

ADDENDUM #6

North Hancock Road Extension Phase IIIA and IIIB
FPN No. 435515-1-58-01; Project No. 2014-11
Bid No. 14-0030

This addendum is being issued to make the following changes, corrections, clarifications and additions to the bidding document. The information in this addendum modifies and changes the original bidding documents and takes precedence over the original documents. **Receipt of this addendum shall be acknowledged by the bidder by signing and dating the appropriate line on page W-11 of the bid proposal.** Failure to acknowledge this addendum may preclude consideration of the bid proposal for award.

Questions asked via E-mail and Answers

- Q1. After reviewing the addendum #4 there is still a serious problem. Yes this is a “lump sum” for the traffic signalization but that does not mean it is a ‘design-build’ where the contractor has to come up with the items necessary for the signal to operate correctly. Lump sum simply means the contractor has to determine the correct quantities and cover all the costs associated with the items as shown in the plans. For us to determine what the County wants on these intersection is not considered a lump sum. Too many variables since we are not the designers. For example, say the contractor knows pedestals are needed and bids concrete pedestals but the County wanted aluminum pedestals. Or for example the electric service: say the contractor bids an overhead service but it really requires an underground service with a pedestal. Plans should show pay items for everything that is needed for each intersection but without that, we can’t bid.
- A1. Please see the attached red lined plan sheets, notes, Signal General Notes and “Signal Pay Items & Quantities” page. The electric service required will be underground.
- Q2. On sheet 300, the last 3 notes of the ‘Signalization Plan General Notes’ mentions bidding items directly to Lake County ‘outside’ of the FDOT pushbutton contract. Not sure how this note applies to this project or if this was to be originally removed from the plan notes. Please advise.
- A2. These notes are removed from the redlined Signal General Notes (See Signal Plans addendum)
- Q3. The specifications for this project references the 2014 Design standards and most current specifications. The signal plans utilize the new conduit pay item numbers (630-2-11; 630-2-12) but quantify them incorrectly. Per the new pay item numbers (FDOT Basis of Estimates), both of these new pay item numbers are to be completely inclusive of all conduit in the UG trench (630-2-11) and/or completely inclusive of all conduits in the directional bore (630-2-12) yet the plans appear to be quantifying these (2) items in an older manner. Will this be revised or are we to utilize the new pay item numbers but the older quantifying system (applicable to the older pay item numbers: 630-1-12 & 630-1-14). Please advise.
- A3. Please utilize the pay items as specified in the most recent FDOT Basis of Estimates
- Q4. Will there be a revision/addendum forthcoming which is to be adding interconnect/fiber to this project? Please advise.

- A4. Addendum #4 shows the interconnect plan to be included in this project.
- Q5. The signal plans are seriously incomplete (a multitude of missing pay items not shown in the signal plans.) I'm not sure how any signal contractor can put a bid together since the traffic signalization pay item (on the bid form) is an all-inclusive lump sum item (bid item No. 76).
- A5. See revised redlined plan sheet, Signal General Notes and Signal Pay Items & Quantities included in Addendum #6.
- Q6. The answer to Q2 on Addendum #2 stating all PED Signals & Detectors are to be mounted on poles. Please specify which type pole, i.e. aluminum, concrete, steel, with breakaway or without. Also, an additional PED Pole is to be added to the SW corner of the N. Hancock & Old Hwy 50 intersection. Is the Ped Signal to be a Single (653-191) and the existing proposed signal on the same corner to be changed from a Double (653-192) to a Single (653-191).
- A6. All pedestrian poles are to be Aluminum Pedestal 646-1-11. See Signal Pay Items & Quantities sheet. For the traffic signal East Old Hwy 50, sheet 301, the additional pedestrian pole is to be single and the existing shall be changed from a double to a single. The original location for the P4 was not correct. See redlined plan sheet 301.
- Q7. The answer to Q3 on Addendum #4 stating Contractor shall include all items shown in the Plans. As stated in Q3 no Electrical Service is shown in the Plans, is this work to be done by others. The Contractor is to provide installation of the items shown but not to be responsible for activation of the Intersection.
- A7. The contractor shall bid and install electric service and electric service wire to make the traffic signals operational. See notes and Signal Pay Items & Quantities. The traffic signal at East Old Hwy 50 is existing and operational with power. This traffic signal is to be removed and replaced, (sheet 301). The existing traffic signal shall remain operational until the new mast arm signal is operational. For the traffic signal West Old Hwy 50, (sheet 302) see note: On Sheet 35 of the plans there is an existing power pole at station 38+60 L. This is the closest power location to the proposed signal at West Old Hwy 50 and Hancock Rd. Power shall be brought from this location to serve the traffic signal. The approximate distance to the controller cabinet is 1050 LF.
- Q8. The answer to Q4 on Addendum #4 stating Contractor shall include all items shown in the Plans. As stated in Q4 no Signal Cable is shown in the Plans, is this work to be done by others. The Contractor is to provide installation of the items shown but not to be responsible for activation of the Intersection.
- A8. The contractor shall bid and install signal cabling to make the traffic signals operational. See Signal Pay Items & Quantities.

Attached hereto and made a part of the bid document is Exhibit A, which details changes to the City of Minneola Turkey Farms WM Relocation plans.



 Terry Scott, Construction Inspection Supervisor

9-15-14

 Date

CHANGES TO DRAWINGS:

Sheet: - Cover Sheet - City of Minneola Turkey Farms WM Relocation Due to Lake County Hancock Road Extension: Add the following General Note:

32. Contractor will employ and pay for services of an Independent Testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

Contractor shall cooperate with the laboratory to facilitate the execution of its required services.

Contractor shall provide Engineer with all test results herein within five (5) days of receipt.

The following schedule defines the responsibilities of various tests.

<u>Test</u>	<u>Notes</u>	<u>Paid for By</u>
Soil Compaction	Pipe Work: every 300 ft. at each lift of compaction minimum. Beneath Structures: each 500 SF each lift of compaction minimum.	Contractor
Pressure	As specified in Section 15044.	Contractor
Bacteriological	As required by local and state agencies and as specified in Section 15050.	Contractor
LBR	Each 600 SF of pavement minimum.	Contractor

Additional Tests: In the event that first test samples do not meet the applicable material specification, Contractor shall take measures to conform the material and equipment to the Specifications. All tests required to show compliance with the Specifications shall be paid for by Contractor.

TRAFFIC SIGNAL DESIGN NOTES

GENERAL NOTES:

1. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH LAKE COUNTY TRAFFIC OPERATIONS, (352)742-1766, PRIOR TO ANY CONSTRUCTION.
 2. IT SHALL BE NOTED THAT NO TEST BORINGS BE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS PRIOR TO SUBMITTING BID PROPOSALS.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING LAKE COUNTY TRAFFIC OPERATIONS, AT 352-742-1766, 48 HOURS IN ADVANCE OF ALL PHASES OF CONSTRUCTION INCLUDING AND NOT LIMITED TO, INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, SIGNAL HEAD ASSEMBLIES, AND LOOP INSTALLATION.
 4. DURING CONSTRUCTION TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT TRAFFIC DESIGN STANDARDS.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS INCLUDING THE ELECTRIC PERMIT. THE APPLICATION FOR POWER SHOULD BE COORDINATED WITH LAKE COUNTY TRAFFIC OPERATIONS.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY PROVIDING THE ELECTRICAL POWER, TO DETERMINE IF ANY ADDITIONAL FEES ARE REQUIRED TO CONNECT POWER. IF REQUIRED, THE FEE SHALL BE INCLUDED AS PART OF BID ITEM PAYMENT FOR ELECTRICAL SERVICE ASSEMBLY.
 7. THE EXACT LOCATIONS OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION.
 8. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND HAVE IT APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
 9. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND WHEN JOINT USE POLES ARE TO BE USED.
 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE PROPER AMOUNT OF RAKE WITH RESPECT TO LOADING TO BE USED ON POLES AT THE TIME OF INSTALLATION.
 11. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PRE-APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY DETECTION DURING CONSTRUCTION. THE USE OF RECALL ON VEHICLE AND PEDESTRIAN MOVEMENTS IS PROHIBITED.
 13. THE MAINTENANCE OF EXISTING SIGNALS, UNTIL REMOVED, SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
 14. ALL REMOVED EQUIPMENT SHALL BE DELIVERED TO LAKE COUNTY TRAFFIC OPERATIONS, 28127 C.R. 561, TAVARES, 352-742-1766, EXCEPT SIGNAL POLES, WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR.
- NOTE: CARE SHALL BE TAKEN NOT TO DAMAGE THE EQUIPMENT IN THE REMOVAL PROCESS.
15. ANY STRIPING/PAVEMENT MARKINGS OR LANDSCAPING DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTORS EXPENSE.
 16. THE COST FOR THE USE OF TRAFFIC CONTROL OFFICER IN THE EVENT OF LANE CLOSURES SHALL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
 17. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS WITH EMERGENCY CONTACTS AND PHONE NUMBERS AND HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A TWO HOUR MINIMUM RESPONSE TIME.

LOOPS/PULL BOXES:

18. PULL BOX COVERS SHALL BE FDOT APPROVED NON METALLIC WITH RECESSED COVER LOGO TRAFFIC SIGNAL OR FIBER OPTICS AS APPROPRIATE.
19. PULL BOXES SHALL BE LOCATED AWAY FROM EDGE OF PAVEMENT, OR BEHIND A CURB WHEN POSSIBLE, ATTEMPTING TO KEEP FROM THE BOTTOM OF A DITCH OR RETENTION AREA, AND WHERE LARGE VEHICLES PARK.
20. MULTIPLE CONDUITS IN THE SAME RUN SHALL BE PAID FOR AS DIRECTIONAL BORED OR JACK AND BORED FOR THE FIRST CONDUIT ONLY, ALL OTHERS WILL BE PAID FOR AS UNDERGROUND. ALL FIBER OR FUTURE USE CONDUIT SHALL HAVE A LOCATE WIRE INSTALLED.
21. LOOP HOME RUNS SHALL NOT BE CUT INTO THE RADIUS.
22. IF LOOPS ARE TO BE DESTROYED DURING CONSTRUCTION THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY VEHICLE DETECTION.

CABINET/CONTROLLER:

23. THE CONTROLLER ASSEMBLY SHALL BE A LAKE COUNTY NAZTEC REGIONAL TS2-1; WITH A TS2-2 CONTROLLER ETHERNET ENABLED FOR COUNTY CLOSED LOOP SYSTEM, TO INCLUDE A GENERATOR SWITCH BOX PANEL.
 24. A GENERATOR PAD, 3X3X4 CONCRETE SHALL BE INSTALLED WITH EYEBOLT INSTALLED IN THE PAD ADJACENT TO CABINET BASE.
 25. THE CABINET CONCRETE BASE SHALL BE A MINIMUM OF 32X48 TO ACCOMMODATE TYPE 6 CABINETS.
 26. GROUNDING FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 25 OHMS. OR LESS.
 27. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION WHEN POSSIBLE.
 28. THE FIRST BUFFER (BLUE BUFFER) OF SINGLE MODE FIBER SHALL BE TERMINATED IN THE CABINET USING SC CONNECTORS.
 29. THE MOUNTING OF THE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CABINET SHALL BE PROHIBITED.
 30. THE INSIDE LANE DISCONNECT SHALL BE WIRED FOR FUTURE 5 SECTION HEADS.
 31. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.
- SIGNAL HEADS:
32. SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS. THE USE OF JONES PLUGS IS PROHIBITED.
 33. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINIUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
 34. PEDESTRIAN SIGNAL ASSEMBLIES SHALL BE CAST ALUMINUM WITH FULL HAND/PERSON LED'S WITH COUNT DOWN INDICATION.
 35. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE LOUVERS AND BE COUNTDOWN LED SIGNALS WITH THE PROPER COUNTDOWN PEDESTRIAN SIGNAGE. ALL PEDESTRIAN SIGNALS NOT MOUNTED ON SIGNAL POLES OR MAST ARM POLES SHALL BE THE BREAKAWAY TYPE COMMONLY REFERRED TO AS A T-BASE. THIS T-BASE WILL HAVE ALN ACCESS DOOR FOR WIRING AND MAINTENANCE.
 36. SIGNAL CABLE SHALL BE ATTACHED TO MESSENGER WIRE USING PROPER SIZE SPIRAL WRAP.

ILLUMINATED STREET SIGNS:

37. INTERNALLY ILLUMINATED STREET NAME SIGNS (LED), SHALL BE INSTALLED BELOW THE MESSENGER CABLE WHERE POSSIBLE, POWERED BY A SEPARATE CIRCUIT BREAKER, AND BE DESIGNED AND INSTALLED IN ACCORDANCE WITH LAKE COUNTY PUBLIC WORKS INTERNALLY ILLUMINATED STREET NAME SIGN DETAIL. A PHOTOCCELL SHALL BE INSTALLED NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. CARE TO BE GIVEN TO INSTALL WHERE STREET LIGHTING DOES NOT AFFECT OPERATION.
38. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS, TWO COMPLETE SETS OF AS-BUILT PLANS THAT INCLUDE CONDUIT AND PULL BOX LOCATIONS, AT FINAL INSPECTION.

OTHER:

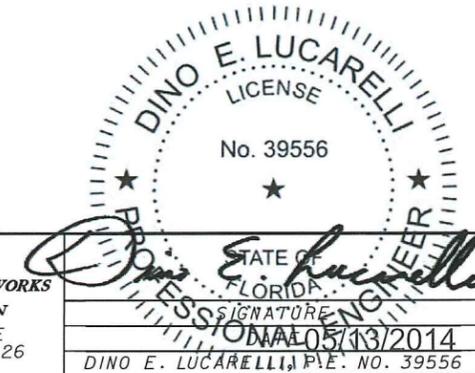
39. A NTCIP CCTV ASSEMBLY SHALL BE FURNISHED AND INSTALLED AT A LOCATION FOR OPTIMAL PERFORMANCE. IT MUST BE COMPATIBLE WITH OUR CURRENT SYSTEM. THE CAMERA WILL HAVE ELECTRONIC IMAGE STABILIZATION AND PTZ CONTROL. THE ASSEMBLY WILL INCLUDE A SURGE PANEL, A VIDEO CONVERTER AND SPECIAL MOUNTING HARDWARE IF NEEDED TO GET OPTIMAL PERFORMANCE.
40. NEXT SIGNAL SIGNS SHALL BE INSTALLED ON, THE MAIN STREET, APPROACHING THE INTERSECTION.
41. OPTICOM PREEMPTION OR EQUIVALENT SHALL BE USED WHEN EMERGENCY PREEMPTION IS REQUESTED.
42. A FIBER PULL BOX AND CONDUIT INTO THE CONTROLLER ASSEMBLY SHALL BE INSTALLED.

NOTE: ALL DAMAGED/DESTROYED CONDUIT AND LOOP LEAD-INS DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR.

~~NOTE: THE EQUIPMENT REQUESTED BY LAKE COUNTY THAT IS OUTSIDE THE SCOPE OF THE DOT PUSHBUTTON CONTRACT, IS REQUESTED TO BE SHOWN IN THE DESIGN, AND BID SEPARATELY BY THE CONTRACTOR, TO LAKE COUNTY.~~

~~THE CONTRACTOR IS REQUESTED TO CONTACT LAKE COUNTY WITH THE QUOTES FOR FURNISH AND INSTALL OF THESE ITEMS. THESE ITEMS WILL INCLUDE BUT ARE NOT LIMITED TO: AN UPGRADE TO THE CONTROLLER ASSEMBLY TO INCLUDE A GENERATOR TRANSFER SWITCH 24 LED ILLUMINATED STREET NAME SIGNS A CONCRETE GENERATOR PAD AND NEXT SIGNAL SIGNS~~

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REVISIONS	DATE	TYLIN INTERNATIONAL 225 E. ROBINSON STREET, SUITE 490 ORLANDO, FLORIDA 32801 P 407.563.7101 F 407.999.5228 CERTIFICATE OF AUTHORIZATION 00002017	 LAKE COUNTY FLORIDA	LAKE COUNTY DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION 437 ARDICE AVENUE EUSTIS, FLORIDA 32726	SIGNALIZATION PLAN GENERAL NOTES	SHEET NO.				
						300				

General Notes Continued.

- 33. DISCONNECTS SHALL OPEN FROM THE SIGNAL FACE. (not from the rear)
- 34. SIGNAL HEADS SHALL BE WIRED PER IMSA NEMA PHASEING, PHASES 2 AND 6 ARE TYPICALLY ASSIGNED TO MAJOR-STREET WITH PHASE 2 BEING SOUTH OR WEST BOUND THROUGH MOVEMENTS. THE USUAL CONVENTION IS FOR THROUGH PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION STARTING WITH PHASE 2, AND THE LEFT-TURN PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION, WITH PHASE 1 BEING ACCOMPANYING LEFT-TURN TO PHASE 6
- 35. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINIUM, WITH TUNNEL VISORS, AND LED's FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
- 36. PEDESTRIAN SIGNAL ASSEMBLIES SHALL BE CAST ALUMINUM WITH FULL HAND/PERSON LED's WITH COUNT DOWN INDICATION.
- 38. SIGNAL CABLE SHALL BE ATTACHED TO MESSENGER WIRE USING PROPER SIZE SPIRAL WRAP.
- 39. FDOT OPTION OF PIVOTAL ADJUSTABLE HANGERS ASSEMBLY WITH FLAT EXTENSION BARS SHALL BE USED INSTEAD OF DROP PIPES FOR DUEL POINT ATTACHMENTS.

NB: 1. Contractor shall be responsible for final electrical hook up for full signal operations

2. Contractor shall be responsible to aquire all permits for full signal operations.

Pay Item Number	Pay Item Description	Quantity	Units
630-2-11	Conduit, F&I, Underground	1741	LF
630-2-12	Conduit, F&I, Directional Bore	1639	LF
635-1-11	Pull & Junction Boxes	23	EA
639-1-122	Electrical Power Service	2	AS
639-2-1	Signals - Electrical Service Wire	3050	LF
646-1-11	Aluminum Pedestal Pole	10	EA
649-31-201	Steel Mast Arm Assembly, F&I, 130 w/Backplates, 36'	1	EA
649-31-202	Steel Mast Arm Assembly, F&I, 130 w/Backplates, 46'	5	EA
649-31-204	Steel Mast Arm Assembly, F&I, 130 w/Backplates, 70.5'	2	EA
650-51-311	Traffic Signal, F&I, 3 Sect, 1 Way Std.	19	AS
650-51-411	Traffic Signal, F&I, 4 Sect, 1 Way Std.	6	AS
650-51-511	Traffic Signal, F&I, 5 Sect, 1 Way Std.	4	AS
653-191	Pedestrian Signal, F&I, LED Countdown, Standard, 1 Way	4	AS
653-192	Pedestrian Signal, F&I, LED Countdown, Standard, 2 Way	6	AS
660-1-102	Loop Assembly Type B, F&I	16	EA
660-1-106	Loop Assembly Type F, F&I	14	EA
663-74-11	Vehicle Detector Assemblies, F&I, Optical Type	8	EA
663-74-15	Vehicle Detector Assemblies, F&I, Video	8	EA
665-11	Pedestrian Detector, Standard, F&I, Pole Assembly	10	EA
670-5-111	Traffic Controller Assembly, w/TS2, Type1 Cabinet, Nema 1 Preemption (Naztec)	2	EA
690-10	Traffic Signal Head Assembly, Removal	8	EA
690-20	Signal Pedestrian Assembly, Removal	4	EA
690-31	Signal Pedestral, Removal	3	EA
690-34-1	Complete Pole Removal, Deep	2	EA
690-70	Detector Pedestrian Assembly, Removal	8	EA
690-80	Span Wire Assembly Remove	1	EA
690-90	Remove Conduit & Cabling	1	PI
690-100	Signal Equipment, Miscellaneous Remove	1	PI
699-1-1	Internally Illuminated Signs	8	EA

Note 1: Sheet 301 - All existing signal must remain in operation at all times until Mast Arm Traffic signal is Operational.

Note 2: Sheet 301 - The original plans call for 2 way Standard P-4 & P6 pedestal pole. The pedestrian pole (P4 & P6) shall be 1 way with additional conduit, cable and Pedestal Assembly

REVISION:	DATE	SECTION	TOWNSHIP	RANGE	 LAKE COUNTY FLORIDA	DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION 437 ARDICE AVE. EUSTIS, FLORIDA 32726	NORTH HANCOCK ROAD CONSTRUCTION COSTS SIGNAL PAY ITEMS & QUANTITIES	SIGNATURE	CAD FILE	
		22	19 S	26 E					Cost Estimate	
DESIGNED:	RES	DATE:								SHEET #
DRAWN:	RES	DATE:								1
APPROVED:	AWK	DATE:								

NOTES:

CABINET AND CONTROLLER ASSEMBLY SHALL BE TYPE 6 NAZTEC CABINET WITH 16 CHANNEL DETECTOR RACK.

FOR EACH SIGNAL POLE.

PAYMENT SHALL BE PER LENGTH OF TRENCH

THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRUT POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

- 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY. PROVIDE SPARE 2" UG CONDUIT RUN
- 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA AND POWER COMPANY REQUIREMENTS (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).

ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

INTERNALLY ILLUMINATED OVERHEAD SIGNS

Please note the pay item number for the 3 section signal head should be 650-1311; and the five section head 650-1511

Delete P4 & P6 S/b one way

Delete

Pay item - 646-1-11_1 EA

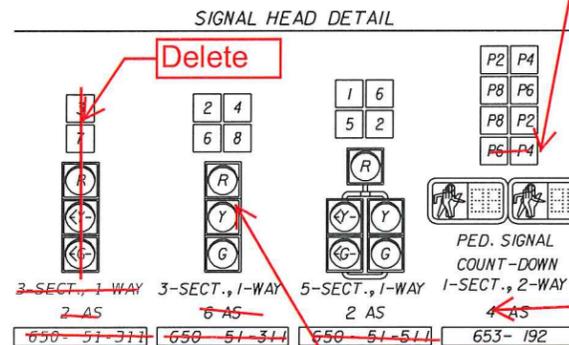
Pay item - 646-1-11_1 EA

Should be 3 section signal head 650-1311

Pay item - 646-1-11:-1 EA

Should be 3 section signal head 650-1311

Add phase 3 & 7_s/b pay item 650-1311- 8 AS



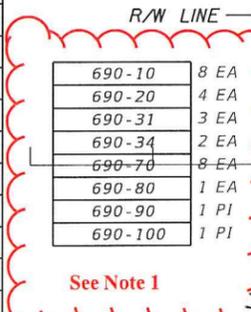
MAJOR STREET = HANCOCK RD.
MINOR STREET = CR. 50
S.O.P 9 (SEE STANDARD INDEX 1787)
FDOT ROADWAY DESIGN STANDARDS

LEGEND

- PROPOSED TRAFFIC SIGNAL POLE
- 3 SECTION TRAFFIC SIGNAL HEAD
- 4 SECTION TRAFFIC SIGNAL HEAD
- 5 SECTION TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)
- CONTROLLER CABINET, BASE MOUNTED
- CONDUIT UNDER GROUND
- CONDUIT UNDER PAVEMENT
- TRAFFIC SIGNAL PULL BOX
- PAY ITEM NUMBER
- OPTICOM DETECTOR
- SIGNAL PHASE NUMBER
- VIDEO DETECTION ZONE

CONTROLLER TIMING PANEL								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT No.	NBL	SB	-	WB	SBL	NB	-	EB
MIN. GREEN (INITIAL)	5	15	-	8	5	15	-	8
EXTENSION (PASSAGE)	3	3	-	3	3	3	-	3
MAXIMUM GREEN I	20	50	-	35	20	50	-	35
MAXIMUM GREEN II	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.3	4.3	-	5.2	4.3	4.3	-	5.2
ALL RED	1.6	1.3	-	1.2	1.6	1.3	-	1.2
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE	-	17	-	31	-	24	-	31
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	-	-	-	-	-	-	-
FLASHING	-	L	-	-	-	L	-	-

LOOP ASSEMBLIES AND DETECTORS CONNECTION CHART		
LOOP NO.	MOVEMENTS	OPERATION
L-1	1, 5	
L-2	2, 6	
L-4	4, 7	
L-8	3, 8	



See Note 1

<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DATE</th><th>DESCRIPTION</th></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	DESCRIPTION				<p>DATE</p>	<p>TYLIN INTERNATIONAL 225 E. ROBINSON STREET, SUITE 490 ORLANDO, FLORIDA 32801 P 407.563.7101 F 407.999.5228 CERTIFICATE OF AUTHORIZATION 00002017</p>	<p>LAKE COUNTY FLORIDA</p>	<p>LAKE COUNTY DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION 437 ARDICE AVENUE EUSTIS, FLORIDA 32726</p>	<p>STATE OF FLORIDA DINO E. LUCARELLI, P.E. No. 39556 SIGNATURE MAY 05/13/2014</p>	<p>SIGNALIZATION PLAN EAST OLD HWY 50</p>	<p>SHEET NO. 301</p>
NO.	DATE	DESCRIPTION											

Sheet 301: Conduit Addendum

INTERNALLY ILLUMINATED OVERHEAD SIGNS

NOTES:

CABINET AND CONTROLLER ASSEMBLY SHALL BE TYPE 6 NAZTEC CABINET WITH 16 CHANNEL DETECTOR RACK.

FOR EACH SIGNAL POLE.

PAYMENT SHALL BE PER LENGTH OF TRENCH.

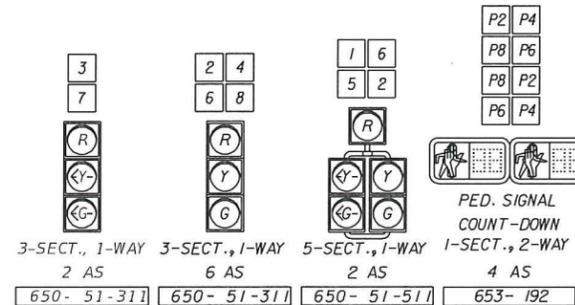
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1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.
 PROVIDE SPARE 2" UG CONDUIT RUN
 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA AND POWER COMPANY REQUIREMENTS (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).

ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

CALL THE SUNSHINE STATE
 ONE CALL 1-800-432-4770
 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

SIGNAL HEAD DETAIL

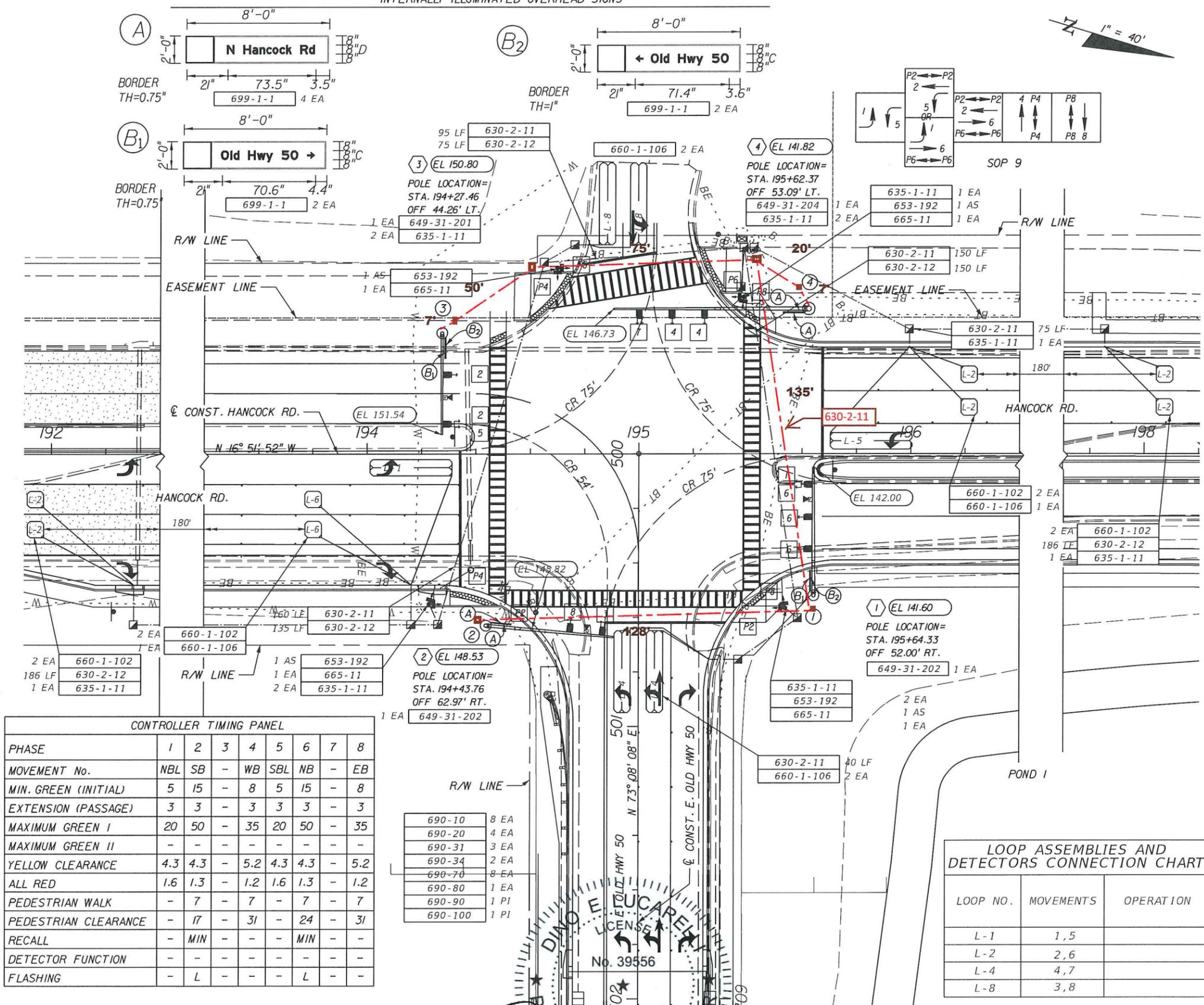


LEGEND

- PROPOSED TRAFFIC SIGNAL POLE
- 3 SECTION TRAFFIC SIGNAL HEAD
- 4 SECTION TRAFFIC SIGNAL HEAD
- 5 SECTION TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)
- CONTROLLER CABINET, BASE MOUNTED
- CONDUIT UNDER GROUND
- CONDUIT UNDER PAVEMENT
- TRAFFIC SIGNAL PULL BOX
- PAY ITEM NUMBER
- OPTICOM DETECTOR
- SIGNAL PHASE NUMBER
- VIDEO DETECTION ZONE

CONTROLLER TIMING PANEL								
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EXTENSION (PASSAGE)	3	3	-	3	3	3	-	3
MAXIMUM GREEN I	20	50	-	35	20	50	-	35
MAXIMUM GREEN II	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.3	4.3	-	5.2	4.3	4.3	-	5.2
ALL RED	1.6	1.3	-	1.2	1.6	1.3	-	1.2
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE	-	17	-	31	-	24	-	31
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	-	-	-	-	-	-	-
FLASHING	-	L	-	-	-	L	-	-

LOOP ASSEMBLIES AND DETECTORS CONNECTION CHART		
LOOP NO.	MOVEMENTS	OPERATION
L-1	1, 5	
L-2	2, 6	
L-4	4, 7	
L-8	3, 8	



REVISIONS	DATE

TYLIN INTERNATIONAL
 225 E. ROBINSON STREET, SUITE 490
 ORLANDO, FLORIDA 32801
 P 407.563.7101 F 407.999.5228
 CERTIFICATE OF AUTHORIZATION 00002017



LAKE COUNTY
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING DIVISION
 437 ARDICE AVENUE
 EUSTIS, FLORIDA 32726

Dino E. Lucarelli
 PROFESSIONAL ENGINEER
 No. 39556
 DATE: 05/13/2014

SIGNALIZATION PLAN
EAST OLD HWY 50

SHEET NO.
 301

NOTES:
 CABINET AND CONTROLLER ASSEMBLY SHALL BE TYPE 6 NAZTEC CABINET WITH 16 CHANNEL DETECTOR RACK.
 FOR EACH SIGNAL POLE.
 PAYMENT SHALL BE PER LENGTH OF TRENCH.
 THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

CONTROLLER TIMING PANEL								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT No.	SBL	NB	WBL	EB	NBL	SB	EBL	WB
MIN. GREEN (INITIAL)	5	15	5	8	5	15	5	8
EXTENSION (PASSAGE)	3	3	3	4	3	3	3	3
MAXIMUM GREEN I	20	50	20	40	40	50	20	20
MAXIMUM GREEN II	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.7	4.7	4.7	5.2	4.7	4.7	5.2	4.7
ALL RED	1.4	1.1	1.2	1.2	1.1	1.4	1.2	1.2
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE	-	23	-	31	-	27	-	27
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	-	-	-	-	-	-	-
FLASHING	-	L	-	-	-	L	-	-

1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.
 PROVIDE SPARE 2" UG CONDUIT RUN
 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA AND POWER COMPANY REQUIREMENTS
 (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).

ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

LOOP ASSEMBLIES AND DETECTORS CONNECTION CHART		
LOOP NO.	MOVEMENTS	OPERATION
L-1	1, 5	
	6	
	7	
	8	

- LEGEND**
- PROPOSED TRAFFIC SIGNAL POLE
 - 3 SECTION TRAFFIC SIGNAL HEAD
 - 4 SECTION TRAFFIC SIGNAL HEAD
 - 5 SECTION TRAFFIC SIGNAL HEAD
 - PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)
 - CONTROLLER CABINET, BASE MOUNTED
 - CONDUIT UNDER GROUND
 - CONDUIT UNDER PAVEMENT
 - TRAFFIC SIGNAL PULL BOX
 - PAY ITEM NUMBER
 - OPTICOM DETECTOR
 - SIGNAL PHASE NUMBER
 - VIDEO DETECTION ZONE

Pay item - 646-1-11_1 EA

Should be 3 section signal head 650-1311

Pay item - 646-1-11_1 EA

Should be 3 section signal head 650-1311

Pay item - 646-1-11_1 EA

Remove

Should be P2 & P8

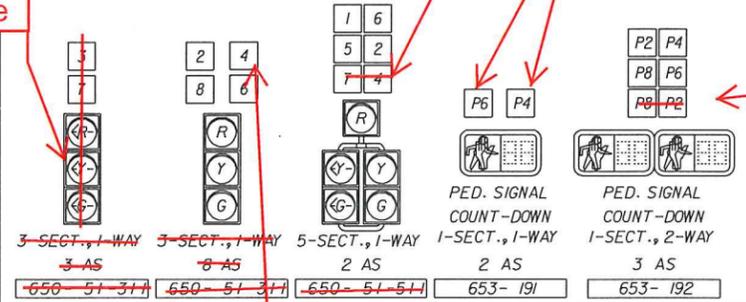
Pay item - 646-1-11_1 EA

Pay item - 646-1-11_1 EA

Should be P6 & P4

Remove

SIGNAL HEAD DETAIL



MAJOR STREET = HANCOCK RD.
 MINOR STREET = CR. 50
 S.O.P 8 (SEE STANDARD INDEX I7870)
 FDOT ROADWAY DESIGN STANDARDS 2010

REVISIONS	DATE
Add phase 3 & 7_s/b pay item 650-1311- 11 AS	

TYLIN INTERNATIONAL
 225 E. ROBINSON STREET, SUITE 490
 ORLANDO, FLORIDA 32801
 P 407.563.7101 F 407.999.5228
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LAKE COUNTY DEPARTMENT OF PUBLIC WORKS
 ENGINEERING DIVISION
 437 ARDICE AVENUE
 EUSTIS, FLORIDA 32726

STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 DINO E. LUCARELLI, P.E. NO. 39556
 05/13/2014

SIGNALIZATION PLAN
WEST OLD HWY 50

SHEET NO.
 302

Sheet 302: Conduit Addendum

NOTES:

CABINET AND CONTROLLER ASSEMBLY SHALL BE TYPE 6 NAZTEC CABINET WITH 16 CHANNEL DETECTOR RACK.

FOR EACH SIGNAL POLE.

PAYMENT SHALL BE PER LENGTH OF TRENCH.

THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY. PROVIDE SPARE 2" UG CONDUIT RUN
 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA AND POWER COMPANY REQUIREMENTS
 (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).

ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

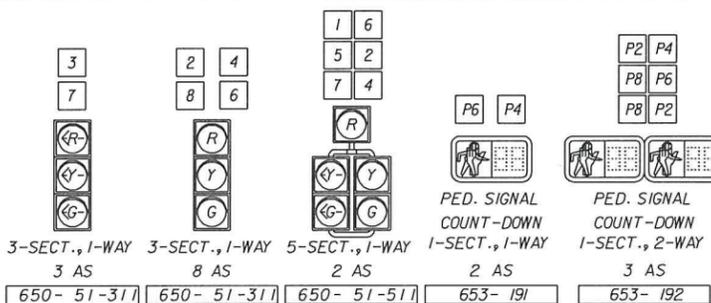
CONTROLLER TIMING PANEL								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT No.	SBL	NB	WBL	EB	NBL	SB	EBL	WB
MIN. GREEN (INITIAL)	5	15	5	8	5	15	5	8
EXTENSION (PASSAGE)	3	3	3	4	3	3	3	3
MAXIMUM GREEN I	20	50	20	40	40	50	20	20
MAXIMUM GREEN II	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	4.7	4.7	4.7	5.2	4.7	4.7	5.2	4.7
ALL RED	1.4	1.1	1.2	1.2	1.1	1.4	1.2	1.2
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE	-	23	-	31	-	27	-	27
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	-	-	-	-	-	-	-	-
FLASHING	-	L	-	-	-	L	-	-

LOOP ASSEMBLIES AND DETECTORS CONNECTION CHART		
LOOP NO.	MOVEMENTS	OPERATION
L-1	1, 5	
L-2	2, 6	
L-3	3, 7	
L-4	4, 8	

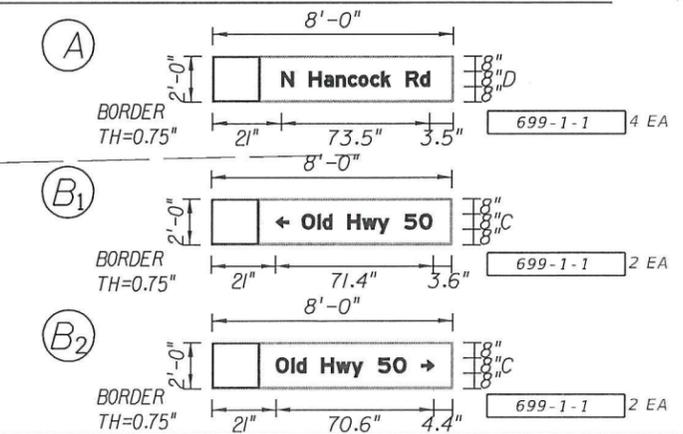
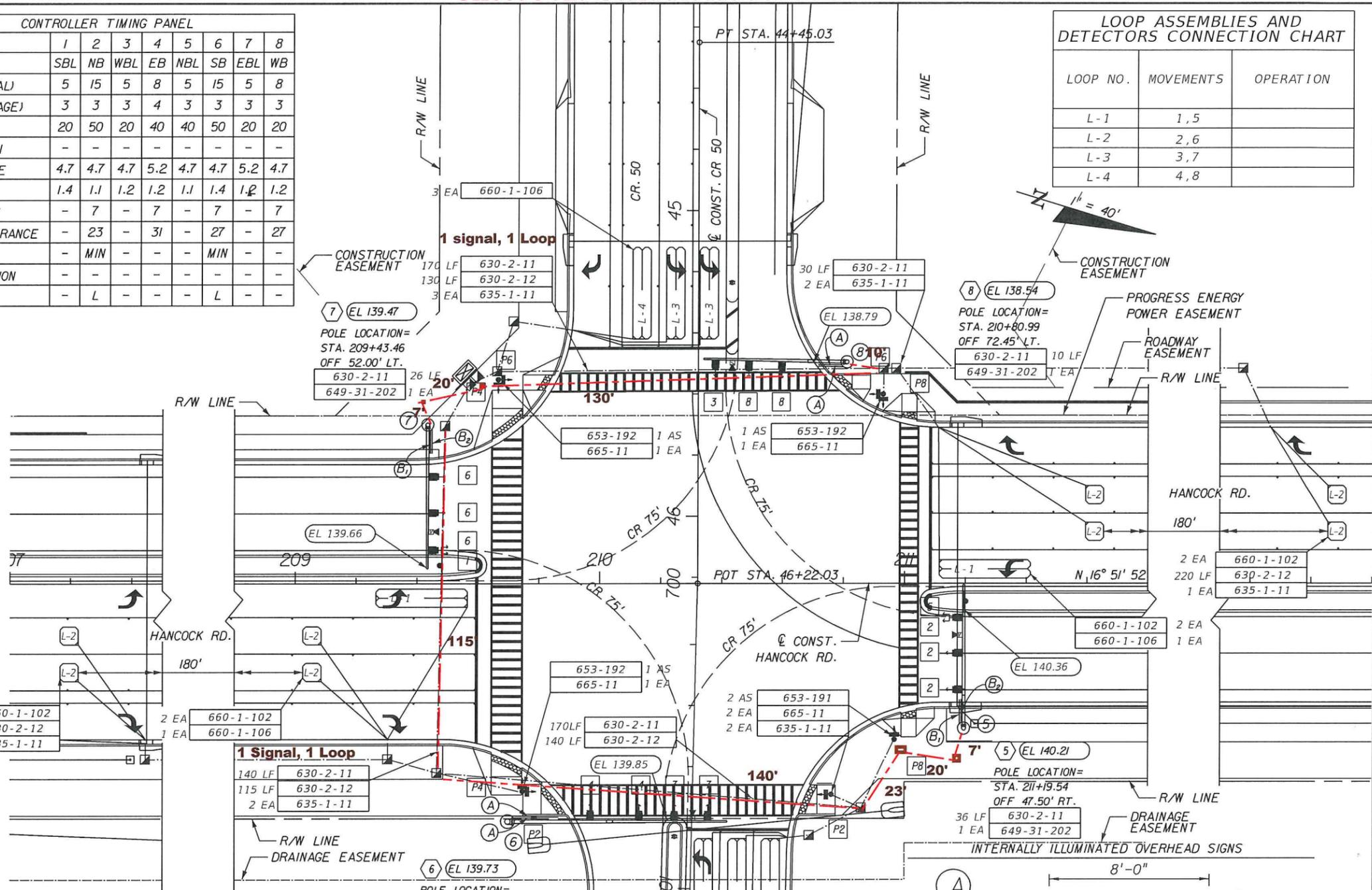
LEGEND

- PROPOSED TRAFFIC SIGNAL POLE
- 3 SECTION TRAFFIC SIGNAL HEAD
- 4 SECTION TRAFFIC SIGNAL HEAD
- 5 SECTION TRAFFIC SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD (POLE MOUNTED)
- CONTROLLER CABINET, BASE MOUNTED
- CONDUIT UNDER GROUND
- CONDUIT UNDER PAVEMENT
- TRAFFIC SIGNAL PULL BOX
- PAY ITEM NUMBER
- OPTICOM DETECTOR
- SIGNAL PHASE NUMBER
- VIDEO DETECTION ZONE

SIGNAL HEAD DETAIL



MAJOR STREET = HANCOCK RD.
 MINOR STREET = CR. 50
 S.O.P 8 (SEE STANDARD INDEX I7870)
 FDOT ROADWAY DESIGN STANDARDS 2010



DINO E. LUCARELLI, P.E.
 No. 39556
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSED 05/13/2014
 ASerrano 5/6/2014 11:21:38 AM P:\ST0013_001_Hancock_Rd\800DrawIngs\signals\PLANS02.DGN