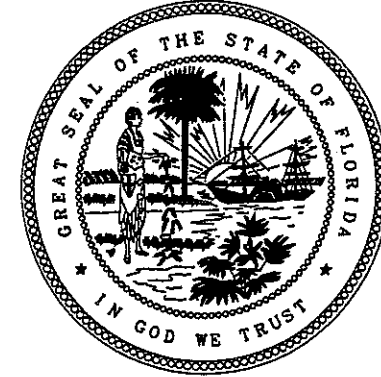


THIS CONTRACT PLAN SET INCLUDES
SIGNAL MODIFICATION PLANS

LAKE COUNTY, FLORIDA



INDEX OF SIGNAL PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET / GENERAL NOTES / QUANTITIES
T-2	SIGNAL MODIFICATION PLAN SHEET
T-3	STRAIN POLE DETAILS

PLANS PREPARED IN ACCORDANCE WITH
FDOT STANDARDS - BOOKLET DATED JANUARY 2006.

GOVERNING SPECIFICATIONS; STATE OF FLORIDA,
DEPARTMENT OF TRANSPORTATION, STANDARD
SPECIFICATIONS DATED 2007 AND SUPPLEMENTS
THERE TO IF NOTED IN THE SPECIAL PROVISIONS
FOR THIS PROJECT.

ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN REDUCED IN
SIZE BY REPRODUCTION. THIS MUST BE
CONSIDERED WHEN OBTAINING SCALED DATA.

SIGNAL MODIFICATION PLANS

SR 44/ORANGE AVENUE & SR 44/LILY POND DRIVE

RECEIVED
NOV 5 2007
TRAFFIC OPERATIONS

FINAL

NOT FOR CONSTRUCTION

OCT 30 2007

GENERAL NOTES

- THE SIGNALIZATION PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION'S ROADWAY AND TRAFFIC DESIGN STANDARDS, DATED 2006. GOVERNING SPECIFICATIONS ARE THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, DATED 2007.
 - THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.
 - IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY DIRECTIONAL BORE JACKING OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE FDOT SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOTIFY SUNSHINE ONE-CALL 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. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING CURRENT LOCATE TICKET THROUGHOUT THE DURATION OF THE WORK.
 - CONTRACTOR TO NOTIFY LAKE COUNTY AND THE FDOT 2 BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION.
 - THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH 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 10 DAYS IN ADVANCE. LAKE COUNTY AND RAY MARLIN (386) 943-5318 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO THEY MAY BE PRESENT.
 - ALL ENDS OF CONDUITS IN PULL BOXES AND CABINETS SHALL BE SEALED WITH ELECTRICAL PUTTY AFTER WIRING IS COMPLETE.
 - ALL CONDUIT SHALL BE SCHEDULE 40, 2 INCH (5 CM) DIA. MINIMUM UNLESS OTHERWISE SPECIFIED IN PLANS, EXCEPT ELECTRICAL POWER SERVICE DUCT.
 - UNDER NO CIRCUMSTANCES SHALL ENERGIZED CABLE BE PLACED IN THE SAME CONDUIT OR PULL BOX AS LOOP LEAD-IN CABLE.
 - PULL BOXES AND COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE.
 - F TYPE LOOPS SHALL BE 40' LONG BY 6' WIDE AND EXTEND 5' BEYOND THE STOP BAR.
 - DELAY TIMES SHALL BE SET TO 5 SECONDS.
 - ANY NEW OR EXISTING STRIPING CUT BECAUSE OF LOOP PLACEMENT SHALL BE RESTRIPEDED PRIOR TO ACCEPTANCE.
 - OVERHEAD BELDONS SHALL BE UV RATED.
 - CONTROLLER SHALL BE PLACED UPON EXISTING CONTROLLER PAD. IF NECESSARY, CONCRETE CONTROLLER PAD SHALL BE WIDENED/MODIFIED TO ACCOMMODATE THE NEW CONTROLLER CABINET.
 - EXISTING CONTROLLER SHALL BE REMOVED (PAY ITEM 690-50-1). NEW ASSEMBLY SHALL BE LAKE COUNTY NAZTEC REGIONAL TS2/1 WITH A TS2/2 CONTROLLER ETHERNET ENABLED FOR LAKE COUNTY CLOSED LOOP SYSTEM.
 - A GENERATOR PAD, 3'X3'X4" CONCRETE SHALL BE INSTALLED.
 - GROUNDING FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 25 OHMS OR LESS.
 - THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION WHEN POSSIBLE.
 - PAY ITEM 650-54-311 SHALL INCLUDE THE INSTALLATION OF A 2-WAY MOUNTING BRACKET WHEN NECESSARY.
 - THE CONTRACTOR SHALL HAND DIG THE FIRST 4' AT EACH POLE LOCATION TO VERIFY NO UTILITY CONFLICTS.
 - SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS; THE USE OF "JONES PLUGS" SHALL BE PROHIBITED.
 - OPTICOM PREEMPTION OR EQUIVALENT SHALL BE INSTALLED FOR THE NB APPROACH OF SR 44, AND SHALL INCLUDE ALL EQUIPMENT AND TIMINGS TO BE MADE FULLY OPERATIONAL AND FUNCTIONAL.
 - LED INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE INSTALLED 1' BELOW MESSENGER CABLE, ATTACHED TO THE SIGNAL POLE, POWERED BY A SEPARATE CIRCUIT BREAKER, AND BE DESIGNED IN ACCORDANCE WITH LAKE COUNTY PUBLIC WORKS INTERNALLY ILLUMINATED STREET NAME SIGN DETAIL.
- THERE SHALL BE NO EASTBOUND AND WESTBOUND LANE CLOSURES BETWEEN THE HOURS OF 7:00 A.M. TO 7:00 P.M. A MAXIMUM OF ONE LANE CAN BE CLOSED IN EACH DIRECTION DURING ACTIVE WORK PERIODS. ALL LANES ARE TO BE OPEN DURING INACTIVE PERIODS.
- MAINTENANCE OF TRAFFIC SHALL BE ESTABLISHED FOR TRAFFIC CONTROL THROUGH WORK ZONE IN ACCORDANCE WITH FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX #600. THE MAINTENANCE OF SIGNALS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR, FROM THE TIME WORK BEGINS UNTIL FINAL ACCEPTANCE.

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	SHEET #	
			T-2	
			ORIG.	FINAL
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
630-1-11	CONDUIT - ABOVEGROUND (RISER)	LF	25	
630-1-12	CONDUIT - UNDERGROUND	LF	150	
632-7-1	SIGNAL CABLE	PI	1	
634-4-114	SPAN WIRE ASSEMBLY	PI	1	
635-1-11	PULL BOXES	EA	3	
641-16-146	CONCRETE STRAIN POLE, TYPE NVII, 46'	EA	2	
650-54-311	RELOCATE TRAFFIC SIGNAL, 3 SECTION (SEE NOTE #16)	EA	5	
650-54-321	RELOCATE TRAFFIC SIGNAL, 3 SECTION TWO-WAY	EA	1	
650-54-511	RELOCATE TRAFFIC SIGNAL, 5 SECTION	EA	1	
659-120	LED SCREW IN MODULE			
	GREEN BALL	EA	8	
	GREEN ARROW	EA	1	
	YELLOW BALL	EA	8	
	YELLOW ARROW	EA	1	
660-1-109	INDUCTIVE LOOP DETECTOR	EA	6	
660-2-102	LOOP ASSEMBLY, TYPE 'B'	AS	4	
660-2-106	LOOP ASSEMBLY, TYPE 'F'	AS	6	
663-74-11	ONE WAY OPTICOM (SEE NOTE #19)	AS	1	
670-5-111	CONTROLLER ASSEMBLY (SEE NOTE #15)	AS	1	
690-33	STRAIN POLE REMOVAL, DEEP	LF	30	
690-50-1	REMOVE CONTROLLER ASSEMBLY, LESS FOUNDATION	EA	1	
690-80	REMOVE SPAN WIRE ASSEMBLY (3 SPANS)	PI	1	
690-90	REMOVE CABLING AND CONDUIT	PI	1	
699-1-1	INTERNALLY ILLUMINATED STREET SIGN, CANTILEVER	EA	4	
	FIELD LOCATE UTILITIES	LS	1	
	AUGMENT STRAIN POLE FOUNDATION (SEE T-3, NOTE 7)	LS	1	

KEY SHEET / NOTES / QUANTITIES

SR 44/ORANGE AVENUE &
SR 44/LILY POND DRIVE

LAKE COUNTY, FLORIDA

TURCOT DERSVISH
FLORIDA P.E. NO. 20400

TPD JOB# 3537 D3

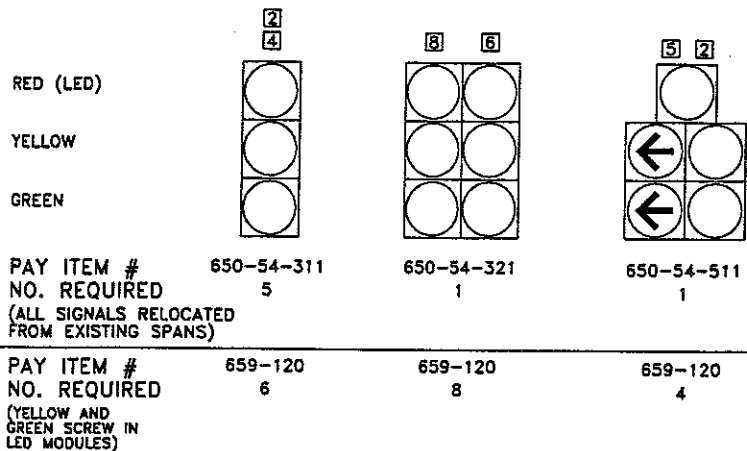
Traffic Planning and Design, Inc.
535 Versailles Drive Maitland, FL 32751
Tel: (407) 828-9955 Fax: (407) 828-8850
E-Mail: turgat@tpdtraffic.com

Certificate of Authorization No. EB-9702

7-18-07 REVISIONS
7-18-07 REVISED PER FDOT COMMENTS DATED 6-29-07, 7-18-07
10-12-07 REVISED PER LAKE CO. COMMENTS DATED 7-16-07

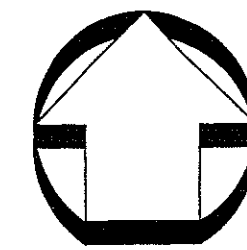
SCALE N/A
DRAWN DF
DESIGNED DF
CHECKED TD

SIGNAL HEAD DETAIL



INTERNALLY ILLUMINATED CANTILEVER ARM MOUNTED STREET NAME SIGNS (LAKE CO. STD.)

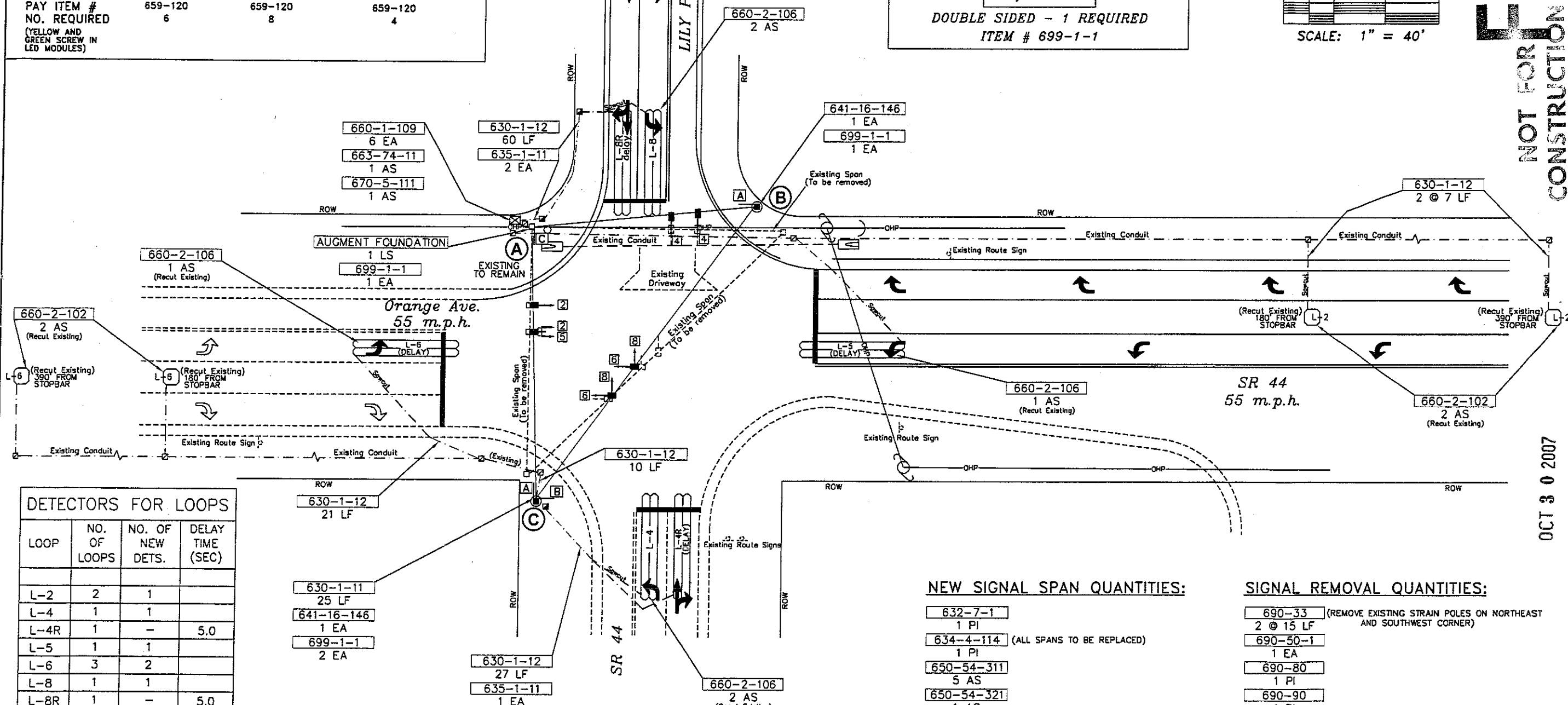
- SR 44 [A] DOUBLE SIDED - 2 REQUIRED
- Orange Ave. [B] DOUBLE SIDED - 1 REQUIRED
- Lily Pond Dr. [C] DOUBLE SIDED - 1 REQUIRED
- ITEM # 699-1-1



GRAPHIC SCALE
0 10 20 40 60
SCALE: 1" = 40'

FINAL

NOT FOR CONSTRUCTION



DETECTORS FOR LOOPS

LOOP	NO. OF LOOPS	NO. OF NEW DETS.	DELAY TIME (SEC)
L-2	2	1	
L-4	1	1	
L-4R	1	-	5.0
L-5	1	1	
L-6	3	2	
L-8	1	1	
L-8R	1	-	5.0

CONTROLLER TIMINGS

MOVEMENT	MIN.	EXT.	MAX.	CLEAR	ALL RED	WALK	FDW.	RECALL	DETECTOR FUNCTION
2	15	3	50	5	2	-	-	MIN.	LOCK
4	5	3	30	4.3	1	-	-	OFF	NL
5	5	3	15	5	2	-	-	OFF	NL
6	15	3	50	5	2	-	-	MIN.	LOCK
8	5	3	30	4.3	1	-	-	OFF	NL

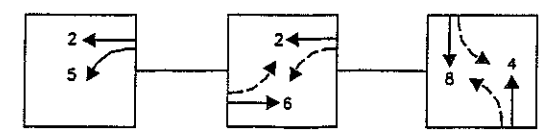
NEW SIGNAL SPAN QUANTITIES:

- 632-7-1 1 PI
- 634-4-114 (ALL SPANS TO BE REPLACED) 1 PI
- 650-54-311 5 AS
- 650-54-321 1 AS
- 650-54-511 1 AS
- 659-120 18 EA

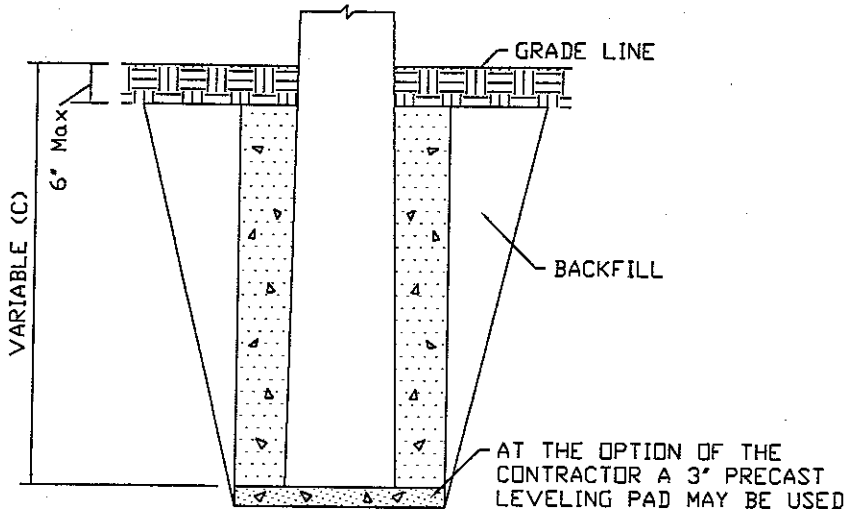
SIGNAL REMOVAL QUANTITIES:

- 690-33 (REMOVE EXISTING STRAIN POLES ON NORTHEAST AND SOUTHWEST CORNER) 2 @ 15 LF
- 690-50-1 1 EA
- 690-80 1 PI
- 690-90 1 PI

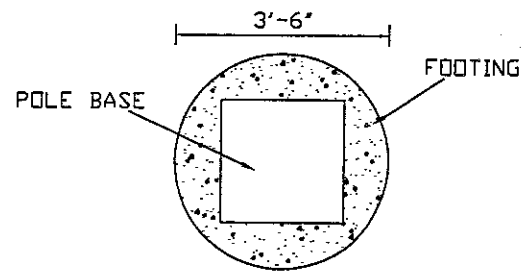
MOVEMENT CHART



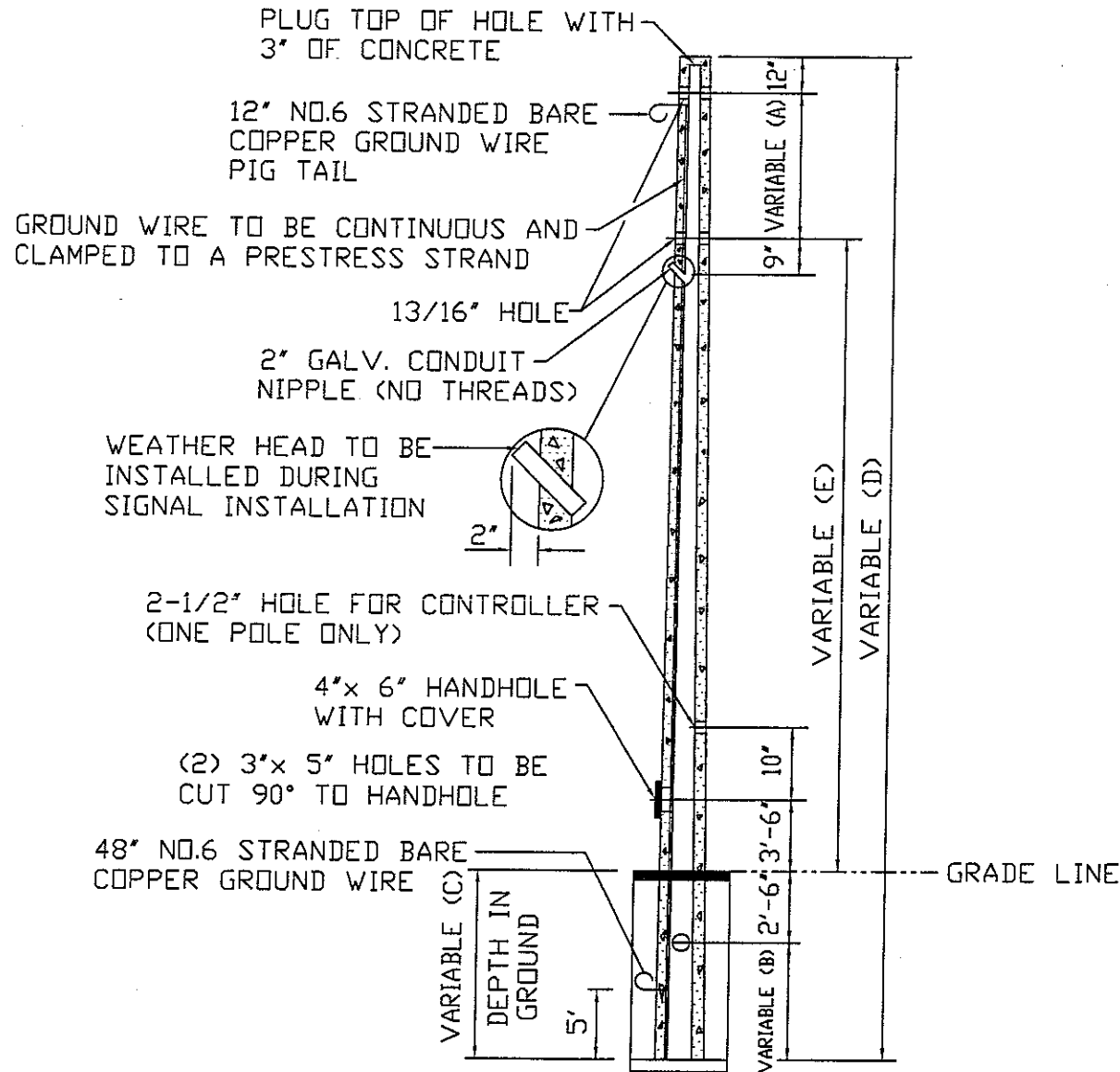
SIGNAL MODIFICATION PLAN SHEET
 SHEET T-2 OF T-3
 TURGT DERVISH
 FLORIDA P.E. NO. 20400
 SR 44/ORANGE AVENUE &
 SR 44/LILY POND DRIVE
 LAKE COUNTY, FLORIDA
 TPD JOB# 3537 D3
 OCT 30 2007
 Traffic Planning and Design, Inc.
 585 Versailles Drive Maitland, FL 32751
 Tel: (407) 628-9955 Fax: (407) 628-8850
 E-Mail: turgt@tpdtraffic.com
 Certificate of Authorization No. EB-3702



SECTION 'A' 'A'

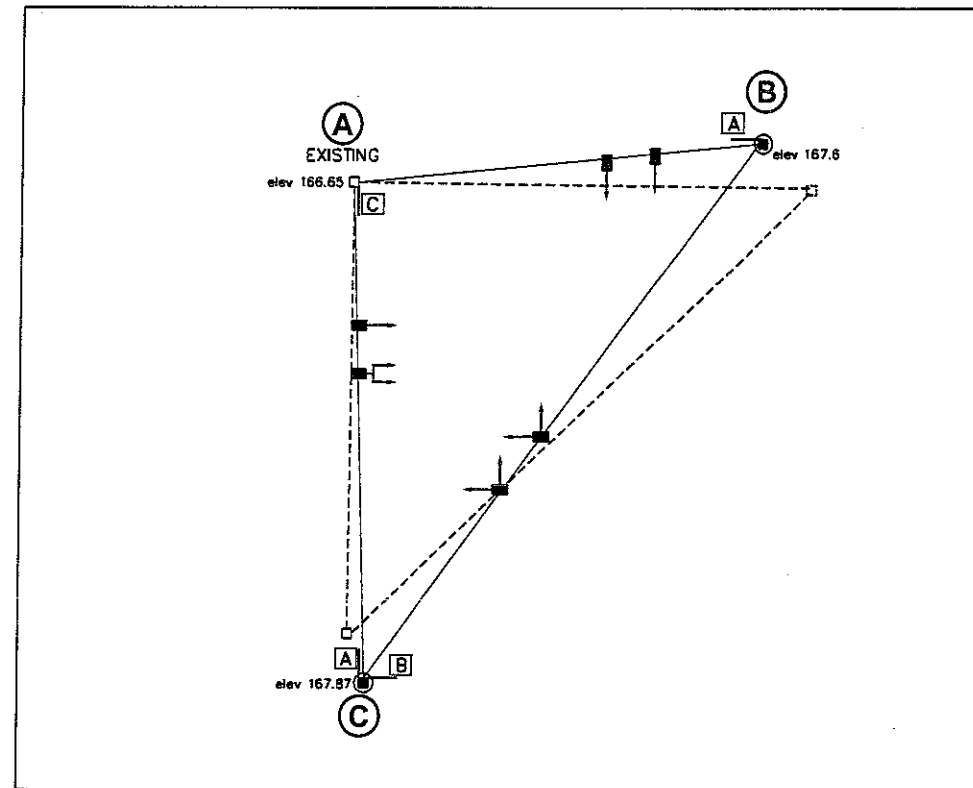


FOUNDATION PLAN



GENERAL NOTES:

1. The method for wire attachment to the concrete poles shall be two point. The footing depth shall be no less than the pole embedment length.
2. It is the responsibility of the contractor to have exact locations of all utilities prior to beginning work.
3. All materials and hardware shall be preapproved by Lake County Traffic Engineering and FDOT.
4. A 17.5' to 19' clearance shall be maintained between the road surface and the bottom of the signal heads.
5. The catenary wire shall be 3/8" diameter and the messenger cable 3/8" diameter.
6. Based upon information provided by the project geotechnical engineer, the foundation for pole A is estimated to be 72" in diameter with an unknown depth. The top of the existing foundation is approximately 18" below existing grade. If at any time information is found that suggests that the existing foundation does not extend to the bottom of the strain pole, the Engineer shall be advised immediately in writing. The Engineer will determine what modifications are necessary.
7. The existing foundation (Pole A) shall be extended upward by constructing a new concrete collar directly on top of the existing foundation. The new concrete collar shall be a minimum of 48" in diameter and shall extend to 6" below grade. The top surface of the existing foundation shall be cleaned and a bonding agent applied to the top of the existing foundation immediately prior to placement of the new concrete collar. No dowels or other measures to connect the new collar to the existing foundation nor to the existing strain pole are required. The concrete for the collar shall be FDOT class 1.
8. Power lines and other overhead and underground utilities may impact construction.



POLE SCHEDULE

ITEM NO.	POLE	TYPE	A	B	C	D	E
(EXISTING)	'A'	NV	5.50	10.3	12.80	45	25.70
641-16-146	'B'	NVII	7.92	9.83	12.33	46	24.75
641-16-146	'C'	NVII	7.92	10.08	12.58	46	24.50

Catenary Cable: 3/8" diameter Utility Grade
 Messenger Cable: 3/8" diameter Utility Grade

FINAL

NOT FOR CONSTRUCTION
 OCT 3 0 2007

SHEET T-3 OF T-3
 TURGUT DERVISH
 FLORIDA P.E. NO. 20400
 SR 44/ORANGE AVENUE &
 SR 44/LILY POND DRIVE
 LAKE COUNTY, FLORIDA
 TPD JOB# 3537 D3

STRAIN POLE DETAILS

Traffic Planning and Design, Inc.
 535 Versailles Drive Maitland, FL 32761
 Tel: (407) 628-8955 Fax: (407) 628-8950
 E-Mail: turgut@tpdtraffic.com
 Certificate of Authorization No. EB-3702

CHECKED	DESIGNED	DRAWN	SCALE
TD	DF	DF	1" = 40'

REVISIONS
 DATE
 7-18-07 REVISED PER FDOT COMMENTS DATED 6-25-07
 7-18-07 REVISED PER LAKE CO. COMMENTS DATED 7-18-07
 10-12-07 REVISED PER FDOT AND COUNTY COMMENTS