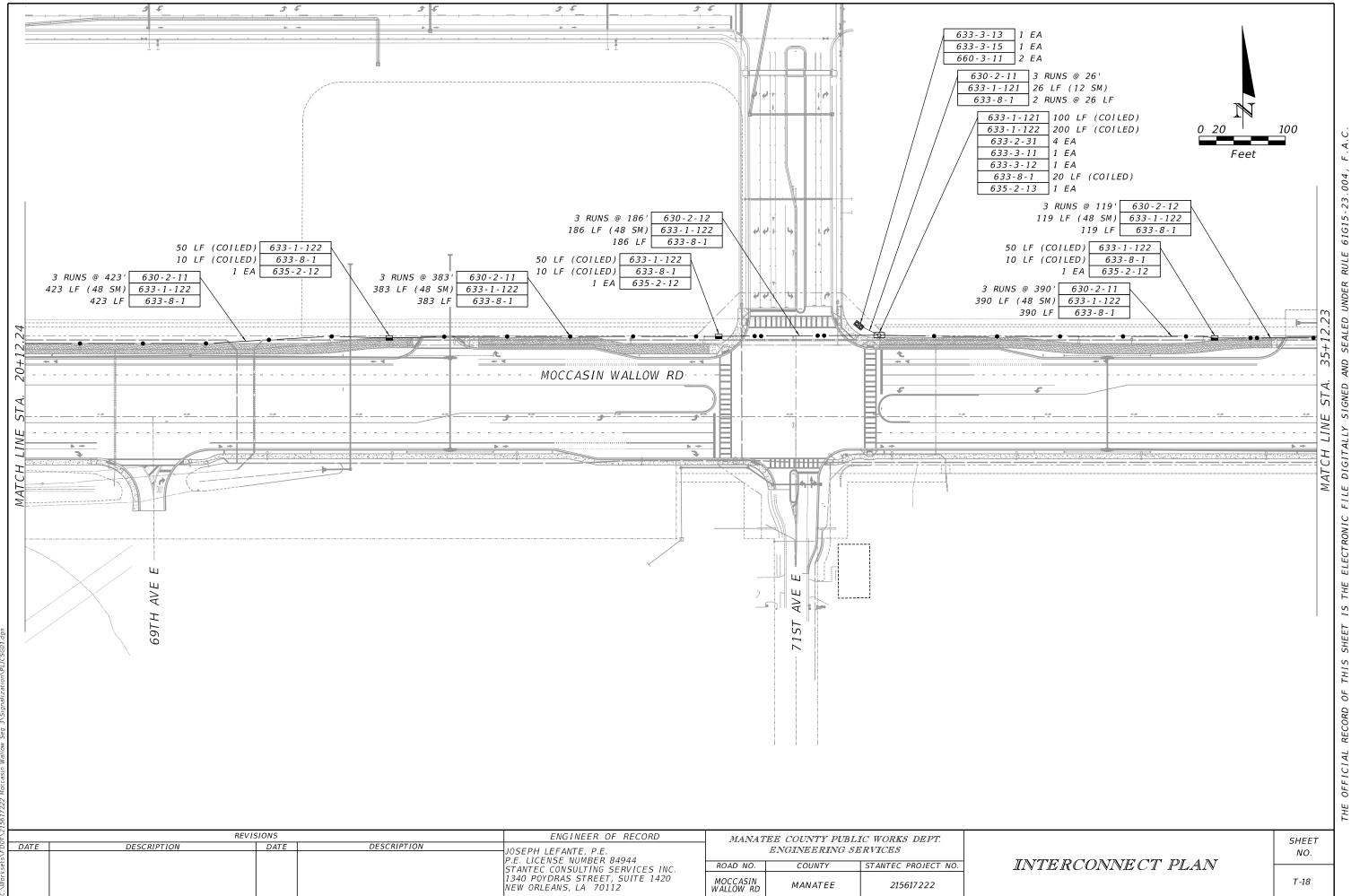


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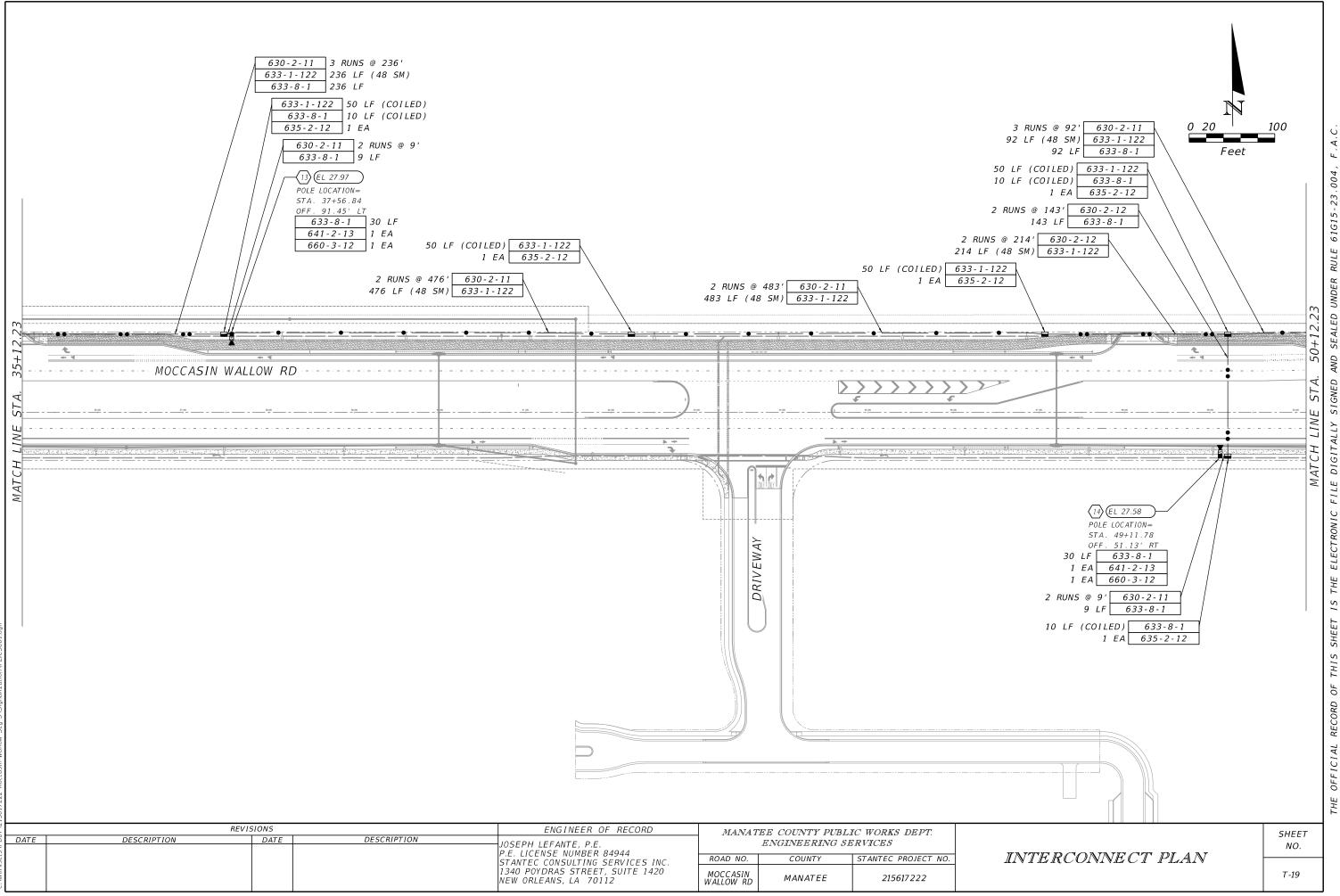
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	30'		110	60	120
.5	32*			60	120



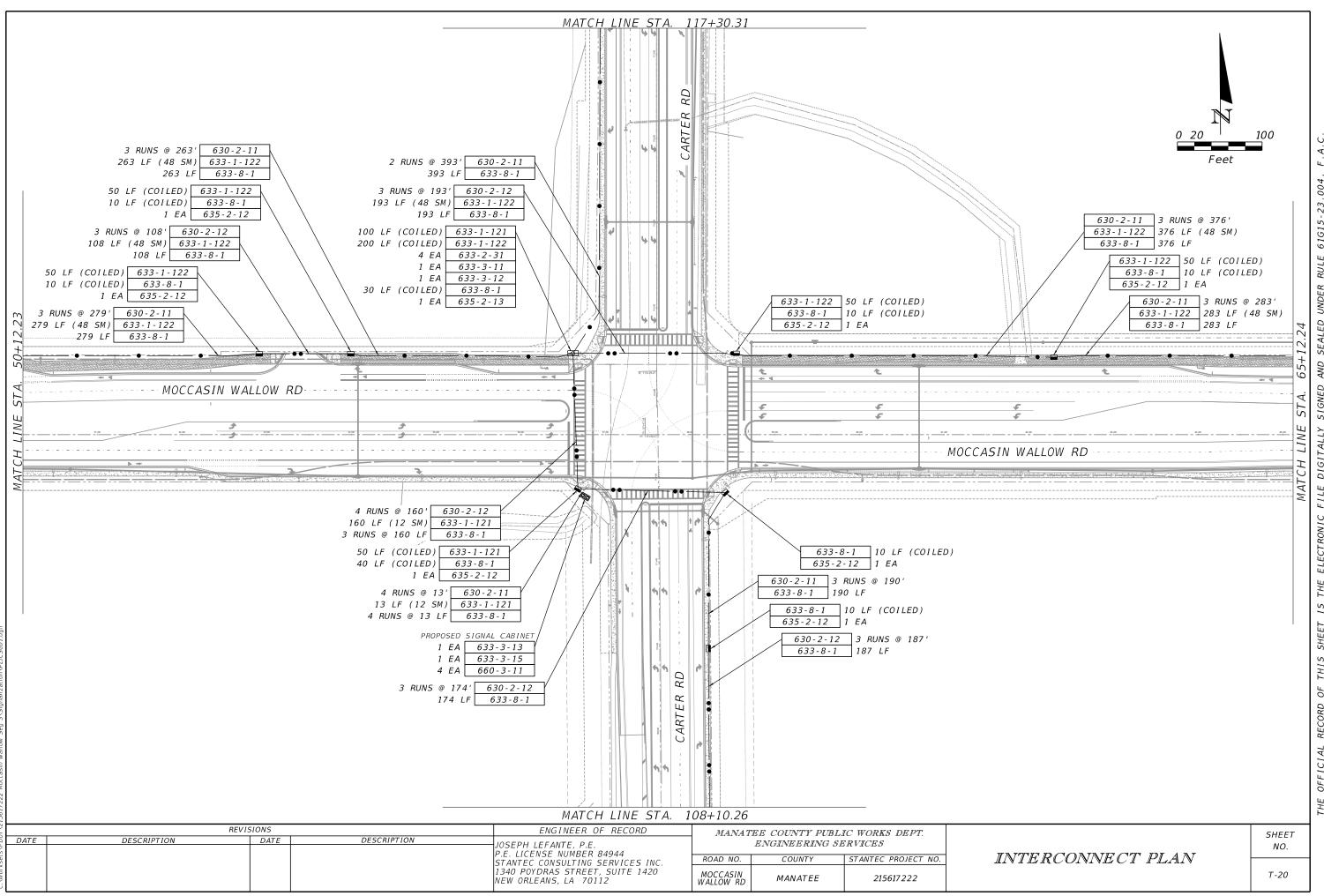


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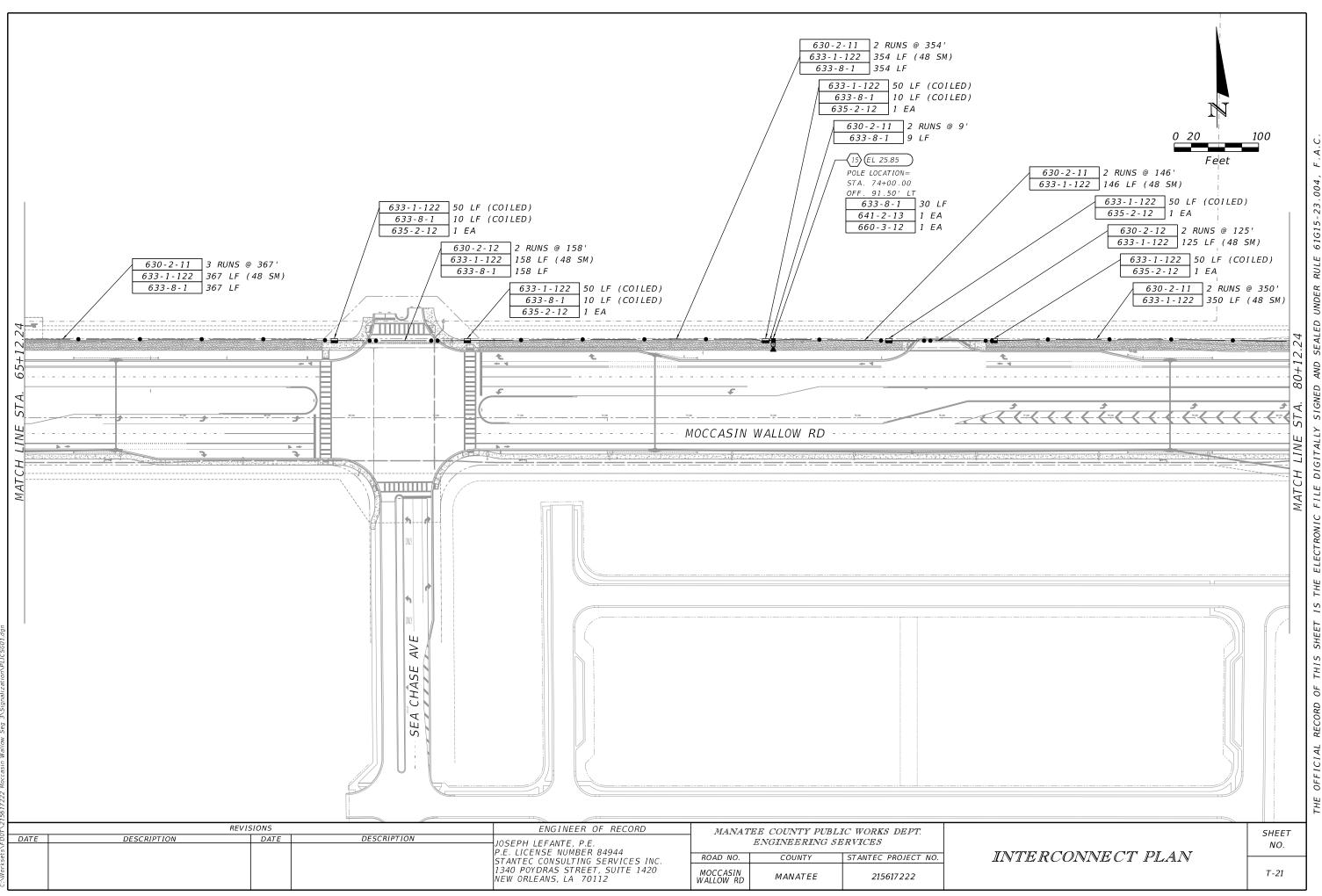
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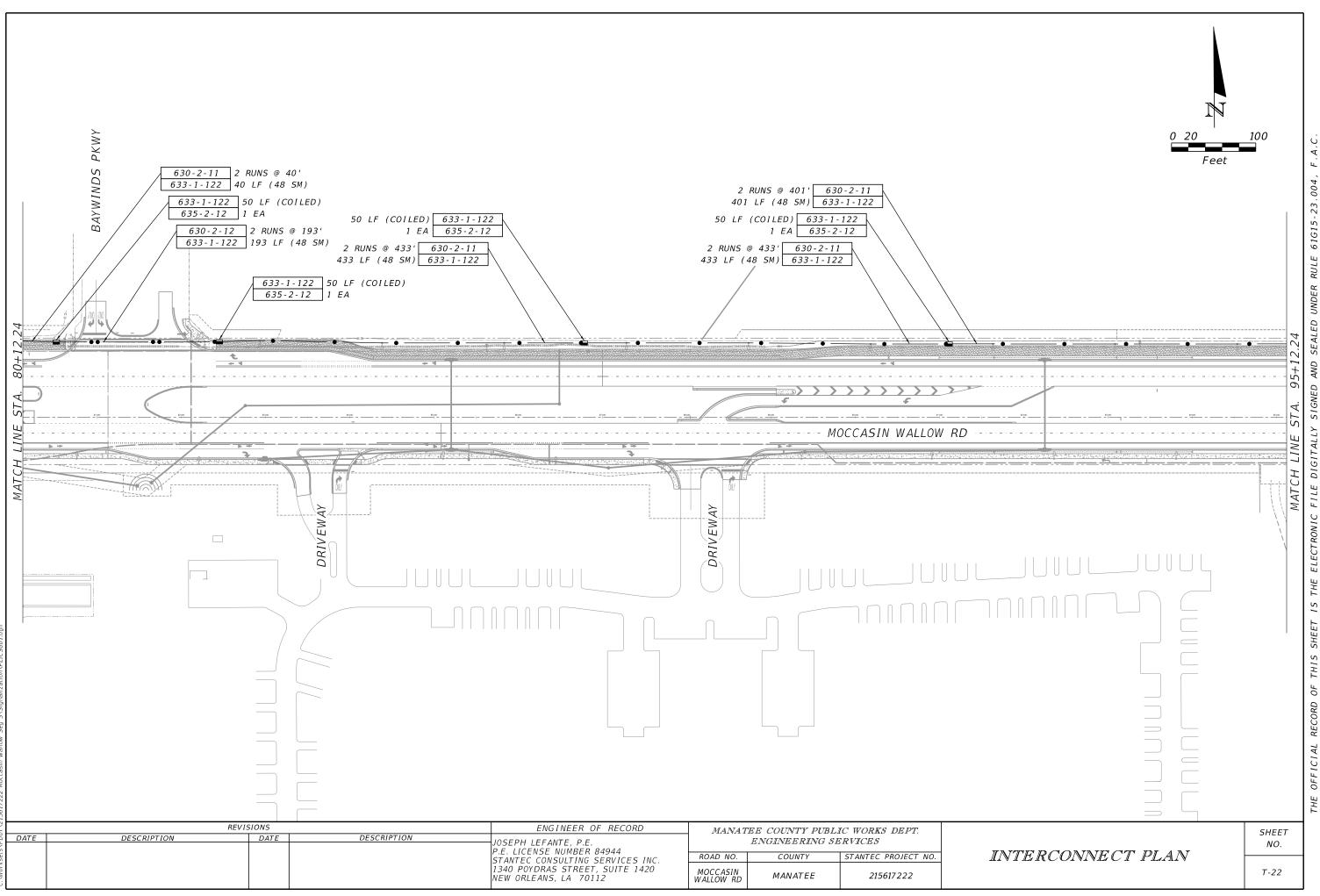
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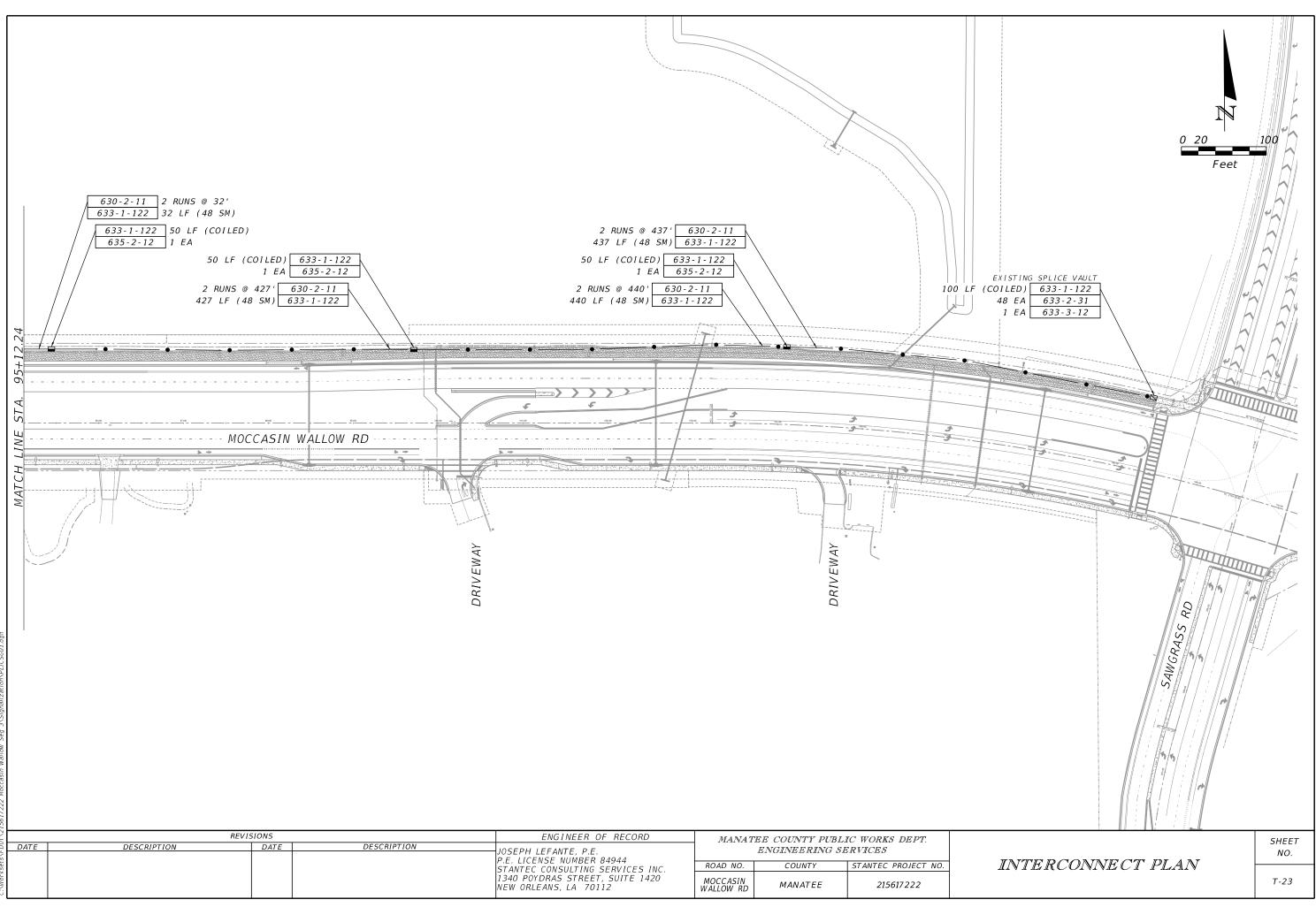
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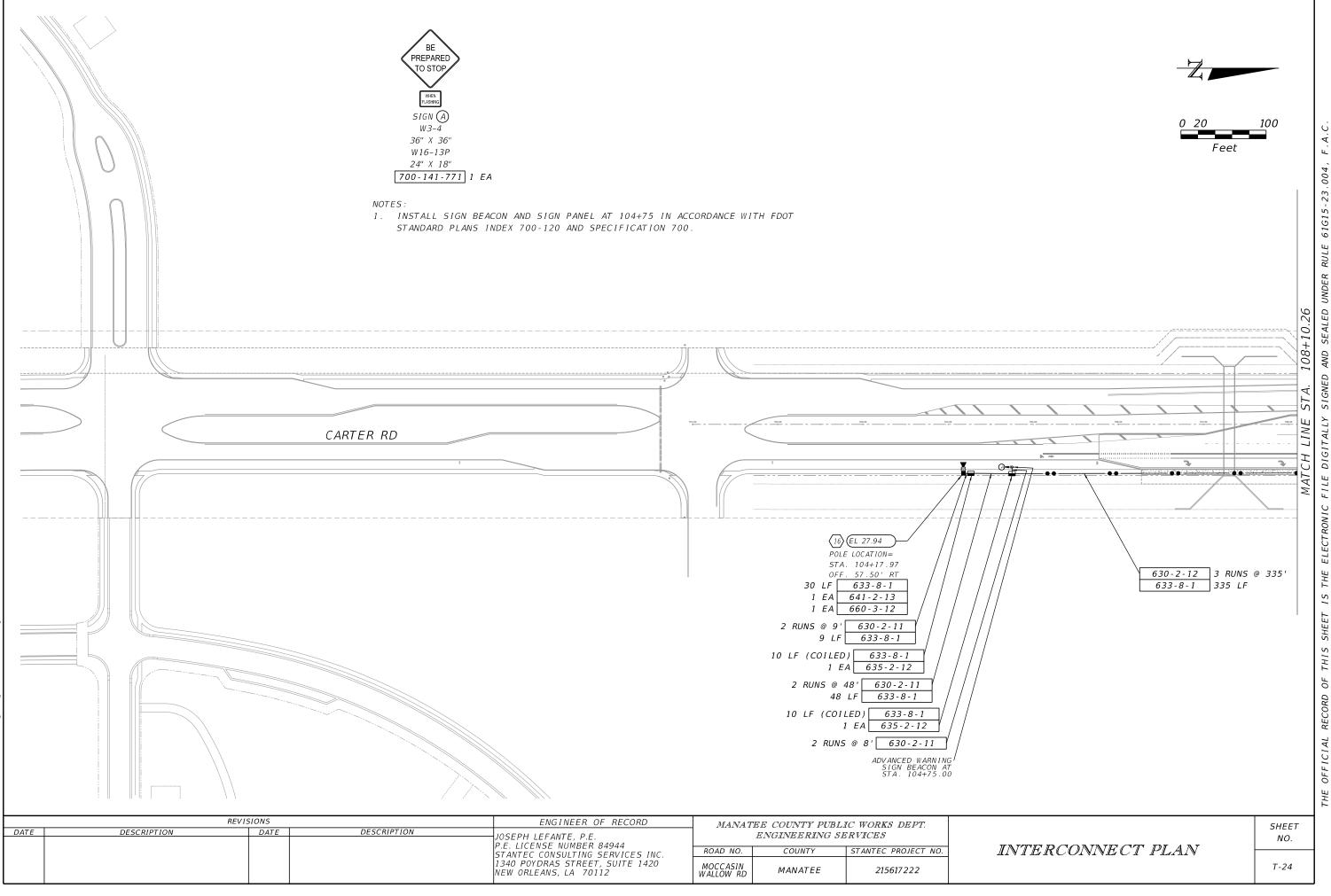


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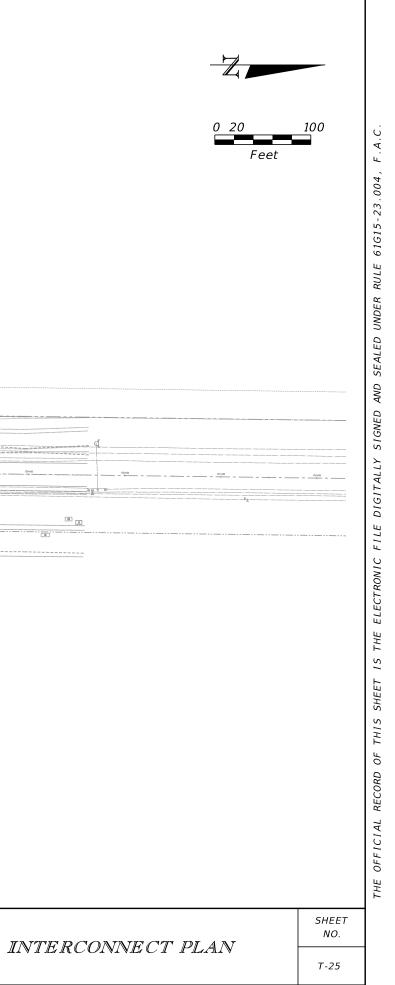
AND SIGNED DIGITALLY FILE ELECTRONIC THE IS SHEET C OFF ΞH-

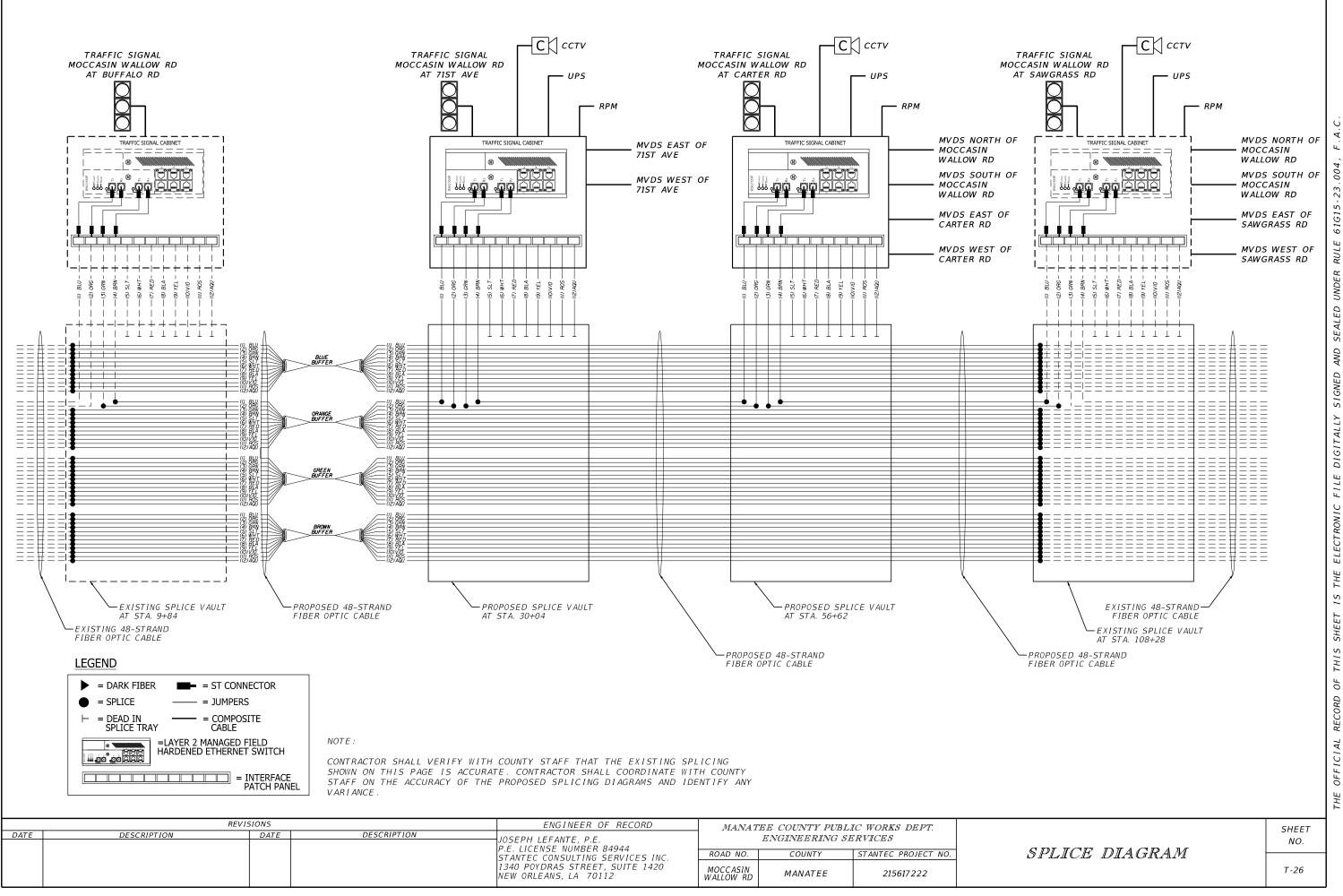


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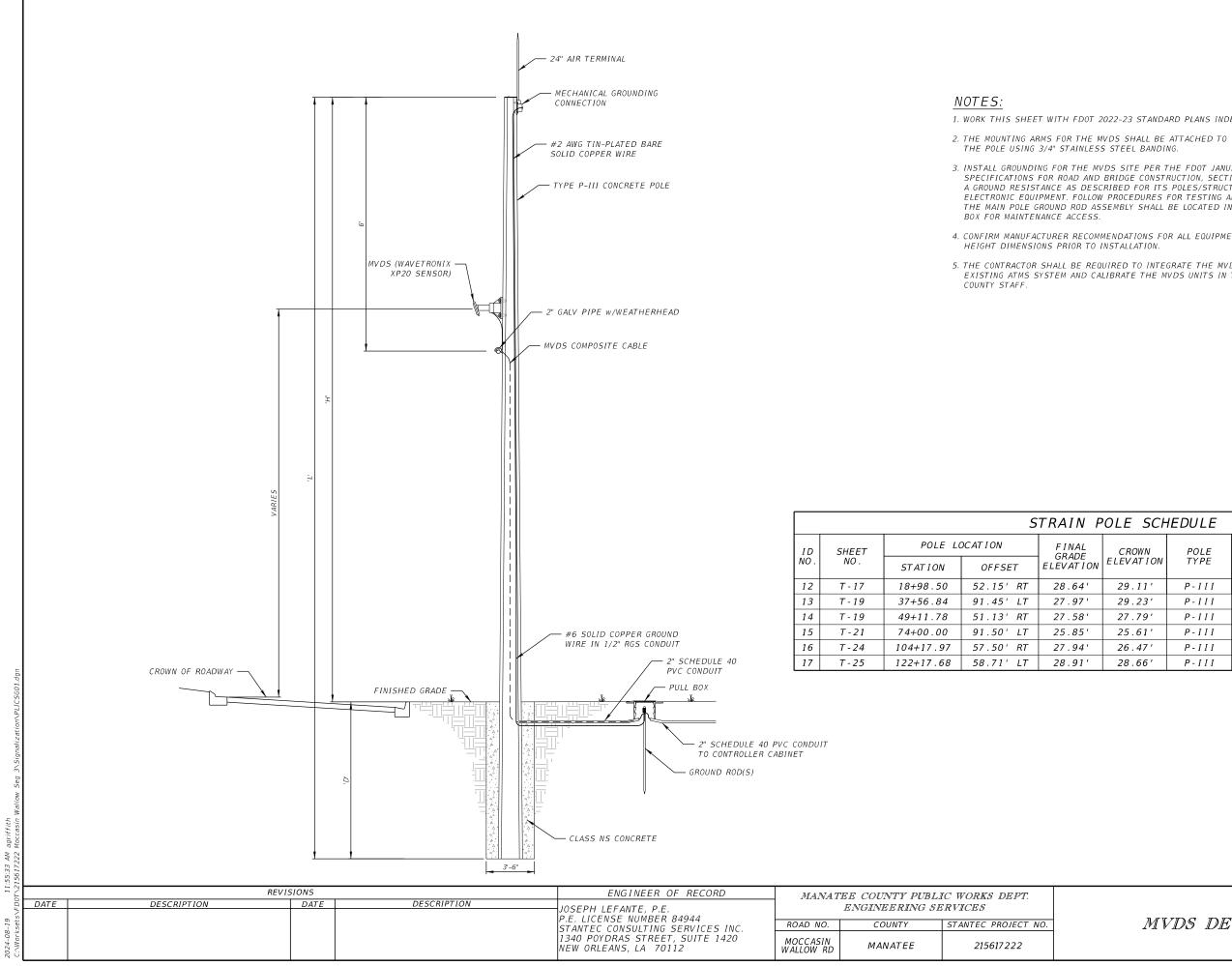
LINE STA. 117+30.31	630-2-11 2 RUNS @ 35' 633-8-1 35 LF 633-8-1 10 LF (COILED) 635-2-12 1 EA			30 - 2 - 11 33 - 8 - 1 443 LF $633 - 8 - 1 633 - 8 - 1 633 - 8 - 1 635 - 2 - 12 1 EA 630 - 2 - 11 633 - 8 - 1 9 LF (17) (EL 28.91) POLE LOCATION= STA. 122+17.68 OFF. 58.71' LT 633 - 8 - 1 641 - 2 - 13 660 - 3 - 12 1 EA 30 LF 1 EA $				
TCH I				CARTER RD				
		SIONS		ENGINEER OF RECORD	MANAT	TEE COUNTY PUBL	IC WORKS DEPT.	
DATE	DESCRIPTION	DATE	DESCRIPTION	JOSEPH LEFANTE, P.E.	ROAD NO.	ENGINEERING S.	ERVICES	_
				STANTEC CONSULTING SERVICES INC. 1340 POYDRAS STREET, SUITE 1420 NEW ORLEANS, LA 70112	MOCCASIN WALLOW RD	MANATEE	215617222	1

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1. WORK THIS SHEET WITH FDOT 2022-23 STANDARD PLANS INDEX 641-010.

3. INSTALL GROUNDING FOR THE MVDS SITE PER THE FDOT JANUARY 2022 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 620. ACHIEVE A GROUND RESISTANCE AS DESCRIBED FOR ITS POLES/STRUCTURES WITH ELECTRONIC EQUIPMENT. FOLLOW PROCEDURES FOR TESTING AND DOCUMENTATION. THE MAIN POLE GROUND ROD ASSEMBLY SHALL BE LOCATED IN THE NEAREST PULL

4. CONFIRM MANUFACTURER RECOMMENDATIONS FOR ALL EQUIPMENT AND MOUNTING

5. THE CONTRACTOR SHALL BE REQUIRED TO INTEGRATE THE MVDS INTO THE COUNTY'S EXISTING ATMS SYSTEM AND CALIBRATE THE MVDS UNITS IN THE PRESENCE OF

OLE SCHEDULE										
CROWN ELEVATION	POLE TYPE	POLE LENGTH (L)	POLE HEIGHT (H)	CONCRETE POLE DEPTH (D)						
29.11'	P-III	35 '	28 '	7 '						
29.23'	P-III	35'	28 '	7 '						
27.79'	P-III	35'	28 '	7 '						
25.61'	P-III	35'	28 '	7 '						
26.47'	P-III	35 '	28 '	7 '						
28.66'	P-III	35'	28 '	7 '						

MVDS DETAILS	SHEET NO.
	T-27