LEE COUNTY PUBLIC WORKS

DEPARTMENT OF TRANSPORTATION

CORKSCREW ROAD WIDENING - PHASE I

BEN HILL GRIFFIN PARKWAY TO BELLA TERRA BOULEVARD

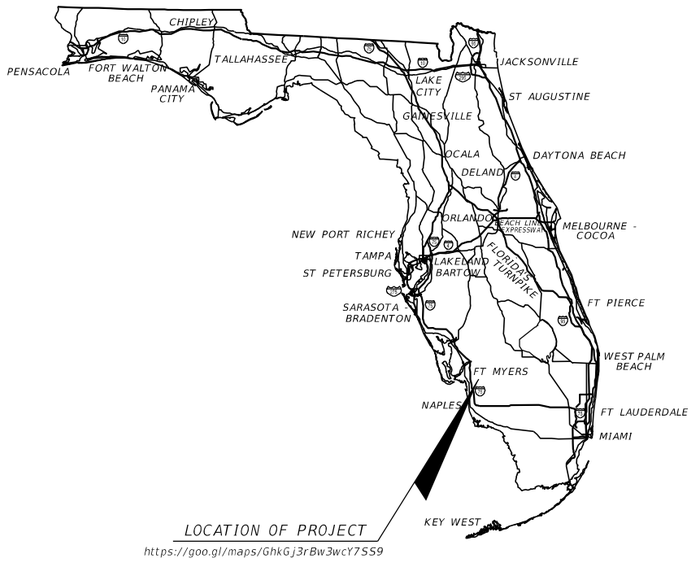
JEI PROJECT ID: 20192030-000

LEE COUNTY (2014100)

COUNTY ROAD NO. 850

INDEX OF SIGNALIZATION PLANS

SIGNALIZATION PLANS



https://goo.gl/maps/GhkGj3rBw3wcY7SS9

SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:

THOMAS MARQUARDT, P.E.

SIGNALIZATION PLANS ENGINEER OF RECORD:

JOHNSON ENGINEERING

LEAH M. HOLMES, P.E.
P.E. LICENSE NUMBER 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
CONTRACT NO.:
VENDOR NO.:
CERTIFICATE OF AUTHORIZATION NO.: 642

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2019-20 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

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

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

GOVERNING STANDARD SPECIFICATIONS:

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

100% SUBMITTAL
AUGUST 2020

LEE COUNTY PROJECT MANAGER:

THOMAS MARQUARDT, P.E.

48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770

Sunshine State One Call of Florida, Inc. 811

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
	19	T-1

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

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JOHNSON ENGINEERING
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33902
CERTIFICATE OF AUTHORIZATION: 00642
LEAH M. HOLMES, P.E. NO. 85359

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

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HIGH SPANS ENGINEERING, INC.
2121 McGREGOR BOULEVARD
FORT MYERS, FLORIDA 33901
CERTIFICATE OF AUTHORIZATION: -----
------- --------, P.E. NO. -----

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SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
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LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

SIGNATURE SHEET

SHEET NO.
T-2

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-7		T-8		T-9													
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	Conduit, Furnish & Install, Open Trench	LF	118		169		117										404		404	
630-2-12	Conduit, Furnish & Install, Directional Bore	LF	464		248		405										1117		1117	
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish & Install	PI	1		1		1										3		3	
632-7-6	Signal Cable, Remove - Intersection	PI	1		1		1										3		3	
633-2-31	Fiber Optic Connection, Splice	EA	12		12		12										36		36	
633-2-32	Fiber Optic Connection, Termination	EA	12		12		12										36		36	
633-3-12	Fiber Optic Connection Hardware, F&I, Splice Tray	EA	1		1		1										3		3	
633-3-13	Fiber Optic Connection Hardware, F&I, Preterminated Connector Assembly	EA	1		1		1										3		3	
633-3-14	Fiber Optic Connection Hardware, F&I, Buffer Tube Fan Out Kit	EA	1		1		1										3		3	
633-3-15	Fiber Optic Connection Hardware, F&I, Preterminated Patch Panel	EA	1		1		1										3		3	
633-3-17	Fiber Optic Connection Hardware, F&I, Connector Panel	EA	1		1		1										3		3	
635-2-11A	Pull & Splice Box, F&I, 17" x 30" Cover Size	EA	21		18		21										60		60	
635-2-12	Pull & Splice Box, F&I, 30" x 48" Cover Size	EA	1		1		1										3		3	
639-1-112	Electrical Power Service, F&I, Overhead Meter Purchased By Contractor From Power Company	AS	1		1		1										3		3	
639-2-1	Signal, Electrical Service Wire, F&I	LF	50		50		50										150		150	
641-2-12	Prestressed Conc. Pole, F&I, Type P-II Service Pole	EA	1		1		1										3		3	
641-2-80	Prestressed Conc. Pole, Complete Pole Remove - Pole 30' And Greater	EA	4		4		3										11		11	
646-1-11	Aluminum Signals Pole, F&I, Pedestal	EA	8		4		7										19		19	
646-1-60	Aluminum Signals Pole, Remove	EA	10		4		3										17		17	
649-21-6	Steel Mast Arm Assembly, Furnish And Install, 50' Single Arm	EA					1										1		1	
649-21-10	Steel Mast Arm Assembly, Furnish And Install, 60' Single Arm	EA					1										1		1	
649-21-15	Steel Mast Arm Assembly, Furnish And Install, 70' Single Arm	EA	2		1		1										4		4	
649-21-20	Steel Mast Arm Assembly, Furnish And Install, Double Arm 70'-70'	EA	1																	
649-21-21	Steel Mast Arm Assembly, Furnish And Install, 78' Single Arm	EA	2														2		2	
649-21-26	Steel Mast Arm Assembly, Furnish And Install, Double Arm 78'-70'	EA			1												1		1	
650-1-14	Vehicular Traffic Signal, Furnish & Install - Aluminum, 3 Section, 1 Way	AS	19		9		7										35		35	
650-1-16	Vehicular Traffic Signal, Furnish & Install - Aluminum, 4 Section, 1 Way	AS			2		3										5		5	
650-1-19	Vehicular Traffic Signal, Furnish & Install - Aluminum, 5 Section Cluster, 1 Way	AS					1										1		1	
653-1-11	Pedestrian Signal, Furnish & Install LED Count Down, 1 Way	AS	8		4		6										18		18	
653-1-12	Pedestrian Signal, Furnish & Install LED Count Down, 2 Ways	AS					1										1		1	
660-4-11	Vehicle Detection System- Video, Furnish & Install, Cabinet Equipment	EA	1		1		1										3		3	
660-4-12	Vehicle Detection System- Video, Furnish & Install, Above Ground Equipment	EA	4		3		3										10		10	
665-1-12	Pedestrian Detector, F&I, Accessible	EA	8		4		7										19		19	
670-5-110	Traffic Controller Assembly, F&I, NEMA	AS	1		1		1										3		3	
670-5-600	Traffic Controller Assembly, Remove Controller And Cabinet	AS	1		1		1										3		3	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA	1														1		1	
684-1-1	Managed Field Ethernet Switch, LAYER 2, Furnish & Install	EA	1		1		1										3		3	
684-6-12	Wireless Communication Device, Furnish And Install Ethernet Subscriber Unit	EA	1														1		1	
685-1-11	Uninterruptible Power Supply, Furnish & Install, Line Interactive	EA	1		1		1										3		3	
700-3-201	Sign Panel, Furnish & Install Overhead Mount, Up to 12 SF	EA	3		3		3										9		9	
700-3-202	Sign Panel, Furnish & Install Overhead Mount, 12 -20 SF	EA	2				2										4		4	
700-11-391	Electronic Display Sign, Furnish & Install Overhead Mount, AC Powered, Blank Out Sign, Up To 12 SF	AS	1		3		1										5		5	
715-5-32	Luminaire & Bracket Arm	EA	4		2		3										9		9	
715-7-12	Load Center, F&I, Primary Voltage	EA	1		1		1										3		3	

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LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

TABULATION OF QUANTITIES

SHEET NO. T-3

GENERAL NOTES:

1. LOCATES: ONE (1) COURTESY LOCATE SHALL BE PERFORMED BY LEE COUNTY SIGNALS AT THE START OF THE PROJECT AT THE CONTRACTOR'S REQUEST. THE CONTRACTOR SHALL DOCUMENT THE LOCATION OF THE EXISTING UNDERGROUND AND ABOVE GROUND FACILITIES. AFTER THE COURTESY LOCATE, ALL LOCATES WITHIN THE PROJECT LIMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED IN A TIMELY MANNER. TIMELY MANNER IN RESPONSE TO LOCATES IS DEFINED AS LOCATE SHALL BE PERFORMED NO LATER THAN TWENTY-FOUR (24) HOURS AFTER NOTIFICATION OR AS REQUIRED BY FLORIDA STATUTE. LEE COUNTY SIGNALS WILL ADVISE THE CONTRACTOR VIA E-MAIL OR FAX OF SUNSHINE LOCATE REQUESTS WITHIN THE WORK ZONE. ANY DAMAGE INCURRED DUE TO CONTRACTOR FAILURE TO LOCATE SHALL BE REPAIRED BY THE CONTRACTOR. SHOULD LEE COUNTY FORCES BE CALLED OUT TO MAKE REPAIRS DUE TO CONTRACTOR REFUSAL OR INABILITY TO MAKE REPAIRS, THE CONTRACTOR WILL BE BILLED THE ENTIRE COST AS A "DEDUCT" ON THE NEXT PAYMENT REQUEST AND WILL TRIGGER A "VENDOR/CONTRACTOR COMPLAINT" NOTICE TO BE FILED WITH LEE COUNTY CONTRACTS. BEING AN "OUT OF TOWN" CONTRACTOR DOES NOT RELIEVE THIS RESPONSIBILITY.

2. DAMAGE TO EXISTING FACILITIES: ANY DAMAGE TO LEE COUNTY FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR. REPAIRS SHALL BE MADE TO ENSURE FACILITIES ARE LIKE NEW OR BETTER. ANY DAMAGE TO EXISTING COMMUNICATION LINES SHALL NECESSITATE THE REMOVAL OF ALL DAMAGED LINES AND THE RE-PULLING OF NEW CABLE. SPLICING OF COMMUNICATION LINES WILL NOT BE ALLOWED. CAUTION SHALL BE EXERCISED DURING EXCAVATION NEAR EXISTING LEE COUNTY FIBER OPTIC LINES, SINCE MANY ENTITIES USE THESE FACILITIES. SHOULD DAMAGE OCCUR TO FIBER OPTIC LINES, LEE COUNTY WILL DECIDE WHICH QUALIFIED FIBER OPTIC SPLICING COMPANY WILL BE USED TO MAKE REPAIRS. CONTRACTOR WILL BE RESPONSIBLE FOR ALL REPAIR COSTS INCURRED, WHETHER REPAIRS ARE MADE BY LEE COUNTY OR A THIRD PARTY.

3. CABINET/CONTROLLER/VIDEO DETECTION/POLARAPED PREP: LEE COUNTY SIGNALS WILL ASSIST THE CONTRACTOR IN THE SETUP OF NEW SIGNAL CABINET/CONTROLLERS/CAMERAS WHEN THE FOLLOWING CONDITIONS ARE MET: DELIVERY OF EQUIPMENT TO 5650 ENTERPRISE PARKWAY BY CONTRACTOR OR SHIPPER. THE CONTRACTOR SHALL SEND A QUALIFIED TECHNICIAN TO THE SIGNAL SHOP TO SET UP THE EQUIPMENT WITH THE AID OF A SENIOR SIGNAL TECH, GIVING MINIMUM OF 48 HOURS NOTICE. AFTER SET UP, CONTRACTOR SHALL ARRANGE TO PICK UP THE EQUIPMENT WITHIN ONE WEEK. AT TIME OF REMOVAL FROM THE LEE COUNTY SIGNAL SHOP, THE EQUIPMENT SHALL BE SIGNED OUT BY THE CONTRACTOR REPRESENTATIVE AS COMPLETE. LEE COUNTY WILL NOT STORE CONTRACTOR EQUIPMENT. UNDER THESE CONDITIONS, LEE COUNTY SIGNALS WILL ASSIST THE CONTRACTOR ON TURN ON DAY IN THE FIELD. SHOULD THE CONTRACTOR ELECT TO SET UP, BURN IN, AND TEST THE EQUIPMENT WITHOUT LEE COUNTY ASSISTANCE, A MANUFACTURERS REPRESENTATIVE SHALL BE ONSITE, AT CONTRACTORS EXPENSE, ON THE DAY OF TURN ON TO ASSIST THE CONTRACTOR AND TO VERIFY PROPER OPERATION.

4. SPECIAL NOTE REGARDING NEW CONTROLLERS: LEE COUNTY RESERVES THE RIGHT TO SUBSTITUTE DIFFERENT CONTROL EQUIPMENT IN THE EVENT THAT DELIVERED EQUIPMENT IS NOT COMPATIBLE WITH THE EXISTING SYSTEM. SINCE SYSTEM UPGRADES MAY BE BEHIND CONTROLLER TECHNOLOGY, AS THE MAINTAINING AGENCY, LEE COUNTY SIGNALS WILL DECIDE EQUIPMENT PLACEMENT AND TIMING AND MAY PROVIDE AN ALTERNATE CONTROLLER TEMPORARILY UNTIL FUTURE UPGRADES ARE MADE. IF THERE IS A COST DIFFERENTIAL, PAYMENT WILL BE MADE TO THE CONTRACTOR PER PLAN QUANTITY AND SPECIFICATION. SIGNAL CABINETS ARE TO PROVIDE SUFFICIENT SPACE FOR COMPTIBILITY FOR FUTURE UPGRADES SUCH AS CONNECTED AND AUTONOMOUS VEHICLE TECHNOLOGY.

5. CONTRACTOR IS REQUIRED TO HAVE AN AUTHORIZED REPRESENTATIVE OF THE CONTRACTOR AND NECESSARY EQUIPMENT TO COMPLETE THE INSPECTIONS ONSITE AT ALL SIGNAL AND LIGHTING INSPECTIONS. FAILURE TO HAVE A REPRESENTATIVE ONSITE WILL RESULT IN THE CANCELLATION OF THE INSPECTION AND THE WITHHOLDING OF FINAL PAYMENT. AUTHORIZED REPRESENTATIVE IS A PERSON WITH THE KNOWLEDGE AND ABILITY TO MAKE CORRECTIONS AS NEEDED. THIS IS A REQUIREMENT AND IS NECESSARY TO ELIMINATE COSTLY RE-INSPECTIONS AND TO SPEED UP THE CLOSE OUT OF THE PROJECT.

6. RESULTS OF FIELD TESTS SHALL BE MADE AVAILABLE IN WRITTEN FORM. A QUALIFIED REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:

   A. COMPLETE FAMILIARITY WITH ALL SYSTEM ELEMENTS INCLUDING CONTROLLERS, COORDINATION UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS.

   B. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

7. SIGNALS SHALL BE PLACED IN FULL OPERATION ON A MONDAY, TUESDAY, OR WEDNESDAY, HOWEVER, THE SIGNAL SHALL NOT BE PLACED IN FULL OPERATIONS THE DAY PRECEDING OR SUCCEEDING A HOLIDAY, IN ACCORDANCE WITH FDOT STANDARDS SPECIFICATIONS ACCEPTANCE PROCEDURES. THE 48 HOUR TEST SHALL NOT START ON THE DAY PRECEDING OR SUCCEEDING A HOLIDAY.

8. THE CONTRACTOR SHALL BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUIT IS TO BE INSTALLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

9. PULL BOXES AND CONDUIT ARE TO BE PLACED BEHIND CURB AND GUTTER. IF CURB AND GUTTER ARE NOT PRESENT, THE PULL BOXES AND CONDUIT SHALL BE PLACED A MINIMUM OF TEN (10) FEET FROM THE EDGE OF PAVEMENT OR AT THE BACK OF THE EXISTING RIGHT OF WAY TO AVOID EXISTING UTILITIES. ALL PULL BOXES SHALL HAVE CONCRETE MOW PAD PER FDOT SPECIFICATIONS.

14. INSURANCE AS REFERENCED IN SECTIONS 7-13 IN THE FDOT STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION (LATEST EDITION) SHALL BE PROVIDED BY THE CONTRACTOR WHEN INSTALLING OR WHEN WORKING ON OR IN THE VICINITY OF JOINT-USE POLES OR WHEN WORKING IN THE VICINITY OF POWER LINES.

15. WHEN PERFORMING NECESSARY WORK UNDER POWER LINES, SUCH AS THE INSTALLATIONS OF SIGNAL CABLE, AND SIGNAL POLES, THE CONTRACTOR SHALL NOTIFY THE POWER COMPANY AT LEAST 72 HOURS PRIOR TO THE INSTALLATION OF THIS EQUIPMENT.

16. ALL SIGNALIZATION WORK SHALL CONFORM TO LEE COUNTY'S SUPPLEMENTAL SPECIFICATIONS. CONTRACTOR SHALL NOTIFY LEE COUNTY DOT 48 HOURS PRIOR TO THE START OF WORK. EFFECTIVE JANUARY 1, 2003, LEE COUNTY BECAME PART OF THE ONE-CALL LOCATE SYSTEM. IF THE CONTRACTOR REQUIRES INSPECTION SERVICES THERE SHALL BE AT LEAST 48 HOUR NOTICE. CONTRACTOR SHALL MAINTAIN THE TRAFFIC SIGNAL DURING CONSTRUCTION UNTIL SUCH TIME LEE COUNTY ASSUMES MAINTENANCE RESPONSIBILITY. IF CONTRACTOR DOES NOT FOLLOW THE REQUIREMENT THEY WILL BE SUBJECT TO ALL COST OF DAMAGED EQUIPMENT.

17. ALL EQUIPMENT AND WORK TO BE COMPLIANT TO LEE COUNTY DEPARTMENT OF TRANSPORTATION PLAN SPECIFICATIONS FOR TRAFFIC SIGNALS (LATEST EDITION).

18. CONTROLLER FOUNDATION ELEVATION SHALL BE SAME ELEVATION AS THE PROPOSED ROADWAY CROWN ELEVATION UP TO A MAXIMUM OF TWELVE (12) INCHES ABOVE THE PROPOSED CROWN OF THE ROADWAY. ALL WIRES IN SIGNAL CABINET WILL HAVE NEW FORK CONNECTIONS. MINIMUM DEPTH OF CONDUIT SHALL BE THIRTY SIX (36) INCHES. WHEN UNDER SIDEWALK, A MINIMUM OF THIRTY (30) INCHES SHALL BE MAINTAINED.

19. ALL PEDESTAL POLES WHICH ARE PROVIDED WITH A BREAKAWAY FEATURE SHALL CONFORM TO THE LEE COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS (LATEST EDITION).

20. REFER TO LATEST EDITION FDOT STANDARD PLANS 665-001 FOR PEDESTRIAN DETECTOR ASSEMBLY INSTALLATION DETAILS. POLARA APS - INS, ICCU-2, POLARA TO HAVE STREET NAMES PROGRAMMED BY POLARA, LEE COUNTY TO RECEIVE VOICE FILES, LEE COUNTY THEN TO RECEIVE FOR PROGRAMMING SPECS.

21. THE POSITION OF PEDESTRIAN PUSH BUTTON SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSH BUTTON. PUSH BUTTON AND SIGNS ARE TO BE MOUNTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 665, AND MEET ALL GROUNDING REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.

23. PULL BOXES SHALL BE COMPOSITE CONSTRUCTION (QUAZITE) AND LOAD RATED 20,000 LBS. NO EXCEPTIONS WILL BE APPROVED. PULL BOX LIDS SHALL BE COMPOSITE CONSTRUCTION (QUAZITE) AND MARKED APPROPRIATELY, "TRAFFIC SIGNAL" OR "STREET LIGHTS". NO CONCRETE PULL BOXES SHALL BE ALLOWED. NO STEEL LIDS SHALL BE ALLOWED. PULL BOXES SHALL BE SIZED TO ACCOMMODATE MAXIMUM NUMBER OF PIPES ALLOWED PER NEC AND TO COMPLY WITH CABLE MANUFACTURE'S BEND RADIUS.

24. CABINET BASE SHALL BE COMPOSITE CONSTRUCTION (QUAZITE). EQUAL TO QUAZITE PIN: PB40581224B24, "POLYMER CONCRETE PRECAST BASE" APPROVED FOR LEE COUNTY. CABINET BASE SHALL BE BURIED TO MANUFACTURER'S RECOMMENDED DEPTH. ELEVATION OF THE CABINET BASE SHALL BE AT THE SAME ELEVATION AS THE CENTER OF ROADWAY, BUT NO HIGHER THAN TWELVE (12) INCHES ABOVE THE CENTER OF THE ROADWAY. SPARE CONDUITS FROM CABINET BASE SHALL TERMINATE AT A PULL BOX IN FRONT OF THE BASE AND SHALL BE SEALED WITH DUCT SEAL OR CAPPED. ALL FILL DIRT MUST BE COMPACTED AROUND THE CABINET BASE. STUB UP CONDUITS SHALL BE NO LOWER THAN TWELVE (12) INCHES AND NO HIGHER THAN SIX (6) INCHES BELOW THE ACCESS HOLE IN CABINET PAD. INSTALL TWELVE (12) INCH MINIMUM OF BED OF ROCK UNDER CABINET BASE. GRAVE SHALL BE #57 STONE OR EQUIVALENT.

25. ON MAST ARM, ALL THREE (3) SECTION HEADS SHALL HAVE A FIVE (5) CONDUCTOR, FOUR (4) SECTION HEADS SHALL HAVE A SEVEN (7) CONDUCTOR, AND FIVE (5) SECTION HEADS SHALL HAVE A SEVEN (7) CONDUCTOR. EACH SIGNAL PHASE SHALL HAVE ITS OWN NEUTRAL. SHARING OF A NEUTRAL IS NOT ALLOWED. EACH PEDESTRIAN PHASE SHALL HAVE ITS OWN NEUTRAL. SHARING OF A NEUTRAL IS NOT ALLOWED ON A MAST ARM INSTALLATION. ALL SIGNAL HEADS SHALL BE WIRED WITH JACKETED CABLE INTO SIGNAL MAST ARM HAND HOLE. SIGNAL CABLE SHALL HAVE A MINIMUM OF THREE (3) FEET OF SLACK. SIGNAL CABLE #4 AWG STRANDED COPPER SHALL BE USED UNLESS OTHERWISE SPECIFIED, AND SHALL MEET IMSA SPECIFICATIONS #19-1. THE COLOR CODE OF SIGNAL CABLE SHALL BE VERIFIED WITH LEE COUNTY TRAFFIC SECTION PRIOR TO WIRING INTERSECTION. THE COLOR CODE CAN BE OBTAINED FROM LEE COUNTY TRAFFIC SECTION. ALL IMSA 19-1 SIGNAL CABLE OUTER BLACK JACKED SHALL EXTEND INTO DISCONNECT AND SIGNAL HEAD ASSEMBLIES ON MAST ARM INSTALLATION A MINIMUM OF 3". LEE COUNTY WILL ASSIST WITH WIRING THE FLASHING YELLOW ARROW SIGNAL HEADS.

26. EACH SIGNAL POLE SHALL HAVE A MINIMUM OF TWENTY (20) FEET OF GROUND ROD DRIVEN. GROUND RODS MUST READ LESS THAN 15 OHMS WHEN TESTED AFTER INSTALLATION.

    EACH PEDESTRIAN POLE SHALL HAVE MINIMUM OF TWENTY (20) FEET OF GROUND ROD DRIVEN. GROUND RODS MUST READ LESS THAN 15 OHMS WHEN TESTED AFTER INSTALLATION.

    EACH CABINET SHALL HAVE MINIMUM OF FIFTY (50) FEET OF GROUND ROD DRIVEN. GROUND RODS MUST READ LESS THAN 5 OHMS WHEN TESTED AFTER INSTALLATION.

    CONNECTIONS TO GROUND RODS SHALL BE CAD WELDED.

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LEE COUNTY PUBLIC WORKS
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ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

GENERAL NOTES

SHEET NO. T-4

GENERAL NOTES (CONTD.)

NO RODS INSTALLED IN CABINET BASE. NO GROUND RODS IN CABINET BASE. EACH ELECTRICAL SERVICE SHALL HAVE MINIMUM OF TWENTY (20) FEET OF GROUND ROD DRIVEN. GROUND RODS MUST READ LESS THAN 15 OHMS WHEN TESTED AFTER INSTALLATION.

ALL GROUND WIRE SHALL BE #6 STRANDED COPPER. ENSURE THAT ALL GROUNDED ELEMENTS AT AN INTERSECTION ARE BONDED TOGETHER TO FORM AN INTERSECTION GROUNDING NETWORK (620-3.1). ALL SIGNAL POLES, PEDESTRIAN POLES SHALL BE TIED INTO A NETWORK GROUND SYSTEM AND BROUGHT BACK TO THE CABINET. ALL GROUND RODS SHALL BE INSTALLED IN A PULL BOX. TOP OF GROUND ROD SHALL BE TWO (2) INCHES ABOVE TOP OF ROCK IN PULL BOX. FOR MAST ARM FOUNDATIONS OR STEEL POLES, INSTALL GROUND ROD IN PULL BOX WITH SIGNAL CABLE NEXT TO POLE GROUND SPARE CONDUCTORS INSIDE CABINET ON CABINET GROUND BAR.

27. MAINTENANCE OF TRAFFIC SIGNAL SHALL BE THE RESPONSIBILITY OF THE SIGNAL CONTRACTOR. MAINTENANCE SHALL INCLUDE LOCATES.

28. ALL THREE (3), FOUR (4), AND FIVE (5) SECTION SIGNAL HEADS SHALL HAVE A METAL LOUVERED BACK PLATE WITH REFLECTORIZED TAPE PER THE FDOT STANDARD PLANS.

29. HUBS SHALL BE SILICONE SEALED TO SIGNAL HEADS, METAL HEADS SHALL BE USED UNLESS OTHERWISE APPROVED IN THE LEE COUNTY DEPARTMENT OF TRANSPORTATION PLAN SPECIFICATIONS. ALL SIGNAL HEADS SHALL BE NEW AND UNIFORM FOR EACH INTERSECTION. TWO (2) EACH 1-1/4 INCH DRAIN HOLD SHALL BE PLACED IN BOTTOM OF EACH SIGNAL HEAD. THE SIGNAL PHASE SHALL BE MARKED IN SIGNAL HEAD.

30. IMSA 19-1 SIGNAL CABLE OUTER JACKET SHALL REMAIN INTACT THROUGH ASSEMBLY, EXTENDING A MINIMUM THREE (3) INCHES INTO TRAFFIC SIGNAL HEAD ON MAST ARM INSTALLATION. NO STRIPPED SIGNAL CABLE INSIDE GUSSET TUBES. WHEN MAST ARM POLES ARE INSTALLED, THE POLE HEIGHT SHALL INCLUDE ADDITIONAL HEIGHT TO INCLUDE STREET LIGHTS. NO ELECTRICAL SERVICES AND CONTROLLER CABINETS ARE TO BE ATTACHED TO MAST ARM POLES UNLESS APPROVED BY ENGINEER. NO TERMINAL BLOCKS ARE TO BE USED IN MAST ARM POLES OR ASTRO BRACKETS.

31. ASTRO CLAMPS SHALL BE STAINLESS STEEL CABLES. NO BANDS SHALL BE PERMITTED. ALL MAST ARM HARDWARE SHALL BE STAINLESS STEEL 304 OR 316. STRAIN RELIEF'S SHALL BE USED TO SUPPORT SIGNAL CABLE IN A MAST ARM POLE. ASTRO BRACKETS SHALL BE CAPABLE OF BEING ROTATED 90 DEGREES WITHOUT DISASSEMBLY.

32. NO PREFORMED CONCRETE BASES FOR MAST ARM POLES WILL BE PERMITTED. EACH SIGNAL HEAD SHALL HAVE A SEPARATED CABLE FROM HEAD TO BOTTOM OF MAST ARM POLE. A MINIMUM OF FOUR (4) SPARE CONDUCTORS AT BASE OF MAST ARM POLE IS REQUIRED PER CABLE FROM CABINET. BOLT CAPS SHALL BE INSTALLED ON ALL MAST ARE BASE BOLTS. BUCANON B2 B-CAP NON-SILICON FILLED WIRE NUTS SHALL BE USED TO SPLICE SIGNAL CABLE IN THE BASE OF THE POLE.

33. CONTRACTOR SHALL INSTALL FOUR (4) EACH 2-INCH CONDUITS, PLUS ONE (1) EACH 1-INCH CONDUIT IN EACH FOUNDATION. STUB OUT LOCATION TO BE DETERMINED IN FIELD. STUB OUTS SHALL BE A MINIMUM OF THIRTY (30) INCHES DEEP.

34. INSTALLATION MOUNTING HEIGHT OF PED HEAD SHALL BE NINE (9) FEET SIX (6) INCHES ABOVE GRADE TO BOTTOM OF HEAD. MOUNTING HEIGHT OF PED BUTTON SHALL BE FOURTY-TWO (42) INCHES TO CENTER OF BOTTOM ABOVE GRADE. BUTTON SHOULD BE UNDER THE HEAD IT CALLS. SEAL WITH SILICONE AROUND ROSETTE CAPS AND PED BUTTONS. EACH SIGN IS TO IDENTIFY THE CROSSWALK TO WHICH EACH BUTTON APPLIES. SIGNAL CABLE SHALL BE SPLICED IN BASE OF PED POLE AND NOT IN PED HEAD. SPLICE CABLE WITH RED B2 B-CAP WIRE UTS. PED CALL WIRES SHALL BE CONNECTED TO A PED ISOLATOR BOARD AND CHASSIS GROUND IN CABINET. PED BUTTONS SHALL HAVE ONLY BELDEN CABLE. INSTRUCTION SIGNS AND PUSH BUTTON SIGN SHALL BE ONE SIGN MOUNTED ABOVE PED BUTTON. PEDESTRIAN PUSH BUTTON WIRES SHALL BE 2 CONDUCTOR SHIELDED CABLE AND MEET IMSA 50-20 SPECIFICATIONS.

35. EACH 15 AMP BREAKER TO HAVE OWN IF ACCEPTABLE. SHALL BE A MINIMUM OF 1800 WATTS. INSTALLATION TWENTY FEET OF 518 COPPER WELD GROUND ROD SHALL BE INSTALLED FOR EACH ELECTRIC SERVICE. GROUND WIRE SHALL BE 1-1/2 INCH SCHEDULE 80 PVC OR I-1/2 INCH RIGID GALVANIZED CONDUIT. CONDUIT SHALL EXTEND MINIMUM OF SIX (6) INCHES BELOW FINISH GRADE. RISER CONDUIT SHALL BE CONNECTED TOGETHER BY USE OF GALVANIZED THREADED COUPLINGS OR COMPRESSION NO-THREAD COUPLINGS. - NATIONAL ELECTRICAL CODE 820.10.

36. AFTER GALVANIZING, ALL GALVANIZED SURFACES MUST BE ALLOWED TO COOL AND VENT GASES PRODUCED DURING THE COOLING DOWN PROCESS. AFTER SURFACES HAVE BEEN ALLOWED AIR DRY, THEY SHALL BE CLEANED TO ACHIEVE A "BRUSH BLAST" CONDITION AS DEFINED BY SSPC-SP6. TEST GALVANIZING THICKNESS TO ENSURE SUFFICIENT GALVANIZING REMAINS ON THE SUBSTRATE TO MEET SPECIFICATION.

37. MAINTENANCE - LEE COUNTY IS RESPONSIBLE FOR THE MAINTENANCE OF THE TRAFFIC SIGNAL FACILITY AFTER FINAL INSPECTION AND A 90 DAY BURN IN PERIOD.

38. ALL MAST ARMS SHALL BE GALVANIZED.

39. AT THE UPRIGHT BASE AND FOR A LENGTH OF TWO (2) FEET, THE INTERIOR OF THE POLE IS MECHANICALLY CLEANED AND COATED WITH A ZINK RICH EPOXY POWDER THAT IS ELECTRO STATICALLY APPLIED AND CURED BY HEATING THE STEEL SUBSTRATE 350 DEGREES FAHRENHEIT MINIMUM, AND 400 DEGREES FAHRENHEIT MAXIMUM.

40. EXISTING TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AND FREE OF OBSTRUCTIONS DURING THE CONSTRUCTION OF THE NEW TRAFFICSIGNALS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

GENERAL NOTES

SHEET NO. T-5

PAY ITEM FOOTNOTES:

1. *ITEMS NO. 630-2-11, & 630-2-12:*
   THE CONTRACT UNIT PRICE PER FOOT OF CONDUIT, FURNISHED AND INSTALLED WILL INCLUDE FURNISHING ALL HARDWARE AND MATERIALS AS SPECIFIED ON THE TABULATION SHEET. ALL LABOR, TRENCHING, BACK FILLING, AND RESTORATION MATERIALS NECESSARY FOR A COMPLETE AND ACCEPTED INSTALLATION. CONSIDER THE LOCATIONS OF CONDUIT AS SHOWN ON THE PLANS AS APPROXIMATE. CONSTRUCT CONDUIT RUNS AS STRAIGHT AS POSSIBLE, AND OBTAIN THE ENGINEER'S APPROVAL OF ALL MAJOR DEVIATIONS IN CONDUIT LOCATIONS FROM THOSE SHOWN ON THE PLANS. UNDERGROUND CONDUITS ARE TO BE ADJUSTED TO AVOID UNDERGROUND UTILITIES AND SIDEWALKS. INCLUDES CONDUIT FOR MULTIPLE RUNS IN ONE TRENCH. LINEAR FOOTAGE SHOWN ON PLANS ARE FOR LENGTH OF TRENCH ONLY.

2. *ITEM NO. 632-7-1:*
   THIS ITEM SHALL INCLUDE ALL LABOR AND WIRE NECESSARY FOR A COMPLETE INSTALLATION. THE COLOR CODE OF SIGNAL CABLE SHALL BE VERIFIED WITH THE INSPECTION TEAM PRIOR TO WIRING INTERSECTION. THERE SHALL BE NO SPLICES IN ANY SIGNAL CABLE AT ANY POINT BETWEEN THE CONTROLLER CABINET AND SIGNAL HEADS. NUMBER OF SPARE CONDUCTORS SHALL BE IN ACCORDANCE WITH SECTION 632 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019.

3. *ITEMS NO. 633-2-31, 633-2-32 & 633-3-12:*
   EACH SIGNAL SHALL HAVE TWELVE (12) SPLICES (SIX (6) IN AND SIX (6) OUT) AND TWELVE (12) TERMINATIONS AND CORKSCREW SHALL ALSO HAVE AN ADDITIONAL NINETY-SIX (96) SPLICES TO BUTT SPLICE INTO THE EXISTING FIBER. ALL FIBERS USED AND UNUSED, NEED TO BE TESTED. A DIGITAL COPY OF ALL FIBER OPTIC TEST RESULTS SHALL BE PROVIDED TO LEE COUNTY SIGNAL PRIOR TO FIELD INSPECTION.

4. *ITEM NO. 635-2-11A, 635-2-12:*
   ALL PULL BOXES SHALL BE TRAFFIC-RATED, FIBERGLASS REINFORCED CONCRETE SHALL BE "QUAZITE COMPOSITE". ALL PULL BOXES SHALL BE USED FOR A SINGLE, DEDICATED FUNCTION AND SHALL NOT CARRY CABLES OF VARYING FUNCTION. A PULL BOX WITH A MINIMUM COVER MEASUREMENT OF 30X48X24 SHALL BE USED ON INTERCONNECT SPLICE VAULTS BETWEEN CABINETS. A PULL BOX WITH A MINIMUM COVER MEASUREMENT OF 17X30X12 SHALL BE USED ON TRAFFIC SIGNALS AND STREET LIGHTS. COVER SHALL BE MARKED TRAFFIC SIGNAL, STREET LIGHT, OR TRAFFIC SIGNAL INTERCONNECT.

5. *ITEM NO. 639-2-1:*
   PAYMENT SHALL BE BASED UPON THE LENGTH OF COMPLETE WIRE RUN, ALL CONDUCTORS INCLUDED.

6. *ITEM NO. 646-1-60 COST TO INCLUDE COMPLETE REMOVAL OF EXISTING PEDESTRIAN SIGNALS INCLUDING FOUNDATION AND ASSOCIATED PULL BOXES.*

7. *ITEMS NO. 649-21-6, 649-21-10, 649-21-15, 649-21-21 & 649-21-26:*
   MAST ARM POLES SHALL INCLUDE FOUR 2 INCH CONDUITS STUBBED OUT THROUGH THE FOUNDATION AND TEMPORARILY SEALED. ALL MAST ARM HARDWARE SHALL BE HOT DIP GALVANIZED. HARDWARE SUCH AS HAND HOLE COVERS SHALL BE STAINLESS STEEL.

8. *ITEM NO. 650-1-14, 650-1-16 & 650-1-19:*
   TWELVE (12) INCH SIGNAL HEAD SECTIONS SHALL BE USED. PEDESTRIAN SIGNAL HEADS SHALL BE UNIFORM IN SIZE, APPEARANCE, AND FROM THE SAME MANUFACTURER. ALL SIGNAL INDICATIONS SHALL BE 15-YEAR "LED".

9. *ITEM NO. 653-1-11:*
   COUNT DOWN PEDESTRIAN SIGNALS SHALL BE USED. THESE SHALL BE SINGLE- SECTION, INTERNATIONAL SYMBOL HEADS & LED HEADS. ALL ATTACHING HARDWARE SHALL BE STAINLESS STEEL 304 OR 316. CONTRACTOR SHALL USE PELCO OR EQUAL BREAKAWAY BASES FOR FED POLES WITH LOCKING PED COLLAR AND GROUND LUG. USE FOUR (4) INCH ID ALUMINUM CONDUIT FOR PED POLES.

10. *ITEM NO. 660-4-11 & 660-4-12:*
    VIDEO DETECTION SYSTEM SHALL BE ITERIS VANTAGE NEXT SYSTEM, SIDE STREETS WILL BE VANTAGE (CAMERA ONLY), MAIN STREET WILL BE VANTAGE VECTOR NEXT (CAMERA/RADAR). PROGRAMMING SHALL BE PROVIDED BY VENDOR/ MANUFACTURER AND LEE COUNTY DOT TRAFFIC MUST BE NOTIFIED PRIOR TO SENIOR TECH CAN BE ON SITE.

11. *ITEM NO. 665-1-12:*
    PEDESTRIAN DETECTORS TO BE ACCESSIBLE AUDIBLE DETECTORS.

12. *ITEM NO. 682-1-113*
    PTZ SHALL BE AXIS Q6055-E. COST TO INCLUDE ALL ITEMS NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION, INCLUDING ALL MOUNTING HARDWARE AND WIRING.

13. *ITEM NO. 684-1-1:*
    FIBER SWITCH FOR CORKSCREW ROAD AND BEN HILL GRIFFIN PKWY TO BE CISCO IE 4000 AND FOR ALL OTHER INTERSECTIONS SHALL BE CISCO IE 2000

14. *ITEM NO. 684-6-12*
    PAY ITEM SHALL BE BLUETOAD SPECTRA

PAY ITEM FOOTNOTES CONTINUED:

15. *ITEM NO. 685-1-11:*
    UPS SHALL BE MYERS POWERBACK MP2000-ITS WITH ETHERNET

16. *ITEM NO. 700-5-21:*
    ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE ONE SIDED WITH 1-1/2 (1.5) INCH WHITE BORDER AROUND THE ENTIRE EDGE, AND RIGID MOUNTED TO THE MAST ARM POLE UPRIGHT. WIRES TO GO TO SERVICE PER LEE COUNTY SPECIFICATIONS. ALL ATTACHING HARDWARE SHALL BE STAINLESS STEEL 304 OR 316.

17. *ITEM NO. 700-11-321:*
    ELECTRONIC REGULATORY SIGN TO BE WIRED WITHIN MAST ARM POWER SOURCE. COST TO INCLUDE ALL WIRING AND INTERNAL TIMERS REQUIRED FOR A COMPLETE AND ACCEPTABLE INSTALLATION. TIME SCHEDULES FOR INDIVIDUAL ELECTRONIC REGULATORY SIGNS ARE TO BE PROVIDED BY LEE COUNTY.

UTILITY/AGENCY OWNERS:

COMCAST	*MARK COOK*	*239-432-1805*
FPL FIBERNET, LLC	*DANNY HASKETT*	*305-552-2931*
FPL RELOCATION COORINATOR	*JAMEL J. BAKER*	*239-947-7356*
FLORIDA POWER & LIGHT	*TRACY STERN*	*800-868-9554*
LEE COUNTY UTILITIES	*TALYA MAYER*	*239-533-8504*
TECO - PEOPLES GAS SYSTEM	*MARILYN D. ALOI*	*239-690-5517 / 239-896-0812*
CENTURYLINK	*JIM NOTTINGHAM*	*239-336-2035*

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REVISIONS			
DATE	*DESCRIPTION*	*DATE*	*DESCRIPTION*

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	*COUNTY*	*JEI PROJECT ID*
CR 850	*LEE*	*20192030-000*

PAY ITEM NOTES

SHEET NO. *T-6*

REMOVAL ITEMS

1 PI	632-7-6
4 EA	641-2-80
1 AS	670-5-600

NO TURN ON RED

(D) 700-11-391 — 1 AS

(E) 700-3-201 — 1 AS

PED. POLE
STA. 635+75.51
72.01' LT

17 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

(1A) EL 18.74
POLE LOCATION=
STA. 635+82.76
78.33' LT

8 LF	630-2-11
1 EA	649-21-21
1 EA	660-4-12

(1B) EL 18.91
POLE LOCATION=
STA. 635+94.98
95.00' LT

10 LF	630-2-11
1 EA	649-21-21
1 EA	715-5-32

PED. POLE
STA. 635+91.23
84.86' LT

5 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

SIGNAL PULL BOXES (17"X30")
5 EA 635-2-11A

EXIST. PED. POLE TO BE REMOVED
2 EA 646-1-60

EXIST. BOX SPAN TO BE REMOVED

EXIST. PED. POLE TO BE REMOVED
1 EA 646-1-60

EXIST. BOX SPAN TO BE REMOVED

EXIST. PED. POLE TO BE REMOVED
1 EA 646-1-60

EXIST. BOX SPAN TO BE REMOVED

EXIST. PED SIGNAL TO BE REMOVED
2 EA 646-1-60

EXIST. PED SIGNAL TO BE REMOVED
2 EA 646-1-60

EXIST. BOX SPAN TO BE REMOVED

EXIST. SIGNAL CABINET TO BE REMOVED

PED. POLE
STA. 637+46.53
93.86' LT

630-2-11	13 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

(2) EL 19.47
POLE LOCATION=
STA. 637+53.68
94.58' LT

630-2-11	13 LF
649-21-15	1 EA
660-4-12	1 EA
715-5-32	1 EA

SIGNAL PULL BOXES (17"X30")
635-2-11A 5 EA

PED. POLE
STA. 637+56.95
81.69' LT

630-2-11	5 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

630-2-12 165 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

630-2-12 165 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

PED. POLE
STA. 637+49.73
73.99' RT

630-2-11	10 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

(3) EL 17.77
POLE LOCATION=
STA. 637+51.95
81.21' LT

630-2-11	7 LF
649-21-20	1 EA
660-4-12	1 EA
715-5-32	1 EA

SIGNAL PULL BOXES (17"X30")
635-2-11A 6 EA

PED. POLE
STA. 637+39.79
78.51' RT

630-2-11	7 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

PED. POLE
STA. 635+96.29
92.57' RT

5 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

SIGNAL PULL BOXES (17"X30")
5 EA 635-2-11A

(4) EL 18.63
POLE LOCATION=
STA. 635+99.27
96.99' RT

6 LF	630-2-11
1 EA	649-21-15
1 EA	660-4-12
1 EA	715-5-32

PED. POLE
STA. 636+16.16
91.73' RT

7 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

134 LF 630-2-12
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

3-SECT., 1-WAY — 6 AS — 650-1-14

3-SECT., 1-WAY — 11 AS — 650-1-14

3-SECT., 1-WAY — 2 AS — 650-1-14

EXISTING PAVEMENT MARKINGS TO REMAIN (TYP.)

630-2-11	5 LF
632-7-1	1 PI
633-2-31	12 EA
633-2-32	12 EA
633-3-12	1 EA
633-3-13	1 EA
633-3-14	1 EA
633-3-15	1 EA
633-3-17	1 EA
635-2-12	1 EA
639-1-112	1 AS
639-2-1	50 LF
641-2-12	1 EA
660-4-11	1 EA
670-5-110	1 AS
682-1-113	1 EA
684-1-1	1 EA
684-6-12	1 EA
685-1-11	1 EA
715-7-12	1 EA

BEN HILL GRIFFIN PKWY
N 28° 13' 24" W
PC STA. 52+56.01
POT STA. 50+00.00
POT STA. 636+73.28
ARM NO. 1
ARM NO. 2
EXIST. R/W
CORKSCREW ROAD
CORKSCREW RD.
STONEYBROOK GOLF DRIVE
BROOK GOLF RD.
Non-Std Signs/Post
ONLY
634 635 636 637 638 639 640
C CONST.

0 10 50
Feet

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33902
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

CORKSCREW ROAD AT BEN HILL GRIFFIN PKWY SIGNALIZATION PLAN

SHEET NO. T-7

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REMOVAL ITEMS

632-7-6	1 PI
641-2-80	4 EA
670-5-600	1 AS

YIELD ON FLASHING YELLOW (D) — 700-3-201 — 2 AS

NO RIGHT TURN (C) — 700-11-391 — 1 AS

(1) EL 19.23
POLE LOCATION=
STA. 663+14.72
70.59' LT

5 LF	630-2-11
1 EA	649-21-26
2 EA	660-4-12
1 EA	715-5-32

SIGNAL PULL BOXES (17"X30")
5 EA 635-2-11A

TRAFFIC SIGNAL CONTROL BOX (3)

EXIST. BOX SPAN TO BE REMOVED
EXIST. PULL BOXES TO BE REMOVED

4-SECT., 1-WAY
1 AS 650-1-16

4-SECT., 1-WAY
1 AS 650-1-16

3-SECT., 1-WAY
9 AS 650-1-14

EXIST. PULL BOXES TO BE REMOVED
EXIST. BOX SPAN TO BE REMOVED

SIGNAL PULL BOXES (17"X30")
635-2-11A 5 EA

PED. POLE
STA. 664+35.98
59.27' LT

630-2-11	7 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

EXIST. R/W

ARM NO. 1

ARM NO. 2

SIGN - SINGLE SUPPORT (CENTER OF POST) (4)

SIGNAL POLE (CROSSWALK)

SIGN - SINGLE SUPPORT (CENTER OF POST)

EXIST. PED. POLE TO BE REMOVED
1 EA 646-1-60

630-2-11 103 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(OPEN TRENCH)

630-2-12 138 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

CORKSCREW ROAD

CORKSCREW

662 663 664+14 665 666

℄ CONST.

+23 +44 +26

55

EXIST. PED. POLE TO BE REMOVED
1 EA 646-1-60

630-2-12 110 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

EXIST. PED. POLE TO BE REMOVED
2 EA 646-1-60

EXIST. BOX SPAN TO BE REMOVED
EXIST. SIGNAL CABINET TO BE REMOVED
EXIST. PULL BOXES TO BE REMOVED

PED. POLE
STA. 664+30.90
62.18' RT

630-2-11	12 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

630-2-11	5 LF
632-7-1	1 PI
633-2-31	12 EA
633-2-32	12 EA
633-3-12	1 EA
633-3-13	1 EA
633-3-14	1 EA
633-3-15	1 EA
633-3-17	1 EA
635-2-12	1 EA
639-1-112	1 AS
639-2-1	50 LF
641-2-12	1 EA
660-4-11	1 EA
670-5-110	1 AS
684-1-1	1 EA
685-1-11	1 EA
715-7-12	1 EA

(2) EL 20.08
POLE LOCATION=
STA. 664+49.34
65.33' RT

630-2-11	13 LF
649-21-15	1 EA
660-4-12	1 EA
715-5-32	1 EA

SIGNAL PULL BOXES (17"X30")
635-2-11A 6 EA

EXIST. R/W

EXIST. TEMPORARY EASEMENT

BURIED GAS LINE

SIGNAL POLE (CROSSWALK)

TRAFFIC SIGNAL CONTROL BOX (5)

SANITARY MANHOLE

STONEYBROOK GOLF DRIVE

PED. POLE
STA. 663+26.81
72.90' RT

5 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

PED. POLE
STA. 664+15.63
69.77' RT

630-2-11	19 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

SIGNAL PULL BOXES (17"X30")
2 EA 635-2-11A

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LEAH M. HOLMES • P.E. LICENSE NO. 85359
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CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

CORKSCREW ROAD AT STONEYBROOK GOLF DR SIGNALIZATION PLAN

SHEET NO. T-8

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REMOVAL ITEMS

632-7-6	1 PI
641-2-80	3 EA
670-5-600	1 AS

NO TURN ON RED (D)

700-11-391 — 1 AS

SIGNAL PULL BOXES (17"X30")
5 EA 635-2-11A

EXIST. PULL BOXES TO BE REMOVED

EXIST. EASEMENT

EXIST. R/W

EXIST. R/W

EXIST. MAST ARM TO BE REMOVED

5 LF	630-2-11
1 EA	649-21-15
1 EA	660-4-12
1 EA	715-5-32

EXIST. PED POLE TO BE REMOVED
1 EA 646-1-60

1 EL 25.24
POLE LOCATION=
STA. 782+18.43
77.41' LT

PED. POLE
STA. 782+58.69
76.84' LT

27 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-11
1 EA	665-1-12

MIDNIGHT BLUE COURT

MIDNIGHT

FUTURE SIGNAL HEAD

PED. POLE
STA. 782+36.73
61.69' LT

630-2-11	19 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

139 LF 630-2-12
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

153 LF 630-2-12
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWERD, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

PED. POLE
STA. 783+69.77
80.19' (LT)

630-2-11	5 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

2 EL 25.06
POLE LOCATION=
STA. 783+71.04
84.13' LT
EXIST. MAST ARM (TO REMAIN)
630-2-11 — 5 LF

SIGNAL PULL BOXES (17"X30")
635-2-11A 5 EA

EXIST. PULL BOXES TO BE REMOVED

PED. POLE
STA. 783+75.71
75.78' (LT)

630-2-11	5 LF
646-1-11	1 EA
653-1-11	1 AS
665-1-12	1 EA

EXIST. R/W

0 10 30
feet

CORKSCREW ROAD

781 ℄ CONST. 782 783 784 785

N 86° 32' 39" E

EXIST. MAST ARM TO BE REMOVED

EXIST. PED POLE TO BE REMOVED
646-1-60 1 EA

EXIST. PED POLE TO BE REMOVED
1 EA 646-1-60

630-2-12 113 LF
6 CONDUIT RUNS:
2 HV, 1 LV, 1 POWER, 1 VIDEO, 1 SPARE
(DIRECTIONAL DRILL)

EXIST. CABINET TO BE REMOVED

EXIST. PULL BOXES TO BE REMOVED

MERGE

PED. POLE
STA. 782+36.73
73.59' RT

6 LF	630-2-11
1 EA	646-1-11
1 AS	653-1-12
1 EA	665-1-12

EXIST. MAST ARM TO BE REMOVED

4-SECT., 1-WAY
3 AS
650-1-16

3-SECT., 1-WAY
7 AS
650-1-14

5-SECT., 1-WAY
1 AS
650-1-19

4 EL 20.26
POLE LOCATION=
STA. 782+43.67
78.61' RT

5 LF	630-2-11
1 EA	649-21-6
1 EA	660-4-12
1 EA	715-5-32

SIGNAL PULL BOXES (17"X30")
5 EA 635-2-11A

EXIST. R/W

BELLA TERRA BOULEVARD

PED. POLE
STA. 783+57.27
73.59' RT

630-2-11	10 LF
646-1-11	1 EA
653-1-11	1 EA
665-1-12	1 AS

3 EL 25.25
POLE LOCATION=
STA. 783+81.80
63.65' RT

630-2-11	12 LF
649-21-10	1 EA
660-4-12	1 EA
715-5-32	1 EA

PED. POLE
STA. 783+71.70
62.27' RT

630-2-11	11 LF
646-1-11	1 EA
653-1-11	1 EA
665-1-12	1 AS

SIGNAL PULL BOXES (17"X30")
635-2-11A 6 EA

630-2-11	7 LF
632-7-1	1 PI
633-2-31	12 EA
633-2-32	12 EA
633-3-12	1 EA
633-3-13	1 EA
633-3-14	1 EA
633-3-15	1 EA
633-3-17	1 EA
635-2-12	1 EA
639-1-112	1 AS
639-2-1	50 LF
641-2-12	1 EA
660-4-11	1 EA
670-5-110	1 AS
684-1-1	1 EA
685-1-11	1 EA
715-7-12	1 EA

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

CORKSCREW ROAD AT BELLA TERRA BLVD SIGNALIZATION PLAN

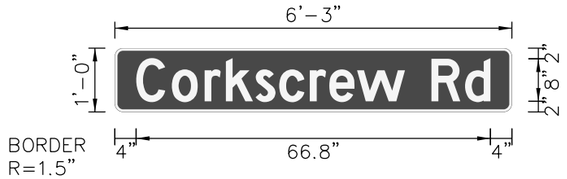
SHEET NO. T-9

MJN 8/4/2020 4:44:38 PM U:\Projects\20192030-000_Phase1\signals\PLANSG03.DGN

SIGN NAME	A	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	6'-3"	WIDTH	0.5"		
HEIGHT	1'-0"	RADII	1.5"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



BORDER
R=1.5"
TH=0.5"

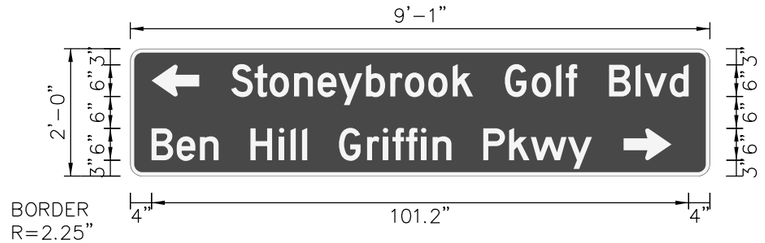
Panel Style: Street name 8-6in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

SIGN NAME	B	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	9'-1"	WIDTH	0.75"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



BORDER
R=2.25"
TH=0.75"

Panel Style: guide_con_advance street name_2-lines_2012.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY / SPACE																								
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SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL		BORDER			
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

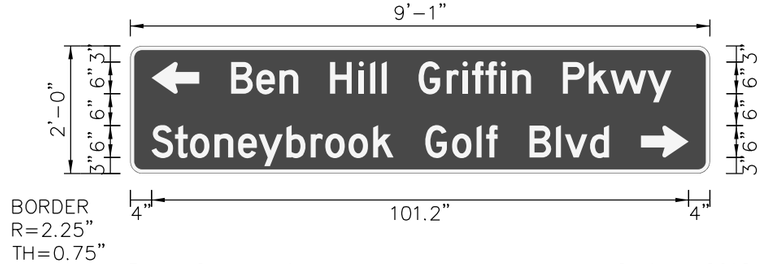
NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY / SPACE																								
COPY / SPACE																								
COPY / SPACE																								
COPY / SPACE																								
COPY / SPACE																								
COPY / SPACE																								

SIGN NAME	C	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	9'-1"	WIDTH	0.75"		
HEIGHT	2'-0"	RADII	2.25"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



BORDER
R=2.25"
TH=0.75"

Panel Style: guide_con_advance street name_2-lines_2012.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY / SPACE																								
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COPY / SPACE																								
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COPY / SPACE																								

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

CORKSCREW ROAD AT BEN HILL GRIFFIN PKWY GUIDE SIGN WORKSHEET

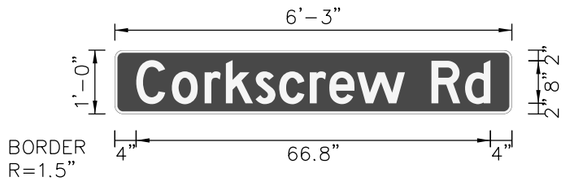
SHEET NO.
T-10

MJN 8/4/2020 4:44:39 PM U:\Projects\20192030-000_Phase1\signals\GSWKSP01.DGN

SIGN NAME	A		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	6'-3"	WIDTH	0.5"			
HEIGHT	1'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



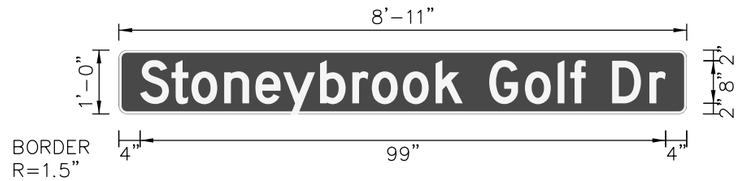
Panel Style: Street name 8-6in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

SIGN NAME	B		QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	8'-11"	WIDTH	0.5"			
HEIGHT	1'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



Panel Style: Street name 8-6in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY
SPACE
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SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL		BORDER			
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY
SPACE
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SIGN NAME		QTY		SIGN NUMBER	STATION(S)
PANEL		BORDER			
WIDTH		WIDTH			
HEIGHT		RADII			
LEGEND		COLOR			
COLOR					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY
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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOHNSON ENGINEERING
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JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 850	LEE	20192030-000

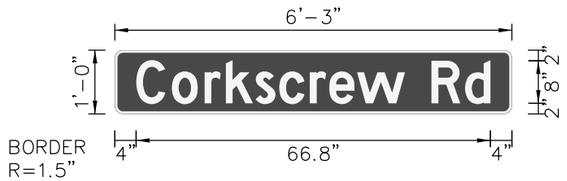
CORKSCREW ROAD AT STONEYBROOK GOLF DR GUIDE SIGN WORKSHEET

SHEET NO. T-11

SIGN NAME	A		QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	6'-3"	WIDTH	0.5"			
HEIGHT	1'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



Panel Style: Street name 8-6in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

SIGN NAME	B		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	6'-10"	WIDTH	0.5"			
HEIGHT	2'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

Panel Style: guide_con_street name_2-line_2012.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY SPACE																								
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COPY SPACE																								

SIGN NAME	C		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	6'-6"	WIDTH	0.5"			
HEIGHT	1'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

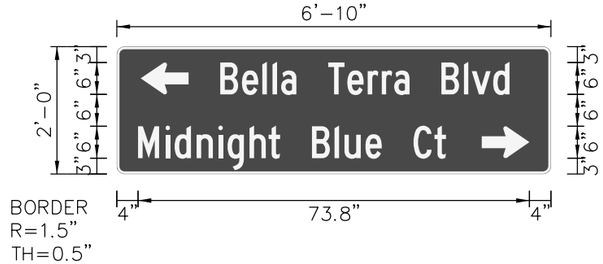
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

SIGN NAME	C		QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER				none
WIDTH	6'-10"	WIDTH	0.5"			
HEIGHT	2'-0"	RADII	1.5"			
LEGEND	White	COLOR	White			
COLOR	Green					

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



Panel Style: guide_con_street name_2-line_2012.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY SPACE																								
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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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LEAH M. HOLMES • P.E. LICENSE NO. 85359
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2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

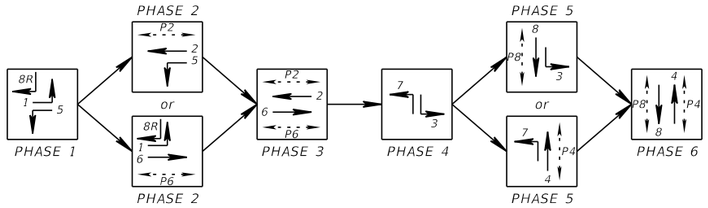
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CR 850	LEE	20192030-000

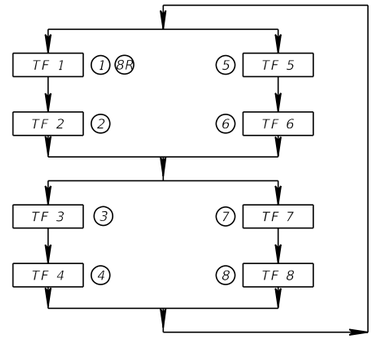
CORKSCREW ROAD AT BELLA TERRA BLVD GUIDE SIGN WORKSHEET

SHEET NO. T-12

VIDEO DETECTION			
CAMERA DETECTOR	DETECTION ZONE	TIMING FUNCTION CONNECTION	DELAY TIME (SEC)
V-1	DZ-2	TF-2	
	DZ-5	TF-5	
V-2	DZ-4	TF-4	
	DZ-7	TF-7	
V-3	DZ-1	TF-1	
	DZ-6	TF-6	
V-4	DZ-3	TF-3	
	DZ-8	TF-8	
	DZ-8R	TF-1	

S.O.P. 10





CONTROLLER OPERATION

MAJOR STREET IS CORKSCREW ROAD
MINOR STREET IS BEN HILL GRIFFIN PKWY

CONTROLLER TO OPERATE AS INDICATED IN THE FLASH MODE:
CORKSCREW ROAD (2 & 6) SHALL FLASH RED
BEN HILL GRIFFIN PKWY (4 & 8) SHALL FLASH RED
CORKSCREW ROAD POSTED SPEED = 45 MPH
BEN HILL GRIFFIN PKWY SPEED = 45 MPH

SBR TO REMAIN RED DURING PED PHASE 8

CONTROLLER TIMINGS (SECONDS)									
MOVEMENT #	1	2	3	4	5	6	7	8	8R
DIRECTION	EBL	WB	SBL	NB	WBL	EB	NBL	SB	SBR
TURN TYPE	PROT	-	PROT	-	PROT	-	PROT	-	PROT/OVER
MIN GREEN	5	15	5	8	5	15	5	8	8
EXT	2.0	5.0	3.0	2.0	2.0	5.0	2.0	2.0	2.0
YELLOW	5.0	5.0	4.8	4.8	5.0	5.0	4.8	4.8	4.8
ALL RED	3.2	3.0	3.0	3.0	3.2	3.0	3.0	3.0	3.0
MAX I	20	57	22	58	25	52	18	58	58
MAX II	40		25					62	
WALK		7		7		7		7	
FLASHING DON'T WALK		38		43		37		43	
DETECTOR MEMORY									
DET. CROSS SWITCH									
DUAL ENTRY									
VEHICLE RECALL		MAX				MAX			

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

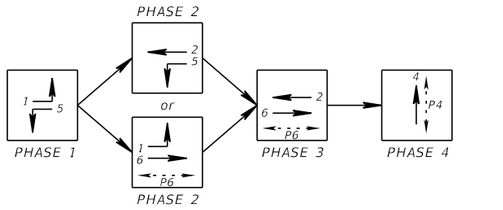
CORKSCREW ROAD AT BEN HILL GRIFFIN PKWY SIGNAL OPERATIONS

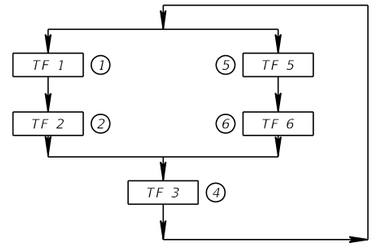
SHEET NO. T-13

MJN 8/4/2020 4:44:40 PM U:\Projects\20192030-000_Phase1\signals\SSDTSG01.DGN

VIDEO DETECTION			
CAMERA DETECTOR	DETECTION ZONE	TIMING FUNCTION CONNECTION	DELAY TIME (SEC)
V-1	DZ-6	TF-6	
	DZ-1	TF-1	
V-2	DZ-2	TF-2	
	DZ-5	TF-5	
V-3	DZ-4	TF-3	

S.O.P. 7





CONTROLLER OPERATION

MAJOR STREET IS CORKSCREW ROAD
MINOR STREET IS STONEYBROOK GOLF DR

CONTROLLER TO OPERATE AS INDICATED IN THE FLASH MODE:
CORKSCREW ROAD (2 & 6) SHALL FLASH YELLOW
STONEYBROOK GOLF DR (4) SHALL FLASH RED
CORKSCREW ROAD POSTED SPEED = 45 MPH
STONEYBROOK GOLF DR SPEED = 30 MPH

CONTROLLER TIMINGS (SECONDS)								
MOVEMENT #	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB		NB	WBL	EB		
TURN TYPE	PROT/PERM	-		-	PROT/PERM	-		
MIN GREEN	5	20		7	5	20		
EXT	3	6		3	3	6		
YELLOW	4.0	5.5		4.0	5.5	5.5		
ALL RED	3.0	3.0		2.5	3.0	3.0		
MAX I	22	80.0		57	22	58		
MAX II								
WALK				7		7		
FLASHING DON'T WALK				27		16		
DETECTOR MEMORY								
DET. CROSS SWITCH								
DUAL ENTRY								
VEHICLE RECALL		MAX				MAX		

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

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

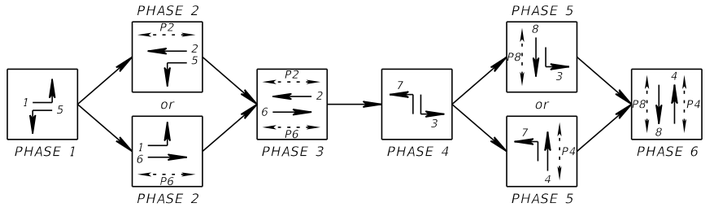
CORKSCREW ROAD AT STONEYBROOK GOLF DR SIGNAL OPERATIONS

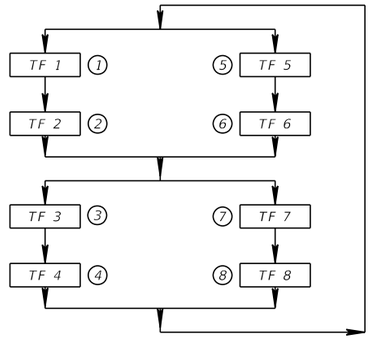
SHEET NO. T-14

MJN 8/4/2020 4:44:41 PM U:\Projects\20192030-000_Phase1\signals\SSDTSG02.DGN

VIDEO DETECTION			
CAMERA DETECTOR	DETECTION ZONE	TIMING FUNCTION CONNECTION	DELAY TIME (SEC)
V-1	DZ-2	TF-2	
	DZ-5	TF-5	
V-2	DZ-4	TF-4	
	DZ-7	TF-7	
V-3	DZ-1	TF-1	
	DZ-6	TF-6	
V-4	DZ-3	TF-3	
	DZ-8	TF-8	

S.O.P. 10





CONTROLLER OPERATION

MAJOR STREET IS CORKSCREW ROAD
MINOR STREET IS BELLA TERRA BLVD

CONTROLLER TO OPERATE AS INDICATED IN THE FLASH MODE:
CORKSCREW ROAD (2 & 6) SHALL FLASH YELLOW
BELLA TERRA BLVD (4 & 8) SHALL FLASH RED

CORKSCREW ROAD POSTED SPEED = 45 MPH
BELLA TERRA BLVD SPEED = 30 MPH

CONTROLLER TIMINGS (SECONDS)								
MOVEMENT #	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB	SBL	NB	WBL	EB	NBL	SB
TURN TYPE	PROT/PERM	-	PROT/PERM	-	PROT/PERM	-	PROT/PERM	-
MIN GREEN	5	20	5	7	5	20	5	7
EXT	3.0	7.0	3.0	3.0	2.0	7.0	3.0	2.0
YELLOW	4.8	4.8	4.0	4.0	4.8	4.8	4.0	4.0
ALL RED	3.0	3.0	2.5	2.5	3.0	3.0	2.5	2.5
MAX I	16.0	34.0		55.0	13.0	38.0	19.0	36.0
MAX II								
WALK		7		7		7		7
FLASHING DON'T WALK		27.0		35.0		26.0		33.0
DETECTOR MEMORY								
DET. CROSS SWITCH								
DUAL ENTRY								
VEHICLE RECALL		MAX				MAX		

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

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JOHNSON ENGINEERING
LEAH M. HOLMES • P.E. LICENSE NO. 85359
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET • FORT MYERS, FL 33901
CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

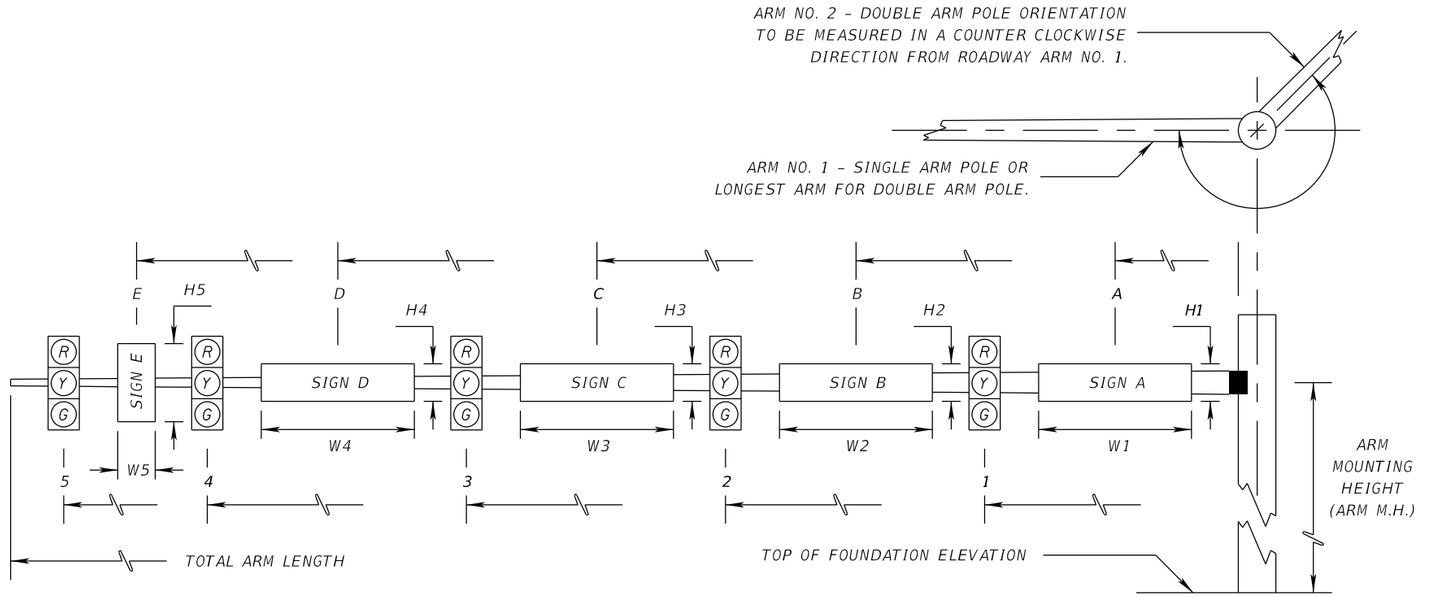
ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

CORKSCREW ROAD AT BELLA TERRA BLVD SIGNAL OPERATIONS

SHEET NO. T-15

SPECIAL INSTRUCTIONS

ID NO.	PED. BUTTON		PED. SIGNALS		HANDHOLE LOCATION



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

** DENOTES FUTURE HEAD

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL DATA																TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	SIGN DATA																	PAINT COLOR
						SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE																DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN																			
									1	*	2	*	3	*	4	*	5	*	6	*				A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5					
1A	T-7	635+82.76	19.24	1	20.13	V	Y	N	34.2	3	45.2	3	57.0	3	69.8	3							78'	22		26.2	2.0	9.1																
---	-----	----------	-------	2		V	Y	N																	-----																			
1B	T-7	635+94.98	19.41	1	20.57	V	Y	N	27.8	3	49.8	3	67.9	3									78'	22.5																			
---	-----	----------	-------	2		V	Y	N																	-----																			
2	T-7	637+53.68	19.99	1	20.57	V	Y	N	38.3	3	52.3	3	66.2	3									70'	21.5		24.6	1.0	6.3																
---	-----	----------	-------	2		V	Y	N																	-----																			
3	T-7	637+51.95	18.27	1	19.88	V	Y	N	50.4	3	64.4	3											70'	23					24.9	2.0	9.1						61.3	3.0	3.0		
---	-----	----------	-------	2	19.92	V	Y	N	34.8	3	48.0	3	57.5	3	67.1	3							70'	23	90																	
4	T-7	635+99.27	19.13	1	20.03	V	Y	N	18.0	3	29.0	3	45.5	3	57.5	3	69.0	3					70'	22		10.0	1.0	6.3	23.5	1.0	6.3											
---	-----	----------	-------	2		V	Y	N																	-----																			
1	T-8	663+14.72	19.74	1	22.25	V	Y	N	61.4	3	72.9	3											78'	23.5		12.1	1.0	6.3							58.5							
---	-----	----------	-------	2		V	Y	N	32.1	3	43.1	3	54.1	3	64.8	4							70'	23.5	270	12.1	1.0	8.9														
2	T-8	664+49.34	21.03	1	22.09	V	Y	N	8.8	3	24.8	3	35.8	3	46.5	3	57.5	4					60'	22		3.2	1.0	8.9	19.1	2.5	2.0				53.0						
---	-----	----------	-------	2		V	Y	N																	-----																			
1	T-9	782+18.43	23.78	1	23.15	V	Y	N	39.5	3	50.3	3	61.0	4									70'	20.5		12.1	2.0	6.7														
---	-----	----------	-------	2		V	Y	N																	-----																			
2	T-9	783+71.04	23.77	1	23.56	V	Y	N	17.9	3	30.0	3	42.1	4	54 24**	4**							60'	22		11.4	1.0	6.3														
---	-----	----------	-------	2		V	Y	N																	-----																			
3	T-9	783+81.80	23.14	1	23.21	V	Y	N	25.2	3	35.9	3	46.7	4									60'	21		11.9	2.0	6.7														
---	-----	----------	-------	2		V	Y	N																	-----																			
4	T-9	782+43.67	22.04	1	23.23	V	Y	N	37.0	3	45.9	5											50'	22		11.0	1.0	6.3	19.7	2.5	2.0											
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				1																																								
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REVISIONS			
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CERTIFICATE OF AUTHORIZATION NO. 642

LEE COUNTY PUBLIC WORKS
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	JEI PROJECT ID
CR 850	LEE	20192030-000

MAST ARM TABULATION

SHEET NO. T-16

STANDARD MAST ARM ASSEMBLIES DATA TABLE

Table Date 11-01-16

SHEET NUMBER	STRUCTURE ID NUMBERS	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT ID
			ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	
T-7	1A	A78/S - P6/S/L	A78/S						P6/S/L		22	DS/24/5
T-7	1B	A78/S - P6/S/L	A78/S						P6/S/L		22.5	DS/21/5
T-7	2	A70/S - P5/S/L	A70/S						P5/S/L		21.5	DS/20/5
T-7	3	A70/D - A70/D - P5/D/L	A70/D		A70/D				P5/S/L		23	DS/25/5
T-7	4	A70/S - P5/S/L	A70/S						P5/S/L		22	DS/22/5
T-8	2	A60/S - P4/S/L	A60/S						P4/S/L		22	DS/22/4.5
T-9	1	A70/S - P5/S/L	A70/S						P5/S/L		20.5	DS/20/5
T-9	2	A60/S - P4/S/L	A60/S						P4/S/L		22	DS/21/4.5
T-9	3	A60/S - P4/S/L	A60/S						P4/S/L		21	DS/19/4.5
T-9	4	A50/S - P3/S/L	A50/S						P3/S/L		22	DS/14/4.5

NOTES [Notes Date 11-01-16]:

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.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS M. WAITS, P.E.
P.E. LICENSE NUMBER 55460

HIGHSPANS ENGINEERING, INC.
2121 MCGREGOR BOULEVARD
SUITE 200
FORT MYERS, FL 33901
REGISTRY NO. 27559

DRAWN BY: SDS 09/19
CHECKED BY: CLH 09/19
DESIGNED BY: RMW 09/19
CHECKED BY: TMW 09/19

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	PROJECT ID
CR 850	LEE	

SHEET TITLE: STANDARD MAST ARM ASSEMBLIES DATA TABLES

REF. DWG. NO.

PROJECT NAME: CORKSCREW ROAD WILDLIFE CROSSING & BOX CULVERTS

SHEET NO. -

Sabrina 8/3/2020 4:05:21 PM H:_Project18\1831_CorkscrewCritterCrossing\struct\MSSGSG01.dgn

SPECIAL MAST ARM ASSEMBLIES DATA TABLE

Table Date 01-01-12

NUMBER OF LOCATIONS	STRUCTURE NUMBER	FIRST ARM				FIRST ARM EXTENSION				SECOND ARM				SECOND ARM EXTENSION				POLE						
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	SA(ft)	SB(in)	SC(in)	SD(in)	SE(ft)	SF(in)	SG(in)	SH(in)	UA(ft)	UB(ft)	UC(in)	UD(in)	UE(in)	UF(deg)	UG(ft)
1	SHEET T-8 Pole 1	38	7.61	12.9	0.25	42	12.2	18	0.375	37	7.73	12.9	0.25	35	12.1	17	0.375	39	23.5	20.6	26	0.5	270	37.5

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 01-01-12

STRUCTURE NUMBER	FIRST ARM CONNECTION (in)					First Arm Camber Angle = 2 Degrees						SECOND ARM CONNECTION (in)					Second Arm Camber Angle = 2 Degrees					
	#Bolts	HT	FJ	FK	FL	FN	FO	FP	FR	FS	FT	#Bolts	HT	SJ	SK	SL	SN	SO	SP	SR	SS	ST
SHEET T-8 Pole 1	6	30	37	3	0.75	0.375	22.9	1.5	2	12	0.375	6	30	37	3	0.75	0.313	22.9	1.5	2	12	0.313

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 07-01-15

STRUCTURE NUMBER	POLE BASE CONNECTION (in)					SHAFT AND REINF.								LUMINAIRE AND LUMINAIRE CONNECTION									
	#Bolts	BA	BB	BC	BF	DA(ft)	DB(ft)	RA	RB	RC	RD(in)	RE	RF(in)	LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)
SHEET T-8 Pole 1	8	44	2.5	2.25	45	25	5	11	19	12	8			40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.187	

NOTES:
1. Work with Index 649-031.
2. Design Wind Speed = 170 mph

FOUNDATION NOTES:
1. Design based on Borings taken 7/13/2020 sealed by Tierra, Inc.
2. Assumptions and Values used in design:
   Soil Type - Sand
   Soil Layer Thickness = 30 ft.
   Soil Friction Angle = 30 deg.
   Soil Weight = 50 pcf
   Design Water Table is 1 ft. below surface

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS M. WAITS, P.E.
P.E. LICENSE NUMBER 55460
HIGHSPANS ENGINEERING, INC.
2121 MCGREGOR BOULEVARD
SUITE 200
FORT MYERS, FL 33901
REGISTRY NO. 27559

DRAWN BY: SDS 09/19
CHECKED BY: CLH 09/19
DESIGNED BY: RMW 09/19
CHECKED BY: TMW 09/19

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	PROJECT ID
CR 850	LEE	

SHEET TITLE: SPECIAL MAST ARM ASSEMBLIES DATA TABLES

REF. DWG. NO.:

PROJECT NAME: CORKSCREW ROAD WILDLIFE CROSSING & BOX CULVERTS

SHEET NO.: -