

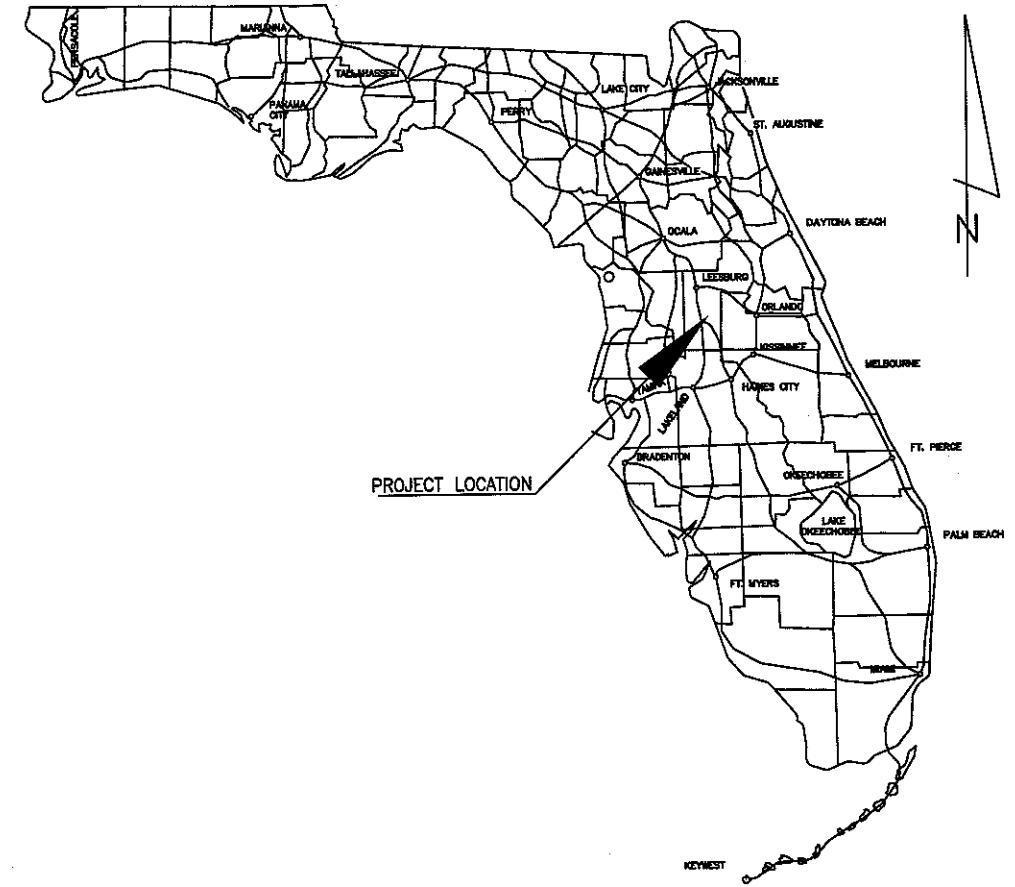
# LAKE COUNTY, FLORIDA

SECTION 11070 - M.P. 14.443  
 SR 50 AT OAKLEY SEAVER ROAD  
 PERMIT NO. 04-A-592-0025

## SIGNAL MODIFICATION PLANS

### INDEX OF SIGNALIZATION PLANS

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T-1	KEY SHEET
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T-3	GENERAL NOTES
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PROJECT LOCATION

VICINITY MAP  
 N.T.S.

### SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:

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 TRAFFIC ENGINEERING DATA SOLUTIONS, INC.  
 615 N. CHARLES RICHARD BEALL BLVD., SUITE 103  
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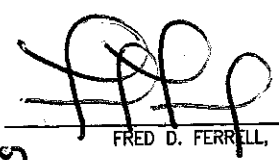
### PLANS PREPARED BY:

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 ENGINEERING BUSINESS NO. 27392

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

GOVERNING STANDARDS AND SPECIFICATIONS:  
 FLORIDA DEPARTMENT OF TRANSPORTATION,  
 DESIGN STANDARDS DATED 2006, AND  
 STANDARD SPECIFICATIONS FOR ROAD  
 AND BRIDGE CONSTRUCTION DATED 2007,  
 AS AMENDED BY CONTRACT DOCUMENTS.

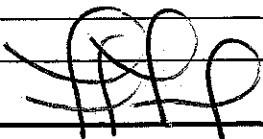
SIGNAL PLAN SET REVISIONS		
DATE	BY	DESCRIPTION
11-8-07	JR	UPDATED PER FDOT COMMENTS

SIGNALIZATION PLANS  
 ENGINEER OF RECORD:   
 DATE: 11-14-07  
 P.E. NO.: 41902  
 FRED D. FERRELL, P.E.

SHEET  
 NO.  
 T-1

**TABULATION OF QUANTITIES**

BID ITEM NUMBER	DESCRIPTION	UNIT	SHEET T-4		ORIG	FINAL	ORIG	FINAL	ORIG	FINAL	ORIG	FINAL	TOTAL THIS SHEET		GRAND TOTAL	
			ORIG	FINAL									ORIG	FINAL	ORIG	FINAL
101-1	MOBILIZATION	LS	1												1	
102-1	MAINTENANCE OF TRAFFIC	LS	1												1	
555-1-1	CONDUIT - DIRECTIONAL BORE (LESS THAN 6")	LF	150												150	
630-1-12	CONDUIT - SIGNALS, FURNISH & INSTALL, UNDERGROUND	LF	460												460	
635-1-11	PULL BOX	EA	4												4	
650-53	TRAFFIC SIGNAL, INSTALL	AS	1												1	
660-1-110	INDUCTIVE LOOP DETECTOR (TYPE 10, 2 CH, SS, RM, TD)	EA	1												1	
660-2-102	LOOP ASSEMBLY (TYPE B) (6'x6')	AS	4												4	
660-2-106	LOOP ASSEMBLY (TYPE F MOD) (6'x40')	AS	3												3	
690-10	TRAFFIC SIGNAL HEAD ASSEMBLY, REMOVAL	EA	1												1	



REVISIONS		
DATE	BY	DESCRIPTION
11-9-07	JR	UPDATED PER FDOT COMMENTS

*Engineer of Record:*  
**Fred Ferrell, P.E.**  
 PE No. 41902  
 Date: November 14, 2007

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 50	LAKE	-----

**TABULATION OF  
QUANTITIES**

SHEET NO.  
**T-2**

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING LOGAN LAND (FDOT) AT (352) 315-3100, RAY MARLIN (FDOT) AT (386) 943-5318 AND STEVE BOLLINGER (LAKE COUNTY) AT (352) 742-1766 AT LEAST TWO (2) BUSINESS DAYS PRIOR TO BEGINNING ANY WORK IN THE RIGHT OF WAY, ANY LANE CLOSURES AND AGAIN FOR LOOP INSTALLATION. ADDITIONALLY, THE LOCAL PERMIT MANAGER (LOGAN LAND) MUST BE INFORMED TWO (2) BUSINESS DAYS BEFORE ANY DIRECTIONAL BORES.
2. THE CONTRACTOR SHALL NOTIFY LAKE COUNTY TRAFFIC OPERATIONS AT LEAST 24 HOURS IN ADVANCE OF INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, AND SEALING SIGNAL HEAD ASSEMBLIES SO THAT THESE OPERATIONS CAN BE OBSERVED.
3. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PREAPPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
4. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE AND INTERCONNECT WITH LAKE COUNTY TRAFFIC OPERATIONS.
5. IT SHALL BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED; IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
6. CONTRACTOR SHALL PROVIDE 4 SETS OF CONSTRUCTION "AS-BUILTS" - ONE TO FDOT, ONE FOR THE CABINET, ONE FOR LAKE COUNTY TRAFFIC ENGINEERING DEPARTMENT, AND ONE TO THE ENGINEER OF RECORD.
7. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH INDEX 600 OF FDOT'S DESIGN STANDARDS 2006 EDITION.
8. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS AND LED DISPLAYS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS INCLUDING THE ELECTRIC PERMIT, AND TO COORDINATE APPLICATION FOR POWER, WITH LAKE COUNTY TRAFFIC OPERATIONS AT (352) 742-1766.
10. 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.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EXACT LOCATIONS OF ALL UTILITIES PRIOR TO BEGINNING WORK.
12. SIGNAL CABLE SHALL BE ATTACHED TO MESSENGER WIRE USING PROPER SIZE SPIRAL WRAP.
13. 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.
14. A PRECONSTRUCTION MEETING SHALL BE SCHEDULED WITH LAKE COUNTY TRAFFIC OPERATIONS, (352) 742-1766, PRIOR TO ANY CONSTRUCTION.

**GENERAL NOTES:**

15. CONTRACTOR SHALL RESTORE LANDSCAPING WHICH HAS BEEN DISTURBED BY HIS ACTIVITIES TO COMPLY WITH THE LAKE COUNTY REQUIREMENTS.
16. ENGINEER CERTIFICATION (IF REQUIRED) MUST BE RECEIVED WITHIN 30 DAYS OF COMPLETION OF THE PROJECT.
17. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE IN CONFORMANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND DESIGN STANDARDS, CURRENT EDITIONS.
18. ANY ITEM NOT SPECIFICALLY ADDRESSED IN THESE PLANS, USE F.D.O.T. SPECIFICATIONS.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY, PROGRESS ENERGY, PROVIDING THE ELECTRICAL POWER TO DETERMINE IF ANY ADDITIONAL FEES ARE REQUIRED TO CONNECT POWER, AND FOR CONNECTION OF POWER. IF REQUIRED, THE FEE SHALL BE INCLUDED AS PART OF THE BID ITEM PAYMENT FOR ELECTRICAL SERVICE ASSEMBLY.
20. CONTRACTOR SHALL CONTACT PROGRESS ENERGY AT LEAST 48 HOURS PRIOR TO INSTALLING THE SIGNAL CABLE. THE ELECTRIC DEPARTMENT PERSONNEL SHALL BE ON SITE WHEN FEEDING THE SIGNAL CABLE IN BETWEEN THE EXISTING ELECTRICAL WIRE.
21. SEPARATE CONDUIT AND PULL BOXES SHALL BE PROVIDED FOR LOOP WIRE, SIGNAL CABLE, AND ELECTRICAL SERVICE WIRE.
22. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY VEHICLE DETECTION IF LOOPS ARE TO BE DESTROYED DURING CONSTRUCTION.
23. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE LAKE COUNTY SIGNAL DEPARTMENT (352.742.1766).
24. THE MAINTENANCE OF EXISTING SIGNALS, UNTIL REMOVED, SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
25. THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH THE FDOT SPECIFICATION 105-5.10. THE CONTRACTOR SHALL COORDINATE THE FINAL ACCEPTANCE INSPECTION IN ACCORDANCE WITH FDOT SPECIFICATION 611-2.2 WITH THE ENGINEER AT LEAST TEN DAYS IN ADVANCE. THE (MAINTAINING AGENCY) AND RAY MARLIN AT (386) 943-5318 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO THEY MAY BE PRESENT.
26. THE CONTRACTOR SHALL NOTIFY "CALL SUNSHINE" AT 1-800-432-4770 AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION OR ANY WORK WHICH WOULD OTHERWISE INTERFERE WITH ANY ABOVE GROUND OR BELOW GROUND UTILITIES. IN ADDITION, THE CONTRACTOR SHALL DIRECTLY NOTIFY ALL UTILITIES WHICH ARE NOT "CALL SUNSHINE" MEMBERS, BUT WHICH MAY HAVE EXISTING FACILITIES WITHIN THE VICINITY OF THE PROJECT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING A CURRENT LOCATE TICKET THROUGHOUT THE DURATION OF THE WORK.
27. NO LANES CLOSURE ARE ALLOWED ALONG SR 50 FROM: 6:00 A.M. - 9:00 P.M.
28. THE FOLLOWING UTILITY CONTACT INFORMATION IS PROVIDED:

**UTILITY AGENCY OWNER:**

LAKE AOPKA NATURAL GAS DISTRICT  
 PROGRESS ENERGY  
 MCI NETWORK SERVICES, INC.  
 SPRINT  
 BRIGHT HOUSE NETWORKS, LLC  
 LAKE COUNTY PUBLIC WORKS  
 LAKE COUNTY SIGNAL DEPARTMENT  
 SUNSHINE ONE-CALL

**CONTACT:**

RICK GULLETT  
 SUE FREYSER  
 TIM COLE  
 CHRISTOPHER B. LOVE  
 JOHN WOSLKI  
 JUAN CHAN  
 STEVE BOLLINGER

**PHONE:**

(407) 466-5117  
 (407) 646-8364  
 (407) 841-4226  
 (407) 814-5271  
 (386) 775-4444 EXT 7879  
 (352) 253-4952  
 (352) 742-1766  
 (800) 432-4770

**LOOPS / PULL BOXES:**

1. EACH LOOP SHALL BE TREATED AS AN INDIVIDUAL LOOP WITH SEPARATE LOOP LEAD-INS FROM SPLICE POINT TO CABINET TERMINAL.
2. F TYPE LOOPS SHALL BE 40' LONG BY 6' WIDE AND EXTEND 5' BEYOND THE STOP BAR.
3. PULL BOXES AND COVERS SHALL BE FDOT APPROVED OF NONMETALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL".
4. LOOP HOME RUNS SHALL NOT BE CUT INTO THE RADIUS.
5. ANY STRIPING / PAVEMENT MARKINGS DESTROYED BY CONTRACTOR DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. PULL BOXES SHALL BE LOCATED 10 FEET FROM EDGE OF PAVEMENT OR BEHIND A CURB WHEN POSSIBLE, ATTEMPTING TO KEEP FROM THE BOTTOM OF A DITCH OR RETENTION AREA.
7. EXISTING LOOPS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION TO BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
8. ALL NEW LOOP DETECTORS ARE TO BE INSTALLED IN CABINET PRIOR TO CUTTING THE EXISTING LOOPS.

**TIMINGS / CONTROLLER:**

1. DELAY TIMES SHALL BE SET TO 5 SECONDS.
2. THE MOUNTING OF ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CABINET SHALL BE PROHIBITED.
3. A GENERATOR PAD, 3'X3'X4' CONCRETE SHALL BE INSTALLED; PAID FOR AS PART OF 670-5-111.

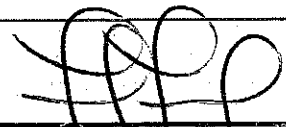
**SIGNAL HEADS:**

1. SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS. THE USE OF "JONES" PLUGS SHALL BE PROHIBITED.
2. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
3. TRAFFIC SIGNALS HEADS FOR PHASE 4 ARE BEING REMOVED AND INSTALLED TO ACCOMMODATE RECONSTRUCTED SOUTH APPROACH TO INTERSECTION. ALL WORK TO ACCOMPLISH THIS TASK TO BE INCLUDED IN PAY ITEM 650-53, INCLUDING TWO-WAY BRACKET.

**CONSTRUCTION SCHEDULE:**

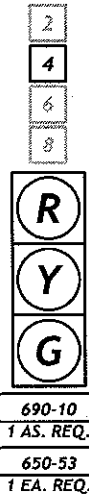
1. FULL SIGNAL OPERATION SHALL REMAIN IN PLACE AT THE EXISTING SIGNAL.
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION SCHEDULES WITH OTHER CONTRACTORS IN THE AREA.

**NOTE:** SIGNAL MODIFICATION PLANS DEVELOPED UTILIZING APPROVED, EXISTING SIGNAL PLANS. MODIFICATIONS MADE TO ACCOMMODATE EB RIGHT TURN LANE AND RECONSTRUCTED SOUTH APPROACH.

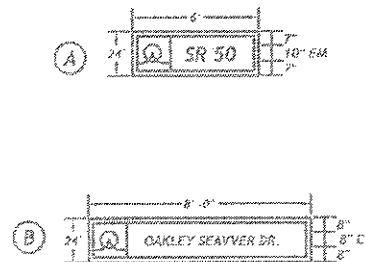


REVISIONS			Engineer of Record: Fred Ferrell, P.E. PE No. 41302 Date: November 14, 2007	Traffic Engineering Data Solutions, Inc. Phone 386.775.7EDS 615 N. Charles Richard Beall Blvd, Suite 103 Fax 386.775.6364 Debarry, FL 32713	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.  T-3
DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
11-08-07	JR	UPDATED PER FDOT COMMENTS		SR 50	LAKE	----	GENERAL NOTES	

**SIGN HEAD DETAILS**

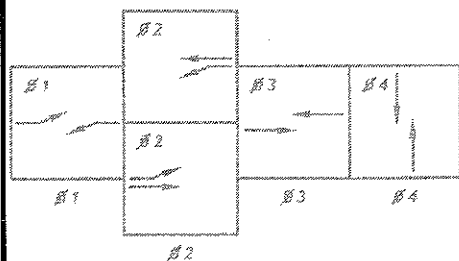


**OVERHEAD DETAILS**

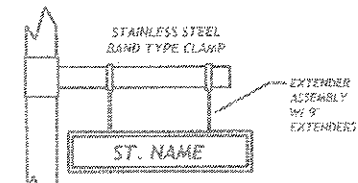


DETECTORS FOR LOOPS			
NO. OF LOOPS	NO. OF DETS.	LOOPS ON DETECTOR CHANNEL	DELAY TIME (SECS.)
1	1	L-1	-
2	1	L2A, L2B	-
2	1	L2C, L2D	-
1	1	L-4A	-
1	1	L-4	5
1	1	L-5	-
2	1	L6A, L6B	-
2	1	L6C, L6D	-
1	1	L-8R	5
1	1	L-8	-

**MOVEMENT DIAGRAM SOP 7**



**TWO POINT TAPERED ARM SIGN MOUNTING ASSEMBLY DETAIL**



PELCO SWIVEL TYPE BRACKET OR EQUIVALENT ARE ACCEPTABLE

**CONTROLLER TIMING PLAN**

TIMING INTERVAL	TIMING FUNCTION							
	1	2	3	4	5	6	7	8
MINIMUM GREEN (INITIAL)	51	17	-	5	5	17	-	5
EXTENSION (PASSAGE)	3	3	-	3	3	3	-	3
MAXIMUM GREEN I	20	50	-	30	20	90	-	30
MAXIMUM GREEN II	-	-	-	-	-	-	-	-
YELLOW	4	5	-	4	4	5	-	4
ALL RED	2	2	-	2	2	2	-	2
PEDESTRIAN WALK	-	-	-	-	-	-	-	-
PEDESTRIAN CLEAR	-	-	-	-	-	-	-	-
RECALL	-	MIN	-	-	-	MIN	-	-
DETECTOR FUNCTION	NL	L	-	NL	NL	L	-	NL
FLASH OPERATION	R	Y	-	R	R	Y	-	R

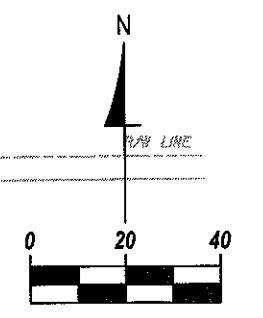
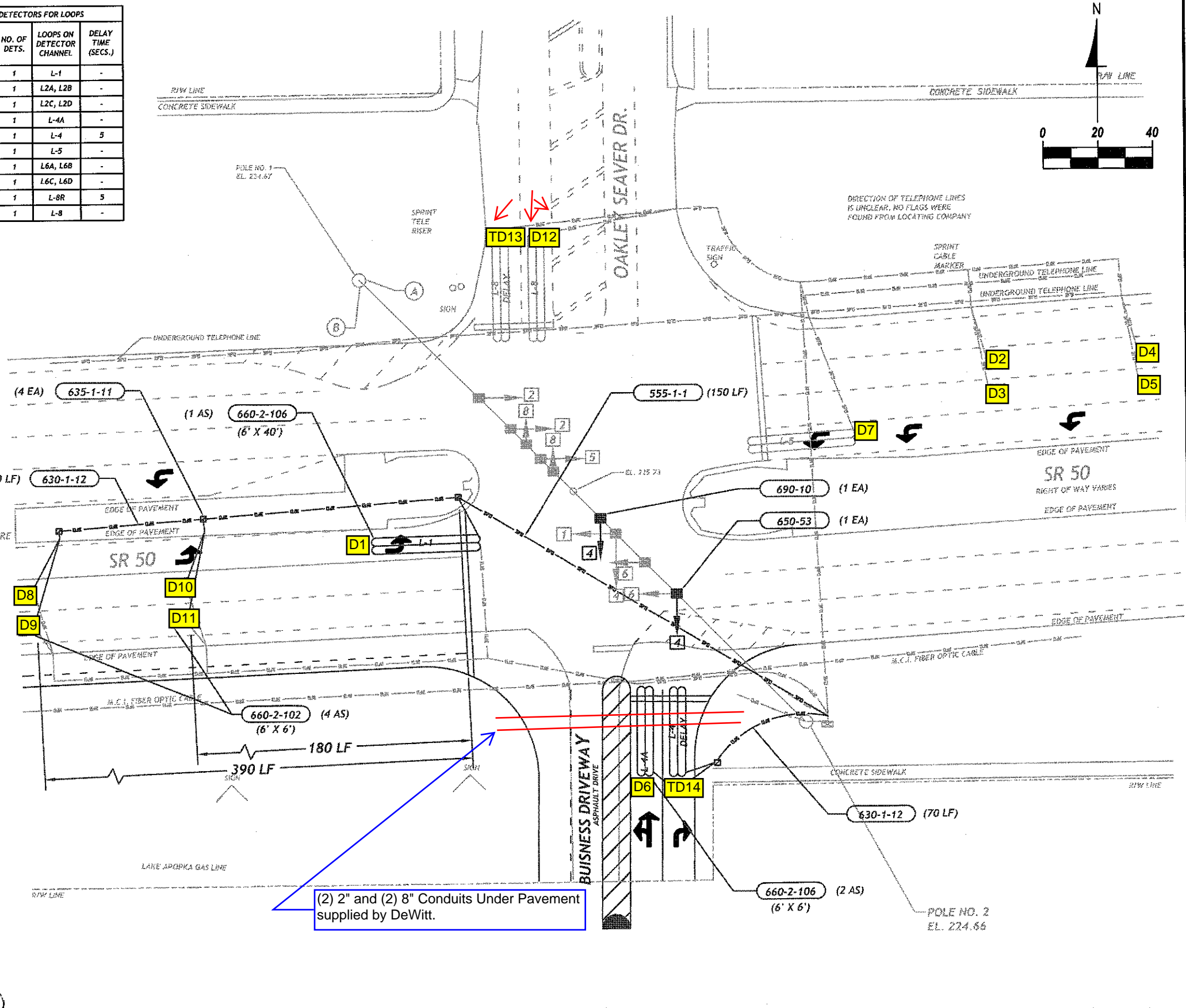
**CONTROLLER OPERATIONS:**

- THE MAJOR STREET IS SR 50 AND THE MINOR STREET IS OAKLEY SEAVER DR.
- DURING FLASHING OPERATIONS, MOVEMENTS 2 & 6 SHALL FLASH YELLOW AND MOVEMENT 1, 4, 5 AND 8 SHALL RED LIGHTS.
- THE SIGNAL CABINET AND CONTROLLER SHALL BE WIRED AND PROGRAMMED FOR CONCURRENT TIMING OF THE INITIAL AND PASSAGE INTERVALS. THE CABINET SHALL BE WIRED TO ACCOMMODATE SOP 10.

**NOTES:**

- SPEED LIMIT ON SR 50 - 55 MPH AND OAKLEY SEAVER DR. - 30 MPH.
- CONTRACTOR IS TO ENSURE THAT LOOP WINDOWS ARE LOCATED OFF RADII.
- ALL SIGNALS TO BE LED'S.
- LEAVE AT LEAST 2.5 FEET OF SPACE BETWEEN PULL BOX AND POWER POLE.
- EXISTING ENTRY INTO CABINET TO BE USED FROM EXISTING PULL BOX.

*[Handwritten signature]*



REVISIONS		
DATE	BY	DESCRIPTION
11-8-07	JR	UPDATED PER FDOT COMMENTS

Engineer of Record:  
**Fred Ferrell, N.E.**  
 PE No. 41902  
 Date: November 14, 2007

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 50	LAKE	---

**SIGNALIZATION PLAN**

SHEET NO.  
**T-4**