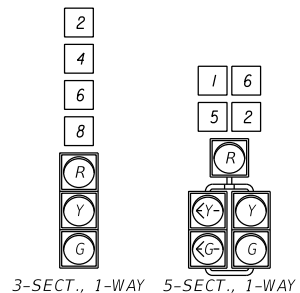
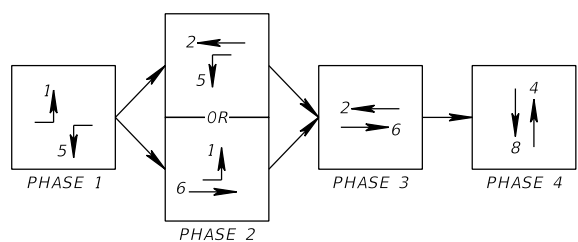


SIGNAL HEAD DETAIL



MOVEMENT DIAGRAM

S.O.P. 7



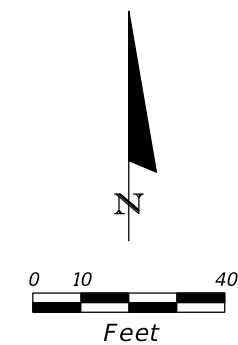
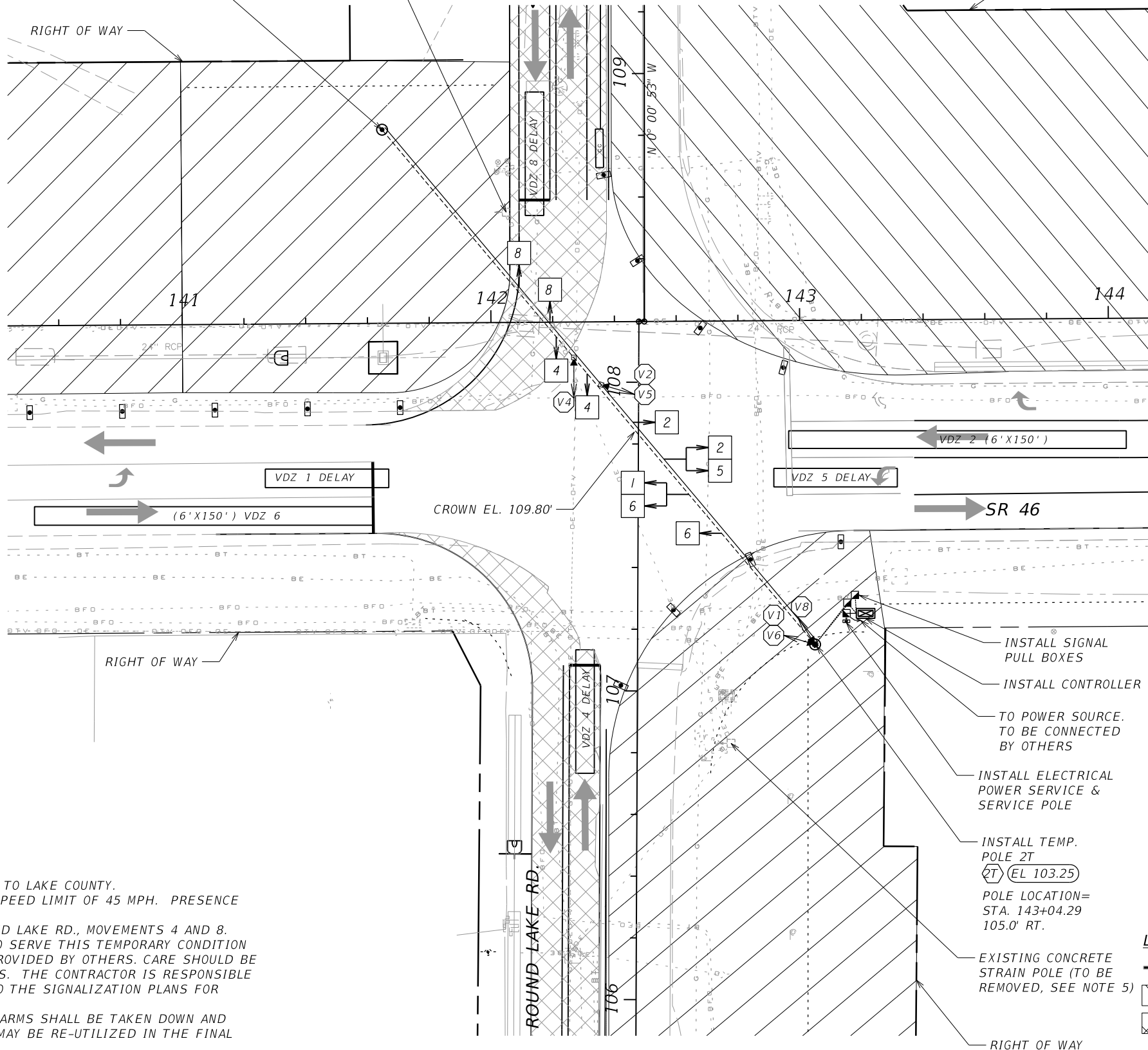
CONTROLLER TIMINGS

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	-	5	5	15	-	5
EXTENSION	3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1	20	50	-	20	20	50	-	20
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	2.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED	2.0	2.0	-	2.0	2.0	2.0	-	2.0
PEDESTRIAN WALK	-	-	-	-	-	-	-	-
PED. CLEARANCE	-	-	-	-	-	-	-	-
RECALL	-	MIN	-	-	-	MIN	-	-

NOTES:

1. REMOVE EXISTING SIGNAL HEADS AND CONTROLLER ASSEMBLY AND RETURN TO LAKE COUNTY.
2. ADVANCED VIDEO DETECTION ZONES PLACEMENT IS BASED ON A POSTED SPEED LIMIT OF 45 MPH. PRESENCE DETECTION ZONES SHALL BE 6'X40' AND EXTEND 5' OVER THE STOP BARS.
3. MAJOR STREET IS SR 46, MOVEMENTS 2 AND 6 AND MINOR STREET IS ROUND LAKE RD., MOVEMENTS 4 AND 8.
4. INSTALL PROPOSED CONTROLLER AND METER FROM FINAL CONFIGURATION TO SERVE THIS TEMPORARY CONDITION (SEE SIGNAL PLANS SHEET T-4) AND CONNECT TO THE NEW POWER SOURCE PROVIDED BY OTHERS. CARE SHOULD BE TAKEN SO THAT THEY ARE NOT DAMAGED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT OCCURS DUE TO CONSTRUCTION ACTIVITIES. REFER TO THE SIGNALIZATION PLANS FOR INSTALLATION NOTES AND DETAILS.
5. EXISTING INTERNALLY ILLUMINATED STREET NAME SIGNS AND CANTILEVER ARMS SHALL BE TAKEN DOWN AND STORED IN A LOCATION WHERE THEY WILL NOT GET DAMAGED SO THAT THEY MAY BE RE-UTILIZED IN THE FINAL SIGNAL CONFIGURATION.

INSTALL TEMP. POLE 1T (EL 110.80)
POLE LOCATION= STA. 141+65.17 62.7' LT.
EXISTING CONCRETE STRAIN POLE (TO BE REMOVED, SEE NOTE 5)



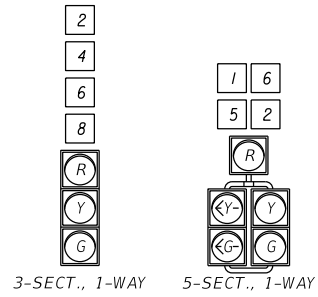
- INSTALL SIGNAL PULL BOXES
- INSTALL CONTROLLER
- TO POWER SOURCE. TO BE CONNECTED BY OTHERS
- INSTALL ELECTRICAL POWER SERVICE & SERVICE POLE
- INSTALL TEMP. POLE 2T (EL 103.25)
POLE LOCATION= STA. 143+04.29 105.0' RT.

LEGEND

- LANE FLOW ARROWS
- ▨ WORK ZONE
- ▩ TEMPORARY PAVEMENT

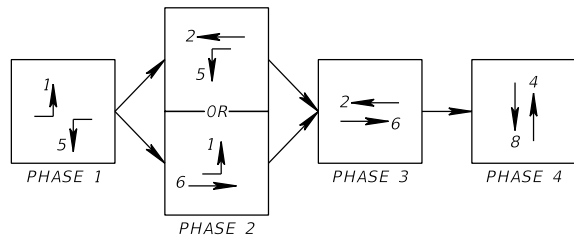
REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 1	SHEET NO. 220
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SIGNAL HEAD DETAIL



MOVEMENT DIAGRAM

S.O.P. 7

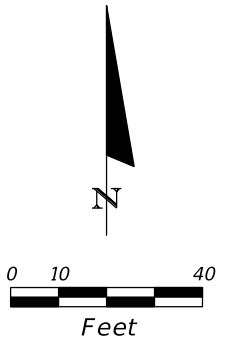
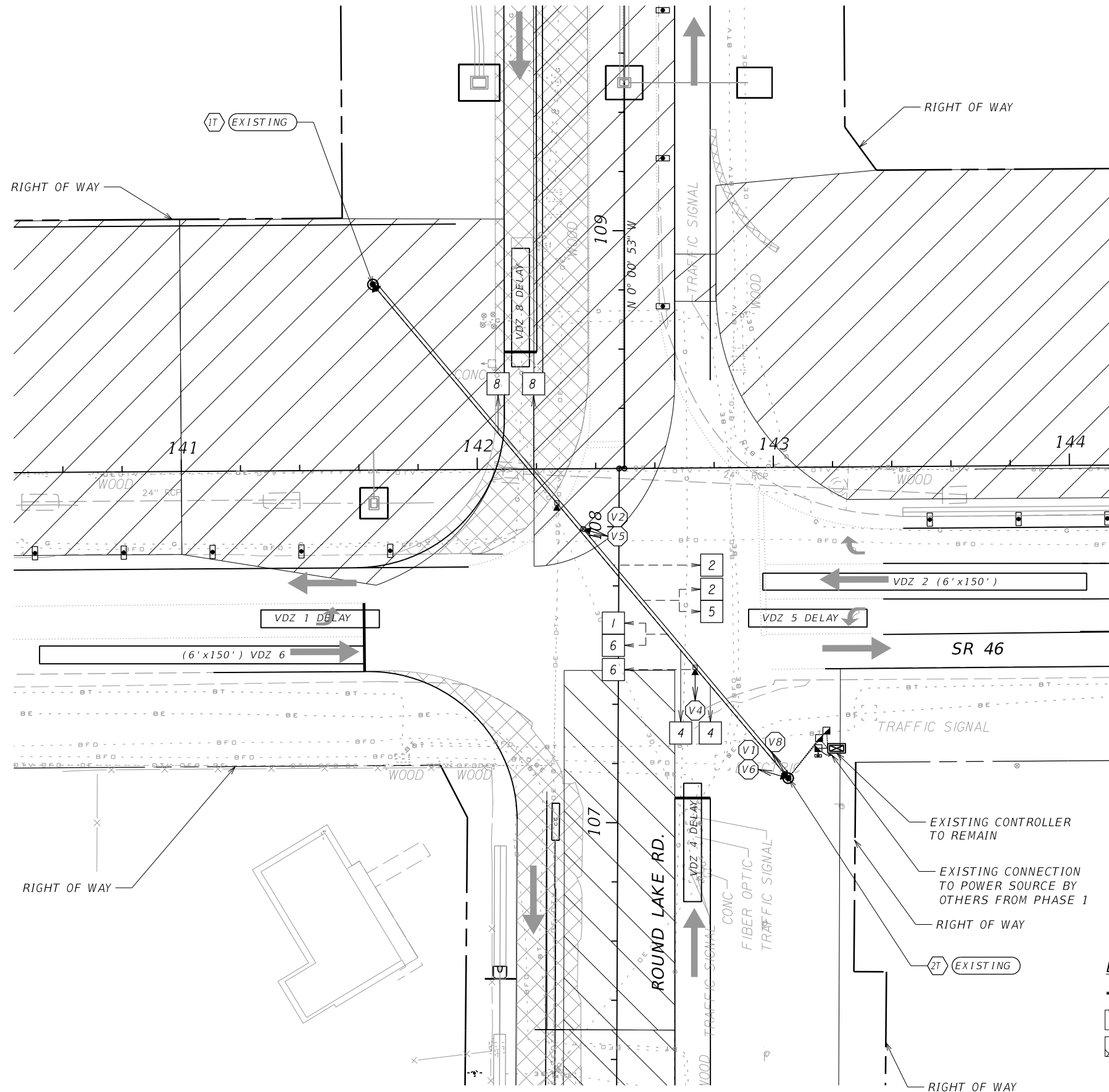


CONTROLLER TIMINGS

TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
MINIMUM GREEN		5	15	-	5	5	15	-	5
EXTENSION		3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1		20	50	-	20	20	50	-	20
MAXIMUM GREEN 2		-	-	-	-	-	-	-	-
YELLOW CLEARANCE		3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED		2.8	2.0	-	2.0	2.8	2.0	-	2.0
PEDESTRIAN WALK		-	-	-	-	-	-	-	-
PED. CLEARANCE		-	-	-	-	-	-	-	-
RECALL		-	MIN	-	-	-	MIN	-	-

NOTES:

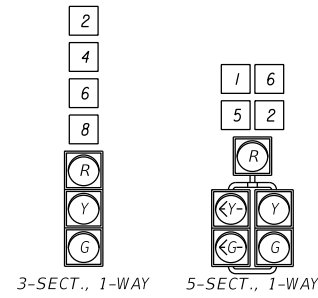
- ADJUST VIDEO DETECTION ZONES AND RELOCATE SIGNAL HEADS AS SHOWN ON THIS PHASE FROM PHASE 1A.
- ADVANCED VIDEO DETECTION ZONES PLACEMENT IS BASED ON A POSTED SPEED LIMIT OF 45 MPH. PRESENCE DETECTION ZONES SHALL BE 6'X40' AND EXTEND 5' OVER THE STOP BARS.
- MAJOR STREET IS SR 46, MOVEMENTS 2 AND 6 AND MINOR STREET IS ROUND LAKE RD., MOVEMENTS 4 AND 8.
- MAINTAIN EXISTING CONTROLLER, METER AND POWER SOURCE INSTALLED FROM PHASE 1. CARE SHOULD BE TAKEN SO THAT THEY ARE NOT DAMAGED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT OCCURS DUE TO CONSTRUCTION ACTIVITIES. REFER TO THE SIGNALIZATION PLANS FOR INSTALLATION NOTES AND DETAILS.



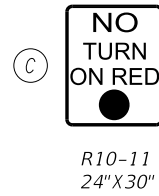
- LEGEND**
- LANE FLOW ARROWS
 - ▨ WORK ZONE
 - ▩ TEMPORARY PAVEMENT

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		221

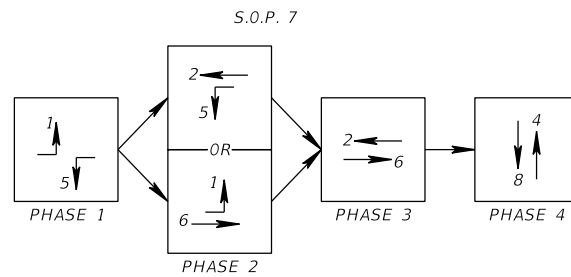
SIGNAL HEAD DETAIL



SIGN DETAIL



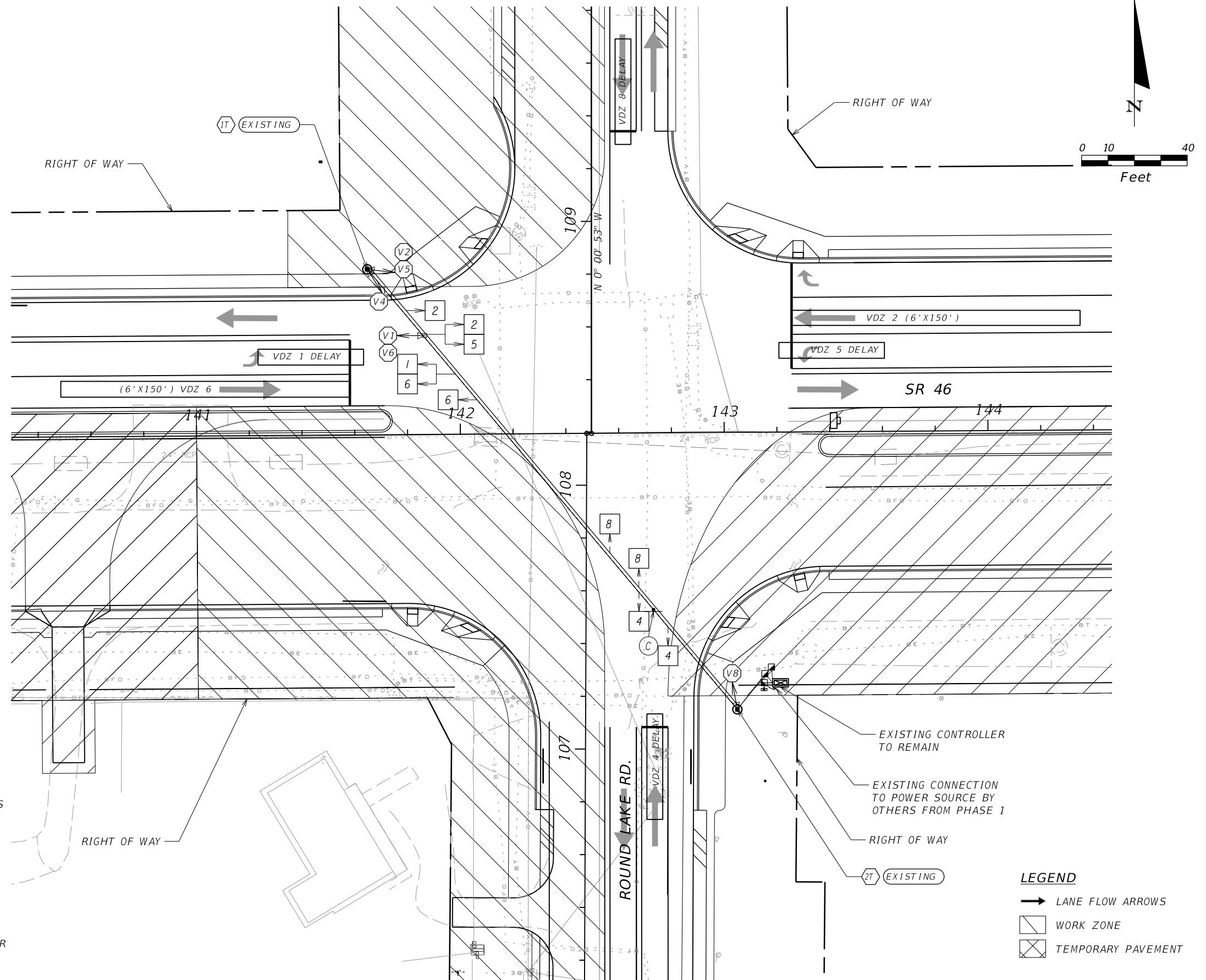
MOVEMENT DIAGRAM



CONTROLLER TIMINGS

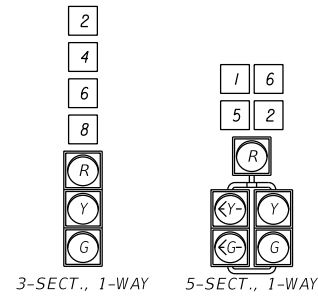
TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
MINIMUM GREEN		5	15	-	5	5	15	-	5
EXTENSION		3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1		20	50	-	20	20	50	-	20
MAXIMUM GREEN 2		-	-	-	-	-	-	-	-
YELLOW CLEARANCE		3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED		3.1	2.3	-	2.8	3.1	2.3	-	2.8
PEDESTRIAN WALK		-	-	-	-	-	-	-	-
PED. CLEARANCE		-	-	-	-	-	-	-	-
RECALL		-	MIN	-	-	-	MIN	-	-

NOTES:
 1. ADJUST VIDEO DETECTION ZONES AND RELOCATE SIGNAL HEADS AS SHOWN ON THIS PHASE FROM PHASE 1A.
 2. ADVANCED VIDEO DETECTION ZONES PLACEMENT IS BASED ON A POSTED SPEED LIMIT OF 45 MPH. PRESENCE DETECTION ZONES SHALL BE 6'X40' AND EXTEND 5' OVER THE STOP BARS.
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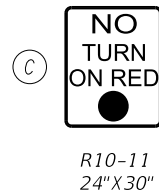


REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 2	SHEET NO. 222
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SIGNAL HEAD DETAIL

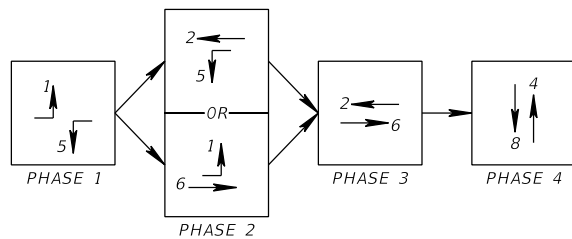


SIGN DETAIL



MOVEMENT DIAGRAM

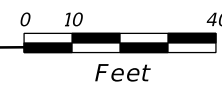
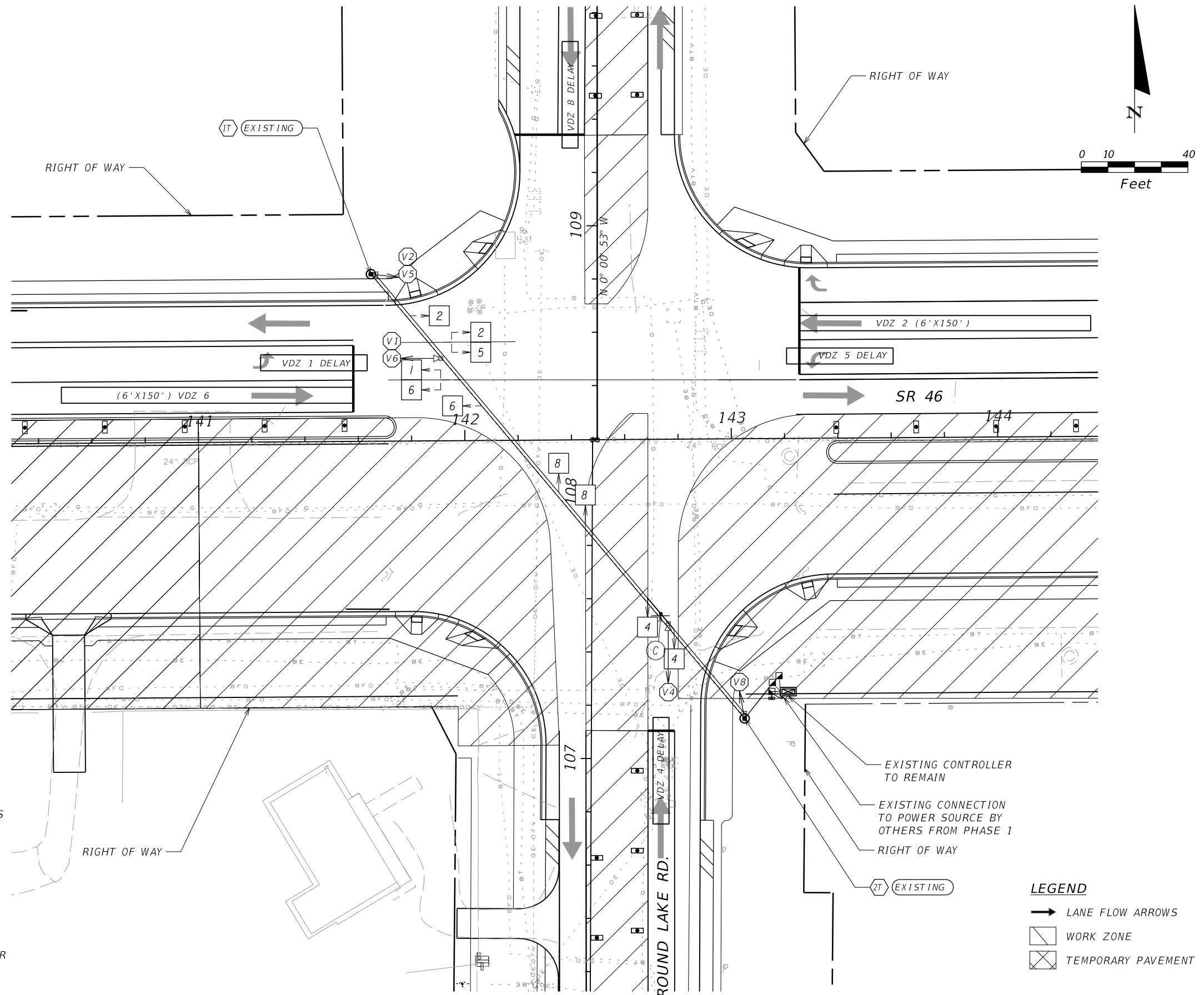
S.O.P. 7



CONTROLLER TIMINGS

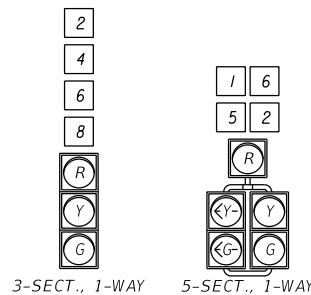
TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
MINIMUM GREEN		5	15	-	5	5	15	-	5
EXTENSION		3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1		20	50	-	20	20	50	-	20
MAXIMUM GREEN 2		-	-	-	-	-	-	-	-
YELLOW CLEARANCE		3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED		3.1	2.1	-	2.7	3.1	2.1	-	2.7
PEDESTRIAN WALK		-	-	-	-	-	-	-	-
PED. CLEARANCE		-	-	-	-	-	-	-	-
RECALL		-	MIN	-	-	-	MIN	-	-

- NOTES:
- ADJUST VIDEO DETECTION ZONES AND RELOCATE SIGNAL HEADS AS SHOWN ON THIS PHASE FROM PHASE 1A.
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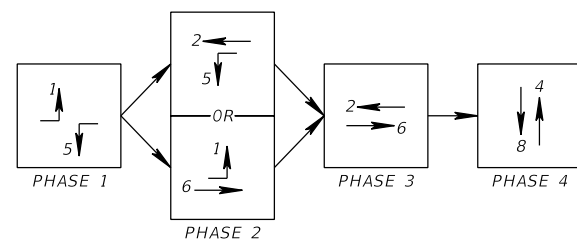
REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 2A	SHEET NO. 223
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SIGNAL HEAD DETAIL



MOVEMENT DIAGRAM

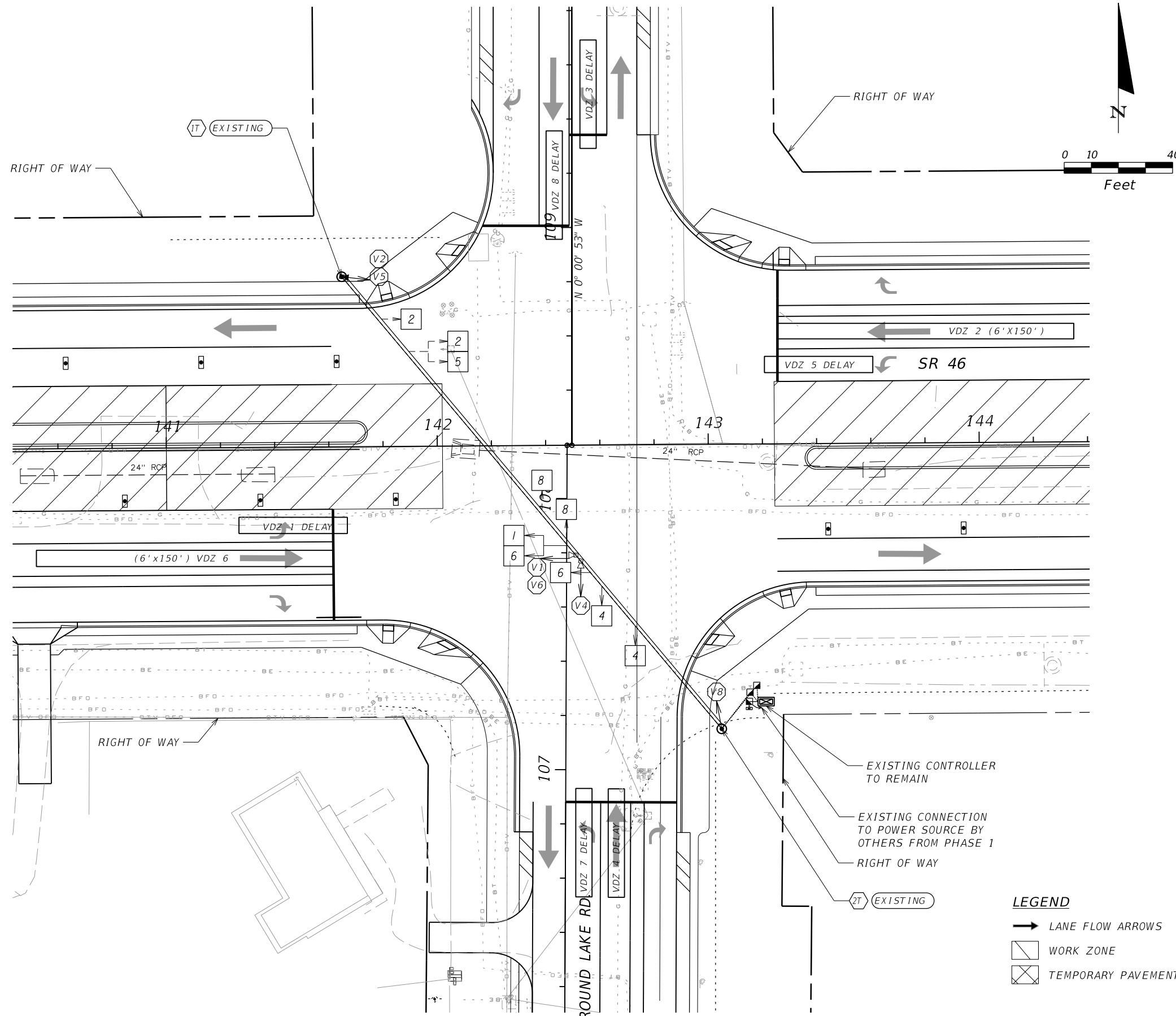
S.O.P. 7



CONTROLLER TIMINGS

TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
MINIMUM GREEN		5	15	-	5	5	15	-	5
EXTENSION		3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1		20	50	-	20	20	50	-	20
MAXIMUM GREEN 2		-	-	-	-	-	-	-	-
YELLOW CLEARANCE		3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED		4.3	2.0	-	3.1	4.3	2.0	-	3.1
PEDESTRIAN WALK		-	-	-	-	-	-	-	-
PED. CLEARANCE		-	-	-	-	-	-	-	-
RECALL		-	MIN	-	-	-	MIN	-	-

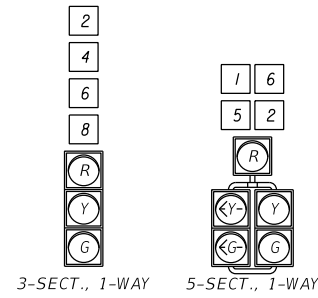
- NOTES:
- ADJUST VIDEO DETECTION ZONES AND RELOCATE SIGNAL HEADS AS SHOWN ON THIS PHASE FROM PHASE 1A.
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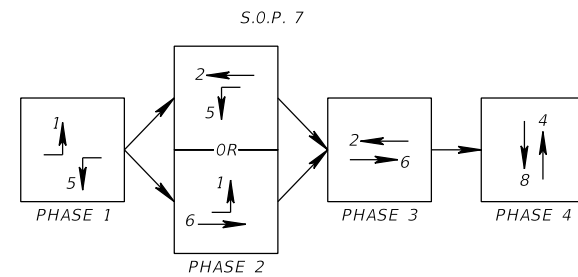
- LEGEND
- LANE FLOW ARROWS
 - ▨ WORK ZONE
 - ▩ TEMPORARY PAVEMENT

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 3	SHEET NO. 224
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SIGNAL HEAD DETAIL

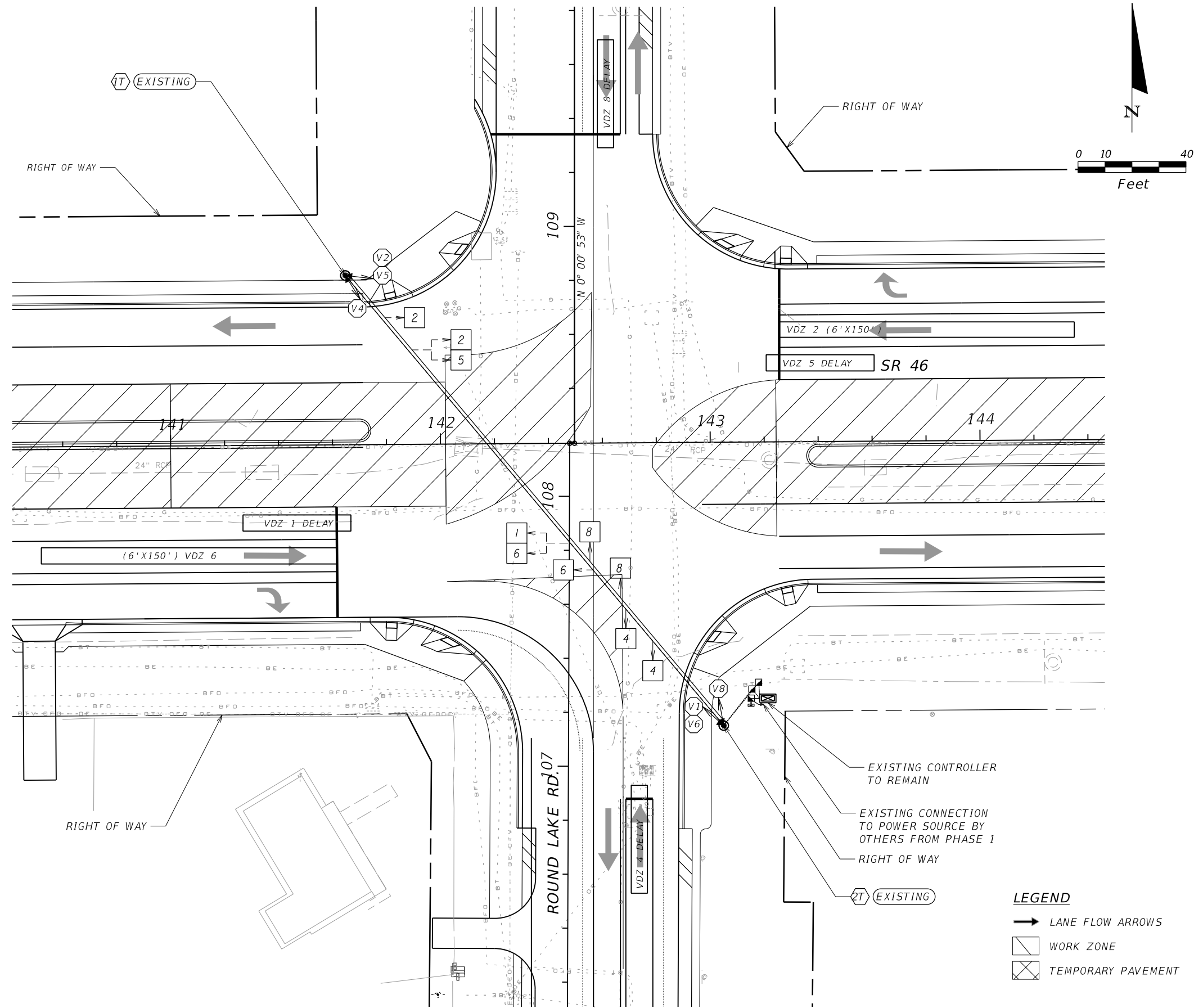


MOVEMENT DIAGRAM



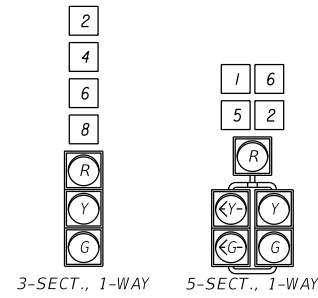
CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	-	5	5	15	-	5
EXTENSION	3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1	20	50	-	20	20	50	-	20
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED	4.5	2.0	-	3.1	4.5	2.0	-	3.1
PEDESTRIAN WALK	-	-	-	-	-	-	-	-
PED. CLEARANCE	-	-	-	-	-	-	-	-
RECALL	-	MIN	-	-	-	MIN	-	-

- NOTES:
- ADJUST VIDEO DETECTION ZONES AND RELOCATE SIGNAL HEADS AS SHOWN ON THIS PHASE FROM PHASE 1A.
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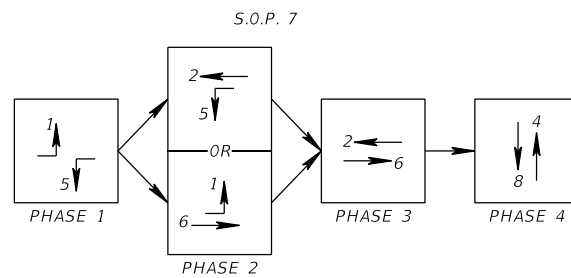


REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 3A	SHEET NO. 225
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SIGNAL HEAD DETAIL



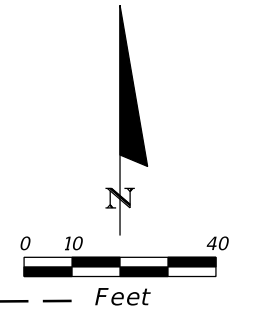
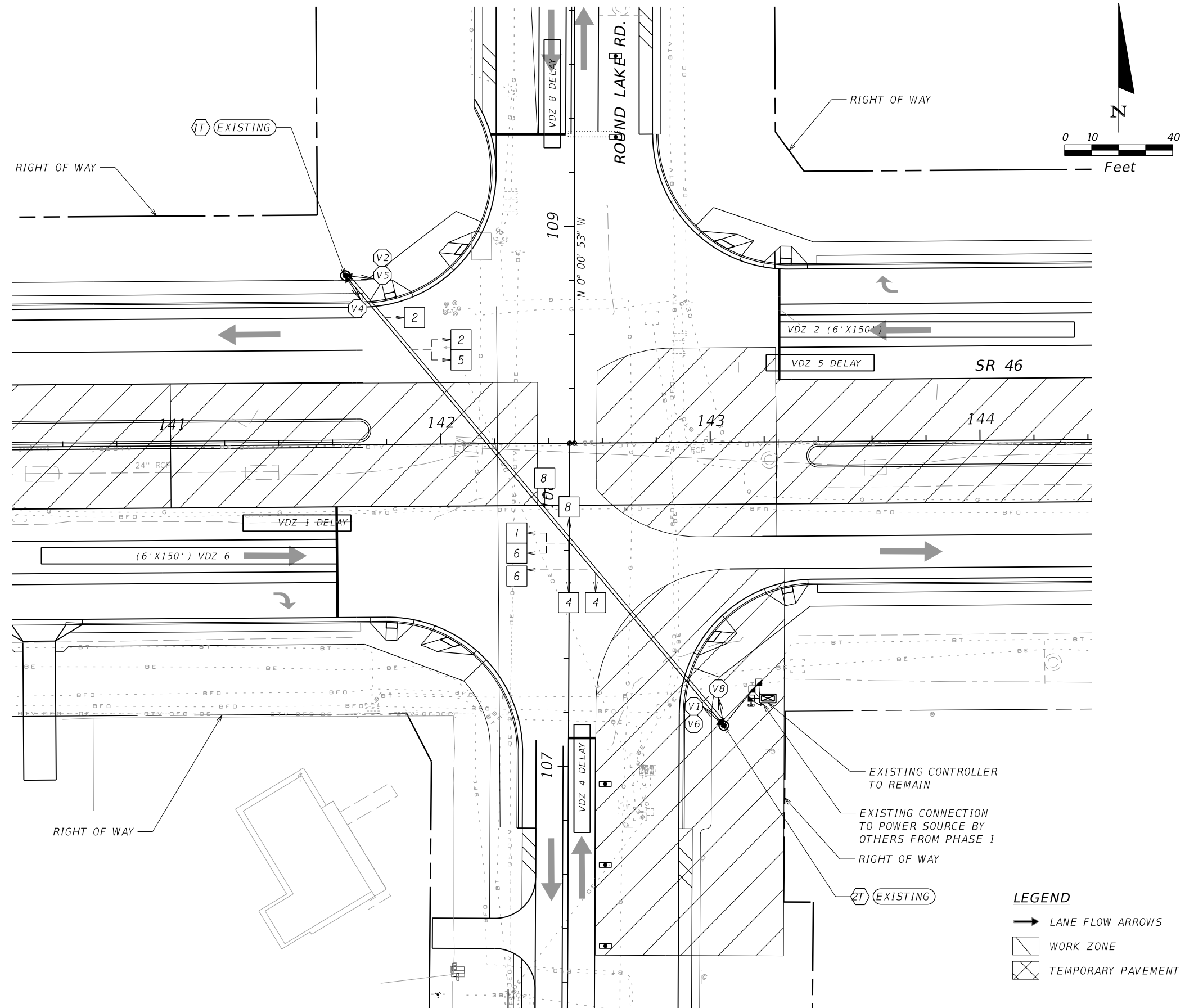
MOVEMENT DIAGRAM



CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	-	5	5	15	-	5
EXTENSION	3.0	2.5	-	3.0	3.0	2.5	-	3.0
MAXIMUM GREEN 1	20	50	-	20	20	50	-	20
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	3.5	5.1	-	5.1	3.5	5.1	-	5.1
ALL RED	4.0	2.0	-	2.8	4.0	2.0	-	2.8
PEDESTRIAN WALK	-	-	-	-	-	-	-	-
PED. CLEARANCE	-	-	-	-	-	-	-	-
RECALL	-	MIN	-	-	-	MIN	-	-

NOTES:

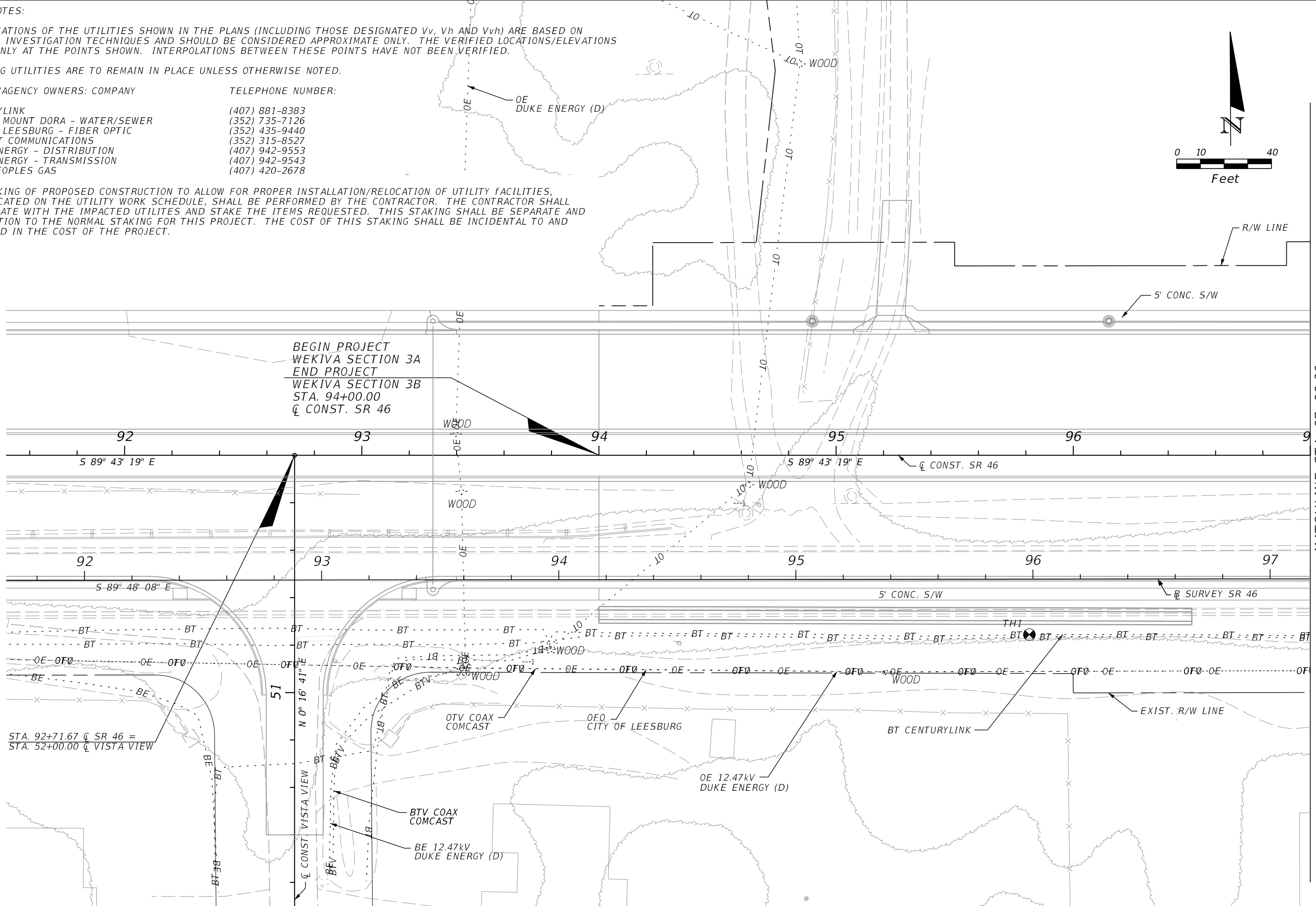
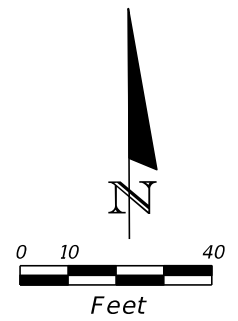
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REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TTC SIGNALIZATION PHASE 3B	SHEET NO. 226
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

GENERAL NOTES:

1. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED Vv, Vh AND Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
2. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
3. UTILITY/AGENCY OWNERS: COMPANY TELEPHONE NUMBER:
 CENTURYLINK (407) 881-8383
 CITY OF MOUNT DORA - WATER/SEWER (352) 735-7126
 CITY OF LEESBURG - FIBER OPTIC (352) 435-9440
 COMCAST COMMUNICATIONS (352) 315-8527
 DUKE ENERGY - DISTRIBUTION (407) 942-9553
 DUKE ENERGY - TRANSMISSION (407) 942-9543
 TECO/PEOPLES GAS (407) 420-2678
4. ALL STAKING OF PROPOSED CONSTRUCTION TO ALLOW FOR PROPER INSTALLATION/RELOCATION OF UTILITY FACILITIES, AS INDICATED ON THE UTILITY WORK SCHEDULE, SHALL BE PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE IMPACTED UTILITIES AND STAKE THE ITEMS REQUESTED. THIS STAKING SHALL BE SEPARATE AND IN ADDITION TO THE NORMAL STAKING FOR THIS PROJECT. THE COST OF THIS STAKING SHALL BE INCIDENTAL TO AND INCLUDED IN THE COST OF THE PROJECT.



MATCHLINE STA. 97+00.00

STA. 92+71.67 \bar{C} SR 46 =
 STA. 52+00.00 \bar{C} VISTA VIEW

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBAY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

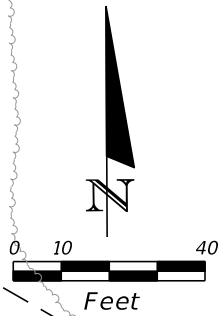
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

**UTILITY ADJUSTMENTS
 PLAN SHEET 1**

SHEET NO.
 227

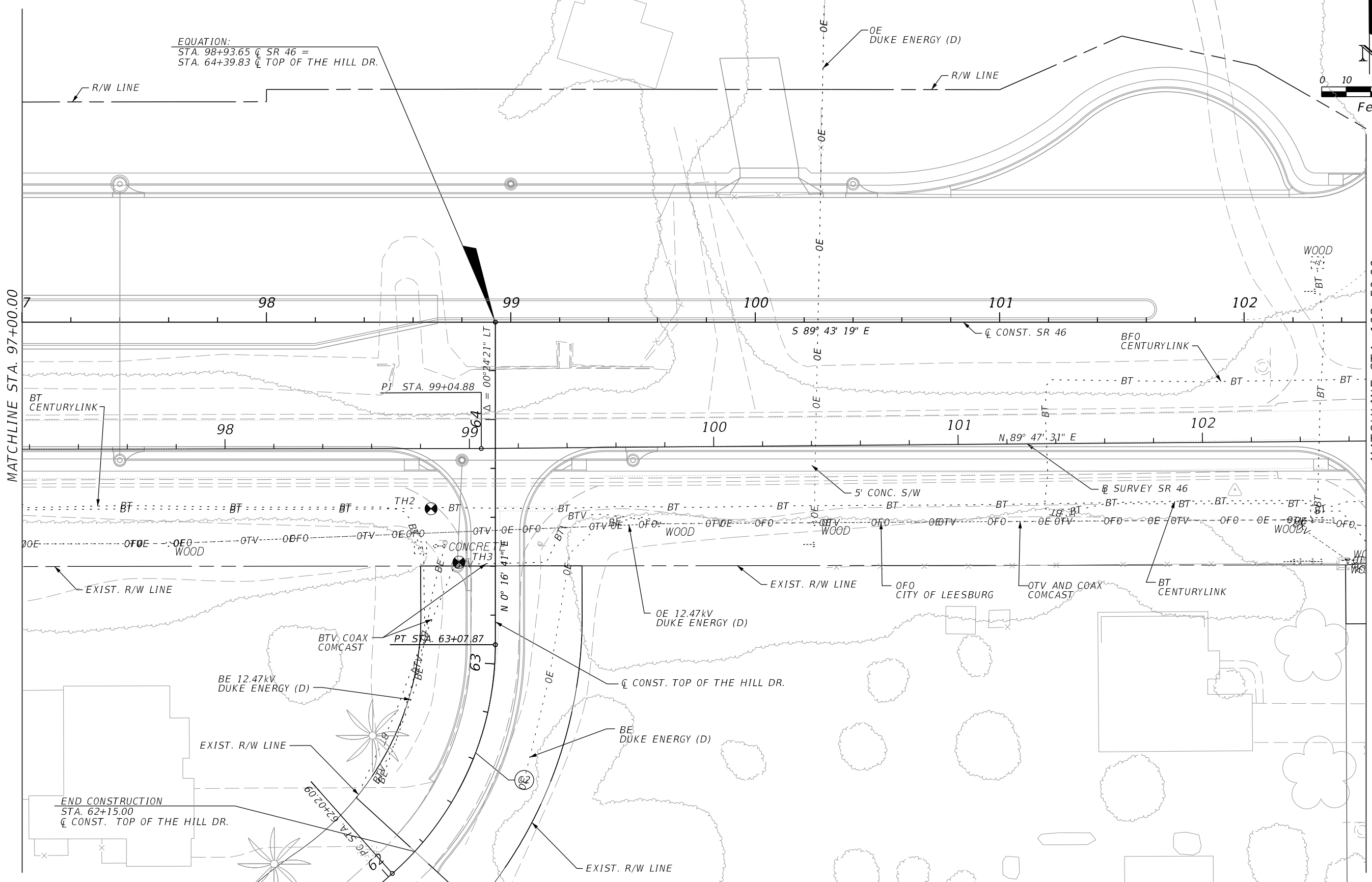
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

EQUATION:
 STA. 98+93.65 \hat{C} SR 46 =
 STA. 64+39.83 \hat{C} TOP OF THE HILL DR.



MATCHLINE STA. 97+00.00

MATCHLINE STA. 102+50.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBAY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

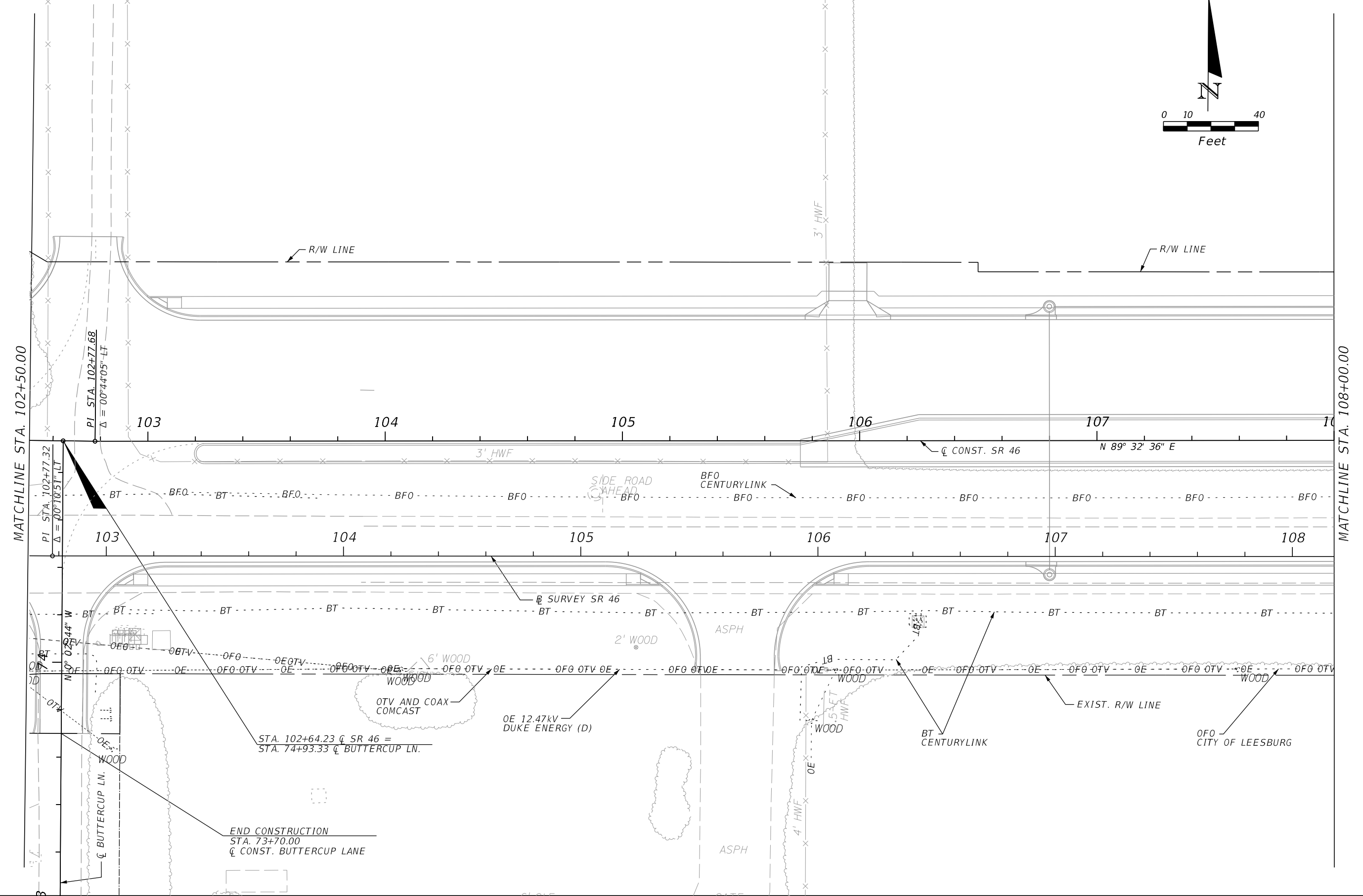
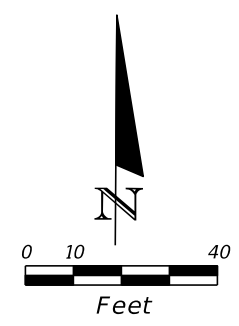
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 2

SHEET
NO.

228

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

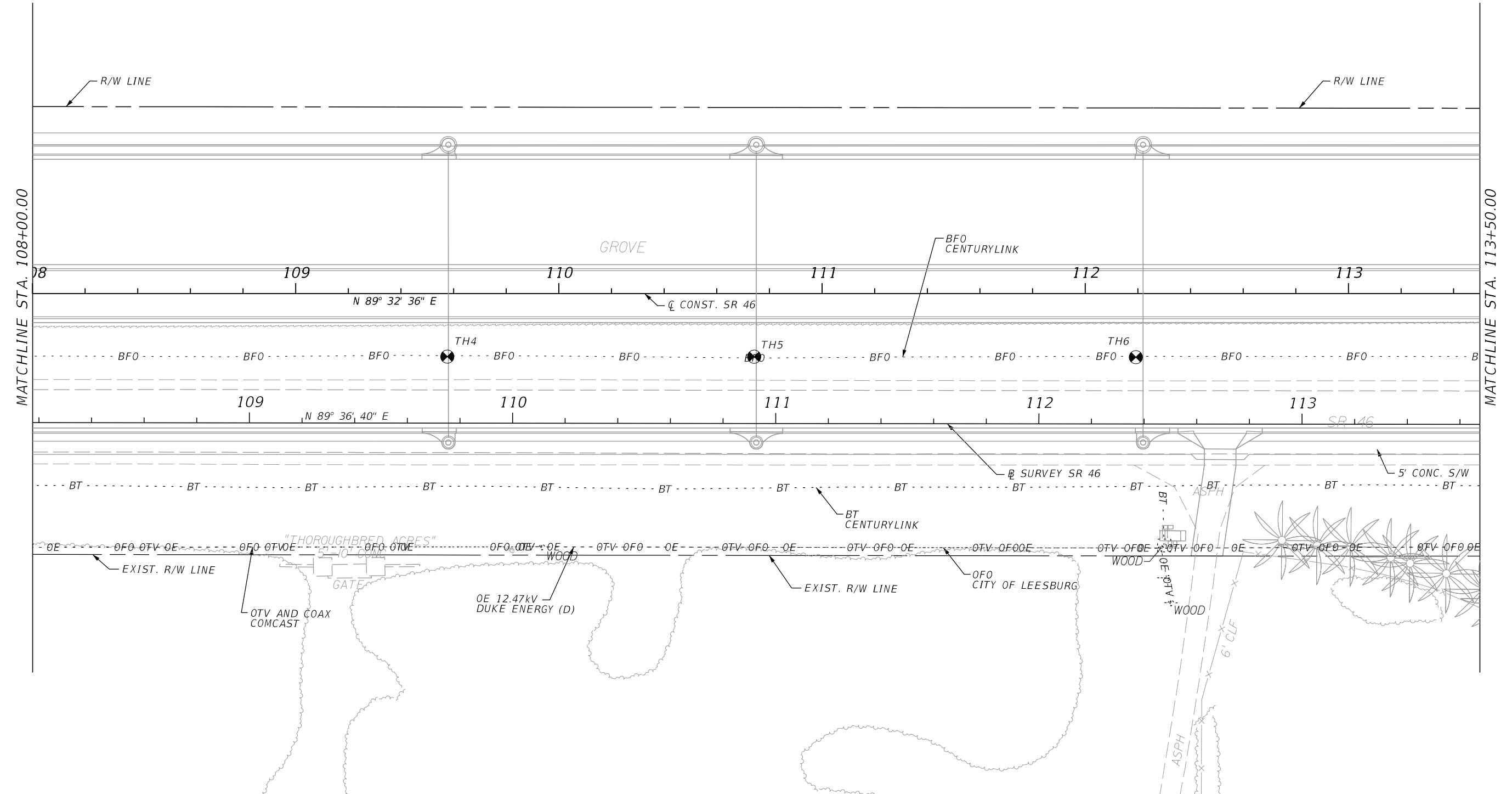
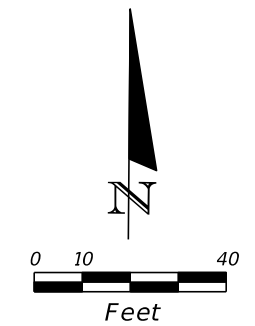
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBAY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 3

SHEET
 NO.
 229

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

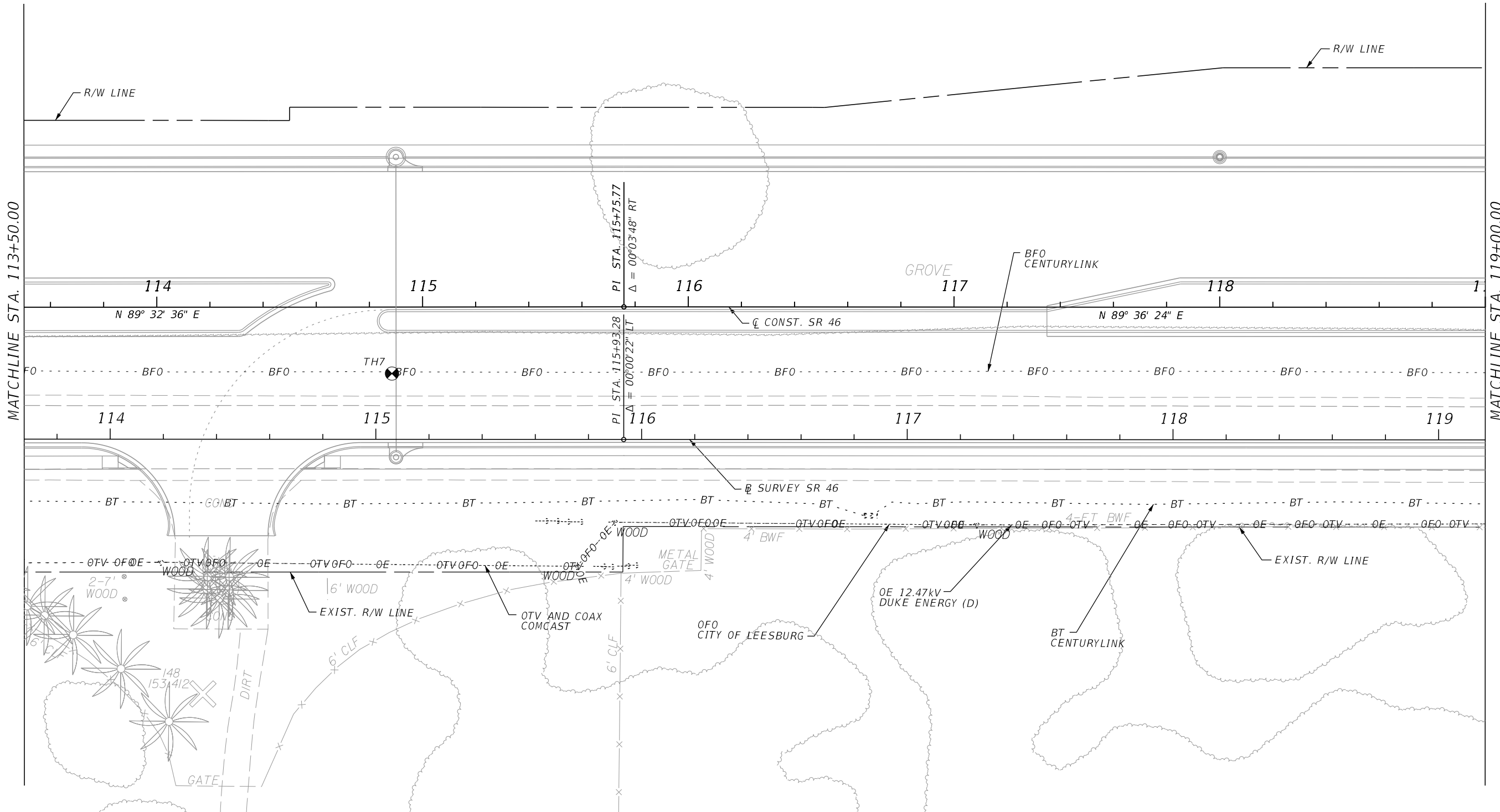
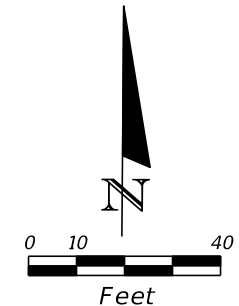
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 4

SHEET NO.
 230

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

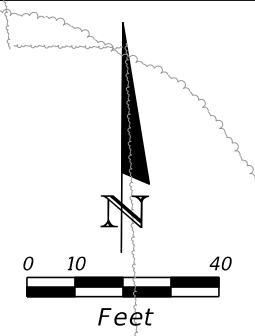
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 5

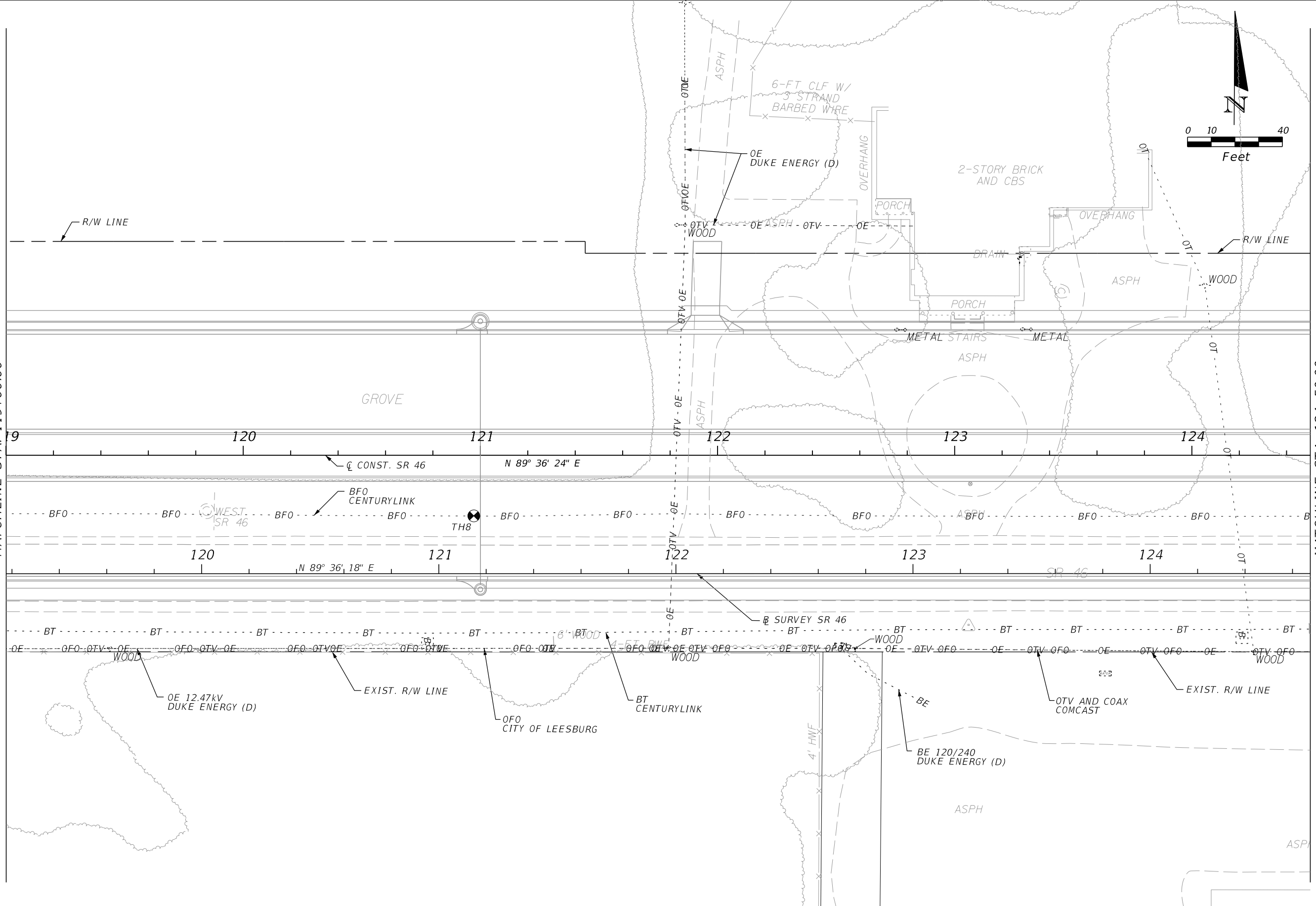
SHEET NO.
 231

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

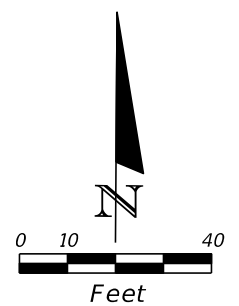


MATCHLINE STA. 119+00.00

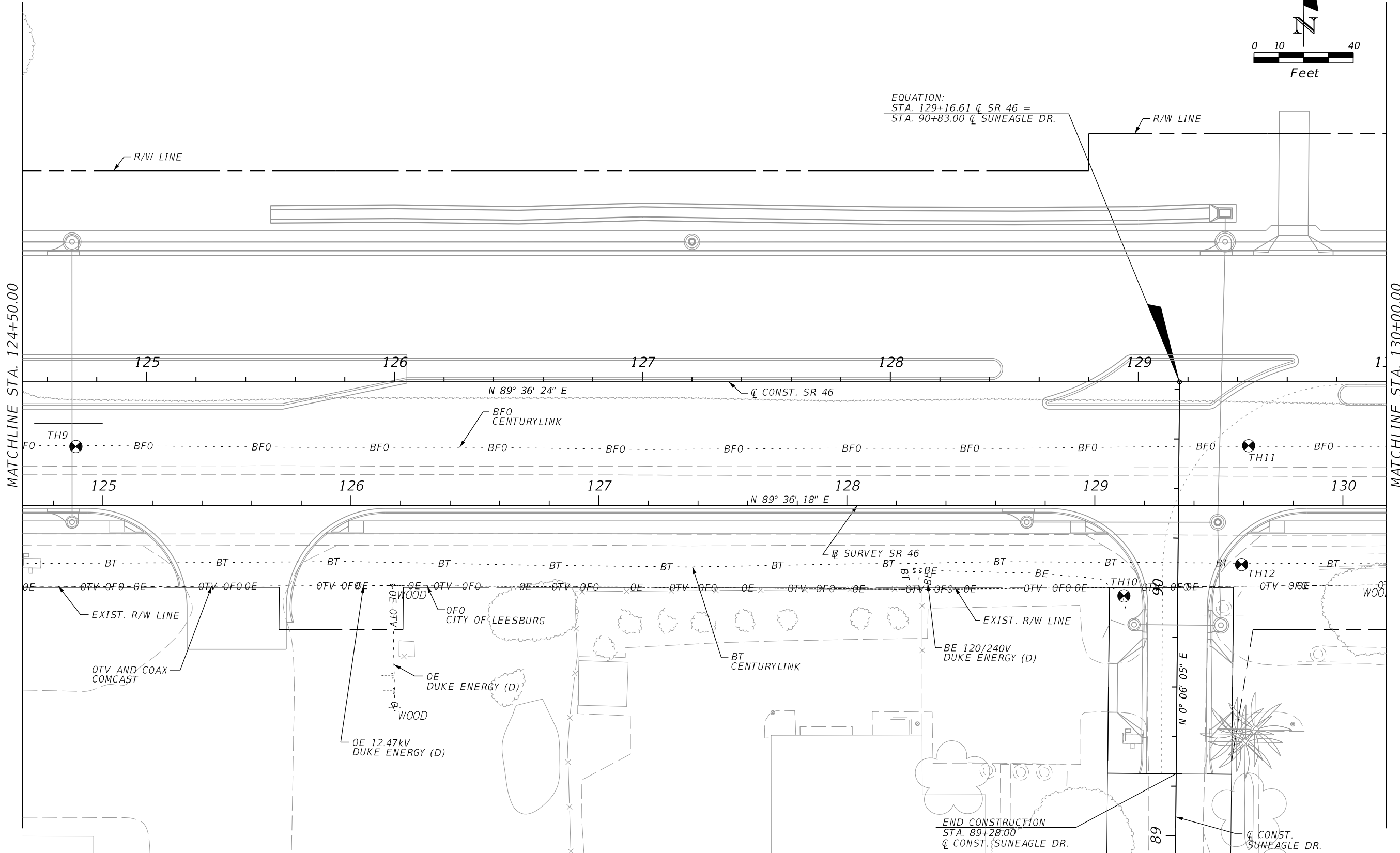
MATCHLINE STA. 124+50.00



REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 6	SHEET NO. 232
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			



EQUATION:
 STA. 129+16.61 ζ SR 46 =
 STA. 90+83.00 ζ SUNEAGLE DR.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

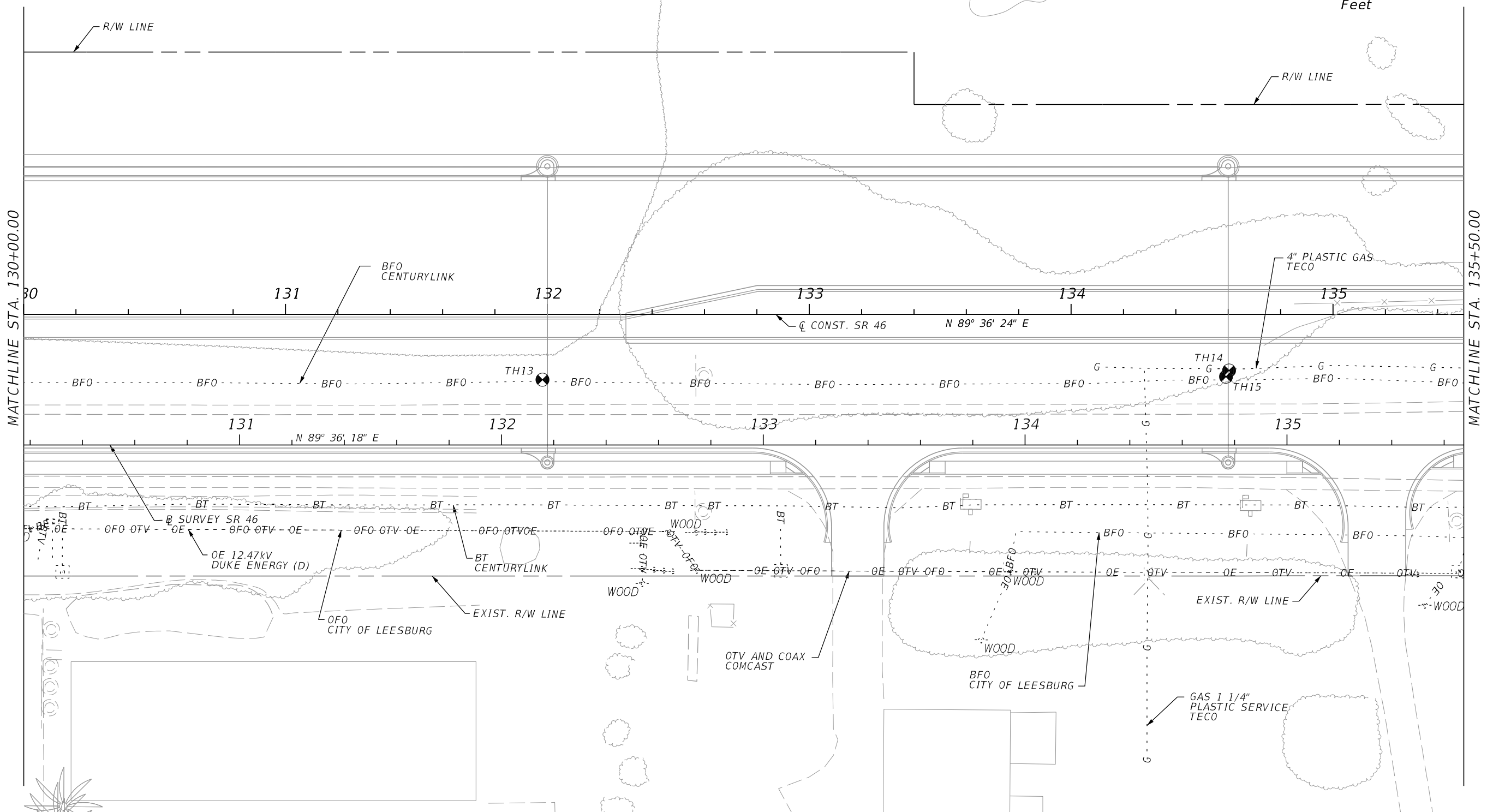
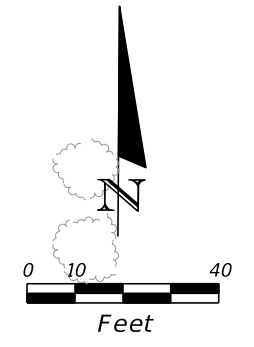
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 7

SHEET NO.
 233

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

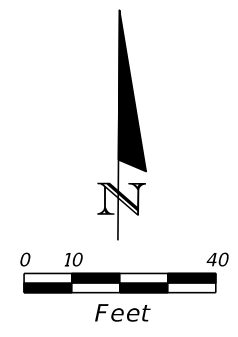
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 8

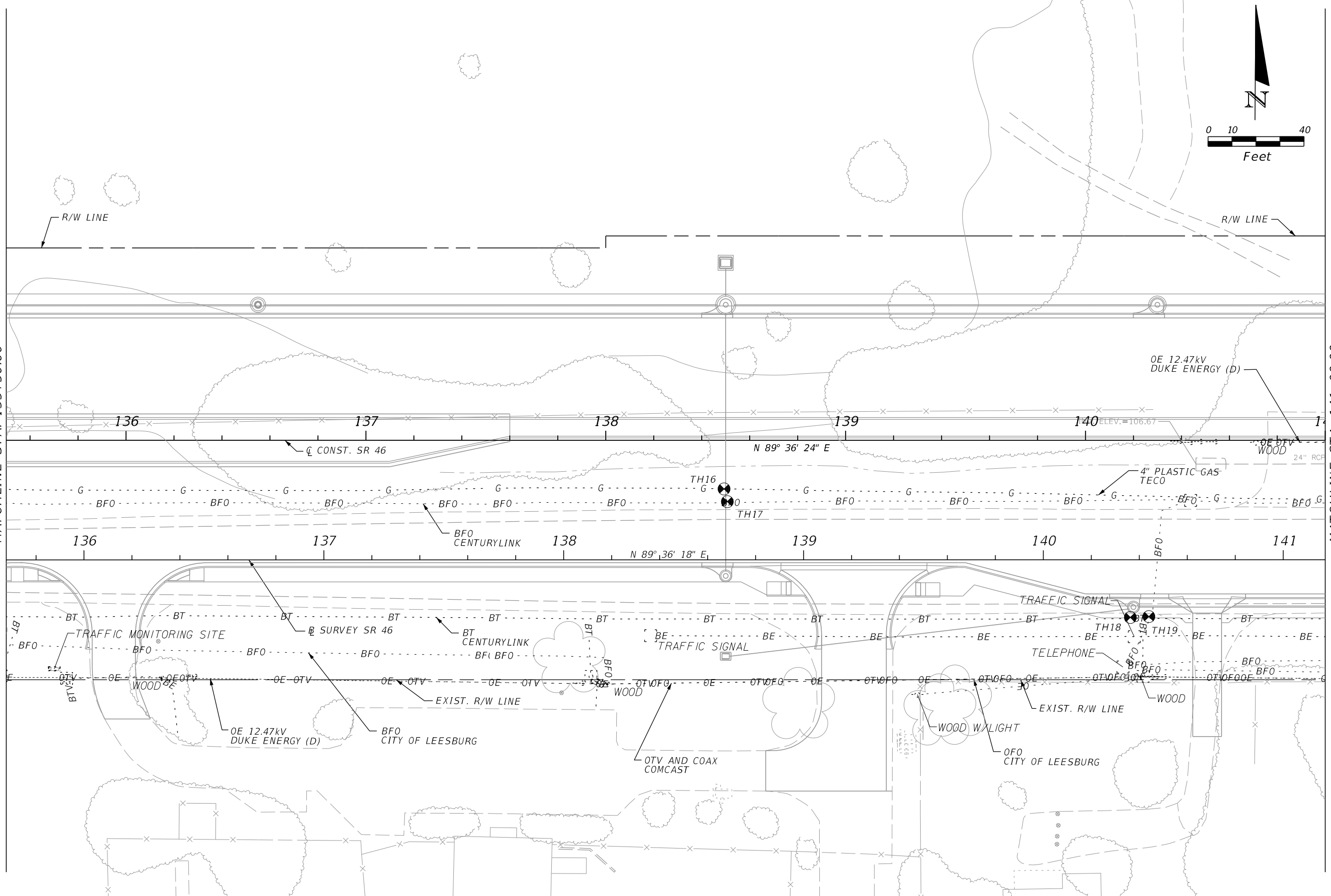
SHEET
 NO.
 234

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



MATCHLINE STA. 135+50.00

MATCHLINE STA. 141+00.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

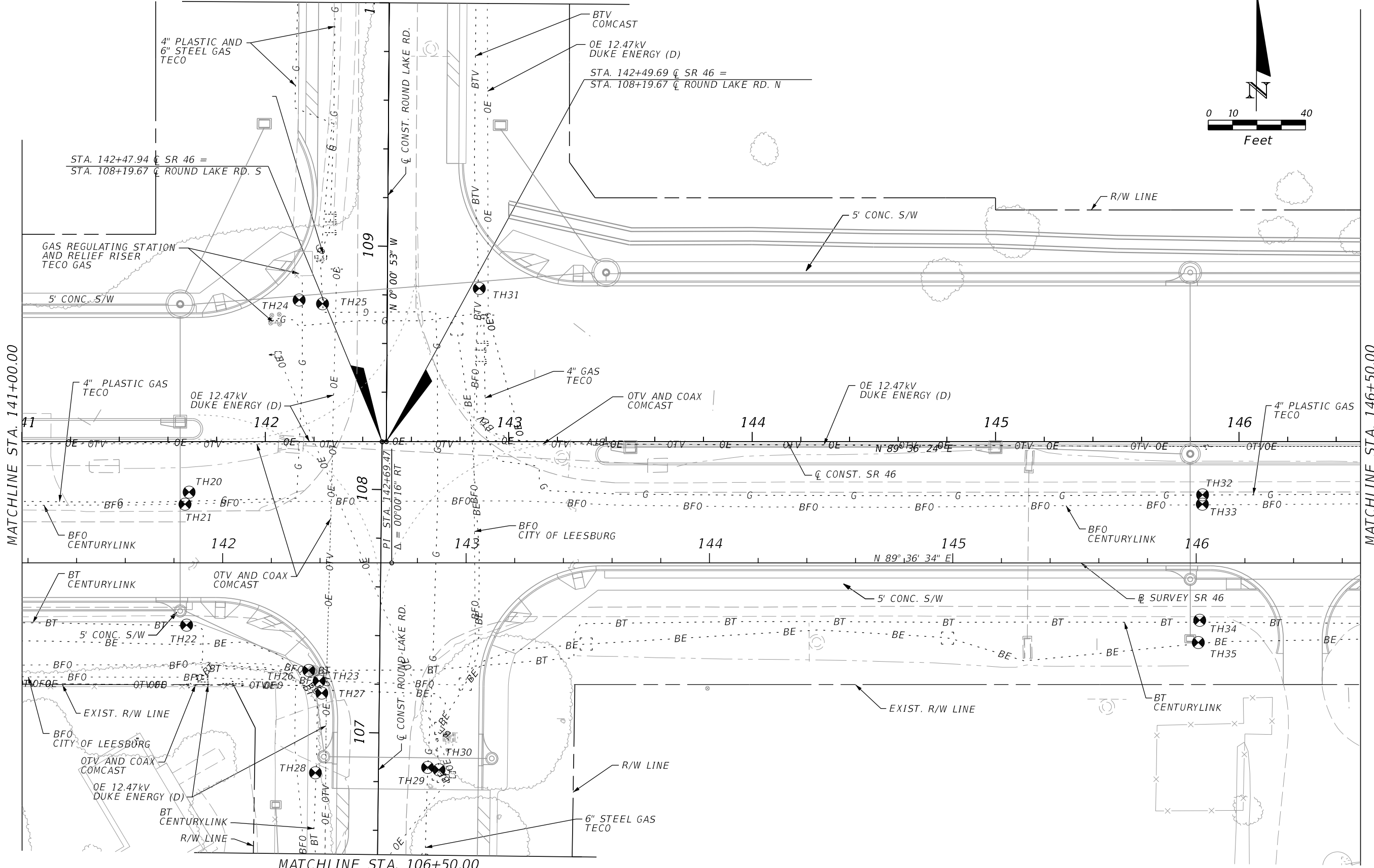
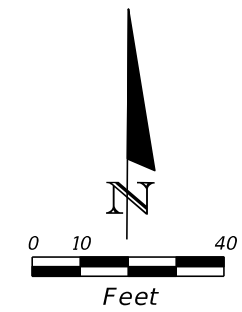
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 9

SHEET NO. 235

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

MATCHLINE STA. 110+00.00



MATCHLINE STA. 106+50.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

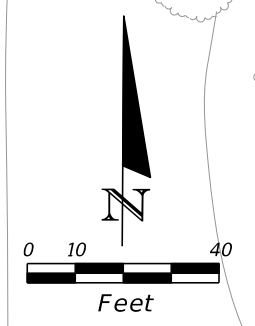
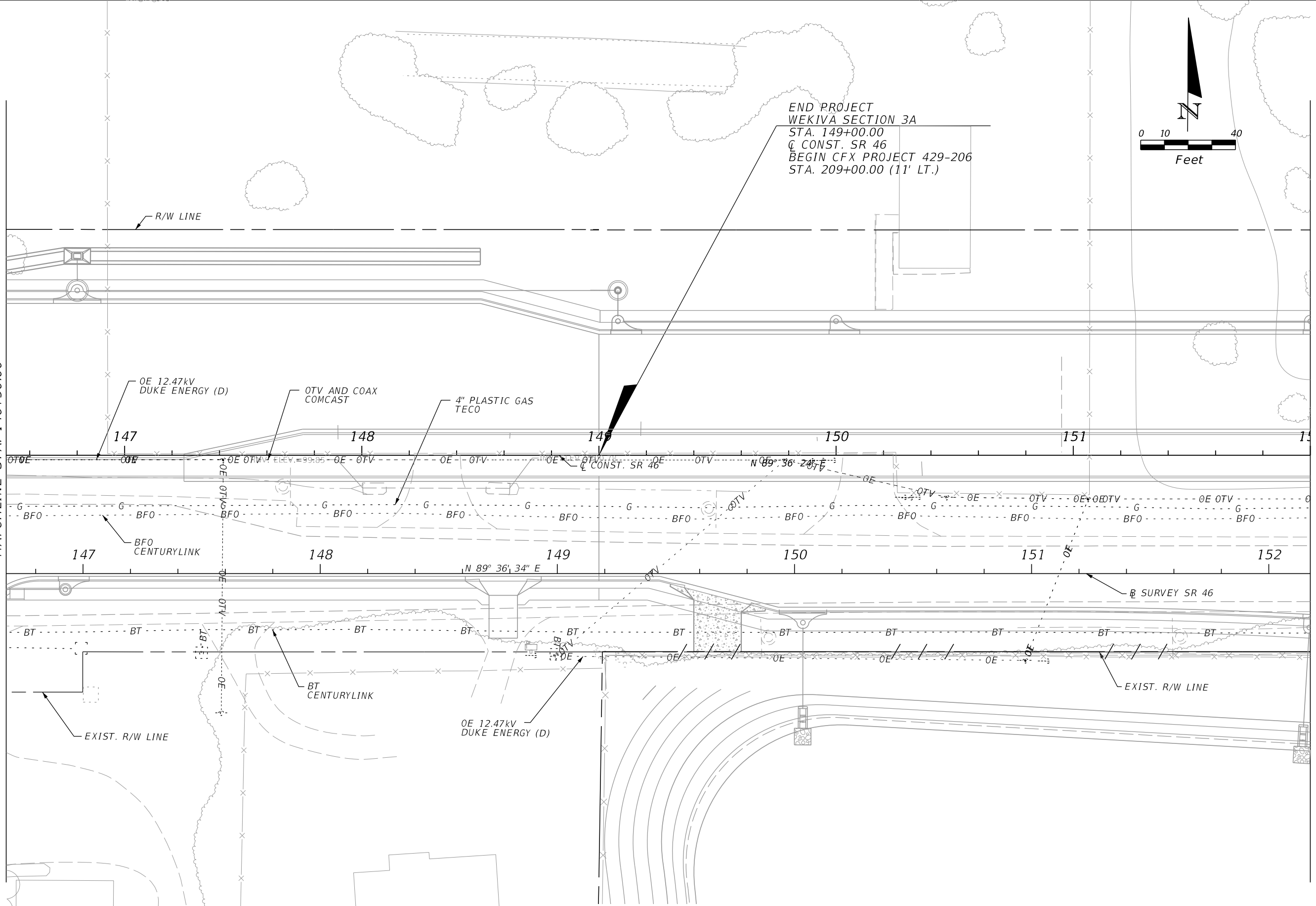
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

UTILITY ADJUSTMENTS
PLAN SHEET 10

SHEET NO. 236

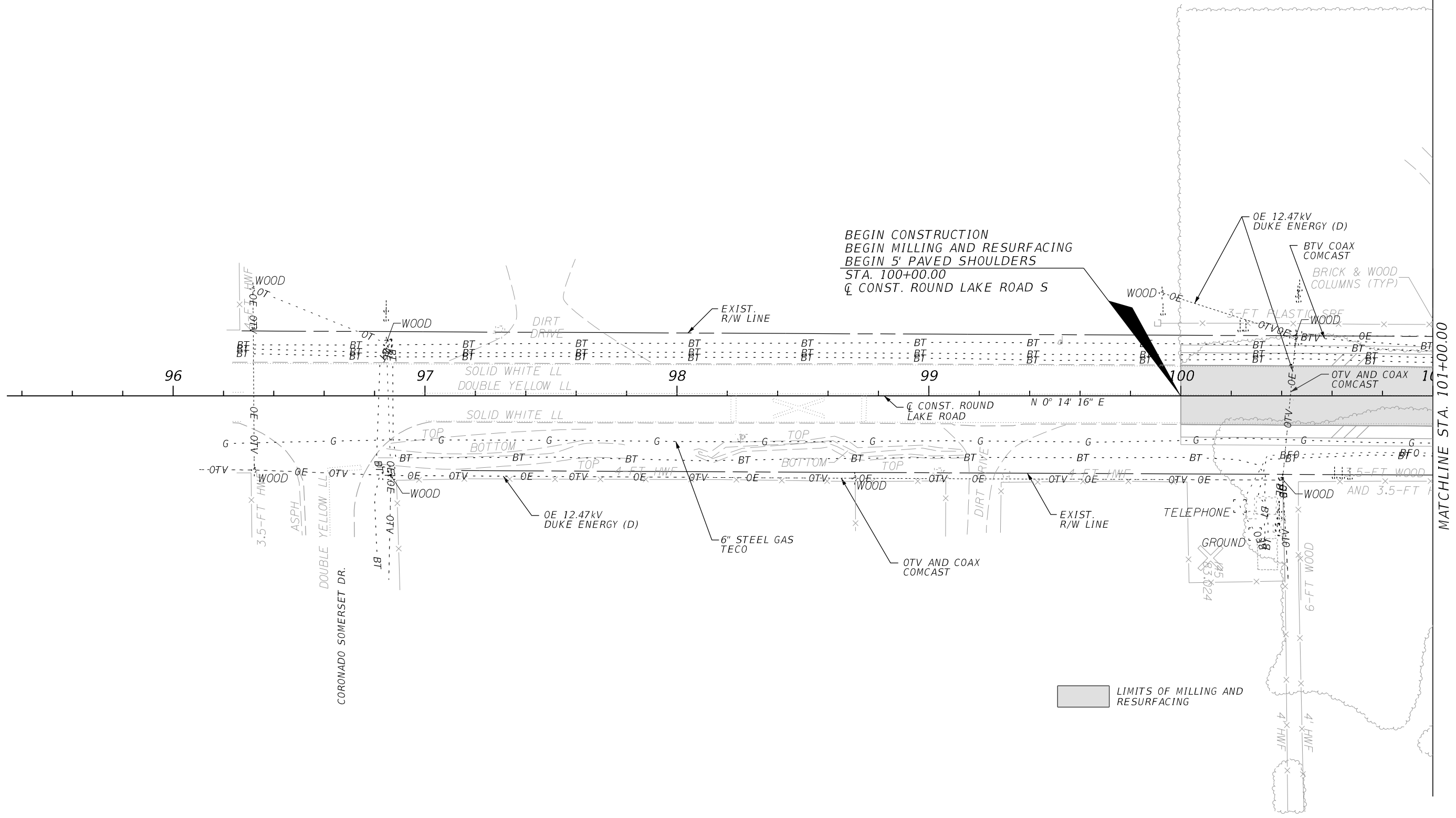
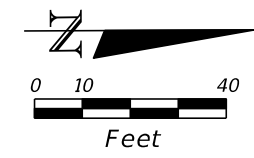
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

MATCHLINE STA. 146+50.00



REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 11	SHEET NO. 237
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



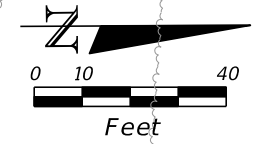
BEGIN CONSTRUCTION
 BEGIN MILLING AND RESURFACING
 BEGIN 5' PAVED SHOULDERS
 STA. 100+00.00
 CL CONST. ROUND LAKE ROAD S

MATCHLINE STA. 101+00.00

LIMITS OF MILLING AND RESURFACING

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 12	SHEET NO. 238
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

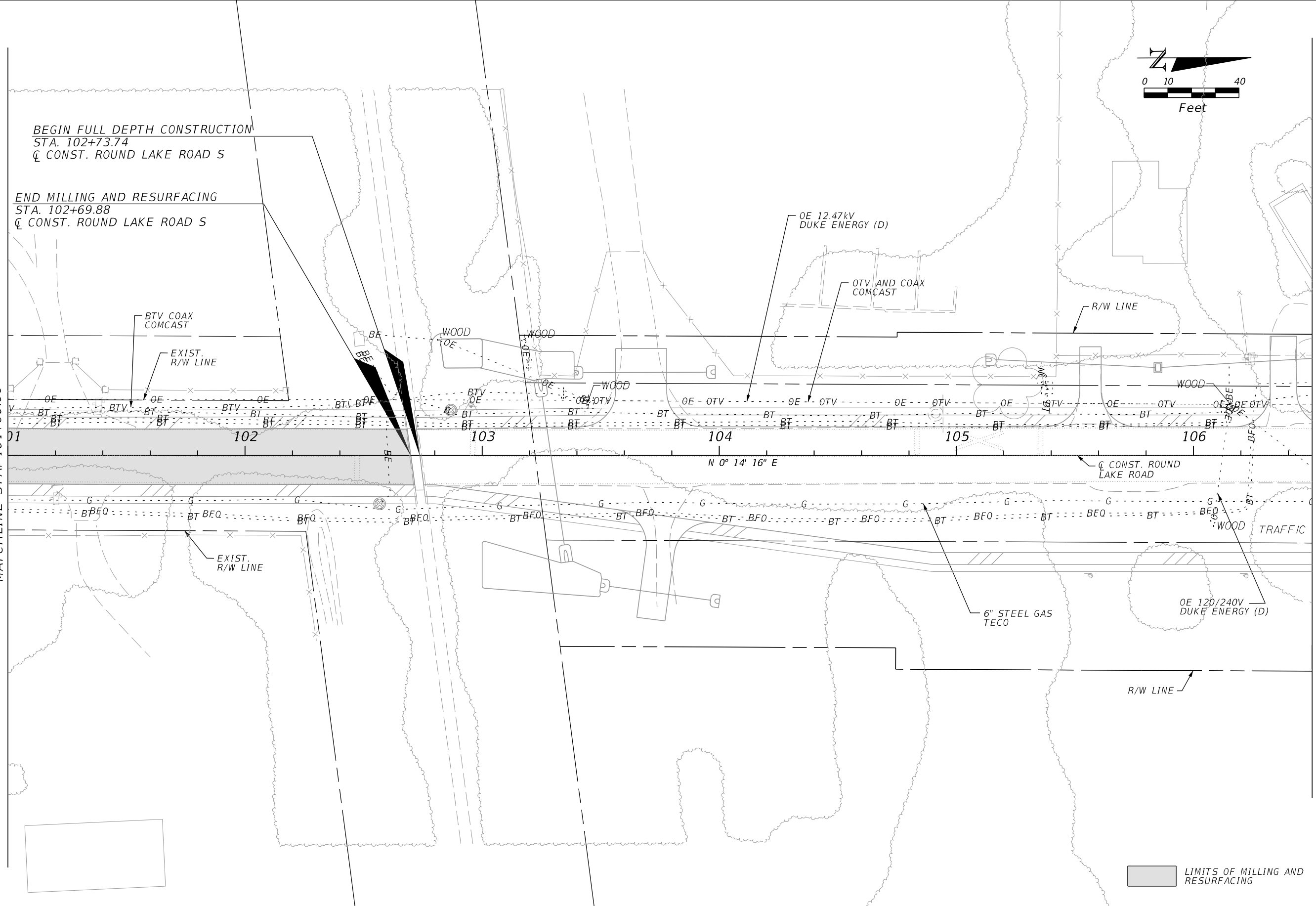


BEGIN FULL DEPTH CONSTRUCTION
STA. 102+73.74
CL CONST. ROUND LAKE ROAD S

END MILLING AND RESURFACING
STA. 102+69.88
CL CONST. ROUND LAKE ROAD S

MATCHLINE STA. 101+00.00

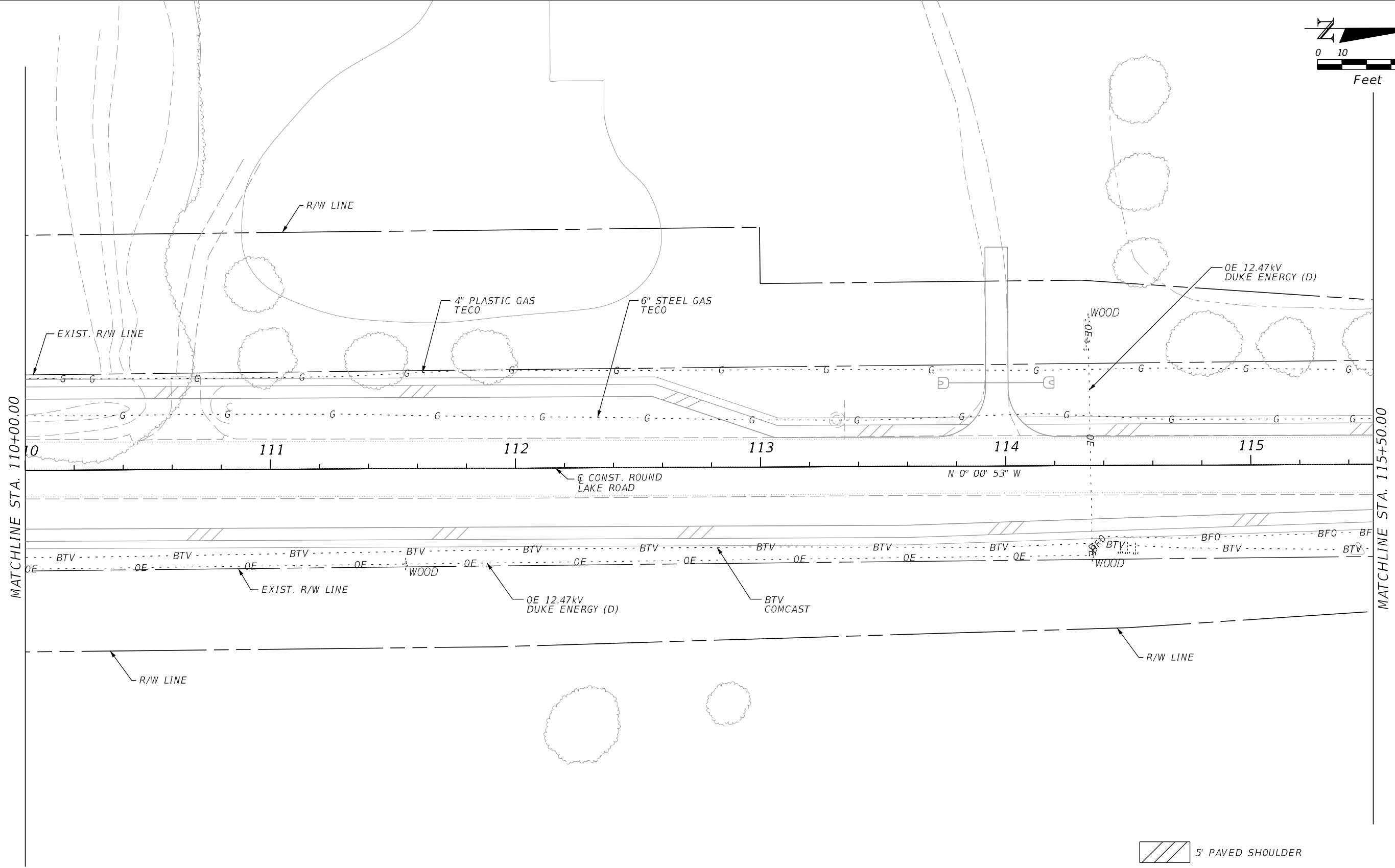
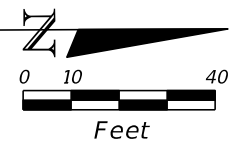
MATCHLINE STA. 106+50.00



LIMITS OF MILLING AND RESURFACING

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 13	SHEET NO. 239
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

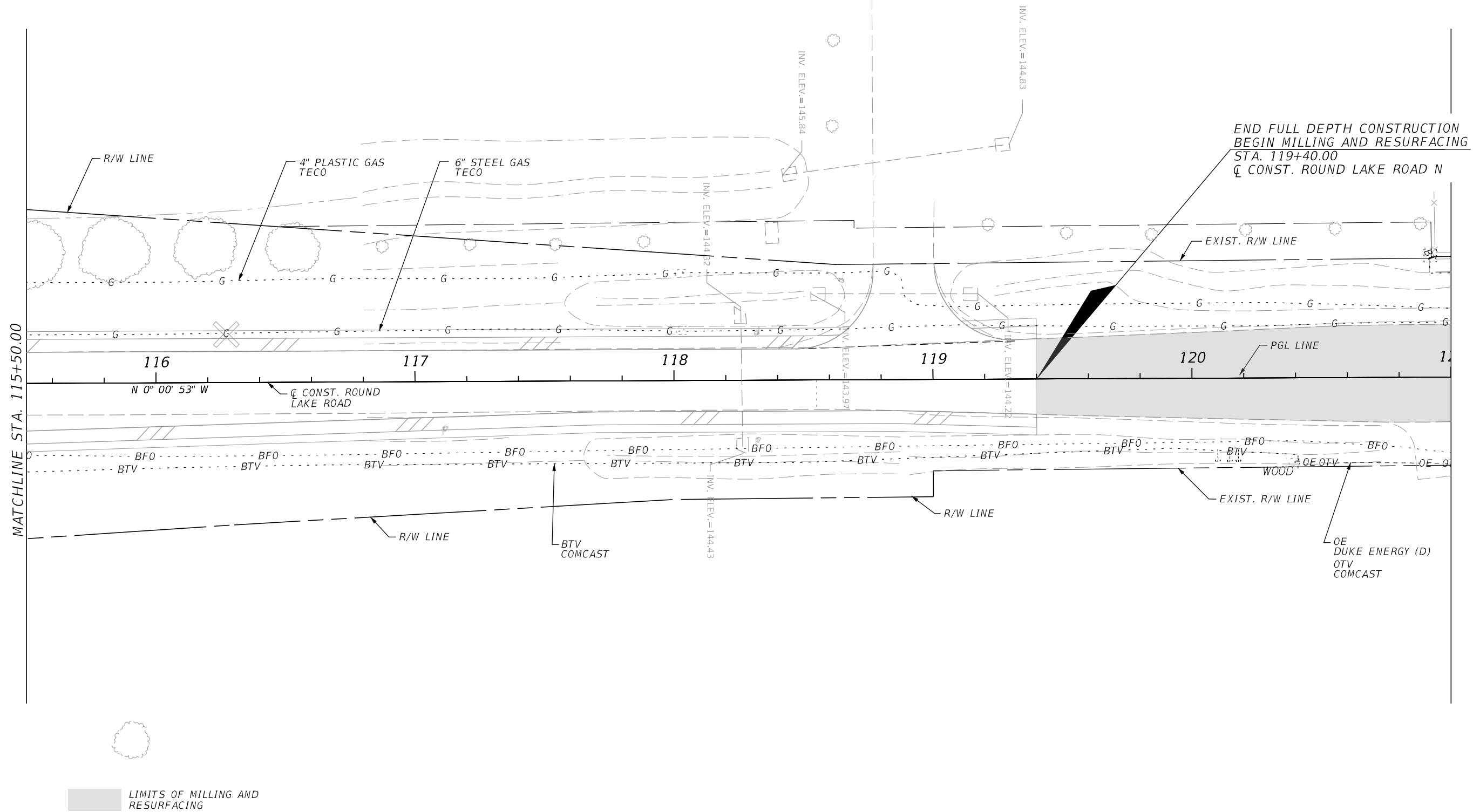
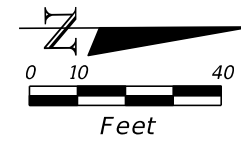


5' PAVED SHOULDER

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 14	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		240
					46	LAKE	238275-3-52-01		

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ROUND LAKE
ELEMENTARY SCHOOL

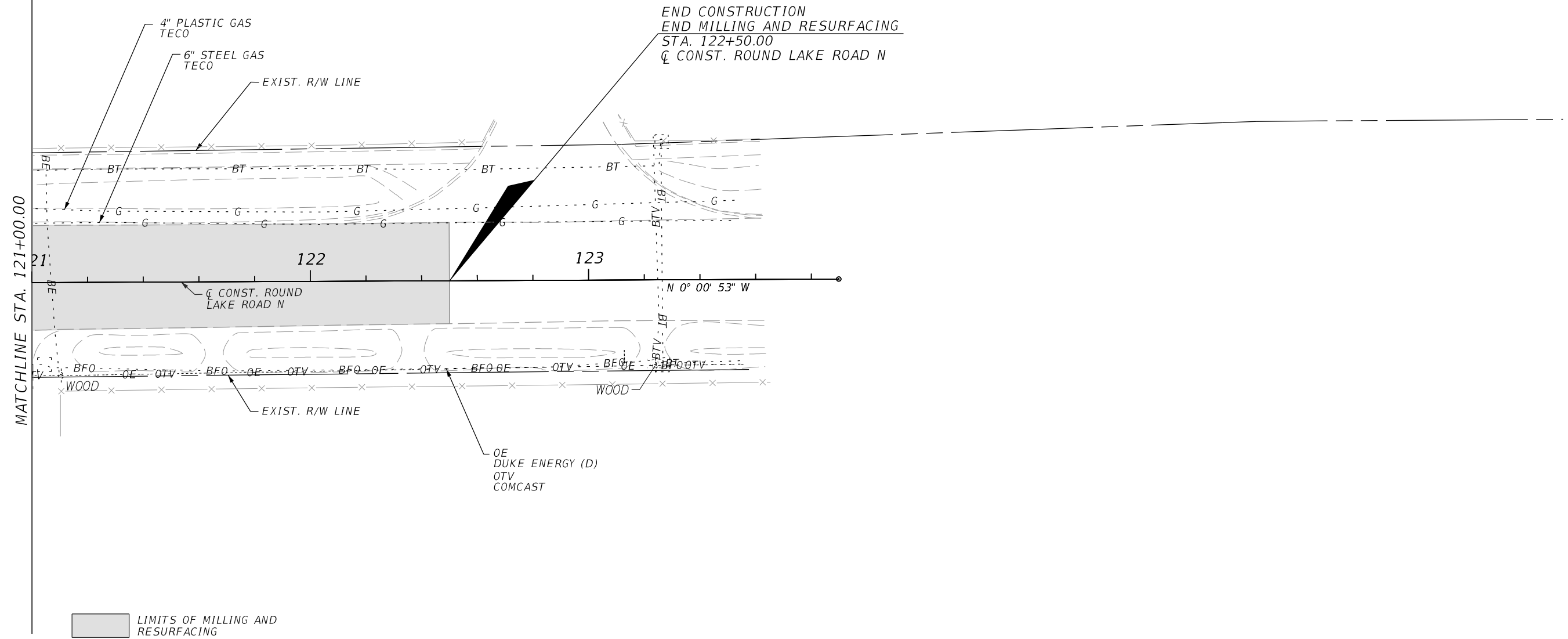
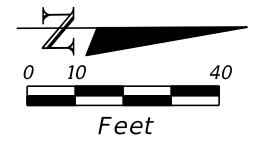


LIMITS OF MILLING AND RESURFACING

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 15	SHEET NO. 241
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

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ROUND LAKE
ELEMENTARY SCHOOL



REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			UTILITY ADJUSTMENTS PLAN SHEET 16	SHEET NO. 242
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

SUMMARY OF VERIFIED UTILITIES

Vvh #	UTILITY DESCRIPTION (Owner, Type)	SIZE	MATERIALS	E and/or Q			EXISTING GROUND ELEVATION	TOP ELEVATION	COMMENTS
				STATION	OFFSET	LT/RT			
TH1	CENTURYLINK, BURIED TELEPHONE	4"		95+98.45	23.4	RT	125.0	121.7	
TH2	CENTURYLINK, BURIED TELEPHONE	4"		98+84.30	24.6	RT	143.1	140.6	
TH3	COMCAST, CABLE TV	1"		98+95.65	46.5	RT	144.1	141.3	
TH4	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		109+75.19	25.3	LT	154.2	150.4	
TH5	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		110+91.78	25.4	LT	153.9	150.0	
TH6	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		112+36.82	25.4	LT	153.6	149.7	
TH7	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		115+06.05	24.8	LT	154.2	150.4	
TH8	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		121+14.78	24.4	LT	153.6	149.7	
TH9	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		124+89.11	23.8	LT	151.0	147.0	
TH10	DUKE ENERGY, BURIED ELECTRIC	1"		129+11.74	36.4	RT	138.1	136.3	
TH11	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		129+62.02	24.1	LT	140.7	136.8	
TH12	CENTURYLINK, BURIED TELEPHONE	4"		129+59.18	23.8	RT	139.5	135.8	
TH13	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		132+15.68	24.9	LT	141.2	137.6	
TH14	TECO GAS, BURIED GAS MAIN	4"	HDPE	134+77.88	28.4	LT	135.5	133.0	
TH15	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		134+76.72	26.1	LT	135.8	132.0	
TH16	TECO GAS, BURIED GAS MAIN	4"	HDPE	138+66.87	29.6	LT	117.6	114.6	
TH17	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		138+68.07	24.1	LT	118.2	114.4	
TH18	CENTURYLINK, BURIED TELEPHONE	4"		140+36.27	24.0	RT	110.3	106.3	
TH19	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		140+44.00	23.6	RT	109.9	105.5	
TH20	TECO GAS, BURIED GAS MAIN	4"	HDPE	141+86.22	29.1	LT	105.0	102.6	
TH21	CENTURYLINK, BURIED FIBER OPTIC CABLE	2"	PVC PIPE	141+84.52	24.1	LT	105.7	102.3	
TH22	CENTURYLINK, BURIED TELEPHONE	4"		141+85.18	25.6	RT	104.7	100.9	
TH23	CITY OF LEESBURG, BURIED FIBER OPTIC CABLE	2"	PVC PIPE	142+39.65	48.5	RT	101.8	95.0	
TH24	TECO GAS, BURIED GAS MAIN	4"	HDPE	142+31.43	108.0	LT	109.1	104.5	
TH25	TECO GAS, BURIED GAS MAIN	4"	STEEL	142+41.04	106.5	LT	108.7	104.2	
TH26	CENTURYLINK, BURIED TELEPHONE	4"		142+35.39	44.2	RT	102.3	96.9	
TH27	FDOT, BURIED ELECTRIC (TRAFFIC)	2"	PVC PIPE	142+40.74	53.5	RT	101.5	99.2	
TH28	CENTURYLINK, BURIED TELEPHONE	1"		142+38.10	86.2	RT	100.3	96.5	
TH29	TECO GAS, BURIED GAS MAIN	4"	STEEL	142+84.22	84.0	RT	100.8	96.7	
TH30	FDOT, BURIED ELECTRIC/FIBER OPTIC CABLE	2"	PVC PIPE	142+88.88	85.0	RT	100.5	98.3	(1) FOC, (2) BE IN PVC
TH31	COMCAST, BURIED CATV	2"	PVC PIPE	143+05.44	112.8	LT	108.0	105.1	
TH32	TECO GAS, BURIED GAS MAIN	4"	HDPE	146+02.63	28.0	LT	101.0	96.7	
TH33	CENTURYLINK, BURIED FIBER OPTIC CABLE	3/4"		146+02.53	24.1	LT	101.2	96.6	
TH34	CENTURYLINK, BURIED TELEPHONE	4"		146+01.45	23.6	RT	100.9	96.9	
TH35	FDOT, BURIED ELECTRIC (TRAFFIC)	2"	PVC PIPE	146+00.73	32.7	RT	99.4	96.9	

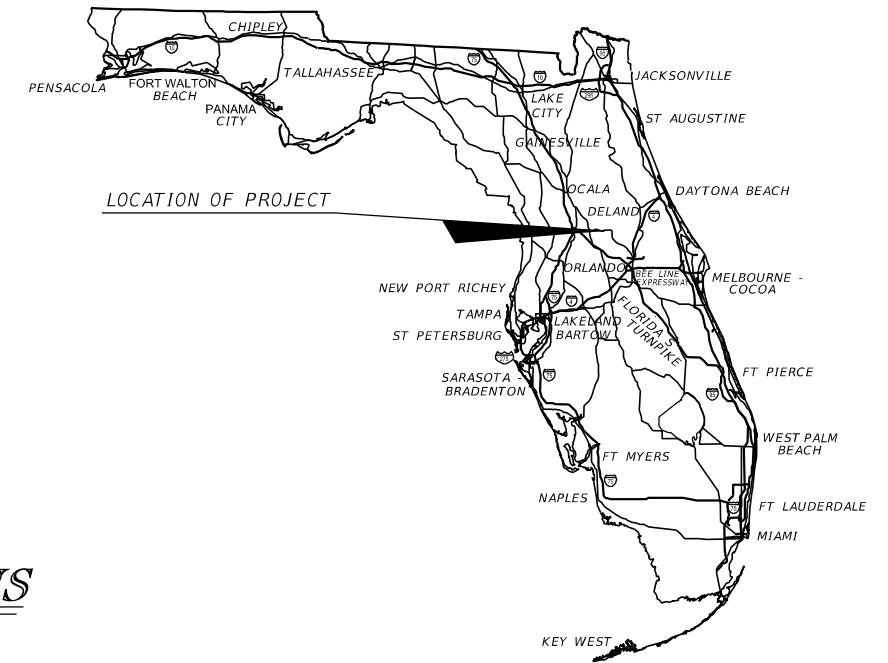
STATION/OFFSET IS TAKEN FROM SR 46 BASELINE OF SURVEY.

<p align="center">REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				DATE	DESCRIPTION	DATE	DESCRIPTION					<p>LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856</p>			<p align="center">STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td align="center">46</td> <td align="center">LAKE</td> <td align="center">238275-3-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	46	LAKE	238275-3-52-01	<p align="center">SUMMARY OF VERIFIED UTILITIES</p>		<p align="center">SHEET NO. 243</p>
DATE	DESCRIPTION	DATE	DESCRIPTION																							
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																								
46	LAKE	238275-3-52-01																								

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-3-52-01
(FEDERAL FUNDS)
LAKE COUNTY (11130)
STATE ROAD NO. 46



INDEX OF SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.	SHEET DESCRIPTION
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S-2 TO S-3	TABULATION OF QUANTITIES
S-4	GENERAL NOTES
S-5 TO S-20	SIGNING AND PAVEMENT MARKING PLAN SHEETS
S-21	GUIDE SIGN WORKSHEET
S-22	SIGN STRUCTURE CROSS SECTION
S-23	CANTILEVER SIGN STRUCTURE DATA TABLE
S-24	REPORT OF SPT BORING FOR SIGN

SIGNING AND PAVEMENT MARKING PLANS

SIGNING AND PAVEMENT MARKING
SHOP DRAWINGS TO BE SUBMITTED TO:

FOREST W. ADKINS, P.E.
LOCHRANE ENGINEERING, INC.
201 SOUTH BUMBY AVENUE
ORLANDO, FLORIDA 32803

PLANS PREPARED BY:

LOCHRANE ENGINEERING, INC.
201 SOUTH BUMBY AVENUE
ORLANDO, FLORIDA 32803
(407) 896-3317
CERTIFICATE OF AUTHORIZATION NO. 2856

CONTRACT NO. C9B09
VENDOR NO. 592036861.002

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

KEY SHEET REVISIONS	
DATE	DESCRIPTION

SIGNING AND PAVEMENT MARKING PLANS
ENGINEER OF RECORD: FOREST W. ADKINS, PE

P.E. NO.: 56003

FISCAL YEAR	SHEET NO.
17	S-1

FDOT PROJECT MANAGER: MATT HASSAN, PE

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			S-5		S-6		S-7		S-8		S-9		S-10		S-11		S-12		S-13		S-14		PLAN	FINAL	PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
700-1-11	SINGLE POST SIGN, F&I, GRD. MOUNT, UP TO 12 SF	AS	1		6		4				1		2		2		4		4		4		28				
700-1-12	SINGLE POST SIGN, F&I, GRD. MOUNT, 12-20 SF	AS									3				2								5				
700-1-50	SINGLE POST SIGN, RELOCATE	AS																			3		3				
700-1-60	SINGLE POST SIGN, REMOVE	AS	3		4		2						1		1		4				3		18				
700-2-50	MULTI-POST SIGN, F&I, GRD. MOUNT, RELOCATE	AS																			1		1				
700-3-208	SIGN PANEL, F&I OVERHEAD MOUNT, 301-400 SF	EA																			1		1				
700-4-114	OH STATIC SIGN STR., F&I, CANTILEVER, 41-50 FT	EA																			1		1				
705-10-1	OBJECT MARKER, TYPE 1, 18"x18" DIAMOND	EA																				2		2			
705-11-1	DELINEATOR, FLEXIBLE TUBULAR	EA			1		1								2						4		8				
710-90	PAINTED PAVEMENT MARKINGS - FINAL SURFACE	LS																					1				
*	RETRO REFLECTIVE PAVEMENT MARKERS																										
*	BI DIRECTIONAL WHITE/RED	EA	28		68		58		56		65		56		72		66		77		126		672				
*	BI DIRECTIONAL YELLOW	EA			12		4								4						8		28				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 6"	NM	0.114		0.221		0.226		0.208		0.249		0.208		0.221		0.245		0.323		0.593		2.620				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 8"	NM									0.008				0.015						0.020		0.043				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 12"	LF			119		306				126				266		169		174		916		2076				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 18"	LF									9				18						17		44				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 24"	LF			17		59				24				49		28		32		850		1059				
*	PAINTED PAVT. MARKINGS, STD., WHITE, SKIP, 10'-30', 6"	GM	0.256		0.400		0.368		0.448		0.448		0.448		0.416		0.448		0.416		0.224		3.872				
*	PAINTED PAVT. MARKINGS, STD., WHITE, DOTTED, 2'-4', 6"	LF			38										18		52		52				108				
*	PAINTED PAVT. MARKINGS, STD., WHITE, 6'-10', GAP, 6"	LF			35		35				35				35		35		35				210				
*	PAINTED PAVT. MARKINGS, STD., WHITE, MESSAGE	EA			2		1				2				3		1		1		7		16				
*	PAINTED PAVT. MARKINGS, STD., WHITE, ARROWS	EA			6		4				5				6		3		5		21		50				
*	PAINTED PAVT. MARKINGS, STD., YELLOW, 6"	NM	0.114		0.234		0.203		0.208		0.205		0.208		0.235		0.209		0.209		0.221		2.046				
*	PAINTED PAVT. MARKINGS, STD., YELLOW, 18"	LF			27																		27				

* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - PAY ITEM 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE FDOT SPECIFICATION 710 FOR NUMBER OF APPLICATIONS REQUIRED.

REVISIONS DATE DESCRIPTION DATE DESCRIPTION				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES	SHEET NO. S-2
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			S-15		S-16		S-17		S-18		S-19		S-20														
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
700-1-11	SINGLE POST SIGN, F&I, GRD. MOUNT, UP TO 12 SF	AS	2		1		1		1		4											9		37			
700-1-12	SINGLE POST SIGN, F&I, GRD. MOUNT, 12-20 SF	AS																				-		5			
700-1-50	SINGLE POST SIGN, RELOCATE	AS									1											1		4			
700-1-60	SINGLE POST SIGN, REMOVE	AS	1				1		1		3											6		24			
700-2-50	MULTI-POST SIGN, F&I, GRD. MOUNT, RELOCATE	AS																				-		1			
700-3-208	SIGN PANEL, F&I OVERHEAD MOUNT, 301-400 SF	EA																				-		1			
700-4-114	OH STATIC SIGN STR., F&I, CANTILEVER, 41-50 FT	EA																				-		1			
705-10-1	OBJECT MARKER, TYPE 1, 18"x18" DIAMOND	EA																				-		2			
705-11-1	DELINEATOR, FLEXIBLE TUBULAR	EA																				-		8			
710-90	PAINTED PAVEMENT MARKINGS - FINAL SURFACE	LS																				1		1			
*	RETRO REFLECTIVE PAVEMENT MARKERS																										
*	BI DIRECTIONAL WHITE/RED	EA	42				21		33		7											103		775			
*	BI DIRECTIONAL YELLOW	EA			6		58		70		8											226		254			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 6"	NM	0.166		0.038		0.283		0.332		0.208		0.085									1.111		3.731			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 8"	NM																				-		0.043			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 12"	LF																				-		2076			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 18"	LF																				-		44			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SOLID, 24"	LF					66				40											106		1165			
*	PAINTED PAVT. MARKINGS, STD., WHITE, SKIP, 10'-30', 6"	GM	0.192																			0.192		4.064			
*	PAINTED PAVT. MARKINGS, STD., WHITE, DOTTED, 2'-4', 6"	LF					176		52													282		390			
*	PAINTED PAVT. MARKINGS, STD., WHITE, 6'-10', GAP, 6"	LF					35		35		35		35									140		350			
*	PAINTED PAVT. MARKINGS, STD., WHITE, MESSAGE	EA					4		1		3											8		24			
*	PAINTED PAVT. MARKINGS, STD., WHITE, ARROWS	EA					6		7		2		2									20		70			
*	PAINTED PAVT. MARKINGS, STD., YELLOW, 6"	NM	0.095		0.038		0.314		0.343		0.412		0.056									1.258		3.304			
*	PAINTED PAVT. MARKINGS, STD., YELLOW, 18"	LF					99		175		92											366		393			

* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - PAY ITEM 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE FDOT SPECIFICATION 710 FOR NUMBER OF APPLICATIONS REQUIRED.

REVISIONS DATE DESCRIPTION DATE DESCRIPTION				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES	SHEET NO. S-3
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

GENERAL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND REPLACE ALL EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS. IF SIGNS ARE DAMAGED BY THE CONTRACTOR, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2. SIDE ROAD STOP BAR LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION TO OBTAIN PROPER SIGHT DISTANCE.
3. FOR RETRO-REFLECTIVE PAVEMENT MARKER PLACEMENT DETAILS, REFER TO FDOT DESIGN STANDARDS, INDEX NO. 17352.
4. ALL EXISTING SIGNS ARE TO REMAIN UNLESS OTHERWISE NOTED IN THE PLANS. EXISTING SIGNS SHOWN FOR INFORMATION ONLY.
5. ALL CALLOUTS ARE TO CENTERLINE OF CONSTRUCTION SR 46 UNLESS OTHERWISE NOTED.
6. ALL REMOVED SIGNS AND THEIR SUPPORTS BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF PROPERLY UNLESS OTHERWISE NOTED.
7. THE LANE WIDTH DIMENSIONS SHOWN IN THE SIGNING AND PAVEMENT MARKING PLANS REFLECT THE NORMAL LANE WIDTHS, NOT THE DISTANCE BETWEEN THE STRIPES. SEE INDEX 17346 FOR PLACEMENT OF LANE LINES.

PAY ITEM FOOTNOTES

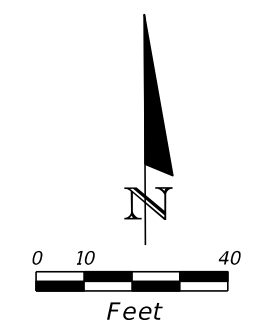
- 700-1-11 INCLUDES THE COST OF RELOCATING STREET NAME SIGNS TO THE NEW SIGN ASSEMBLY USING A POST TOP SLIP FITTER AT THE LOCATIONS SHOWN IN THE PLANS. ALL ADDITIONAL COSTS AND HARDWARE NECESSARY, INCLUDING RE-DRILLING OF THE SIGNS, SHALL BE INCLUDED IN THIS PAY ITEM.
- 700-1-12
- 705-11-1 INCLUDES THE REMOVAL OF ALL DELINEATORS WITHIN THE PROJECT LIMITS.

RPM LEGEND:

BDWR = BI-DIRECTIONAL WHITE/RED
 BDY = BI-DIRECTIONAL YELLOW

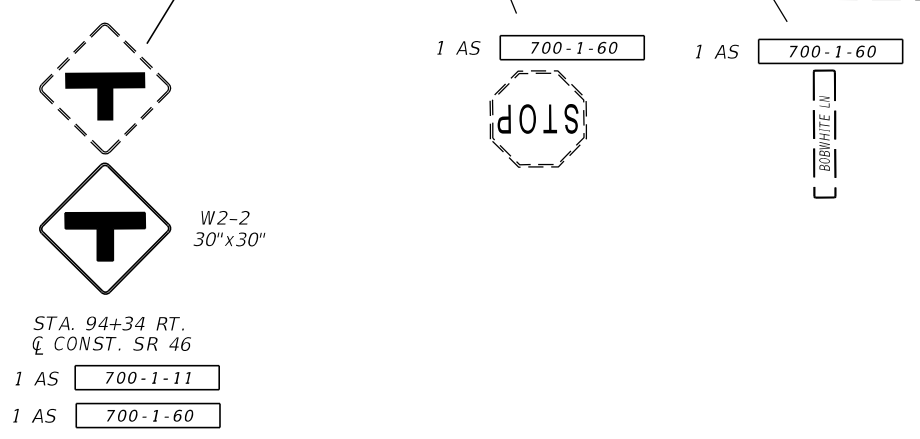
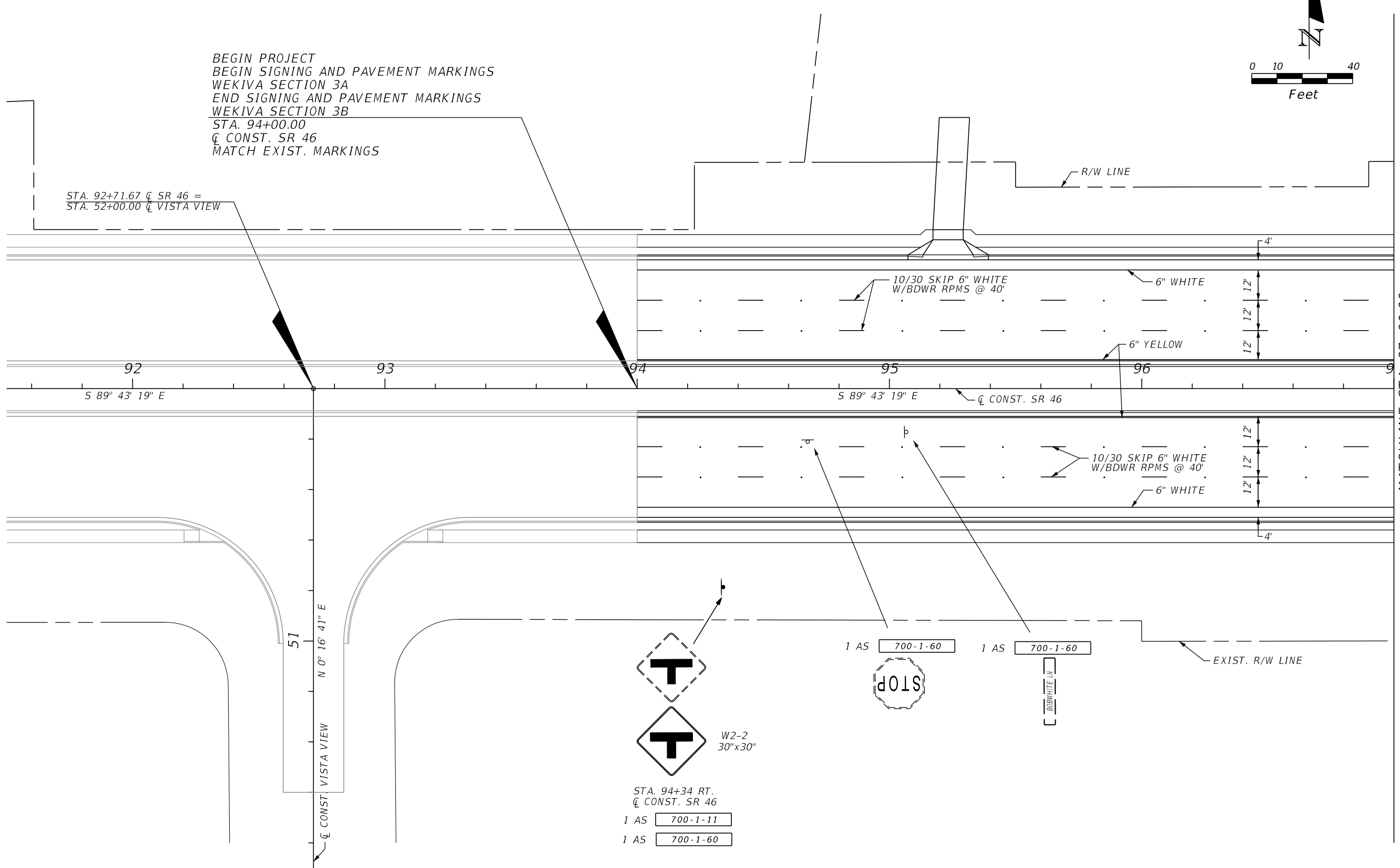
REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	GENERAL NOTES
								S-4

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BEGIN PROJECT
 BEGIN SIGNING AND PAVEMENT MARKINGS
 WEKIVA SECTION 3A
 END SIGNING AND PAVEMENT MARKINGS
 WEKIVA SECTION 3B
 STA. 94+00.00
 Q CONST. SR 46
 MATCH EXIST. MARKINGS

STA. 92+71.67 Q SR 46 =
 STA. 52+00.00 Q VISTA VIEW



MATCHLINE STA. 97+00.00

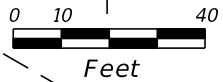
REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 1	SHEET NO. S-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

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EQUATION:
 STA. 98+93.65 \bar{C} SR 46 =
 STA. 64+39.83 \bar{C} TOP OF THE HILL DR.

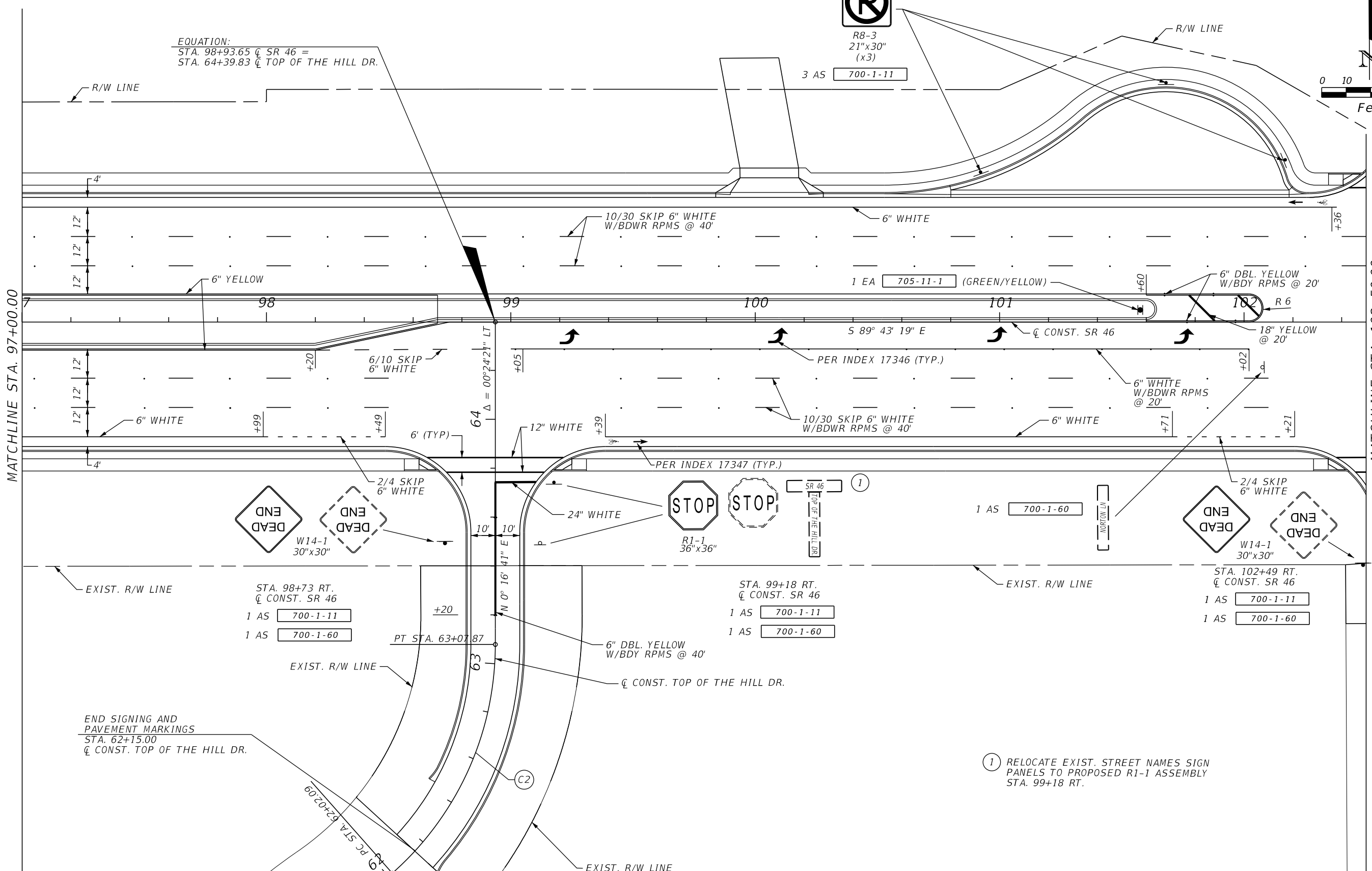


R8-3
 21"x30"
 (x3)
 3 AS 700-1-11



MATCHLINE STA. 97+00.00

MATCHLINE STA. 102+50.00



END SIGNING AND
 PAVEMENT MARKINGS
 STA. 62+15.00
 \bar{C} CONST. TOP OF THE HILL DR.

STA. 98+73 RT.
 \bar{C} CONST. SR 46
 1 AS 700-1-11
 1 AS 700-1-60

STA. 99+18 RT.
 \bar{C} CONST. SR 46
 1 AS 700-1-11
 1 AS 700-1-60

STA. 102+49 RT.
 \bar{C} CONST. SR 46
 1 AS 700-1-11
 1 AS 700-1-60

① RELOCATE EXIST. STREET NAMES SIGN
 PANELS TO PROPOSED R1-1 ASSEMBLY
 STA. 99+18 RT.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

**SIGNING AND PAVEMENT
 MARKINGS PLAN SHEET 2**

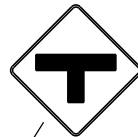
SHEET NO.
 S-6

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

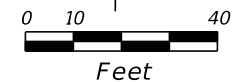
R1-1
36x36
STA. 102+51 LT.
C CONST. SR 46
1 AS 700-1-11



NORTON LANE

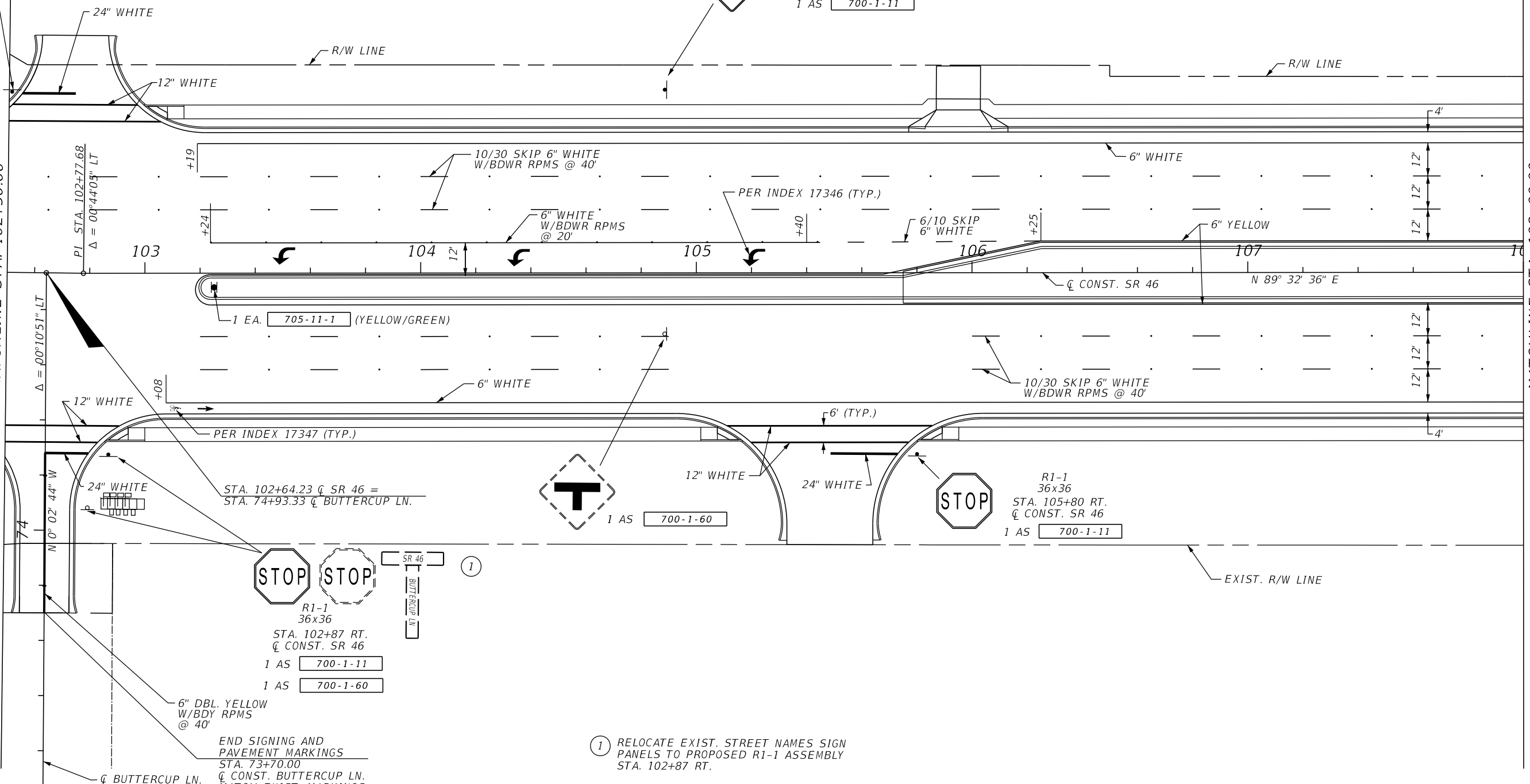


W2-2
30"x30"
STA. 104+89 LT.
C CONST. SR 46
1 AS 700-1-11



MATCHLINE STA. 102+50.00

MATCHLINE STA. 108+00.00



STA. 102+64.23 C SR 46 =
STA. 74+93.33 C BUTTERCUP LN.



R1-1
36x36
STA. 102+87 RT.
C CONST. SR 46
1 AS 700-1-11
1 AS 700-1-60



1 AS 700-1-60



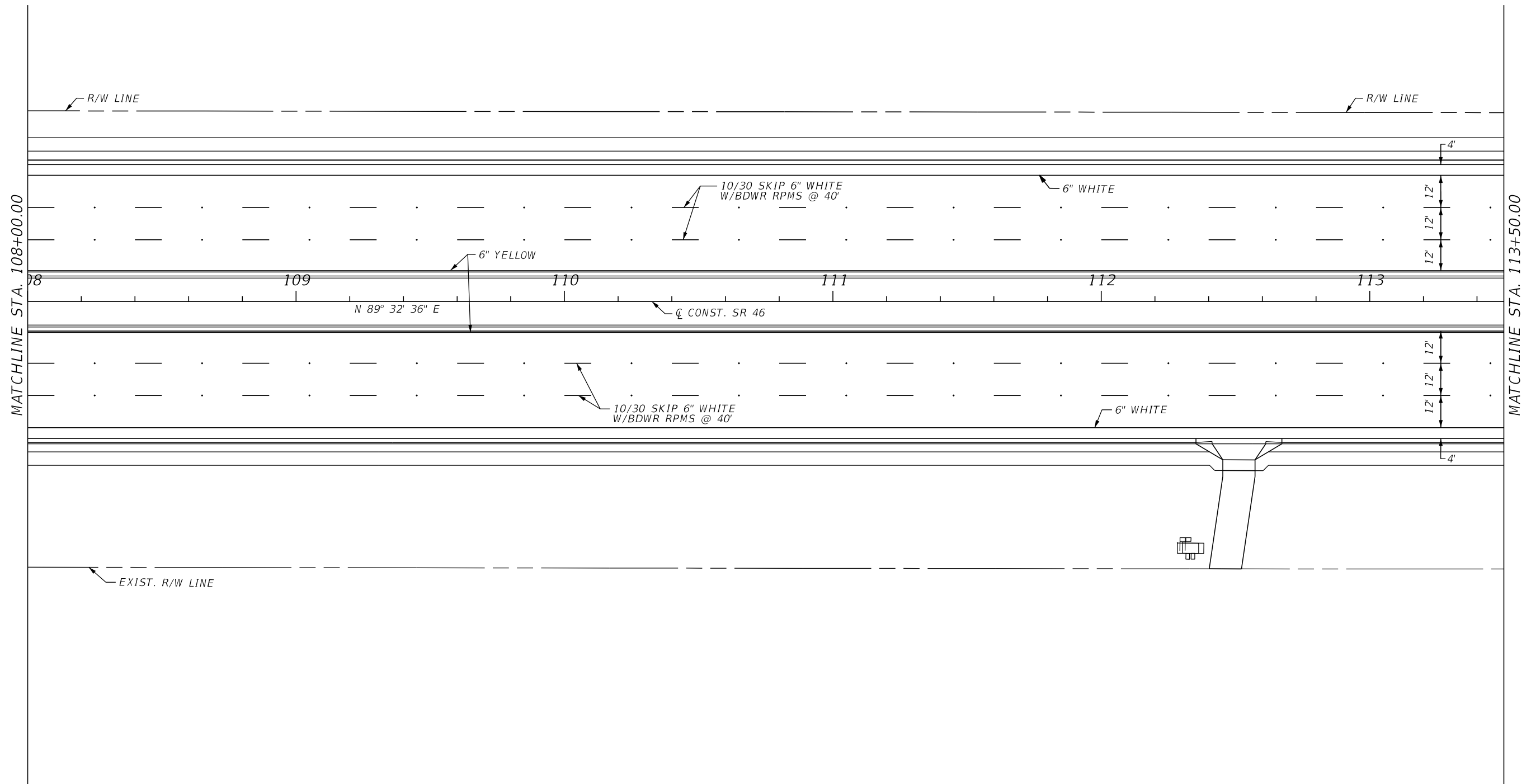
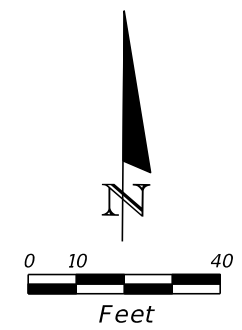
R1-1
36x36
STA. 105+80 RT.
C CONST. SR 46
1 AS 700-1-11

END SIGNING AND
PAVEMENT MARKINGS
STA. 73+70.00
C CONST. BUTTERCUP LN.
MATCH EXIST. MARKINGS

1 RELOCATE EXIST. STREET NAMES SIGN
PANELS TO PROPOSED R1-1 ASSEMBLY
STA. 102+87 RT.

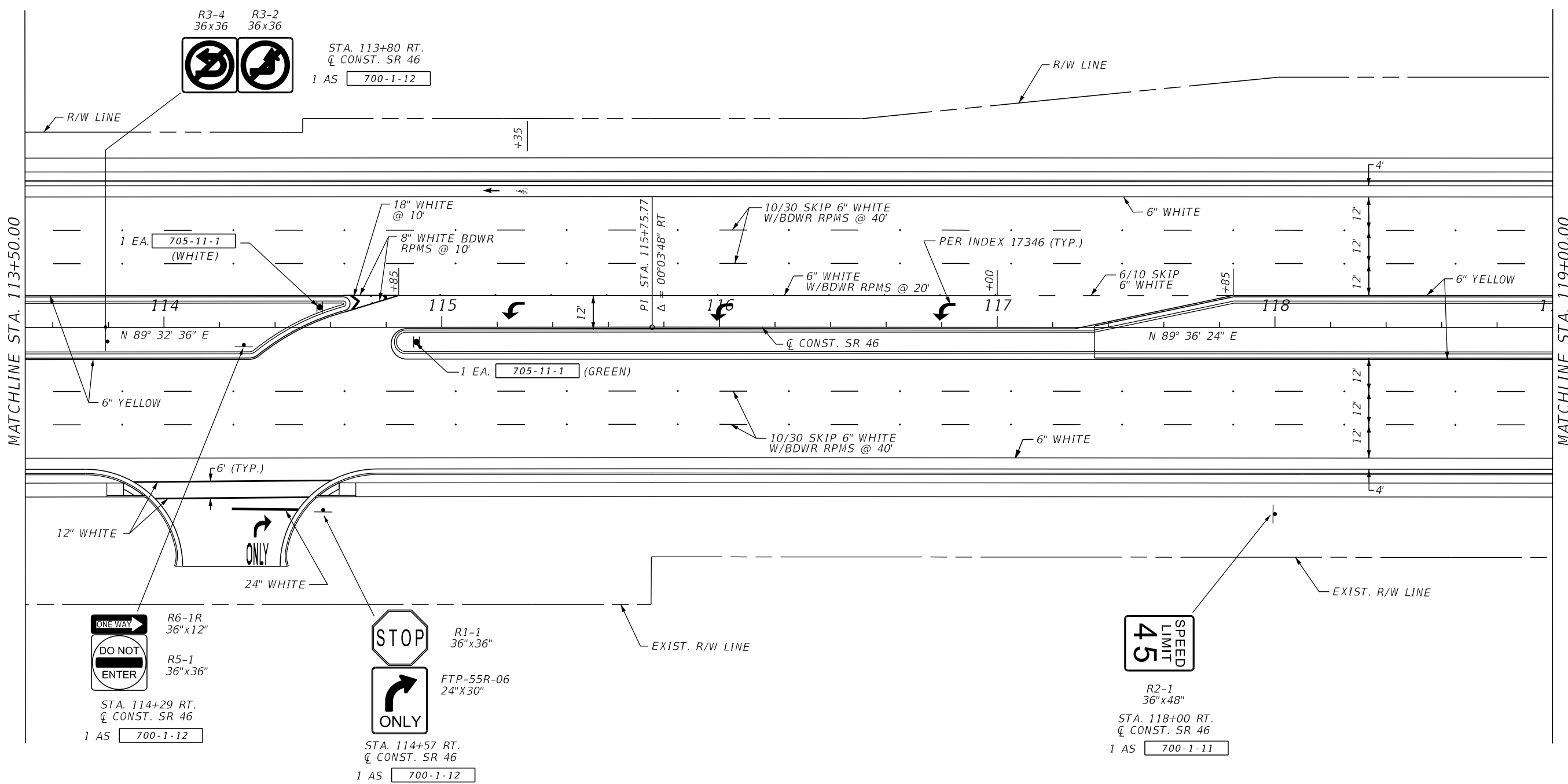
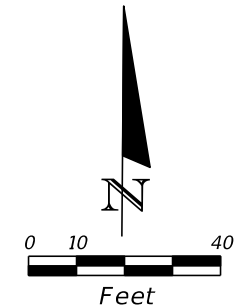
REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 3	SHEET NO. S-7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

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REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 4	SHEET NO. S-8
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

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R3-4
36x36

R3-2
36x36

STA. 113+80 RT.
☒ CONST. SR 46

1 AS 700-1-12

1 EA. 705-11-1
(WHITE)

1 EA. 705-11-1
(GREEN)

R6-1R
36"x12"

R5-1
36"x36"

STA. 114+29 RT.
☒ CONST. SR 46

1 AS 700-1-12

R1-1
36"x36"

FTP-55R-06
24"x30"

STA. 114+57 RT.
☒ CONST. SR 46

1 AS 700-1-12

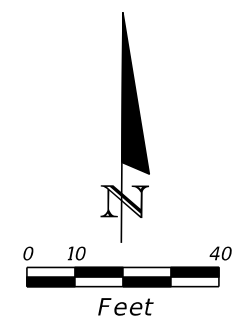
R2-1
36"x48"

STA. 118+00 RT.
☒ CONST. SR 46

1 AS 700-1-11

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 5	SHEET NO. S-9
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

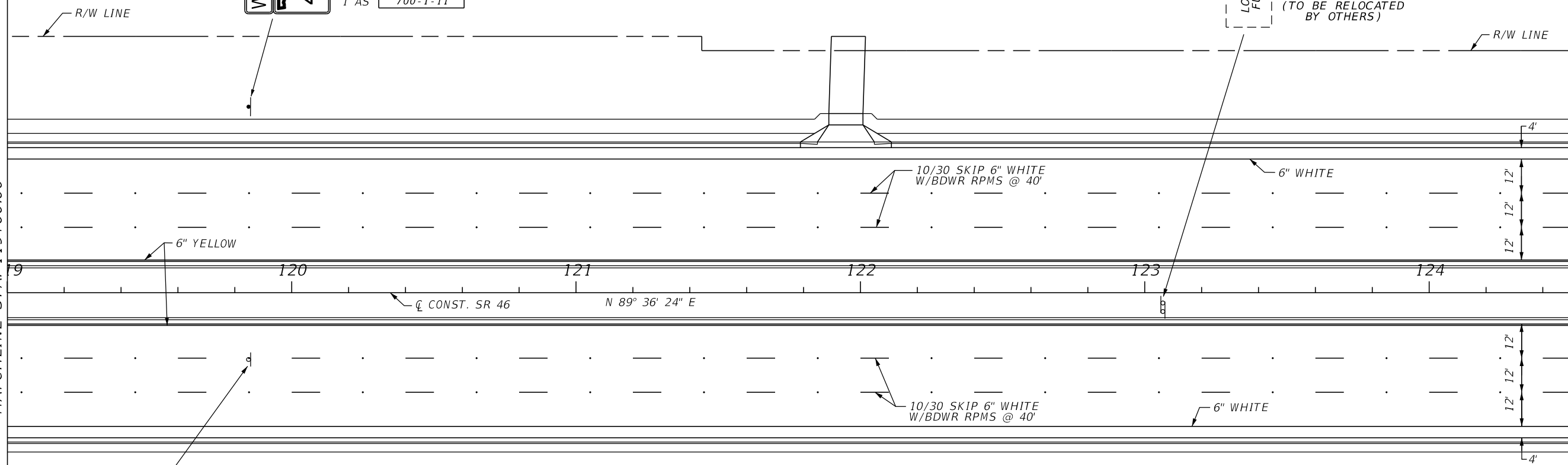


M3-4 FTP 17-06
24"x12" 24"x24"
WEST 46
STA. 119+85 LT.
☉ CONST. SR 46
1 AS 700-1-11

LOOMIS FAMILY
FUNERAL HOME
PRIVATE SIGN
(TO BE RELOCATED
BY OTHERS)

MATCHLINE STA. 119+00.00

MATCHLINE STA. 124+50.00







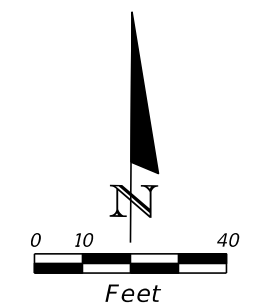
WEST 46
1 AS 700-1-60

46 EAST
FTP 17-06 M3-2
24"x24" 24"x12"
STA. 119+85 RT.
☉ CONST. SR 46
1 AS 700-1-11

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 6	SHEET NO. S-10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

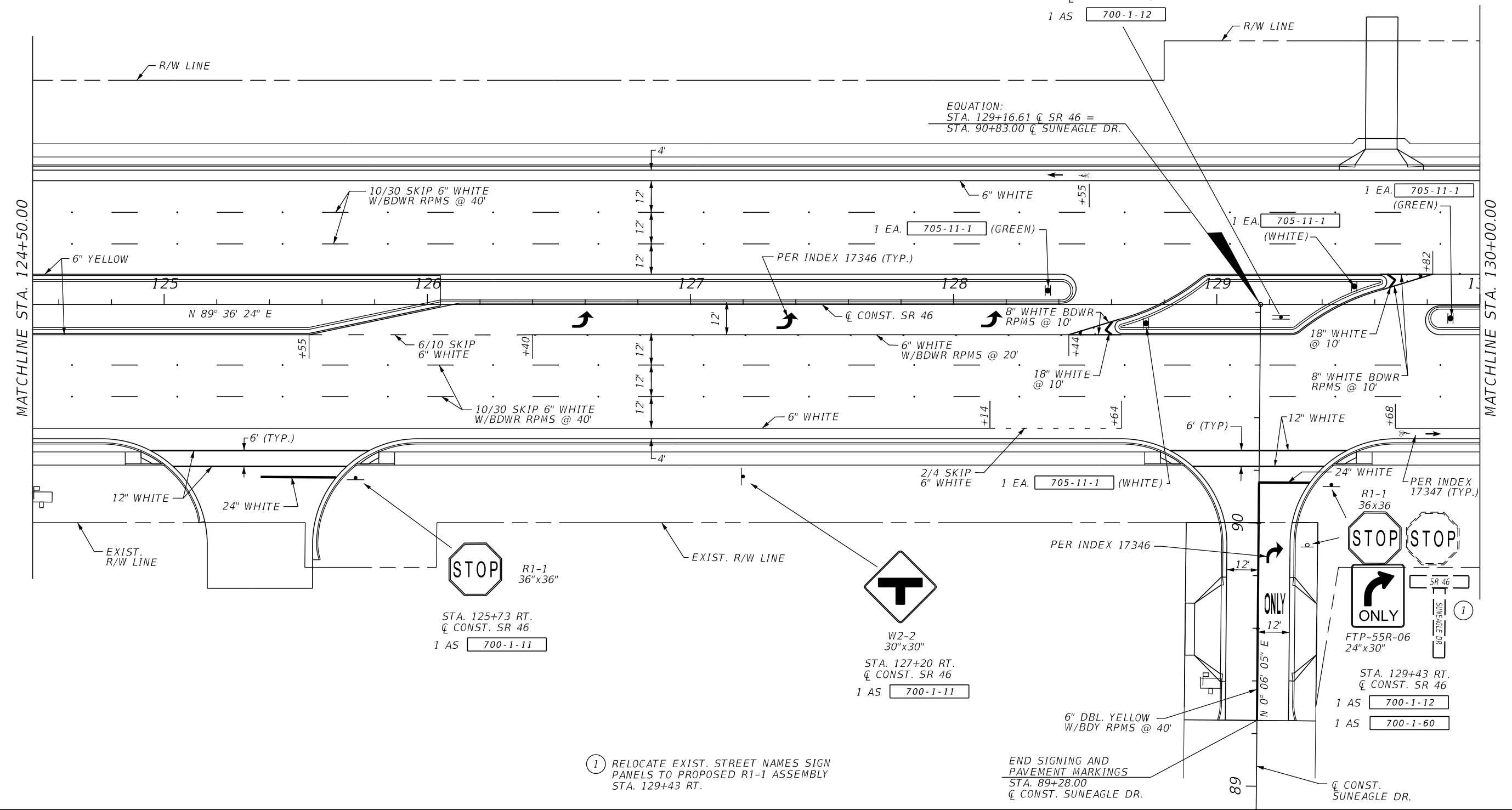
-  R5-1
36"x36"
-  R6-1R
36"x12"
-  R6-1R
36"x12"
-  R5-1
36"x36"



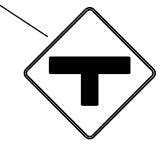
STA. 129+25 RT.
 Q̄ CONST. SR 46

1 AS 700-1-12

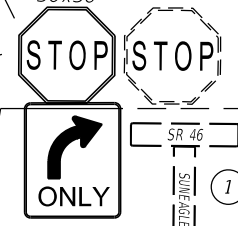
EQUATION:
 STA. 129+16.61 Q̄ SR 46 =
 STA. 90+83.00 Q̄ SUNEAGLE DR.



STA. 125+73 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-11



STA. 127+20 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-11



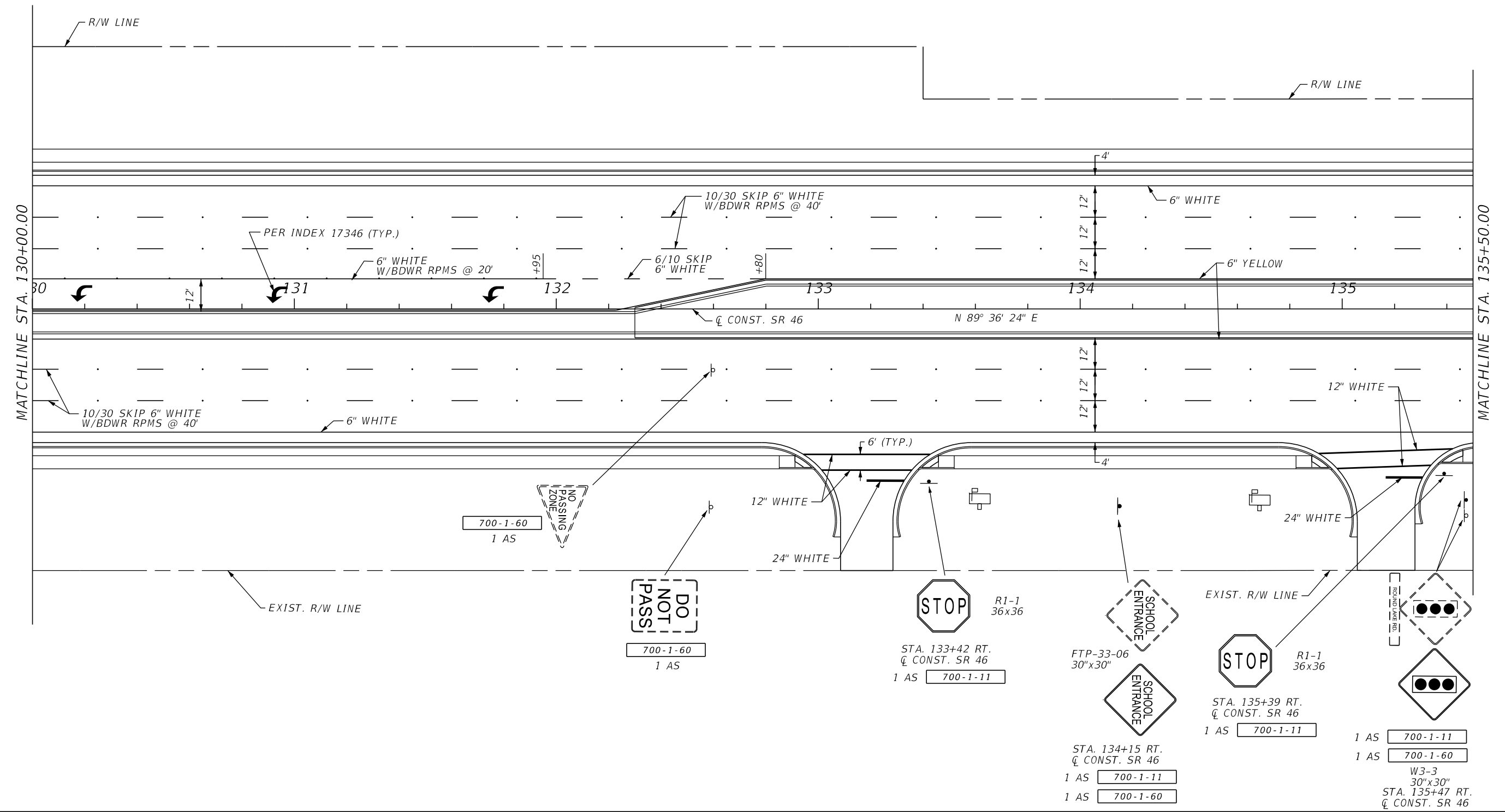
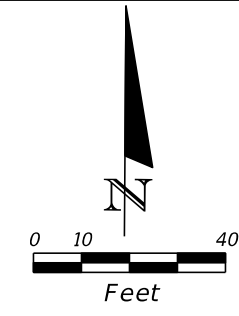
STA. 129+43 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-12
 1 AS 700-1-60

① RELOCATE EXIST. STREET NAMES SIGN
 PANELS TO PROPOSED R1-1 ASSEMBLY
 STA. 129+43 RT.

END SIGNING AND
 PAVEMENT MARKINGS
 STA. 89+28.00
 Q̄ CONST. SUNEAGLE DR.

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 7	SHEET NO. S-11
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

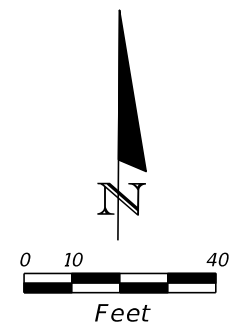
LOCHRANE ENGINEERING, INC.
 201 SOUTH BUMBY AVENUE
 ORLANDO, FLORIDA 32803
 (407) 896-3317
 FOREST W. ADKINS, P.E.
 P.E. NUMBER 56003
 CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

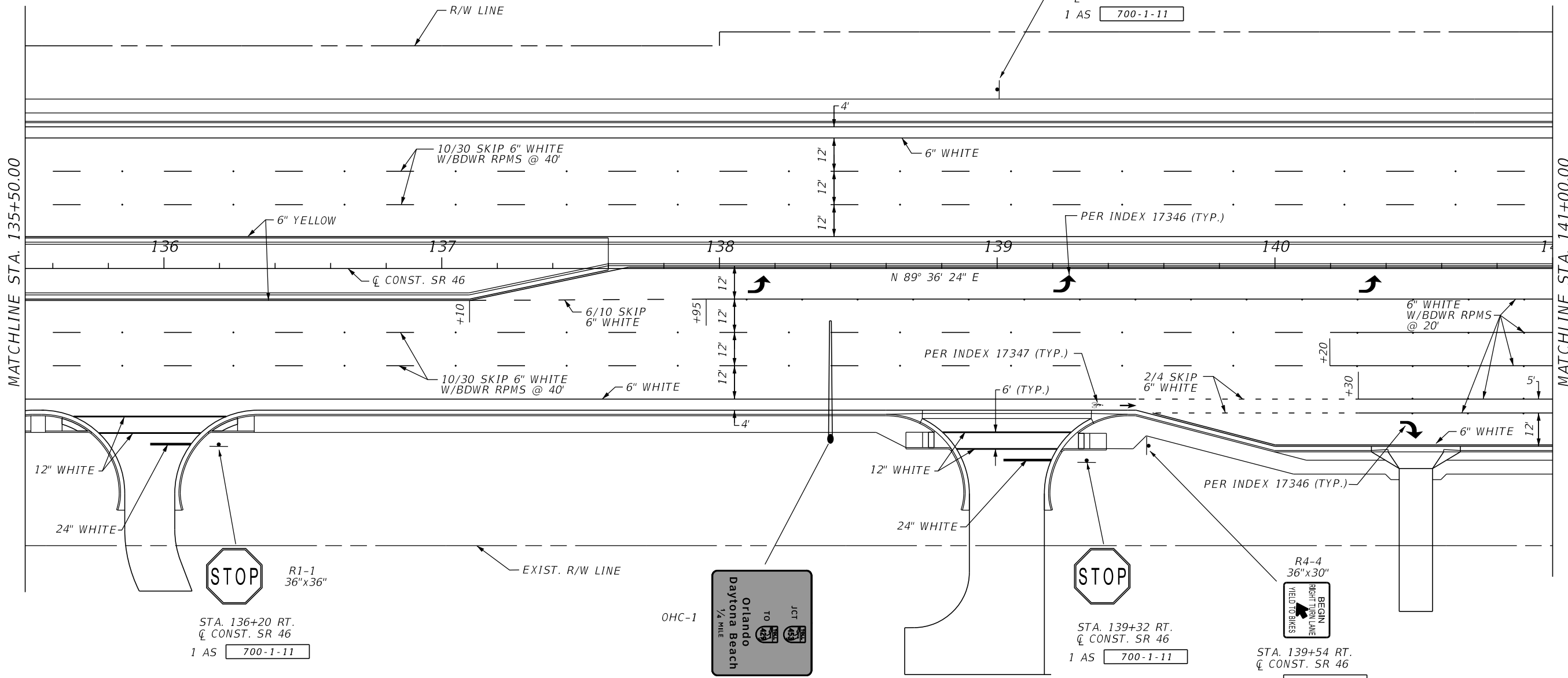
**SIGNING AND PAVEMENT
MARKINGS PLAN SHEET 8**

SHEET NO.
S-12

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



SPEED LIMIT 45
 R2-1
 36"x48"
 STA. 139+00 LT.
 Q̄ CONST. SR 46
 1 AS 700-1-11



STOP
 R1-1
 36"x36"
 STA. 136+20 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-11

JCT
 Orlando
 Daytona Beach
 1/4 MILE
 OHC-1

STA. 138+40 RT.
 Q̄ CONST. SR 46
 1 EA 700-3-208
 1 EA 700-4-114
 SEE SHEETS S-21 TO S-23

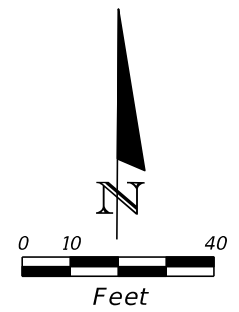
STOP
 STA. 139+32 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-11

R4-4
 36"x30"
 BEGIN
 RIGHT TURN LANE
 YIELD TO BIKES
 STA. 139+54 RT.
 Q̄ CONST. SR 46
 1 AS 700-1-11

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBAY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 9	SHEET NO. S-13
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

MATCHLINE STA. 110+00.00
SIGNING AND PAVEMENT MARKING SHEET 14

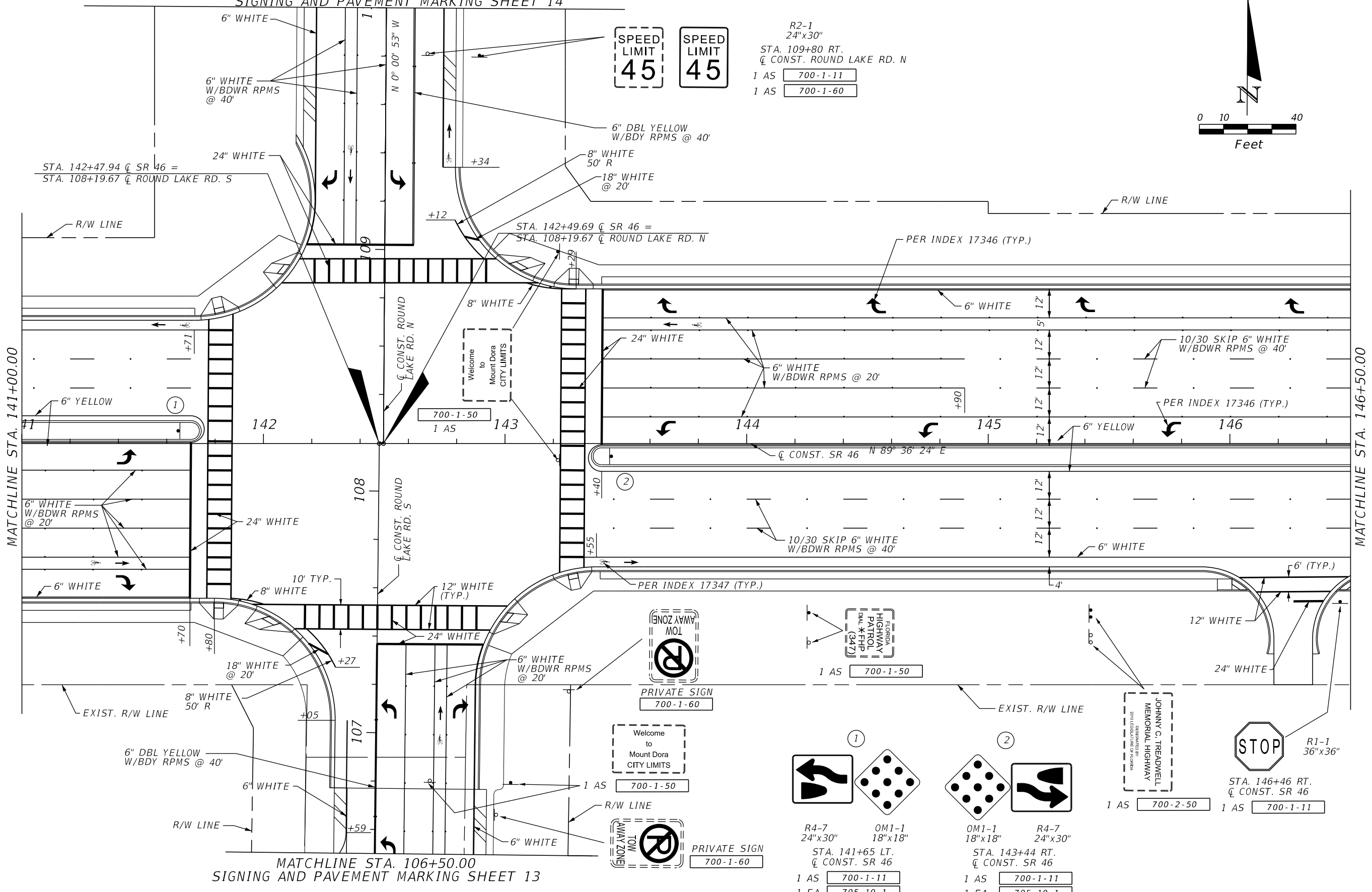


SPEED LIMIT 45
SPEED LIMIT 45

R2-1
24"x30"
STA. 109+80 RT.
Q CONST. ROUND LAKE RD. N
1 AS 700-1-11
1 AS 700-1-60

MATCHLINE STA. 141+00.00

MATCHLINE STA. 146+50.00



MATCHLINE STA. 106+50.00
SIGNING AND PAVEMENT MARKING SHEET 13

R4-7 24"x30" 1 AS 700-1-11
1 EA 705-10-1

OM1-1 18"x18" 1 AS 700-1-11
1 EA 705-10-1

R4-7 24"x30" 1 AS 700-1-11
1 EA 705-10-1

STA. 141+65 LT.
Q CONST. SR 46

STA. 143+44 RT.
Q CONST. SR 46

R1-1 36"x36" 1 AS 700-1-11

STA. 146+46 RT.
Q CONST. SR 46

1 AS 700-2-50

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

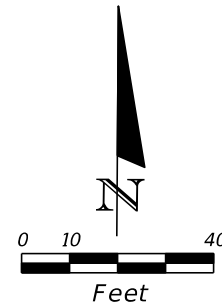
LOCHRANE ENGINEERING, INC.
201 SOUTH BUMBY AVENUE
ORLANDO, FLORIDA 32803
(407) 896-3317
FOREST W. ADKINS, P.E.
P.E. NUMBER 56003
CERTIFICATE OF AUTHORIZATION NO. 2856

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

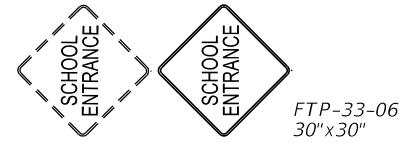
**SIGNING AND PAVEMENT
MARKINGS PLAN SHEET 10**

SHEET NO.
S-14

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



END PROJECT
 END SIGNING AND PAVEMENT MARKINGS
 WEKIVA SECTION 3A
 MATCH EXISTING MARKINGS
 WEKIVA 2C/PROJECT 429-206
 STA. 149+00.00
 C CONST. SR 46



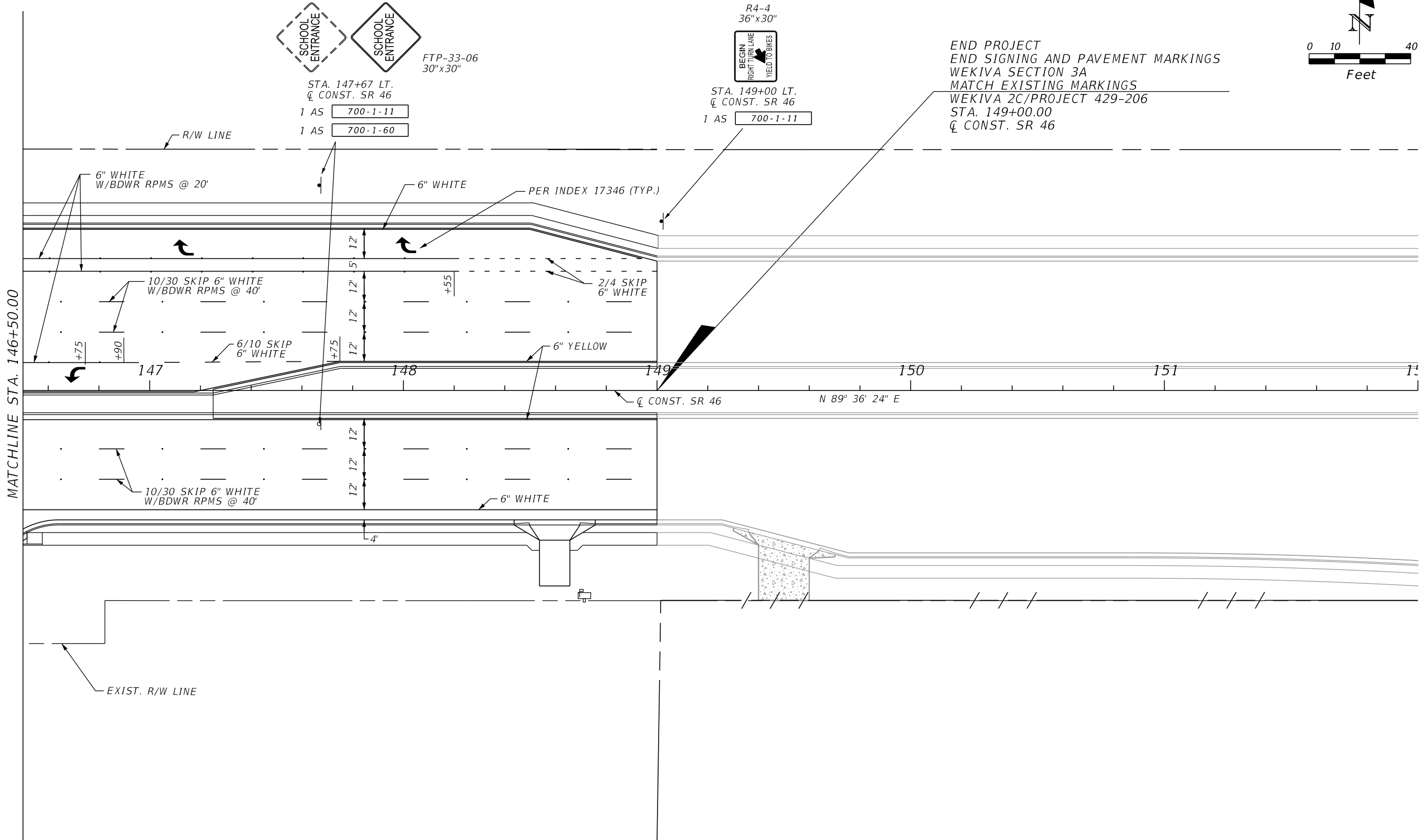
FTP-33-06
 30"x30"

STA. 147+67 LT.
 C CONST. SR 46
 1 AS 700-1-11
 1 AS 700-1-60

R4-4
 36"x30"

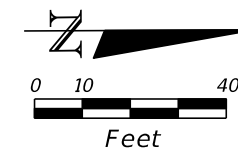


STA. 149+00 LT.
 C CONST. SR 46
 1 AS 700-1-11



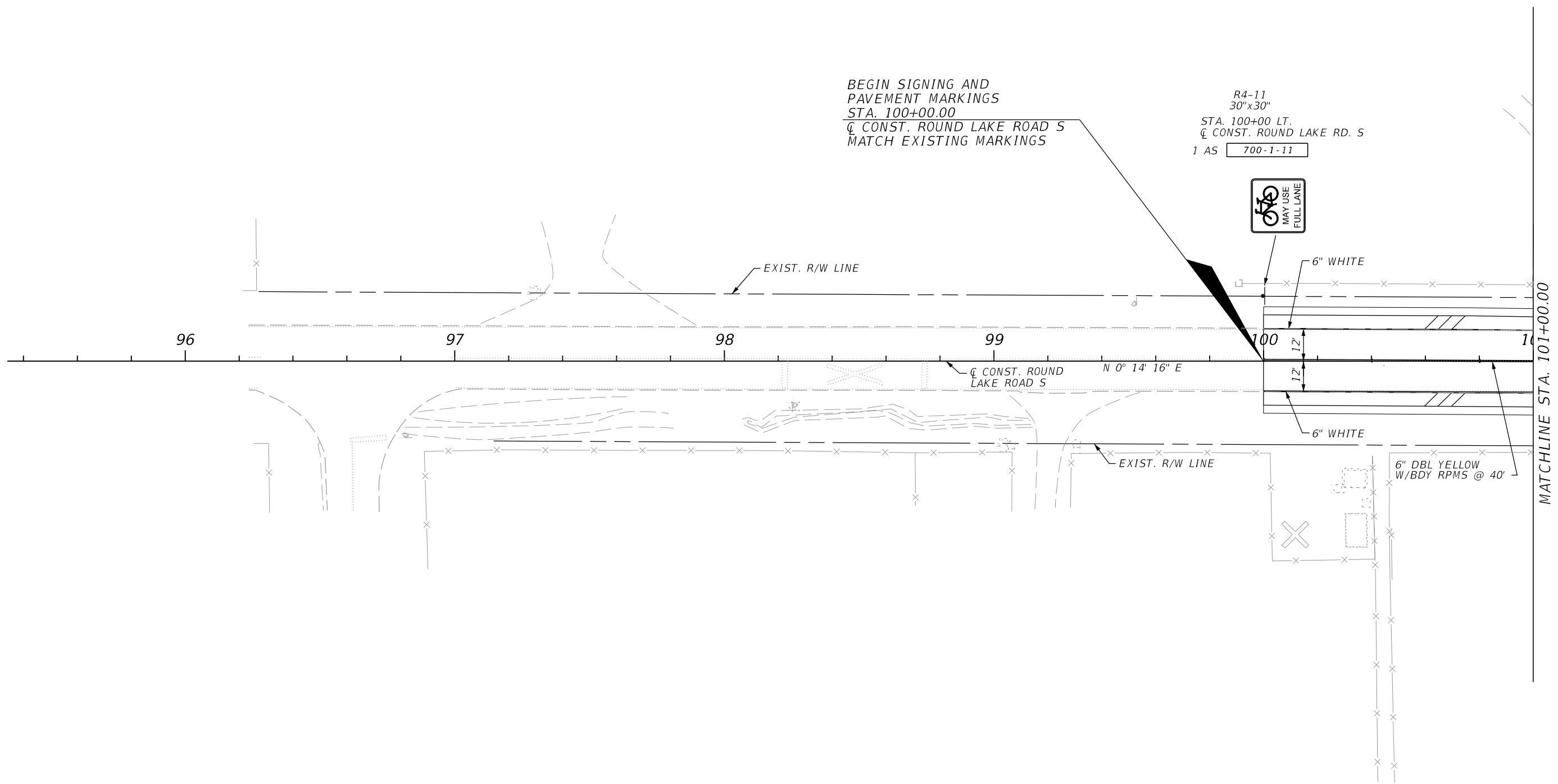
REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 11	SHEET NO. S-15
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

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BEGIN SIGNING AND
PAVEMENT MARKINGS
STA. 100+00.00
C CONST. ROUND LAKE ROAD S
MATCH EXISTING MARKINGS

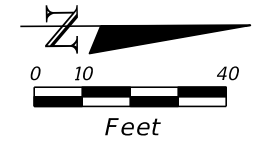
R4-11
30"x30"
STA. 100+00 LT.
C CONST. ROUND LAKE RD. S
1 AS 700-1-11



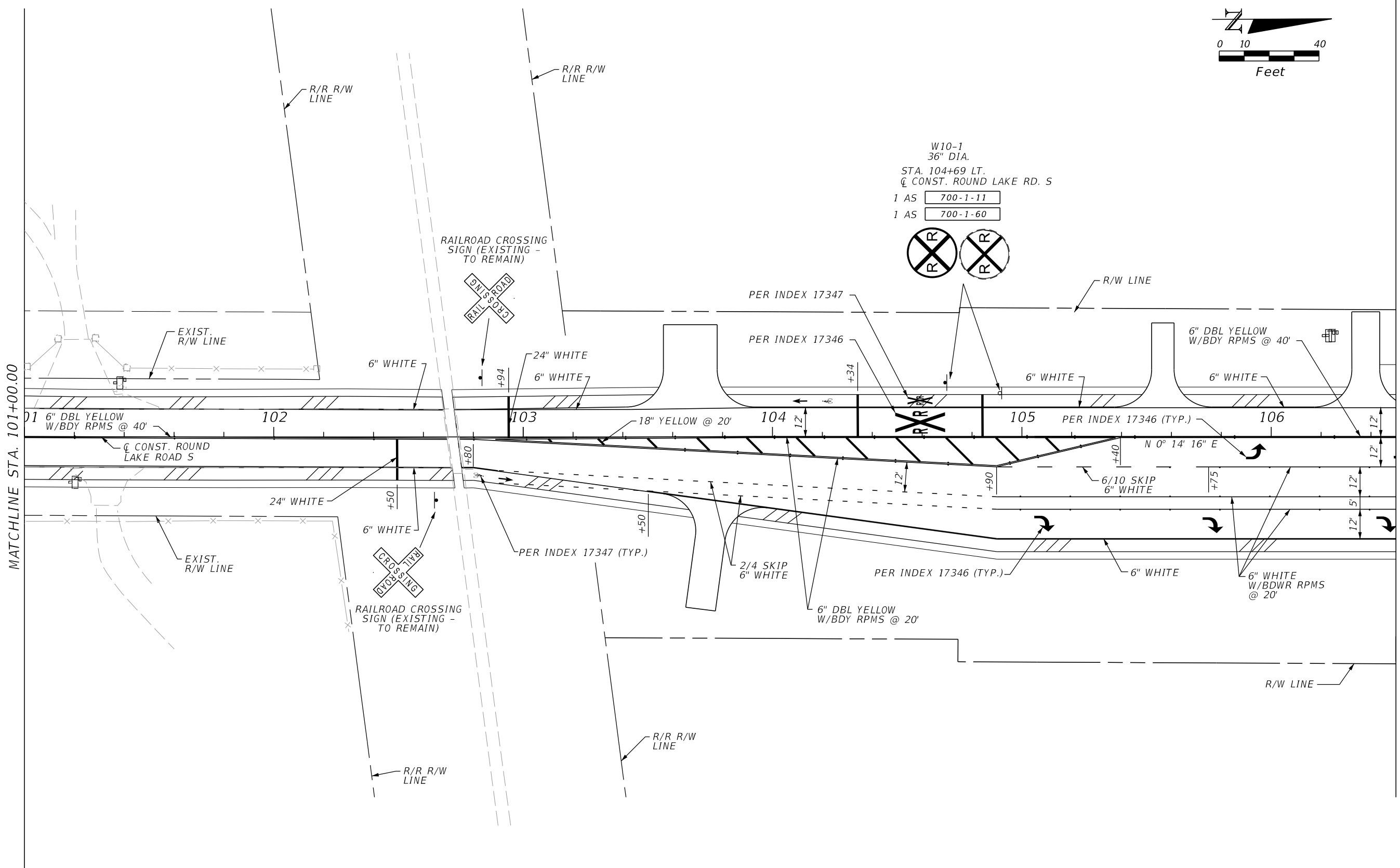
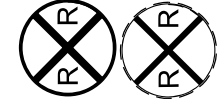
MATCHLINE STA. 101+00.00

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 12	SHEET NO. S-16
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



W10-1
36" DIA.
STA. 104+69 LT.
C CONST. ROUND LAKE RD. S
1 AS 700-1-11
1 AS 700-1-60

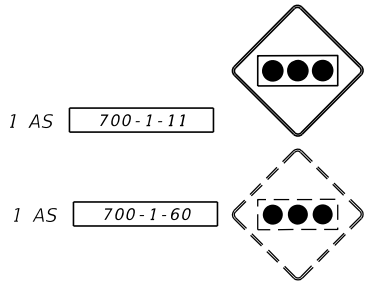
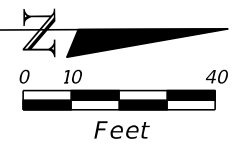


MATCHLINE STA. 101+00.00

MATCHLINE STA. 106+50.00
SIGNING AND PAVEMENT MARKINGS SHEET 10

REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 13	SHEET NO. S-17
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

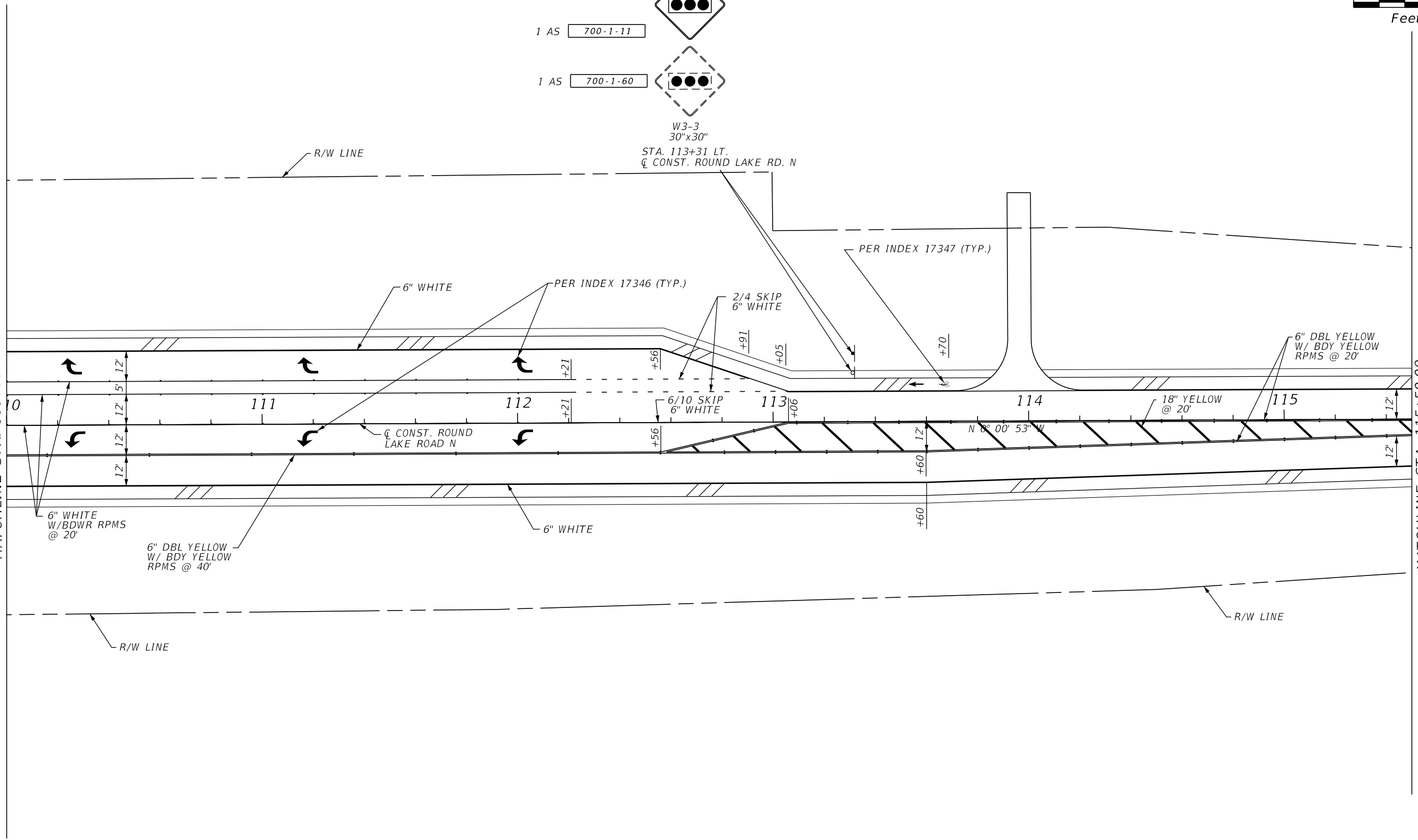
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



W3-3
30"x30"
STA. 113+31 LT.
C CONST. ROUND LAKE RD. N

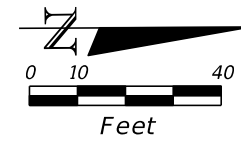
SIGNING AND PAVEMENT MARKINGS SHEET 10
MATCHLINE STA. 110+00.00

MATCHLINE STA. 115+50.00

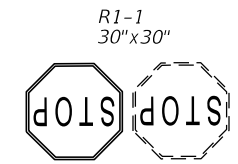
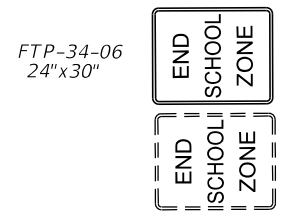


REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 14	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		S-18
					46	LAKE	238275-3-52-01		

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ROUND LAKE
ELEMENTARY SCHOOL

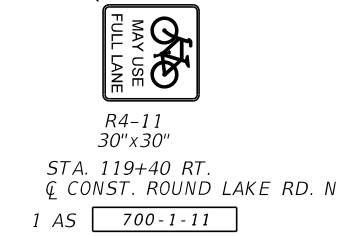
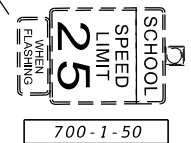
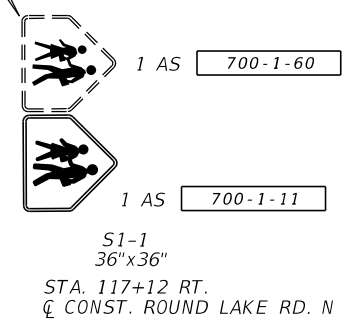
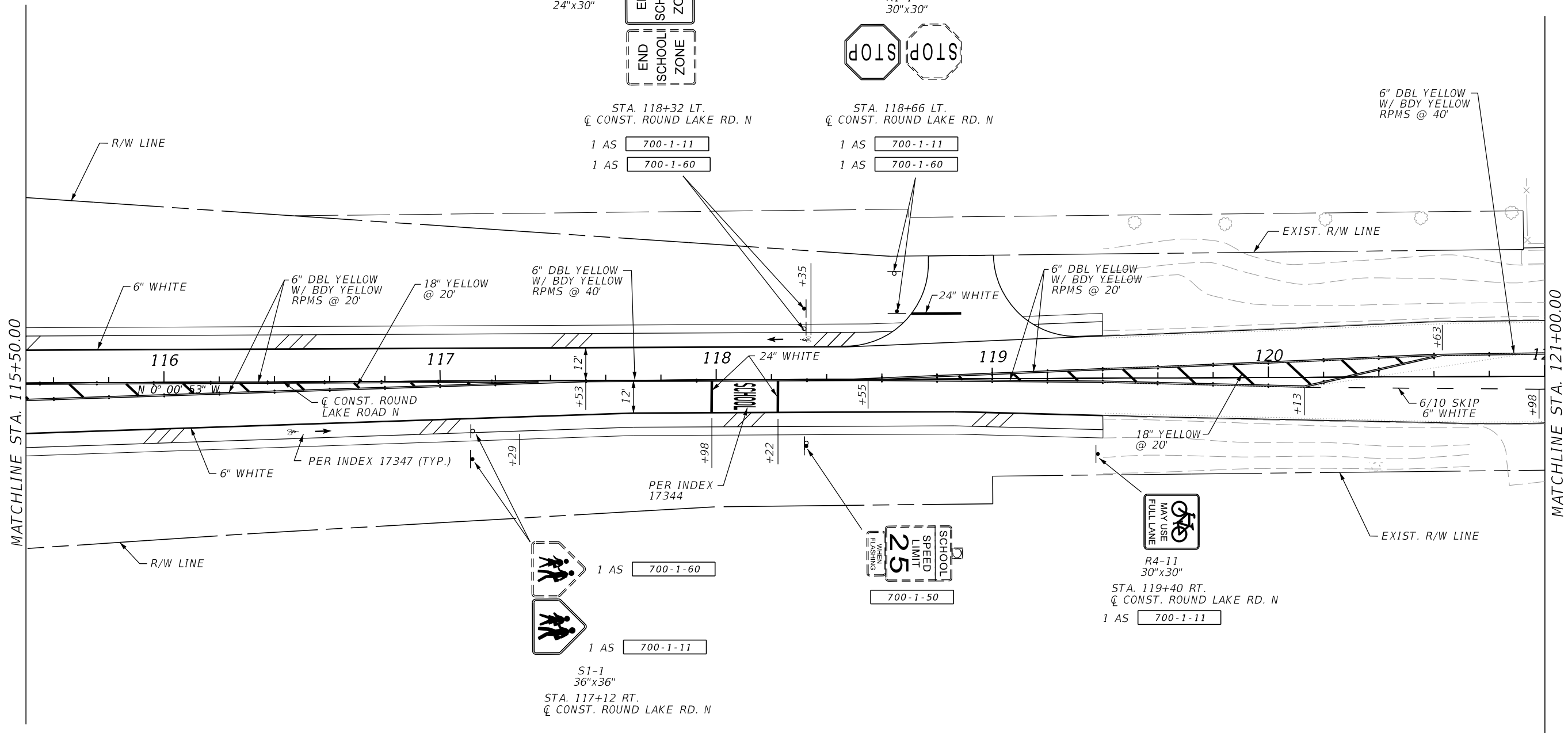


STA. 118+32 LT.
☐ CONST. ROUND LAKE RD. N

STA. 118+66 LT.
☐ CONST. ROUND LAKE RD. N

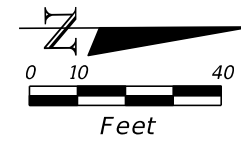
1 AS 700-1-11
1 AS 700-1-60

1 AS 700-1-11
1 AS 700-1-60

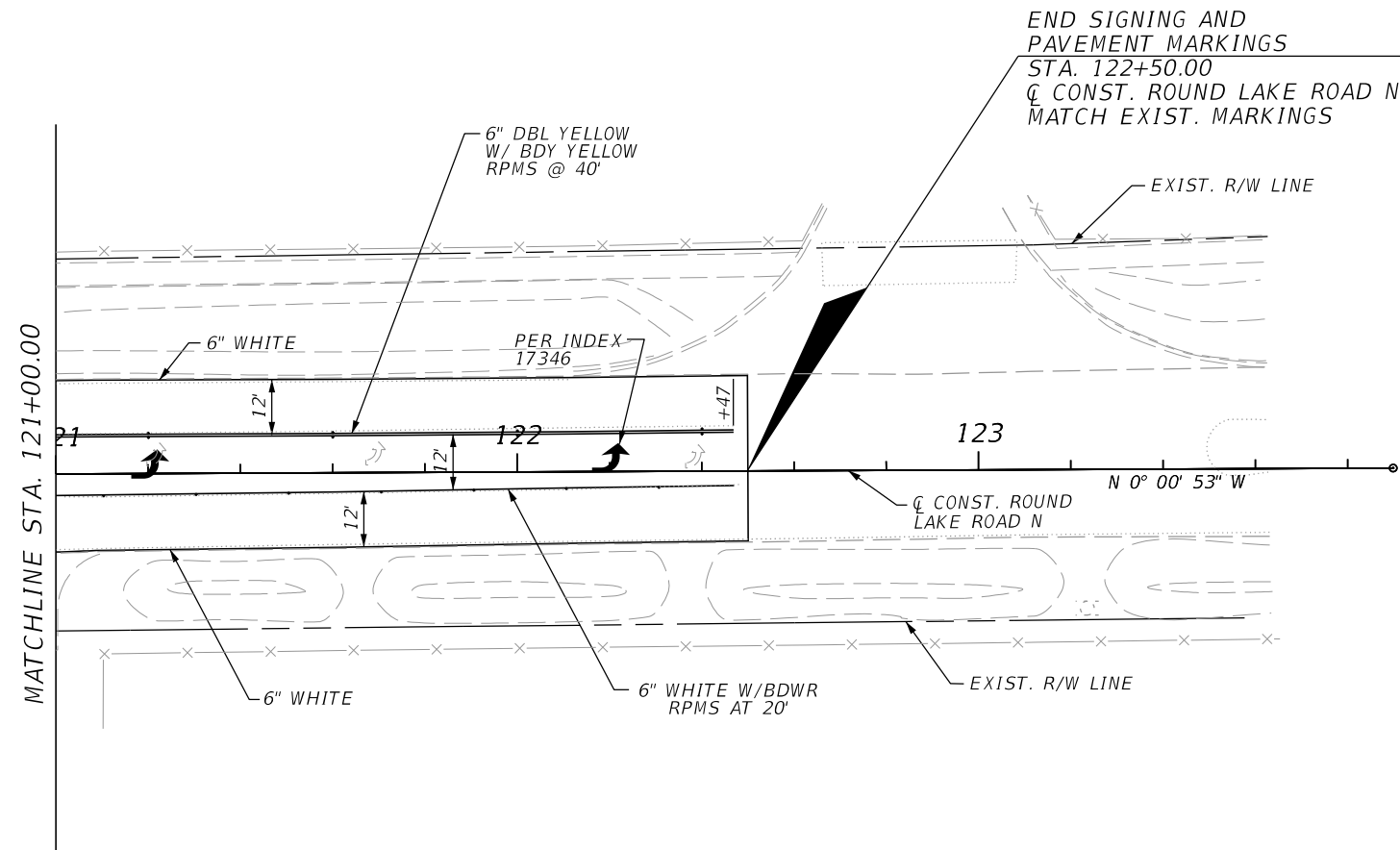


REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 15	SHEET NO. S-19
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

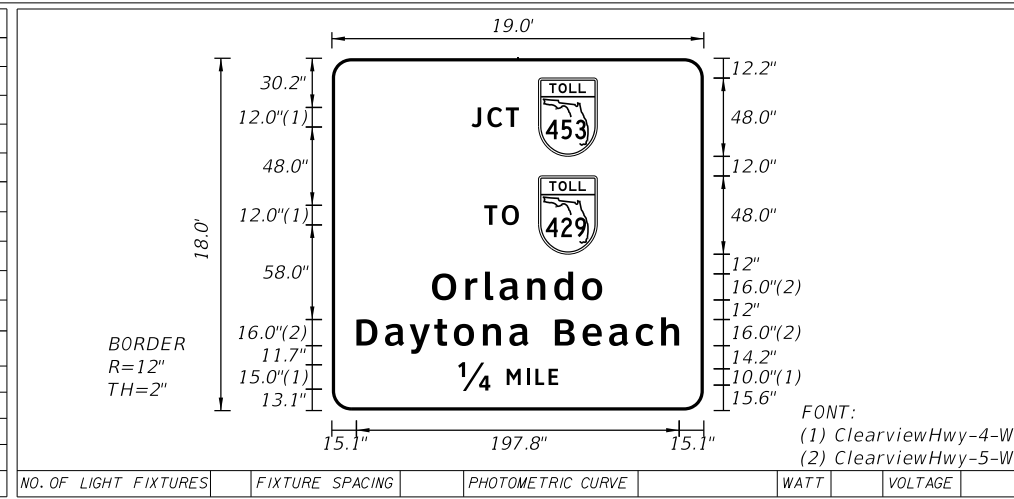


ROUND LAKE
ELEMENTARY SCHOOL



REVISIONS				LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNING AND PAVEMENT MARKINGS PLAN SHEET 16	SHEET NO. S-20
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

SIGN NAME	OHC-1	QTY	SIGN NUMBER	STATION(S)	
PANEL	BORDER			none	
WIDTH	19'-0"	WIDTH	2"		
HEIGHT	18'-0"	RADII	12"		
LEGEND	White	COLOR	White		
COLOR	Green				
SYMBOL(S)	ANGLE	X	Y	WID	HT
102A	0	126.7	155.9	36	48
102A	0	126.7	95.9	36	48
SIGN NUMBER	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH		



SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH		

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

COPY	J	C	T	L																
SPACE	85.6	9.8	11.3	8	113.3	29.1														
COPY	T	O	L																	
SPACE	93.4	10.8	10.5	113.3	21.3															
COPY	O	r	I	a	n	d	o	L												
SPACE	61.4	20.5	12	8.9	17	16.5	17.1	12.4	62.2	104.4										
COPY	D	a	y	t	o	n	a	B	e	a	c	h	L							
SPACE	15.1	17.5	15.1	15.1	12	17.8	16.2	11.9	16	16.3	16.4	15.5	11.1	15.1	197.8					
COPY	14	M	I	L	E	L														
SPACE	77.4	19.8	10	12.2	5.4	8.1	5.9	89.2	61.3											
COPY																				
SPACE																				

COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH		

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH		

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE
-----------------------	-----------------	-------------------	------	---------

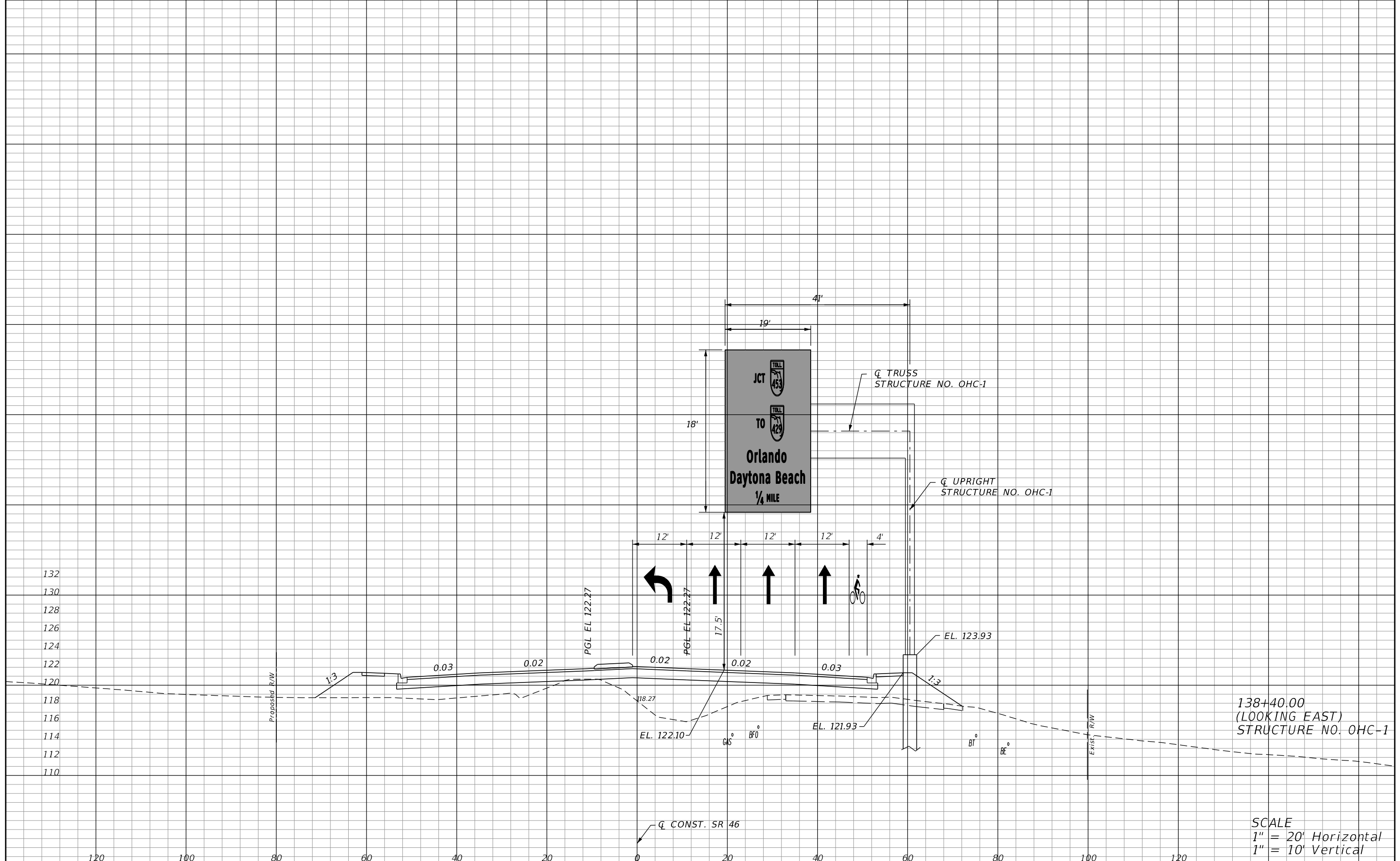
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
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COPY																				
SPACE																				
COPY																				
SPACE																				

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

KATHRYN L. LEE, P.E.
P.E. LICENSE NUMBER 62420
GMB ENGINEERS & PLANNERS, INC.
2602 E. LIVINGSTON STREET
ORLANDO, FL 32803
CERTIFICATE OF AUTHORIZATION 8155

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01



138+40.00
(LOOKING EAST)
STRUCTURE NO. OHC-1

SCALE
1" = 20' Horizontal
1" = 10' Vertical

REVISIONS		DESCRIPTION		LOCHRANE ENGINEERING, INC. 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803 (407) 896-3317 FOREST W. ADKINS, P.E. P.E. NUMBER 56003 CERTIFICATE OF AUTHORIZATION NO. 2856	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGN STRUCTURE CROSS SECTION	SHEET NO. S-22
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-02		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

CANTILEVER SIGN STRUCTURES DATA TABLE										Table Date 01-01-11
SIGN NO.	STATION / OFFSET	DIMENSIONS			PANELS	MEMBER SIZES			BACKRAKE	
		A	B	C	N	D (CHORD)	E (WEB)	F (UPRIGHT)	G	
		ft	ft	in	in	O. D. x Wall Thk. (in)	Angle (in)	O. D. x Wall Thk. (in)	in	
OHC-1	138+40.00/49.50' RT	25.0000	6	10	60	5.56 x 0.375	3 x 3 x 1/4	24.00 x 0.750	2.1077	

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																							Table Date 01-01-11									
SIGN NO.	GUSSET PLATES												TRUSS CONNECTION							SPLICE												
	GA	GB	GC		GD		GE		GF		GG		GH		GJ		GK	TA	TB	TC	TD	TE	TF	TG	TH	TJ	SA	SB	SC	SD		
	in	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	in	in	#	#	in	in	in	in	in	in	in	Angle (in)	#	in	#	
OHC-1	3/8	5/8	1	1-3/4	5-1/4	1	1-1/4	5	6-3/4	6-1/2	8	3/16	7/8	8	6	5/8	1/2	5/16	1/4	3/16	1/4	5 x 5 x 1/2	4	7/8	4							

CANTILEVER SIGN STRUCTURES DATA TABLE (CONT.)																	Table Date 07-01-13			
SIGN NO.	BASE CONNECTION									ANCHOR		FOOTING - DRILLED SHAFT								
	BA	BB	BC	BD	BE		BF	BG	BH	BJ	BK	FA	FB		FC	FD	FE			
	in	#	in	in	ft	in	in	in	in	in	ft	in	ft	in	# / Size	#	in			
OHC-1	2	12	1-1/4	3/8	2	3	5/16	5/16	5/16	3/16	3	4	32	0	5	0	19 / 11	42	6	

NOTES:

- WORK THESE DATA TABLES WITH INDEX 11310.
- DESIGN WIND SPEED = 110 MPH.
- UPRIGHT WALL THICKNESS GIVEN IS A MINIMUM DIMENSION.
- THE CONTRACTOR SHALL CONTACT DISTRICT FIVE MAINTENANCE OFFICE AT (386) 740-3463 TWO WEEKS PRIOR TO COMPLETION OF THE PROJECT TO SCHEDULE A POST CONSTRUCTION INSPECTION OF THE SIGN STRUCTURE.

FOUNDATION NOTES:

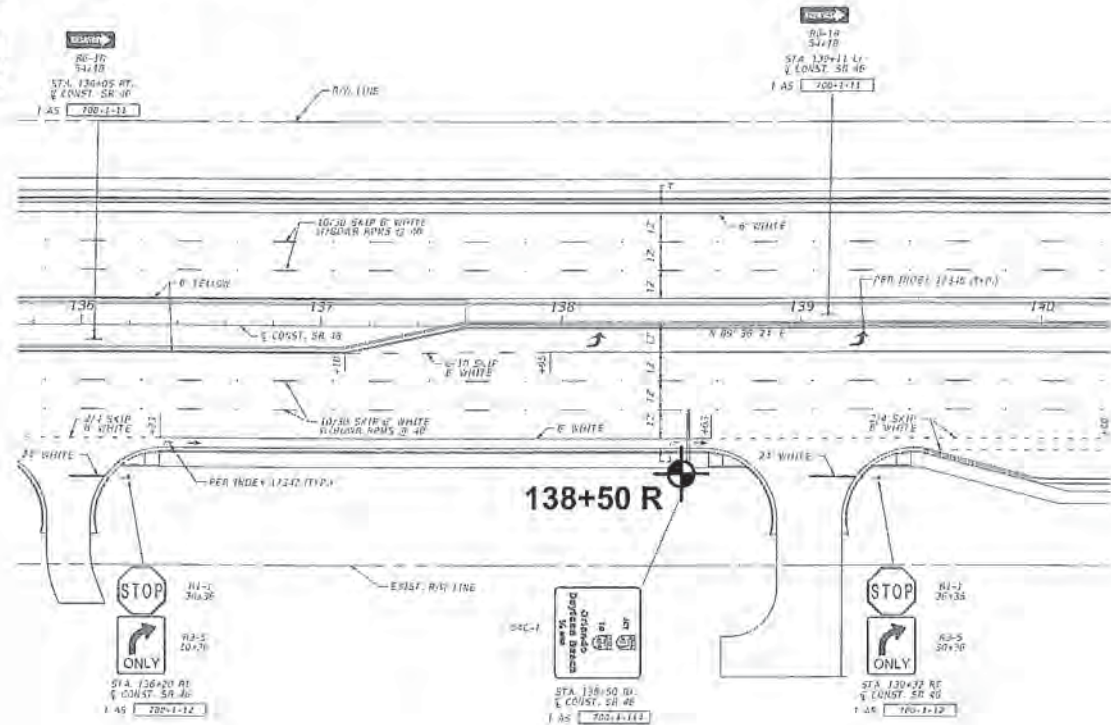
- DESIGN BASED ON BORINGS TAKEN 03-12-14 SEALED BY ANTILLIAN ENGINEERING ASSOCIATES, INC.
- ASSUMPTIONS AND VALUES USED IN DESIGN:
 SOIL TYPE COHESIONESS (SAND)
 SOIL LAYER THICKNESS = 30 FT.
 SOIL FRICTION ANGLE = 30 DEG.
 SOIL WEIGHT = 42.6 PCF
 DESIGN WATER TABLE IS 0 FT. BELOW SURFACE

<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION									FBT - FLORIDA BRIDGE AND TRANSPORTATION, INC. 633 DARTMOUTH STREET ORLANDO, FL 32804 (407) 513-9709 CERT. OF AUTH. NO. 26379 ENGINEER OF RECORD: Juan A. Valenzuela, PE FL REGISTRATION NO. 68208		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION <table border="1"> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> <tr> <td>46</td> <td>LAKE</td> <td>238275-3-52-01</td> </tr> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	46	LAKE	238275-3-52-01	CANTILEVER SIGN STRUCTURE DATA TABLE		SHEET NO. S-23
REVISIONS																																	
DATE	DESCRIPTION	DATE	DESCRIPTION																														
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																															
46	LAKE	238275-3-52-01																															

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.
 Drawn By : DAB 04-14
 Checked By : JAV 04-14
 Designed By : DAB 04-14
 Checked By : JAV 04-14

SECTION: 34
TOWNSHIP: 19 SOUTH
RANGE: 27 EAST

NTS



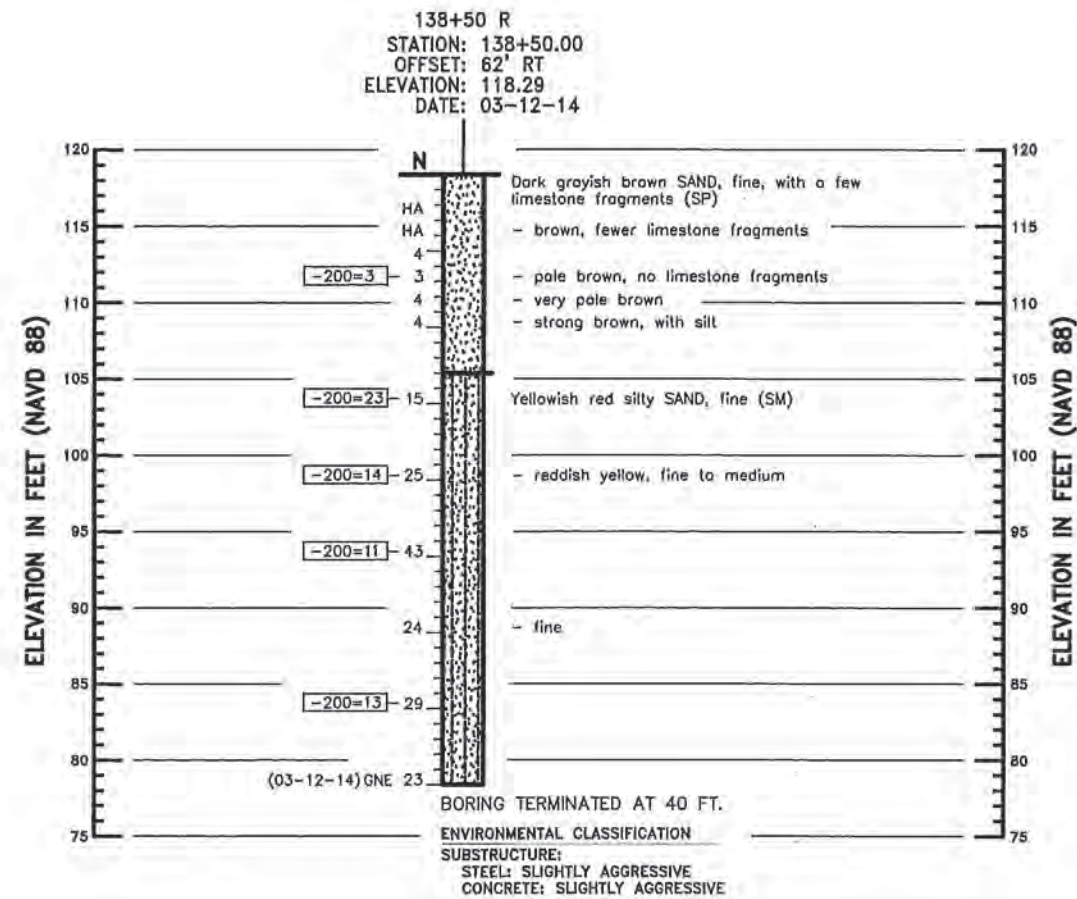
LEGEND

- SAND
- SILTY SAND
- STANDARD PENETRATION TEST (SPT) BORING LOCATION
- CHANGE IN SOIL STRATA
- N** SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
- HA** BORING ADVANCED BY HAND AUGER TO AVOID CONFLICT WITH UTILITIES
- (SP)** UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
- (03-12-14) GNE** 24 HOUR GROUNDWATER LEVEL READING
- ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
- 200** PERCENT PASSING U.S. STANDARD NO. 200 SIEVE

NOTES

1. PLAN VIEW IS PRELIMINARY FOR SHOWING BORING LOCATIONS ONLY AND MAY NOT BE INDICATIVE OF FINAL PLAN.
2. PLAN FURNISHED BY CLIENT.
3. BORING WAS DRILLED BY B. VANHOOSE ON 03/12/14 USING A BR2500 RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.

SOIL CONSISTENCY (BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)	
GRANULAR SOILS	
VERY LOOSE	- LESS THAN 4 BLOWS/FT.
LOOSE	- 4 TO 10 BLOWS/FT.
MEDIUM DENSE	- 10 TO 30 BLOWS/FT.
DENSE	- 30 TO 50 BLOWS/FT.
VERY DENSE	- MORE THAN 50 BLOWS/FT.
FINE-GRAINED SOILS	
VERY SOFT	- LESS THAN 2 BLOWS/FT.
SOFT	- 2 TO 4 BLOWS/FT.
FIRM	- 4 TO 8 BLOWS/FT.
STIFF	- 8 TO 15 BLOWS/FT.
VERY STIFF	- 15 TO 30 BLOWS/FT.
HARD	- MORE THAN 30 BLOWS/FT.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
PRELIMINARY NOT FOR CONSTRUCTION					

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 46	LAKE	238275-3-52-02

REPORT OF SPT BORING FOR SIGN

SHEET NO.
S-24

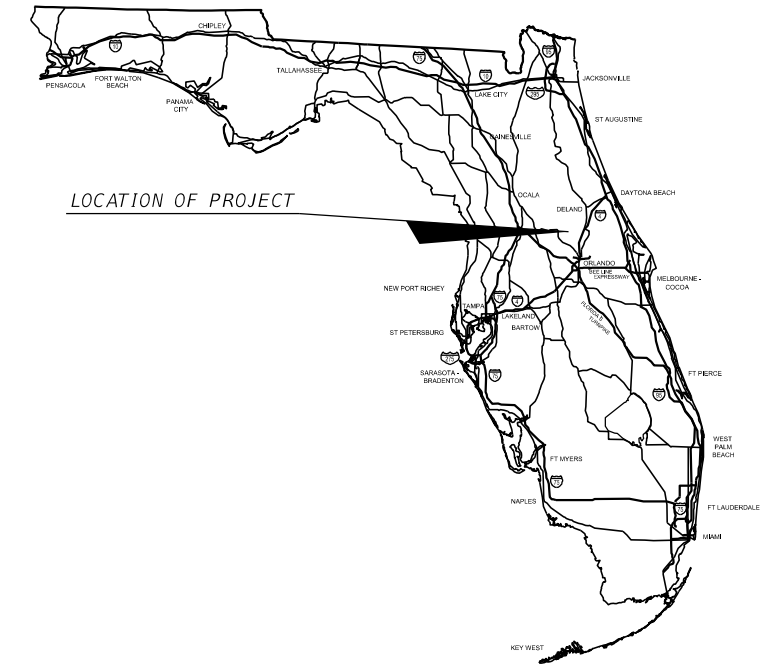
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-3-52-01
(FEDERAL FUNDS)

LAKE COUNTY (11130)
STATE ROAD NO. 46

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

<i>SHEET NO.</i>	<i>SHEET DESCRIPTION</i>
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3	GENERAL NOTES
T-4	SIGNALIZATION PLAN
T-5	STRAIN POLE SCHEDULE
T-6	TRAFFIC MONITORING SITE DETAILS
T-7	GUIDE SIGN WORKSHEET
T-8	REPORT OF SPT BORINGS FOR SIGNALS

*SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:*
KATHRYN L. LEE, P.E.
GMB ENGINEERS & PLANNERS, INC.
2602 E. LIVINGSTON STREET
ORLANDO, FLORIDA 32803
PH: (407) 898-5424
FX: (407) 898-5425

PLANS PREPARED BY:
GMB ENGINEERS & PLANNERS, INC
2602 E. LIVINGSTON ST.
ORLANDO, FLORIDA, 32803
CERTIFICATE OF AUTHORIZATION 8155

CONTRACT NO. C9B09
VENDOR NO. 59-3556348

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

<i>KEY SHEET REVISIONS</i>	
<i>DATE</i>	<i>DESCRIPTION</i>

SIGNALIZATION PLANS
ENGINEER OF RECORD: KATHRYN L. LEE, P.E.

P.E. NO.: 62420

<i>FISCAL YEAR</i>	<i>SHEET NO.</i>
17	T-1

FDOT PROJECT MANAGER: MATT HASSAN, P.E.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-4		T-6												PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	148		39												187			
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF	428														428			
632-7-1	CABLE (NEW OR RECONSTRUCTED INTERSECTION- F&I)	PI	1														1			
634-4-153	SPAN WIRE ASSEMBLY, F&I, 2-POINT, BOX	PI	1														1			
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" STANDARD SIZE	EA	8		2												10			
639-1-121	ELECTRICAL POWER SERVICE (F&I) (UNDERGROUND) (PURCHASED BY CONTRACTOR FROM POWER COMPANY)	AS	1														1			
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	200														200			
641-2-12	PRESTRESSED CONCRETE POLES, F&I, TYPE P-11 SERVICE POLE	EA	1														1			
641-2-17	PRESTRESSED CONCRETE POLES, F&I, TYPE P-VII	EA	4														4			
641-2-70	PRESTRESSED CONCRETE POLE (INDEX 17725) (SHALLOW REMOVAL POLES 30' AND GREATER)	EA	2														2			
646-1-11	ALLUMINUM SIGNAL POLE, F&I, PEDESTAL	EA	5														5			
650-1-14	VEHICULAR TRAFFIC SIGNAL (F&I- ALUMINUM) (3-SECTION, 1 WAY)	AS	10														10			
650-1-16	VEHICULAR TRAFFIC SIGNAL (F&I- ALUMINUM) (4-SECTION, 1 WAY)	AS	4														4			
653-1-11	PEDESTRIAN SIGNAL, (F&I LED-COUNTDOWN) (1-WAY)	AS	8														8			
660-4-12	VEHICLE DETECTOR SYSTEM- VIDEO, F&I, ABOVE GROUND	EA	4														4			
660-4-51	VEHICLE DETECTOR SYSTEM- VIDEO, MODIFY, CABINET EQUIPMENT	EA	1														1			
663-1-110	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL	EA	2														2			
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	EA	8														8			
670-5-111	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA) (ONE PREEMPTION PLAN)	AS	1														1			
670-5-600	TRAFFIC CONTROLLER ASSEMBLY (REMOVE CONTROLLER CABINET)	AS			1												1			
671-2-40	TRAFFIC CONTROLLER ASSEMBLY (MODIFY)	EA	1														1			
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OVERHEAD MOUNT, 12-18 SF	EA	1														1			
700-5-50	INTERNALLY ILLUMINATED SIGN, RELOCATE	EA	3														3			
741-1-11	TMS, VEHICLE SENSOR, NON-WEIGHT APPLICATION, F&I, TYPE 1 AXLE SENSOR	EA			6												6			
745-70-12	TMS, INDUCTIVE LOOP ASSEMBLY, F&I, 2	AS			6												6			
746-71-131	TMS, CABINET, F&I, TYPE III, PEDESTAL, ONE BACKPLANE	EA			2												2			

<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION					KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION <table border="1"> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> <tr> <td>46</td> <td>LAKE</td> <td>238275-3-52-01</td> </tr> </table>	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	46	LAKE	238275-3-52-01	TABULATION OF QUANTITIES	SHEET NO. T-2
REVISIONS																									
DATE	DESCRIPTION	DATE	DESCRIPTION																						
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																							
46	LAKE	238275-3-52-01																							

GENERAL

1. UNLESS OTHERWISE NOTED ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO LAKE COUNTY AT OPERATIONS, 28127 C.R. 561, TAVARES, 352-742-1766, EXCEPT SIGNAL POLES, WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR.
2. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE SPECIFICATIONS.
3. THE CONTRACTOR SHALL HAND DIG THE FIRST 4' AT EACH POLE LOCATION AND THE FIRST 2' AT EACH PEDESTAL LOCATION TO VERIFY NO UTILITY CONFLICTS.
4. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH LAKE COUNTY BEFORE ORDERING.
5. THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH FDOT SPECIFICATION 105-8.10. 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 LAKE COUNTY AND TRAFFIC SIGNAL QUALITY ASSURANCE MANAGER AT (386) 943-5318 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO THEY MAY BE PRESENT.
6. THE CONTRACTOR SHALL MAINTAIN THE EXISTING TRAFFIC SIGNALS DURING THIS PROJECT.
7. THE CONTRACTOR HAS THE OPTION TO USE DIRECTIONAL BORE AS THE CONDUIT INSTALLATION METHOD FOR PAY ITEM 630-2-12.
8. FOR MISCELLANEOUS STRUCTURES THAT HAVE BEEN COMPLETED AND SCHEDULED FOR ACCEPTANCE, THE CONTRACTOR, SHALL CONTACT DISTRICT FIVE STRUCTURES MAINTENANCE OFFICE AT (386)-740-3463 ONE MONTH PRIOR TO COMPLETION OF PROJECT TO SCHEDULE AN INSPECTION OF STRUCTURES INCLUDING: CABLE SIGNS, CANTILEVER SIGNS, TRUSS SIGNS, HIGH MAST LIGHT POLES, ITS AND DMS.
9. IN THE EVENT PERMANENT VEHICLE DETECTION IS DISRUPTED, PROVIDE AN ALTERNATIVE MEANS OF DETECTION TO ALL LANES APPROACHING THE INTERSECTION, SEPARATING EACH MOVEMENT WHICH PREVIOUSLY HAD DETECTION. THE TYPE OF DETECTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. EQUIPMENT SHALL ONLY DETECT THE INTENDED MOVEMENT PAID FOR UNDER PAY ITEM 660-4-12.

PED FEATURES:

1. THREE (3) SPARE CONDUCTORS ARE TO BE RUN TO THE FURTHEST PEDESTRIAN SIGNAL HEAD.
2. ALL PEDESTRIAN SIGNALS SHALL BE 16" LED, COUNTDOWN TYPE.
3. CONTRACTOR TO ENSURE THAT A 4-FOOT X 4-FOOT FLAT LANDING AREA IS ADJACENT TO ALL DETECTORS FOR PEDESTRIAN ACCESS.

SIGNAL CABLE, LOOPS, CONDUIT, & PULL BOXES

1. DELAY TIMES FOR VDZ MARKED "DELAY" SHALL BE SET TO 5 SECONDS. ALL OTHERS SHALL BE SET TO ZERO.
2. PULL BOXES AND COVERS SHALL BE NON- METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE.
3. CONDUIT UNDER RECONSTRUCTION OF DRIVEWAYS SHALL BE PLACED PRIOR TO PLACING PAVEMENT AND SHALL BE PAID AS UNDERGROUND CONDUIT.

PAY ITEM NOTES

1. PAY ITEM NO. 665-1-11 INCLUDES FTP-68B-06.
2. PAY ITEM NUMBER 700-5-22 SHALL INCLUDE A MASTER PHOTOCCELL MOUNTED NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. PHOTOCCELL SHALL BE INSTALLED WHERE STREETLIGHTS DO NOT AFFECT OPERATION.
3. PAY ITEM NO. 635-2-11 SHALL INCLUDE REMOVAL AND RESTORATION OF CONCRETE SIDEWALK NECESSARY TO INSTALL THE PULL BOXES.

LAKE COUNTY GENERAL NOTES:

1. A PRE- CONSTRUCTION MEETING SHALL BE SCHEDULED WITH LAKE COUNTY TRAFFIC OPERATIONS, (352) 742-1766, PRIOR TO ANY CONSTRUCTION.
2. 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.
3. 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.
4. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND HAVE IT APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.

5. 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.
6. 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.
7. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PRE-APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY DETECTION DURING CONSTRUCTION. THE USE OF RECALL ON VEHICLE AND PEDESTRIAN MOVEMENTS IS PROHIBITED.
9. THE MAINTENANCE OF EXISTING SIGNALS, UNTIL REMOVED, SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
NOTE: CARE SHALL BE TAKEN NOT TO DAMAGE THE EQUIPMENT IN THE REMOVAL PROCESS.
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 MAXIMUM RESPONSE TIME.
11. 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.

PULL BOXES:

1. PULL BOX COVERS SHALL BE FDOT APPROVED NON METALLIC WITH RECESSED COVER LOGO "TRAFFIC SIGNAL".
2. 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.
3. 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.

CABINET/CONTROLLER:

1. 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.
2. A GENERATOR PAD, 3'X3'X4" CONCRETE SHALL BE INSTALLED.
3. THE CABINET CONCRETE BASE SHALL BE A MINIMUM OF 32"x 48" TO ACCOMMODATE TYPE 6 CABINETS.
4. GROUNDING FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 25 OHMS. OR LESS.
5. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION WHEN POSSIBLE.
6. THE FIRST BUFFER OF SINGLE MODE AND MULTI MODE FIBER SHALL BE TERMINATED IN THE CABINET USING ST CONNECTORS.
7. THE MOUNTING OF THE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CABINET SHALL BE PROHIBITED.
8. THE INSIDE LANE DISCONNECT SHALL BE WIRED FOR FUTURE 5 SECTION HEADS.
9. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.

SIGNAL/PEDESTRIAN HEADS:

1. SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS. THE USE OF "JONES" PLUGS IS PROHIBITED.
2. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
3. PEDESTRIAN SIGNAL ASSEMBLIES SHALL BE CAST ALUMINUM WITH FULL HAND/PERSON LED'S WITH COUNT DOWN INDICATION.
4. 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 SHALL BE THE BREAKAWAY TYPE COMMONLY REFERRED TO AS A "T-BASE". THIS T-BASE WILL HAVE AN ACCESS DOOR FOR WIRING AND MAINTENANCE.
5. SIGNAL CABLE SHALL BE ATTACHED TO MESSENGER WIRE USING PROPER SIZE SPIRAL WRAP.

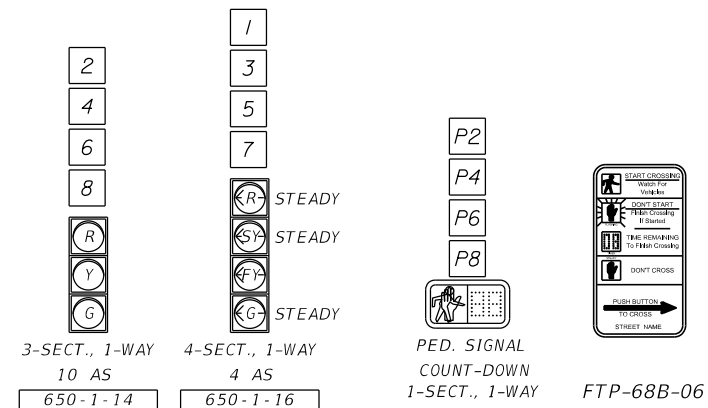
ILLUMINATED STREET SIGNS:

1. INTERNALLY ILLUMINATED STREET NAME SIGNS (LED), SHALL BE INSTALLED 1' 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.
2. LAKE COUNTY LOGO WILL BE SUPPLIED BY LAKE COUNTY AND INSTALLED BY CONTRACTOR AS PART OF 700-5-22.

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. T-3
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

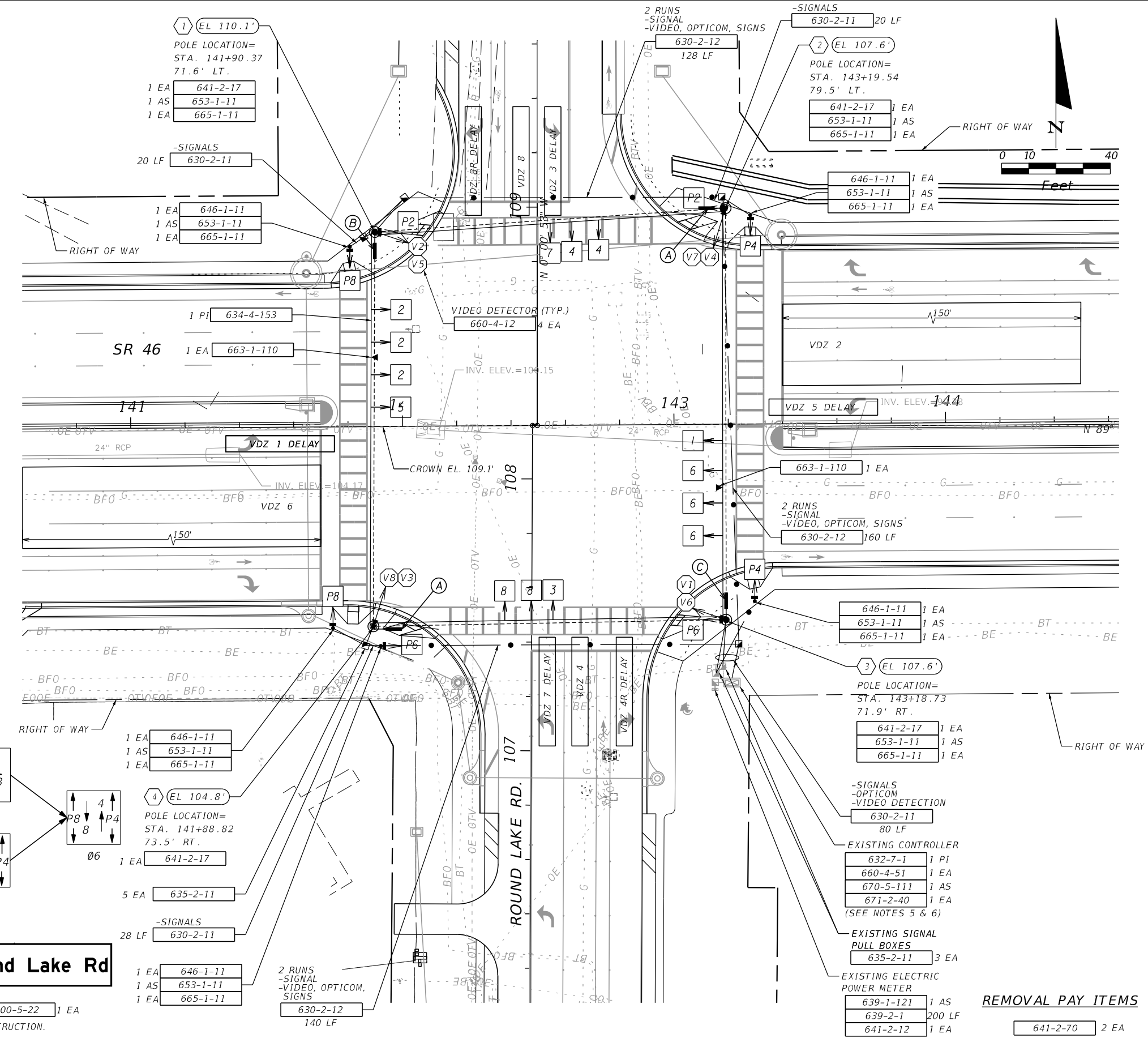
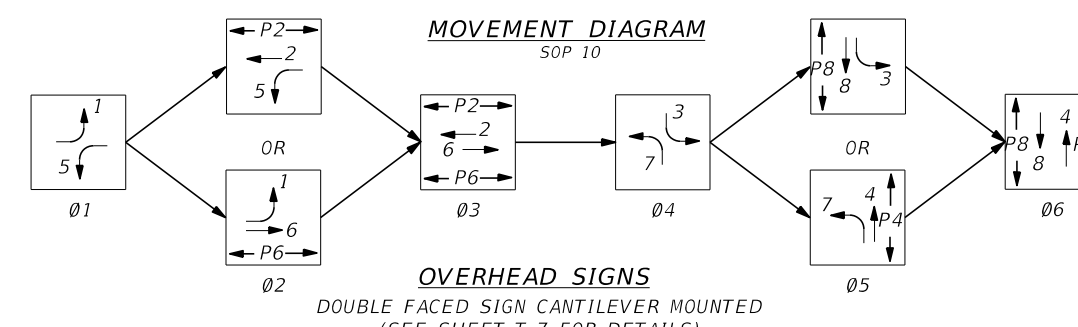
GENERAL NOTES

TRAFFIC SIGNAL DETAIL PEDESTRIAN SIGNAL DETAIL



CONTROLLER TIMINGS								
TIMING FUNCTION								
Movement Number	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15	5	5	5	15	5	5
EXTENSION	3.0	2.5	3.0	x	3.0	2.5	3.0	x
MAXIMUM GREEN 1	20	50	20	20	20	50	20	20
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	3.5	5.1	3.5	5.1	3.5	5.1	3.5	5.1
ALL RED	3.8	2.0	2.7	2.4	3.8	2.0	2.7	2.4
PEDESTRIAN WALK	-	27	-	33	-	28	-	33
PED. CLEARANCE	-	7	-	7	-	7	-	7
RECALL	-	MIN	-	-	-	MIN	-	-

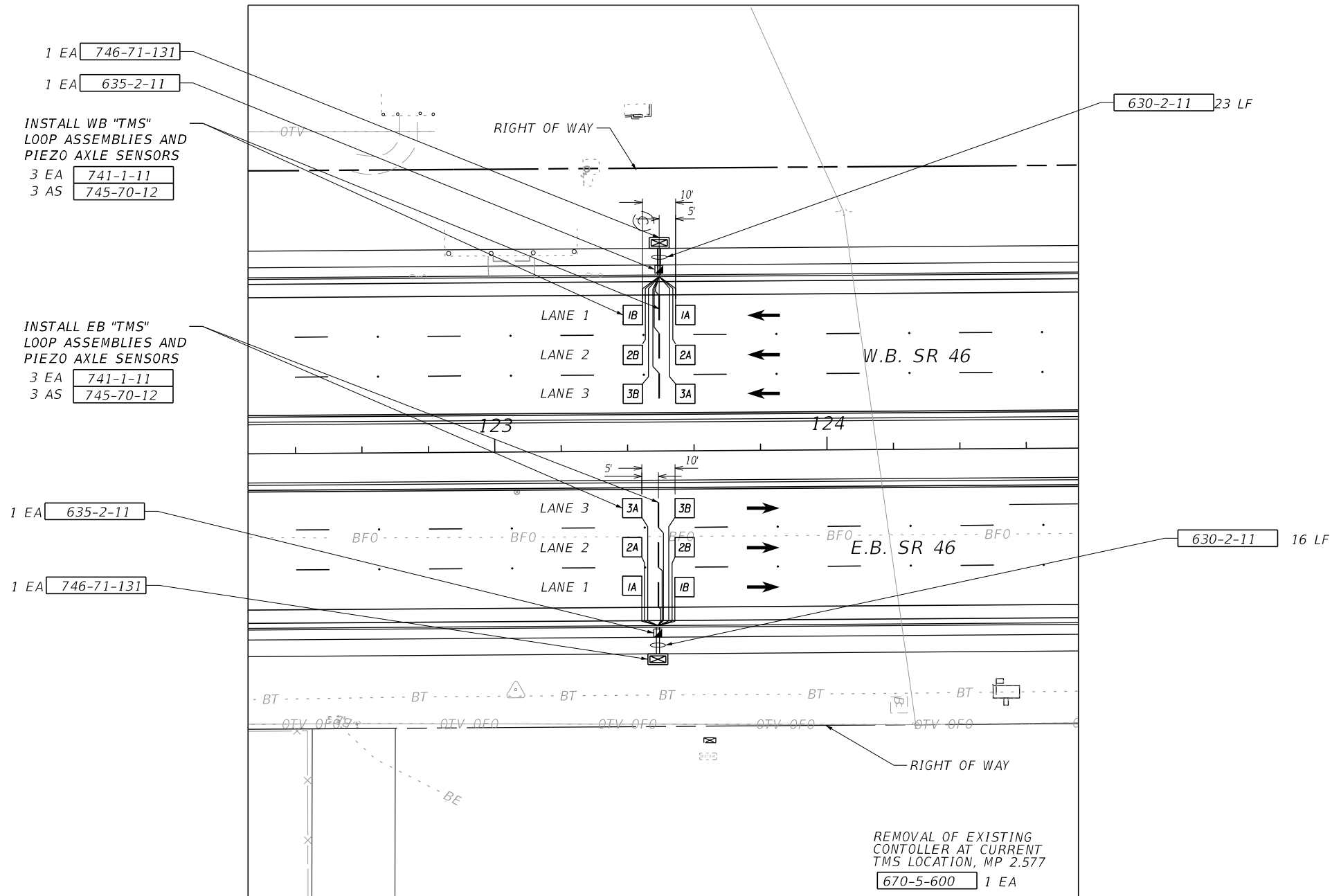
- NOTES:
1. VIDEO DETECTION ZONES PLACEMENT IS BASED ON A POSTED SPEED LIMIT OF 45 MPH.
 2. DURING FLASH OPERATIONS, MOVEMENTS 2 & 6 SHALL FLASH YELLOW, ALL OTHERS SHALL FLASH RED.
 3. MAJOR STREET IS SR 46, MOVEMENTS 2 AND 6, AND MINOR STREET IS ROUND LAKE RD., MOVEMENTS 4 AND 8.
 4. REUTILIZE CONTROLLER, METER AND EXISTING POWER SOURCE INSTALLED DURING SIGNAL TEMPORARY TRAFFIC CONTROL PLAN (TTCP) PHASE I. POWER TO BE LOCATED AND CONNECTED BY OTHERS.
 5. THE CONTROLLER, POWER METER, SERVICE WIRE AND SOME PULL BOXES ARE SHOWN IN THE TTCP SINCE THEY ARE TO BE INSTALLED DURING MAINTENANCE OF TRAFFIC, BUT THE PAY ITEMS ARE INCLUDED IN THE SIGNAL PLANS.
 6. PAY ITEM 671-2-40 INCLUDES MODIFYING THE CONTROLLER PHASING AND TIMINGS FROM THE TTCP PHASING AND TIMINGS TO THE FINAL CONFIGURATION.



REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. T-4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

SIGNALIZATION PLAN

TMS 110501, MP 2.349



Standard Notes for Traffic Monitoring Sites

Contractor Shall:

(1) Notify the District Traffic Operations Office at least ten (10) working days prior to beginning any work. Contact the District Data Collection Manager at (386) 943-5380 to confirm location. The District Traffic Operations Office must approve any change to the proposed count station location.

(2) Furnish and install a pedestal-mounted Type III Traffic count cabinet, fabricated and installed per Roadway and Traffic Design Standards 17841 and 17900. And the following:

- A pull box is to be placed approximately 4 feet from the pavement edge.
- The cabinets shall be wired with the "J" and "P" Amphenol Classification and ADR-2000 wiring harness regardless if the cabinet is new or existing.
- Whenever there are more than 4 lanes total, each direction is to be wired to a separate "J" harness with the lanes counted from the outside lane, as lane 1. (East bound lanes 1, 2, 3 and west bound lanes 1, 2, 3.)
- Ensure there is enough room in the cabinet for an additional backplane if widening or adding piezos.

(3) Furnish and install piezoelectric axle sensors and speed classification loop assemblies per Roadway and Traffic Design Standards 17721 and 17900.

(4) All loop wires are NOT TO BE SPLICED, run straight to the pull boxes, and extend them through 2-inch conduits to the cabinet. Piezo leads shall not be spliced. Run the piezo axle sensor leads through a separate 2-inch conduit to the cabinet.

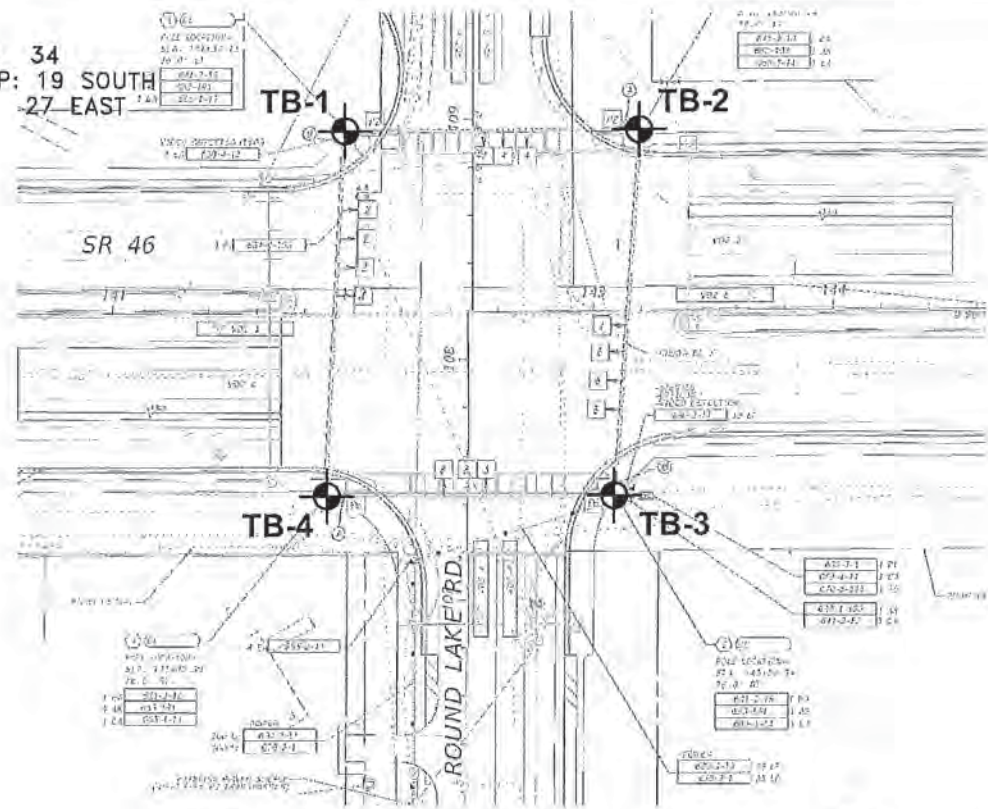
(5) Pull boxes and covers shall be FDOT approved of cast iron or steel construction with recessed cover logo "Traffic Signals". A 1' concrete apron shall surround the pull box regardless of new or existing.

(6) All loops and piezos are to be installed in the friction course.

(7) Immediately after completion of installation, contact the District Data Collection Manager @ 386-943-5380 prior to final acceptance.

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC 2602 E. LIVINGSTON ST. ORLANDO, FLORIDA, 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TRAFFIC MONITORING SITE DETAILS	SHEET NO. T-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

SECTION: 34
TOWNSHIP: 19 SOUTH
RANGE: 27 EAST



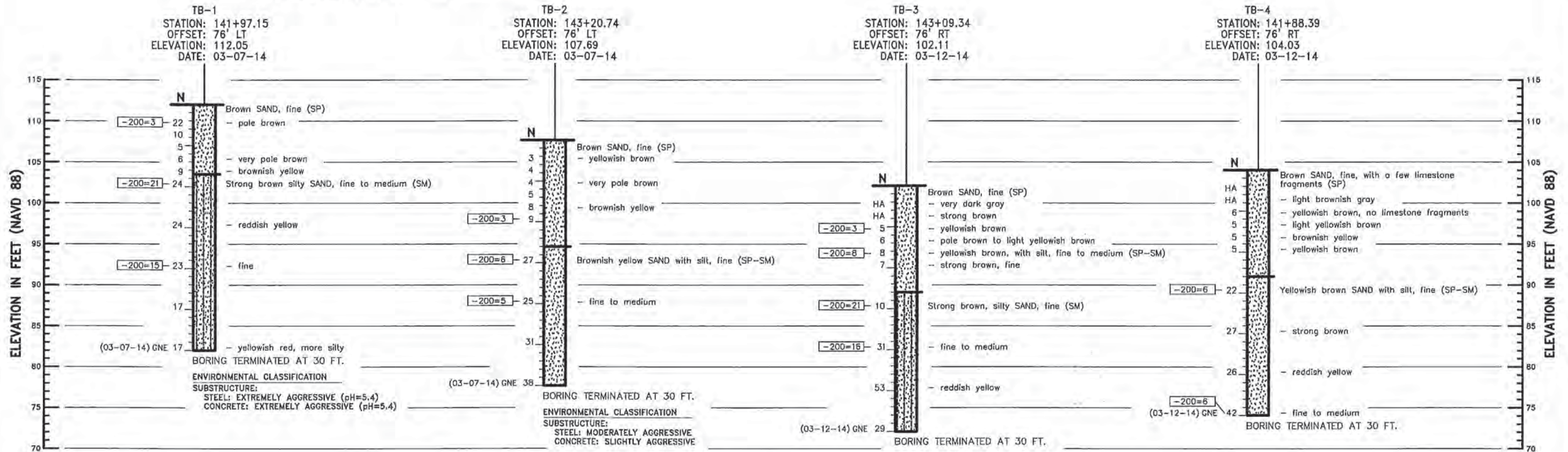
LEGEND

- SAND
- SILTY SAND
- STANDARD PENETRATION TEST (SPT) BORING LOCATION
- CHANGE IN SOIL STRATA
- N** SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
- HA** BORING ADVANCED BY HAND AUGER TO AVOID CONFLICT WITH UTILITIES
- (SP)** UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
- (03-13-13) GNE** 24 HOUR GROUNDWATER LEVEL READING
- ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
- 200** PERCENT PASSING U.S. STANDARD NO. 200 SIEVE

NOTES

1. PLAN VIEW IS PRELIMINARY FOR SHOWING BORING LOCATIONS ONLY AND MAY NOT BE INDICATIVE OF FINAL PLAN.
2. PLAN FURNISHED BY CLIENT.
3. BORINGS WERE DRILLED BY B. VANHOUSE ON 03/07/14 AND 03/12/14 USING A BR2500 RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.

SOIL CONSISTENCY (BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)	
GRANULAR SOILS	
VERY LOOSE	- LESS THAN 4 BLOWS/FT.
LOOSE	- 4 TO 10 BLOWS/FT.
MEDIUM DENSE	- 10 TO 30 BLOWS/FT.
DENSE	- 30 TO 50 BLOWS/FT.
VERY DENSE	- MORE THAN 50 BLOWS/FT.
FINE-GRAINED SOILS	
VERY SOFT	- LESS THAN 2 BLOWS/FT.
SOFT	- 2 TO 4 BLOWS/FT.
FIRM	- 4 TO 8 BLOWS/FT.
STIFF	- 8 TO 15 BLOWS/FT.
VERY STIFF	- 15 TO 30 BLOWS/FT.
HARD	- MORE THAN 30 BLOWS/FT.



S:\Current Projects\SR 46 Weikva 3A\AEC\Drawings\Weikva 3A Master.dwg, Signals 1-4, 4/10/2014 2:45:03 PM

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS						PETER G. SUAH, P.E. P.E. LICENSE NO. 46910 ANTILLIAN ENGINEERING ASSOCIATES, INC. 3331 BARTLETT BOULEVARD ORLANDO, FLORIDA 32811 CERTIFICATE OF AUTHORIZATION EB6685	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. REPORT OF SPT BORINGS FOR SIGNALS T-8
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
		PRELIMINARY NOT FOR CONSTRUCTION				SR 46	LAKE	238275-3-52-02		

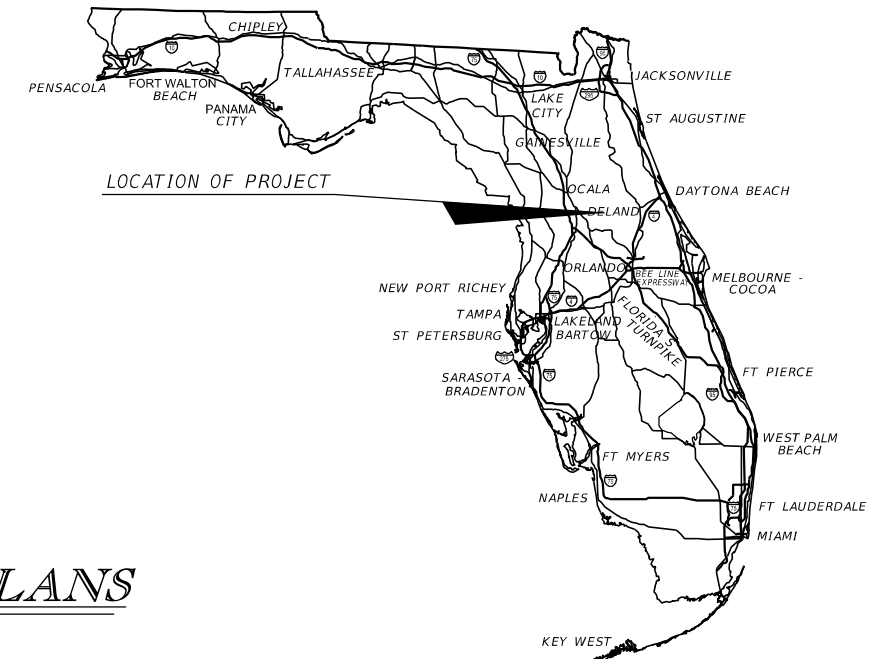
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-3-52-01

FEDERAL FUNDS
LAKE COUNTY (11130)
STATE ROAD NO. 46

INTELLIGENT TRANSPORTATION SYSTEMS PLANS



INDEX OF ITS PLANS

SHEET NO.	SHEET DESCRIPTION
IT-1	KEY SHEET
IT-2 to IT-3	TABULATION OF QUANTITIES
IT-4	GENERAL NOTES
IT-5 to IT-15	ITS PLANS
IT-16	VEHICLE DETECTOR DETAIL
IT-17 to IT-18	CCTV DETAIL
IT-19	SPLICE DIAGRAM SHEET

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
SHOP DRAWINGS TO BE SUBMITTED TO:

KATHRYN L. LEE, P.E.
GMB ENGINEERS & PLANNERS, INC.
2602 E. LIVINGSTON STREET
ORLANDO, FLORIDA 32803
PH: (407) 898-5424
FX: (407) 898-5425

PLANS PREPARED BY:

KATHRYN L. LEE, P.E.
P.E. LICENSE NUMBER 62420
GMB ENGINEERS & PLANNERS, INC
2602 E. LIVINGSTON ST.
ORLANDO, FLORIDA, 32803
CERTIFICATE OF AUTHORIZATION 8155
CONTRACT NO. C9B09
VENDOR NO. 59-3556348

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

KEY SHEET REVISIONS	
DATE	DESCRIPTION

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
ENGINEER OF RECORD: KATHRYN L. LEE

P.E. NO.: 62420

FISCAL YEAR	SHEET NO.
17	IT-1

FDOT PROJECT MANAGER: MATT HASSAN, P.E.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																		TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET		
			IT-5		IT-6		IT-7		IT-8		IT-9		IT-10		IT-11		IT-12		IT-13		IT-14		PLAN	FINAL		PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	290		510		680		477		490		759		341		484		464		430		4925				
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF			37		98		17		60				167		95		235		152		861				
633-1-121	FIBER OPTIC CABLE, F&I, UG, 2-12 FIBERS	LF					110						110								115		335				
633-1-123	FIBER OPTIC CABLE, F&I, UG, 49-96 FIBERS	LF	340		697		708		494		600		638		608		579		699		691		6054				
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA					12						12								12		36				
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	1				1						1								1		4				
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA	1				1						1								1		4				
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERM. PATCH PANEL	EA					1						1								1		3				
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA					1						1									2					
635-2-12	PULL & SPLICE BOX, F&I, 24"x36" COVER SIZE	EA			3		1				1			2		1					1		9				
635-2-13	PULL & SPLICE BOX, F&I, 36" ROUND COVER SIZE	EA	1				1						1								1		4				
639-1-122	ELECTRICAL POWER SERVICE, F&I, UG, METER BY CONTRACTOR	AS					1						1								1		3				
639-2-1	ELECTRICAL SERVICE WIRE	LF					210						211								231		652				
639-3-11	ELECTRICAL SERVICE DISCONNECT	EA					1						1								1		3				
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II	EA					1						1								1		3				
641-2-13	PRESTRESSED CONCRETE POLE, F&I, TYPE P-III	EA											1										1				
641-3-263	CONCRETE CCTV POLE, F&I WITHOUT LOWERING DEVICE, 63'	EA					1														1		2				
660-3-11	VDS-MICROWAVE, F&I, CABINET EQUIPMENT	EA					1						1										2				
660-3-12	VDS-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT	EA					1						1										2				
676-2-111	ITS CABINET, F&I, POLE MOUNT, 336, 24"W X 36"H X 20"D	EA					1						1								1		3				
682-1-11	ITS CCTV CAMERA, F&I, DOME ENCLOSURE - PRESSURIZED	EA					1														1		2				
684-1-1	MANAGED FIELD ETHERNET SWITCH, F&I	EA					1						1								1		3				
684-3-11	DIGITAL VIDEO ENCODER W/ DECODER F&I HARDENED ENCODER	EA					1														1		2				
685-106	SYSTEM AUXILIARIES, F&I, UNINTERRUPTIBLE POWER SOURCE	EA					1						1								1		3				

NOTES:
















1. 660-3-11: INCLUDES ETHERNET TO SERIAL CONVERTER, CABLE, AND PANELS NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION.
2. 630-2-11: FIBER OPTIC CABLE LOCATE WIRE SHALL UTILIZE SPARE CONDUIT RUN.
3. PAY ITEM 682-1-11 ITS CCTV CAMERA SHALL BE HIGH DEFINITION.

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA			TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		DEPARTMENT OF TRANSPORTATION				IT-2
					ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01			

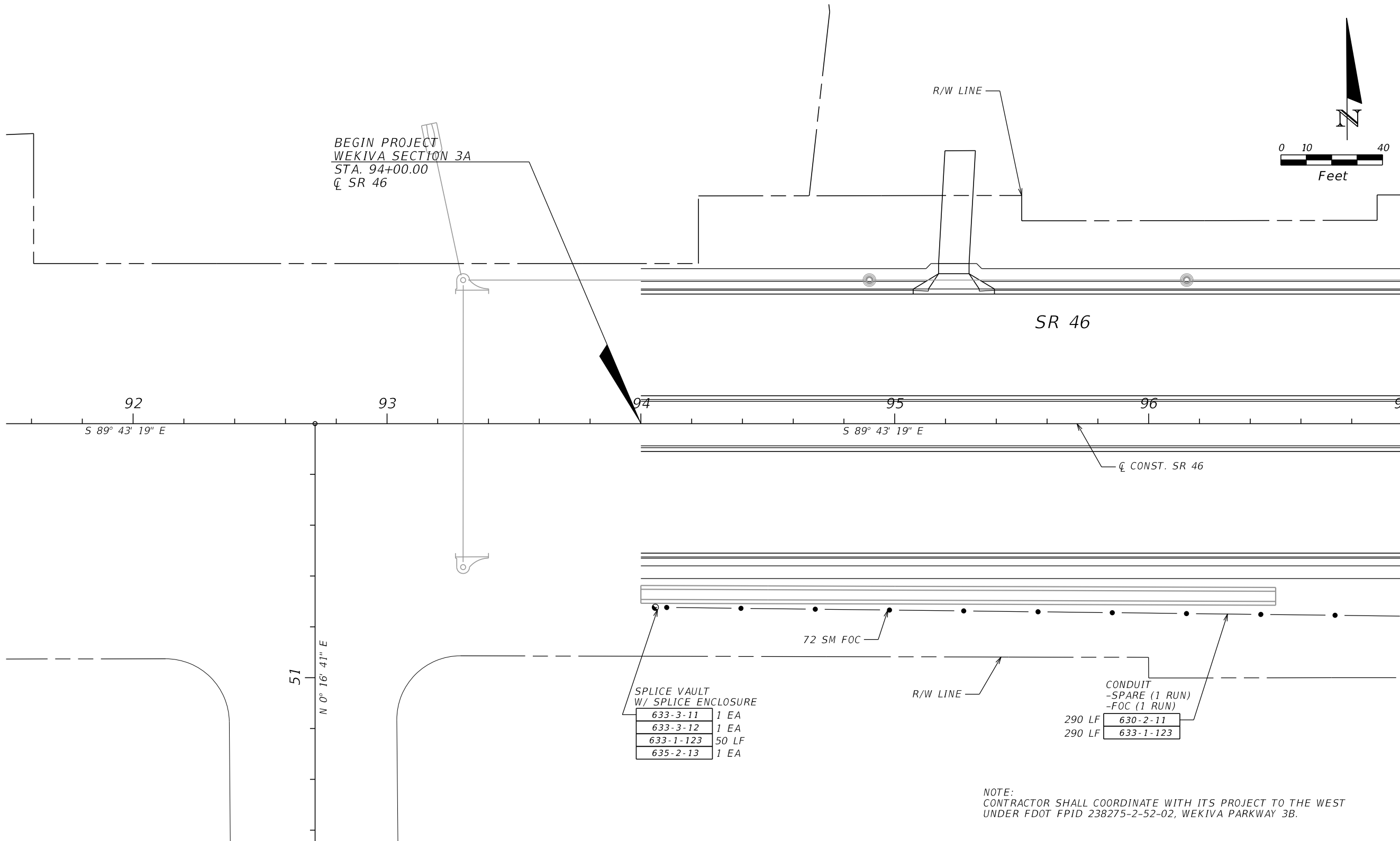
GENERAL NOTES

1. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, DIRECTIONAL BORING, OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL HAND DIG THE FIRST 4 FEET AT EACH POLE LOCATION AND THE FIRST 2 FEET AT EACH PEDESTAL LOCATION TO VERIFY NO UTILITY CONFLICTS.
3. THE LOCAL PERMIT MANAGER SHOULD BE INFORMED TWO BUSINESS DAYS BEFORE ANY DIRECTIONAL BORES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS INCLUDING THE ELECTRIC PERMIT. THE APPLICATION FOR POWER SHOULD BE COORDINATED WITH FDOT TRAFFIC OPERATIONS.
5. 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.
6. ALL MATERIAL SHALL BE FDOT APPROVED, AND PRE-APPROVED BY FDOT DISTRICT 5 ITS.
7. TRANSIENT VOLTAGE SURGE SUPPRESSOR SHALL BE INCLUDED IN COST OF THE RESPECTIVE ITS EQUIPMENT.
8. PULL BOXES SHALL BE SPACED A MAXIMUM OF 1000 FEET APART.
9. CONDUIT CONNECTORS SHALL BE MARINE-GRADE.
10. ALL CONDUIT SHALL BE SCHEDULE 40, 2 INCH (5 CM) DIA. MINIMUM UNLESS OTHERWISE SPECIFIED IN PLANS, EXCEPT ELECTRICAL POWER SERVICE CONDUCTOR.
11. CONTRACTOR SHALL GROUND LOCATE WIRE AT EACH SPLICE BOX.

ITS LEGEND:

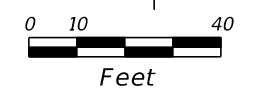
	EXIST ELECTRIC (BE) PULL BOX*		PROPOSED CCTV CAMERA
	EXISTING FIBER OPTIC CABLE (FCO, BFO) PULL BOX*		PROPOSED ITS POLE
	EXISTING FOC SPLICE VAULT*		EXISTING POLE MOUNT CABINET
.....	EXISTING BURIED ELECTRIC*		EXISTING POLE
.....	EXISTING FIBER OPTIC CONDUIT*		PROPOSED P-III CONCRETE POLE
.....	EXISTING BURIED TELEPHONE*		POWER SOURCE
— • —	PROPOSED UNDERGROUND CONDUIT		MVDS SYSTEM
— •• —	PROPOSED DIRECTIONAL BORE CONDUIT	*NOTE: EXISTING FEATURES TO REMAIN, OTHERWISE UNLESS NOTED ON PLAN SHEET	
	PROPOSED SPLICE BOX		FIBER OPTIC PULL BOX (24"x36")
	PROPOSED ELECTRICAL (BE) PULL BOX		EXISTING BASE MOUNT CABINET*
			PROPOSED BASE MOUNT CABINET

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						46	LAKE		238275-3-52-02



BEGIN PROJECT
WEKIVA SECTION 3A
STA. 94+00.00
CL SR 46

SR 46



92
S 89° 43' 19" E

93

94

95
S 89° 43' 19" E

96

MATCHLINE STA. 97+00.00

CL CONST. SR 46

72 SM FOC

SPLICE VAULT
W/ SPLICE ENCLOSURE

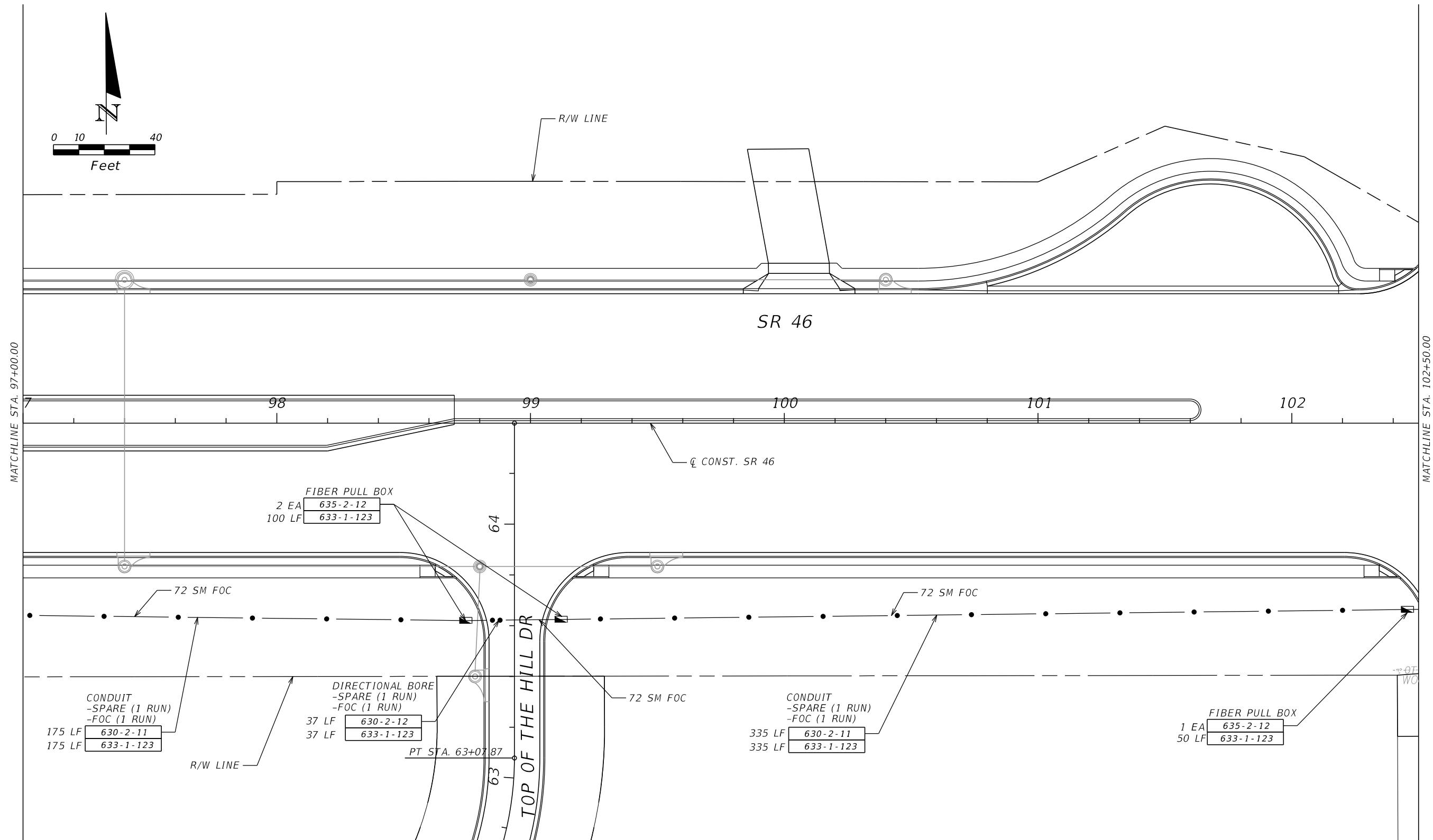
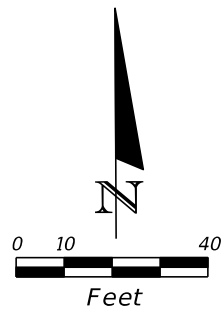
633-3-11	1 EA
633-3-12	1 EA
633-1-123	50 LF
635-2-13	1 EA

CONDUIT
-SPARE (1 RUN)
-FOC (1 RUN)

290 LF	630-2-11
290 LF	633-1-123

NOTE:
CONTRACTOR SHALL COORDINATE WITH ITS PROJECT TO THE WEST
UNDER FDOT FPID 238275-2-52-02, WEKIVA PARKWAY 3B.

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO. IT-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



FIBER PULL BOX
 2 EA 635-2-12
 100 LF 633-1-123

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 175 LF 630-2-11
 175 LF 633-1-123

DIRECTIONAL BORE
 -SPARE (1 RUN)
 -FOC (1 RUN)
 37 LF 630-2-12
 37 LF 633-1-123

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 335 LF 630-2-11
 335 LF 633-1-123

FIBER PULL BOX
 1 EA 635-2-12
 50 LF 633-1-123

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS SHEET NO. IT-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

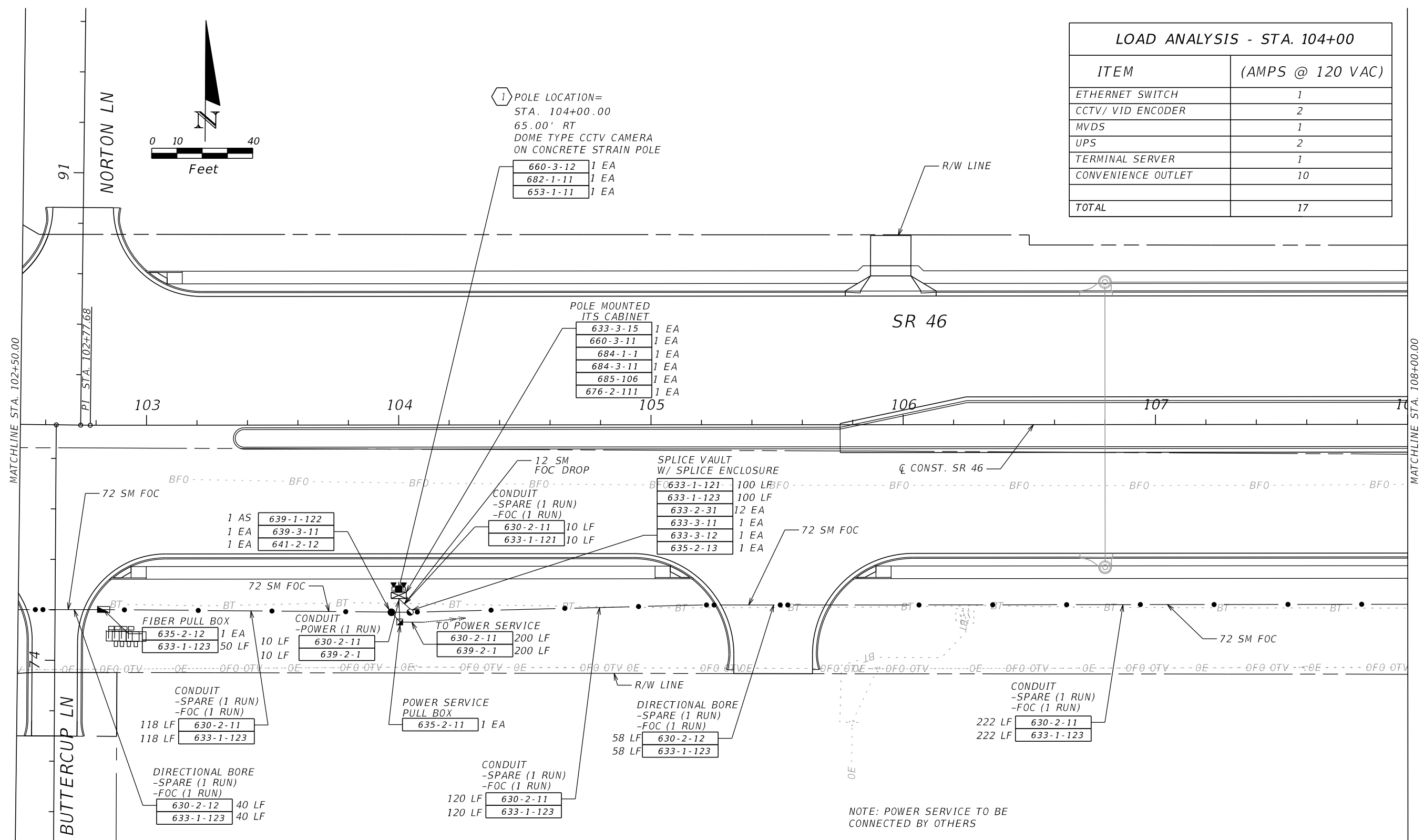
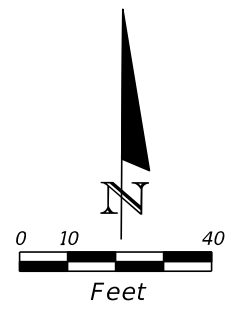
LOAD ANALYSIS - STA. 104+00	
ITEM	(AMPS @ 120 VAC)
ETHERNET SWITCH	1
CCTV/ VID ENCODER	2
MVDS	1
UPS	2
TERMINAL SERVER	1
CONVENIENCE OUTLET	10
TOTAL	17

① POLE LOCATION=
 STA. 104+00.00
 65.00' RT
 DOME TYPE CCTV CAMERA
 ON CONCRETE STRAIN POLE

- 660-3-12 1 EA
- 682-1-11 1 EA
- 653-1-11 1 EA

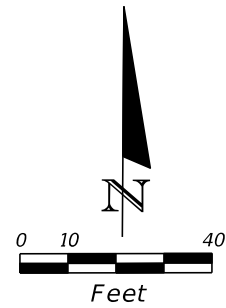
- POLE MOUNTED
 ITS CABINET
- 633-3-15 1 EA
 - 660-3-11 1 EA
 - 684-1-1 1 EA
 - 684-3-11 1 EA
 - 685-106 1 EA
 - 676-2-111 1 EA

- SPLICE VAULT
 W/ SPLICE ENCLOSURE
- 633-1-121 100 LF
 - 633-1-123 100 LF
 - 633-2-31 12 EA
 - 633-3-11 1 EA
 - 633-3-12 1 EA
 - 635-2-13 1 EA



NOTE: POWER SERVICE TO BE
 CONNECTED BY OTHERS

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. ITS PLANS IT-7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

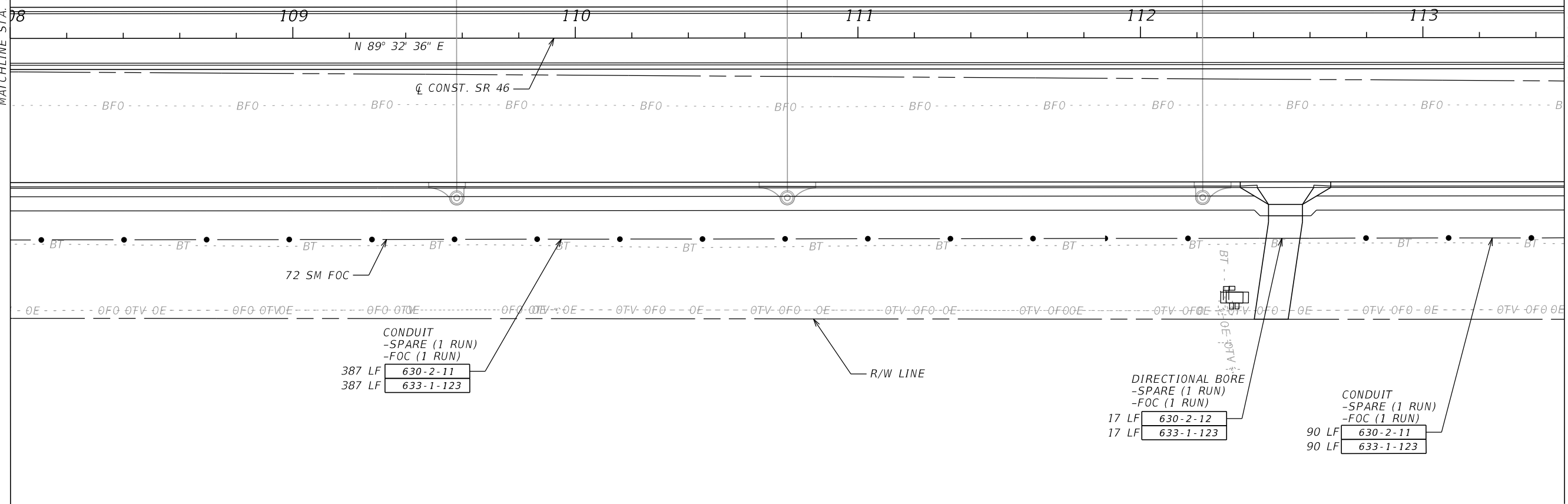


R/W LINE

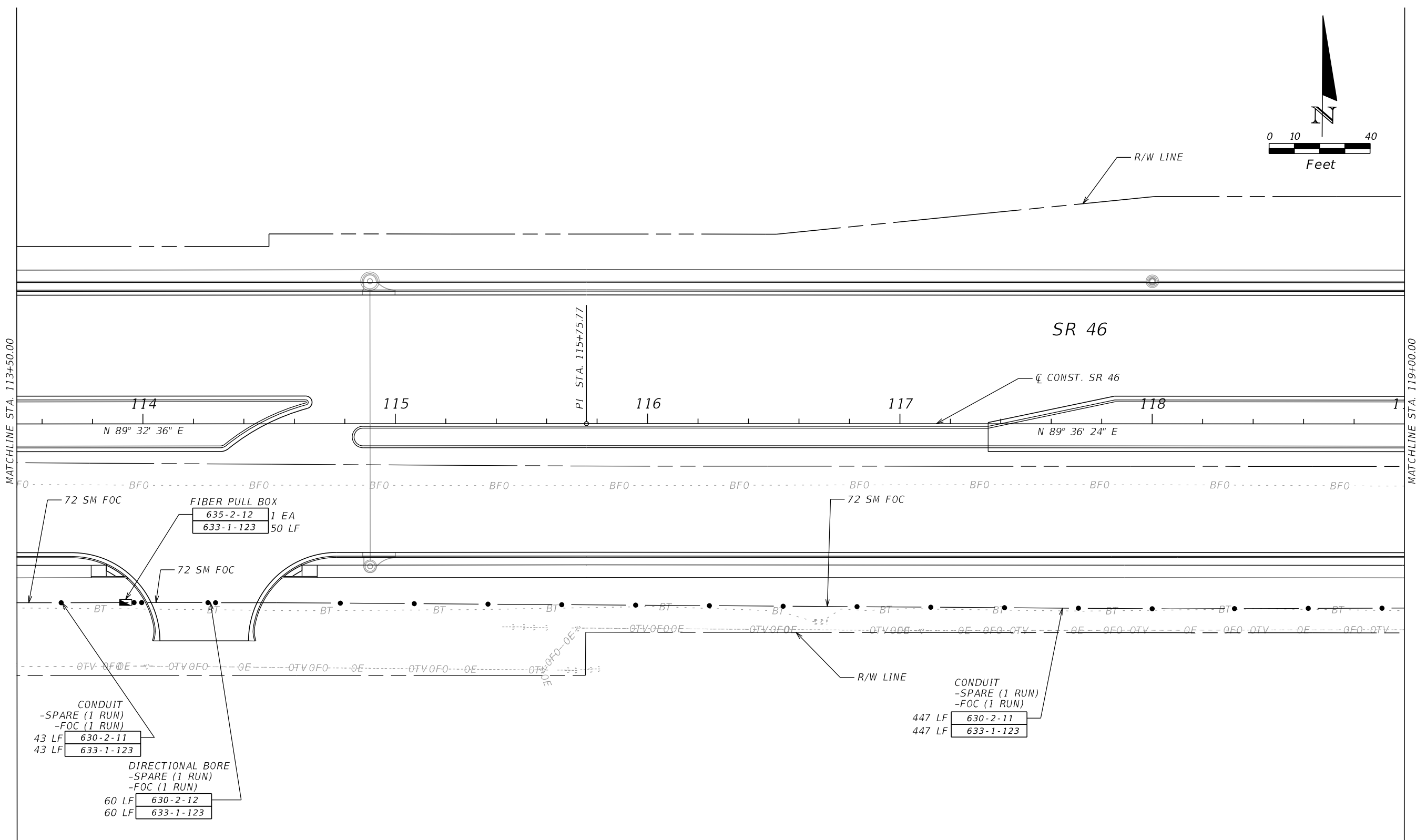
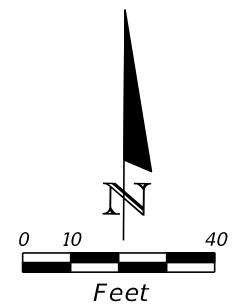
SR 46

MATCHLINE STA. 108+00.00

MATCHLINE STA. 113+50.00



REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-8
					46	LAKE	238275-3-52-01		



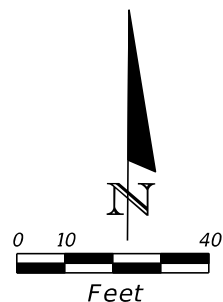
72 SM FOC
 FIBER PULL BOX
 635-2-12 1 EA
 633-1-123 50 LF

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 43 LF 630-2-11
 43 LF 633-1-123

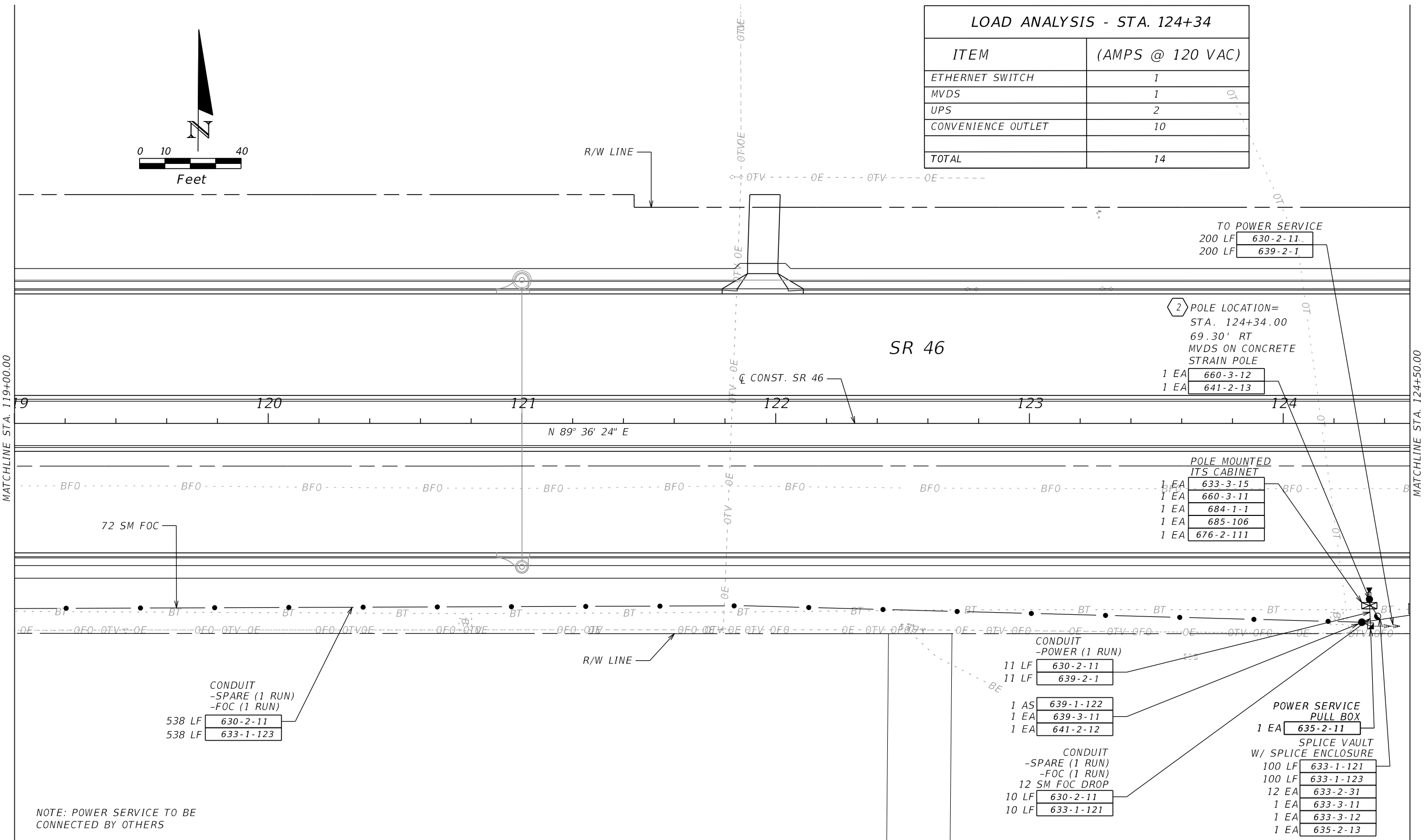
DIRECTIONAL BORE
 -SPARE (1 RUN)
 -FOC (1 RUN)
 60 LF 630-2-12
 60 LF 633-1-123

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 447 LF 630-2-11
 447 LF 633-1-123

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO. IT-9
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



LOAD ANALYSIS - STA. 124+34	
ITEM	(AMPS @ 120 VAC)
ETHERNET SWITCH	1
MVDS	1
UPS	2
CONVENIENCE OUTLET	10
TOTAL	14



2 POLE LOCATION=
 STA. 124+34.00
 69.30' RT
 MVDS ON CONCRETE
 STRAIN POLE
 1 EA 660-3-12
 1 EA 641-2-13

POLE MOUNTED
 ITS CABINET
 1 EA 633-3-15
 1 EA 660-3-11
 1 EA 684-1-1
 1 EA 685-106
 1 EA 676-2-111

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 538 LF 630-2-11
 538 LF 633-1-123

CONDUIT
 -POWER (1 RUN)
 11 LF 630-2-11
 11 LF 639-2-1

1 AS 639-1-122
 1 EA 639-3-11
 1 EA 641-2-12

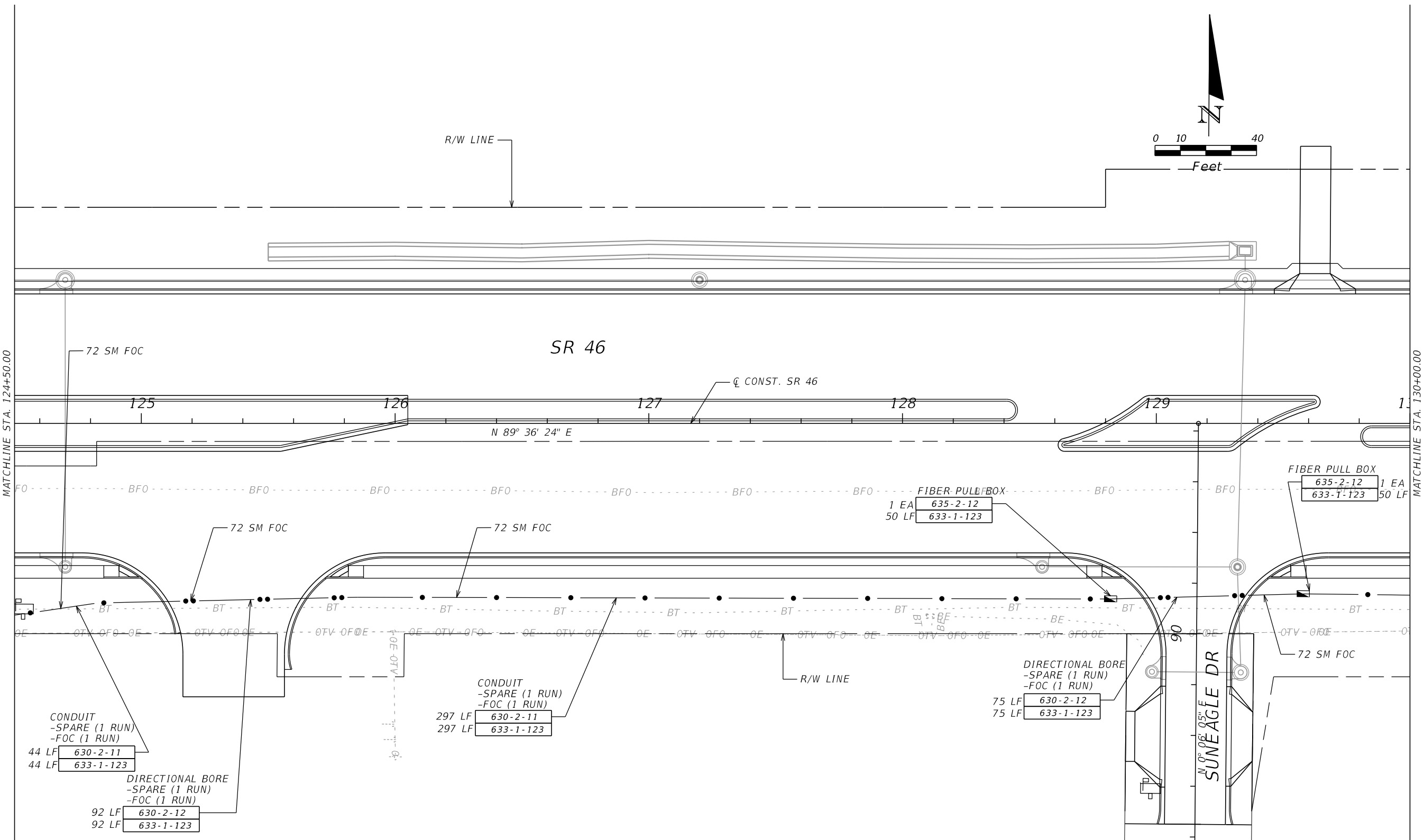
CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 12 SM FOC DROP
 10 LF 630-2-11
 10 LF 633-1-121

POWER SERVICE
 PULL BOX
 1 EA 635-2-11

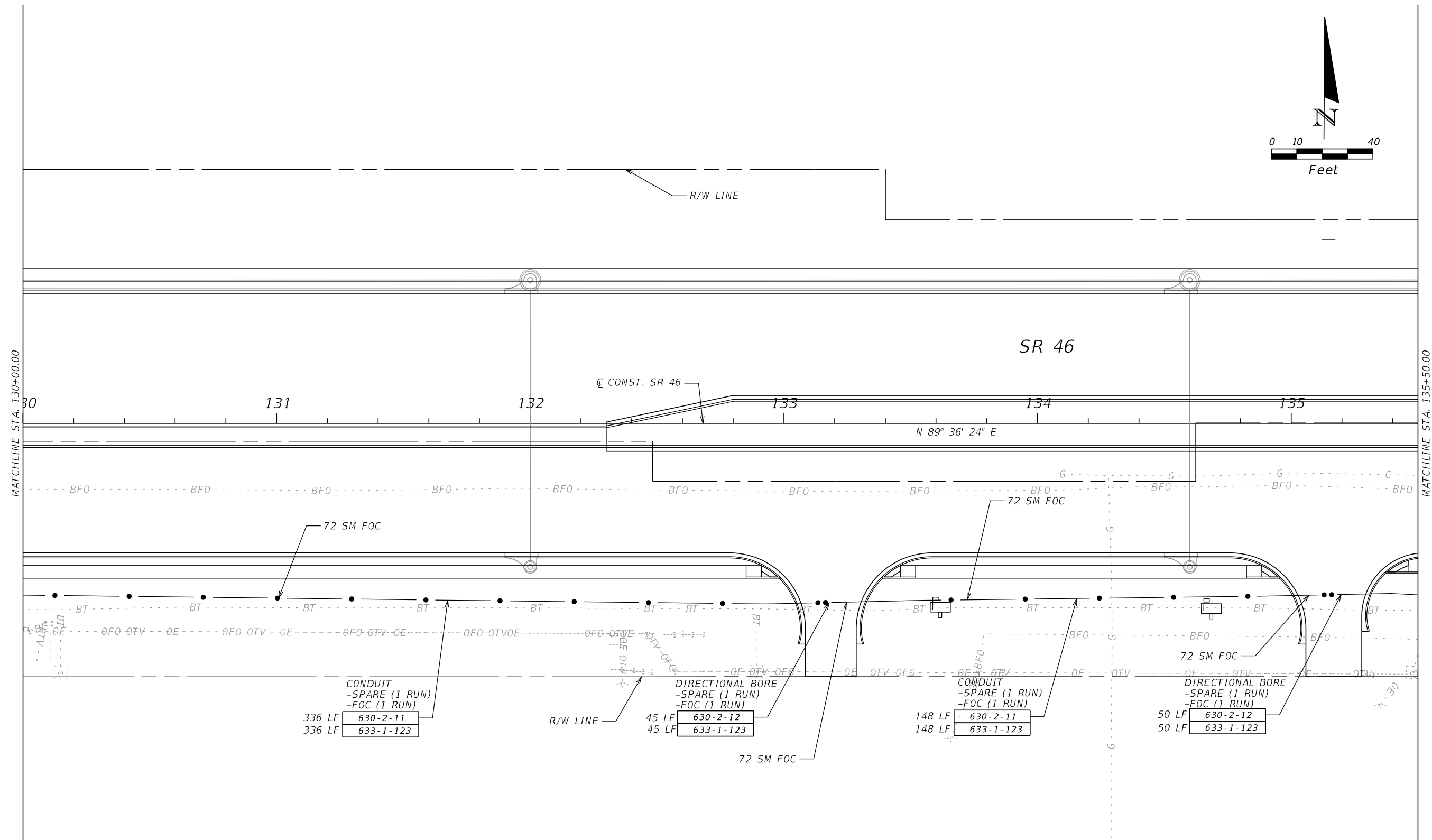
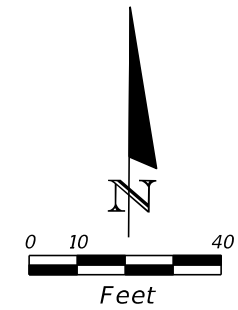
SPLICE VAULT
 W/ SPLICE ENCLOSURE
 100 LF 633-1-121
 100 LF 633-1-123
 12 EA 633-2-31
 1 EA 633-3-11
 1 EA 633-3-12
 1 EA 635-2-13

NOTE: POWER SERVICE TO BE
 CONNECTED BY OTHERS

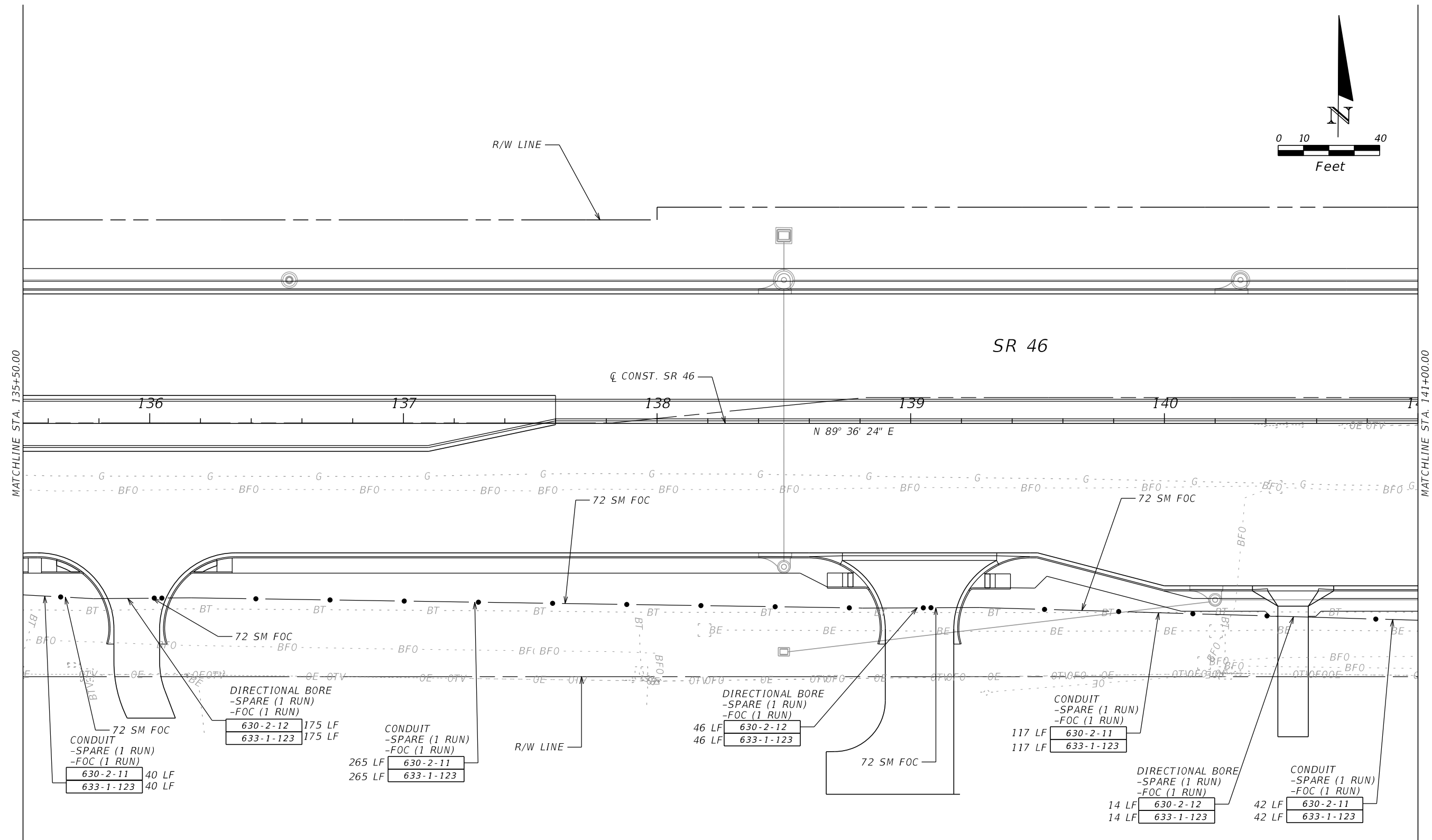
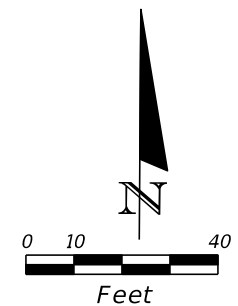
REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO. IT-10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



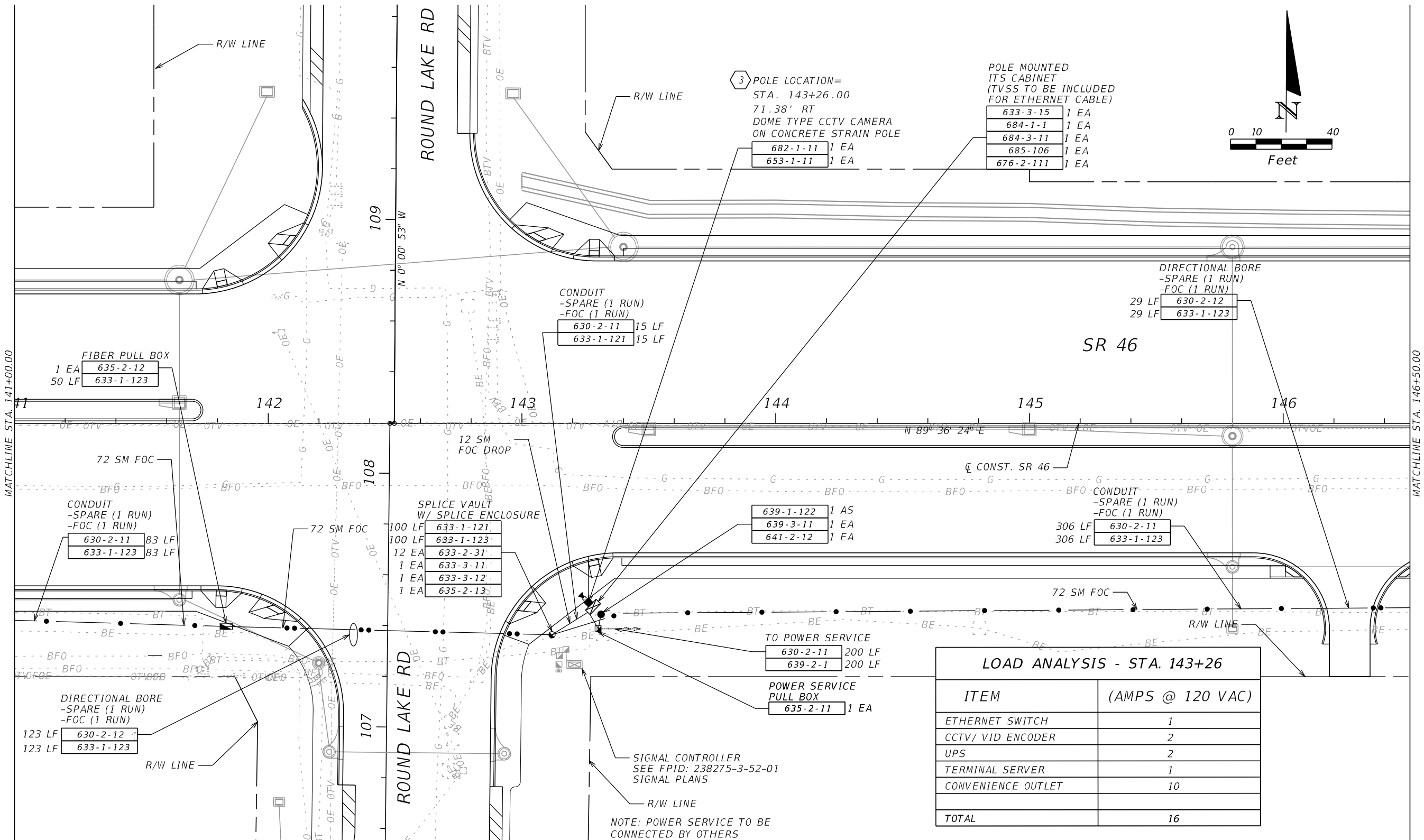
REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-11
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	



REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO. IT-12
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

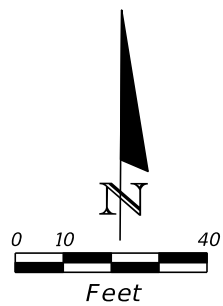


REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLANS	SHEET NO. IT-13
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



3 POLE LOCATION=
 STA. 143+26.00
 71.38' RT
 DOME TYPE CCTV CAMERA
 ON CONCRETE STRAIN POLE
 682-1-11 1 EA
 653-1-11 1 EA

POLE MOUNTED
 ITS CABINET
 (TVSS TO BE INCLUDED
 FOR ETHERNET CABLE)
 633-3-15 1 EA
 684-1-1 1 EA
 684-3-11 1 EA
 685-106 1 EA
 676-2-111 1 EA



CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 630-2-11 15 LF
 633-1-121 15 LF

DIRECTIONAL BORE
 -SPARE (1 RUN)
 -FOC (1 RUN)
 29 LF 630-2-12
 29 LF 633-1-123

FIBER PULL BOX
 1 EA 635-2-12
 50 LF 633-1-123

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 630-2-11 83 LF
 633-1-123 83 LF

SPLICE VAULT
 W/ SPLICE ENCLOSURE
 100 LF 633-1-121
 100 LF 633-1-123
 12 EA 633-2-31
 1 EA 633-3-11
 1 EA 633-3-12
 1 EA 635-2-13

639-1-122 1 AS
 639-3-11 1 EA
 641-2-12 1 EA

CONDUIT
 -SPARE (1 RUN)
 -FOC (1 RUN)
 306 LF 630-2-11
 306 LF 633-1-123

TO POWER SERVICE
 630-2-11 200 LF
 639-2-1 200 LF

POWER SERVICE
 PULL BOX
 635-2-11 1 EA

SIGNAL CONTROLLER
 SEE FPID: 238275-3-52-01
 SIGNAL PLANS

NOTE: POWER SERVICE TO BE
 CONNECTED BY OTHERS

LOAD ANALYSIS - STA. 143+26	
ITEM	(AMPS @ 120 VAC)
ETHERNET SWITCH	1
CCTV/ VID ENCODER	2
UPS	2
TERMINAL SERVER	1
CONVENIENCE OUTLET	10
TOTAL	16

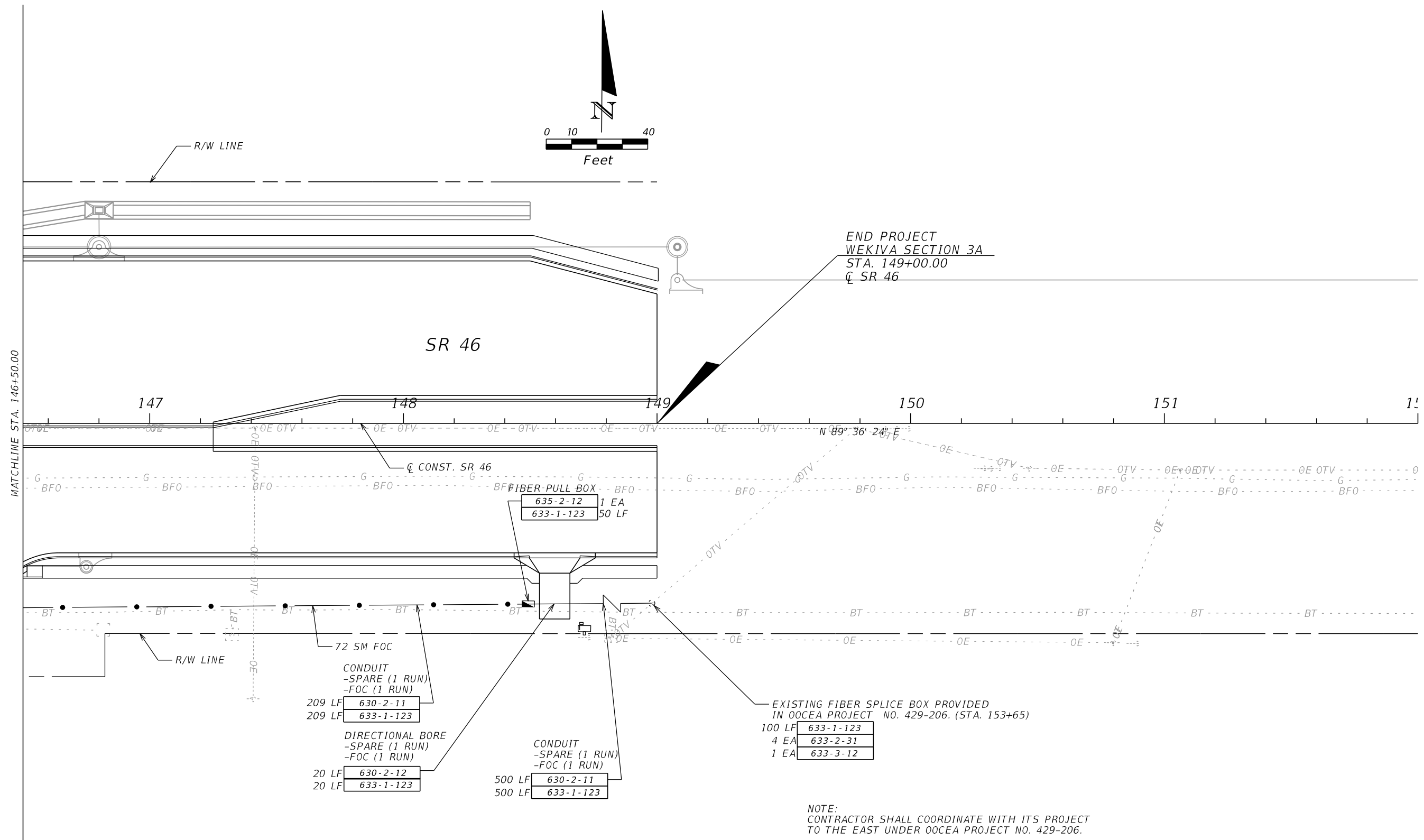
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

KATHRYN L. LEE, P.E.
 P.E. LICENSE NUMBER 62420
 GMB ENGINEERS & PLANNERS, INC.
 2602 E. LIVINGSTON STREET
 ORLANDO, FL 32803
 CERTIFICATE OF AUTHORIZATION 8155

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

ITS PLANS

SHEET NO.
IT-14

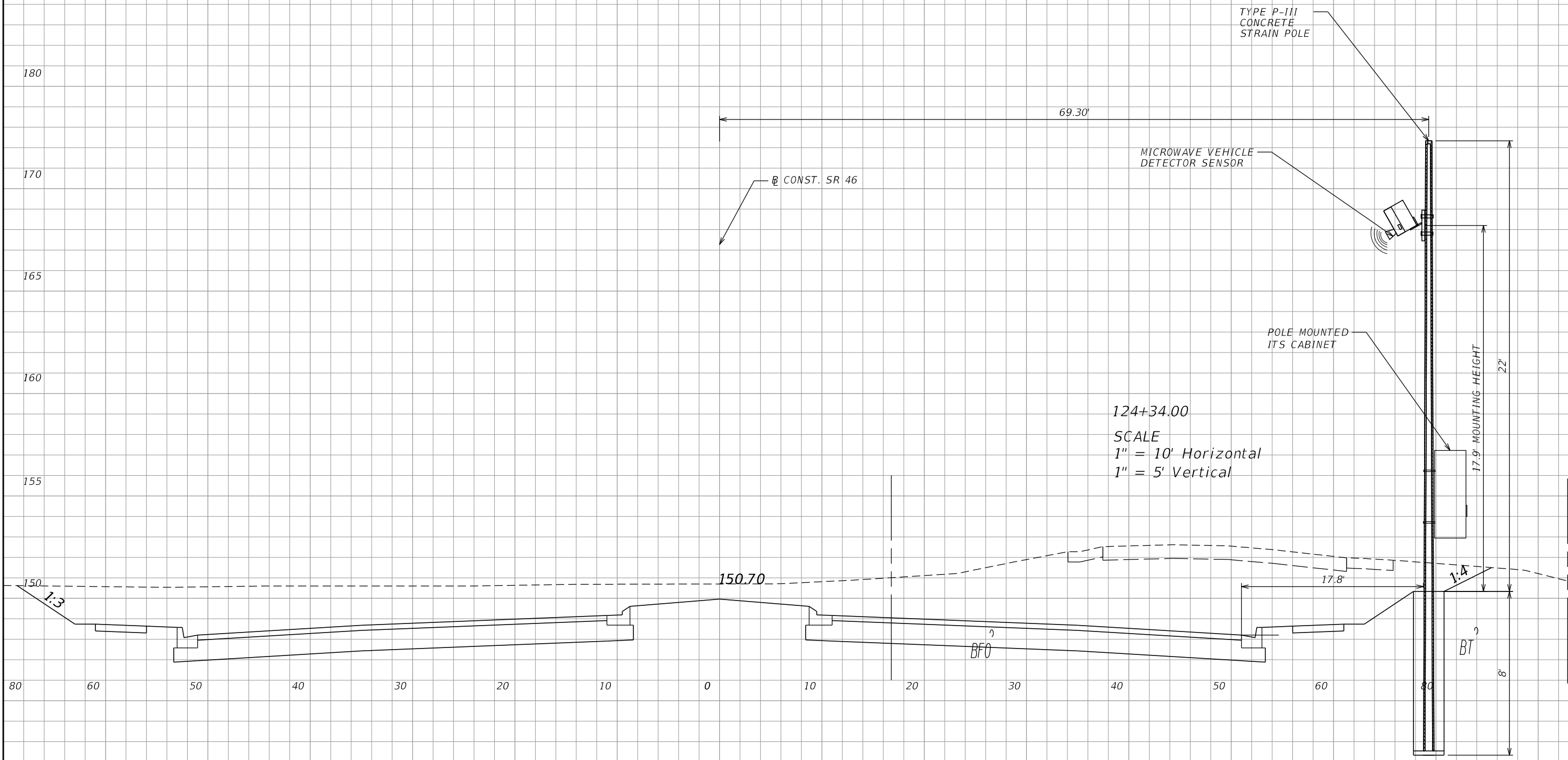


NOTE:
CONTRACTOR SHALL COORDINATE WITH ITS PROJECT
TO THE EAST UNDER OCEA PROJECT NO. 429-206.

REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-15
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

NOTE:

1. SEE INDEX 17725 AND 17900 FOR TRAFFIC MONITORING SITE AND POLE TYPE P-III DETAILS.



REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			VEHICLE DETECTOR DETAIL	SHEET NO. IT-16
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		

185

180

175

170

165

160

155

NOTE:

1. SEE INDEX 18113 FOR CCTV CONCRETE POLE DETAILS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR CCTV CAMERA MOUNTING HEIGHT AND ORIENTATION BASED ON FIELD INVESTIGATION AND COORDINATION WITH ORLANDO-ORANGE COUNTY EXPRESSWAY AUTHORITY FIELD REQUIREMENTS.

65.0'

12-SIDED ITS
CONCRETE POLE
W/O LOWERING DEVICE

DOME TYPE
CCTV CAMERA

MICROWAVE VEHICLE
DETECTOR SENSOR

POLE MOUNTED
ITS CABINET

50'
19.5' MOUNTING HEIGHT

CONST. SR 46

104+00.00

SCALE
1" = 10' Horizontal
1" = 5' Vertical

13.1'

155.23

1:3

13'

BFO

BT

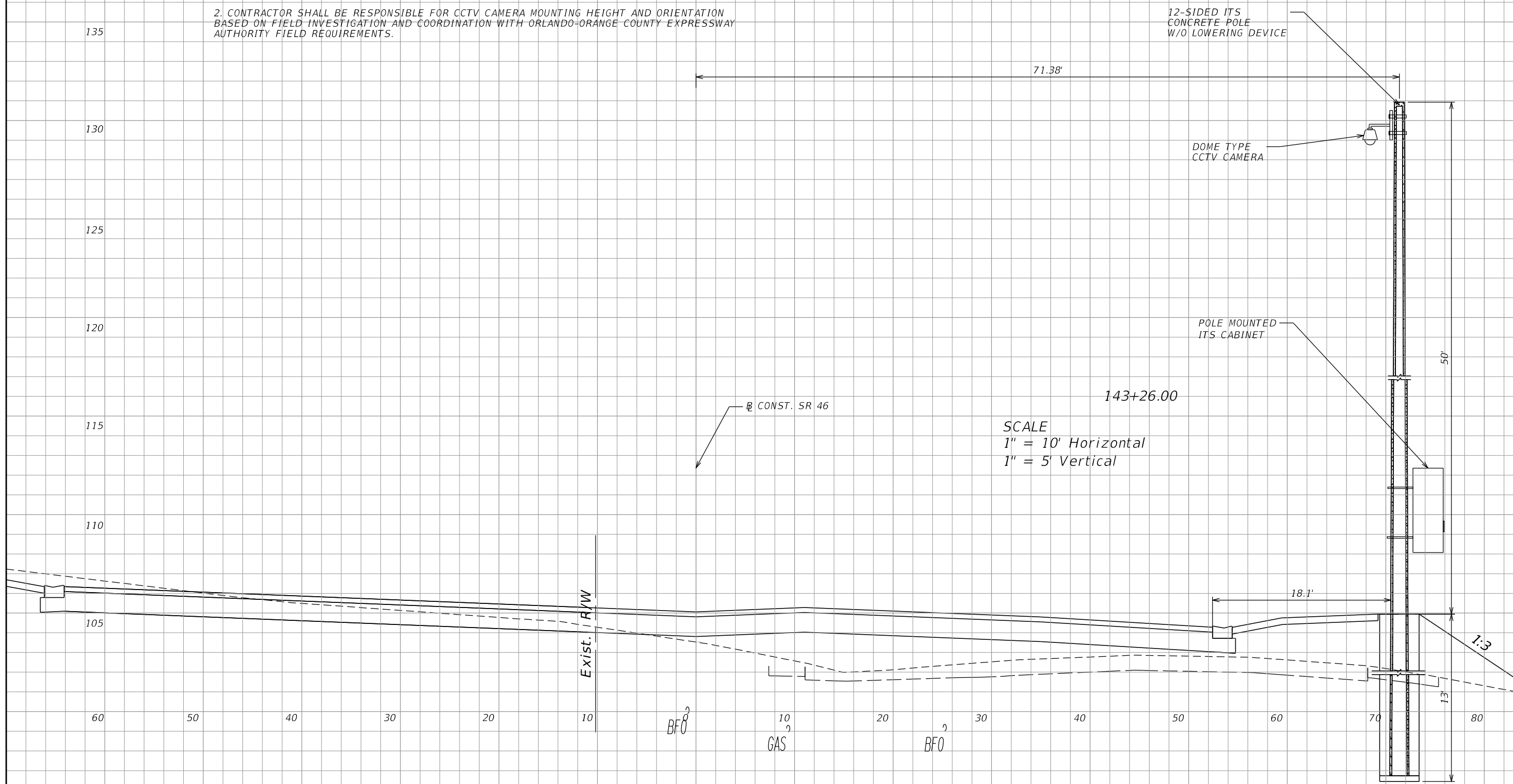
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REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-17
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

CCTV DETAIL

NOTE:

1. SEE INDEX 18113 FOR CCTV CONCRETE POLE DETAILS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CCTV CAMERA MOUNTING HEIGHT AND ORIENTATION BASED ON FIELD INVESTIGATION AND COORDINATION WITH ORLANDO-ORANGE COUNTY EXPRESSWAY AUTHORITY FIELD REQUIREMENTS.

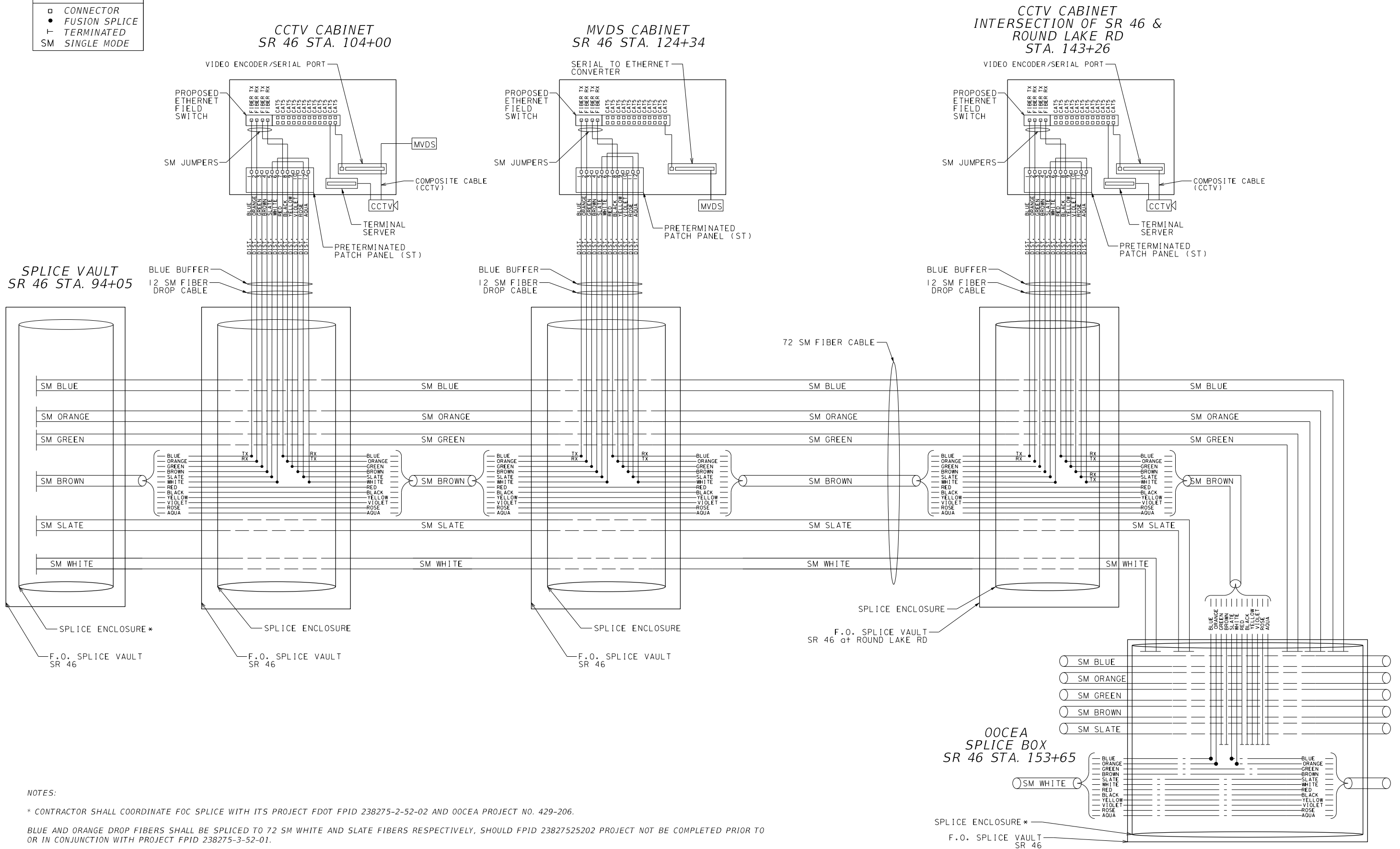


REVISIONS				KATHRYN L. LEE, P.E. P.E. LICENSE NUMBER 62420 GMB ENGINEERS & PLANNERS, INC. 2602 E. LIVINGSTON STREET ORLANDO, FL 32803 CERTIFICATE OF AUTHORIZATION 8155	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-18
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-3-52-01	

CCTV DETAIL

LEGEND

- CONNECTOR
- FUSION SPLICE
- └ TERMINATED
- SM SINGLE MODE



NOTES:

* CONTRACTOR SHALL COORDINATE FOC SPLICE WITH ITS PROJECT FDOT FPID 238275-2-52-02 AND 00CEA PROJECT NO. 429-206.

BLUE AND ORANGE DROP FIBERS SHALL BE SPLICED TO 72 SM WHITE AND SLATE FIBERS RESPECTIVELY, SHOULD FPID 23827525202 PROJECT NOT BE COMPLETED PRIOR TO OR IN CONJUNCTION WITH PROJECT FPID 238275-3-52-01.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

KATHRYN L. LEE, P.E.
 P.E. LICENSE NUMBER 62420
 GMB ENGINEERS & PLANNERS, INC.
 2602 E. LIVINGSTON STREET
 ORLANDO, FL 32803
 CERTIFICATE OF AUTHORIZATION 8155

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

SPLICE DIAGRAM SHEET

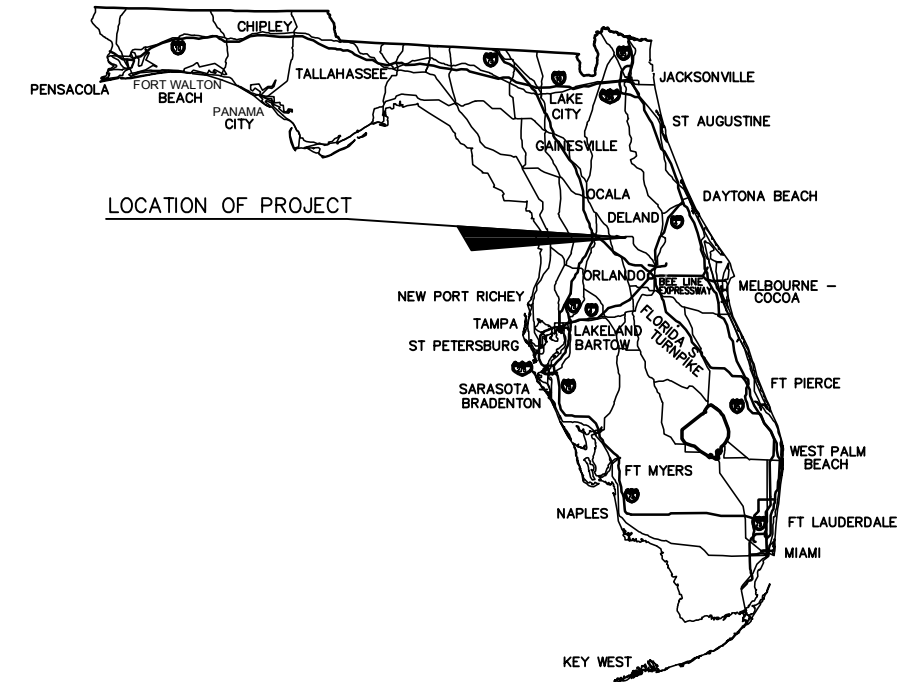
SHEET NO.
IT-19

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-3-52-01
(FEDERAL FUNDS)
LAKE COUNTY (11130)
STATE ROAD NO. 46

LANDSCAPE PLANS



INDEX OF LANDSCAPE PLANS

SHEET NO.	SHEET DESCRIPTION
LD1 – LD11	LANDSCAPE PLANS
LD12	LANDSCAPE DETAILS/ NOTES/ PLANT LIST
LD13	SPECIFICATIONS

LIST OF REVISED INDEX DRAWINGS

INDEX NO.	SHEET NO.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

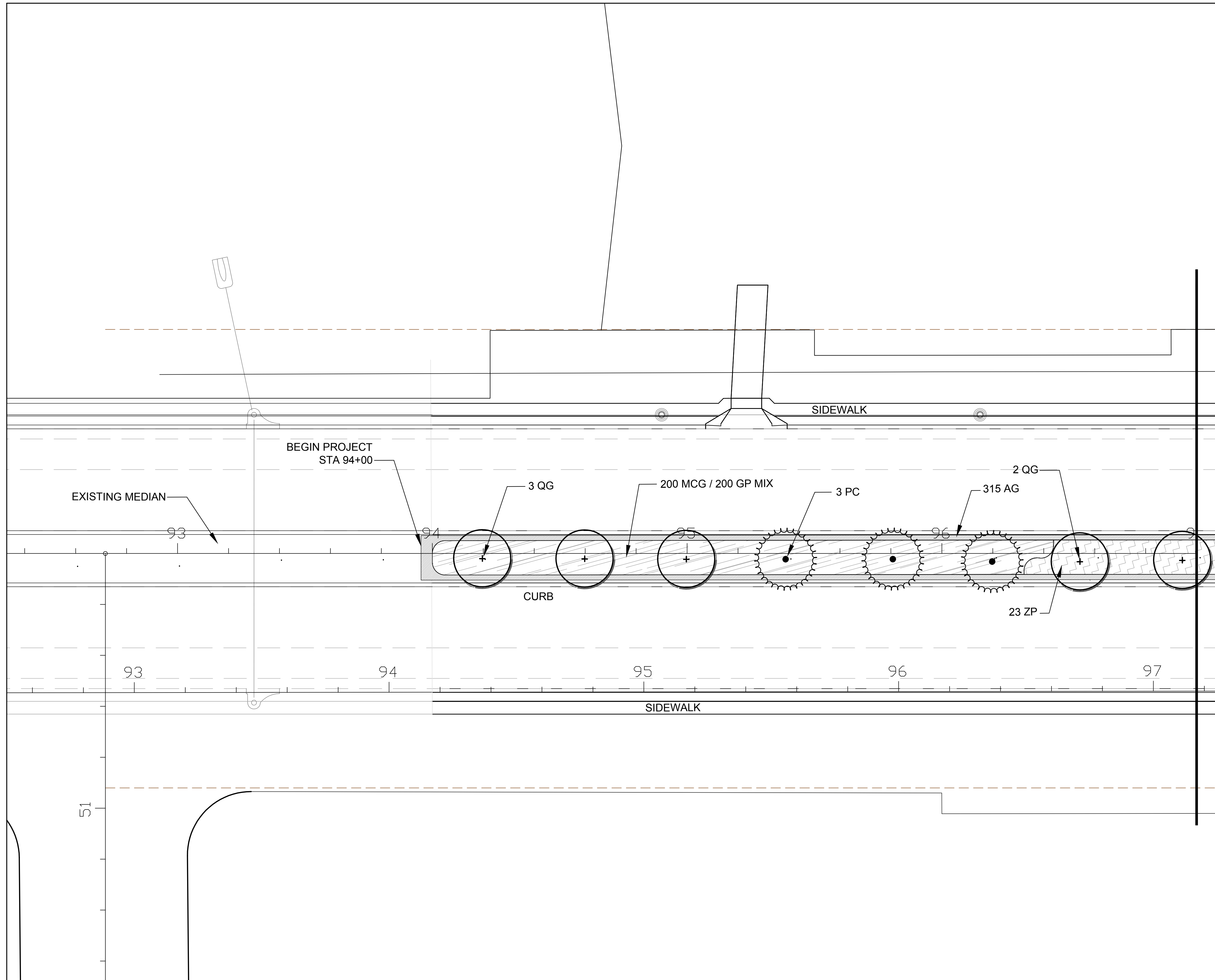
PLANS PREPARED BY:

DIX LATHROP AND ASSOCIATES, INC.
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA, 32750
(407) 667-1777
CERTIFICATE OF AUTHORIZATION NO. LC000358

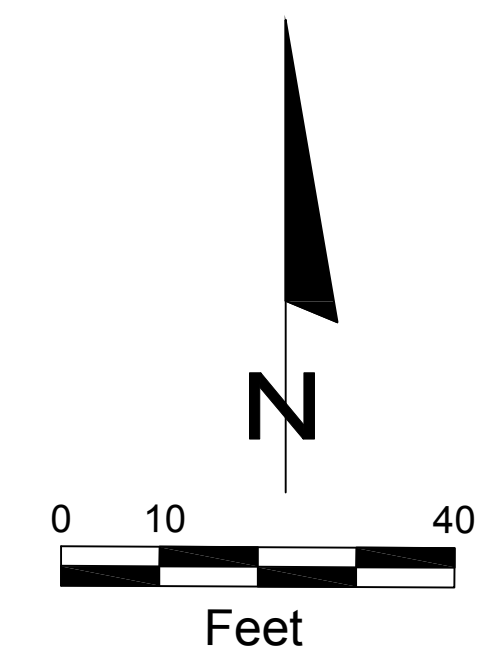
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

FDOT PROJECT MANAGER: MATT HASSAN, PE FDOT PM

FISCAL YEAR	SHEET NO.
2017	LD-0



MATCHLINE STA. 97+00.00



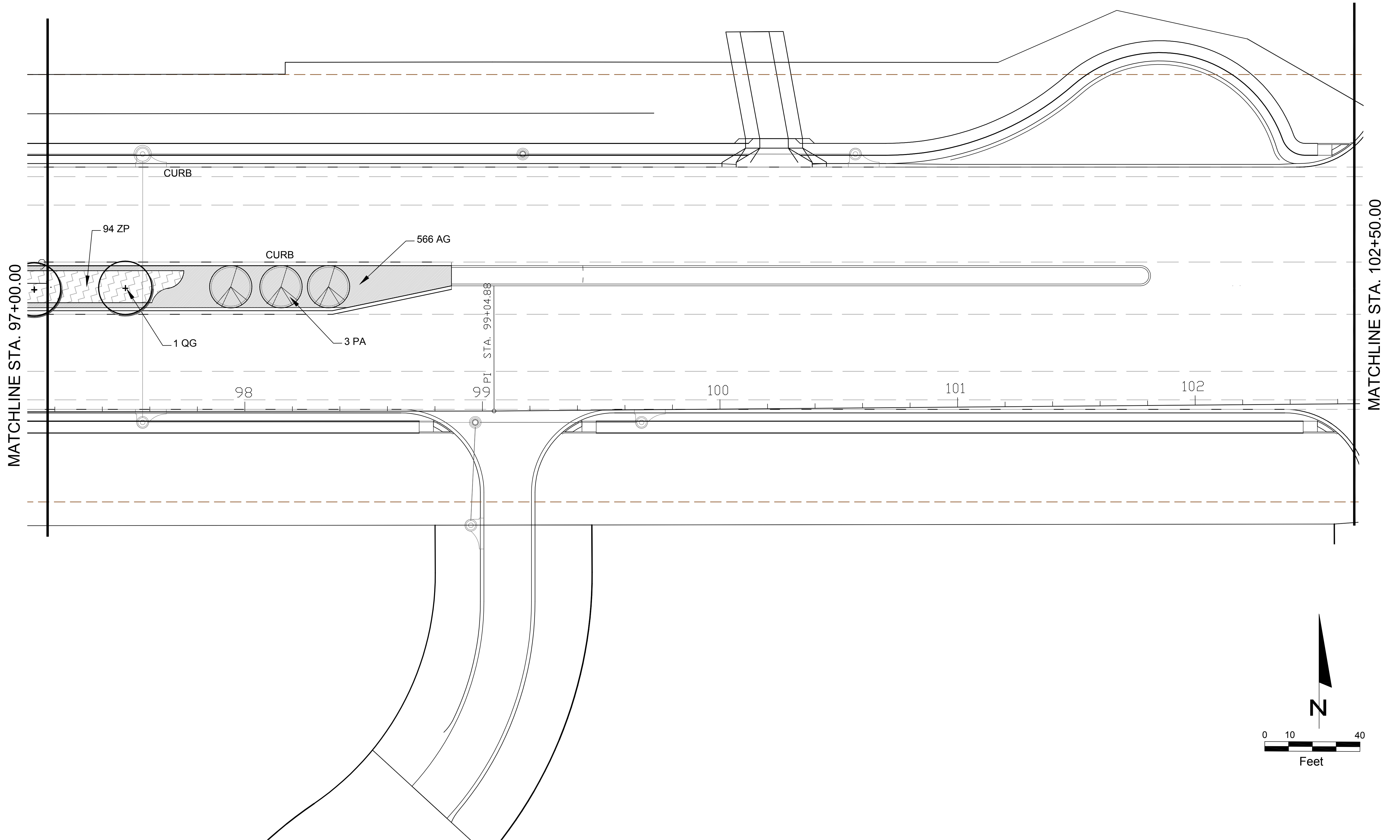
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DIX LATHROP
 150 WEST JESSUP AVENUE
 LONGWOOD, FLORIDA 32750
 (407) 667-1777
 DAVID M. HOPPES
 PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

LANDSCAPE PLANS
SR 46

SHEET NO.
 LD-1



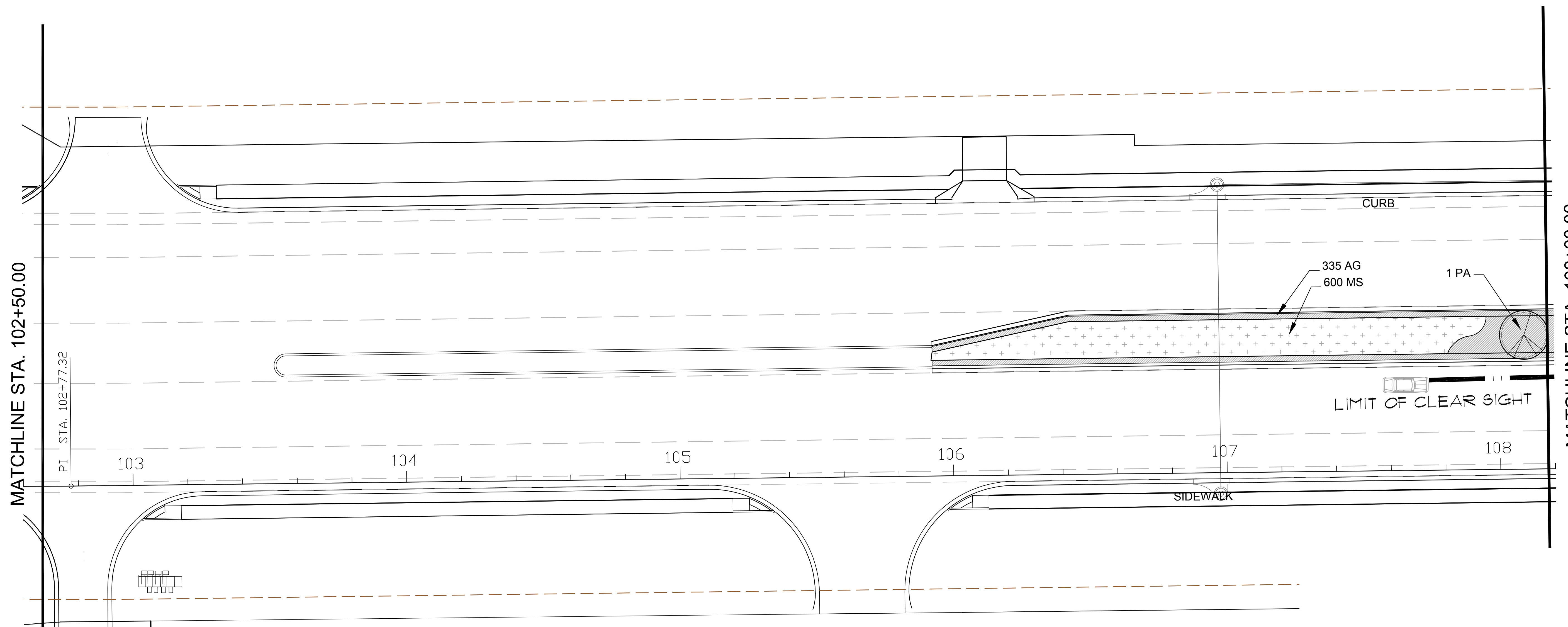
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DIX.LATHROP
 150 WEST JESSUP AVENUE
 LONGWOOD, FLORIDA 32750
 (407) 667-1777
 DAVID M. HOPPES
 PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

LANDSCAPE PLANS
SR 46

SHEET NO.
 LD-2



MATCHLINE STA. 102+50.00

MATCHLINE STA. 108+00.00

PI STA. 102+77.32

103

104

105

106

107

108

CURB

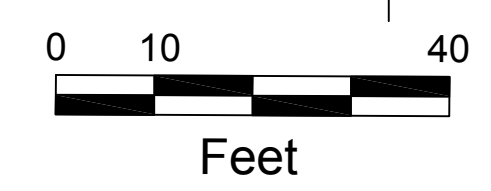
335 AG
600 MS

1 PA

LIMIT OF CLEAR SIGHT

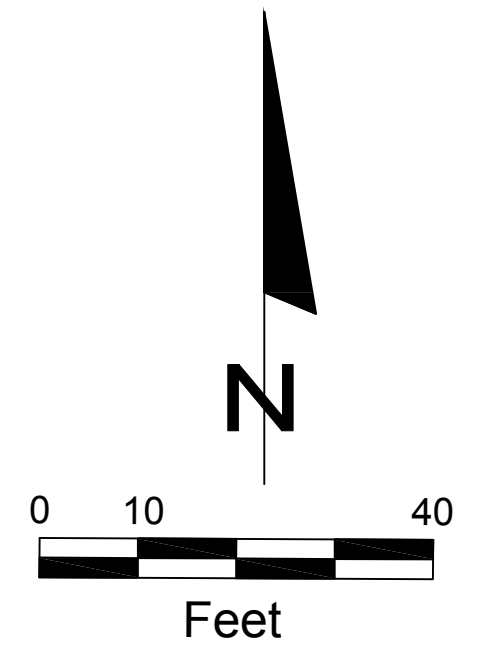
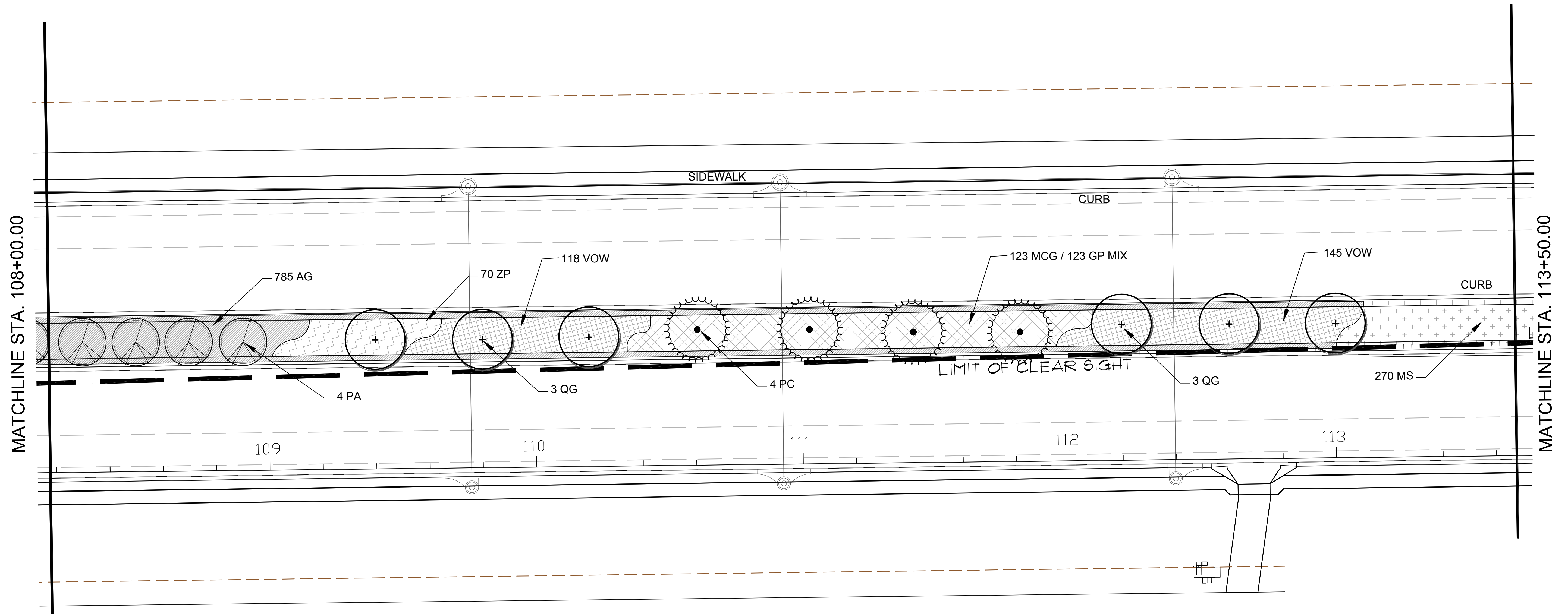
SIDEWALK

N

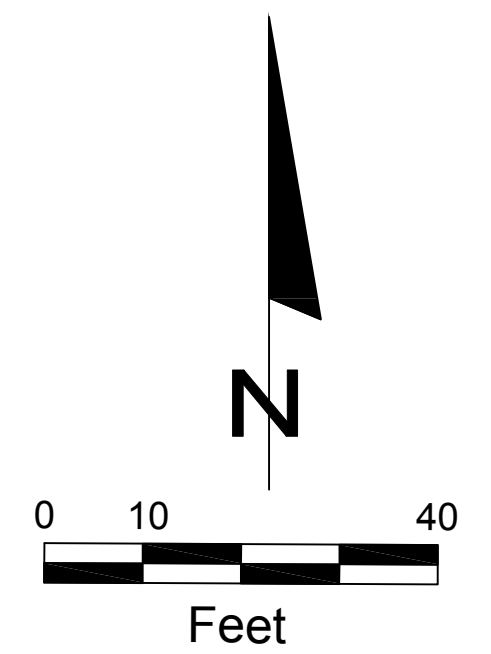
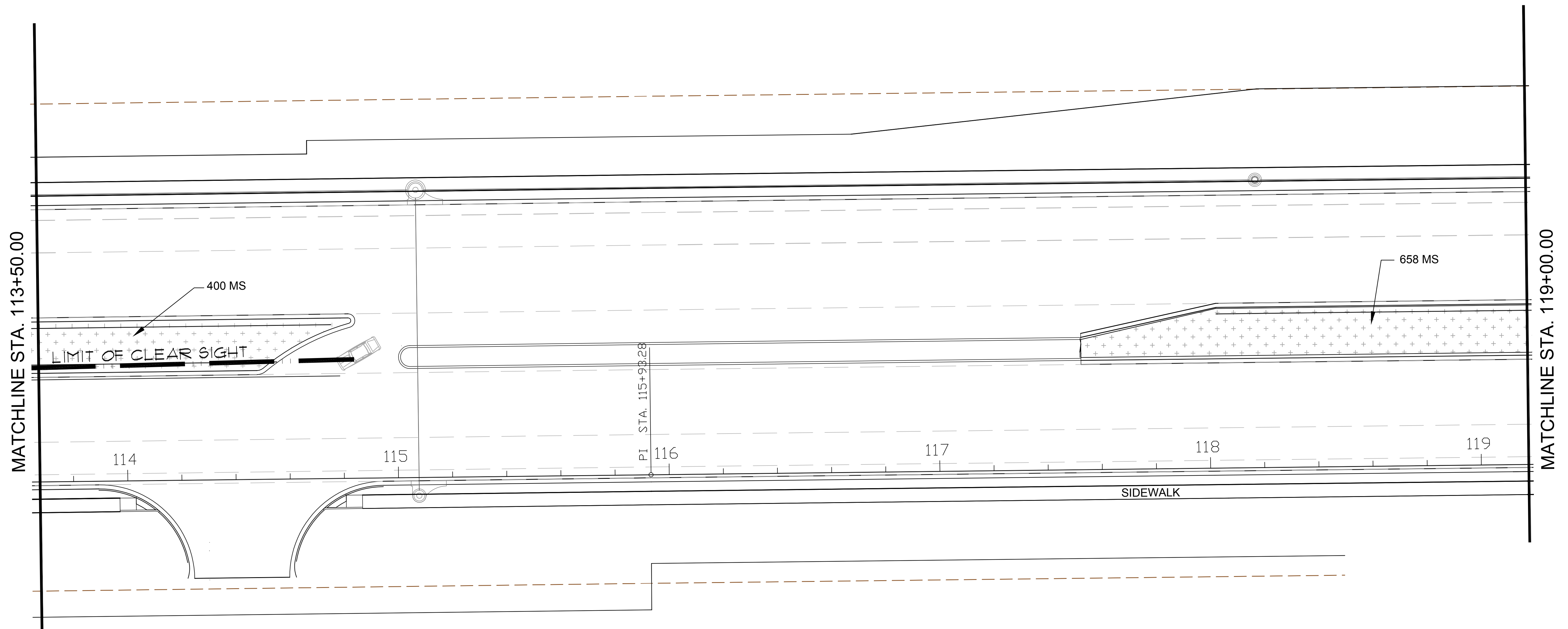


REVISIONS				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO. LD-3
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				46	LAKE	238275-3-52-01		

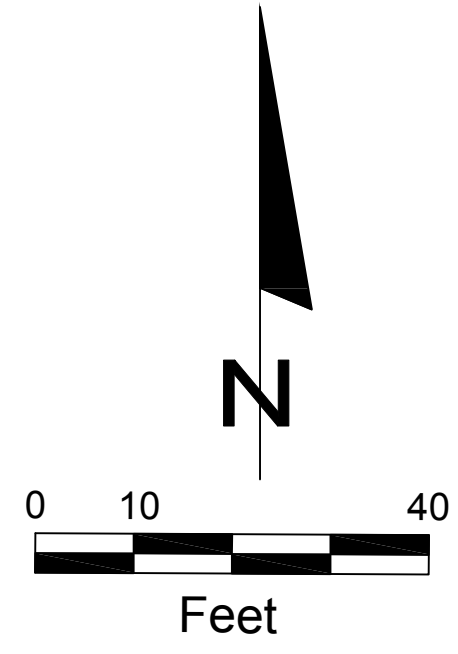
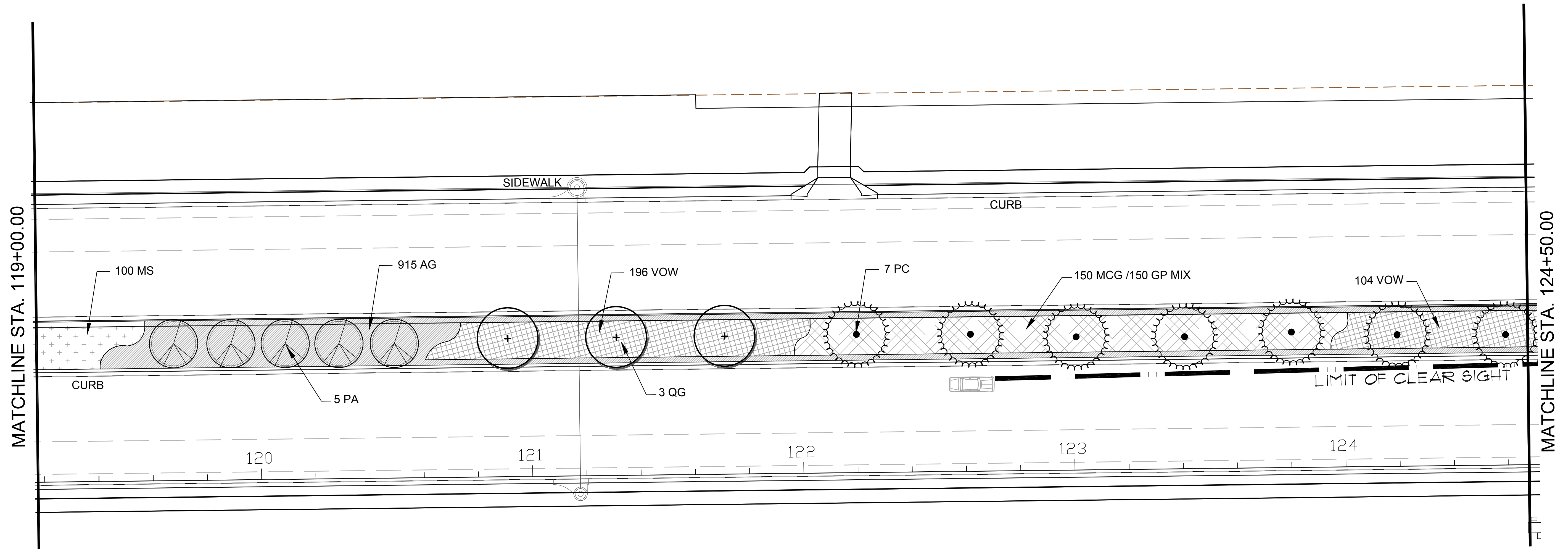
DIX.LATHROP
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA 32750
(407) 667-1777
DAVID M. HOPPES
PLA# 00001719



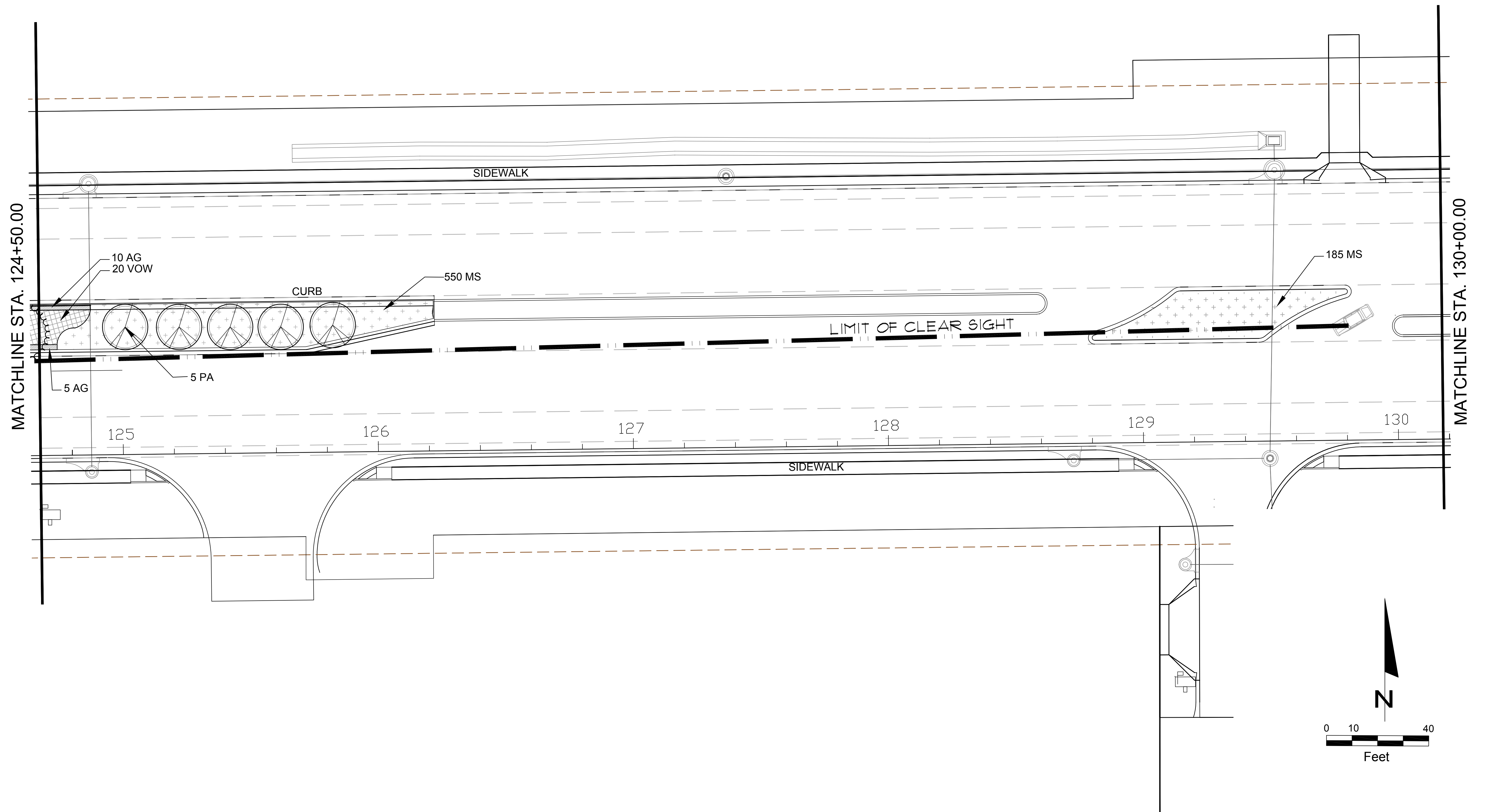
REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						46	LAKE		238275-3-52-01



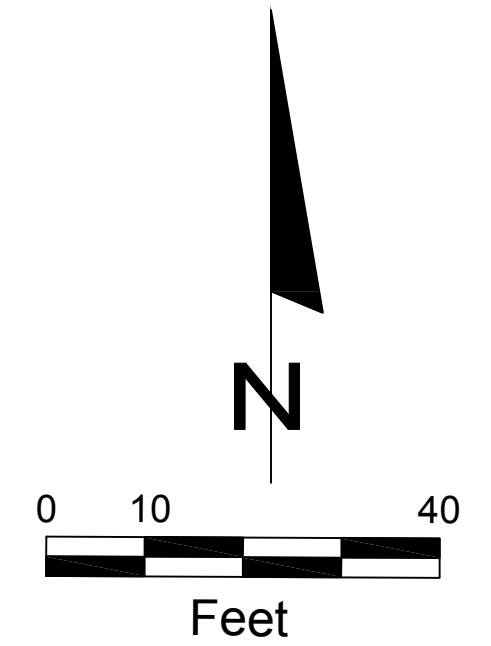
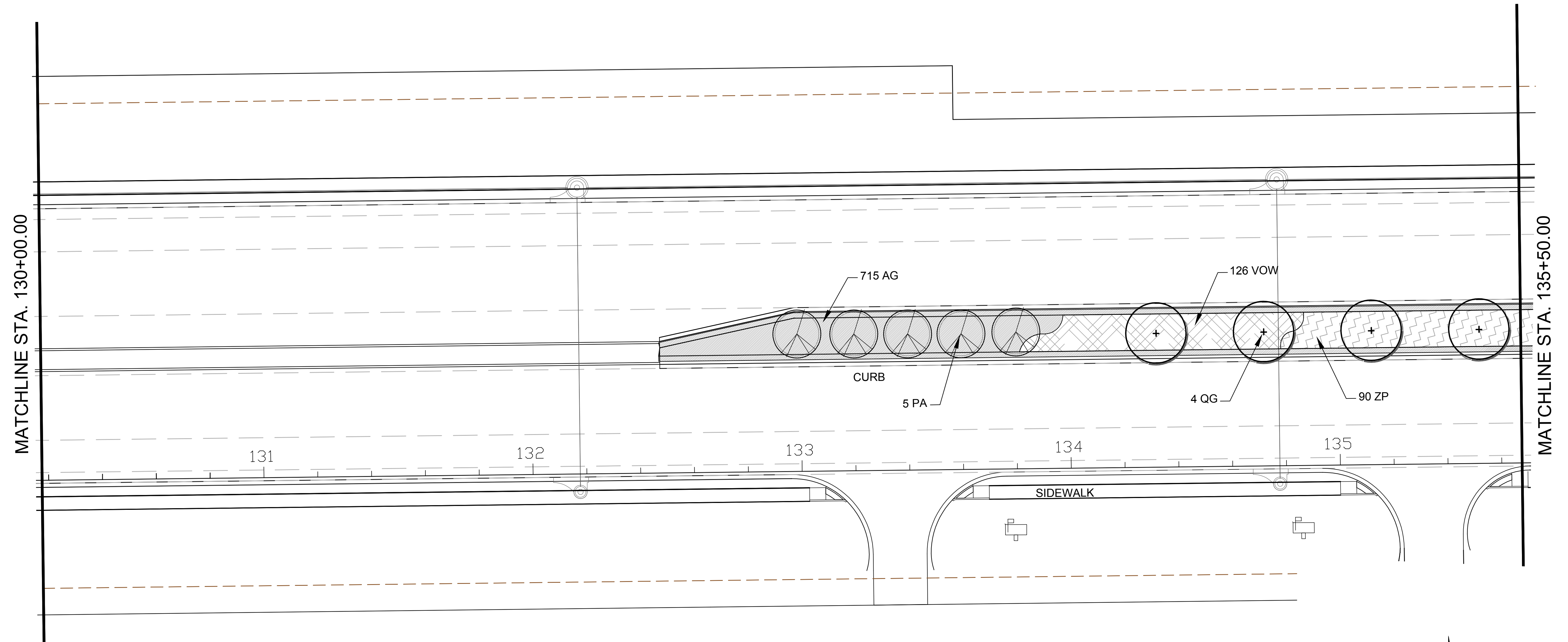
REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO. LD-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



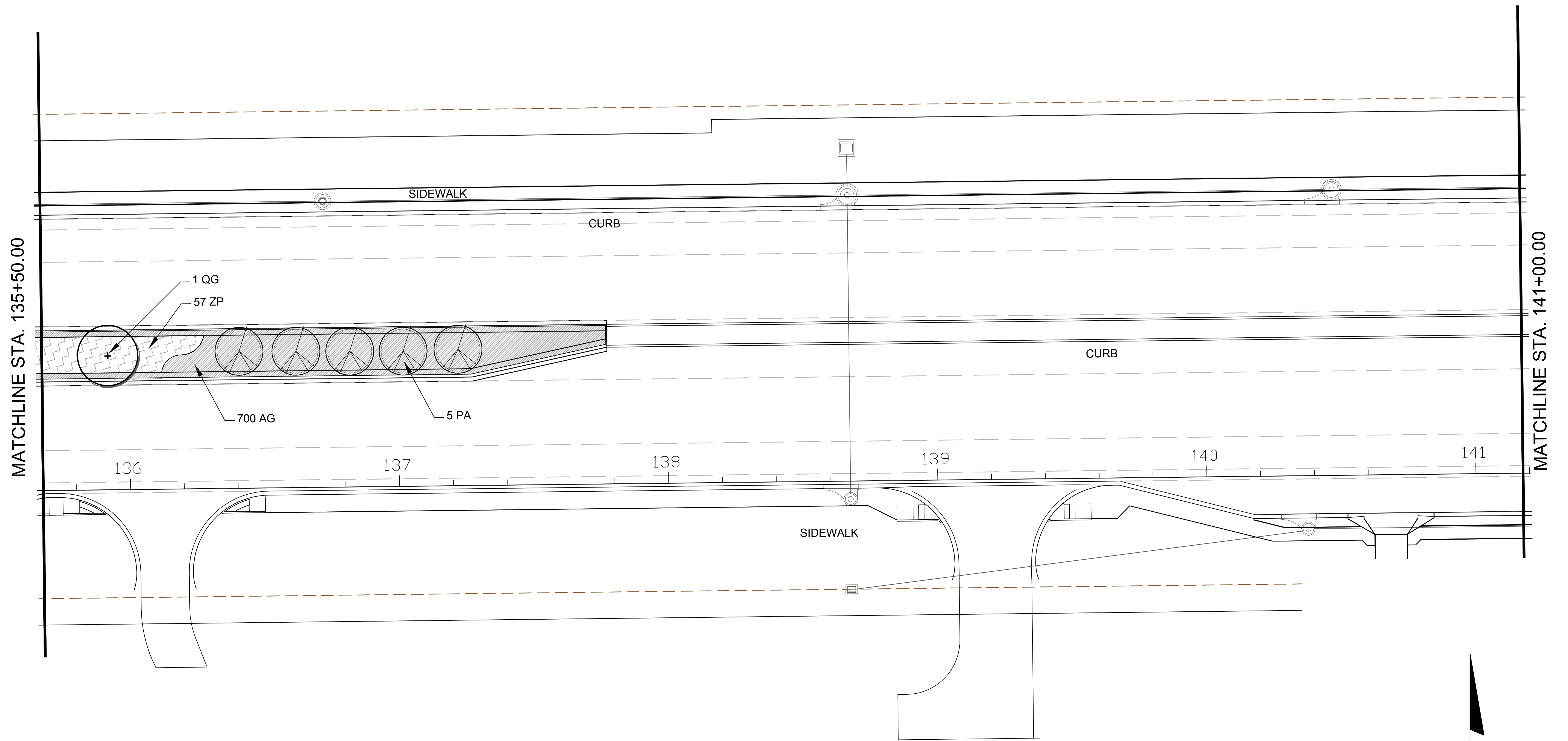
REVISIONS		REVISIONS		DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO. LD-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



REVISIONS		REVISIONS		DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						46	LAKE		238275-3-52-01



REVISIONS		REVISIONS		DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		LD-8
					46	LAKE	238275-3-52-01		

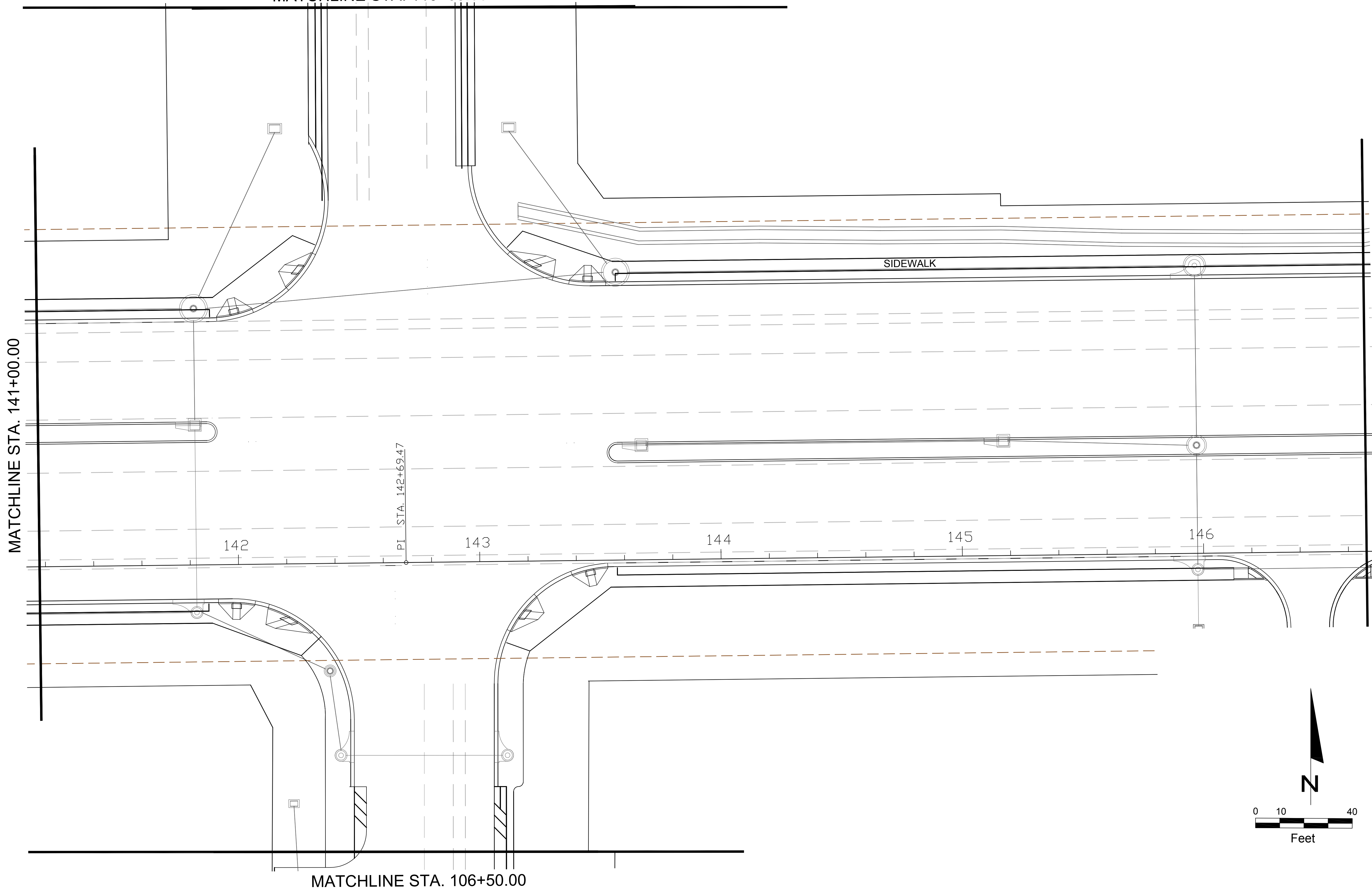


REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						46	LAKE		238275-3-52-01

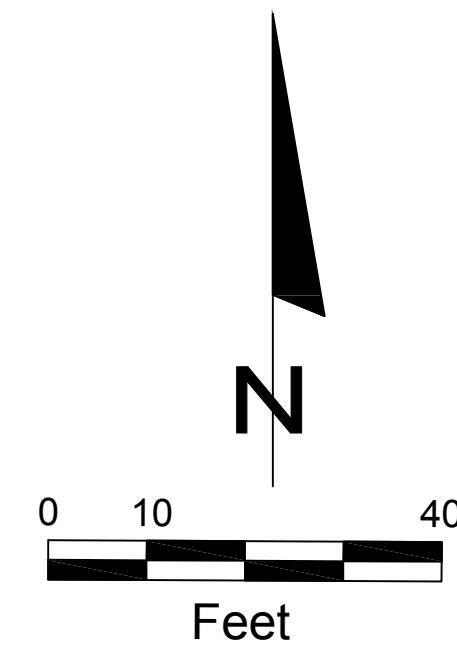
MATCHLINE STA. 110+00.00

MATCHLINE STA. 141+00.00

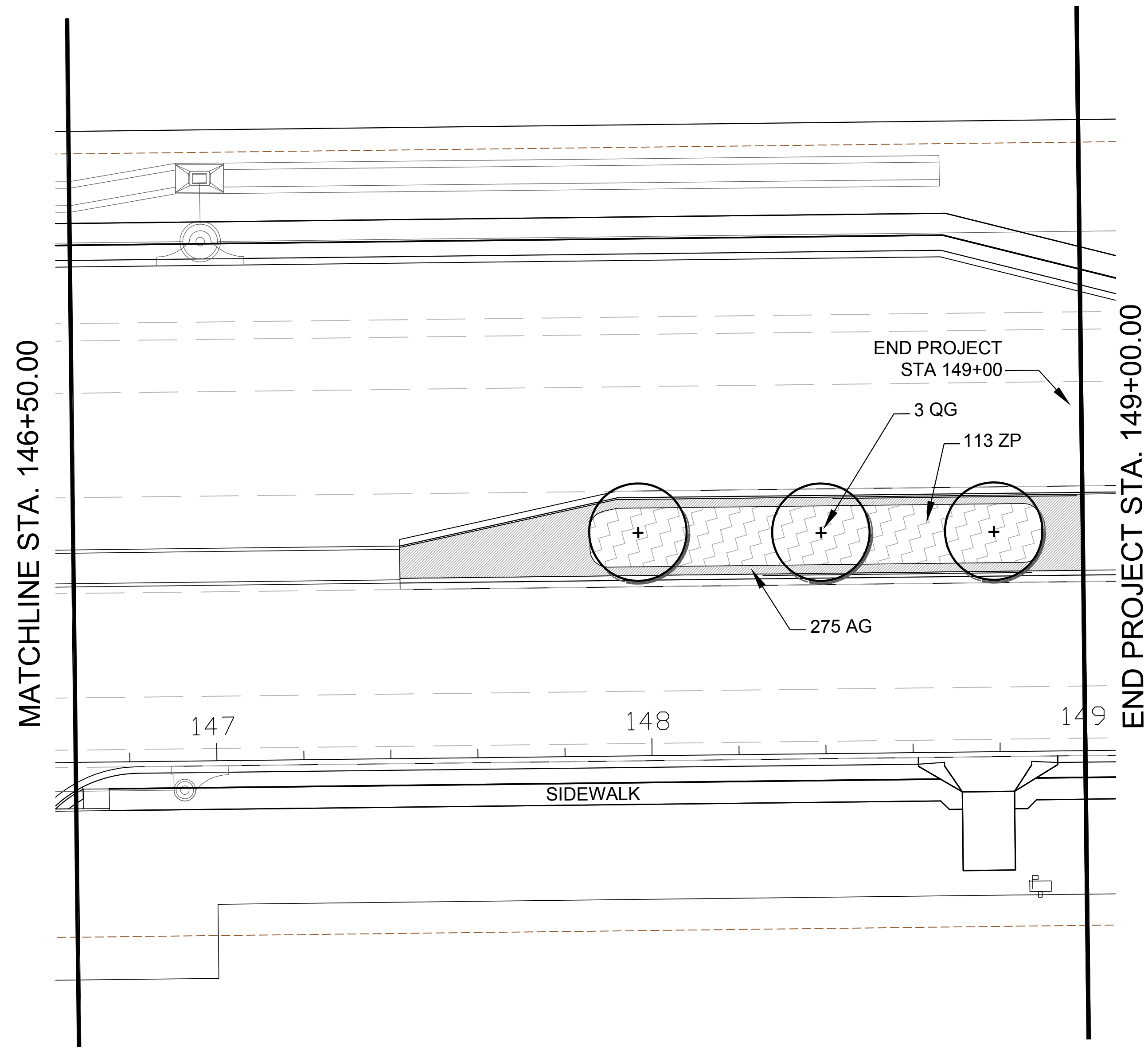
MATCHLINE STA. 146+50.00



MATCHLINE STA. 106+50.00



REVISIONS		REVISIONS		DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE PLANS SR 46	SHEET NO. LD-10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-01		



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DIX.LATHROP
 150 WEST JESSUP AVENUE
 LONGWOOD, FLORIDA 32750
 (407) 667-1777
 DAVID M. HOPPES
 PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-01

LANDSCAPE PLANS
SR 46

SHEET NO.
 LD-11

TABULATION OF QUANTITIES / PLANT SCHEDULE

PAY ITEM NUMBER	PAY SIZE	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	REMARKS	UNIT	SHEET NUMBERS																						TOTAL THIS SHEET		GRAND TOTAL	
										LD-1		LD-2		LD-3		LD-4		LD-5		LD-6		LD-7		LD-8		LD-9		LD-10		LD-11		PLAN	FINAL	PLAN	FINAL
										PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL	PLAN	TOTAL						
580-1-2	LARGE	PA	<i>Prunus umbellata</i> or <i>Prunus angustifolia</i>	Flatwoods Plum or Chicasaw Plum	4'-5" Ht. x 4'-5" Sprd.	18'-20" Ht. x 8'-10" Sprd	N/A	Dark Green	EA	0	28	3	28	1	28	4	28	0	28	5	28	5	28	5	28	5	28	0	28	0	28	0	28	28	28
580-1-2	LARGE	PC	<i>Pinus clausa</i>	Sand Pine	10'-12" Ht. x 3'-4" Sprd	Natural Mature Height	N/A	2-2 1/2" Cal.	EA	4	15	0	15	0	15	4	15	0	15	7	15	0	15	0	15	0	15	0	15	0	15	0	15	15	15
580-1-2	LARGE	QG	<i>Quercus geminata</i>	Sand Live Oak	12'-14" Ht. x 6'-7" Sprd	18'-20" Ht. x 8'-10" Sprd.	N/A	3-3 1/2" Cal.	EA	4	22	1	22	0	22	6	22	0	22	3	22	0	22	4	22	1	22	0	22	0	22	3	22	22	22
580-1-1	SMALL	AG	<i>Arachis glabrata</i>	Perennial Peanut	6"-8" Ht.	8"-12" HT. x 12"-15" Sprd	24" O.C.	Full, Healthy	EA	315	4,621	566	4,621	335	4,621	785	4,621	0	4,621	915	4,621	15	4,621	715	4,621	700	4,621	0	4,621	275	4,621	4,621	4,621		
580-1-1	SMALL	GP	<i>Gaillardia pulchella</i>	Blanket Flower	6"-8" Ht.	10"-12" Ht. x 12"-15" Sprd	36" O.C.	Full, Healthy	EA	200	473	0	473	0	473	123	473	0	473	150	473	0	473	0	473	0	473	0	473	0	473	0	473	473	473
580-1-1	SMALL	MCG	<i>Muhlenbergia capillaris</i>	Muhly Grass	24" Ht.	36" Ht. x 30" Sprd.	36" O.C.	Full, Healthy	EA	200	473	0	473	0	473	123	473	0	473	150	473	0	473	0	473	0	473	0	473	0	473	0	473	473	473
580-1-1	SMALL	MS	<i>Mimosa strigillosa</i>	Sunshine Mimosa	6"-8" Ht.	8"-12" HT. x 12"-15" Sprd	24" O.C.	Full, Healthy	EA	0	2,763	0	2,763	600	2,763	270	2,763	1,058	2,763	100	2,763	735	2,763	0	2,763	0	2,763	0	2,763	0	2,763	2,763	2,763		
580-1-1	SMALL	VOW	<i>Viburnum obovatum</i> 'Densa'	Dwarf Walter's Viburnum	12" Ht. x 14" Sprd.	36" Ht. x 36" Sprd.	36" O.C.	Full, Healthy	EA	0	709	0	709	0	709	263	709	0	709	300	709	20	709	126	709	0	709	0	709	0	709	709	709		
580-1-1	SMALL	ZP	<i>Zamia pumila</i>	Coontie	16"Ht. x 16" Sprd.	36" Ht. x 42" Sprd.	42" O.C.	Full, Healthy	EA	23	447	94	447	0	447	70	447	0	447	0	447	0	447	90	447	57	447	0	447	113	447	447	447		

LANDSCAPE NOTES

ALL PLANT MATERIAL SHALL BE FLORIDA #1 OR BETTER ACCORDING TO THE CURRENT NURSERY GRADES AND STANDARDS.

CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO INSTALLATION.

ALL PLANTS SHALL MEET SIZE, CONTAINER, AND SPACING SPECIFICATIONS. ANY MATERIAL NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR SHALL BE RESPONSIBLE TO RECEIVE THE LANDSCAPE ARCHITECT'S APPROVAL OF ALL PLANT BED LAYOUTS AND TREE LOCATIONS PRIOR TO INSTALLATION. IF PLANT MATERIAL IS INSTALLED PRIOR TO LANDSCAPE ARCHITECT'S APPROVAL, CONTRACTOR WILL BE SUBJECT TO RELOCATING THE MATERIAL AT THE LANDSCAPE ARCHITECT'S REQUEST AND THE CONTRACTOR'S OWN EXPENSE.

CONTRACTOR SHALL PERFORM SOIL TESTS PRIOR TO CONSTRUCTION AND AMEND WITH LIME AND SULFUR AS NEEDED.

CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING. GRADING SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.

SOIL SHALL BE FREE FROM LIME ROCK AND CONSTRUCTION DEBRIS.

IN THE EVENT OF A CONFLICT BETWEEN QUANTITIES REPRESENTED ON THE PLAN VS. QUANTITIES SHOWN ON THE PLANT LIST, THE PLAN SHALL CONTROL.

CONTRACTOR SHALL MAINTAIN TREES IN A STRAIGHT AND PLUMB POSITION FOR ONE YEAR. CONTRACTOR SHALL STAKE ALL TREES AS REQUIRED BY FDOT SPECIFICATIONS.

PRIOR TO REMOVAL OF ANY TREES, THE TREES TO BE RETAINED SHALL HAVE PROTECTIVE TREE BARRIERS.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN TAKE OFFS AND QUANTITIES. THE QUANTITIES ON THE PLANT LIST SERVE ONLY AS A GUIDE TO THE OWNER AND L.A.

DESIGN NOTES

ALL PLANTINGS ALONG THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH FDOT DESIGN STANDARD 546 AND 700. BUFFER PLANTINGS ARE TO BE PROVIDED WHERE APPROPRIATE. THE DESIGN SPEED OF THE ROAD IS 45 MPH. A XERISCAPE LANDSCAPE PALETTE IS PROPOSED.

THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS LIMIT THE SIZE SELECTION OF PLANTING MATERIAL WITHIN THE LIMIT OF CLEAR SIGHT AS FOLLOWS:

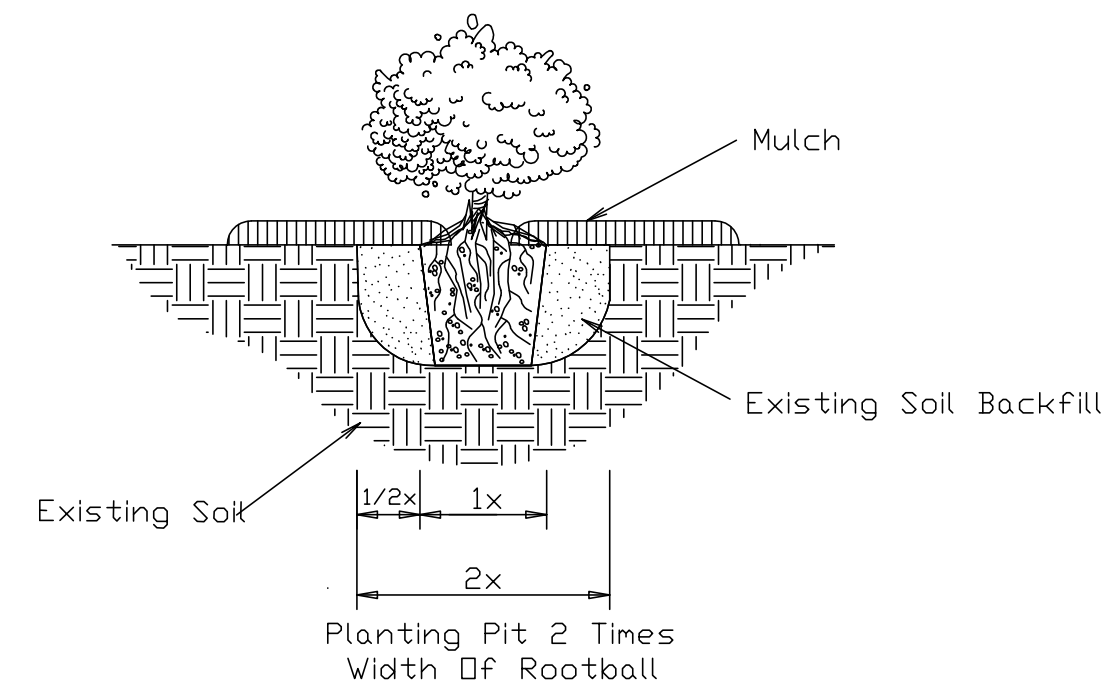
WITHIN THE LIMITS OF CLEAR SITE, GROUND COVER SPECIES WILL BE SELECTED THAT AT MATURITY DO NOT ATTAIN A HEIGHT GREATER THE 24" ABOVE THE TRAVEL LANE. CANOPY OR HIGH BORNE FOLIAGE SHALL NEVER BE LOWER THAN 8'-6" ABOVE THE TRAVEL LANES. TREES EXPECTED TO BECOME GREATER THAN 4" IN DIAMETER MEASURED 6" ABOVE THE GROUND ARE TO BE LOCATED A MINIMUM OF 4' FROM FACE OF CURB OUTSIDE OF ROADWAYS, AND IN MEDIANS A MINIMUM OF 6' FROM THE EDGE OF THE TRAFFIC LANES.

CANOPY AND UNDERSTORY TREES WILL BE PROVIDED IN MEDIANS. SHRUBS, GROUNDCOVERS, AND SOD ARE PROPOSED IN KEY AREAS AS UNDERSTORY TO PROVIDE VISUAL INTEREST.

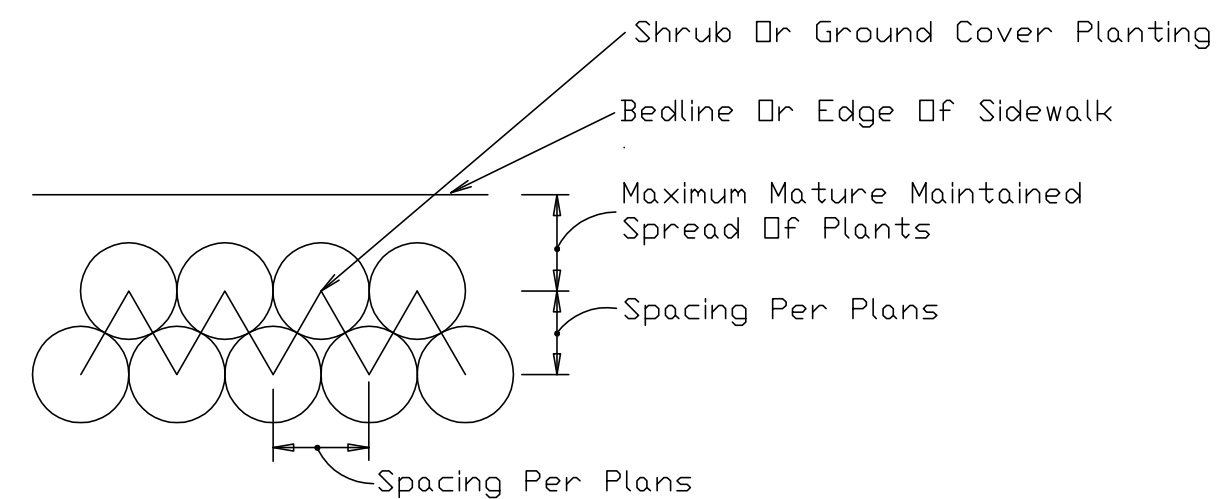
THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS LIMIT THE SIZE SELECTION OF PLANTING MATERIAL WITHIN THE LIMIT OF CLEAR SIGHT AS FOLLOWS:

WITHIN THE LIMITS OF CLEAR SITE, GROUND COVER SPECIES WILL BE SELECTED THAT AT MATURITY DO NOT ATTAIN A HEIGHT GREATER THE 24" ABOVE THE TRAVEL LANE. CANOPY OR HIGH BORNE FOLIAGE SHALL NEVER BE LOWER THAN 8'-6" ABOVE THE TRAVEL LANES. TREES IN THE MEDIANS EXPECTED TO BECOME GREATER THAN 4" IN DIAMETER MEASURED 6" ABOVE THE GROUND ARE TO BE LOCATED A MINIMUM OF 6' FROM THE EDGE OF THE TRAFFIC LANES.

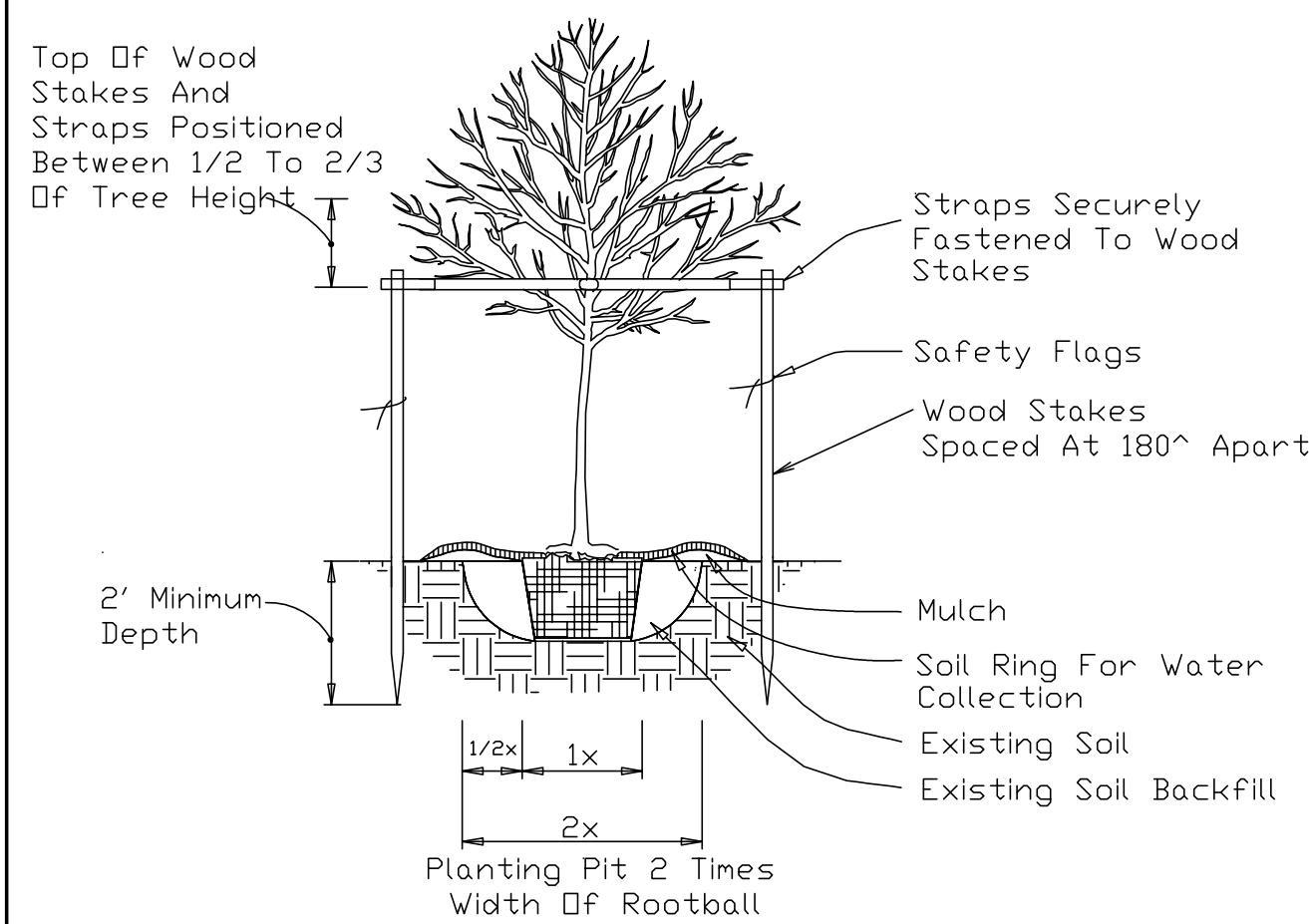
ALL PLANT MATERIAL SHALL BE PLANTED A MINIMUM OF 5'-0" AWAY FROM EXISTING SEWER LINES.



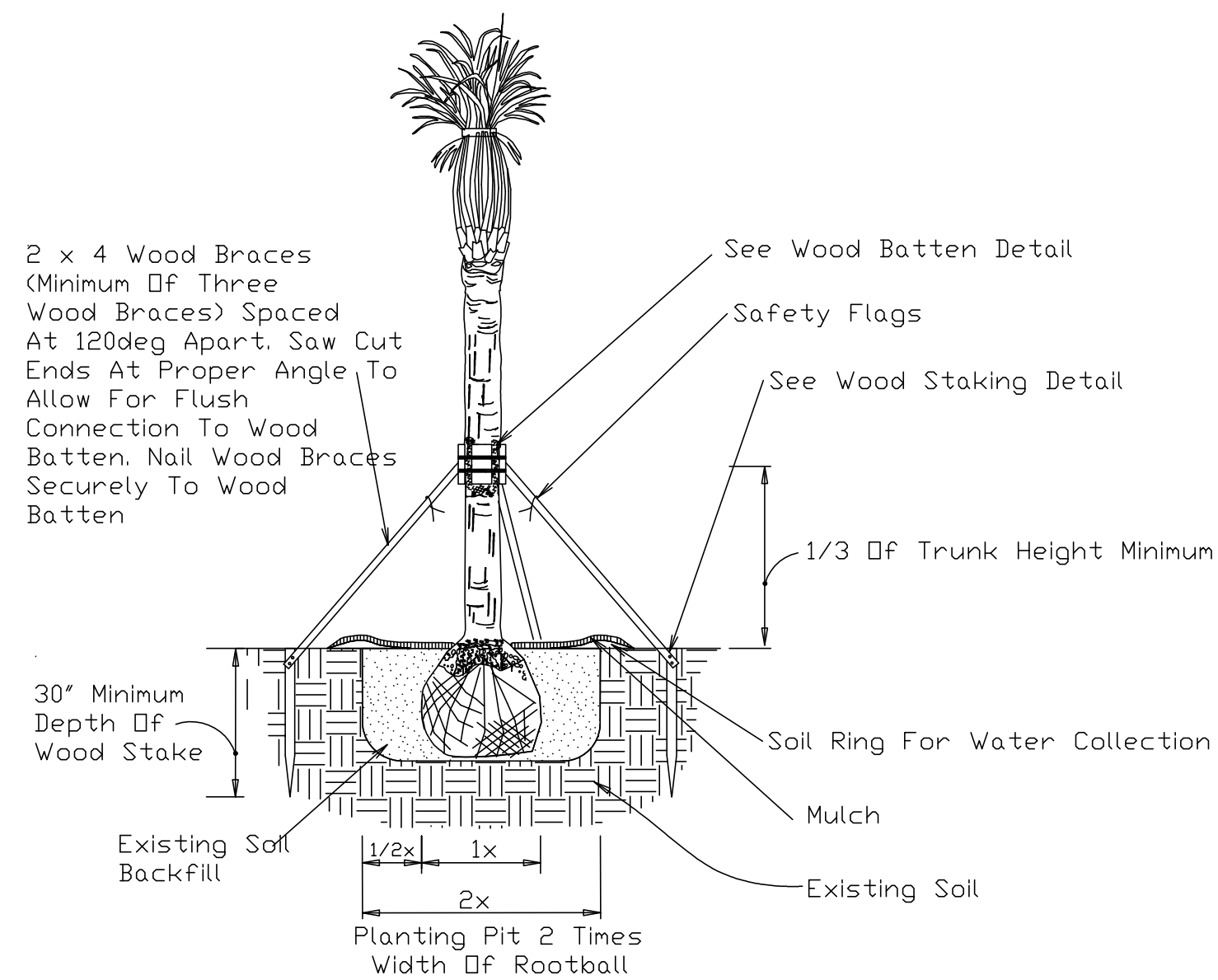
TYPICAL SHRUB PLANTING DETAIL
NTS



SHRUB AND GROUND COVER LAYOUT DETAIL
NTS



TREE PLANTING DETAIL
NTS



PALM PLANTING DETAIL
NTS

CONTRACTOR SHALL BE RESPONSIBLE FOR WARRANTY OF HEALTH OF PLANTS IN ON-SITE SOILS. IF, DURING DIGGING, CONTRACTOR DISCOVERS WATER-LOGGED, CLAYEY, COMPACTED OR SIMILARLY POORLY DRAINED SOILS, IT SHOULD BE BROUGHT TO THE ATTENTION OF OWNER/LANDSCAPE ARCHITECT FOR REMEDIAL ACTION.

ALL DIMENSIONS 6" AND LESS ARE EXAGGERATED FOR ILLUSTRATIVE PURPOSES ONLY.

PLANT CONTAINERS SHALL BE REMOVED PRIOR TO PLANTING. IF PLANTS ARE NOT CONTAINER GROWN, REMOVE A MINIMUM OF THE TOP 1/3 OF BURLAP, FABRIC, OR WIRE MESH. NEVER LIFT OR HANDLE THE TREE BY THE TRUNK.

THE UPPERMOST ROOT ON ALL TREES AND SHRUBS SHALL BE COVERED BY LESS THAN 1" OF SOIL. USE HAND TOOLS TO CAREFULLY REMOVE ALL EXCESS SOIL. THE TOP OF ROOT BALL SHALL BE SET 1"-2" ABOVE FINISH GRADE AND SET PLUMB TO THE HORIZON. IF PLANTING PIT IS TOO DEEP, REMOVE THE TREE AND FIRMLY PACK ADDITIONAL SOIL IN THE BOTTOM OF THE PLANTING PIT TO RAISE THE ROOTBALL. AFTER POSITIONING THE TREE IN THE PLANTING PIT, SLICE THROUGH ROOTBALLS WITH 3 OR 4 VERTICAL SLICES (TOP TO BOTTOM) EQUALLY DISTRIBUTED AROUND THE TREE.

BACKFILL SHALL BE LOOSENED EXISTING SOIL. REMOVE ROCKS, STICKS, OR OTHER DELETERIOUS MATERIAL GREATER THAN 1" IN ANY DIRECTION PRIOR TO BACKFILLING. WATER AND TAMP TO REMOVE AIR POCKETS. IF EXISTING SOILS CONTAIN EXCESSIVE SAND, CLAY, OR OTHER MATERIAL NOT CONDUCIVE TO PROPER PLANT GROWTH, CONTACT ENGINEER PRIOR TO PLANTING.

SOIL RINGS SHALL BE CONSTRUCTED OF EXISTING SOIL AT THE OUTER EDGE OF THE PLANTING PIT, WITH A HEIGHT OF 3" AND GENTLY SLOPING SIDES. DO NOT PILE SOIL ON TOP OF ROOTBALL.

MULCH SHALL BE A 3" DEEP LAYER PLACED TO THE EDGE OF THE TRUNK FLARE, AROUND THE BASE OF SHRUB, OR SOLIDLY AROUND GROUND COVER. NEVER PILE MULCH AGAINST THE TREE TRUNK.

STRAPS SHALL BE MINIMUM 1" WIDE NYLON OR POLYPROPYLENE. ALL WOOD STAKES OR ANCHORS SHALL BE LOCATED BEYOND THE EDGE OF SOIL RING AND LOCATED BELOW FINISHED GRADE, UNLESS OTHERWISE SPECIFIED.

SABAL PALMS MAY BE HURRICANE CUT. ALL OTHER PALMS MUST HAVE FRONDS TIED WITH BIODEGRADABLE TWINE. PALM TRUNKS SHALL HAVE NO BURN MARKS, SCARS, OR SANDING.

ALL DIMENSIONS PROVIDED FOR WOOD MATERIALS ARE NORMAL.

WHEN A PERMANENT, SUBSURFACE, OR DRIP IRRIGATION SYSTEM IS PROVIDED, A SOIL RING IS NOT REQUIRED. MULCH TO EDGE OF PLANTING PIT.

ALTERNATE TREE BRACING AND GUYING SYSTEMS APPROVED BY THE LANDSCAPE ARCHITECT MAY BE USE IN LIEU OF THE TREE BRACING AND GUYING METHODS DETAILED ON THE INDEX. ALTERNATE TREE PROTECTION SYSTEMS APPROVED BY THE ENGINEER MAY BE USED IN LIEU OF THE TREE PROTECTION BARRICADE DETAILED ON THE INDEX.

REMOVE ABOVEGROUND GUYING SYSTEMS AT THE END OF THE ESTABLISHMENT PERIOD.

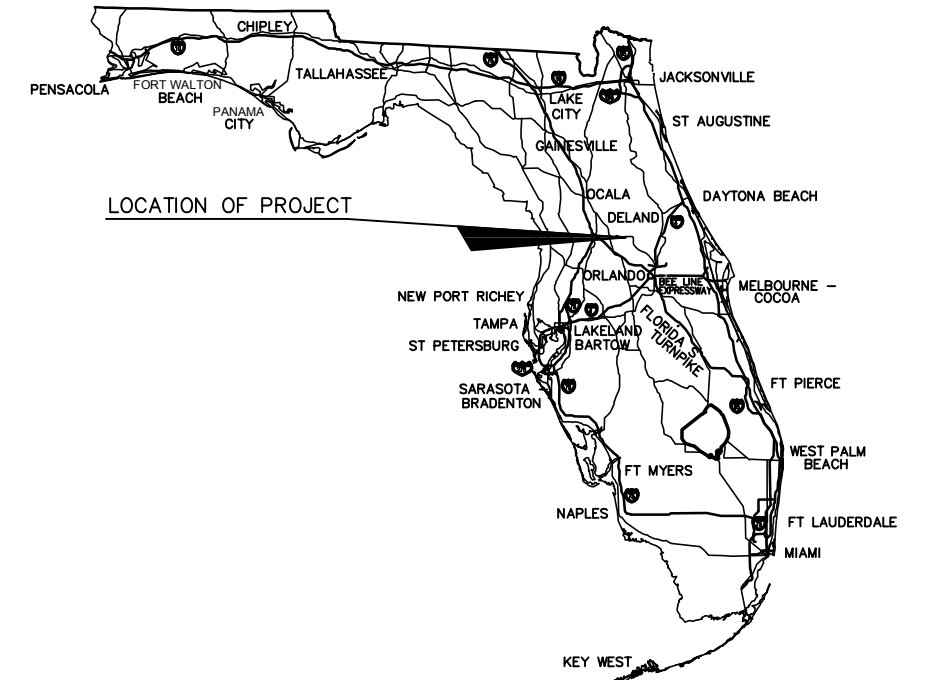
REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			LANDSCAPE DETAILS / NOTES / PLANT LIST	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						46	LAKE		238275-3-52-01

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-3-52-01
(FEDERAL FUNDS)
LAKE COUNTY (11130)
STATE ROAD NO. 46

IRRIGATION PLANS



INDEX OF LANDSCAPE PLANS

SHEET NO.	SHEET DESCRIPTION
IR1 - IR11	IRRIGATION PLANS
IR12	IRRIGATION LEGEND / TABLES / NOTES
IR13 - IR14	IRRIGATION DETAILS
IR15 - IR16	IRRIGATION SPECIFICATIONS

LIST OF REVISED INDEX DRAWINGS

INDEX NO.	SHEET NO.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

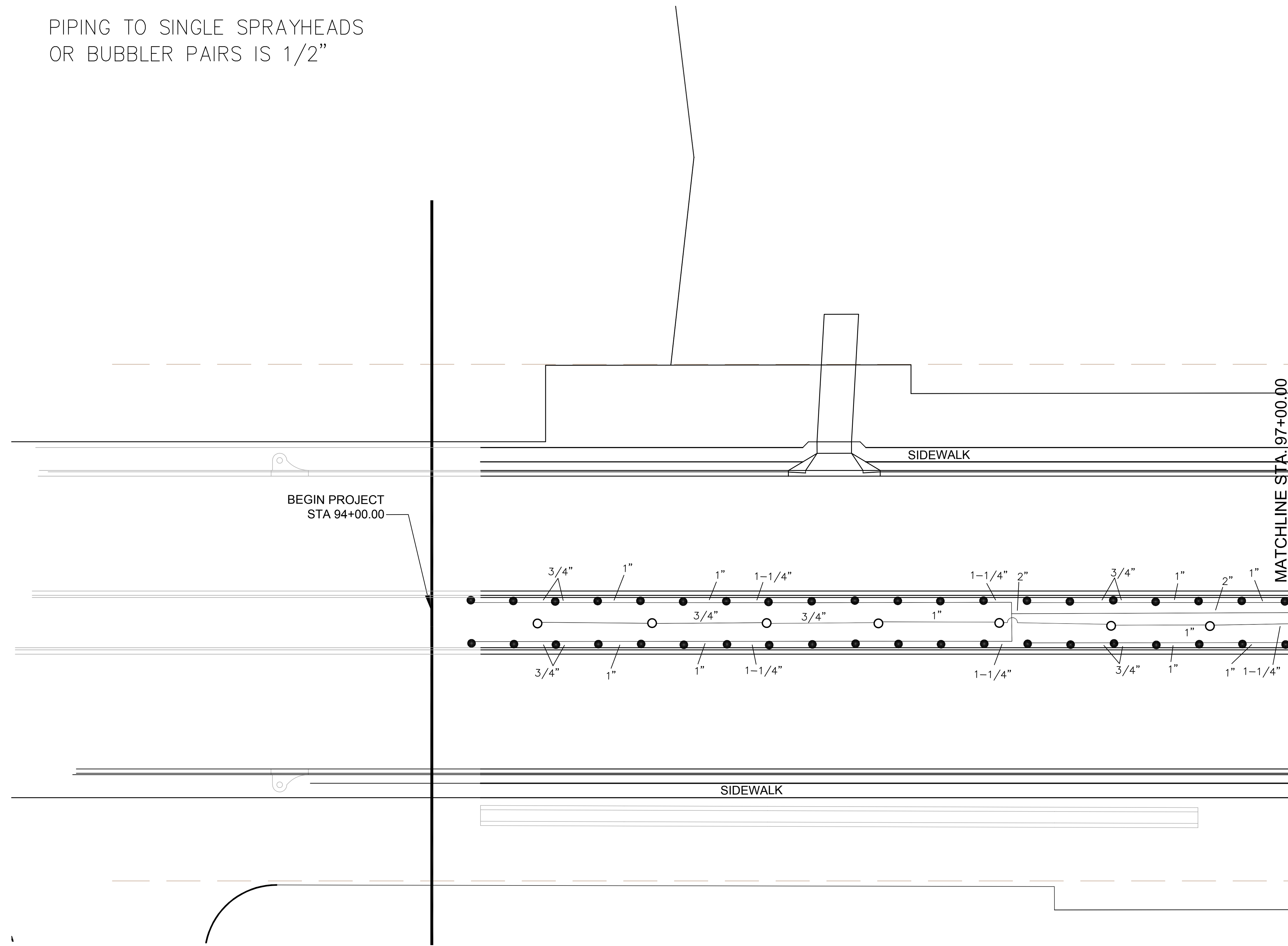
PLANS PREPARED BY:

DIX LATHROP AND ASSOCIATES, INC.
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA, 32750
(407) 667-1777
CERTIFICATE OF AUTHORIZATION NO. LC000358

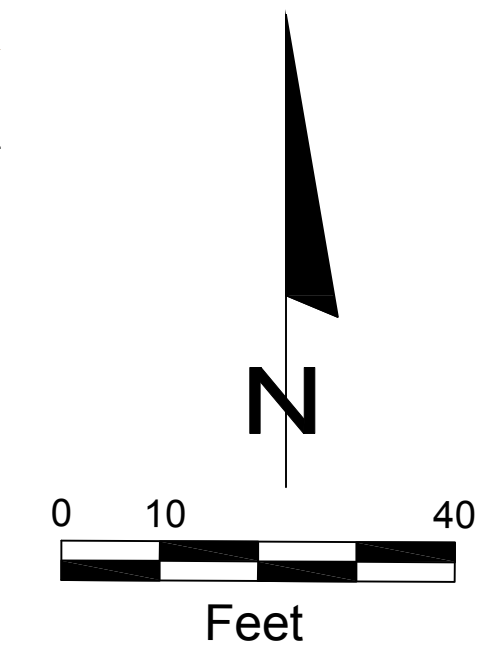
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

FISCAL YEAR	SHEET NO.
2017	IR-0

PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

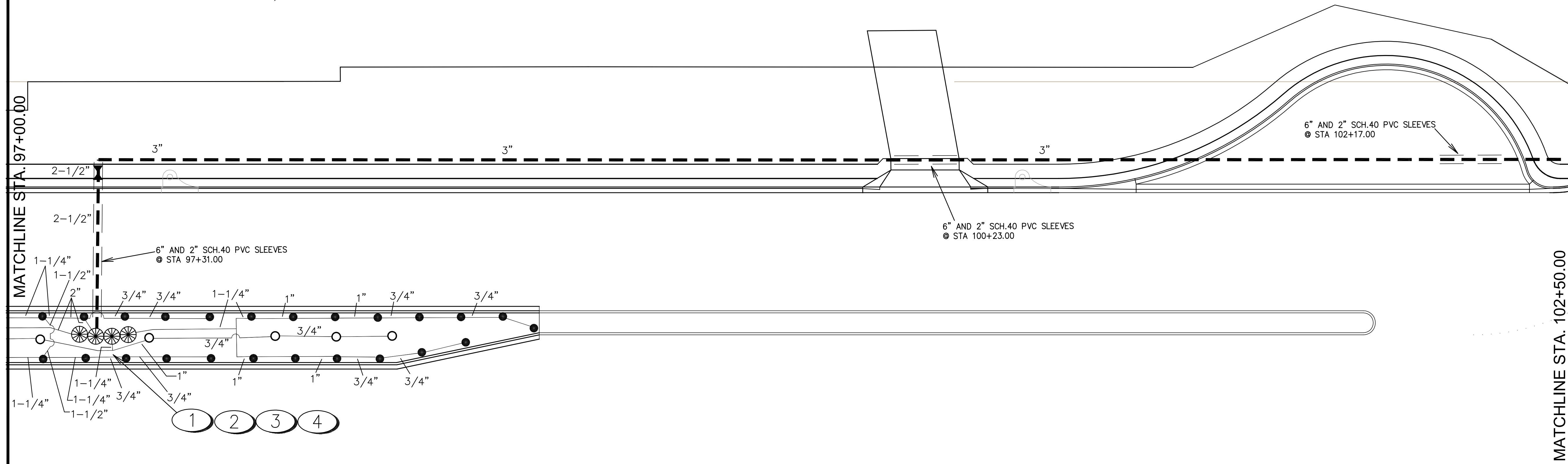
DIX.LATHROP
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA 32750
(407) 667-1777
DAVID M. HOPPES
PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-02

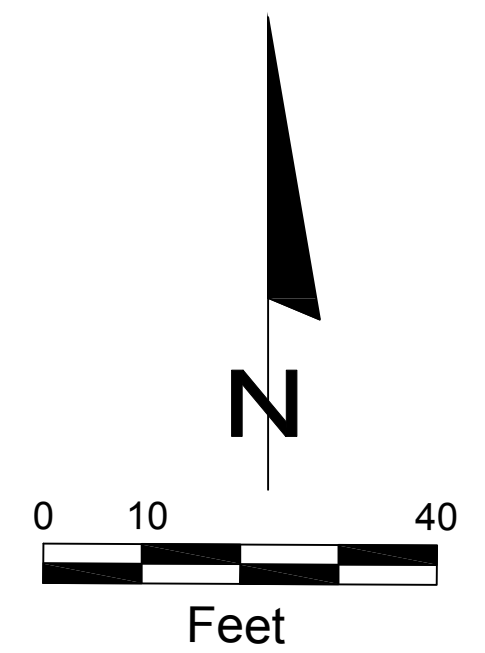
IRRIGATION PLANS
SR 46

SHEET
NO.
IR-1

PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

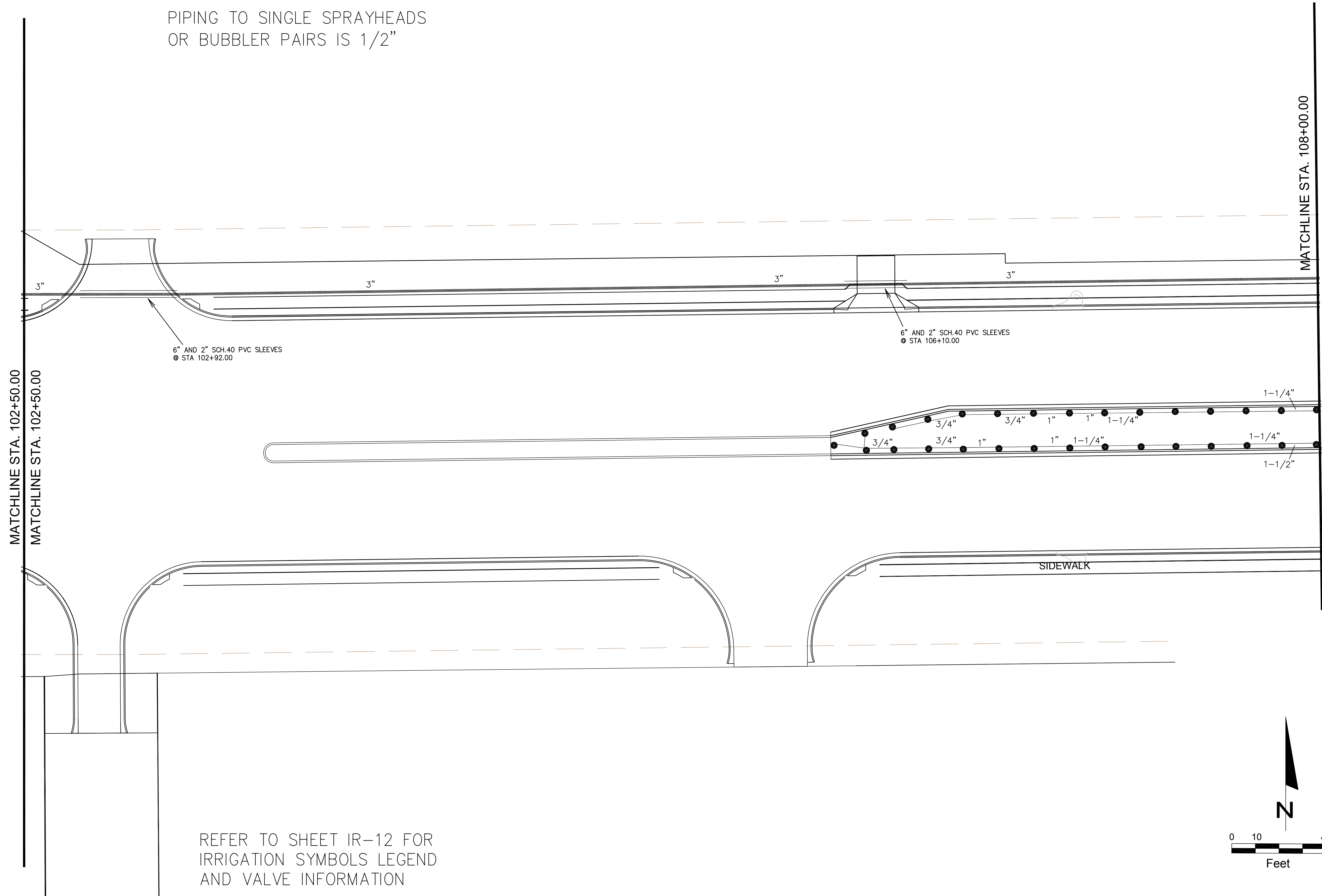
DIX.LATHROP
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA 32750
(407) 667-1777
DAVID M. HOPPES
PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-02

IRRIGATION PLANS
SR 46

SHEET
NO.
IR-2

PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"



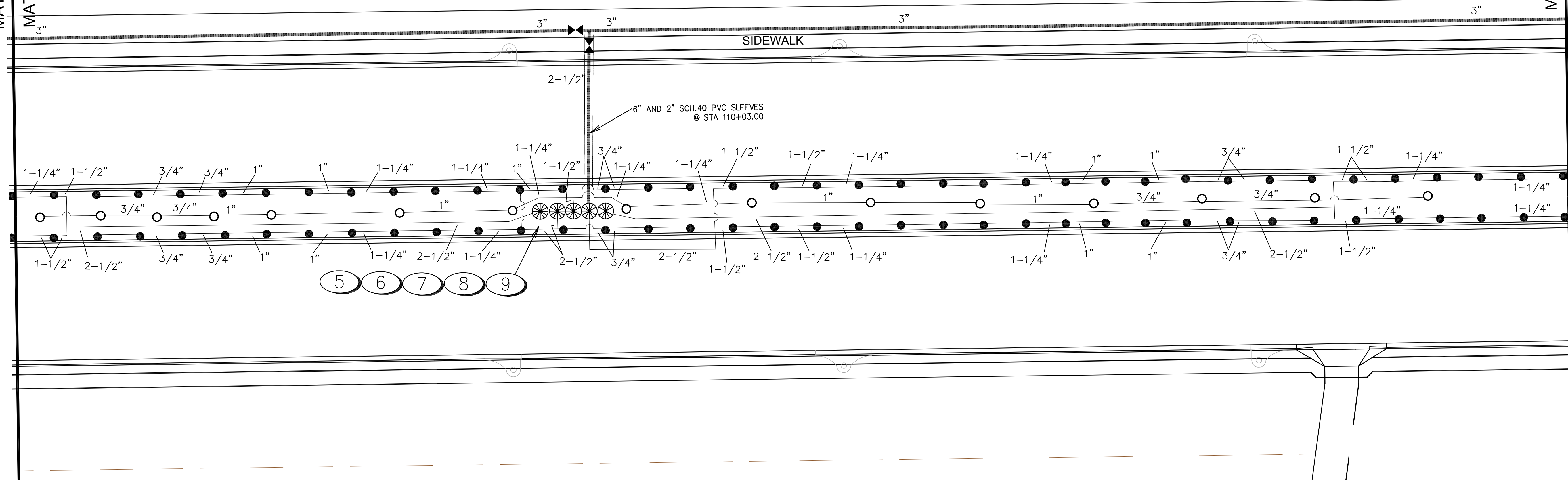
REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION

REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			IRRIGATION PLANS SR 46	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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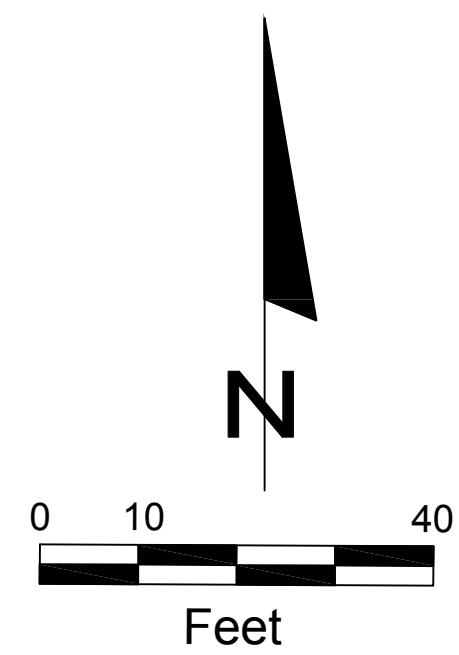
PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"

MATCHLINE STA. 108+00.00

MATCHLINE STA. 113+50.00



- 5
- 6
- 7
- 8
- 9



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION

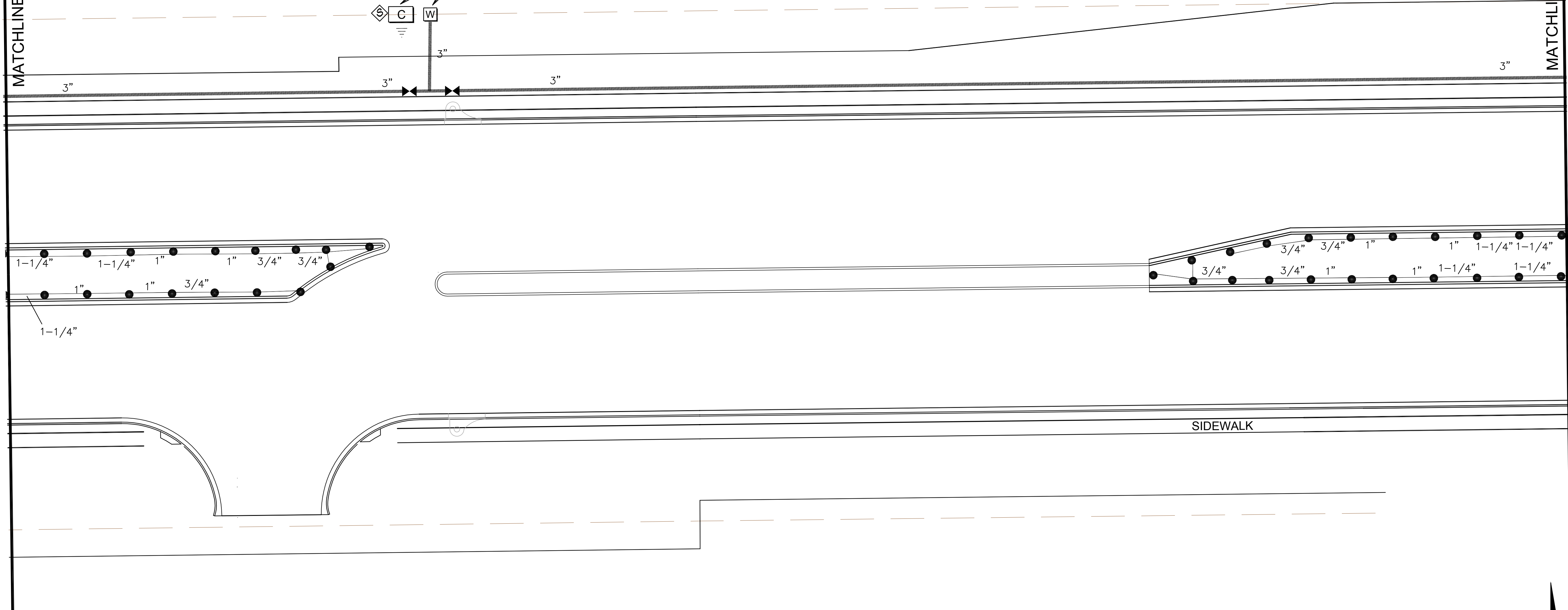
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PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"

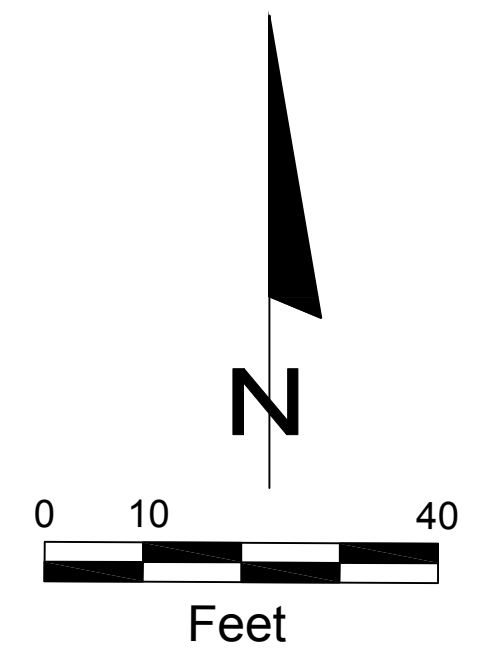
MATCHLINE STA. 113+50.00

MATCHLINE STA. 119+00.00

COORDINATE EXACT LOCATIONS AND
POWER HOOKUPS IN THE FIELD



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION

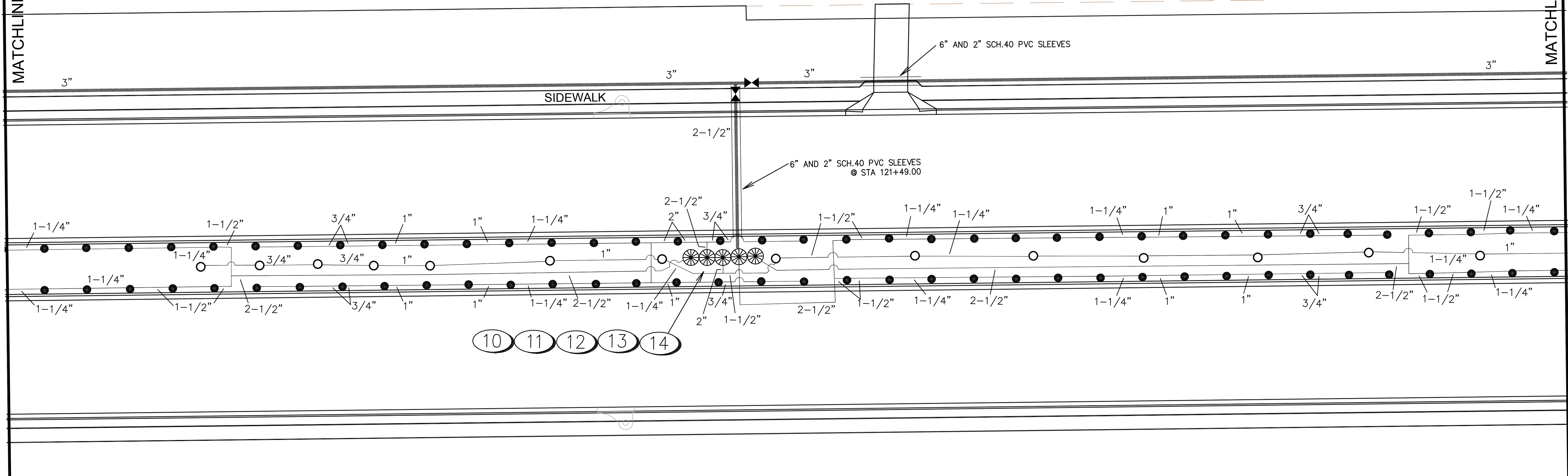


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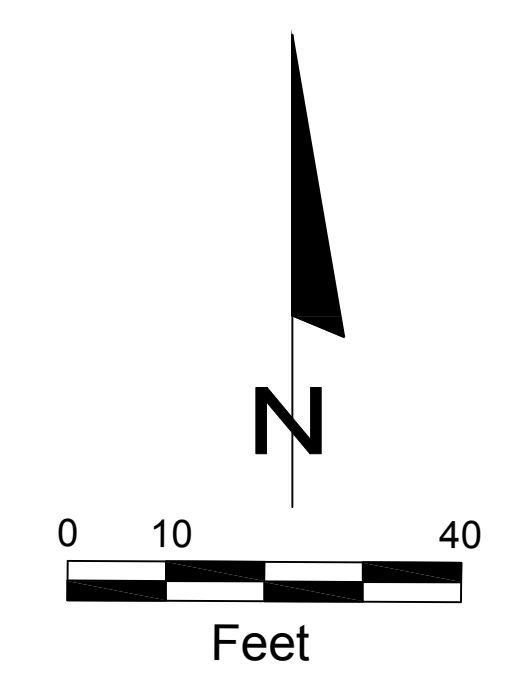
PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"

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MATCHLINE STA. 124+50.00



REFER TO SHEET IR-12 FOR
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AND VALVE INFORMATION

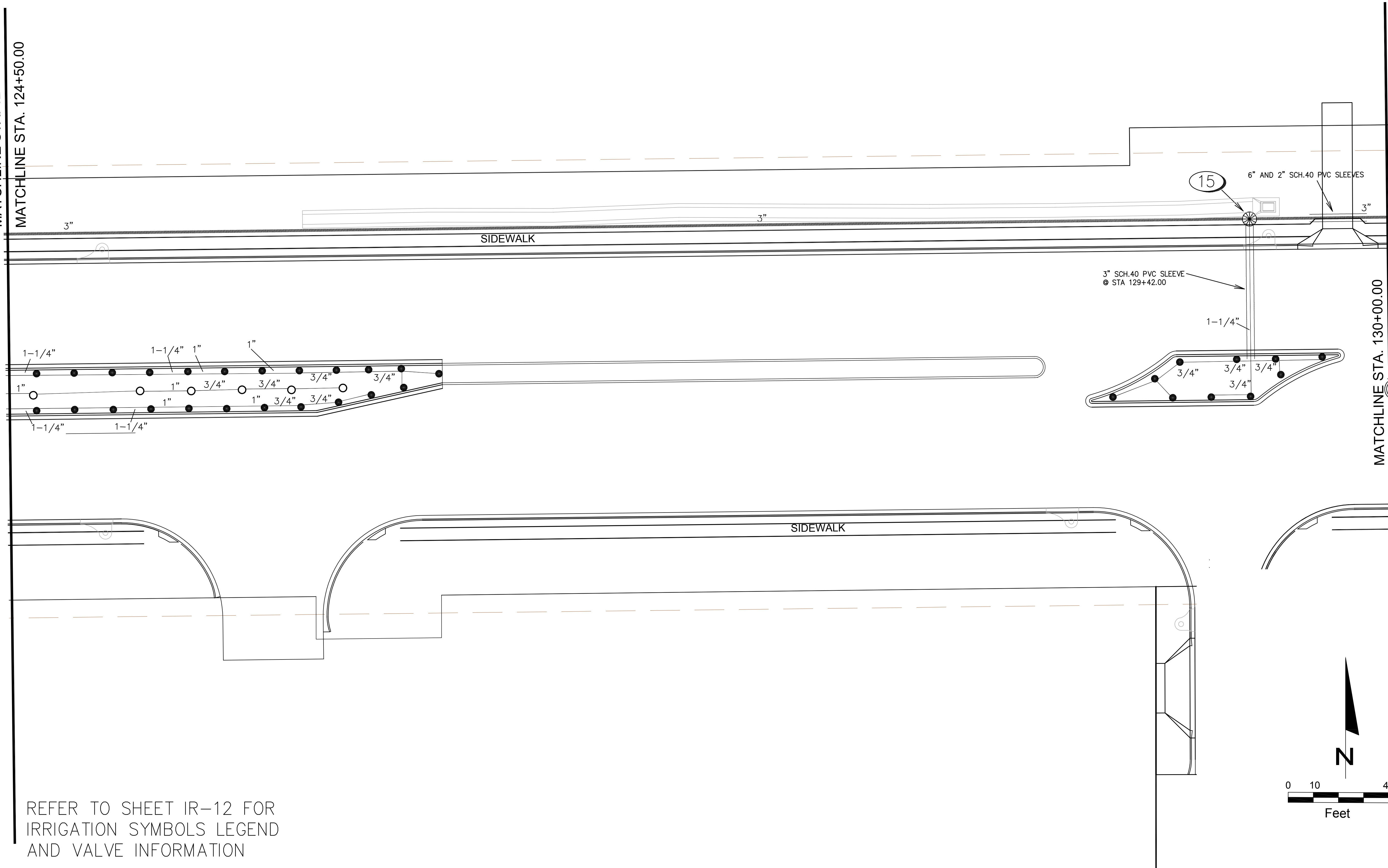


REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			IRRIGATION PLANS SR 46	SHEET NO. IR-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"

MATCHLINE STA. 124+50.00

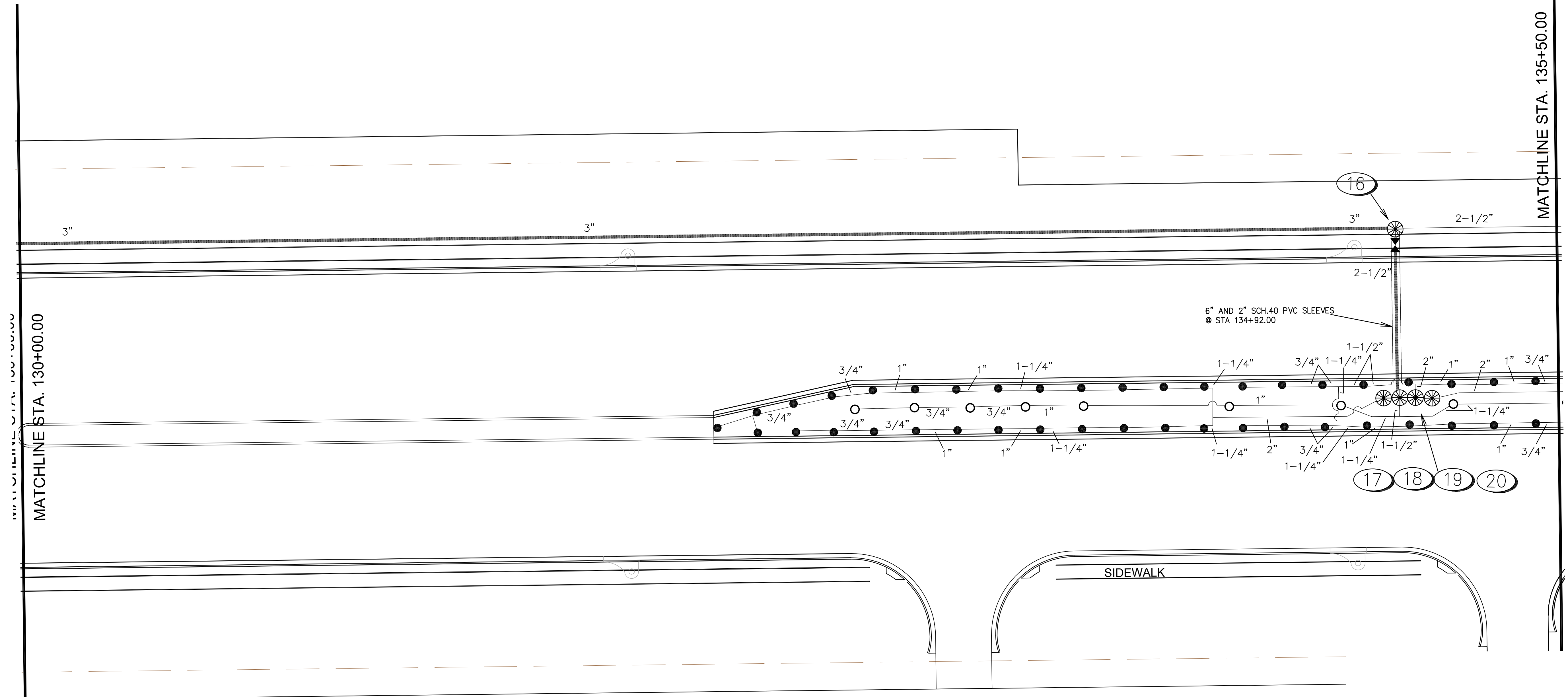
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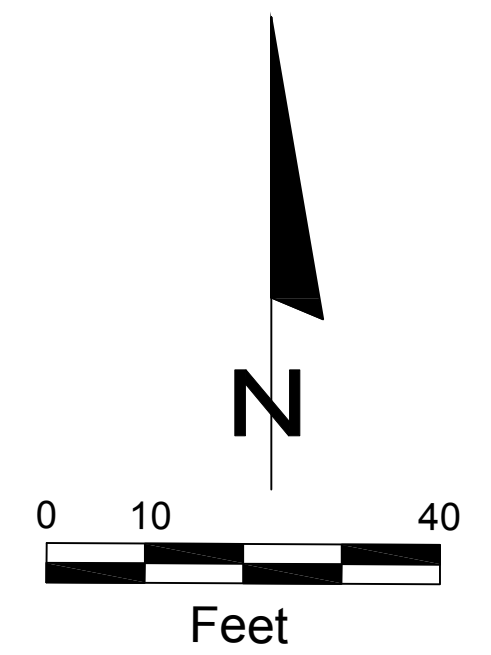
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AND VALVE INFORMATION

REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			IRRIGATION PLANS SR 46	SHEET NO. IR-7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-3-52-02		

PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

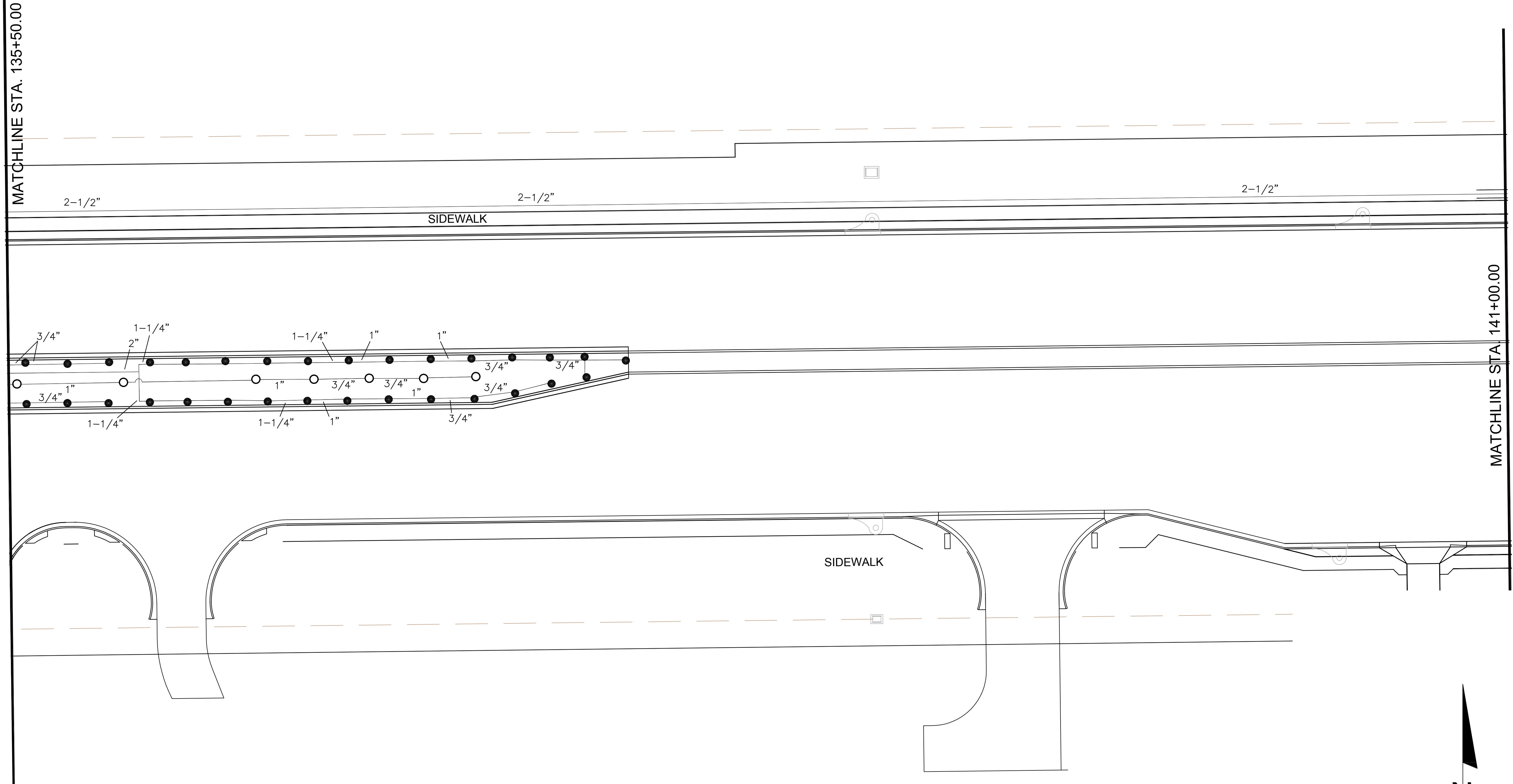
DIX.LATHROP
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA 32750
(407) 667-1777
DAVID M. HOPPES
PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-3-52-02

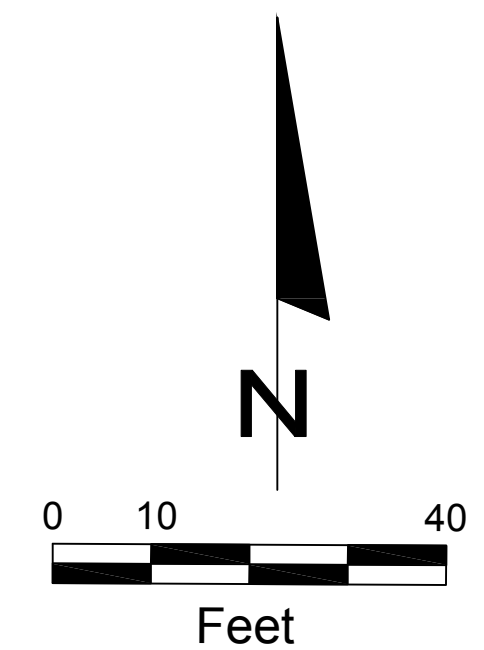
IRRIGATION PLANS
SR 46

SHEET
NO.
IR-8

PIPING TO SINGLE SPRAYHEADS
OR BUBBLER PAIRS IS 1/2"

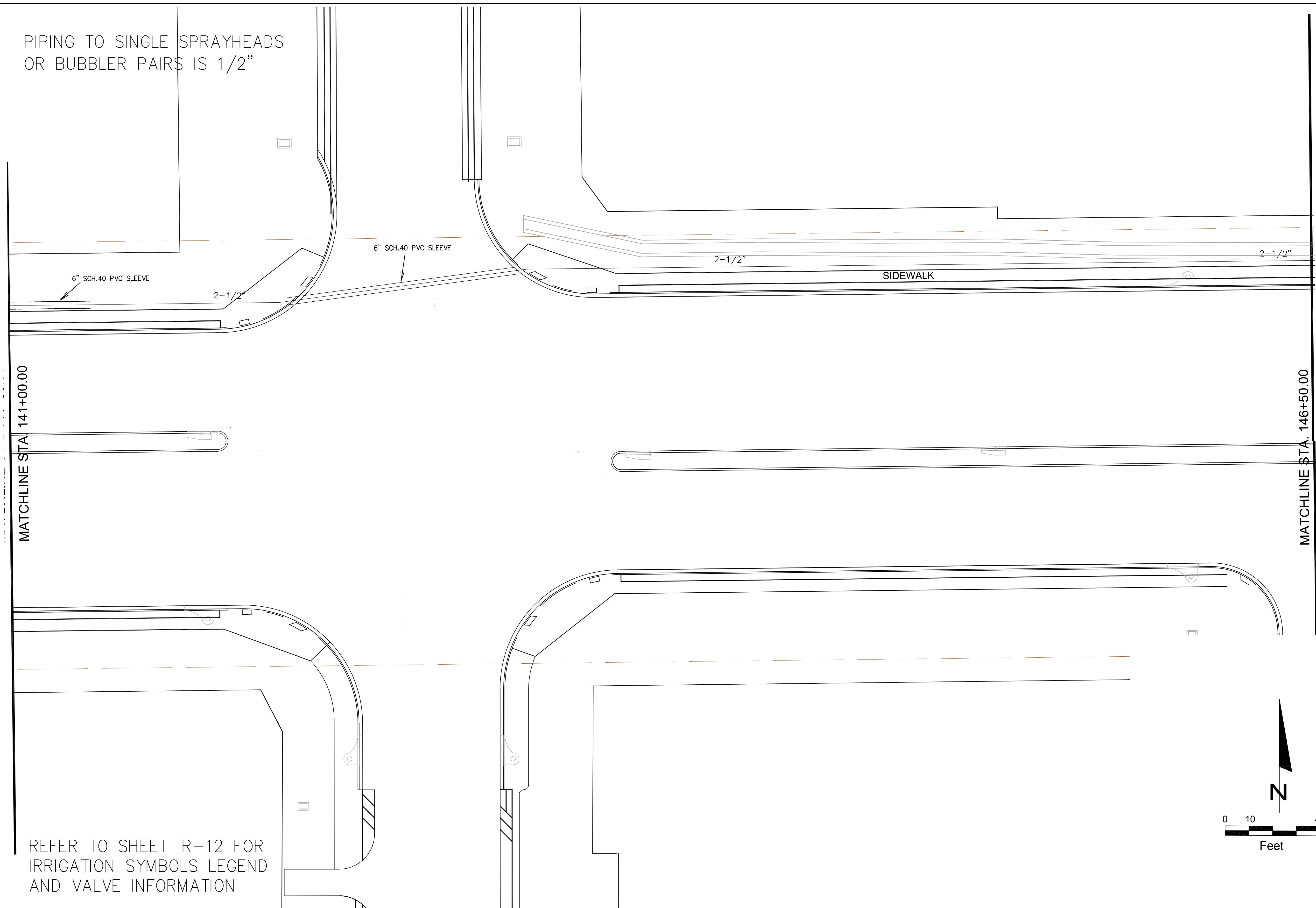


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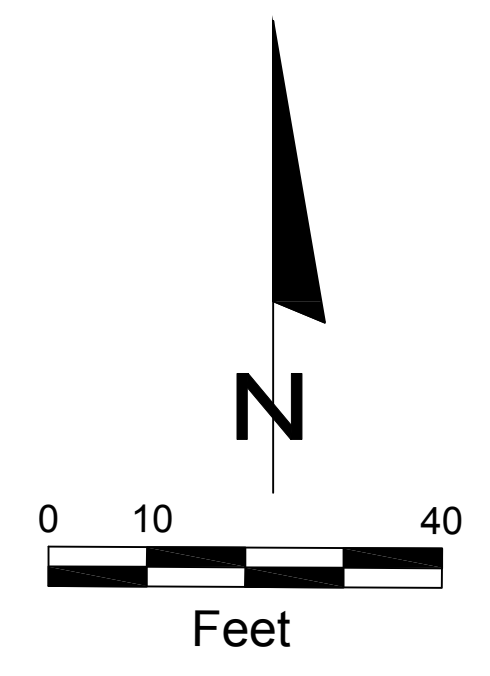


REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			IRRIGATION PLANS SR 46	SHEET NO.
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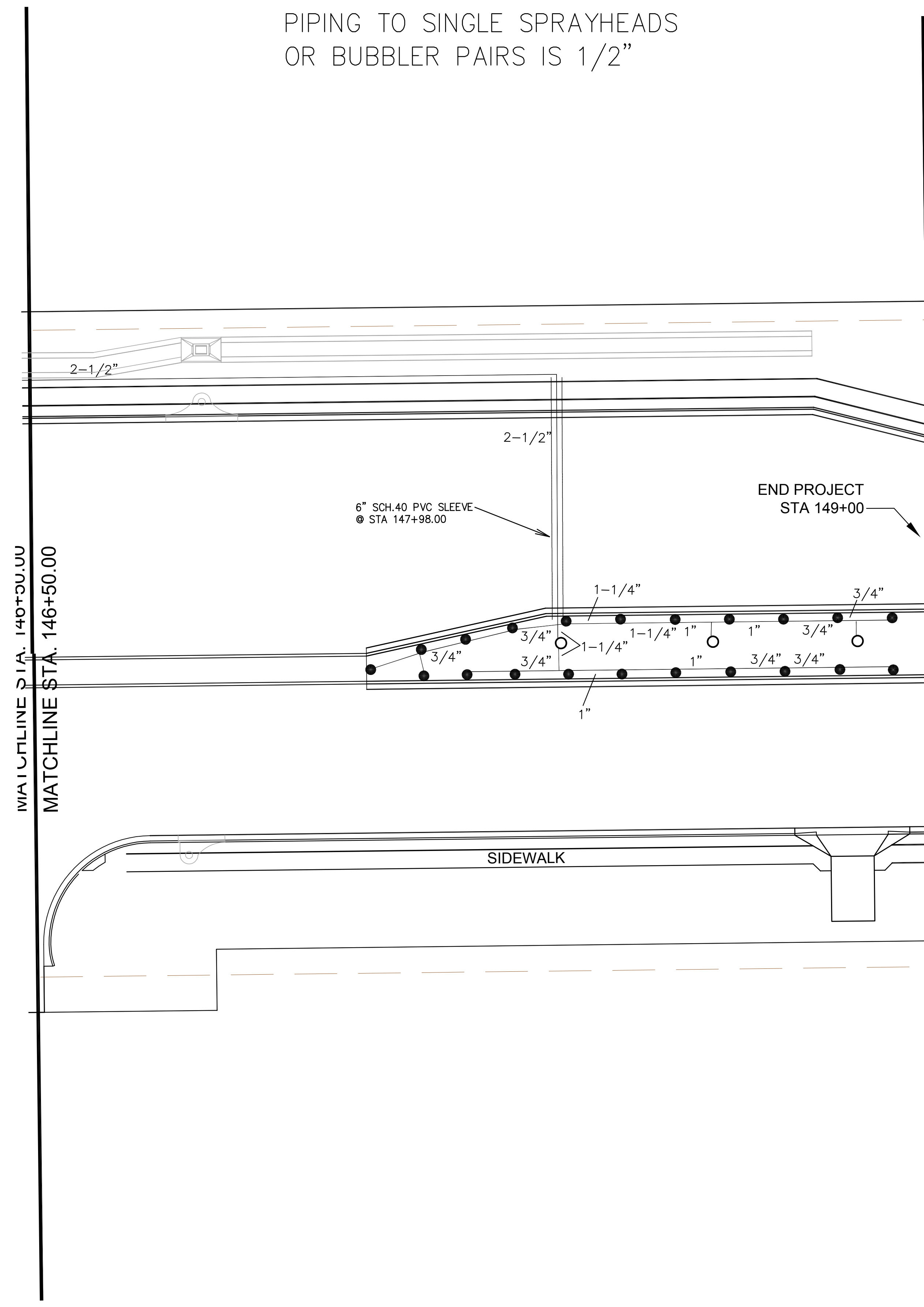


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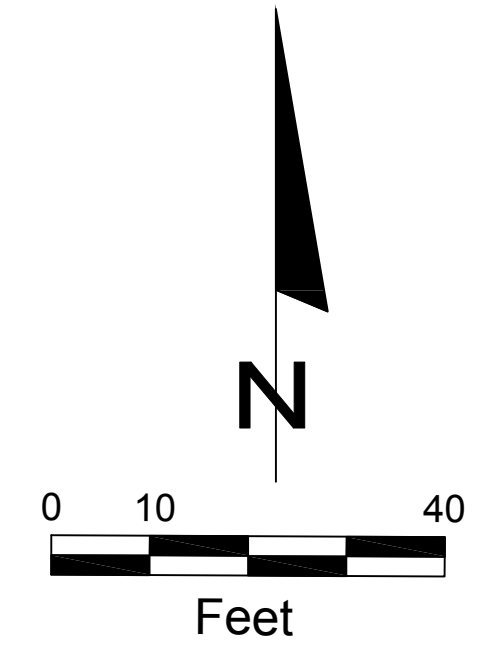


MATCHLINE STA. 146+50.00

END PROJECT
STA 149+00

6" SCH.40 PVC SLEEVE
@ STA 147+98.00

SIDEWALK



REFER TO SHEET IR-12 FOR
IRRIGATION SYMBOLS LEGEND
AND VALVE INFORMATION

REVISIONS				DIX.LATHROP 150 WEST JESSUP AVENUE LONGWOOD, FLORIDA 32750 (407) 667-1777 DAVID M. HOPPES PLA# 00001719	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			IRRIGATION PLANS SR 46	SHEET NO.
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IRRIGATION SYMBOLS LEGEND

- 12" POP-UP SPRAY HEAD, WITH ANTI-DRAIN VALVE AND PRESSURE LIMITER
- DOUBLE PRESSURE-COMPENSATING TREE BUBBLER HEAD, 1.0-GPM
- ⊗ 24-VAC ELEC. SOLENOID VALVE, SIZE AS INDICATED, WITH FLOW CONTROL AND FILTER SCREEN FOR DIRTY WATER APPLICATIONS
- ◀ DOMESTIC-MAKE I.B.B.M. PUSH-ON GATE VALVE, LINE SIZED, WITH 2" OPERATING NUT
- Ⓢ SOLID-STATE ELECTRONIC CONTROLLER, 24-STATION MODULAR, PEDESTAL-MOUNTED
- ⊞ WEATHER SENSOR PACKAGE, WIRELESS, COMPATIBLE WITH CONTROLLER
- ≡ COPPER GROUND ROD AND GROUNDING PLATE NETWORK
- Ⓜ 4" DEEP WELL AND SUBMERSIBLE PUMP (65-GPM AT 60-PSI MINIMUM)
- SCH.40 SOLVENT-WELD PVC MAINLINE PIPING
- _____ PR-160 SOLVENT-WELD PVC LATERAL PIPING, SIZE AS INDICATED

NOTE: NO SPECIFIC BRANDS, MAKES OR MODELS OF MATERIALS MAY BE UTILIZED ON THE PROJECT WITHOUR PRIOR SUBMITTAL AND APPROVAL OF THE LANDSCAPE ARCHITECT.

IRRIGATION GENERAL NOTES

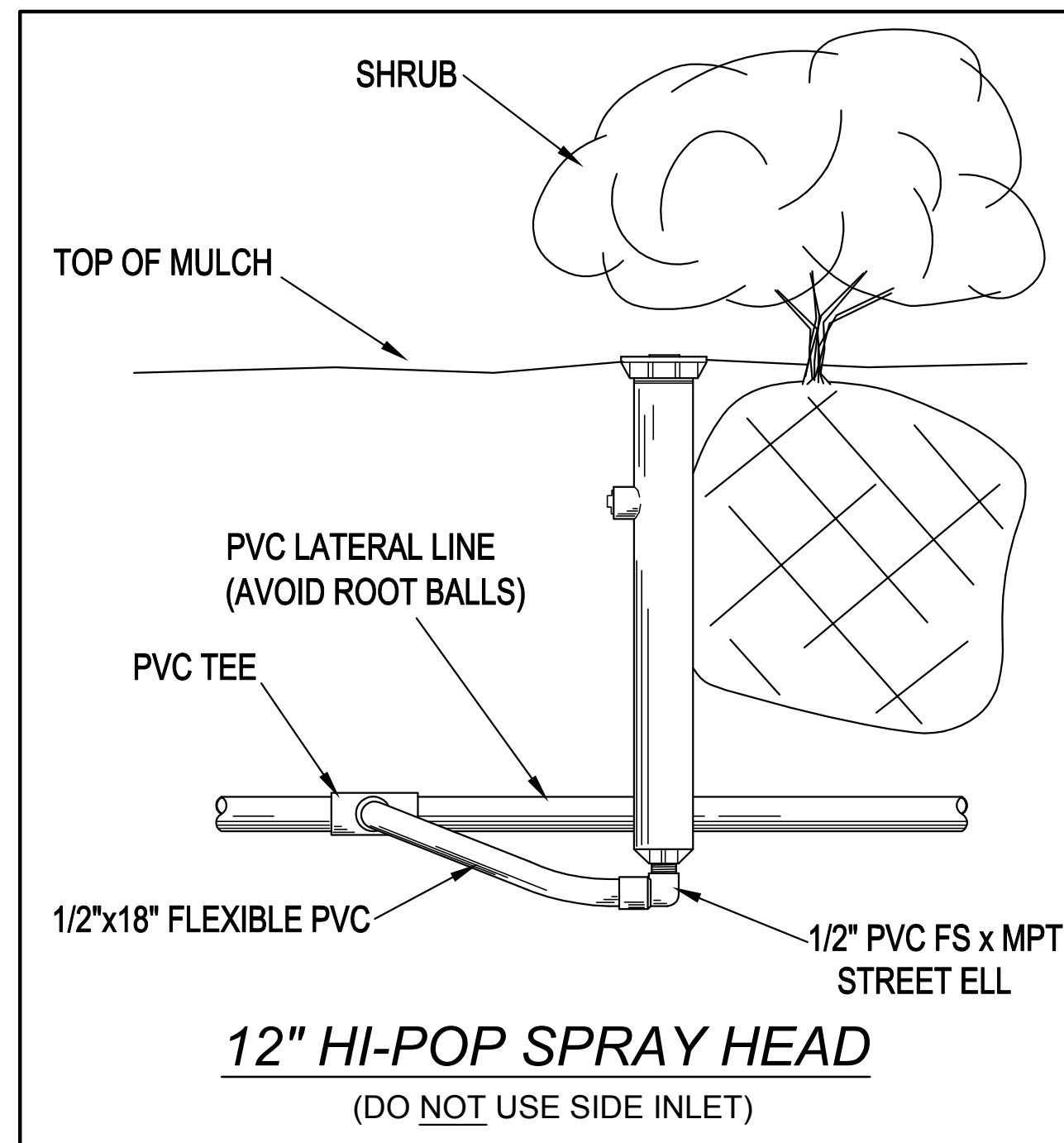
1. THE DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, AS IT MAY NOT HAVE BEEN POSSIBLE TO ACCURATELY DEPICT THE EXACT LOCATIONS FOR ALL MATERIAL, OR ALL JOBSITE ELEMENTS. THE INSTALLER SHALL BE EXPECTED TO MAKE MINOR ADJUSTMENTS ON THE SITE AS NEEDED, IN ORDER TO MAINTAIN COMPLETE AND ACCURATE COVERAGE, AND MAINTAIN THE INTENT OF THE DESIGN. MODIFICATIONS WHICH INCREASE THE SPACING OF HEADS, OR DECREASE THE SIZING OF PIPE, SHALL NOT BE MADE WITHOUT PRIOR CONSENT OF THE PROJECT MANAGER. THE FINAL LOCATIONS FOR ALL MAJOR EQUIPMENT, INCLUDING CONTROLLERS, VALVES, SUPPLY CONNECTIONS, MAINLINES, ETC. SHALL BE DETERMINED IN THE FIELD, STAKED OUT BY THE CONTRACTOR, USING THE DRAWINGS AS A GUIDE, AND APPROVED PRIOR TO INSTALLATION.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH PREVAILING CODES AND REGULATIONS. ALTHOUGH DUE DILIGENCE HAS BEEN EXERCISED IN THE PREPARATION OF THE DOCUMENTS TO AVOID CONFLICTS, IT SHALL REMAIN THE RESPONSIBILITY OF THE INSTALLER FOR VERIFICATION AND CONFORMANCE TO THE PARTICULAR CODES FOR THIS LOCATION. THE INSTALLER SHALL OBTAIN ANY NECESSARY PERMITS, LOCATES, AND INSPECTIONS.
3. ALL WORK SHALL BE CLOSELY COORDINATED WITH THAT OF OTHER TRADES, IN ORDER TO AVOID CONFLICTS. THE INSTALLATION SHALL BE COORDINATED WITH ALL NEW AND EXISTING IMPROVEMENTS, AND WITH THE ACTUAL INSTALLED BEDLINES, SOD LIMITS, AND PLANT LOCATIONS.
4. THE INSTALLER SHALL BE FAMILIAR WITH ALL APPLICABLE DOCUMENTS, INCLUDING ANY WRITTEN SPECIFICATIONS THAT MAY HAVE BEEN ISSUED. ANY CONFLICT FOUND BETWEEN THE VARIOUS DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE PROJECT MANAGER FOR DETERMINATION.
5. ALL MATERIAL AND LABOR NECESSARY TO PROVIDE A COMPLETE, FULLY OPERATIONAL, AND GUARANTEED SYSTEM SHALL BE CONSIDERED PART OF THE WORK, WHETHER OR NOT THEY ARE SPECIFICALLY INDICATED IN THE DOCUMENTS. THIS SHALL INCLUDE CONFORMANCE TO THE REQUIREMENTS AND RECOMMENDATIONS OF THE VARIOUS MANUFACTURERS OF THE EQUIPMENT, AND TO APPLICABLE TRAINING AND CERTIFICATION OF INSTALLATION PERSONNEL.
6. UNLESS SPECIFICALLY STATED TO THE CONTRARY, PIPING AND WIRING PASSING UNDER PAVED OR OTHER IMPERVIOUS SURFACES SHALL BE INSTALLED IN SLEEVING OF ADEQUATE SIZE AND STRENGTH. SIDEWALKS AND DECKS AND TURF PAVERS SHALL REQUIRE SLEEVING, EVEN IF NOT SHOWN ON THE DRAWINGS. CONTROL WIRING SHALL BE RUN IN A 2" SLEEVE SEPARATE FROM MAINLINE PIPING. WIRE MAY NOT BE TAPED TO THE MAINLINE IN LIEU OF THIS SEPARATE SLEEVE, AS ABRASION OF THE WIRE JACKET IS LIKELY TO OCCUR.
7. SLEEVES UNDER PAVING AND DRIVEWAYS MAY BE MADE THE RESPONSIBILITY OF OTHER THAN THE IRRIGATION CONTRACTOR (SUCH AS THE PAVING OR SITE CIVIL CONTRACTOR). CONSULT OTHER DOCUMENTS FOR ADDITIONAL INFORMATION. ANY NEEDED SLEEVE WHICH EITHER CANNOT BE FOUND OR IS DAMAGED BEYOND PRACTICAL USE SHALL BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY, ALONG WITH RECOMMENDATIONS FOR CORRECTIVE ACTION. SLEEVES UNDER SIDEWALKS, DECKS, ETC. ARE NORMALLY INSTALLED BY THE IRRIGATION CONTRACTOR.
8. CONTROL WIRING SHALL BE ROUTED WITH THE MAINLINE WHENEVER POSSIBLE. OTHERWISE, WIRING SHALL BE PROTECTED WITH PVC CONDUIT OF SUITABLE SIZE, AND PULL BOXES AT RECOMMENDED INTERVALS. LOW VOLTAGE WIRING SHALL BE TYPE "UF", WITH PVC JACKET. MULTI-CONDUCTOR OR NON-PVC JACKETS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE PROJECT MANAGER. UNLESS STATED TO THE CONTRARY, ZONE "HOT" WIRES SHALL BE SIZE 14-1, COLORED RED. SPARE WIRES, A MINIMUM OF TWO OF WHICH SHALL BE RUN FROM THE CONTROLLER TO THE FARTHEST ZONE VALVE IN EACH DIRECTION, SHALL BE 14-1, BLUE IN COLOR. VALVE COMMON WIRES SHALL BE 12-1, WHITE IN COLOR. THE INSTALLER SHALL INSTALL ALL WIRING WITH ADEQUATE SLACK, SNAKED IN TRENCHES, BUNDLED AT TEN FOOT INTERVALS, AND WITH SURGE/EXPANSION COILS AT THE VALVES AND THE CONTROLLER LOCATION.
9. ALL SPRINKLER HEADS SHALL BE OF THE PROPER SIZE AND TYPE FOR THE LOCATION AND PLANT MATERIAL. HEADS SHALL BE INSTALLED IN THE PRESCRIBED MANNER, PLUMB, AND WITH THE PROPER HEIGHT WITH RESPECT TO GRADE AND/OR PLANT MATERIAL. ALL HEADS AND OTHER EQUIPMENT SHALL BE INSTALLED WITH ADEQUATE AND UNIFORM CLEARANCES FROM ALL PAVING, CURBS, SIDEWALKS, WALLS, AND OTHER OBSTACLES, SO THAT DAMAGE TO EQUIPMENT DOES NOT OCCUR DURING NORMAL LANDSCAPE MAINTENANCE OPERATIONS. ALL SPRINKLERS SHALL BE ADJUSTED TO OBTAIN OPTIMAL COVERAGE OF PLANT MATERIAL, WHILE MINIMIZING OVERSPRAY ONTO WINDOWS, WALLS PAVING OR OTHER IMPERVIOUS SURFACES, PARTICULARLY WOODWORK AND/OR TRIM. THE INSTALLER SHALL UTILIZE THE PROPER SPRAY NOZZLE PATTERN FOR THE LOCATION, AS WELL AS PRESSURE-COMPENSATING HEADS OR SCREENS, AND ADJUSTABLE-PATTERN NOZZLES WHERE A FIXED PATTERN IS NOT SUITABLE TO CONTROL COVERAGE OR OVERSPRAY.
10. THE CONTROLLER SHALL REQUIRE A STANDARD 120-VAC POWER FEED, WHICH SHALL BE COORDINATED BY THE INSTALLER, AND HOOKED UP BY A LICENSED ELECTRICIAN. IT IS PREFERRED THAT A DEDICATED CIRCUIT BE PROVIDED FOR THIS CONNECTION. A 3-WIRE POWER INPUT SURGE ARRESTOR SHALL BE PROVIDED ON THE POWER FEED, AND A DEDICATED GROUND ROD/PLATE NETWORK (SEE DETAIL) SHALL BE INSTALLED, HAVING A MEASURED EARTH GROUND RESISTANCE OF NOT GREATER THAN TEN (10) OHMS.
11. THE CONTROLLER SHALL BE EQUIPPED WITH A PROPERLY LOCATED AND INSTALLED WEATHER/RAIN SENSOR DEVICE, COMPATIBLE WITH THE CONTROLLER, AS REQUIRED BY FLORIDA LAW. THE SENSOR SHALL BE LOCATED IN SUCH A MANNER SO THAT IT IS UNOBSTRUCTED AND DIRECTLY EXPOSED TO NATURAL RAINFALL AND SUNLIGHT FROM ALL DIRECTIONS, BUT NOT TO RUNOFF WATER FROM ROOFS, ETC.
12. THE MINIMUM SUPPLY REQUIREMENT FOR THE SYSTEM AS DESIGNED IS 65-GPM AT 60-PSI.
13. THE WELL PUMP SHALL BE SET UP TO ACTIVATE FROM THE CONTROLLER'S PUMP START SIGNAL.
14. A SUITABLE LOCKING CHAIN-LINK FENCED ENCLOSURE SHALL BE CONSTRUCTED AROUND THE WELL AND CONTROLLER INSTALLATION.
15. THE INSTALLER SHALL BE EXPECTED TO BE FAMILIAR WITH ALL REQUIREMENTS FOR THE WORK, AND TO CONDUCT HIS WORK IN A CLEAN, SAFE, AND WORKMANLIKE MANNER. THE OWNER RESERVES THE RIGHT TO ACT TO PROTECT HIS PROPERTY AND THE OTHER PERSONNEL AT WORK THERE, AND TO MAKE EMERGENCY REPAIRS OR TAKE CORRECTIVE ACTION IF THE INSTALLER DOES NOT FULFILL HIS OBLIGATIONS IN A TIMELY MANNER. THE OWNER FURTHER RESERVES THE RIGHT TO BACK-CHARGE THE INSTALLER TO COVER SUCH EXPENSES, TO THE EXTENT ALLOWED UNDER APPLICABLE LAW.

VALVE INFORMATION

VALVE NUM.	VALVE SZ.	VALVE GPM	TYPE OF SPRINKLER	NOMINAL PRECIP. RT.	VALVE NUM.	VALVE SZ.	VALVE GPM	TYPE OF SPRINKLER	NOMINAL PRECIP. RT.
1	2"	48	SHRUB SPRAY	1.60	11	2"	53	SHRUB SPRAY	1.60
2	2"	46	SHRUB SPRAY	1.60	12	1.5"	40	BUBBLER	N/A
3	1"	24	BUBBLER	N/A	13	2"	54	SHRUB SPRAY	1.60
4	1"	24	SHRUB SPRAY	1.60	14	2"	54	SHRUB SPRAY	1.60
5	2"	54	SHRUB SPRAY	1.60	15	1"	12	SHRUB SPRAY	1.60
6	2"	58	SHRUB SPRAY	1.60	16	1.5"	41	SHRUB SPRAY	1.60
7	1.5"	30	BUBBLER	N/A	17	2"	43	SHRUB SPRAY	1.60
8	2"	55	SHRUB SPRAY	1.60	18	1.5"	30	BUBBLER	N/A
9	2"	52	SHRUB SPRAY	1.60	19	2"	42	SHRUB SPRAY	1.60
10	2"	54	SHRUB SPRAY	1.60	20	2"	43	SHRUB SPRAY	1.60

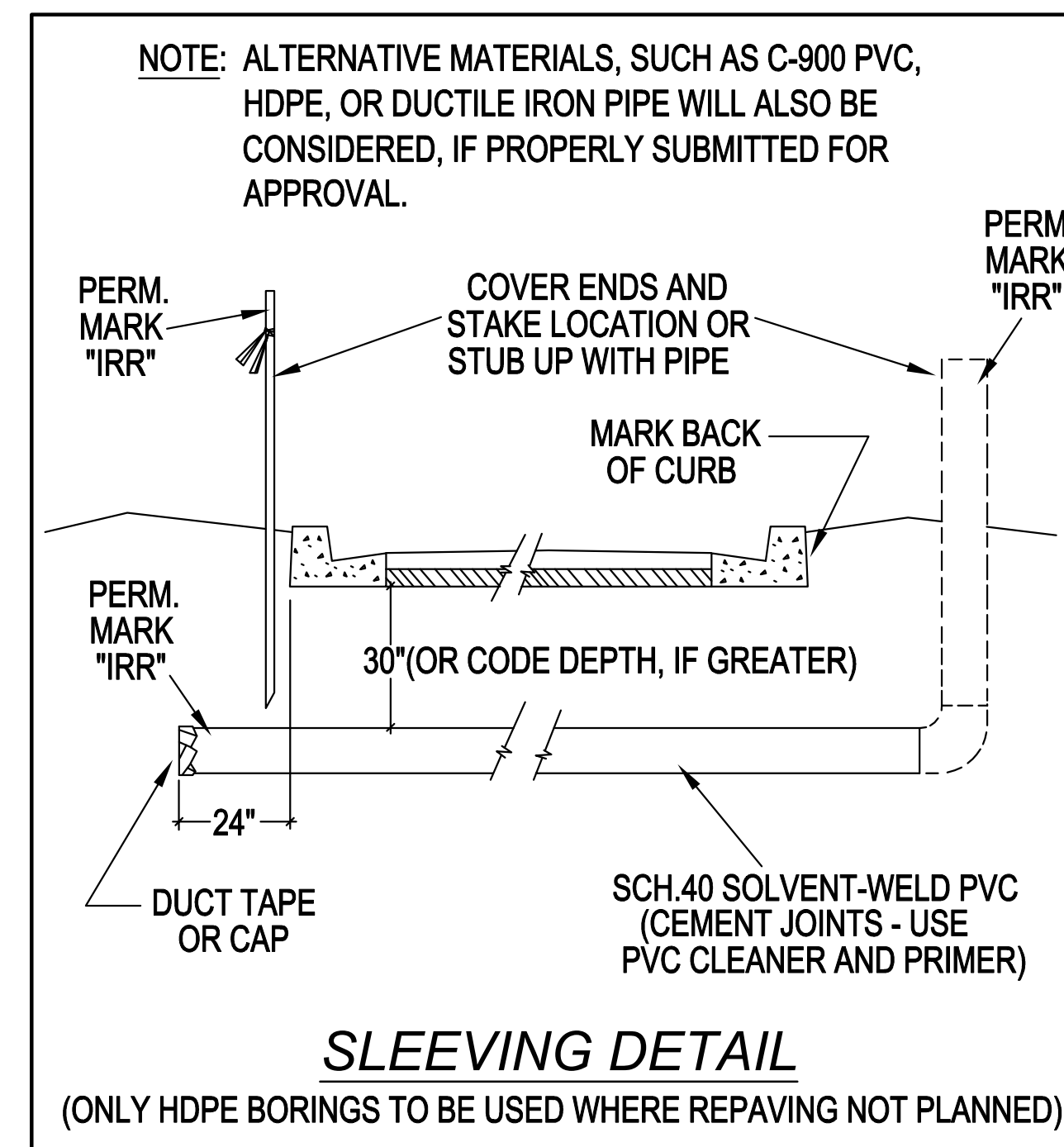
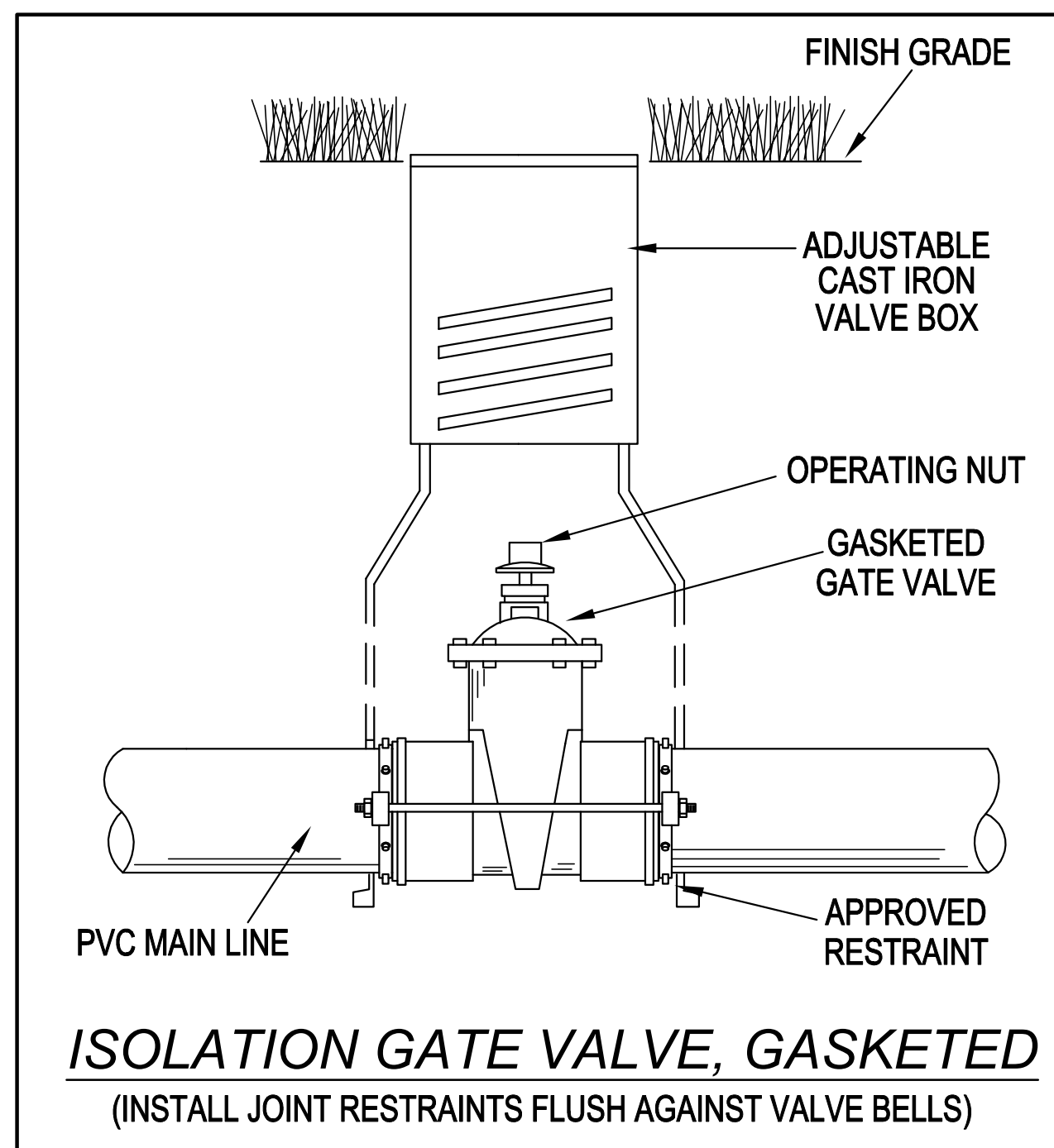
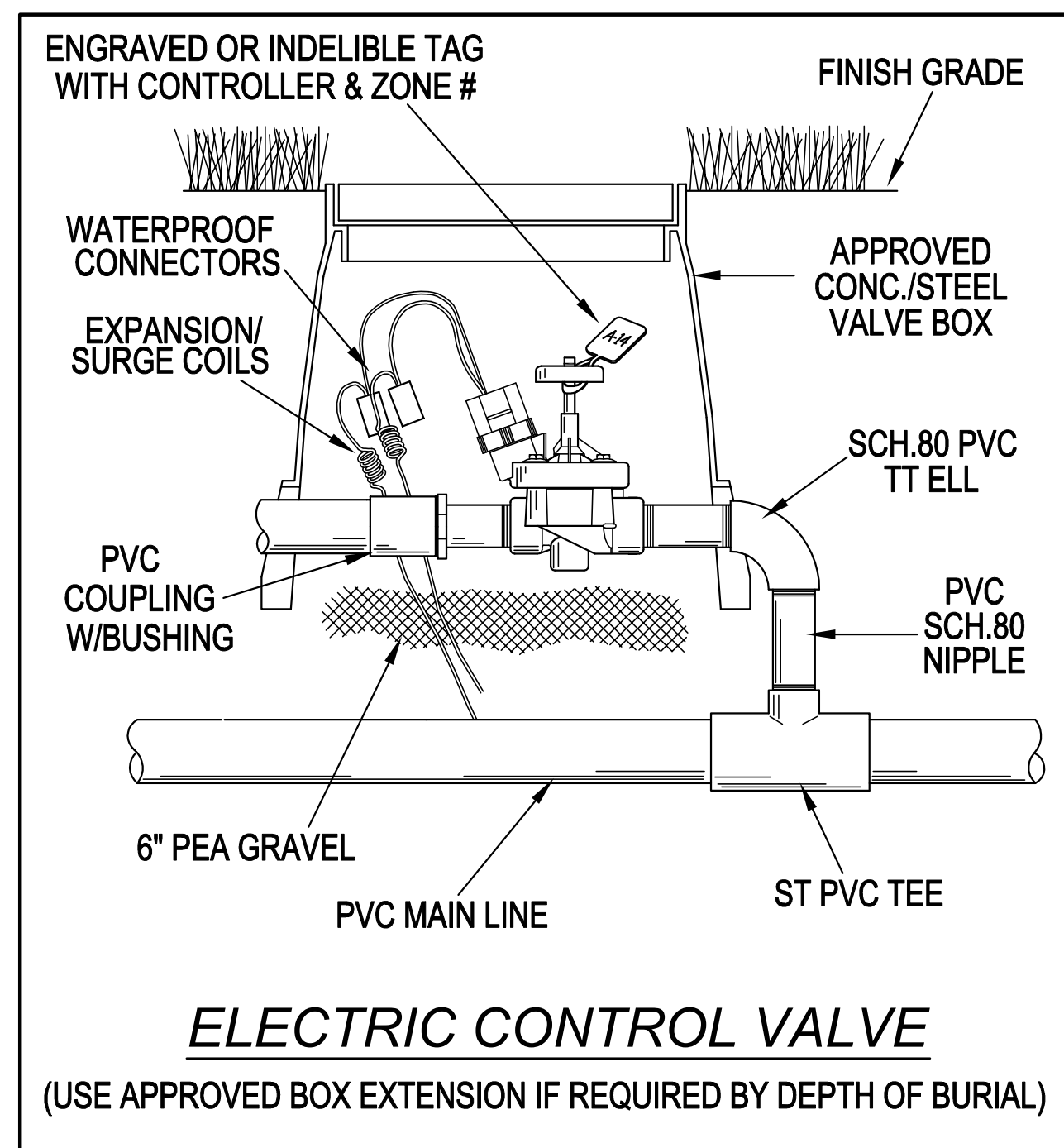
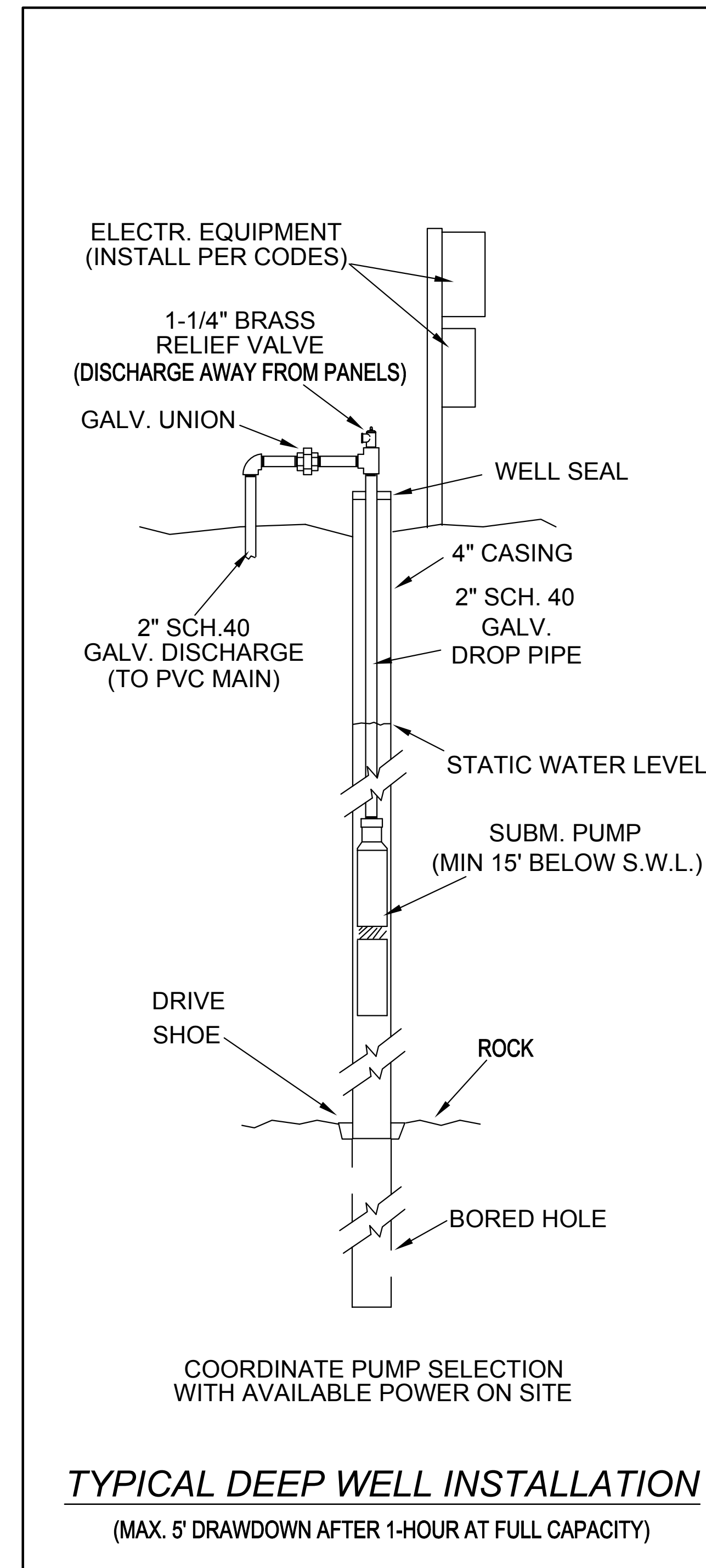
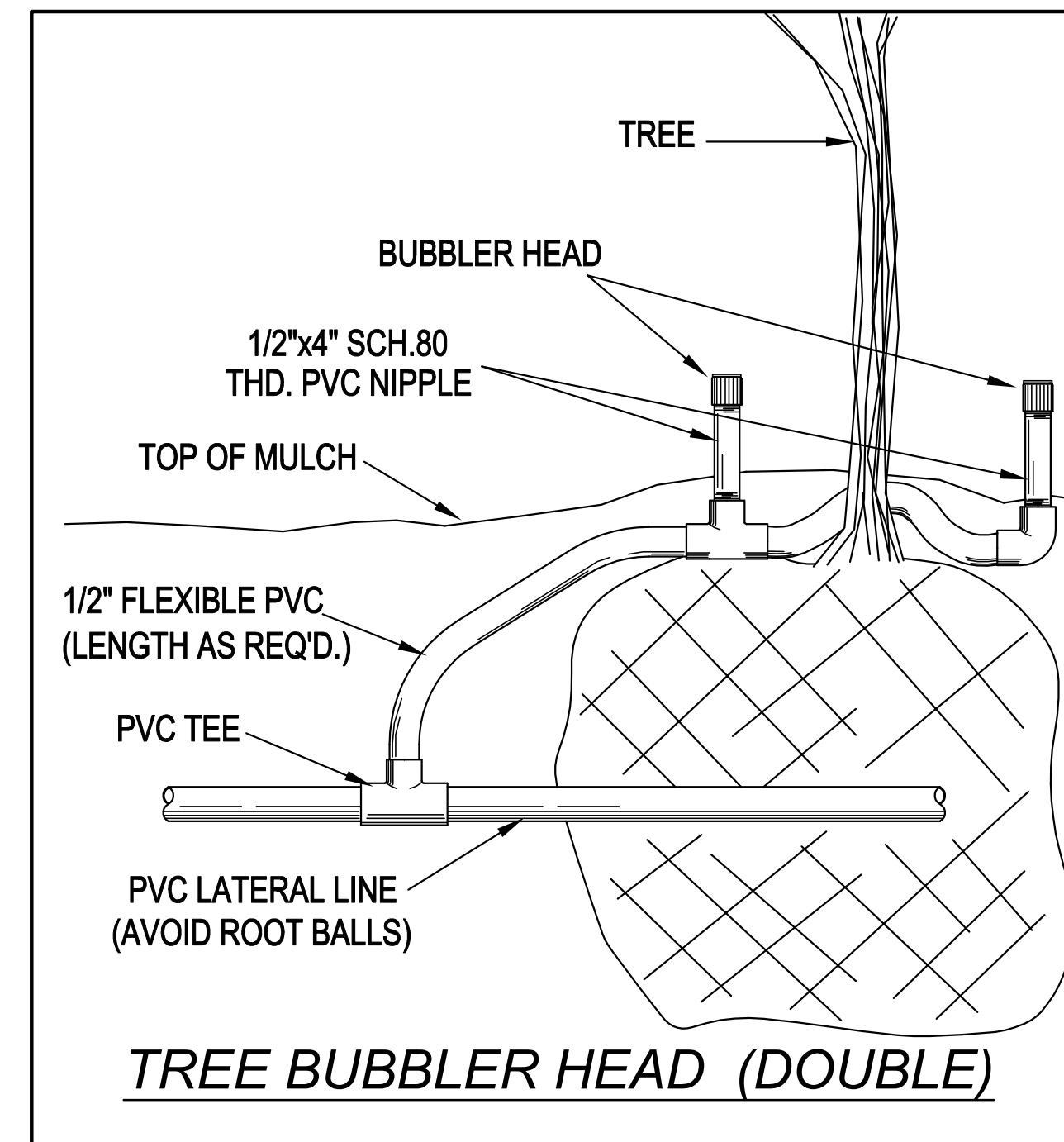
NOTE: VALVES #15 AND #16 SHALL BE WIRED TO RUN TOGETHER
 VALVES #4 AND #19 SHALL BE WIRED TO RUN TOGETHER
 VALVES #3 AND #7 SHALL BE WIRED TO RUN TOGETHER

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PATTERN	GPM @ 30-psi	RADIUS @ 30-psi
15F FULL	3.70	15'
15TQ THREE QUARTER	2.78	15'
15TT TWO THIRD	2.48	15'
15H HALF	1.85	15'
15T THIRD	1.23	15'
15Q QUARTER	.93	15'
15EST END STRIP	.61	4'x15'
15CST CENTER STRIP	1.21	4'x30'
15SST SIDE STRIP	1.21	4'x30'
12F FULL	2.60	12'
12TQ THREE QUARTER	1.95	12'
12TT TWO THIRD	1.74	12'
12H HALF	1.30	12'
12T THIRD	.87	12'
12Q QUARTER	.65	12'
10F-LA FULL	1.57	10'
10H-LA HALF	.79	10'
10T-LA THIRD	.52	10'
10Q-LA QUARTER	.39	10'
8F-FLT FULL	1.57	8'
8H-FLT HALF	.79	8'
8T-FLT THIRD	.52	8'
8Q-FLT QUARTER	.39	8'

TYPICAL SPRAY HEAD NOZZLE PERFORMANCE CHART
THE INSTALLER SHALL SELECT THE NOZZLE PATTERNS WHICH BEST SUIT THE LOCATION OF THE HEADS, WHILE MINIMIZING OVERSPRAY ONTO WALLS OR PAVEMENT AREAS



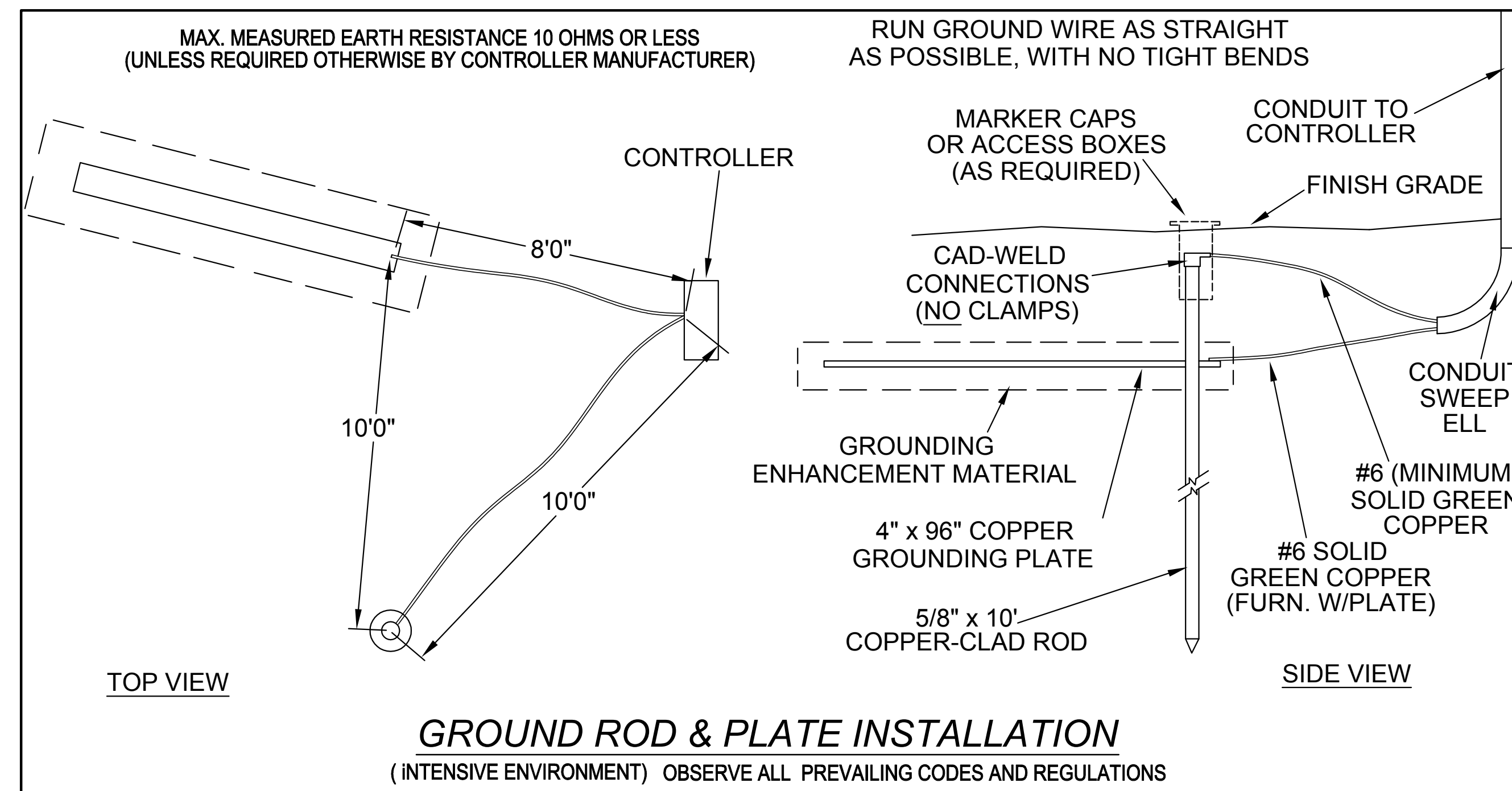
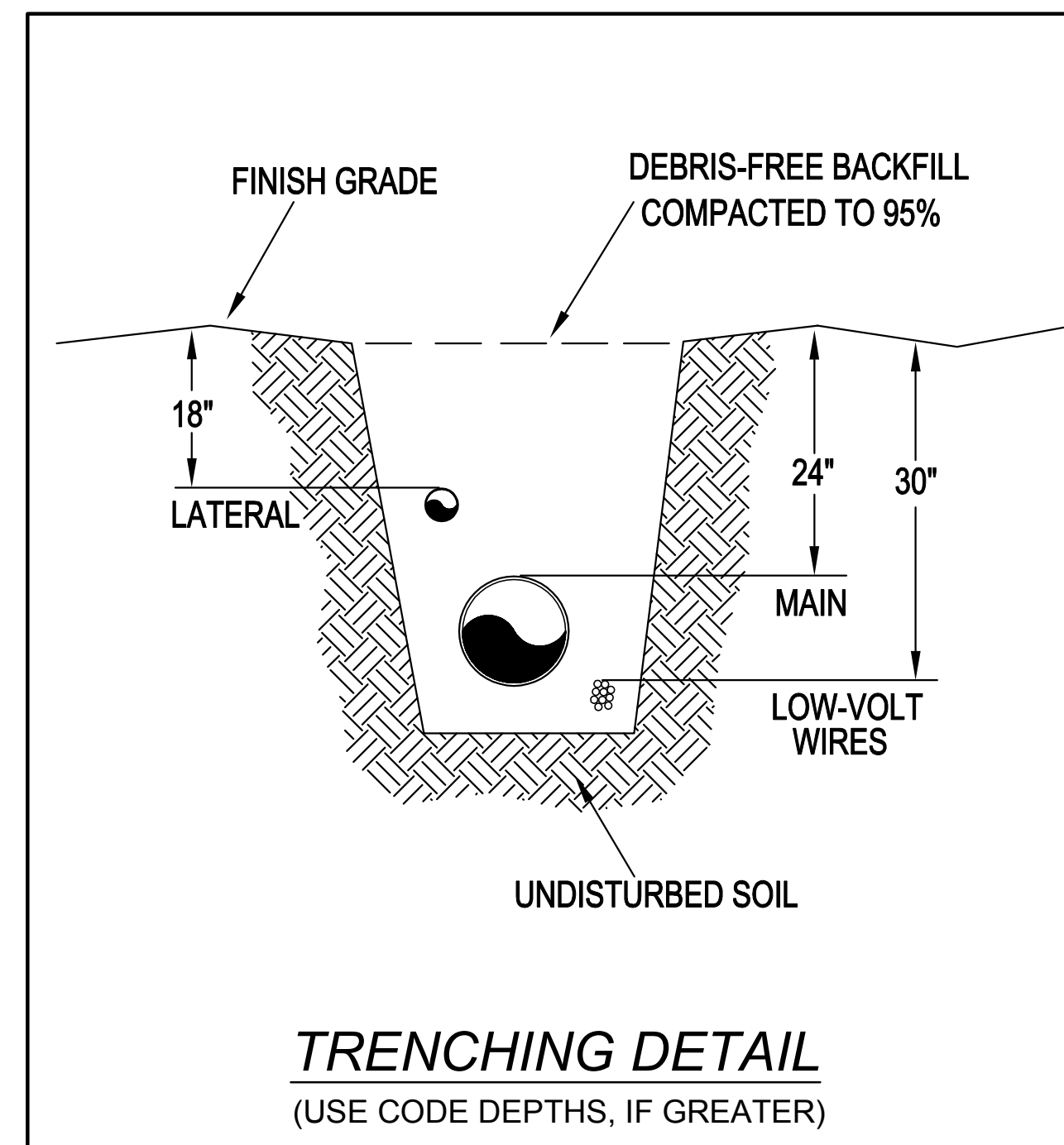
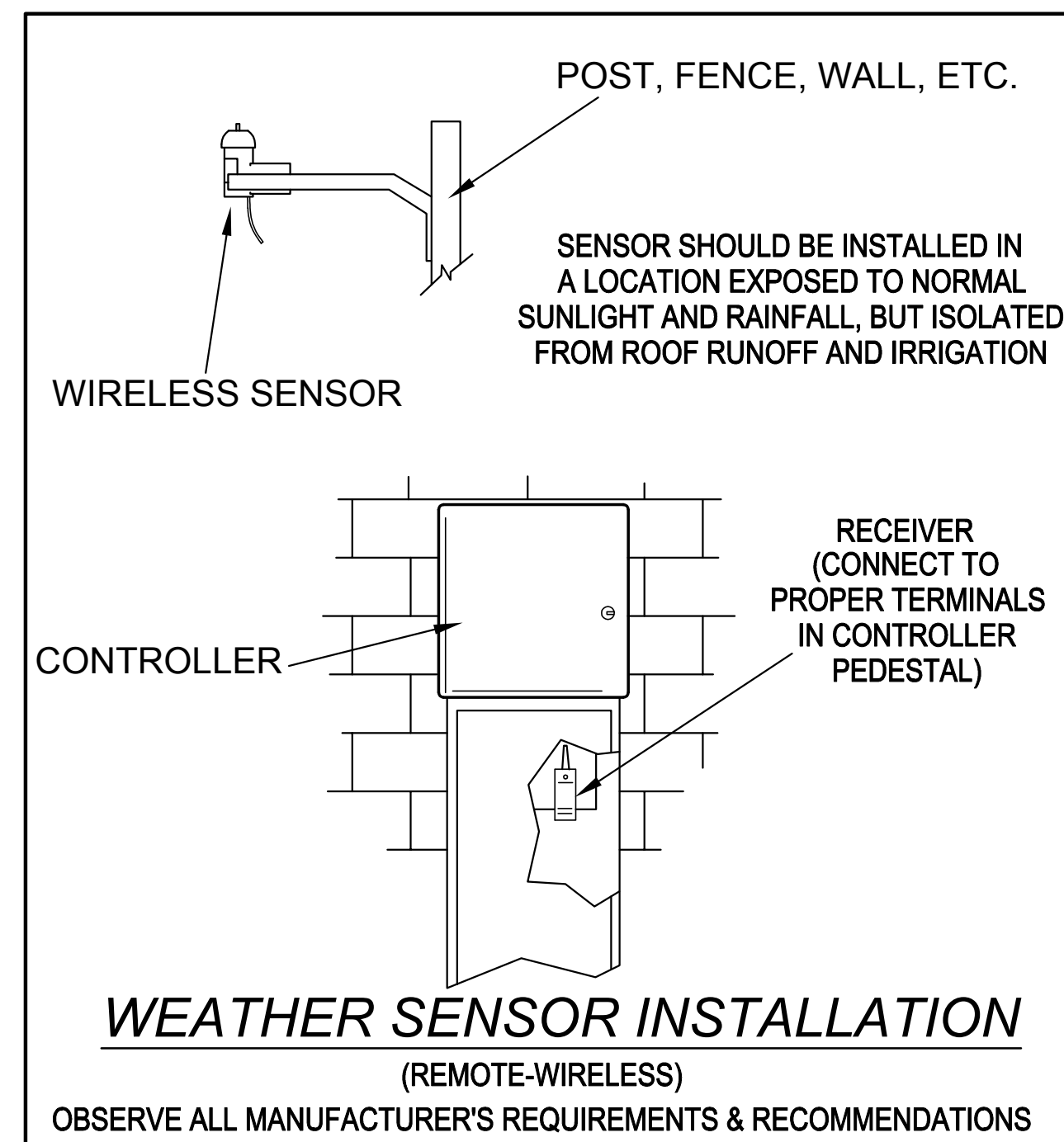
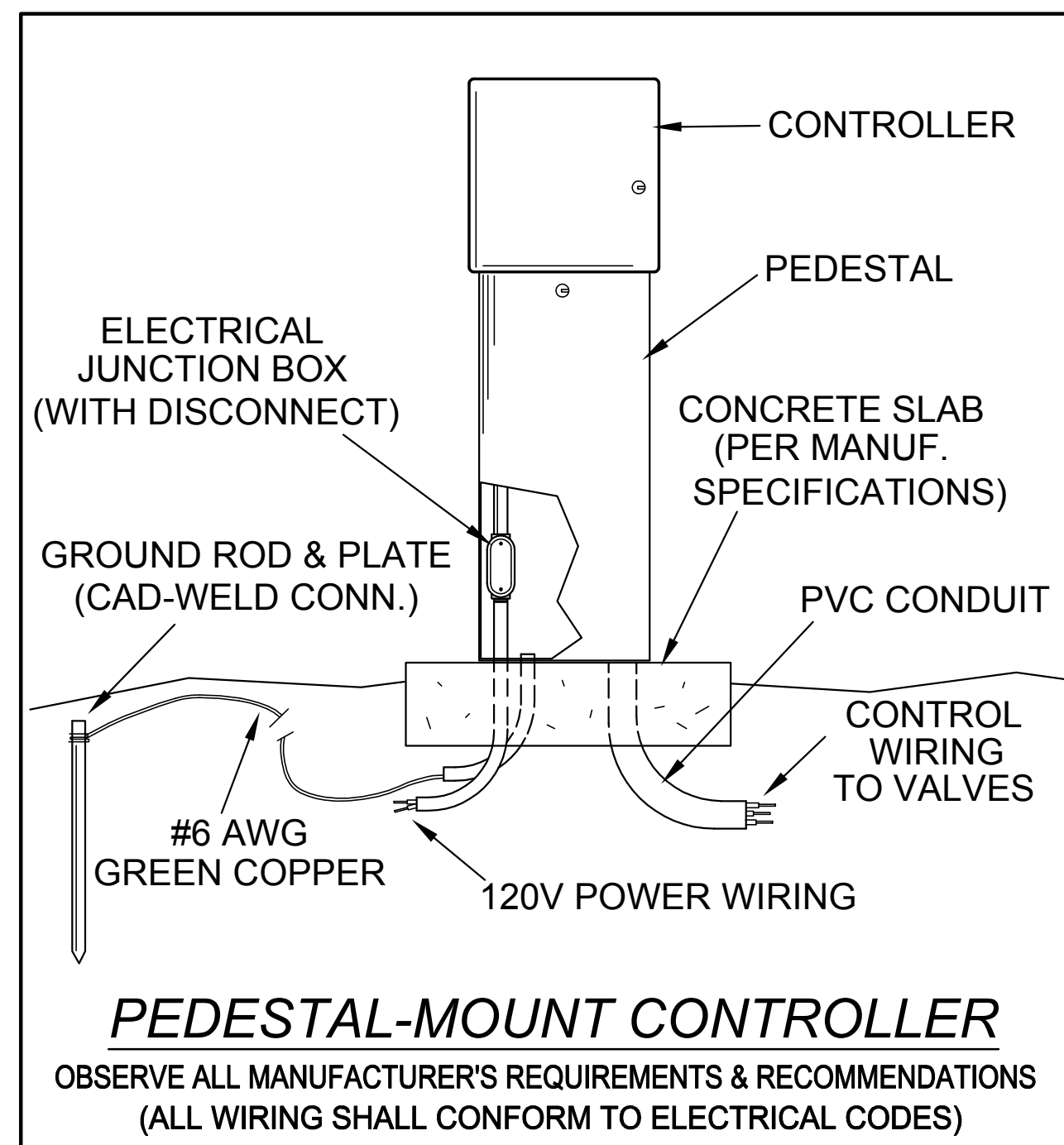
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DIX.LATHROP
150 WEST JESSUP AVENUE
LONGWOOD, FLORIDA 32750
(407) 667-1777
DAVID M. HOPPES
PLA# 00001719

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
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IRRIGATION DETAILS
SR 46

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150 WEST JESSUP AVENUE
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IRRIGATION DETAILS
SR 46

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IR-14

IRRIGATION SPECIFICATIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

The work consists of installing a complete automated underground irrigation system as shown on the Drawings and hereinafter specified. The work shall include the furnishing of all labor, equipment, materials, permits, meeting and coordination time, and supervision in performing all operations in connection with the construction of the irrigation system. The Bidders are advised that all work will be performed in a thorough, proper, and professional manner, and that the implementation of substandard or otherwise unapproved materials or methods will not be tolerated by the Owner.

B. General Description:

The irrigation system shall be constructed using the materials and methods shown on the Drawings and as called for in these Specifications. The system shall be constructed to grades and conform to areas and locations as shown on the Drawings. Locations of irrigation lines and equipment shown on the Drawings are largely diagrammatic. Mainline, valve, pump & well (if used) and/or supply P.O.C. locations shall be staked out by the Contractor and approved by the Owner prior to installation. Location of all other equipment shall be as close as practical to those shown on the Drawings. Mainline locations shall also be coordinated to avoid conflicts with pavement, easements, proposed and existing planting and/or other obstructions. The construction of the irrigation system shall include the furnishing, installation, and testing of all mainlines, lateral piping, fittings, sprinkler heads, swing joints, valves, controller equipment, wiring, pumping equipment (if used), all other pertinent materials and accessories, the removal and/or restoration of existing improvements, excavation and backfill, and all other work in accordance with the Drawings and Specifications, as required for a complete, functional, and fully warranted system. Although architectural considerations may result in some differences of criteria between various areas of the project, the Contractor shall maintain uniformity of construction methods and materials throughout.

C. Relationship of the Documents:

The Drawings for this project and these Written Specifications are to be considered totally integral, with neither considered complete without the other. The Bidders shall thoroughly examine and familiarize themselves with all the information contained in the Documents, and by submitting a bid for this work, agree to accept and be bound by all the provisions made in the Documents. Should a discrepancy arise between the Drawings and these Specifications, the Drawings shall control, unless the item in question is part of an Addendum, dated later than the Drawings. The Owner or his chosen Representative shall be immediately notified of any such discrepancies, and shall take any corrective action deemed necessary.

D. Alternate Products and Methods:

Specific equipment, performances, installation methods, and other such criteria have been chosen for use in the design of this project, and these shall be considered the basis for the Base Bid. The use of alternate equipment and/or methods shall not be acceptable without prior approval. Consideration shall be given only for those materials and methods whose performance most closely matches that which is contained in the original Documents, and most reasonably serves the intent of this design. Any modifications or other impact to this design which may be necessitated by the submission of alternate equipment and/or methods shall be clearly noted within the submittal, and subsequently acted upon by the Owner. The Bidders shall warrant that any bid submitted for

any equipment shall include all materials and work necessary for the proper and fully warranted installation of the equipment, including, but not limited to, increased pipe or wire size, fittings, concrete, gravel, or any other associated materials and/or labor. After the Contract is awarded, any alternative material or methods that the Installer wishes considered shall be submitted in a written "Request for Substitution", which shall include full data for the proposed alternate, a cost difference (plus or minus) and a detailed reason for submitting the alternate.

E. Related Work Specified Elsewhere:

Consult the Owner for documents pertaining to other trades relative to this work.

1.02 SUBMITTALS

A. Requirements:

Prior to commencement of work under this Contract, the Contractor shall submit six sets of submittal data on all proposed materials and equipment. This data shall include copies of all manufacturers' warranty information, including documentation of any extended warranties, if applicable to this project. Submittals shall be in three-ring binders with various sections tabbed and properly indexed. Each item shall be marked as acceptable to the General Contractor before the Engineer, Landscape Architect, or the Consultant shall consider it for approval.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General:

The Contractor shall supply all material and equipment of the types and makes shown on the Drawings. No substitutions shall be permitted without prior written approval of the Owner. The Contractor shall inspect all material and equipment prior to installation; any defective materials or equipment shall be removed immediately from the site and replaced with the proper items. All materials shall be new and current production. Pipe shall be delivered to the site in full 20-foot lengths, and shall be clearly and permanently marked with manufacturer's name, classification, and code references. Any items used in the installation which are subsequently found to be defective, improperly installed, or not as specified herein and on the Drawings, shall likewise be removed and replaced with the proper materials and equipment, and installed in the proper manner, as interpreted by the Owner. Any work done or materials used for this purpose shall be provided by the Contractor at no cost to the Owner. All materials normally associated with the proper installation of the specified equipment, or required by the corresponding manufacturer of the equipment, shall be considered part of the work, regardless of whether every item is specifically called out in the Documents. In the event that less costly type of equipment is accepted for use on the project, or any equipment is deleted or omitted from the work, the Contractor shall discount the Contract amount (or if paid, shall fully refund the difference to the Owner) regardless of whether the action was initiated by the Owner or the Contractor. The use of prototype or field-test materials is absolutely prohibited on this project, unless the permission of the Owner or his authorized representative is obtained in advance.

PART 3 - INSTALLATION

3.01 GENERAL:

A. Description:

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The Contractor shall install a fully operational and warranted automatic irrigation system. Any and all materials and prevalent methods necessary to do so shall be provided by the Contractor as part of this contract, even if not specifically called for in the Drawings and/or these Specifications. The Contractor shall obtain all the necessary permits and inspections for this work, and shall be responsible for penalties or damages which may result from his failure to do so. The content and enforcement of codes and regulations may vary from job to job, or change over time between Design and Construction. Information contained in these documents is for reference purposes ONLY, and shall not be considered an absolute interpretation of prevailing requirements. The responsibility for researching code requirements, and for conformance thereto, shall remain solely that of the Contractor. The Contractor shall NOT install any materials or perform any work that is known to be in violation of any standing code requirement or regulation, even if so directed by the Design Documents. Conflicts of this nature should be brought immediately to the attention of the Project Manager using a written "Request for Information".

A. Existing Conditions:

The Drawings show conditions as they are believed to exist, but it is not intended, nor should it be interpreted, that the conditions shown constitute a representation by the Owner that the conditions actually exist. The Contractor shall personally inspect the job site prior to bidding, to fully familiarize himself with the nature of the work, and shall accept full responsibility for any loss sustained as a result of differences between the conditions shown on the Drawings and any actual condition revealed during the completion of the work. (EXCEPTION: Rock Clause; See section 3.02.D.) The Contractor shall, prior to excavation, verify the location of any and all existing underground improvements, and shall take any action necessary to protect said improvements during his work, and eliminate service outages. This may include, but not be limited to, existing irrigation. If the site contains areas of protected wetland or other environmentally sensitive areas, the Contractor shall fully acquaint himself with the actual limits of these areas and any corresponding buffer zones, and shall make sure that the progress and/or result of his work shall not impact these areas. These areas may not be excavated, drained, thrown into by sprinklers, used for equipment access or storage, or otherwise disturbed in any way whatsoever. Any fees or penalties assessed upon the Owner as a result of violations by the Contractor will be paid by the Contractor. The Contractor shall be responsible for checking the irrigation water source for salinity, odor, stain or other objectionable properties, and reporting the results to the Owner and Landscape Architect. If the irrigation source is from pressurized service, the Contractor shall test the supply pressure before work begins, to ensure that it is adequate for the proper operation of the system. This work should be performed as early as possible.

B. Trenching and Backfilling:

The Contractor shall be responsible for staking out the head locations on the project. When grading has been established in a particular area, the Contractor shall, prior to beginning any excavation in the area, cause staking to be performed, and shall secure the approval of the Owner or Landscape Architect of the finished staking. Excavation shall be open vertical construction sufficiently wide to allow free working space around the work installed, and allow ample space for backfilling and tamping. Trenches for piping shall be cut to required grade lines, and compacted to provide accurate grade and uniform bearing for the full length of the piping. Bottoms of trenches shall be free of rocks and other sharp objects. Unless specifically stated to the contrary, minimum depth of cover shall be 24" on mainline piping, and 18" on lateral piping. Minimum depth of cover on low-voltage wiring shall be as provided by the electrical codes in effect. Intersecting pipes and those sharing a common ditch shall have a minimum of three inches clearance from each other, and from other utilities. Initial backfill shall be pulverized native soil, free of foreign matter. Within four inches of the pipe shall be clean soil or sand. Remaining backfill shall be compacted to dry density equal to that of adjacent undisturbed soil, and shall conform to adjacent grades without depressions, lumps, or other irregularities. In lieu of trenching, piping may be laid by plowing, using approved equipment and methods. The Contractor shall still abide by the minimum clearances prescribed above.

C. Rock Clause:

If the ground should be such that the Contractor encounters large rocks, debris, or other obstructions that cannot be trenched through or otherwise removed during the normal course of construction, the Owner shall be notified, and a cost for excavation and backfill with selected materials shall be negotiated.

D. Pipes:

Pipe and associated fittings shall be as noted in the Drawings. Pipe shall be installed in such a manner so as to provide for expansion and contraction in accordance with the manufacturers published recommendations. Spigot ends of the pipe shall be firmly and completely seated in the fittings. Angular deflections in the joint shall not exceed manufacturer's recommendations. Lines shall be flushed before installation of heads. Heating and bending the pipe is not permitted. Pipe shall be cut in such a manner so as to provide a clean, square cut, free of chips, burrs, or splitting. Pipe shall be laid using a cleaner, primer, and cement (if solvent-weld) or lubricant (if gasketed joints) approved by the manufacturer of the pipe. As pipe is laid, installed pieces shall be restrained, so that slippage does not occur in previous joints. The Contractor shall monitor previous joints for slippage, until joints are set. Cemented joints shall be twisted one quarter turn as they are assembled, and excess solvent shall be immediately wiped away.

E. Inspections:

The Owner or his designated Representative may appear on site at any time to make periodic informal inspections. Other persons, such as the Consultant, or a representative of an equipment manufacturer may be included to offer comments. If it is determined that the provisions of the Documents or other requirements of the Work, including the proper and warranted installation of any equipment, have not been complied with, the Installer shall be directed to make immediate and satisfactory reparations. Upon completion of the Work, the Owner reserves the right to schedule a formal walk-through inspection, at which a punchlist will be prepared, outlining items of concern or deficiency that must be corrected prior to the Work being considered complete.

G. Record Drawings:

The Installer shall be responsible for maintaining up-to-date on-site record drawings during the progress of the work. Record drawings shall show all major deviations from the Construction Drawings, and shall document installed mainline and wire routings, valve locations and designations, controllers, pavement crossings, splice boxes, pumping equipment (if used) and any other major equipment. These on-site drawings shall be available for inspection at any time during execution of the work, and shall be compiled into a complete, legible and reproducible (or CAD) "As-Built" drawing once work is complete. This completed drawing shall be provided to the Owner prior to Final Acceptance.

H. Warranty:

The entire system, including parts and labor, shall be warrantied by the Installer for a period of not less than one year from date of acceptance by the Owner. Manufacturers' warranties of greater than one year shall be fully honored for their duration. The Owner reserves the right to seek damages for improper or substandard work up to and beyond the expiration of the warranty, to the extent allowed by law. Further, during the warranty period, the Owner reserves the right to act independantly to protect his property in the event of any failure, without respect to warranties in force, if the failure cannot be, or is not, resolved in a timely manner by the Installer. The Owner may then elect to seek compensation from the Installer if the failure is determined to be a result of defective materials or workmanship.

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