

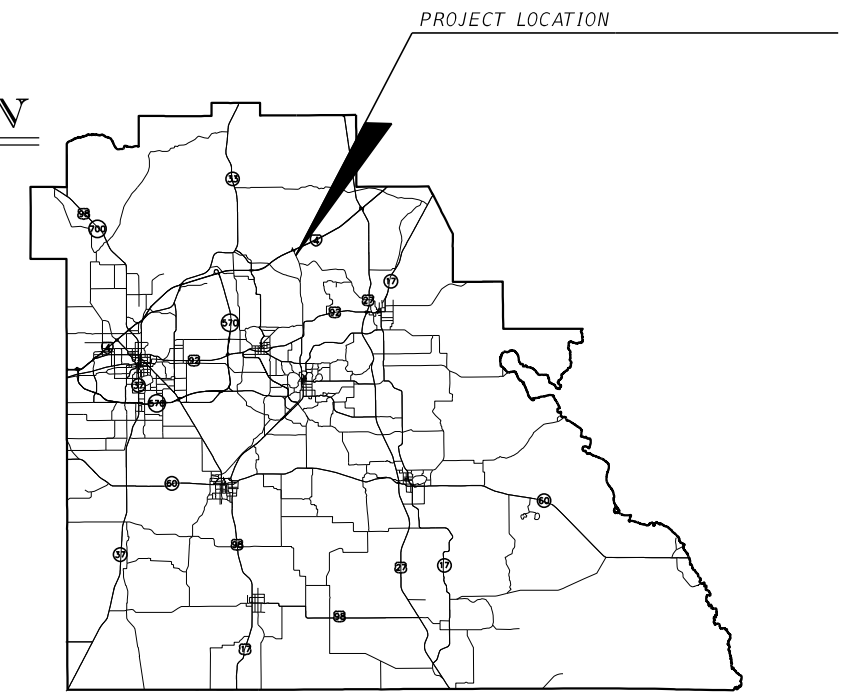


POLK COUNTY ROADS AND DRAINAGE DIVISION

CONTRACT PLANS

POLK COUNTY
 COUNTY ROAD NO. 557
 PROJECT NO. 18-73

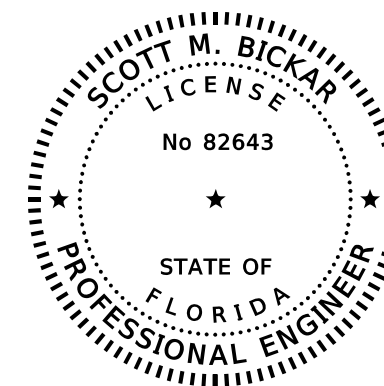
SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3	GENERAL NOTES
T-4	SIGNALIZATION PLAN
T-5	QUADRANT DETAILS
T-6	INTERNALLY ILLUMINATED SIGN DETAILS
T-7	MAST ARM TABULATION
T-8	STANDARD MAST ARM ASSEMBLIES DATA TABLE
T-9	UTILITY PLAN
GT-1	REPORT OF SPT BORINGS FOR STRUCTURES *

*NOT INCLUDED IN THIS SUBMITALL



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90% SUBMITTAL
 FEBRUARY 2023
 PRELIMINARY NOT
 FOR CONSTRUCTION

SIGNALIZATION PLANS
 ENGINEER OF RECORD:

SCOTT M. BICKAR, P.E.
 P.E. LICENSE NUMBER 82643
 DEWBERRY ENGINEERS INC.
 800 N. MAGNOLIA AVENUE, SUITE 1000
 ORLANDO, FL 32803
 CERTIFICATE OF AUTHORIZATION 8794

POLK COUNTY PROJECT MANAGER:
 AUSTIN POTTS, P.E.

SHEET NO.

T-1

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														GRAND TOTAL	
			T-4														PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL				
630-2-11	CONDUIT (F&I) (UNDERGROUND)	LF	400														400	
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	210														210	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1														1	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	14														14	
639-1-420	ELECTRICAL POWER SERVICE, RELOCATE, UNDERGROUND	AS	1														1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	50														50	
641-2-80	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- POLE 30' AND GREATER	EA	2														2	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4														4	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA	1														1	
649-21-13	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, DOUBLE ARM 60'-50'	EA	1														1	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	8														8	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	4														4	
660-1-106	LOOP DETECTOR INDUCTIVE, F&I, TYPE 6, 2 CH,SS,S,TD	EA	3														3	
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	AS	4														4	
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	AS	3														3	
663-1-122	SIGNAL PRIORITY AND PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA	1														1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	4														4	
670-5-110	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA	AS	1														1	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS	1														1	
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OVERHEAD MOUNT 12-18 SF	EA	3														3	

REVISIONS				SCOTT M. BICKAR, P.E. P.E. LICENSE NUMBER 82643 DEWBERRY ENGINEERS INC. 800 NORTH MAGNOLIA AVE., SUITE 1000 ORLANDO, FL 32803	POLK COUNTY ROADS AND DRAINAGE DIVISION			TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PROJECT NO.		T-2
					CR 557	POLK	18-73		

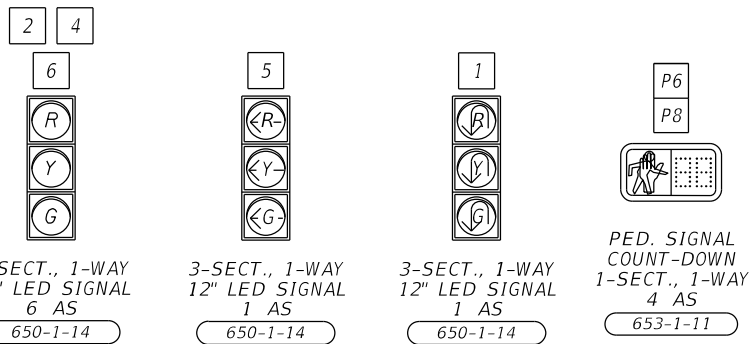
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GENERAL NOTES

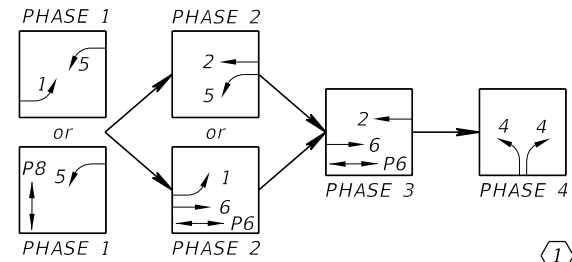
POLK COUNTY:

1. ALL MAST ARMS POLES (PREFERRED) ARE TO BE NON-PAINTED GALVANIZED, SEE F.D.O.T. STANDARD PLANS INDEX 649-031 FOR STATE DESIGN REQUIREMENTS. ALL SIGNAL HEADS ON MAST ARMS MUST BE RIGID MOUNTED USING STAINLESS STEEL WIRE ROPE CABLE. IF SPAN WIRE INSTALLATION IS USED, BOX CONFIGURATION IS PREFERRED. SPAN WIRE INSTALLATION SHALL HAVE SIGNAL CABLE HARD WIRED IN THE MARATHON BLOCKS TO SIGNAL HEADS (NO JONES PLUGS).
2. USE TERMINAL STRIP FOR ALL MAST ARM SPLICES IN THE POLE BASES. NO EPOXY FILLED CONNECTORS IN ANY OTHER SPLICES. (USE POLK COUNTY WIRING DIAGRAM)
3. PROVIDE NAZTEC TS-2, TYPE 1 CONTROLLER WITH TYPE VI CABINET. CABINETS SHALL HAVE A WIRED IN 32 DETECTOR PANEL, AND 2 DETECTOR RACKS. UPS SHALL HAVE A STANDALONE FOUNDATION AND CABINET.
4. ALL CONTROLLER EQUIPMENT MUST BE COMPATIBLE WITH POLK COUNTY'S EXISTING CENTRAL SOFTWARE SYSTEM (NAZTEC ATMS NOW). CONTACT POLK COUNTY PRIOR TO ORDERING ANY EQUIPMENT TO CONFIRM.
5. USE LOOP DETECTION AT ALL LOCATIONS WHEN POSSIBLE. IF LOOPS ARE NOT USED, RADAR DETECTION IS PREFERRED.
6. PULL BOXES ARE TO BE POLYMER CONCRETE. PULL BOXES FOR COMMUNICATIONS WILL BE 24" X 36".
7. POLK COUNTY TRAFFIC OPERATIONS WIRING DIAGRAM TO BE USED WHEN WIRING DISCONNECTS AND SIGNALS. (CONTACT POLK COUNTY FOR POLK COUNTY WIRING DIAGRAM.)
8. USE INFRARED PREEMPTION ON ALL EMERGENCY ROUTES.
9. SEND POLK COUNTY A COPY OF "AS BUILT" PLANS WHEN CONSTRUCTION IS COMPLETE.
10. RETURN ALL REMOVED SIGNAL EQUIPMENT TO POLK COUNTY.
11. OVERHEAD INTERNALLY ILLUMINATED STREET SIGNS SHALL BE LED EDGE LIT TYPE (NO FLUORESCENT). SIGNS WILL BE FREE SWINGING MOUNTED ON A GALVANIZED CLAMP ON CANTILEVER ARM ON POLE. (SIGNS LIMITED TO 10' MAX LENGTH) ALL SIGNS SHOULD HAVE INTERNAL PHOTO CELLS BYPASSED. INSTALL PHOTOCELLS FOR OVERHEAD STREET NAME SIGNS AND LUMINARIES ON THE ELECTRICAL SERVICE DISCONNECT.
12. USE 6' X 40' TYPE "F" LOOPS FOR SIDE STREET AND MAIN STREET LEFT TURN MOVEMENTS. PLACE LOOP 2' IN ADVANCE OF THE STOP BAR.
13. ALL OTHER ASPECTS OF CONSTRUCTION SHALL ADHERE TO FDOT SPECIFICATIONS.

REVISIONS				SCOTT M. BICKAR, P.E. P.E. LICENSE NUMBER 82643 DEWBERRY ENGINEERS INC. 800 NORTH MAGNOLIA AVE., SUITE 1000 ORLANDO, FL 32803	POLK COUNTY ROADS AND DRAINAGE DIVISION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PROJECT NO.		
						CR 557	POLK		18-73



MOVEMENT CHART S.O.P. 7 (MODIFIED)

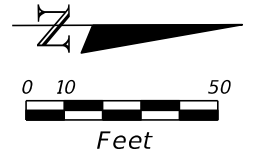


REMOVAL ITEMS
 2 EA 641-2-80
 1 AS 670-5-600

Evenhouse RD 640
 1 EA 700-5-22

Evenhouse 640 RD
 1 EA 700-5-22

CR 557 1000 1100
 1 EA 700-5-22

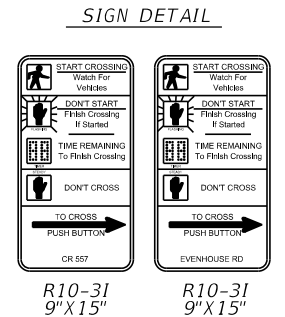
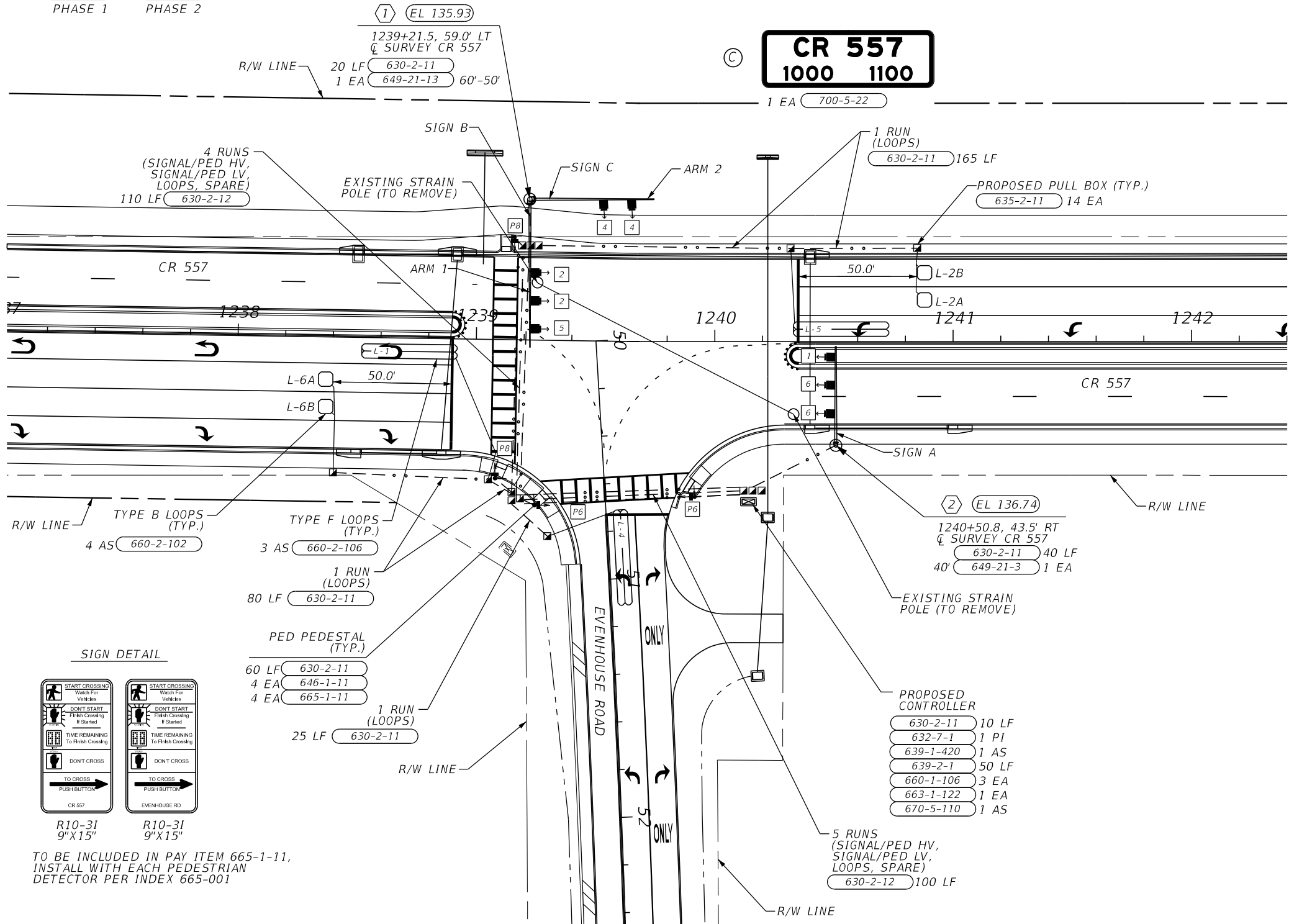


- NOTES:
- MAJOR STREET IS CR 557 MOVEMENTS 1, 2, 5 AND 6) MINOR STREET IS EVENHOUSE RD (MOVEMENTS 4 AND 8)
 - POSTED SPEED ON CR 557 IS 45 MPH. POSTED SPEED ON EVENHOUSE RD IS 35 MPH.

TIMING FUNCTION	1	2	3	4	5	6	7	8
MINIMUM GREEN	7	20		7	7	20		
EXTENSION	3	3		3	3	3		
MAXIMUM GREEN 1	20	45		20	20	45		
MAXIMUM GREEN 2								
YELLOW CLEARANCE	3.4	4.8		3.4	3.4	4.8		
ALL RED	2.2	2.3		4.3	3.5	2.5		
PEDESTRIAN WALK							7	7
PED. CLEARANCE							17	26
DET. FUNCTION		MIN				MIN		

CONTROLLER TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

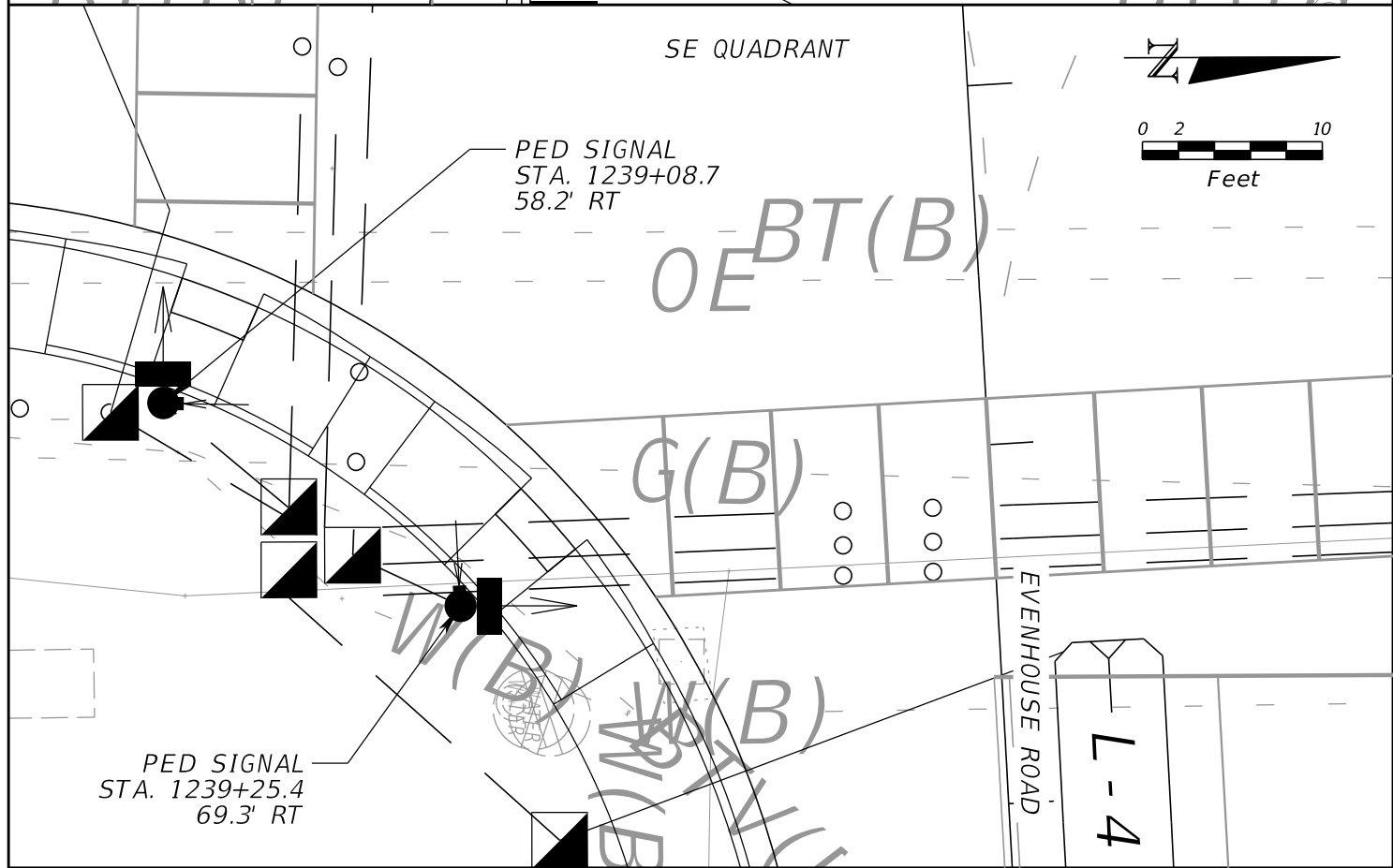
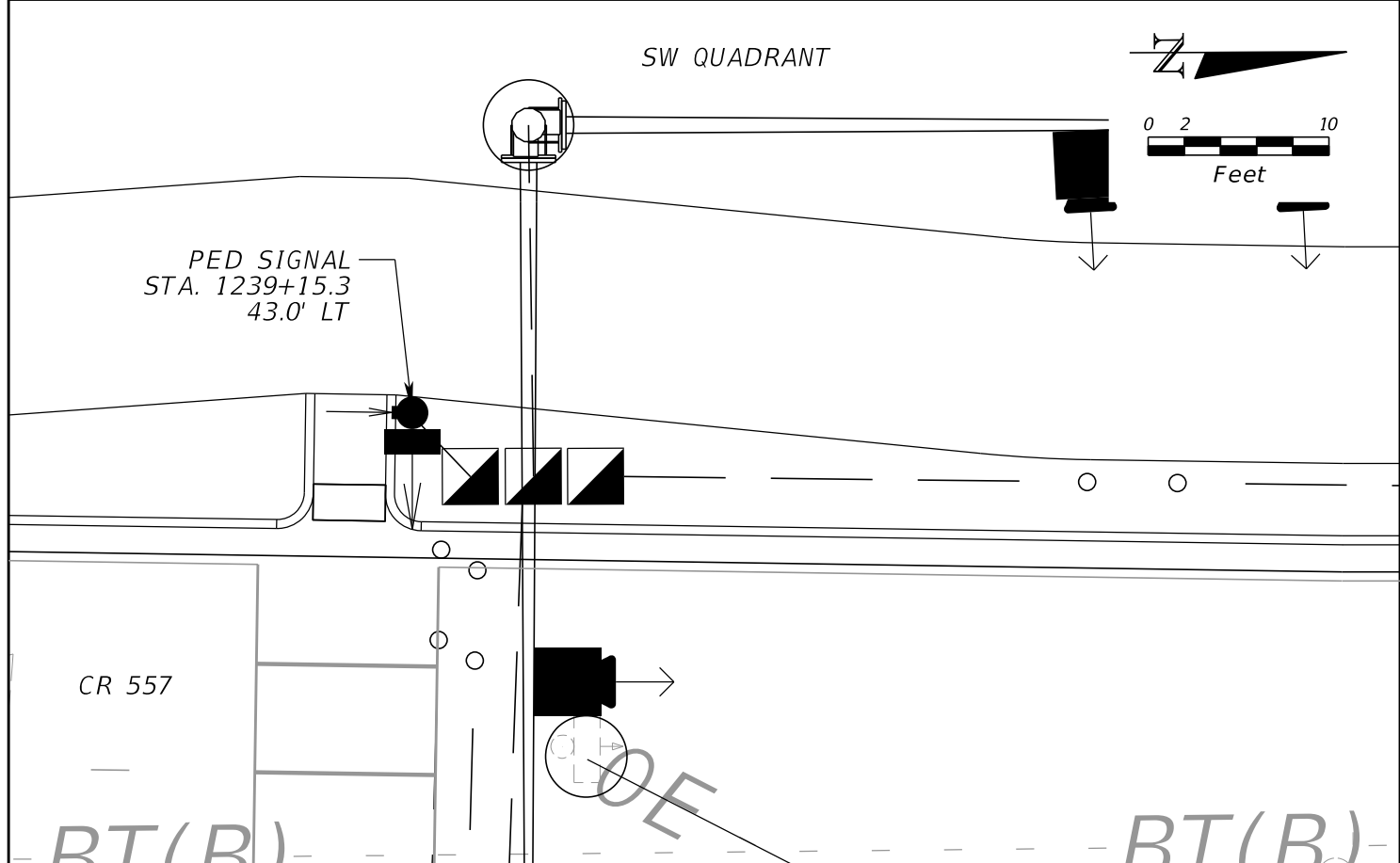
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	CHANNEL NO.	DELAY TIME (SEC)
L-1	1	1		0
L-2A	1	1		0
L-2B	1	1		0
L-4	1	1		0
L-5	1	1		0
L-6A	1	1		0
L-6B	1	1		0



TO BE INCLUDED IN PAY ITEM 665-1-11, INSTALL WITH EACH PEDESTRIAN DETECTOR PER INDEX 665-001

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PROJECT NO.		
					CR 557	POLK	18-73		



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SCOTT M. BICKAR, P.E.
P.E. LICENSE NUMBER 82643
DEWBERRY ENGINEERS INC.
800 NORTH MAGNOLIA AVE., SUITE 1000
ORLANDO, FL 32803

POLK COUNTY ROADS AND DRAINAGE DIVISION		
ROAD NO.	COUNTY	PROJECT NO.
CR 557	POLK	18-73

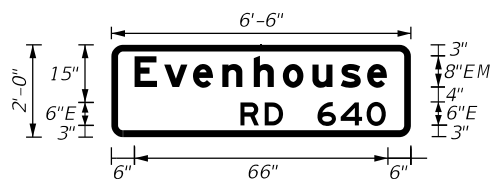
QUADRANT DETAILS
CR 557 AND EVENHOUSE RD

SHEET NO.
T-5

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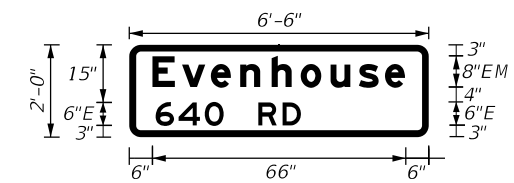
SIGN NUMBER	A
QUANTITY	1
WIDTH	6'-6"
HEIGHT	2'-0"
BORDER WIDTH	0.5"
BORDER RADII	1.5"
BACKGROUND COLOR	GREEN
LEGEND & BORDER COLOR	WHITE
STATIONS(S)	SEE PLANS
SHEETING	

NOTES:
DOUBLE-SIDED



SIGN NUMBER	B
QUANTITY	1
WIDTH	6'-6"
HEIGHT	2'-0"
BORDER WIDTH	0.5"
BORDER RADII	1.5"
BACKGROUND COLOR	GREEN
LEGEND & BORDER COLOR	WHITE
STATIONS(S)	SEE PLANS
SHEETING	

NOTES:
DOUBLE-SIDED

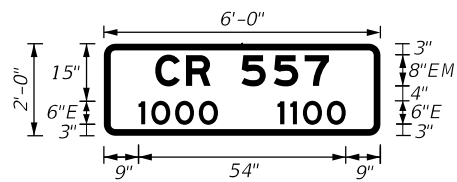


COPY		E	v	e	n	h	o	u	s	e									L
SPACE	6					66					6								66
COPY	R	D																	L
SPACE	11.1																		11.1
COPY	6	4	0																L
SPACE	17.7																		17.7
COPY																			
SPACE																			
COPY																			
SPACE																			

COPY		E	v	e	n	h	o	u	s	e									L
SPACE	6					66					6								66
COPY	6	4	0																L
SPACE	17.7																		17.7
COPY	R	D																	L
SPACE	11.1																		11.1
COPY																			
SPACE																			
COPY																			
SPACE																			

SIGN NUMBER	C
QUANTITY	1
WIDTH	6'-0"
HEIGHT	2'-0"
BORDER WIDTH	0.5"
BORDER RADII	1.5"
BACKGROUND COLOR	GREEN
LEGEND & BORDER COLOR	WHITE
STATIONS(S)	SEE PLANS
SHEETING	

NOTES:



SIGN NUMBER	
QUANTITY	
WIDTH	
HEIGHT	
BORDER WIDTH	
BORDER RADII	
BACKGROUND COLOR	
LEGEND & BORDER COLOR	
STATIONS(S)	
SHEETING	

NOTES:

COPY		C	R		5	5	7												L
SPACE	13.4					45.2				13.4									45.2
COPY		1	0	0	0		1	1	0	0									L
SPACE	9					54					9								54
COPY																			
SPACE																			
COPY																			
SPACE																			

COPY																			L
SPACE																			50.8
COPY																			L
SPACE																			56.4
COPY																			
SPACE																			
COPY																			
SPACE																			

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SCOTT M. BICKAR, P.E.
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DEWBERRY ENGINEERS INC.
800 NORTH MAGNOLIA AVE., SUITE 1000
ORLANDO, FL 32803

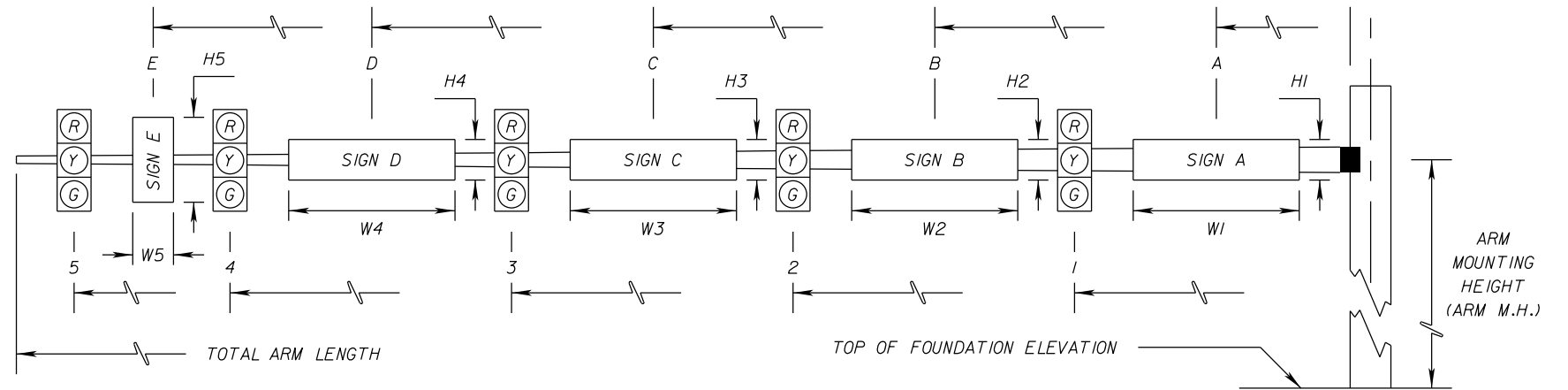
POLK COUNTY ROADS AND DRAINAGE DIVISION		
ROAD NO.	COUNTY	PROJECT NO.
CR 557	POLK	18-73

**INTERNALLY ILLUMINATED
STREET NAME SIGNS**

SHEET NO.
T-6

NOTE:

IF THE MAST ARM BASE IS ADJACENT TO A SIDEWALK, THE TOP OF THE FOUNDATION SHOULD BE FLUSH WITH THE SIDEWALK. IF IT IS NOT, THE MAST ARM BASE SHOULD BE 6 INCHES ABOVE THE SURROUNDING GRADE.



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUNDATION ELEVATION	GROUND ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL DATA													TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	SIGN DATA						PAINT COLOR								
							SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE													DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN														
										1	*	2	*	3	*	4	*	5	*				6	*	A	H1	W1	B		H2	W2	C	H3	W3			
1	T-4	STA 1239+21.5	135.93	135.43	1	135.57	V	Y	N	29	3	41	3	52.5	3																						GALVANIZED
					2	135.43				29	3	41	3																								
2	T-4	STA 1240+50.8	136.74	136.74	1	136.72	V	Y	N	12	3	24	3	35.5	3																						GALVANIZED

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SCOTT M. BICKAR, P.E.
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DEWBERRY ENGINEERS INC.
800 NORTH MAGNOLIA AVE., SUITE 1000
ORLANDO, FL 32803

POLK COUNTY ROADS AND DRAINAGE DIVISION		
ROAD NO.	COUNTY	PROJECT NO.
CR 557	POLK	18-73

MAST ARM TABULATION

SHEET NO.
T-7

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STANDARD MAST ARM ASSEMBLIES DATA TABLE											Table Date 11-01-16
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.)	
MA-1	A60/D-A50/D-P4/D	A60/D	-	A50/D	-	90	-	P4/D	-	20	DS/16/5.0
MA-2	A40/S-P2/S	A40/S	-	-	-	-	-	P2/S	-	20.5	DS/16/4.5

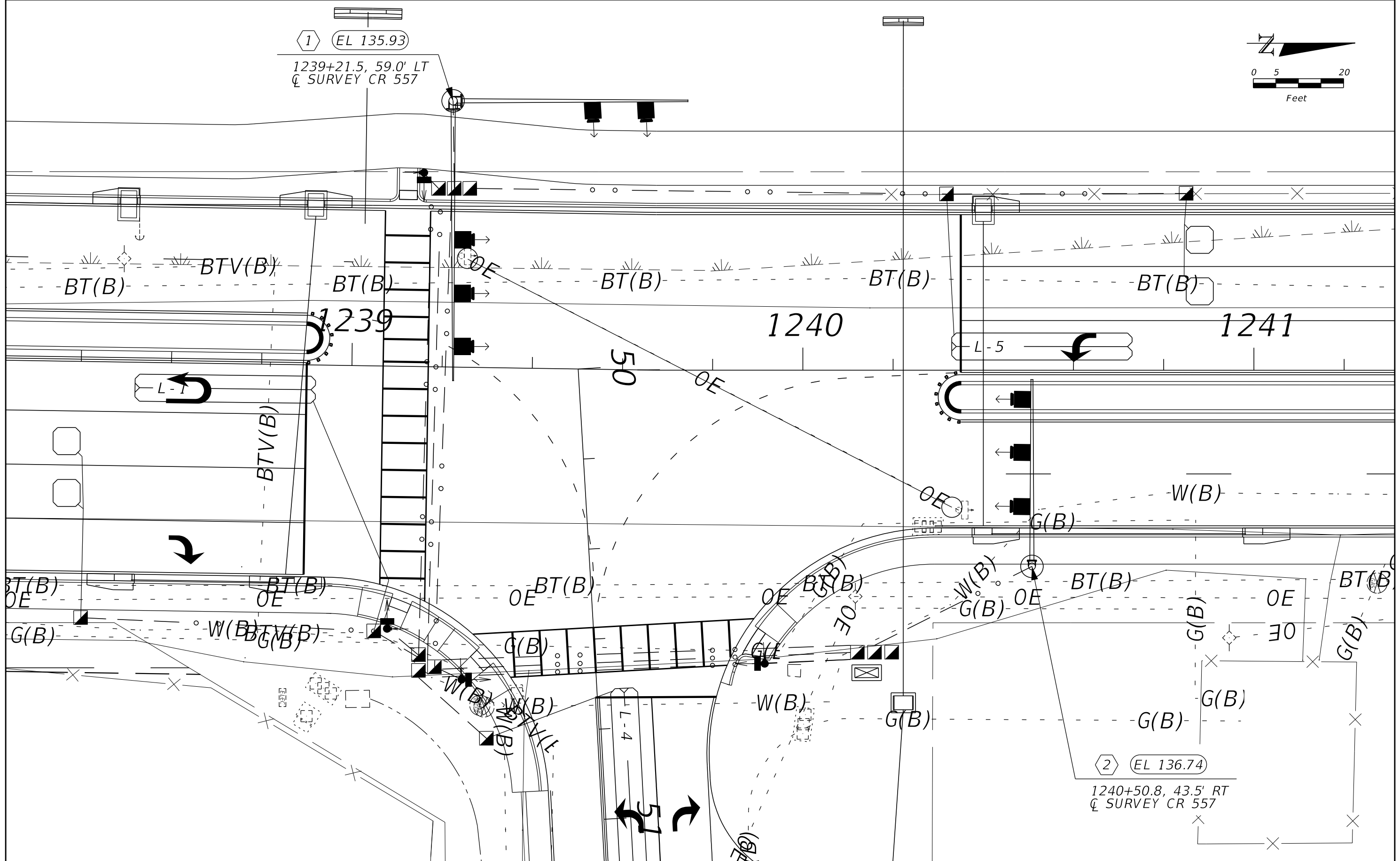
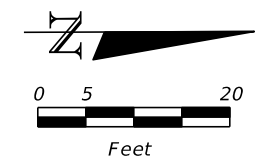
NOTES [Notes Date 11-01-16]:

1. If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
2. If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
3. Arm mounting height UB must be between 18-22 feet.
4. Pole types P2 and larger require a minimum 4.5 foot diameter drilled shaft. Pole types P5 and larger require a minimum 5.0 foot diameter drilled shaft.
5. Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.
6. Work with Index 649-030 and 649-031.

REVISIONS				MARYBETH MORIN, P.E. P.E. LICENSE NUMBER 57547 DEWBERRY ENGINEERS INC. 800 NORTH MAGNOLIA AVE., SUITE 1000 ORLANDO, FL 32803	POLK COUNTY ROADS AND DRAINAGE DIVISION			STANDARD MAST ARM ASSEMBLIES DATA TABLE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	PROJECT NO.		T-8
					CR 557	POLK	18-73		

1 EL 135.93

1239+21.5, 59.0' LT
 Q SURVEY CR 557



2 EL 136.74

1240+50.8, 43.5' RT
 Q SURVEY CR 557

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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 800 NORTH MAGNOLIA AVE., SUITE 1000
 ORLANDO, FL 32803

POLK COUNTY ROADS AND DRAINAGE DIVISION		
ROAD NO.	COUNTY	PROJECT NO.
CR 557	POLK	18-73

UTILITY PLAN SHEET
CR 557 AND EVENHOUSE RD

SHEET NO.
 T-9

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