

*LEE COUNTY PUBLIC WORKS  
DEPARTMENT OF TRANSPORTATION*

*CORKSCREW ROAD WIDENING - PHASE II*

BELLA TERRA BOULEVARD TO ALICO ROAD

JEI PROJECT ID: 20192030-000

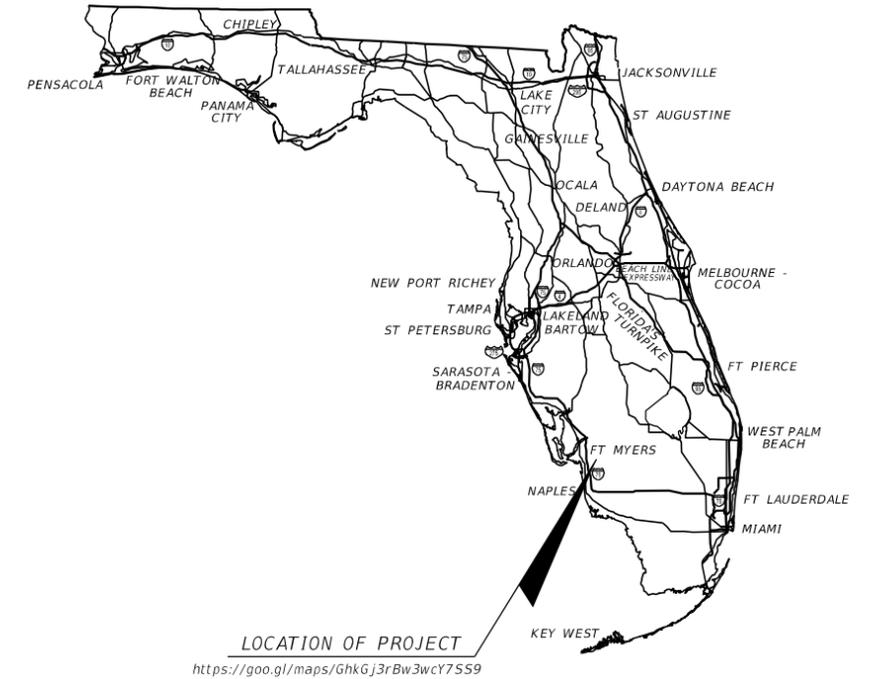
LEE COUNTY (2014100)

COUNTY ROAD NO. 850

*SIGNALIZATION PLANS*

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SIGNALIZATION SHOP DRAWINGS  
TO BE SUBMITTED TO:

DAVID M. MURPHY, P.E.

SIGNALIZATION PLANS  
ENGINEER OF RECORD:



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

**GOVERNING STANDARD PLANS:**

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>

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

**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>

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

**FINAL SUBMITTAL  
JANUARY 2023**

**LEE COUNTY  
PROJECT MANAGER:**

DAVID M. MURPHY, P.E.

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



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

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

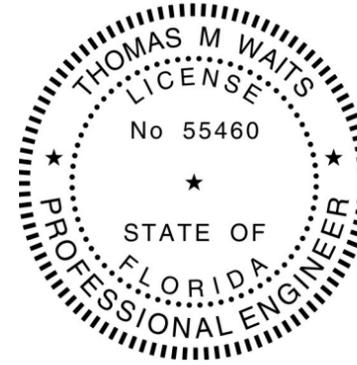
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JOHNSON ENGINEERING  
2122 JOHNSON STREET  
FORT MYERS, FLORIDA 33902  
CERTIFICATE OF AUTHORIZATION: 00642  
LEAH M. HOLMES, P.E. NO. 85359

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

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4 - T-5	GENERAL NOTES
T-6 - T-7	PAY ITEM NOTES
T-8	SIGNALIZATION PLAN
T-9	GUIDE SIGN WORKSHEET
T-10	SIGNAL OPERATIONS
T-11	MAST ARM TABULATION



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HIGH SPANS ENGINEERING, INC.  
2121 MCGREGOR BOULEVARD, SUITE 200  
FORT MYERS, FLORIDA 33901  
REGISTRY NO: 27559  
THOMAS M. WAITS, P.E. NO. 55460

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
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<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
T-2	SIGNATURE SHEET
T-12	STANDARD MAST ARM ASSEMBLIES DATA TABLES
T-13	SPECIAL MAST ARM ASSEMBLIES DATA TABLES

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REVISIONS				 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			SHEET NO.  T-2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
					CR 850	LEE	20192030-000	

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-8														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	104														104		104	
630-2-12	Conduit, Furnish & Install, Directional Bore	LF	233														233		233	
632-7-1	Signal Cable, New Or Reconstructed Intersection, Furnish & Install	PI	1														1		1	
633-1-121	Fiber Optic Cable, F&I, Underground, 2-12 Fibers	LF	70														70		70	
633-2-31	Fiber Optic Connection, Splice	EA	12														12		12	
633-2-32	Fiber Optic Connection, Termination	EA	12														12		12	
633-3-11	Fiber Optic Connection Hardware, F&I, Splice Enclosure	EA	1														1		1	
633-3-12	Fiber Optic Connection Hardware, F&I, Splice Tray	EA	1														1		1	
633-3-13	Fiber Optic Connection Hardware, F&I, Preterminated Connector Assembly	EA	1														1		1	
633-3-14	Fiber Optic Connection Hardware, F&I, Buffer Tube Fan Out Kit	EA	1														1		1	
633-3-15	Fiber Optic Connection Hardware, F&I, Preterminated Patch Panel	EA	1														1		1	
633-3-17	Fiber Optic Connection Hardware, F&I, Connector Panel	EA	1														1		1	
635-2-11A	Pull & Splice Box, F&I, 17" x 30" Cover Size	EA	16														16		16	
635-2-13	Pull & Splice Box, F&I, 30" x 60" Cover Size	EA	1														1		1	
639-1-122	Electrical Power Service, F&I, Underground, Meter Purchased By Contractor From Power Company	AS	1														1		1	
639-2-1	Signal, Electrical Service Wire, F&I	LF	50														50		50	
639-3-11	Electrical Service Disconnect, F&I, Pole	EA	1														1		1	
641-2-11	Prestressed Conc. Pole, F&I, Type P-II Pedestal	EA	2														2		2	
646-1-11	Aluminum Signals Pole, F&I, Pedestal	EA	4														4		4	
649-21-3	Steel Mast Arm Assembly, Furnish And Install, 40' Single Arm	EA	1														1		1	
649-21-9	Steel Mast Arm Assembly, Furnish And Install, Double Arm 50'-50'	EA	1														1		1	
650-1-14	Vehicular Traffic Signal, Furnish & Install - Aluminum, 3 Section, 1 Way	AS	6														6		6	
650-1-16	Vehicular Traffic Signal, Furnish & Install - Aluminum, 4 Section, 1 Way	AS	1														1		1	
653-1-11	Pedestrian Signal, Furnish & Install LED Count Down, 1 Way	AS	4														4		4	
660-4-11	Vehicle Detection System - Video, Furnish & Install, Cabinet Equipment	EA	1														1		1	
660-4-12	Vehicle Detection System - Video, Furnish & Install, Above Ground Equipment	EA	3														3		3	
660-6-121	Vehicle Detection System - AVI, Bluetooth, Furnish & Install, Cabinet Equipment	EA	1														1		1	
660-6-122	Vehicle Detection System - AVI, Bluetooth, Furnish & Install, Above Ground Equipment	EA	1														1		1	
665-1-12	Pedestrian Detector, F&I, Accessible	EA	4														4		4	
670-5-110	Traffic Controller Assembly, F&I, NEMA	AS	1														1		1	
682-1-133	ITS CCTV Camera, F&I, Dome Enclosure - Non-Pressurized, IP, High Definition	EA	1														1		1	
684-1-1	Managed Field Ethernet Switch, LAYER 2, Furnish & Install	EA	1														1		1	
685-1-13	Uninterruptible Power Supply, Furnish & Install, Line Interactive with Cabinet	EA	1														1		1	
700-3-201	Sign Panel, Furnish & Install Overhead Mount, Up to 12 SF	EA	3														3		3	
700-3-202	Sign Panel, Furnish & Install Overhead Mount, 12-20 SF	EA	3														3		3	
715-5-32	Luminaire & Bracket Arm	EA	2														2		2	

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  
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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**

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

**GENERAL NOTES:**

1. NOTIFICATIONS: PRIOR TO THE START OF ANY CONSTRUCTION OF TRAFFIC SIGNALS, STREET LIGHTING, RRFBS, FLASHERS, SCHOOL FLASHERS, AND ITS DEVICES, LEE COUNTY DOT TRAFFIC SHALL BE NOTIFIED VIA EMAIL LCDOTPROJECTS@LEEGOV.COM AT LEAST TEN (10) BUSINESS DAYS PRIOR
2. PRELIMINARY PRODUCT AND EQUIPMENT DATA SUBMITTALS: PRIOR TO INSTALLATION OR WITHIN THIRTY (30) DAYS AFTER THE PRECONSTRUCTION MEETING, WHICHEVER COMES FIRST, SUBMIT TO LEE COUNTY DOT TRAFFIC FOR APPROVAL, A COMPLETED SUBMITTAL PACKAGE THAT INCLUDES THE FOLLOWING. ALL TRAFFIC CONTROL SIGNALS, DEVICES, AND HARDWARE THAT WILL BE USED ON THE PROJECT. SHOP DRAWINGS FOR STRUCTURAL SUPPORT MATERIAL AND OTHER SPECIAL DESIGNS, SUCH AS NON-ELECTRICAL, NON-MECHANICAL, OR OTHER FABRICATED ITEMS WHICH MAY NOT BE SPECIFICALLY DETAILED IN THE PLANS VIA EMAIL LCDOTPROJECTS@LEEGOV.COM
3. QUALIFICATIONS: MINIMUM QUALIFICATIONS FOR PERSONNEL SUPERVISING OR PERFORMING WORK INVOLVING ELECTRICAL OR SOLAR POWER TRAFFIC CONTROL DEVICES, STREET LIGHTING AND RELATED COMPONENTS.
  - A. TRAFFIC SIGNAL CABINET WIRING: WORK MUST BE PERFORMED BY AN EMPLOYEE OF THE CONTRACTOR THAT HOLDS A CURRENT IMSA TRAFFIC SIGNAL FIELD TECHNICIAN LEVEL II CERTIFICATION OR HIGHER; AND MUST BE PRESENT AT THE FINAL INSPECTION OF THE PROJECT.
  - B. TRAFFIC SIGNAL ELECTRICAL SERVICE: WORK MUST BE PERFORMED BY OR IN THE PRESENCE OF AND UNDER THE RESPONSIBLE CHARGE OF AN EMPLOYEE OF THE LICENSED ELECTRICAL CONTRACTOR AND THAT HOLDS A CURRENT IMSA TRAFFIC SIGNAL FIELD TECHNICIAN LEVEL II CERTIFICATION OR HIGHER.
  - C. RRFB, FLASHERS, AND SCHOOL FLASHERS: WORK MUST BE PERFORMED BY AN EMPLOYEE OF THE CONTRACTOR THAT HOLDS A CURRENT IMSA TRAFFIC SIGNAL FIELD TECHNICIAN LEVEL II CERTIFICATION OR HIGHER; AND MUST BE PRESENT AT THE FINAL INSPECTION OF THE PROJECT.
  - D. ITS DEVICES: WORK MUST BE PERFORMED BY AN EMPLOYEE OF THE CONTRACTOR THAT HOLDS A CURRENT IMSA TRAFFIC SIGNAL FIELD TECHNICIAN LEVEL II CERTIFICATION OR HIGHER; AND MUST BE PRESENT AT THE FINAL INSPECTION OF THE PROJECT.
  - E. STREET LIGHTING: WORK MUST BE PERFORMED BY OR IN THE PRESENCE OF AND UNDER THE RESPONSIBLE CHARGE OF AN EMPLOYEE OF THE LICENSED ELECTRICAL CONTRACTOR AND THAT HOLDS A CURRENT IMSA ROADWAY LIGHTING TECHNICIAN LEVEL I CERTIFICATION OR HIGHER.
4. CONTRACTOR TRANSFER OF MAINTENANCE RESPONSIBILITIES:
  - A. FULLY MAINTAIN ALL TRAFFIC CONTROL DEVICES LOCATED WITHIN THE PROJECT LIMITS, INCLUDING ANY INTERCONNECT, PREEMPTION, SYSTEM/ADVANCED LOOPS, AND ITS DEVICES, BEGINNING ON THE DATE OF THE NOTICE TO PROCEED OR THE DATE CONTRACTOR HAS BEGUN ANY WORK ON ANY PORTION OF THE PROJECT, WHICHEVER IS SOONER, THROUGH AND INCLUDING THE DATE OF FINAL ACCEPTANCE BY THE COUNTY SUBJECT TO ANY ADDITIONAL CONTRACTOR WARRANTY AND BURN-IN PERIOD REQUIREMENTS. INVESTIGATE ALL INQUIRIES, COMPLAINTS OR REQUESTS MADE BY THE COUNTY OR THE PUBLIC AND IMMEDIATELY INITIATE ALL REQUIRED REPAIRS.
  - B. NOTIFY LEE COUNTY DOT TRAFFIC OF INTENT TO BEGIN ANY PHYSICAL CONSTRUCTION WORK ON THE PROJECT OR ANY PORTION THEREOF. THIS NOTIFICATION MUST BE A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO ALLOW SUFFICIENT TIME FOR CONTRACTOR TO CONDUCT AN INSPECTION OF THE EXISTING TRAFFIC CONTROL DEVICE INSTALLATION(S). IN THE EVENT ANY DEFICIENCIES ARE NOTED BY CONTRACTOR, AT THE COUNTY'S OPTION, THEY ARE TO BE REPAIRED BY LEE COUNTY DOT TRAFFIC OR DOCUMENTED ON THE "TRANSFER OF MAINTENANCE" FORM. IF WORK IS STARTED PRIOR TO THE INSPECTION, MAINTENANCE OF THE TRAFFIC CONTROL DEVICE(S) WILL IMMEDIATELY BE TRANSFERRED TO CONTRACTOR WITHOUT AN INSPECTION. CONTRACTOR IS THEN RESPONSIBLE FOR REPAIRING OR REPLACING ALL EQUIPMENT NOT OPERATING PROPERLY OR DAMAGED AT NO COST TO THE OWNER OF THE TRAFFIC CONTROL DEVICE.
5. EMERGENCY AND NON-EMERGENCY REPAIRS:
  - A. PROVIDE LEE COUNTY DOT TRAFFIC MINIMUM TWO (2) CONTACT NAMES AND (24-HOUR) TELEPHONE NUMBERS. CONTRACTOR MUST PROVIDE SUFFICIENT QUALIFIED PERSONNEL TO RESPOND TO ALL NOTIFICATIONS OF MALFUNCTIONS ON A ROUND-THE-CLOCK BASIS (24 HOURS A DAY, 7 DAYS A WEEK).
  - B. MAINTAIN AND MAKE AVAILABLE TO LEE COUNTY DOT TRAFFIC A TIME AND DATE LOG OF EACH RESPONSE FROM THE TIME OF THE INITIAL REPORT TO THE TIME OF FINAL PERMANENT REPAIR.
  - C. WHEN A SIGNAL MALFUNCTION OCCURS, CONTRACTOR MUST RESPOND WITHIN TWO (2) HOURS OF NOTIFICATION AND REPAIR THE TRAFFIC SIGNAL SO THAT IT IS OPERATING IN A SAFE MANNER WITHIN FOUR (4) HOURS OF INITIAL NOTIFICATION. CONTRACTOR IS RESPONSIBLE FOR THE PERMANENT REPAIR WITHIN 24 HOURS, AND MUST NOTIFY THE COUNTY IMMEDIATELY UPON COMPLETION OF THE REPAIRS. IF CONTRACTOR FAILS TO RESPOND WITHIN TWO (2) HOURS, THE COUNTY RESERVES THE RIGHT TO EITHER REPAIR THE MALFUNCTION OR EMPLOY ALTERNATE PERSONNEL AND CHARGE ALL COSTS INCURRED BY THE COUNTY TO THE CONTRACTOR.
  - D. AUTHORIZED COUNTY PERSONNEL MAY, AT ANY TIME, ENTER THE CONTROLLER CABINET IN ORDER TO MODIFY TIMING OR RESTORE ANY AND ALL SIGNAL EQUIPMENT TO PROPER OPERATION IF THE MALFUNCTION OR NON-FUNCTION OF SUCH EQUIPMENT POSES A HAZARD OR INCONVENIENCE TO MOTORISTS OR PEDESTRIANS. SUCH AUTHORIZED ENTRY MAY OCCUR AT ANY TIME WITHIN THE PERIOD OF THE CONTRACT, AND SUCH AUTHORIZED ENTRY WILL IN NO WAY RELIEVE THE CONTRACTOR OR MANUFACTURER OF THEIR RESPECTIVE WARRANTIES.

6. EMERGENCY REPAIRS:

- A. DURING THE TRANSFER OF MAINTENANCE PERIOD, THE FOLLOWING WILL BE CONSIDERED AN EMERGENCY UNLESS OTHERWISE IDENTIFIED BY LEE COUNTY DOT TRAFFIC:
  - i. ANY HAZARDOUS CONDITION;
  - ii. ANY MALFUNCTION OF A CONTROLLER AND ITS ACCESSORY EQUIPMENT; OR
  - iii. ANY SITE CONDITION, EQUIPMENT MALFUNCTIONS OR DAMAGE, WHICH IN THE OPINION OF LEE COUNTY DOT TRAFFIC CONSTITUTES A SERIOUS HAZARD OR INCONVENIENCE TO THE PUBLIC.
- B. CONTRACTOR MUST DISPATCH PERSONNEL TO UNDERTAKE EACH SUCH REPAIR NO LATER THAN THIRTY (30) MINUTES AFTER THE COUNTY NOTIFIES CONTRACTOR OF THE EMERGENCY. PERSONNEL RESPONDING MUST ARRIVE WITHIN ONE (1) HOUR AFTER NOTIFICATION AND IMMEDIATELY PROCEED TO MAKE THE SITE SAFE.
7. 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 AS WELL AS FDOT. BEING AN "OUT OF TOWN" CONTRACTOR DOES NOT RELIEVE THIS RESPONSIBILITY.
8. 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 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. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REPAIR COSTS INCURRED, WHETHER REPAIRS ARE MADE BY LEE COUNTY OR A THIRD PARTY.
9. EXISTING EQUIPMENT: EQUIPMENT SHALL BE RETURNED TO LEE COUNTY DOT/TRAFFIC IN GOOD OPERATING CONDITION AND IN THE SAME CONDITION AS ON THE DAY OF THE MAINTENANCE TRANSFER AT 5650 ENTERPRISE PARKWAY, FORT MYERS, FL 33905 AND IN A TIMELY MANNER. TIMELY MANNER FOR EXISTING EQUIPMENT IS DEFINED AS NO LATER THAN 72 HOURS AFTER DISCONNECTION. THE CONTRACTOR SHALL NOTIFY LEE COUNTY OF THE DISCONNECTION 24 HOURS IN ADVANCE TO SCHEDULE THE DELIVERY OF THE EQUIPMENT SO THAT DELIVERY TAKES PLACE DURING A REGULAR BUSINESS DAY AND HOURS. FAILURE TO PERFORM AS OUTLINED IN THIS PARAGRAPH WILL RESULT IN NO INSPECTION AT COMPLETION UNTIL CONTRACTOR IS IN COMPLIANCE WITH THIS REQUIREMENT. LEE COUNTY SIGNALS WILL WITHHOLD PAYMENT REQUESTS UNTIL LEE COUNTY PROPERTY IS DELIVERED TO 5650 ENTERPRISE PARKWAY, FORT MYERS, FL 33905.
10. CABINET/CONTROLLER/VIDEO DETECTION 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, FORT MYERS, FL 33905 BY CONTRACTOR OF SHIPPER. THE CONTRACTOR SHALL SEND A QUALIFIED TECHNICIAN TO THE SIGNAL SHOP TO SETUP THE EQUIPMENT WITH THE AID OF A SENIOR SIGNAL TECHNICIAN, GIVING A MINIMUM OF 48 HOURS' NOTICE. AFTER SETUP, THE 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 SETUP, BURN IN, AND TEST THE EQUIPMENT WITHOUT LEE COUNTY ASSISTANCE, A MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE AT THE CONTRACTOR'S EXPENSE, ON THE DAY OF TURN ON TO ASSIST THE CONTRACTOR AND TO VERIFY PROPER OPERATION.
11. SPECIAL NOTE REGARDING NEW CONTROLLERS: LEE COUNTY SIGNALS 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, 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.

REVISIONS				 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			SHEET NO.  T-4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
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**GENERAL NOTES**

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GENERAL NOTES (CONTD.)

12. 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.
13. TEMPORARY DETECTION AND MAINTENANCE: CONTRACTOR SHALL PROVIDE AND MAINTAIN FULLY ACTUATED VEHICLE DETECTION AT EXISTING, TEMPORARY, AND NEW SIGNALIZED INTERSECTION FOR THE DURATION OF THE ENTIRE PROJECT.

SEVERAL OPTIONS ARE AVAILABLE TO THE CONTRACTOR FOR TEMPORARY VEHICLE DETECTION:

- A. MAINTAIN AND/OR RECUT LOOPS AS NECESSARY.
- B. INSTALL CONTRACTOR OWNED TEMPORARY VIDEO DETECTION.
- C. INSTALL THE PERMANENT CAMERAS THAT MAY BE CALLED OUT ON THE PLANS FOR TEMPORARY USE DURING CONSTRUCTION. THE CONTRACTOR CAN RELOCATE THESE CAMERAS TO THEIR PERMANENT LOCATION AT THE APPROPRIATE TIME. SHOULD THE CONTRACTOR CHOOSE OPTION 3, LEE COUNTY WILL NOT BE RESPONSIBLE FOR ANY DAMAGE TO THE VIDEO CAMERAS DURING THE PROJECT. THE CAMERAS SHALL BE SUBJECT TO FINAL INSPECTION AND SHALL BE IN GOOD WORKING ORDER.

ADDITIONALLY, ALL EXISTING SIGNAL PHASES, ANY PHASES ACTIVE DURING CONSTRUCTION, AND ALL NEW OR MODIFIED PHASES RESULTING FROM NEW CONSTRUCTION SHALL HAVE DETECTION FULLY MAINTAINED AND OPERATIONAL DURING THE DURATION OF THE PROJECT. ONLY DETECTION APPROVED BY LEE COUNTY DOT TRAFFIC AND OPERATES PROPERLY IN THE "PRESENCE" MODE MAY BE USED. MOTION DETECTION SUCH AS MICROWAVE PULSE DETECTION IS PROHIBITED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED, UNLESS SPECIFICALLY CALLED OUT IN THE PLANS FOR ANY OF THE ABOVE OPTIONS. MICROWAVE DETECTION OR PULSE DETECTION SHALL NOT BE USED IN LEE COUNTY FOR PRESENCE DETECTION DUE TO OPERATIONAL PROBLEMS AND FAILURE TO DETECT STOPPED VEHICLES.

14. 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.
15. 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.
16. 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.
17. ALL EQUIPMENT AND WORK TO BE COMPLIANT TO LEE COUNTY DEPARTMENT OF TRANSPORTATION PLAN SPECIFICATIONS FOR TRAFFIC SIGNALS (LATEST EDITION).
18. NEW SIGNALS OR SOP: ALL NEW SIGNALS OR EXISTING SIGNALS WITH A NEW SOP SHALL HAVE VMS BOARDS ON ALL APPROACHES 48 HOURS PRIOR TO PRE FLASH, FULL OPERATION, OR NEW SOP. LEE COUNTY DOT TRAFFIC REPRESENTATIVE SHALL BE PRESENT FOR: FLASH MODE ACTIVATION, FULL OPERATION, OR NEW SOP.
19. PRE FLASH: PRIOR TO ACTIVATING FLASH MODE AT NEW SIGNALS, INSPECTION WILL BE REQUIRED TO ENSURE THE INTERSECTION IS READY TO BE ENERGIZED. ACTIVATION OF FLASH MODE SHALL BE DONE ON MONDAY, TUESDAY, WEDNESDAY, OR THURSDAY BETWEEN THE HOURS OF 9:00 AM - 11:00 AM. PLACE ALL NEW SIGNAL INSTALLATIONS (NO EXISTING SIGNALS) IN FLASH FOR A MINIMUM OF 72 HOURS NOT TO EXCEED 168 HOURS UNLESS EOR OR LEE COUNTY DOT TRAFFIC APPROVES IN WRITING. IF SIGNAL CANNOT GO INTO FULL OPERATION AFTER 168 HOURS THE SIGNAL MUST BE TURNED BACK OFF AND SIGNAL INDICATIONS COVERED.
20. FULL OPERATION: ONCE THE PRE FLASH REQUIREMENT HAS BEEN SATISFIED, THE INTERSECTION CAN BE PLACED INTO FULL OPERATION UNLESS PRIME CONTRACTOR OR LEE COUNTY DOT TRAFFIC STATES OTHERWISE IN WRITING. FULL OPERATION SHALL BE DONE ON TUESDAY, WEDNESDAY, OR THURSDAY BETWEEN THE HOURS OF 9:00 AM - 11:00 AM UNLESS FALLS ON A HOLIDAY OR SPECIAL EVENTS.
21. 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.
22. 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.

23. TRAFFIC SIGNAL & STREET LIGHTING INSPECTIONS:

- A. ALL TRAFFIC SIGNAL & STREET LIGHTING INSPECTIONS MUST BE SCHEDULED VIA EMAIL AT LCDOTPROJECTS@LEEGOV.COM TWO WEEKS IN ADVANCE OF SCHEDULED PRE-FLASH ACTIVATION, FULL OPERATION, SOP CHANGE, FINAL INSPECTION, PUNCH LIST INSPECTIONS.
  - B. THE VENDOR SHALL CONFIGURE ALL VIDEO/RADAR DETECTION BEFORE THE FINAL INSPECTION TAKES PLACE, FAILURE TO DO SO WILL RESULT IN RESCHEDULING OF THE INSPECTION.
  - C. INTERSECTION SHALL BE TO FINAL CONFIGURATION PRIOR TO SCHEDULING FINAL INSPECTION.
  - D. CONTRACTOR IS REQUIRED TO BE PRESENT AND/OR HAVE AN AUTHORIZED REPRESENTATIVE ON ALL FORMAL INSPECTIONS. CONTRACTOR SHALL HAVE ALL 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 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.
24. AS-BUILT DRAWINGS: WHEN CONSTRUCTION IS COMPLETE, AS A CONDITION PRECEDENT TO FINAL ACCEPTANCE, PROVIDE SIGNED AND SEALED AS-BUILT DRAWINGS, EITHER BY A STATE OF FLORIDA LICENSED PROFESSIONAL ENGINEER OR A PROFESSIONAL SURVEYOR AND MAPPER CONTRACTOR SHALL PROVIDE A SET OF "AS-BUILT" PLANS IN ELECTRONIC FORM (PDF) TO: LCDOTPROJECTS@LEEGOV.COM
  25. WARRANTY: CONTRACTOR'S RESPONSIBILITY FOR WARRANTY REPAIRS, WARRANTY REPLACEMENT, TROUBLESHOOTING, OR OTHER COSTS ASSOCIATED WITH REPAIR OR REPLACEMENT OF TRAFFIC CONTROL SIGNALS AND DEVICES WITHIN THE CONTRACT'S PROJECT LIMITS WILL TERMINATE 90 DAYS AFTER FINAL ACCEPTANCE.
  26. DRILL SHAFT: MAST ARM DRILL SHAFT INSPECTIONS ARE REQUIRED BEFORE CONCRETE PLACEMENT. PLEASE REFER TO THE MOST CURRENT FDOT STANDARD SPECIFICATIONS FOR DRILLED SHAFT INSTALLATION, WHICH REQUIRE AN FDOT CERTIFIED DRILLED INSPECTOR TO BE ONSITE DURING THE ENTIRE PROCESS. USE CASING WHEN NECESSARY TO ENSURE SHAFT INTEGRITY. CONCRETE STRAIN POLE EXCAVATIONS WILL ALSO REQUIRE INSPECTION. WHEN USING THE "WETHOLE" METHOD, THE CONCRETE SHALL BE PLACED FROM THE BOTTOM UP, USING EITHER A CONCRETE PUMP OR TREMIE TUBE METHOD OR AS SPECIFIED IN THE PLANS BY THE EOR. NO FREE FALLING CONCRETE SHALL BE ALLOWED. ALL FDOT GUIDELINES FOR CONCRETE QA/QL SHALL BE ADHERED TO. TWENTY-FOUR (24) HOURS' NOTICE IS REQUIRED TO THE INSPECTOR SHOWN IN THE PLAN SET GENERAL NOTES. SHOULD THE INFORMATION BE MISSING, THE CONTRACTOR IS HEREBY DIRECTED TO CALL LEE COUNTY SIGNALS AT 239-533-9500 AND ASK FOR THE SIGNAL INSPECTION DEPARTMENT.

UTILITY/AGENCY OWNERS:

COMPANY	CONTACT	TELEPHONE NUMBERS
LUMEN	LUIS NEGRON	(239) 920-5925
COMCAST	SCOTT LETZELTER	(239) 986-6975
FLORIDA POWER & LIGHT	MICHAEL MARTINEZ	(239) 353-6047
LEE COUNTY SIGNALS	RYAN KIRSCH	(239) 533-9501
LEE COUNTY IRRIGATION	BOB DEBROCK	(239) 357-4591
LEE COUNTY UTILITIES	BRETT ZIMMERMAN	(239) 292-2338
CROWN CASTLE	CHUCK FERGUSON	(570) 872-6637
TECO GAS	GREG THOMPSON	(407) 799-7438

REVISIONS				 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			SHEET NO.  <b>GENERAL NOTES</b>  T-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
					CR 850	LEE	20192030-000	

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

**PAY ITEM FOOTNOTES:**

**PAY ITEM NO. 630-2-11:**

GENERAL SIGNALIZATION AND STREET LIGHTING CONDUIT SHALL BE PVC CONDUIT AND BE SCHEDULE 40 OR SCHEDULE 80 APPROVED FOR ELECTRICAL USE (GRAY). NO THIN WALL CONDUIT IS ALLOWED. TWENTY (20) FOOT LENGTHS ON RUNS OVER TWENTY (20) FOOT SHALL BE USED.

FOC INTERCONNECT CONDUIT SHALL BE, FOUR (4) EACH (1 - GREEN, 1 - BLUE, 1 - ORANGE, 1 - YELLOW) 1-1/4 INCH CONTINUOUS HDPE SDR 13.5. NO OTHER CONDUIT COLORS CAN BE USED UNLESS APPROVED BY LEE COUNTY DOT TRAFFIC IN WRITING. A MINIMUM OF #10 AWG ORANGE CU STRANDED THHN/THWN-2 COPPER WIRE SHALL BE INSTALLED FOR LOCATING PURPOSES IN THE ORANGE CONDUIT. THE LOCATE WIRE SHALL NOT BE SPLICED IN THE CONDUIT. SPLICES OF THE LOCATE WIRE SHALL BE IN PULL BOXES AND SPLICED WITH A SPLIT BOLT AND INSULATED PER NEC. PERFORM CONTINUITY TESTS AND INSULATION RESISTANCE TESTS ON ALL LOCATE WIRES AND PROVIDE LEE COUNTY DOT TRAFFIC WITH ALL TEST RESULTS. REPLACE, OR REPAIR DEFECTIVE LOCATE WIRE AT NO ADDITIONAL COST.

**PAY ITEM NO. 630-2-12:**

DIRECTIONAL BORE CONDUIT FOR GENERAL SIGNALIZATION AND STREET LIGHTING SHALL BE TWO (2) INCH CONTINUOUS HDPE SDR 11 AND SHALL BE GRAY IN COLOR. NO OTHER CONDUIT COLOR CAN BE USED UNLESS APPROVED BY LEE COUNTY DOT TRAFFIC IN WRITING.

FOC INTERCONNECT CONDUIT SHALL BE, FOUR (4) EACH (1 - GREEN, 1 - BLUE, 1 - ORANGE, 1 - YELLOW) 1-1/4 INCH CONTINUOUS HDPE SDR 13.5. NO OTHER CONDUIT COLORS CAN BE USED UNLESS APPROVED BY LEE COUNTY DOT TRAFFIC IN WRITING. A MINIMUM OF #10 AWG ORANGE CU STRANDED THHN/THWN-2 COPPER WIRE SHALL BE INSTALLED FOR LOCATING PURPOSES IN THE ORANGE CONDUIT. THE LOCATE WIRE SHALL NOT BE SPLICED IN THE CONDUIT. SPLICES OF THE LOCATE WIRE SHALL BE IN PULL BOXES AND SPLICED WITH A SPLIT BOLT AND INSULATED PER NEC. PERFORM CONTINUITY TESTS AND INSULATION RESISTANCE TESTS ON ALL LOCATE WIRES AND PROVIDE LEE COUNTY DOT TRAFFIC WITH ALL TEST RESULTS. REPLACE, OR REPAIR DEFECTIVE LOCATE WIRE AT NO ADDITIONAL COST.

**PAY ITEM NO. 632-7-1:**

ON MAST ARM, ALL THREE (3) AND/OR FOUR (4) SECTION HEADS SHALL HAVE A MINIMUM SEVEN (7) CONDUCTOR SIGNAL CABLE INSTALLED CONTINUOUS FROM THE MAST ARM HAND HOLE COMPARTMENT TO SIGNAL HEAD TERMINATION BLOCK. ALL FIVE (5) SECTION HEADS SHALL HAVE A MINIMUM NINE (9) CONDUCTOR SIGNAL CABLE INSTALLED CONTINUOUS FROM THE MAST ARM HAND HOLE COMPARTMENT TO SIGNAL HEAD TERMINATION BLOCK. EACH SIGNAL PHASE SHALL HAVE ITS OWN NEUTRAL. EACH ONE-WAY MAST ARM (NEAR SIDE OR FAR SIDE) SHALL HAVE A MINIMUM NINETEEN (19) CONDUCTOR SIGNAL CABLE INSTALLED CONTINUOUS FROM CONTROLLER CABINET TO MAST ARM HAND HOLE COMPARTMENT FOR VEHICULAR SIGNAL INDICATIONS. EACH TWO-WAY MAST ARM (NEAR SIDE OR FAR SIDE) SHALL HAVE A MINIMUM OF TWO (2) - NINETEEN (19) CONDUCTOR SIGNAL CABLE INSTALLED CONTINUOUS FROM CONTROLLER CABINET TO MAST ARM HAND HOLE COMPARTMENT FOR VEHICULAR SIGNAL INDICATIONS. SIGNAL CABLE SHALL BE #14 AWG STRANDED COPPER AND MEET IMSA 19-1 SPECIFICATIONS. ALL SIGNAL CABLE SHALL HAVE A MINIMUM OF THREE (3) FEET OF SLACK AT THE MAST ARM HAND HOLE COMPARTMENT. COLOR CODE CAN BE OBTAINED FROM LEE COUNTY DOT TRAFFIC.

**PAY ITEM NO. 633-3-17:**

FOC PATCH PANELS TO FOC MANAGED SWITCH, CONNECTORS SHALL BE LC/SC.

**PAY ITEM NO. 635-2-11A & 635-2-13:**

PULL BOXES SHALL BE POLYMER CONCRETE CONSTRUCTION (QUAZITE), HAVE ANSI TIER RATING OF T22 AND DESIGN LOAD RATING OF 22,500 LBS., NO EXCEPTIONS WILL BE PERMITTED. MINIMUM PULL BOX SIZE SHALL BE AS FOLLOWS:

- i. TRAFFIC SIGNAL AND STREET LIGHTING 17" X 30" X 12" - (PG1730BA12)
- ii. FIBER OPTIC CABLE MID RUNS 24" X 36" X 24" - (PG2436BA24)
- iii. FIBER OPTIC CABLE SPLICE VAULT - 30" X 60" X 36" - (PG3060BA36)

PULL BOX COVERS SHALL BE POLYMER CONCRETE CONSTRUCTION (QUAZITE), HAVE ANSI TIER RATING OF T22 AND DESIGN LOAD RATING OF 22,500 LBS., AND MARKED APPROPRIATELY, "TRAFFIC SIGNAL" OR "STREET LIGHTING", NO EXCEPTIONS WILL BE PERMITTED.

- i. 17" X 30" COVER - "TRAFFIC SIGNAL" - (PG1730HH0046), "STREET LIGHTING" - (PG1730HH0041)
- ii. 24" X 36" COVER - "TRAFFIC SIGNAL" - (PG2436HH0046)
- iii. 30" X 60" COVER 2 PIECE - "TRAFFIC SIGNAL" - (PG3060HH0046)

ALL PULL BOXES SHALL HAVE A MINIMUM OF SIX (6) INCHES BETWEEN OTHER PULL BOXES. ALL PULL BOXES SHALL HAVE A CONCRETE APRON; THE APRON SHALL BE MINIMUM 1-FOOT WIDE X 6 INCHES DEEP. APRON SHALL BE LEVEL TO EXISTING GRADE AND HAVE A FINISHED EDGE AND SURFACE. PULL BOXES SHALL NOT BE INCORPORATED INTO THE CABINET WORK PAD. ALL CONDUITS EXCEPT FOC CONDUIT SHALL BE PLUMBED, CENTERED AND NO LOWER/HIGHER THAN MIDPOINT IN THE PULL BOX.

**PAY ITEM NO. 639-1-122, 639-2-1, 639-3-11:**

WHEN ELECTRIC SERVICE FEED IS ON CABINET CORNER AND WITHIN ONE HUNDRED FIFTY (150) FEET OF THE

**TRAFFIC SIGNAL CABINET. THE ELECTRICAL SERVICE ASSEMBLY SHALL INCLUDE THE FOLLOWING:**

- i. TRAFFIC SIGNAL ELECTRIC SERVICE SHALL BE MOUNTED ON EIGHT (8) INCH X EIGHT (8) INCH X TWELVE (12) FOOT CONCRETE SERVICE POLE WITHIN THIRTY (30) FEET OF TRAFFIC SIGNAL CABINET.
- ii. TRAFFIC SIGNAL ELECTRICAL SERVICE SHALL BE METERED. METER SOCKET SHALL BE MILBANK 200 AMP LEVER BYPASS NEMA 3R ENCLOSURE RATED FOR OUTDOOR USE (MILBANK UAP9551-X-QG-HSP).
- iii. MAIN LUG LOAD CENTER SHALL BE SQUARE D QO 100 AMP 6 SPACE/12 CIRCUIT RATED FOR OUTDOOR USE (SQUARE D QO612L100RB).
- iv. SURGE PROTECTION DEVICE (SPD) SHALL BE AN ASCO MODEL 420 (420120SP05NWSJ10).

**WHEN SIGNALIZATION PLANS CALL FOR INTERSECTION LIGHTING THE FOLLOWING SHALL BE INCLUDED:**

- i. NEMA 3R 18 X 15 X 8 CARBON STEEL GALVANIZED ENCLOSURE (HUBBELL-WIEGMANN RSC181508G) SHALL BE MOUNTED ON THE TRAFFIC SIGNAL ELECTRIC SERVICE POLE.
- ii. LIGHTING CONTACTOR SHALL BE A 30 AMP 2 POLE 120 VAC COIL (SQUARE D 8903SMOIV02) AND MOUNTED INSIDE THE ABOVE REFERENCED ENCLOSURE.
- iii. PHOTO CONTROL SHALL BE A 1/2" STEM DIECAST ZINC, 120 - 277 VAC, 2000W TUGSTEN, 1800VA BALLAST (TORK 2129A) AND MOUNTED ON THE MAIN LUG LOAD CENTER.

**ALL CIRCUIT BREAKERS SHALL BE SQUARE D QO AND SPACES SHALL BE ASSIGNED AS FOLLOWS:**

- i. SPACE 2 SHALL BE A SINGLE POLE 30 AMP FOR TRAFFIC SIGNAL CABINET
- ii. SPACE 3-4 SHALL BE A DOUBLE POLE 20 AMP FOR SPD
- iii. SPACE 5-6 SHALL BE A DOUBLE POLE 30 AMP FOR INTERSECTION LIGHTING
- iv. SPACE 7 SHALL BE RESERVED FOR FUTURE USE

#6 AWG (THHN/THWN-2) WIRE SHALL BE USED FROM THE METER SOCKET TO THE POINT OF SERVICE.  
#10 AWG (THHN/THWN-2) WIRE SHALL BE USED FROM MAIN DISCONNECT TO TRAFFIC SIGNAL CABINET.

WHEN ELECTRIC SERVICE FEED IS NOT ON CABINET CORNER OR GREATER THAN ONE HUNDRED FIFTY (150) FEET FROM THE TRAFFIC SIGNAL CABINET. THE ELECTRICAL SERVICE ASSEMBLY SHALL INCLUDE THE FOLLOWING:

**MAIN TRAFFIC SIGNAL ELECTRIC SERVICE METER AND DISCONNECT:**

- i. MAIN TRAFFIC SIGNAL ELECTRIC SERVICE METER AND DISCONNECT SHALL BE MOUNTED ON EIGHT (8) INCH X EIGHT (8) INCH X TWELVE (12) FOOT CONCRETE SERVICE POLE NEAR POINT OF SERVICE.
- ii. TRAFFIC SIGNAL ELECTRICAL SERVICE SHALL BE METERED. METER SOCKET SHALL BE MILBANK 200 AMP LEVER BYPASS NEMA 3R ENCLOSURE RATED FOR OUTDOOR USE (MILBANK UAP9551-X-QG-HSP).
- iii. MAIN LUG LOAD CENTER SHALL BE SQUARE D QO 100 AMP 6 SPACE/12 CIRCUIT RATED FOR OUTDOOR USE (SQUARE D QO612L100RB).
- iv. SURGE PROTECTION DEVICE (SPD) SHALL BE AN ASCO MODEL 420 (420120SP05NWSJ10).

**ALL CIRCUIT BREAKERS SHALL BE SQUARE D QO AND SPACES SHALL BE ASSIGNED AS FOLLOWS:**

- i. SPACE 2-3 SHALL BE A SINGLE POLE 100 AMP FOR TRAFFIC SIGNAL CABINET
- ii. SPACE 4-5 SHALL BE A DOUBLE POLE 20 AMP FOR SPD
- iii. SPACE 5-7 SHALL BE RESERVED FOR FUTURE USE

**SECONDARY DISCONNECT FOR TRAFFIC SIGNAL ELECTRIC SERVICE:**

- i. SECONDARY DISCONNECT FOR TRAFFIC SIGNAL ELECTRIC SERVICE SHALL BE MOUNTED ON EIGHT (8) INCH X EIGHT (8) INCH X TWELVE (12) FOOT CONCRETE SERVICE POLE NEAR TRAFFIC SIGNAL CABINET.
- ii. MAIN LUG LOAD CENTER SHALL BE SQUARE D QO 100 AMP 6 SPACE/12 CIRCUIT RATED FOR OUTDOOR USE (SQUARE D QO612L100RB).
- iii. SURGE PROTECTION DEVICE (SPD) SHALL BE AN ASCO MODEL 420 (420120SP05NWSJ10).

**WHEN SIGNALIZATION PLANS CALL FOR INTERSECTION LIGHTING THE FOLLOWING SHALL BE INCLUDED:**

- i. NEMA 3R 18 X 15 X 8 CARBON STEEL GALVANIZED ENCLOSURE (HUBBELL-WIEGMANN RSC181508G) SHALL BE MOUNTED ON THE TRAFFIC SIGNAL ELECTRIC SERVICE POLE.
- ii. LIGHTING CONTACTOR SHALL BE A 30 AMP 2 POLE 120 VAC COIL (SQUARE D 8903SMOIV02) AND MOUNTED INSIDE THE ABOVE REFERENCED ENCLOSURE.
- iii. PHOTO CONTROL SHALL BE A 1/2" STEM DIECAST ZINC, 120 - 277 VAC, 2000W TUGSTEN, 1800VA BALLAST (TORK 2129A) AND MOUNTED ON THE MAIN LUG LOAD CENTER.

**ALL CIRCUIT BREAKERS SHALL BE SQUARE D QO AND SPACES SHALL BE ASSIGNED AS FOLLOWS:**

- i. SPACE 2 SHALL BE A SINGLE POLE 30 AMP FOR TRAFFIC SIGNAL CABINET
- ii. SPACE 3-4 SHALL BE A DOUBLE POLE 20 AMP FOR SPD
- iii. SPACE 5-6 SHALL BE A DOUBLE POLE 30 AMP FOR INTERSECTION LIGHTING
- iv. SPACE 7 SHALL BE RESERVED FOR FUTURE USE

#2 AWG (THHN/THWN-2) WIRE SHALL BE USED FROM THE METER SOCKET TO THE POINT OF SERVICE.  
#2 AWG (THHN/THWN-2) WIRE SHALL BE USED FROM THE MAIN DISCONNECT TO THE SECONDARY DISCONNECT.  
#10 AWG (THHN/THWN-2) WIRE SHALL BE USED FROM SECONDARY DISCONNECT TO TRAFFIC SIGNAL CABINET.

REVISIONS				 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			SHEET NO.  T-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
					CR 850	LEE	20192030-000	

**PAY ITEM NOTES**

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PAY ITEM FOOTNOTES (CONTD.):

PAY ITEM NO. 646-1-11:

FOR PEDESTRIAN SIGNAL PRE-CAST OR CAST-IN-PLACE BASE, REFER TO FDOT INDEX 653-001, THE BASE SHALL BE MINIMUM 2 FEET DIAMETER X 3 FEET LENGTH, AND INCLUDE ANCHOR BOLT CAGE (PELCO - AP-1095-GLV). PEDESTAL BASE SHALL HAVE TWO (2) EACH TWO (2) INCH PVC CONDUITS AND ONE (1) EACH 3/4 INCH PVC CONDUITS. USE

PELCO SQUARE BREAKAWAY BASE FOR PEDESTRIAN POLES WITH ALUMINUM DOOR AND GROUND LUG (SP-1116-FL-AD-GL-PNC) OR APPROVED EQUIVALENT BY LEE COUNTY DOT TRAFFIC IN WRITING. ALL PEDESTAL MOUNTED PEDESTRIAN SIGNAL ASSEMBLIES SHALL HAVE A POLE & BASE COLLAR ASSEMBLY (PB-5325-PNC) INSTALLED. USE PELCO PEDESTAL SPUN ALUMINUM FOUR (4) INCH POLE (PB-5102-X-PNC) X=LENGTH OR APPROVED EQUIVALENT BY LEE COUNTY DOT TRAFFIC IN WRITING.

PAY ITEM NO. 649-21-3 & 649-21-9:

DRILLED SHAFT FOUNDATIONS FOR MAST ARMS SHALL BE INSTALLED AS PER PROPOSED PLAN ELEVATION AND SHALL NOT BE INSTALLED IN DRAINAGE SLOPES, SWALES, OR WHERE SHEET WATER CAN INTRUDE THE ANCHOR BOLTS.

ALL MAST ARM FOUNDATIONS SHALL HAVE MINIMUM - FIVE (5) EACH TWO (2) INCH CONDUIT AND ONE (1) EACH (3/4) INCH CONDUIT. CONDUIT STUB OUT LOCATION TO BE DETERMINED BY LEE COUNTY DOT TRAFFIC IN FIELD. STUB OUTS SHALL BE A MINIMUM OF THIRTY (30) INCHES DEEP. (INTERSECTION LIGHTING SHALL BE SEPARATE FROM STANDARD STREET LIGHTING CIRCUIT, HAVING 480 VAC POWER IN A SIGNAL UPRIGHT IS STRICTLY PROHIBITED)

- i. TWO - 2" CONDUIT FOR SIGNAL HIGH VOLTAGE
- ii. ONE - 2" CONDUIT FOR PED HIGH VOLTAGE
- iii. ONE - 2" CONDUIT FOR POWER (240 VAC MAXIMUM) - INTERSECTION LIGHTING
- iv. ONE - 2" CONDUIT FOR DETECTION
- v. ONE - 3/4" CONDUIT FOR #6 AWG GREEN GROUND WIRE

CONDUITS SHALL BE PLUMBED AND CENTERED IN FOUNDATION AND SHALL BE SIX (6) INCHES - TEN (10) INCHES ABOVE THE FOUNDATION. TOP OF THE CONDUITS SHALL BE CUT FLAT, NOT ANGLED.

PAY ITEM NO. 650-1-14 & 650-1-16:

ALL TRAFFIC SIGNAL HEADS SHALL BE BLACK TWELVE (12) INCH DIAMETER ALUMINUM HOUSING; POLYCARBONATE HOUSING HEADS ARE PROHIBITED. MCCAIN TRAFFIC SIGNAL HEADS IS LEE COUNTY DOT TRAFFIC PREFERENCE. ALL TRAFFIC SIGNAL HEADS SHALL HAVE ONE-PIECE BLACK LOUVERED ALUMINUM RETROREFLECTIVE BORDERED BACKPLATES INSTALLED. ALL TRAFFIC SIGNAL LED MODULES SHALL BE TWELVE (12) INCH DIALIGHT LONG LIFE 15 YEAR FULL PERFORMANCE WARRANTY OR APPROVED EQUIVALENT BY LEE COUNTY DOT TRAFFIC WRITING. TWO (2) EACH 1/4 INCH DRAIN HOLE SHALL BE PLACED IN BOTTOM OF EACH SIGNAL HEAD.

PAY ITEM NO. 653-1-11:

ALL PEDESTRIAN SIGNAL HEADS SHALL BE BLACK SIXTEEN (16) INCH ALUMINUM HOUSING WITH EGG CRATE VISOR; POLYCARBONATE HOUSING HEADS ARE PROHIBITED. MOBOTREX PEDESTRIAN SIGNAL HEADS IS LEE COUNTY DOT TRAFFIC PREFERENCE. ALL PEDESTRIAN LED SIGNAL MODULES SHALL BE INTERNATIONAL SYMBOL AND COUNTDOWN; USE OF WORDS IN PLACE OF SYMBOLS ARE PROHIBITED. DIALIGHT LED MODULES IS LEE COUNTY DOT TRAFFIC PREFERENCE. MOUNTING HEIGHT OF PEDESTRIAN SIGNAL HEAD SHALL BE NINE (9) FEET SIX (6) INCHES ABOVE GRADE TO BOTTOM OF HEAD. TWO (2) EACH 1/4 INCH DRAIN HOLE SHALL BE PLACED IN BOTTOM OF EACH PEDESTRIAN SIGNAL HEAD. PEDESTRIAN CROSSING INFORMATION SIGN SHALL BE STANDARD NINE (9) INCH X EIGHTEEN (18) INCH AND INSTALLED ABOVE THE BUTTON. EACH SIGN SHALL IDENTIFY THE CROSSWALK TO WHICH EACH BUTTON APPLIES. THE COMPLETE STREET NAMES (TO INCLUDE ST., RD., DR., ETC.) SHALL BE PERMANENTLY PRINTED ONTO THE SIGN FACE.

PAY ITEM NO. 660-4-11 & 660-4-12:

VIDEO DETECTION SYSTEM SHALL BE ITERIS VANTAGE NEXT SYSTEM, SIDE STREETS WILL BE THE VANTAGE NEXT (CAMERA ONLY), MAIN STREET WILL BE VANTAGE VECTOR NEXT (CAMERA/RADAR). VIDEO DETECTION SYSTEM SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS, PROGRAMMING SHALL BE PROVIDED BY VENDOR/MANUFACTURER AND LEE COUNTY DOT-TRAFFIC MUST BE NOTIFIED PRIOR SO SENIOR TECH CAN BE ON-SITE. SEE PLAN SHEETS FOR THE NUMBER OF VIDEO CAMERAS INCLUDED IN VIDEO DETECTION ASSEMBLY. USE A 74" LONG GUSSET TUBE FOR VIDEO DETECTION CAMERA ATTACHMENT BRACKET. PELCO CAMERA KIT: (SP-1106-FL-IPC-74-120-PNC)

PAY ITEM NO. 660-6-121 & 620-6-122:

BLUETOOTH TRAVEL TIME DEVICE SHALL BE TRAFFICCAST BLUETOOTH SPECTRA ETHERNET. ALL INSTALLATIONS SHALL BE DONE IN A WORKMANSHIP LIKE MANNER AND PERFORMED BY A QUALIFIED PERSONNEL. BLUETOOTH SPECTRA SHALL BE MOUNTED AT FOURTEEN (14) FEET FROM FINAL ELEVATION. BLUETOOTH SHALL MOUNTED USING STAINLESS-STEEL BANDING. BLUETOOTH WIRING SHALL BE CAT 6E SHIELDED OUTDOOR/UNDERGROUND RATED FOR DISTANCE NO LONGER THAN MANUFACTURE'S RECOMMENDATION OF 350 CABLE FEET. ALL CAT6 RJ45 CONNECTORS SHALL BE SHIELDED, CRIMP ON, AND NON PASS-THROUGH. POE INJECTOR SHALL BE RIGID MOUNT ON LEFT SIDE OF CABINET SHELF.

PAY ITEM NO. 665-1-12:

THE CONTROL FACE AND VIBROTACTILE ARROW OF APS AND TACTILE ARROW OF STANDARD PEDESTRIAN PUSH BUTTON SHALL BE CAREFULLY ALIGNED WITH THE DIRECTION OF TRAVEL TO THE DESIGNATED PEDESTRIAN RAMP AND CROSSWALK WHILE ENSURING A REACH DISTANCE NOT TO EXCEED 10" FOR WHEELCHAIR USERS.

INCORPORATING THE BASE INTO THE CURB OR SIDEWALK IS AN OPTION BUT WOULD REQUIRE A NON-CHAUFFEURED EDGE BASE TO BE USED.

FOR ACCESSIBLE PEDESTRIAN DETECTION SYSTEM, POLARA INS 2-WIRE SYSTEM SHALL BE USED:

- i. POLARA INS2 INAVIGATOR PEDESTRIAN STATION
- ii. POLARA ICCU-S2 (TS2 CONFIGURATION)
- iii. THE INS2 PEDESTRIAN STATION SHALL HAVE THE COMPLETE STREET NAMES (TO INCLUDE STREET, ROAD, DRIVE, ETC.) PROGRAMMED BY POLARA, AND LEE COUNTY SHALL RECEIVE THE VOICE FILES DIGITALLY.
- iv. LEE COUNTY DOT TRAFFIC SHALL RECEIVE THE VOICE FILES DIGITALLY. SEND TO THE FOLLOWING EMAIL: LCDOTPROJECTS@LEEGOV.COM
- v. CONTRACTOR SHALL BRING ICCU-S2 AND ALL INS2'S TO LEE COUNTY FOR PROGRAMMING AND SOFTWARE UPGRADE IF NEEDED AND PROGRAM IP ADDRESS. LEE COUNTY WILL LABEL WHERE EACH INS2 GOES AFTER BEING PROGRAMMED.
- vi. FOR ANY FURTHER QUESTIONS PLEASE CALL LEE COUNTY DOT TRAFFIC AT (239) 533-9500.

PAY ITEM NO. 670-5-110:

CONTROLLER BASE SHALL BE POLYMER CONCRETE CONSTRUCTION (QUAZITE) P/N: PB40581224B24. CABINET BASE SHALL BE BURIED TO MANUFACTURER'S RECOMMENDED DEPTH, ELEVATION OF CABINET BASE SHALL BE AT THE SAME ELEVATION AS THE CENTER OF ROADWAY, BUT NO HIGHER THAN TWELVE (12) INCHES ABOVE THE CENTER OF ROADWAY. STUB UP CONDUITS SHALL BE NO LOWER THAN TWELVE (12) INCHES AND NO HIGHER THAN SIX (6) INCHES BELOW THE ACCESS OPENING IN CABINET PAD, AND SHALL BE CENTERED WITHIN THE ACCESS OPENING. INSTALL TWELVE (12) INCH MINIMUM BED OF ROCK UNDER CABINET BASE. GRAVEL SHALL BE 57 STONE (3/4" CLEAR) OR EQUIVALENT. TRAFFIC CABINET SHALL NOT BE PLACED IN DRAINAGE SLOPES, SWALES, OR WHERE SHEET WATER CAN INTRUDE. THERE SHALL BE A SIX (6) FOOT LEVEL CLEAR ZONE SURROUNDING THE CABINET BASE. CABINET WORK PAD SHALL BE POURED IN PLACE ON SIGNAL CABINET ACCESS SIDE OF BASE. IT SHALL BE THE LENGTH OF THE BASE AND A MINIMUM THIRTY-SIX (36) INCHES WIDE AND 4" THICK WITH A FINISHED EDGE AND SURFACE. A COMPOSITE OR PRECAST PAD IS NOT ACCEPTABLE. TRAFFIC CONTROLLER CABINET SHALL BE A ECONOLITE TS-2 TYPE 1, CABINET SIZE TYPE VII (77"), SHALL INCLUDE ECONOLITE/SAFETRAN COBALT RACKMOUNT CONTROLLER SETUP FOR TS-2 CONFIGURATION, ECONOLITE MMU2-16LE(IP), 1 DETECTOR RACK.

PAY ITEM NO. 682-1-133:

PTZ CAMERA SHALL BE AN AXIS Q6075-E AND SHALL INCLUDE THE FOLLOWING COMPONENTS:

- i. AXIS PENDANT KIT (T94A01D)
- ii. AXIS T8144 60W POE INJECTOR (01154-001) (DIN RAIL MOUNTED)
- iii. MEAN WELL POWER SUPPLY NDR-120-24 (DIN RAIL MOUNTED)

ALL INSTALLATIONS SHALL BE DONE IN A WORKMANSHIP LIKE MANNER AND PERFORMED BY A QUALIFIED PERSONNEL. PTZ WIRING SHALL BE CAT 6E SHIELDED OUTDOOR/UNDERGROUND RATED FOR DISTANCE NO LONGER THAN MANUFACTURE'S RECOMMENDATION OF 350 CABLE FEET. ALL CAT6 RJ45 CONNECTORS SHALL BE SHIELDED, CRIMP ON, AND NON PASS-THROUGH. ALL THREADS SHALL HAVE PTFE THREAD SEALANT TAPE INSTALLED PROPER DIRECTION. ALL MECHANICAL THREADS AND HARDWARE SHALL BE TIGHTENED TO THE MANUFACTURES SPECIFICATIONS.

PAY ITEM NO. 684-1-1:

MANAGED FIBER SWITCH SHALL BE A CISCO IE2000 (IE-2000-8TC-G-B) AND SHALL INCLUDE POWER SUPPLY (PWR-IE50W-AC) AND TWO (2) SFP OPTICAL MODULES (GLC-LH-SMD-PRO)

PAY ITEM NO. 685-1-13:

UPS SHALL BE A TCS MYERS POWERBACK MP2000-ITS/PIGGYBACK SERIES WITH SERIAL OVER ETHERNET CARD (TCS# ZLEE)

PAY ITEM NO. 700-3-201 AND 700-3-202:

ALL STATIC SIGNS SHALL HAVE DIAMOND GRADE TYPE XI SHEETING. ALL OVERHEAD STREET NAME SIGNS SHALL HAVE ALUMINUM Z BAR MOUNTED HORIZONTAL TO/FROM EDGE OF SIGN ON TOP AND BOTTOM UTILIZING 3/8" STAINLESS STEEL HARDWARE. ALL OVERHEAD STREET NAME SIGNS SHALL MOUNTED UTILIZING ONE OF THE FOLLOWING BRACKETS: PELCO FORMED TUBE, PELCO ASTRO SIGN-BRAC, STELLAR CABLE MOUNT FOR OVERHEAD STREET NAME SIGNS, AND PELCO ASTRO SIGN-BRAC, STELLAR TENON MOUNT FOR OVERHEAD STREET NAME SIGNS.

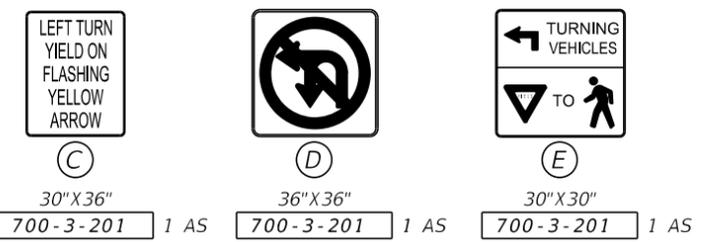
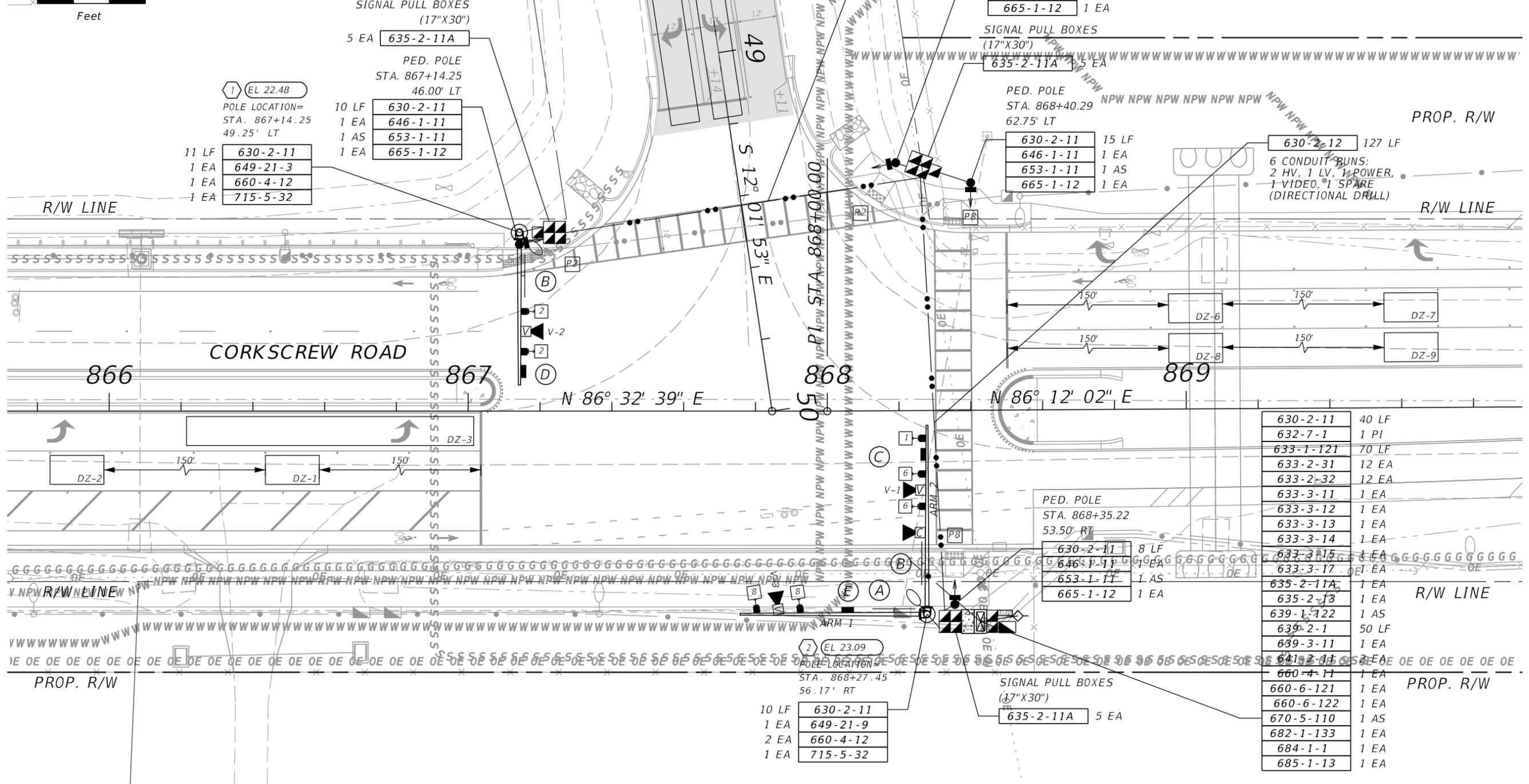
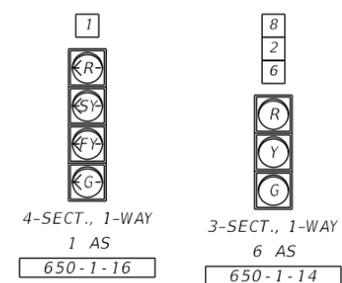
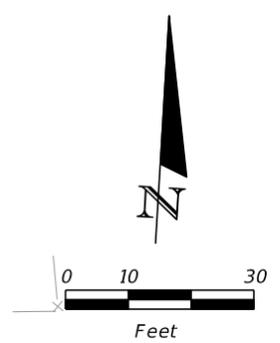
PAY ITEM NO. 715-5-32:

LUMINAIRE SHALL BE HOLOPHANE MONGOOSE LED MEDIUM P7, 3000K CCT, FORWARD THROW, WITH FIELD ADJUSTABLE OUTPUT (MGLEDM-P7-30K-MVOLT-FT-VH-GRSD-AO-NL)

REVISIONS				 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			SHEET NO.  T-7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID	
					CR 850	LEE	20192030-000	

PAY ITEM NOTES

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



- SIGNAL PULL BOXES (17\"/>
  - 5 EA 635-2-11A

PED. POLE  
 STA. 867+14.25  
 46.00' LT

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

POLE LOCATION =  
 STA. 867+14.25  
 49.25' LT

  - 11 LF 630-2-11
  - 1 EA 649-21-3
  - 1 EA 660-4-12
  - 1 EA 715-5-32

- 630-2-12 106 LF
- 6 CONDUIT RUNS:  
 2 HV, 1 LV, 1 POWER,  
 1 VIDEO, 1 SPARE  
 (DIRECTIONAL DRILL)
- PED. POLE  
 STA. 868+19.47  
 68.39' LT
- 630-2-11 10 LF
  - 646-1-11 1 EA
  - 653-1-11 1 AS
  - 665-1-12 1 EA

- SIGNAL PULL BOXES (17\"/>
  - 635-2-11A 5 EA

PED. POLE  
 STA. 868+40.29  
 62.75' LT

  - 630-2-11 15 LF
  - 646-1-11 1 EA
  - 653-1-11 1 AS
  - 665-1-12 1 EA

- 630-2-12 127 LF
- 6 CONDUIT RUNS:  
 2 HV, 1 LV, 1 POWER,  
 1 VIDEO, 1 SPARE  
 (DIRECTIONAL DRILL)

- PED. POLE  
 STA. 868+35.22  
 53.50' RT
- 630-2-11 8 LF
  - 646-1-11 1 EA
  - 653-1-11 1 AS
  - 665-1-12 1 EA

- 630-2-11 40 LF
- 632-7-1 1 PI
- 633-1-121 70 LF
- 633-2-31 12 EA
- 633-2-32 12 EA
- 633-3-11 1 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
- 635-2-11A 1 EA
- 635-2-13 1 EA
- 639-1-122 1 AS
- 639-2-1 50 LF
- 639-3-11 1 EA
- 660-4-11 1 EA
- 660-6-121 1 EA
- 660-6-122 1 EA
- 670-5-110 1 AS
- 682-1-133 1 EA
- 684-1-1 1 EA
- 685-1-13 1 EA

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

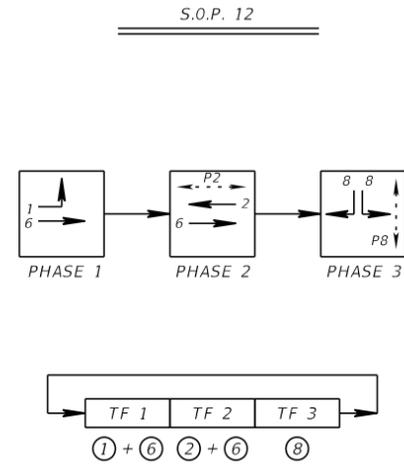
**CORKSCREW ROAD AT  
ALICO ROAD  
SIGNALIZATION PLAN**

SHEET NO.	T-8
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VIDEO DETECTION			
CAMERA DETECTOR	DETECTION ZONE	TIMING FUNCTION CONNECTION	DELAY TIME (SEC)
V-1	DZ-1	TF-1	
	DZ-2	TF-2	
	DZ-3	TF-1	
V-2	DZ-6	TF-2	
	DZ-7	TF-2	
	DZ-8	TF-2	
V-3	DZ-4	TF-3	
	DZ-5	TF-3	



**CONTROLLER OPERATION**

MAJOR STREET IS CORKSCREW ROAD  
MINOR STREET IS ALICO ROAD

CONTROLLER TO OPERATE AS INDICATED IN THE FLASH MODE:  
CORKSCREW ROAD (2 & 6) SHALL FLASH YELLOW  
ALICO ROAD (8) SHALL FLASH RED  
CORKSCREW ROAD POSTED SPEED = 45 MPH  
ALICO ROAD SPEED = 55 MPH

CONTROLLER TIMINGS (SECONDS)								
MOVEMENT #	1	2	3	4	5	6	7	8
DIRECTION	EBL	WB				EB		SB
TURN TYPE	PROT/PERM	-				-		-
MIN GREEN	20	30				20		19
EXT	3.0	3.0				3.0		3.0
YELLOW	4.8	4.8				4.8		5.5
ALL RED	3.0	3.0				3.0		3.7
MAX I	27.8	42.0				69.8		40.2
MAX II								
WALK		7						7
FLASHING DON'T WALK		27						24
DETECTOR MEMORY								
DET. CROSS SWITCH								
DUAL ENTRY								
VEHICLE RECALL		MAX				MAX		

REVISIONS				 <small>LEAH M. HOLMES • P.E. LICENSE NO. 85359 JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET • FORT MYERS, FL 33901 CERTIFICATE OF AUTHORIZATION NO. 642</small>	LEE COUNTY PUBLIC WORKS DEPARTMENT OF TRANSPORTATION			<b>CORKSCREW ROAD AT ALICO ROAD SIGNAL OPERATIONS</b>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	JEI PROJECT ID		

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



STANDARD MAST ARM ASSEMBLIES DATA TABLE										Table Date 04-22-21	
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.)	
SHEET T-8 POLE 1	A40/S - P2/S/L	A40/S					45	P2/S/L		20.2	DS/14/4.5

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.

REVISIONS						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 04/21 CHECKED BY: CLH 04/21 DESIGNED BY: RMW 04/21 CHECKED BY: TMW 04/21	LEE COUNTY DEPARTMENT OF TRANSPORTATION			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	PROJECT ID	STANDARD MAST ARM ASSEMBLIES DATA TABLES		
								CR 850	LEE		CORKSCREW ROAD WIDENING - PHASE II		
											SHEET NO.		
											T - 12		

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

SPECIAL MAST ARM ASSEMBLIES DATA TABLE																							Table Date 04-22-21		
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 2	32	7.52	12	0.25	21.5	11	14	0.313	32	8.52	13	0.25	21.5	12	15	0.313	39	19.8	14.6	20	0.375	270	37.5	

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)																							Table Date 04-22-21	
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 2	6	30	36	3	0.75	0.25	23.2	1.25	2	12.5	0.313	6	30	36	3	0.75	0.313	23.2	1.25	2	12.5	0.313		

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)																							Table Date 04-22-21		
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 2	6	36	2.5	2	40	17	4.5	11	15	6	8	0	0	40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.25	315	

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

FOUNDATION NOTES:  
1. Design based on Borings taken and sealed by:  
Thomas E. Musgrave, Jr., P.E.  
P.E. License Number 81669  
Tierra, Inc.  
Dated 2-1-2021

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 2 ft. below surface

<b>REVISIONS</b> 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 04/21 CHECKED BY: CLH 04/21 DESIGNED BY: RMW 04/21 CHECKED BY: TMW 04/21	<b>LEE COUNTY</b> DEPARTMENT OF TRANSPORTATION			SHEET TITLE: <b>SPECIAL MAST ARM ASSEMBLIES DATA TABLES</b>		REF. DWG. NO.
								ROAD NO. COUNTY PROJECT ID			PROJECT NAME: <b>CORKSCREW ROAD WIDENING - PHASE II</b>		SHEET NO.
								CR 850 LEE					T-13

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