

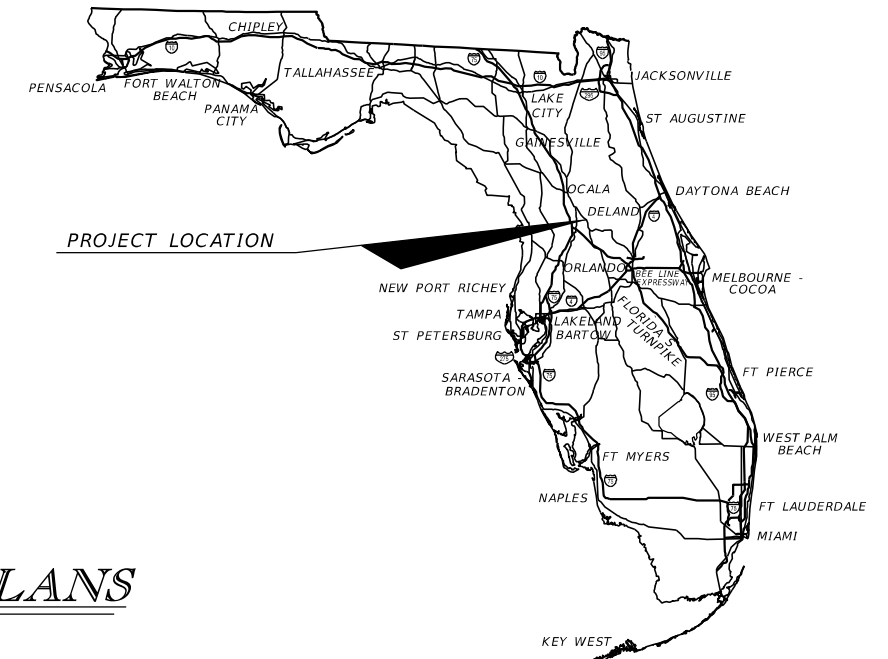
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 238275-2-52-01

LAKE COUNTY (11130)
STATE ROAD NO. 46

INTELLIGENT TRANSPORTATION SYSTEMS PLANS



INDEX OF ITS PLANS

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IT-1	KEY SHEET
IT-1A	NOTES TO REVIEWER
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IT-5	GENERAL NOTES
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IT-23	MVDS INSTALLATION DETAIL

GOVERNING STANDARDS AND SPECIFICATIONS:
Florida Department of Transportation, 2015 Design Standards and revised Index Drawings as appended herein, and January 2015 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

For Design Standards click on the "Design Standards" link at the following web site:
<http://www.dot.state.fl.us/rddesign/>

For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the following web site:
<http://www.dot.state.fl.us/specificationsoffice/>

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
SHOP DRAWINGS TO BE SUBMITTED TO:

MICHAEL J. NOESEN, P.E.
BES INC.
11007 N 56TH STREET, SUITE 208
TEMPLE TERRACE, FL 33617

PLANS PREPARED BY:

BES Inc.
C.A. No. 9835
11007 N 56TH STREET, SUITE 208
TEMPLE TERRACE, FL 33617
TEL NO. (813) 985 7800
FAX NO. (813) 985 7884
VENDOR NO. 20-0242028
CONTRACT NO. C-9862

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

**PHASE IV SUBMITTAL
JULY, 2015**

KEY SHEET REVISIONS	
DATE	DESCRIPTION

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
ENGINEER OF RECORD: MICHAEL J. NOESEN, P.E.

P.E. NO.: 42255

FISCAL YEAR	SHEET NO.
17	IT-1

FDOT PROJECT MANAGER: MEDHAT HASSAN, P.E.

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

WEKIVA 3B ITS PLANS

NOTES TO REVIEWER:

DUE TO RIGHT-OF-WAY ACQUISITION, THIS PROJECT WILL HAVE A PLANS UPDATE PHASE. AS SUCH, THE FOLLOWING ITEMS HAVE BEEN NEGOTIATED TO BE PART OF THE PLANS UPDATE SUPPLEMENTAL AND SUBMITTAL:

- TASK 33.10 REFERENCE AND MASTER COMMUNICATIONS DESIGN FILE
- TASK 33.16 OTHER ITS ANALYSIS (ITS MEMO) AND ANY VOLTAGE DROP CALCULATIONS
- TASK 34.8 ITS COMMUNICATIONS PLANS
- TASK 34.9 FIBER OPTIC SPLICE DIAGRAMS
- TASK 34.11 CROSS SECTIONS FOR 2 DMS SIGNS, STA 430+65 SR 500 AND STA 475+75 SR 500
- TASK 34.15 OVERHEAD SIGN CANTILEVER SIGN STRUCTURE, 2 DMS SIGNS
- TASK 34.17 TRAFFIC CONTROL PLANS (MAINTENANCE OF COMMUNICATION)

REVISIONS				BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 C.A. No. 9835 MICHAEL J. NOESEN., P.E. No. 42255	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			NOTES TO REVIEWER	SHEET NO. IT-1A
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-2-52-02		

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF SHEET
			IT-6		IT-7		IT-8		IT-9		IT-10		IT-11		IT-12		IT-13		IT-14		IT-15		PLAN	FINAL	PLAN	FINAL	
			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,FURNISH & INSTALL,OPEN, OPEN TRENCH	LF	690		730		640		715		710		825		700		700		700		700		7110				
630-2-12	CONDUIT,FURNISH & INSTALL,DIRECTIONAL BORE	LF																									
633-1-121	FIBER OPTIC CABLE,F&I,UNDERGROUND,2-12 FIBERS	LF			25		50						195									270					
633-1-122	FIBER OPTIC CABLE,F&I,UNDERGROUND,13-48 FIBERS	LF																									
633-1-123	FIBER OPTIC CABLE,F&I,UNDERGROUND,49-96 FIBERS	LF	940		1450		880		765		810		1075		750		750		750		750		8920				
633-2-31	FIBER OPTIC CONNECTION,INSTALL,SPLICE	EA			12		12						12									36					
633-2-32	FIBER OPTIC CONNECTION,INSTALL, TERMINATION	EA	72																			72					
633-3-11	FIBER OPTIC CONNECTION,INSTALL,SPLICE ENCLOSURE	EA	1		1		1						1									4					
633-3-12	FIBER OPTIC CONNECTION HARDWARE,F&I,SPLICETRAY	EA	1		1		1						1									4					
633-3-15	FO CONN.,INSTALL, PATCH PNL PRETERMINATED	EA			1		1						1									3					
635-2-11	PULL & SPLICE BOX,F&I,13"x24"COVER SIZE				3		1															4					
635-2-13	PULL & SPLICE BOX, F&I, 36" ROUND COVER SIZE	EA	2		3		2		1		2		1		1		1		1		1		15				
639-1-112	ELEC PWR SERVICE,F&I,UG,METER, FURN BY POWER CO	AS			1								1									2					
639-2-1	ELECTRICAL SERVICE WIRE	LF			520		386						250									1156					
639-3-12	ELECTRICAL SERVICE DISCONNECT,F&I,CABINET	EA			1		1						1									3					
641-2-12	PRESTRESSED CONC POLE,F&I,TY P-II, SERV POLE	EA			1								1									2					
641-3-163	CONCRETE CCTV POLE,F&I,WITH LOWERING DEVICE,63'	EA					1						1									2					
641-3-186	CONCRETE CCTV POLE,F&I,WITH LOWERING DEVICE, 86'	EA			1																	1					
660-3-11	VEH DET SYSTEM-MICROWAVE,F&I, CABINET EQUIPMENT	EA					1						1									2					
660-3-12	VEH DET SYSTEM-MICROWAVE, F&I, ABOVE GRD EQUIP	EA					1						1									2					
676-2-111	ITS FIELD CAB,F&I,336,POLE MOUNT,24"WX36"HX20"D	EA			1		1						1									3					
682-1-133	ITS CCTV CAM,F&I,DOME ENCLOS,NON-PRESS,IP,HD	EA			1								1									2					
684-1-1	MANAGED FIELD ETHERNET SWITCH, F& I	EA			1		1						1									3					
684-2	DEVICE SERVER	EA			1		1						1									3					
684-3-11	DIGITAL VIDEO ENCODER W/ SOFTWARE DECODER	EA			1								1									2					
685-106	SYSTEM AUX,F&I, UNINTERRUPTIBLE POWER SOURCE	EA			1		1						1									3					
700-8-115	FRONT ACCESS, DYNAMIC MESSAGE SIGN, F&I W/ UPS MONOCHROME,51-100 SF	EA																									
700-10-121	DMS SUPPORT STRUCTURE,CANTILEVER,UP TO 20FT	EA																									

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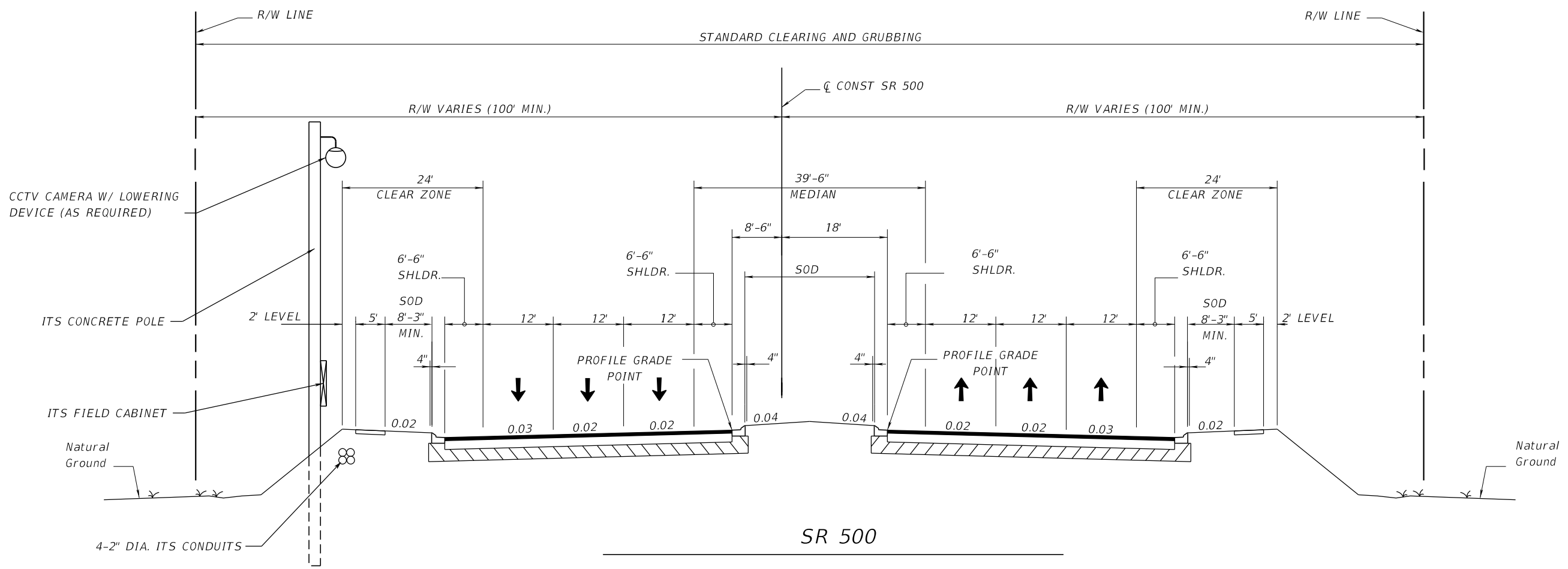
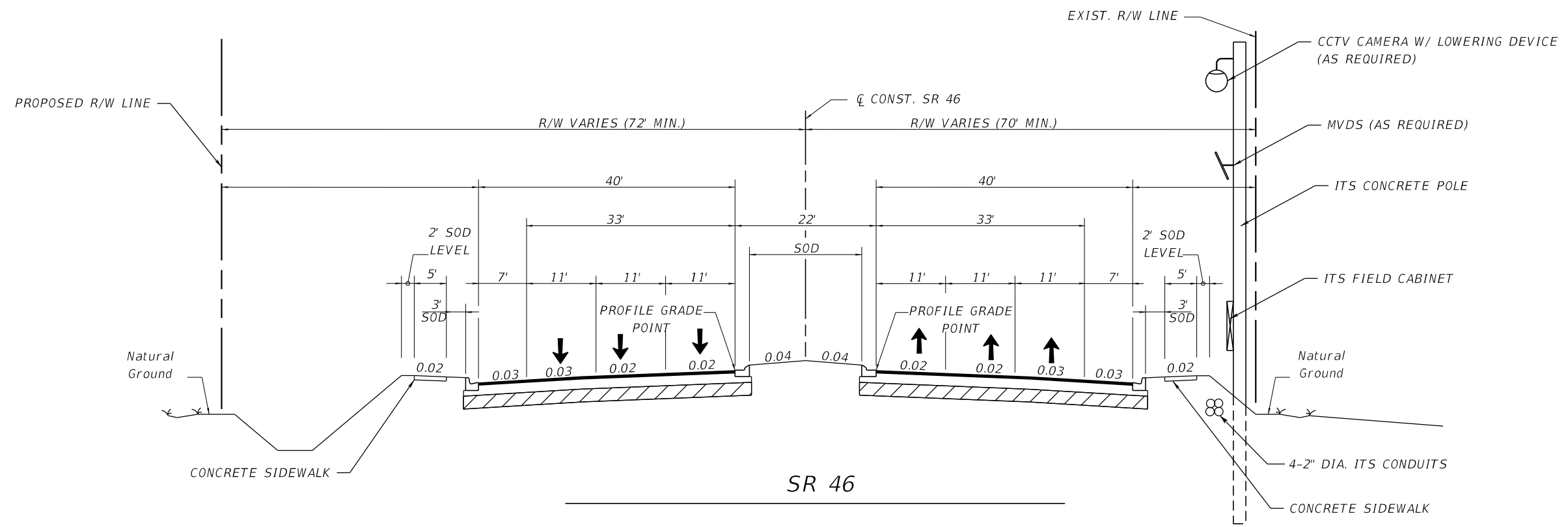
<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				REVISIONS				DATE	DESCRIPTION	DATE	DESCRIPTION					BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 C.A. No. 9835 MICHAEL J. NOESEN, P.E. No. 42255		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>46</td> <td>LAKE</td> <td>238275-2-52-02</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	46	LAKE	238275-2-52-02	SHEET NO. IT-2			
REVISIONS																														
DATE	DESCRIPTION	DATE	DESCRIPTION																											
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																												
46	LAKE	238275-2-52-02																												

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF SHEET
			IT-16		IT-17		IT-18		IT-19		IT-20		IT-21		IT-22		IT-23		PLAN	FINAL	PLAN	FINAL					
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL									
630-2-11	CONDUIT,FURNISH & INSTALL,OPEN, OPEN TRENCH	LF	810		700		660		760		700		700		320							4650		11760			
630-2-12	CONDUIT,FURNISH & INSTALL,DIRECTIONAL BORE	LF	150																			150		150			
633-1-121	FIBER OPTIC CABLE,F&I,UNDERGROUND,2-12 FIBERS	LF	250												300							550		820			
633-1-122	FIBER OPTIC CABLE,F&I,UNDERGROUND,13-48 FIBERS	LF	150																			150		150			
633-1-123	FIBER OPTIC CABLE,F&I,UNDERGROUND,49-96 FIBERS	LF	1010		750		710		860		750		750		520							5350		14270			
633-2-31	FIBER OPTIC CONNECTION,INSTALL,SPLICE	EA	36												24							60		96			
633-2-32	FIBER OPTIC CONNECTION,INSTALL, TERMINATION	EA	72												72							144		216			
633-3-11	FIBER OPTIC CONNECTION,INSTALL,SPLICE ENCLOSURE	EA	3												3							6		10			
633-3-12	FIBER OPTIC CONNECTION HARDWARE,F&I,SPLICETRAY	EA	3												3							6		10			
633-3-15	FO CONN.,INSTALL, PATCH PNL PRETERMINATED	EA	1												1							2		5			
635-2-11	PULL & SPLICE BOX,F&I,13"x24"COVER SIZE	EA	2												2							4		8			
635-2-13	PULL & SPLICE BOX, F&I, 36" ROUND COVER SIZE	EA	3		1		1		2		1		1		2							11		26			
639-1-112	ELEC PWR SERVICE,F&I,UG,METER, FURN BY POWER CO	AS	1												1							2		4			
639-2-1	ELECTRICAL SERVICE WIRE	LF	213												60							273		1429			
639-3-12	ELECTRICAL SERVICE DISCONNECT,F&I,CABINET	EA	1												1							2		5			
641-2-12	PRESTRESSED CONC POLE,F&I,TY P-11, SERV POLE	EA	1												1							2		4			
641-3-163	CONCRETE CCTV POLE,F&I,WITH LOWERING DEVICE,63'	EA	1												1							2		4			
641-3-186	CONCRETE CCTV POLE,F&I,WITH LOWERING DEVICE,86'	EA																						1			
660-3-11	VEH DET SYSTEM-MICROWAVE,F&I, CABINET EQUIPMENT	EA																				0		2			
660-3-12	VEH DET SYSTEM-MICROWAVE, F&I, ABOVE GRD EQUIP	EA																				0		2			
676-2-111	ITS FIELD CAB,F&I,336,POLE MOUNT,24"WX36"HX20"D	EA	1												1							2		5			
682-1-133	ITS CCTV CAM,F&I, DOME ENCLOS, NON-PRESS, 1P, HD	EA	1												1							2		4			
684-1-1	MANAGED FIELD ETHERNET SWITCH, F & I	EA	1												1							2		5			
684-2-1	DEVICE SERVER	EA	1												1							2		5			
684-3-11	DIGITAL VIDEO ENCODER W/ SOFTWARE DECODER	EA	1												1							2		4			
685-106	SYSTEM AUX,F&I, UNINTERRUPTIBLE POWER SOURCE	EA	1												1							2		5			
700-8-115	FRONT ACCESS, DYNAMIC MESSAGE SIGN, F&I W/ UPS MONOCHROME, 51-100 SF	EA	1												1							2		2			
700-10-121	DMS SUPPORT STRUCTURE,CANTILEVER,UP TO 20FT	EA	1												1							2		2			

REVISIONS				BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 C.A. No. 9835 MICHAEL J. NOESEN, P.E. No. 42255	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES	SHEET NO. IT-3
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-2-52-02		

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







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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					46	LAKE	238275-2-52-02	

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GENERAL NOTES
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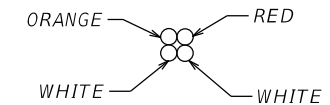
1. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DESIGN AND CONSTRUCTION ACTIVITIES AND SCHEDULES WITH ON-GOING OR FUTURE PROJECTS IN THE VICINITY OF THE PROJECT LIMITS. OBTAIN REQUIRED PERMITS AND APPROVAL OF THE ITS CONTRACT PLANS PRIOR TO COMMENCING WORK.
2. NOTIFY FDOT DISTRICT 5 ITS AT LEAST 72 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
3. CALL SUNSHINE ONE-CALL , A MINIMUM OF FORTY EIGHT (48) HOURS AND A MAXIMUM OF NINETY SIX (96) HOURS BEFORE ANY EXCAVATION WORK. FDOT DISTRICT 5 ITS MAINTENANCE DEPARTMENT SHALL BE CONTACTED FOR ALL SUNGUIDE ITS RELATED UTILITY LOCATES AND QUESTIONS. NOTE THAT NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE SUNSHINE ONE CALL, AND THEREFORE, CONTACT THEM INDIVIDUALLY.
4. EXISTING UTILITIES (IF ANY) SHOWN ON PLANS ARE FOR INFORMATION PURPOSES ONLY. VERIFY THE VERTICAL AND HORIZONTAL (VVH) PRESENCE OF ANY EXISTING UTILITIES, PRIOR TO UNDERGROUND OR DIRECTIONAL BORING OF CONDUIT INSTALLATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ANALYZING GEOTECHNICAL BORING INFORMATION AT THE PROPOSED POLE LOCATIONS. ADJUST THE FOUNDATION DEPTH AND WIDTH AS NECESSARY.
6. THE LOCATION OF PROPOSED POLE, FOUNDATION, CONDUIT AND PULL BOXES SHOWN IN THESE PLANS IS APPROXIMATE. THEIR LOCATION MAY BE CHANGED TO AVOID CONFLICTS WITH EXISTING /PROPOSED UTILITIES, DRAINAGE STRUCTURES, TREES, SIGNS AND EXISTING CONDUIT. NO PULL BOXES OF ANY TYPE SHALL BE INSTALLED IN DRAINAGE SWALES, DITCHES OR PAVED SHOULDERS.
7. INSTALL ONE 2" CONDUIT FOR ELECTRICAL SERVICE WIRES FOR POWER, BETWEEN THE UTILITY POLE AND ITS POLE DISCONNECT.
8. COORDINATE WITH DUKE ENERGY PRIOR TO ANY CONSTRUCTION WITHIN 20 FEET OF ENERGIZED ELECTRICAL CONDUCTORS. ALL PRECAUTIONARY MEASURES AND EXTREME CAUTION SHALL BE EXERCISED AROUND HIGH VOLTAGE AREAS.
9. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHEN THE WORK ZONE BECOMES INACTIVE.
10. ALL SPARE CONDUITS (IF ANY) SHALL BE CAPPED USING PLUGS/ CONDUIT CAPS TO AVOID ENTRY OF DUST, DIRT OR MOISTURE.
11. ALL ELECTRICAL EQUIPMENT SHALL BE WATERPROOF. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO THE GROUNDING ELECTRODES USING EXOTHERMIC WELDS.
12. MVDS WORK SHALL INCLUDE THE FURNISH AND INSTALL OF WEATHER HEAD, MOUNTING EQUIPMENT, POWER AND DATA CABLES, SURGE PROTECTION DEVICE (SPD) AND ANY OTHER INCIDENTAL FOR SUCCESSFUL INSTALLATION OF MVDS.
13. WORK SHALL INCLUDE THE FURNISH AND INSTALL OF A UPS. THE UPS AT EACH MICROWAVE TOWER SITE REQUIRES A 120V, NEMA L5-20P TWIST-LOCK PLUG. ("L"-LOCKABLE, "P"- PLUG).
14. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE DRILL SHAFT FOUNDATION AND 10FT X 10FT CONCRETE MOW PAD, IN ADDITION TO THE FURNISH AND INSTALL OF THE ITS POLE. MOW PAD DIMENSIONS SUBJECT TO FIELD CONDITIONS AND ENGINEER APPROVAL.
15. PAY ITEM NUMBER 633-3-123: THE QUANTITIES INCLUDED 200 FT OF COILED SLACK INSIDE EACH SPICE BOX AND 50 FT INSIDE EACH FIBER OPTIC PULL BOX.

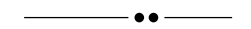
LEGEND

-  CCTV CAMERA
-  MICROWAVE VIDEO DETECTION SYSTEM
-  SPLICE BOX (36" DIA)
-  FO PULL BOX (36" DIA)
-  POWER PULL BOX (13"X24")
-  ITS FIELD CABINET
-  POWER SERVICE POLE
-  CONCRETE ITS POLE

 SCHEDULE 40 PVC DIRECTIONAL BORE CONDUIT WITH FOC CABLES INSIDE (AS SHOWN ON THE PLAN SHEETS).

 4- 2" HDPE CONDUITS
RED FOR POWER (WITH SEPARATE PULL BOX)
ORANGE FOR FIBER OPTIC CABLE (WITH TONE WIRE AND PULL STRING)
2 WHITE CONDUITS FOR SPARES

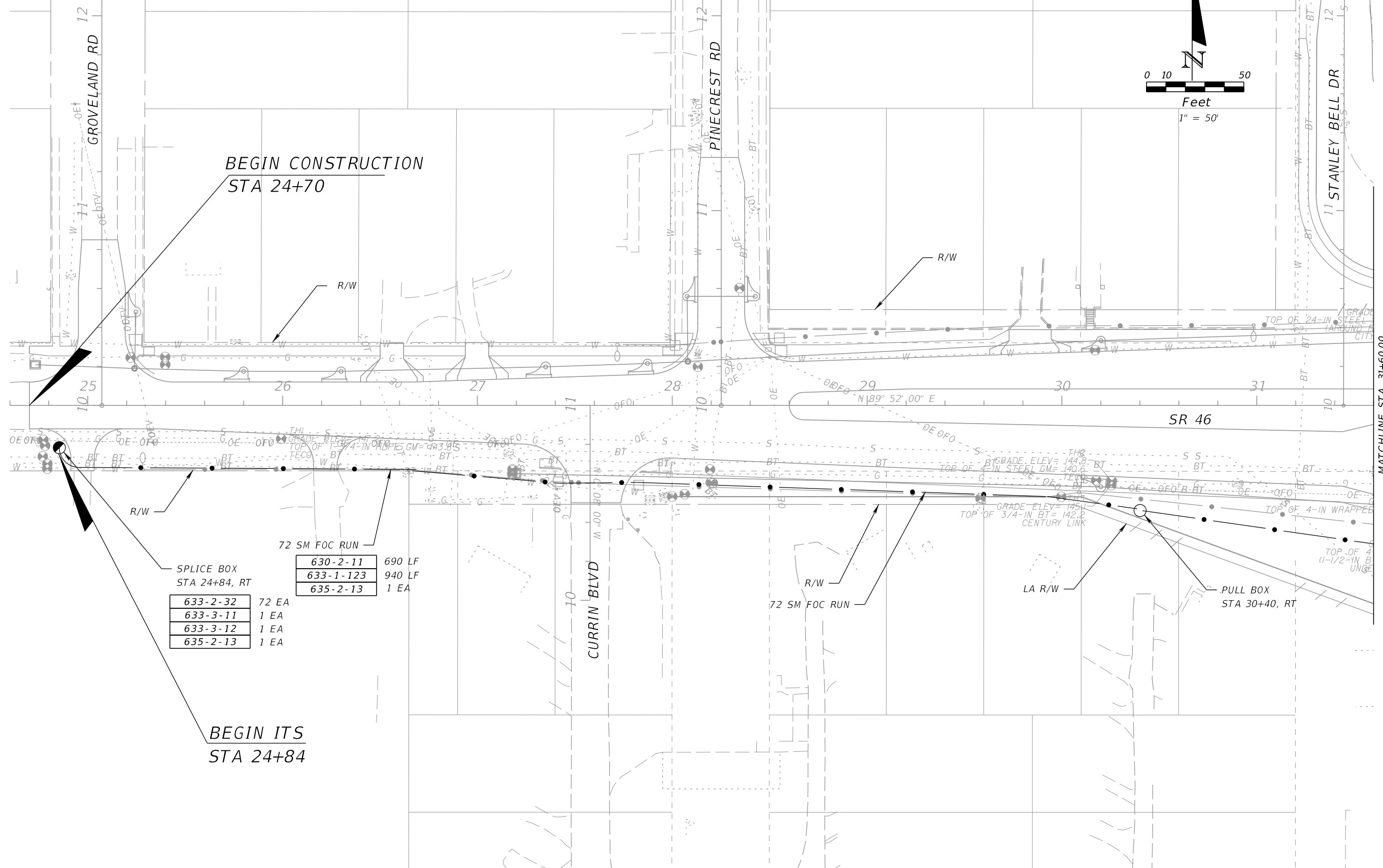
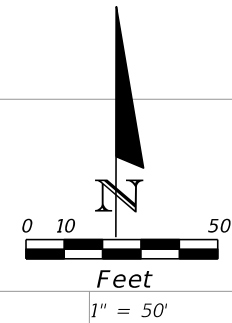


 3-NO 8 AWG MINIMUM SIZE CONDUCTORS FOR ITS DEVICE POWER INSIDE RED CONDUIT.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
						46	LAKE	

GENERAL NOTES

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BEGIN CONSTRUCTION
STA 24+70

BEGIN ITS
STA 24+84

MATCHLINE STA. 31+60.00
SEE ITS PLAN (2)

SPLICE BOX STA 24+84, RT		72 EA
633-2-32		72 EA
633-3-11		1 EA
633-3-12		1 EA
635-2-13		1 EA

72 SM FOC RUN		690 LF
630-2-11		690 LF
633-1-123		940 LF
635-2-13		1 EA

REVISIONS			
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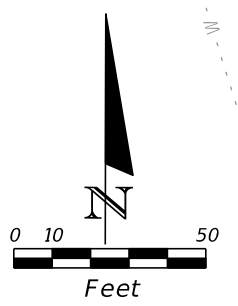
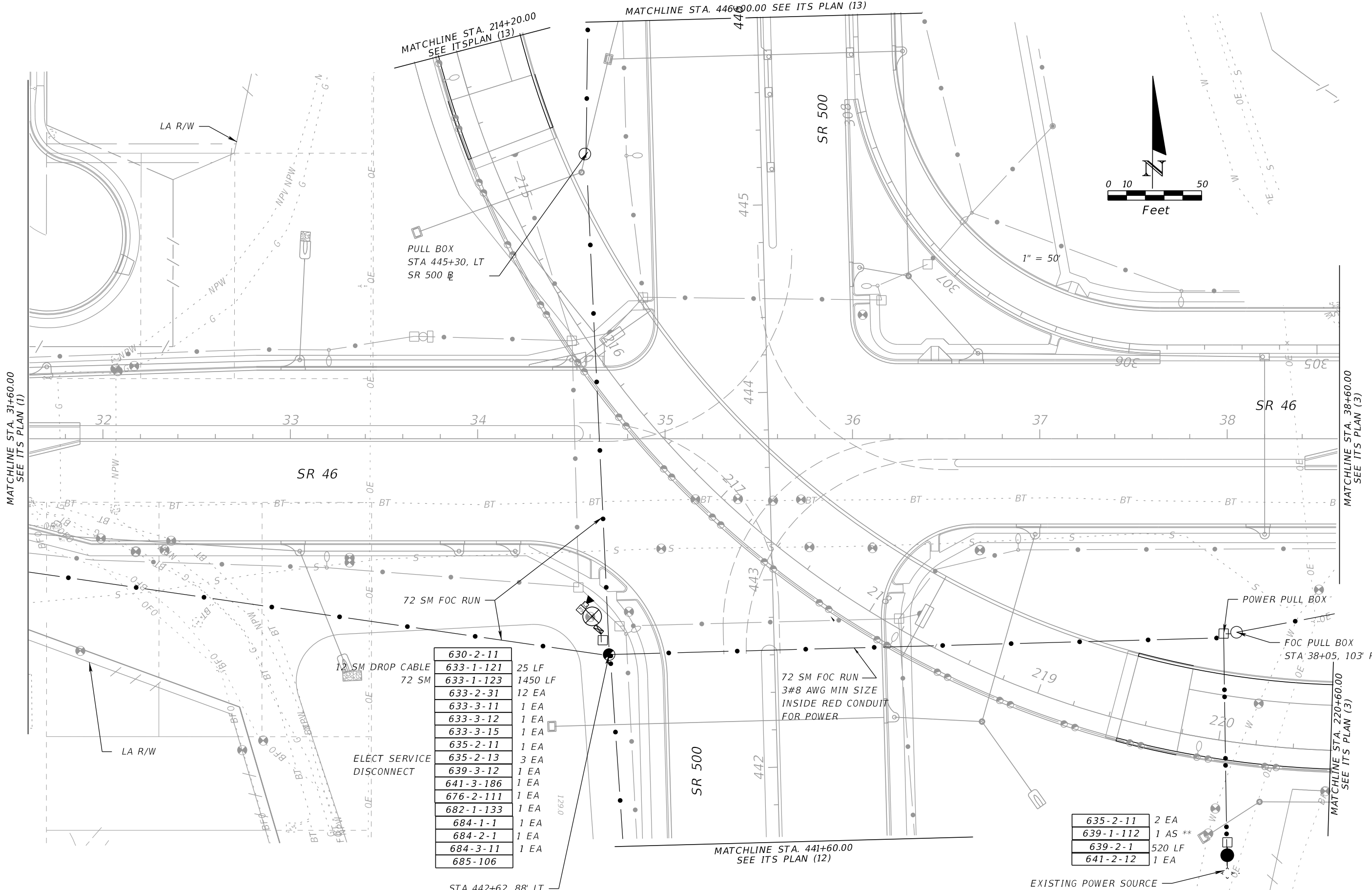
BES Inc
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MICHAEL J. NOESEN, P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (1)

SHEET NO.
IT-6

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630-2-11	
633-1-121	25 LF
633-1-123	1450 LF
633-2-31	12 EA
633-3-11	1 EA
633-3-12	1 EA
633-3-15	1 EA
635-2-11	1 EA
635-2-13	3 EA
639-3-12	1 EA
641-3-186	1 EA
676-2-111	1 EA
682-1-133	1 EA
684-1-1	1 EA
684-2-1	1 EA
684-3-11	1 EA
685-106	

635-2-11	2 EA
639-1-112	1 AS **
639-2-1	520 LF
641-2-12	1 EA

REVISIONS			
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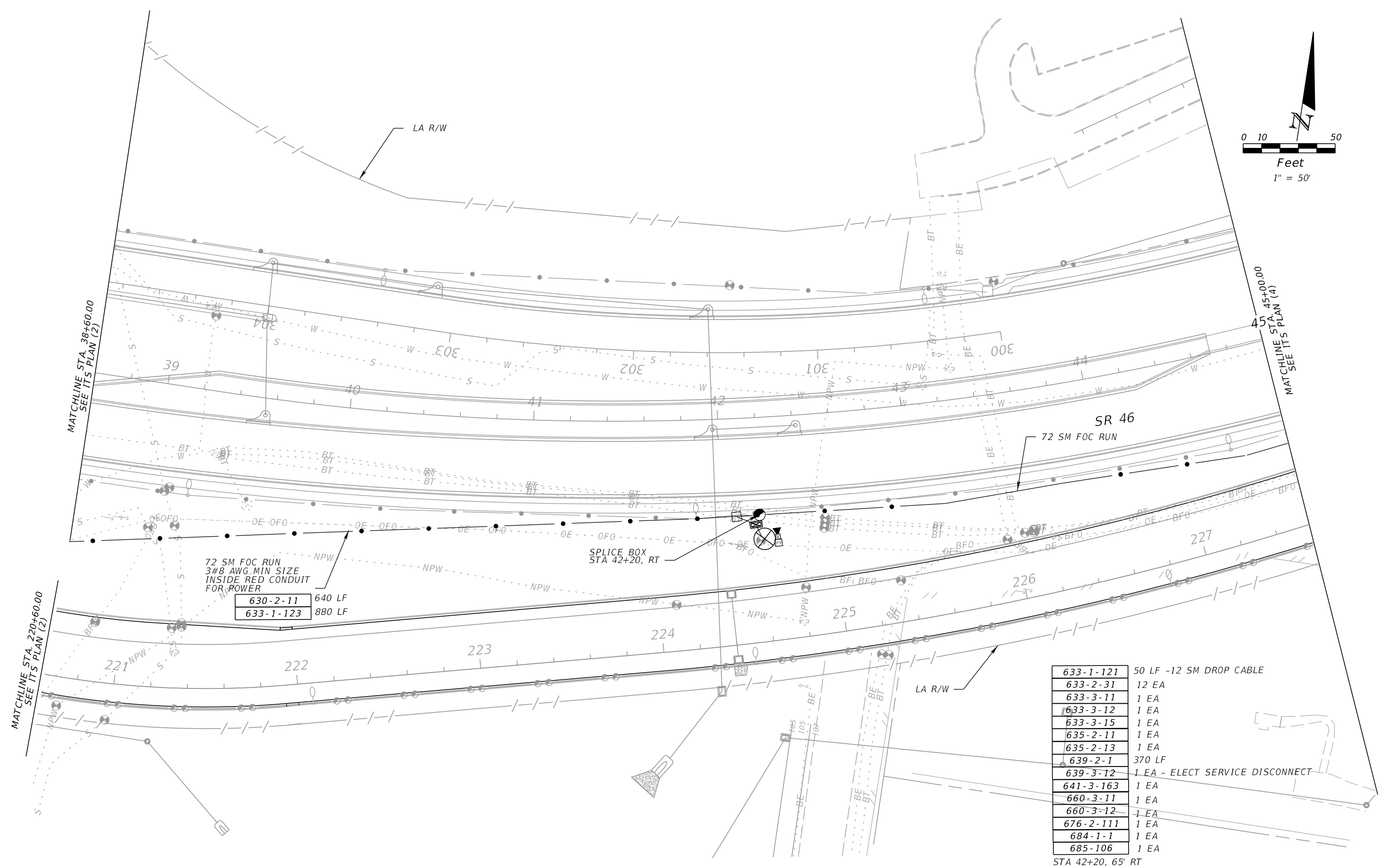
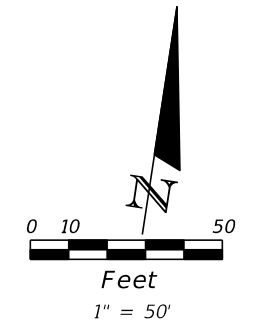
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
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ITS PLAN (2)

SHEET NO.
IT-7

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72 SM FOC RUN
3#8 AWG MIN SIZE
INSIDE RED CONDUIT
FOR POWER

630-2-11	640 LF
633-1-123	880 LF

633-1-121	50 LF -12 SM DROP CABLE
633-2-31	12 EA
633-3-11	1 EA
633-3-12	1 EA
633-3-15	1 EA
635-2-11	1 EA
635-2-13	1 EA
639-2-1	370 LF
639-3-12	1 EA - ELECT SERVICE DISCONNECT
641-3-163	1 EA
660-3-11	1 EA
660-3-12	1 EA
676-2-111	1 EA
684-1-1	1 EA
685-106	1 EA

STA 42+20, 65' RT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

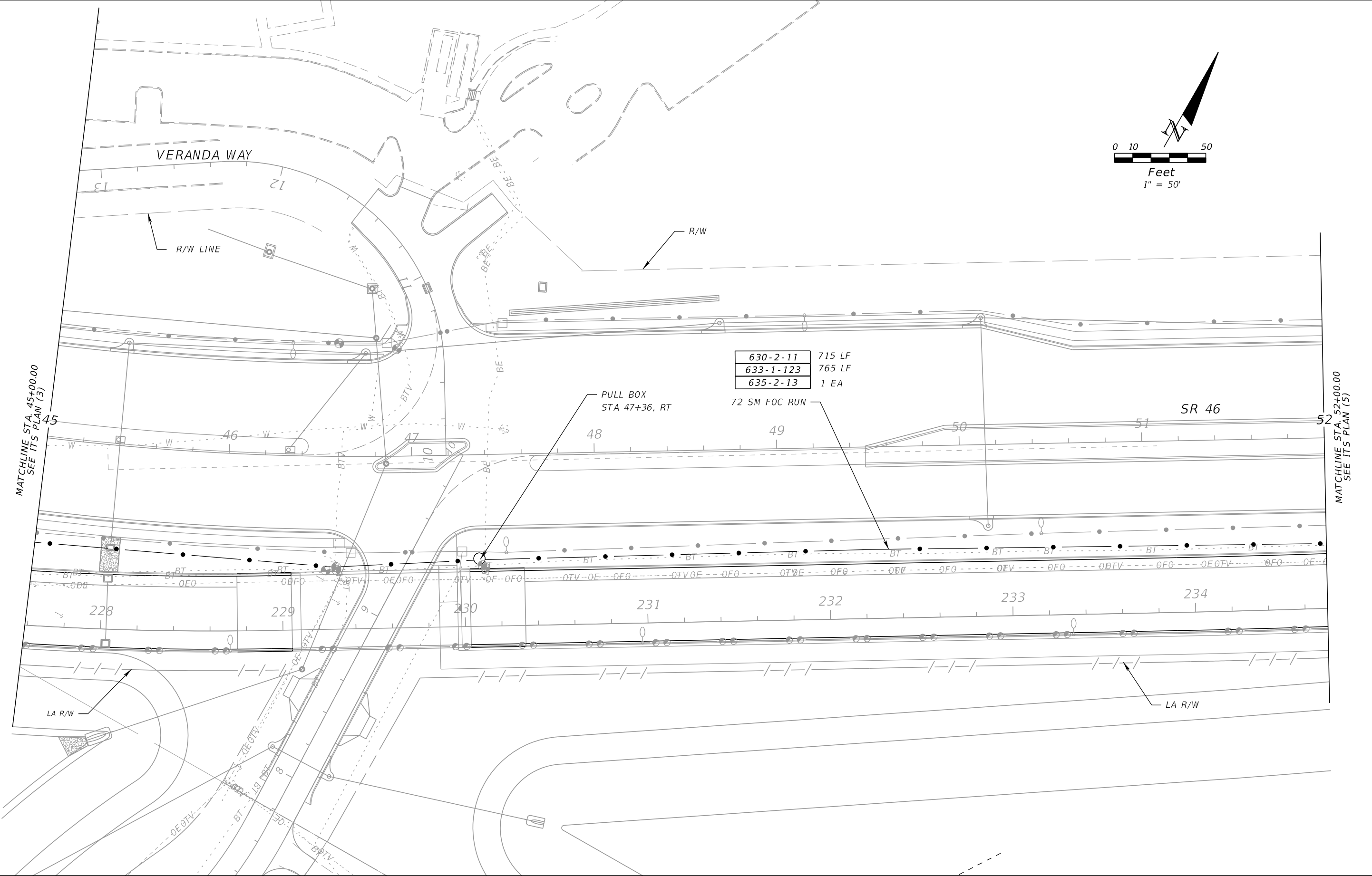
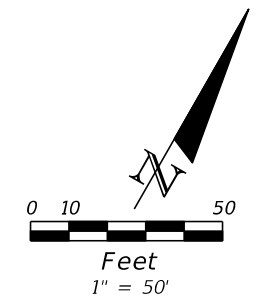
BES Inc
11007 N. 56th St., #208
Temple Terrace, FL 33617
(813) 985-7800
C.A. No. 9835
MICHAEL J. NOESEN, P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (3)

SHEET NO.
IT-8

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



630-2-11	715 LF
633-1-123	765 LF
635-2-13	1 EA

PULL BOX
STA 47+36, RT
72 SM FOC RUN

SR 46

MATCHLINE STA. 45+00.00
SEE ITS PLAN (3)

MATCHLINE STA. 52+00.00
SEE ITS PLAN (5)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

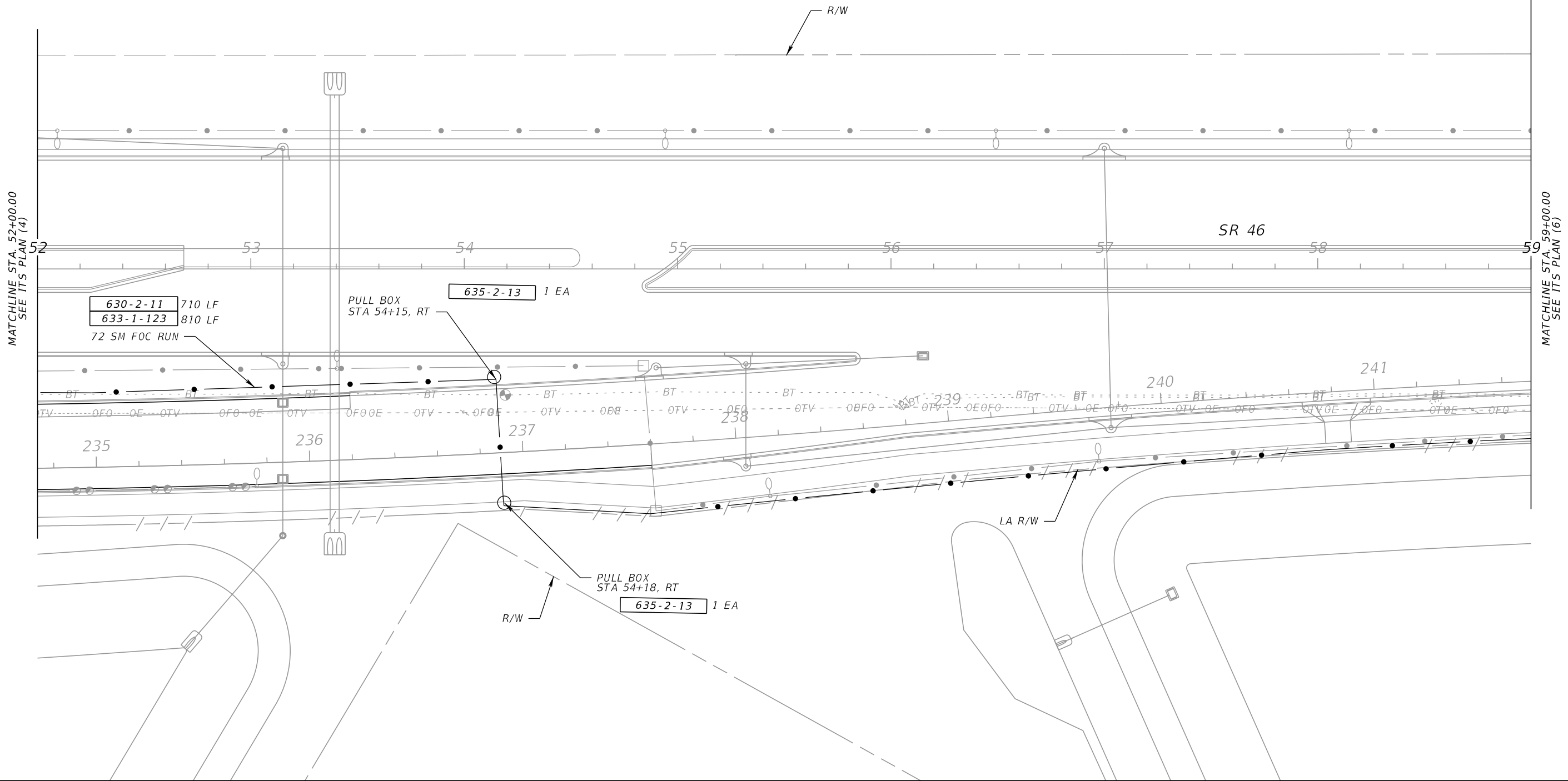
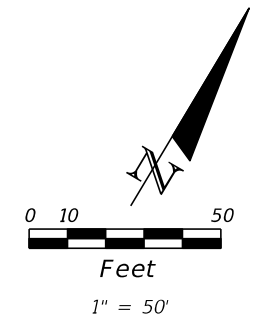
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11007 N. 56th St., #208
Temple Terrace, FL 33617
(813) 985-7800
C.A. No. 9835
MICHAEL J. NOESEN., P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (4)

SHEET NO.
IT-9

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



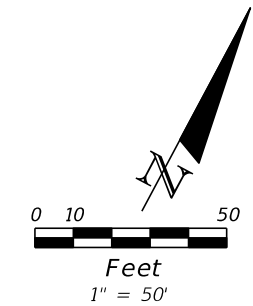
MATCHLINE STA. 52+00.00
SEE ITS PLAN (4)

MATCHLINE STA. 59+00.00
SEE ITS PLAN (6)

REVISIONS				BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 C.A. No. 9835 MICHAEL J. NOESEN, P.E. No. 42255	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLAN (5)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-10
					46	LAKE	238275-2-52-02		

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

12 SM DROP CABLE	633-1-121	195 LF
	633-2-31	12 EA
	633-3-12	1 EA
	633-3-15	1 EA
	635-2-11	1 EA
ELECT SERVICE DISCONNECT	639-3-12	1 EA
	660-3-11	1 EA
	660-3-12	1 EA
	641-3-163	1 EA
	676-2-111	1 EA
	682-1-133	1 EA
	684-1-1	1 EA
	684-2-1	1 EA
	684-3-11	1 EA
	685-106	1 EA



STA 63+05, 70' LT

635-2-11	1 EA
639-1-112	1 AS
639-2-1	150 LF
641-2-12	1 EA

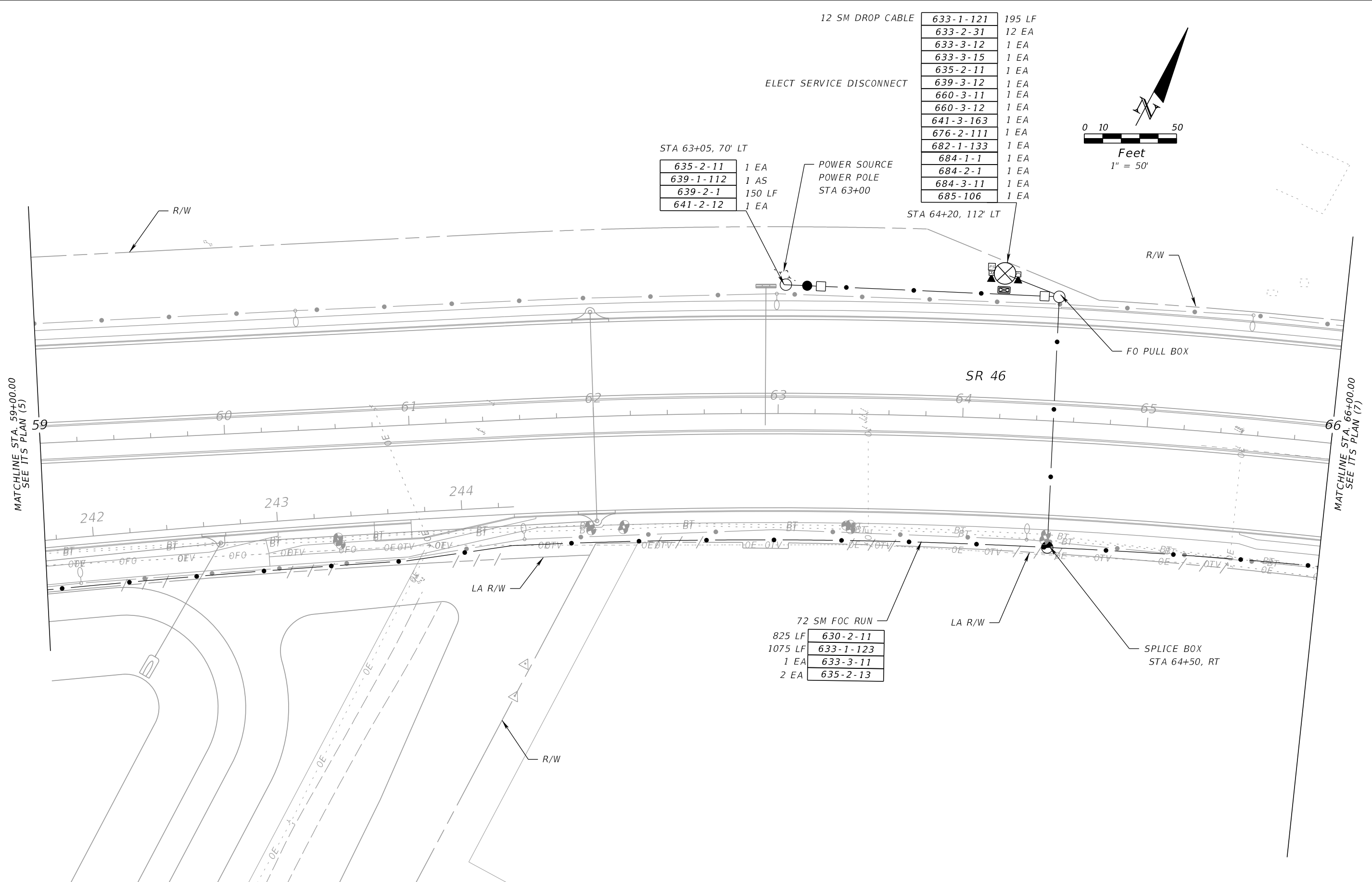
POWER SOURCE
POWER POLE
STA 63+00

STA 64+20, 112' LT

72 SM FOC RUN

825 LF	630-2-11
1075 LF	633-1-123
1 EA	633-3-11
2 EA	635-2-13

SPLICE BOX
STA 64+50, RT



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

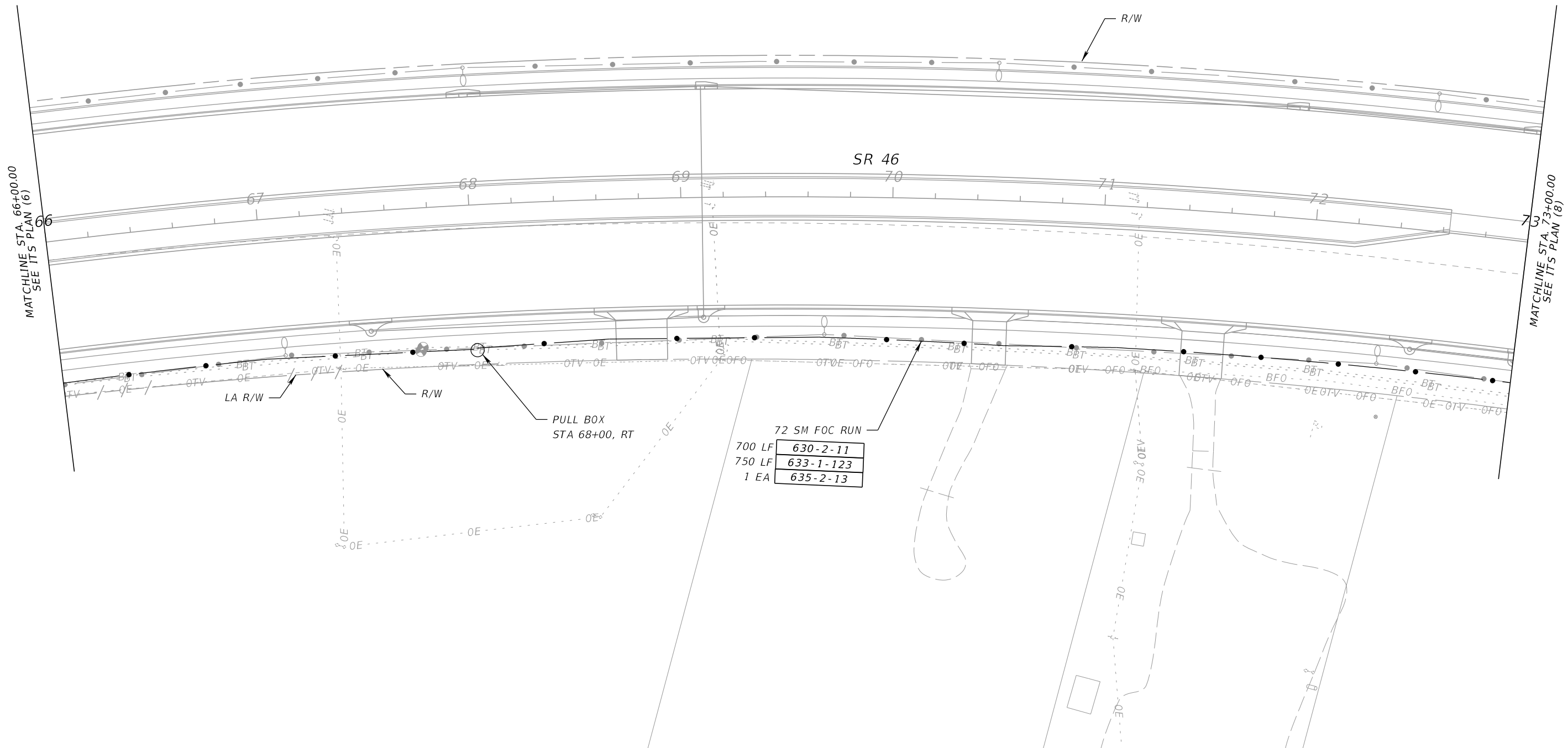
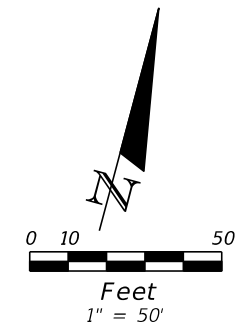
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MICHAEL J. NOESEN, P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (6)

SHEET NO.
IT-11

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



MATCHLINE STA. 66+00.00
SEE ITS PLAN (6)

MATCHLINE STA. 73+00.00
SEE ITS PLAN (8)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

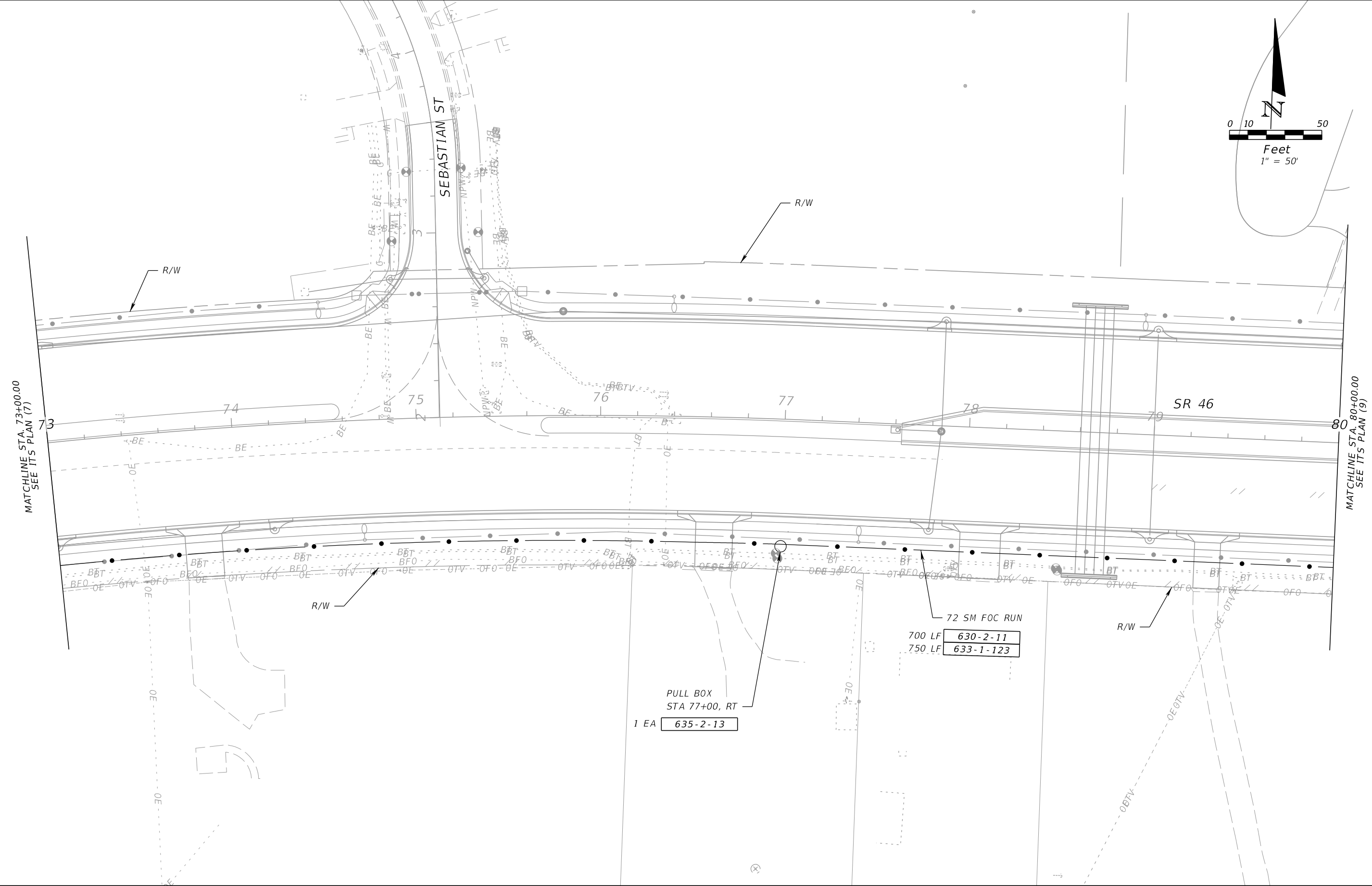
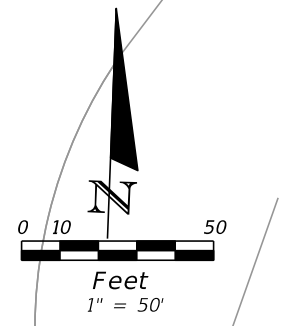
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (7)

SHEET NO.
IT-12

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

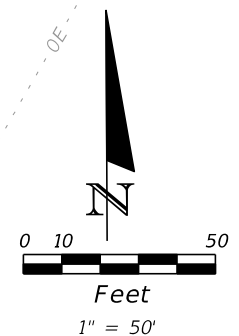
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

BES Inc
 11007 N. 56th St., #208
 Temple Terrace, FL 33617
 (813) 985-7800
 C.A. No. 9835
 MICHAEL J. NOESEN, P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

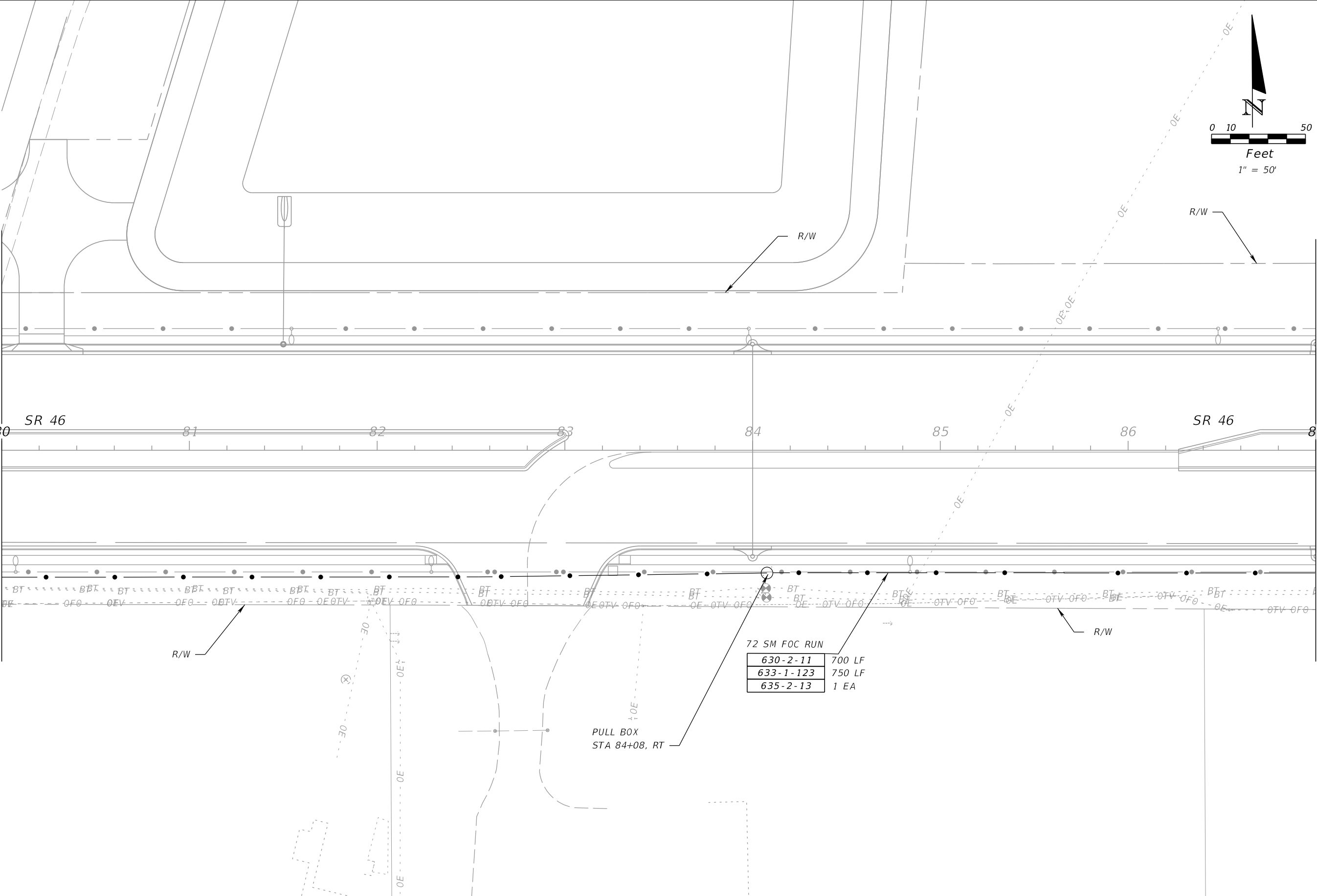
ITS PLAN (8)

SHEET NO.
IT-13



MATCHLINE STA. 80+00.00
SEE ITS PLAN (8)

MATCHLINE STA. 87+00.00
SEE ITS PLAN (10)



72 SM FOC RUN

630-2-11	700 LF
633-1-123	750 LF
635-2-13	1 EA

PULL BOX
STA 84+08, RT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

BES Inc
11007 N. 56th St., #208
Temple Terrace, FL 33617
(813) 985-7800
C.A. No. 9835
MICHAEL J. NOESEN, P.E. No. 42255

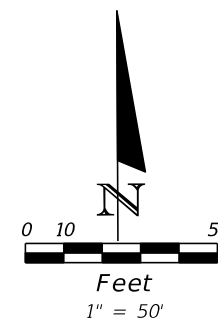
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (9)

SHEET NO.
IT-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 ITS
STA 94+00



MATCHLINE STA. 87+00.00
SEE ITS PLAN (9)

SR 46

VISTA VIEW

72 SM FOC RUN
700 LF 630-2-11
750 LF 633-1-123

COORDINATE /
CONNECT TO
PULL OR SPLICE BOX, BY
FPID #238275-3-52-02,
STA 94+00 RT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

BES Inc
11007 N. 56th St., #208
Temple Terrace, FL 33617
(813) 985-7800
C.A. No. 9835
MICHAEL J. NOESEN., P.E. No. 42255

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

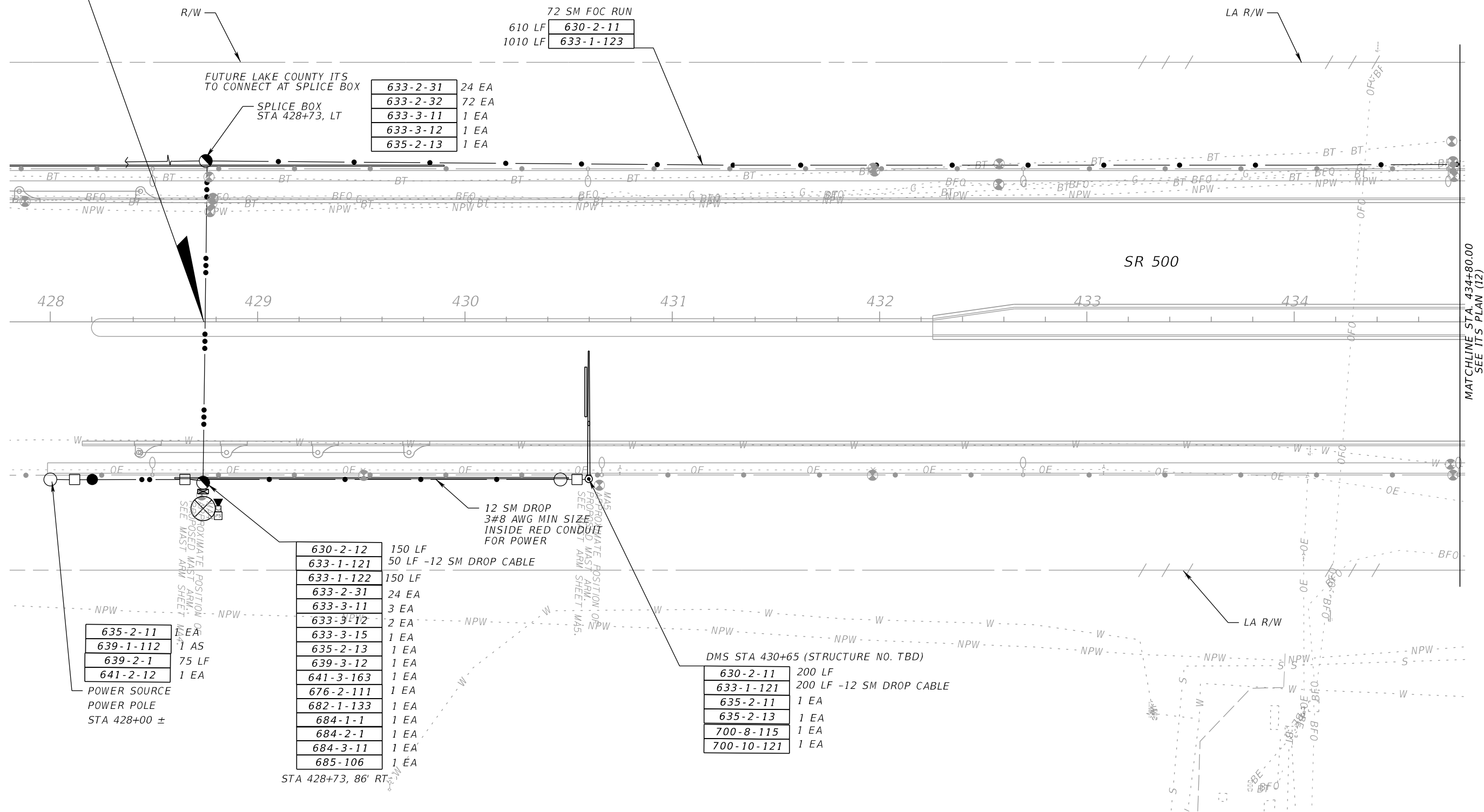
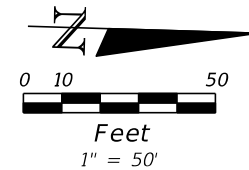
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (10)

SHEET
NO.
IT-15

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

BEGIN ITS SR 500
STA 428+73



633-2-31	24 EA
633-2-32	72 EA
633-3-11	1 EA
633-3-12	1 EA
635-2-13	1 EA

72 SM FOC RUN
610 LF 630-2-11
1010 LF 633-1-123

630-2-12	150 LF
633-1-121	50 LF -12 SM DROP CABLE
633-1-122	150 LF
633-2-31	24 EA
633-3-11	3 EA
633-3-12	2 EA
633-3-15	1 EA
635-2-13	1 EA
639-3-12	1 EA
641-3-163	1 EA
676-2-111	1 EA
682-1-133	1 EA
684-1-1	1 EA
684-2-1	1 EA
684-3-11	1 EA
685-106	1 EA

DMS STA 430+65 (STRUCTURE NO. TBD)	
630-2-11	200 LF
633-1-121	200 LF -12 SM DROP CABLE
635-2-11	1 EA
635-2-13	1 EA
700-8-115	1 EA
700-10-121	1 EA

635-2-11	1 EA
639-1-112	1 AS
639-2-1	75 LF
641-2-12	1 EA

POWER SOURCE
POWER POLE
STA 428+00 ±

12 SM DROP
3#8 AWG MIN SIZE
INSIDE RED CONDUIT
FOR POWER

MATCHLINE STA. 434+80.00
SEE ITS PLAN (12)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

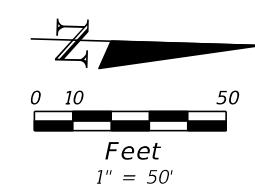
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Temple Terrace, FL 33617
(813) 985-7800
C.A. No. 9835
MICHAEL J. NOESEN, P.E. No. 42255

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (11)

SHEET NO.
IT-16

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



72 SM FOC RUN	
700 LF	630-2-11
750 LF	633-1-123
1 EA	635-2-13

MATCHLINE STA. 434+80.00
SEE ITS PLAN (11)

MATCHLINE STA. 441+60.00
SEE ITS PLAN (2)

LA R/W

PULL BOX
STA 437+40, LT

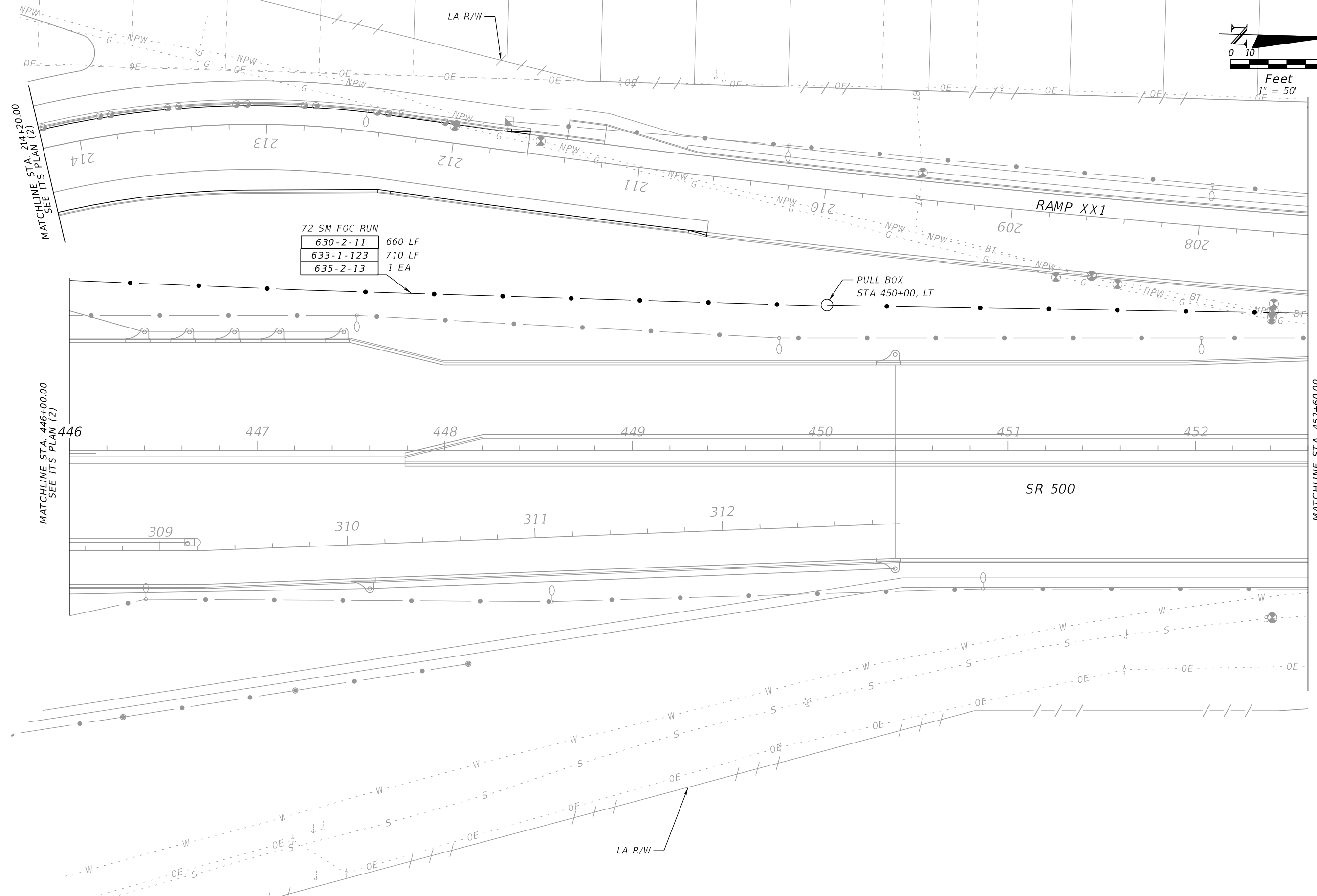
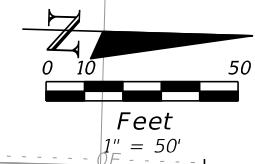
SR 500

SR 500

LA R/W

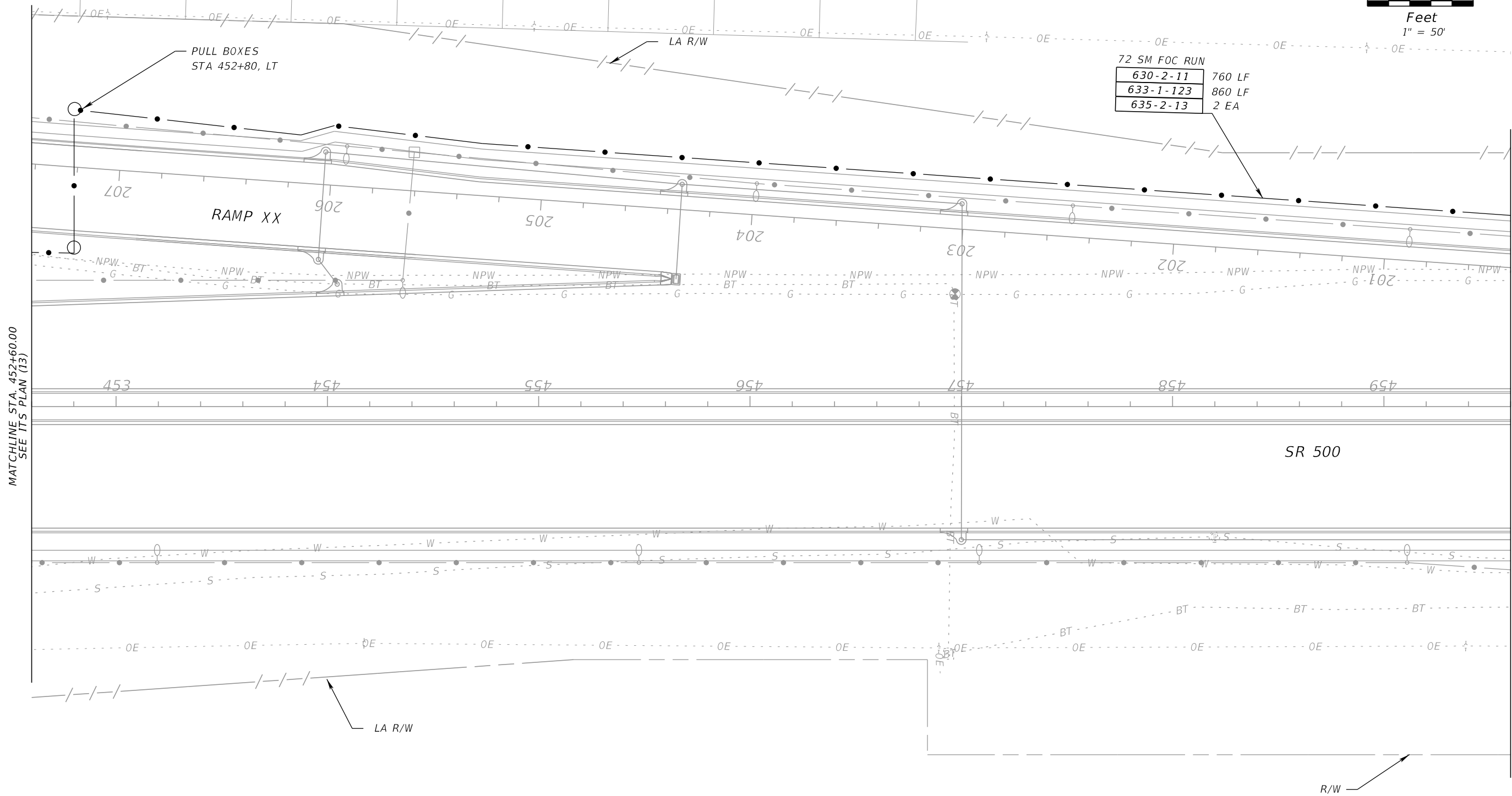
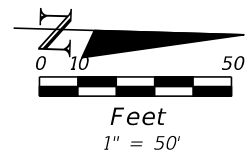
REVISIONS				BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 C.A. No. 9835 MICHAEL J. NOESEN, P.E. No. 42255	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLAN (12)	SHEET NO. IT-17
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-2-52-02		

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-2-52-02		

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MATCHLINE STA. 452+60.00
SEE ITS PLAN (13)

MATCHLINE STA. 459+60.00
SEE ITS PLAN (15)

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

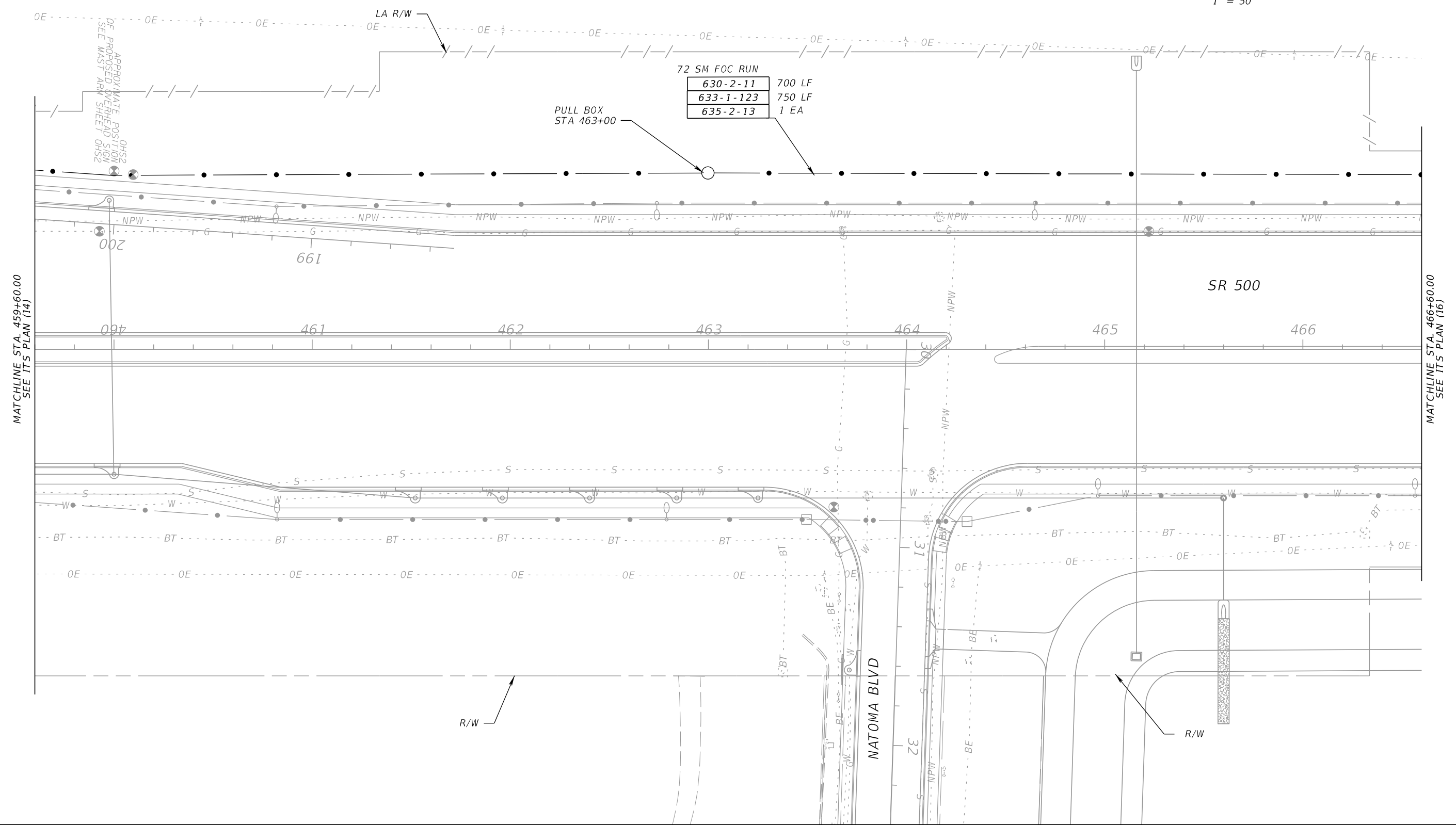
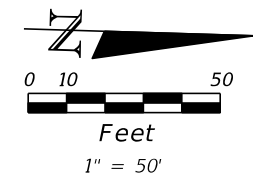
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46	LAKE	238275-2-52-02

ITS PLAN (14)

SHEET
NO.

IT-19



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

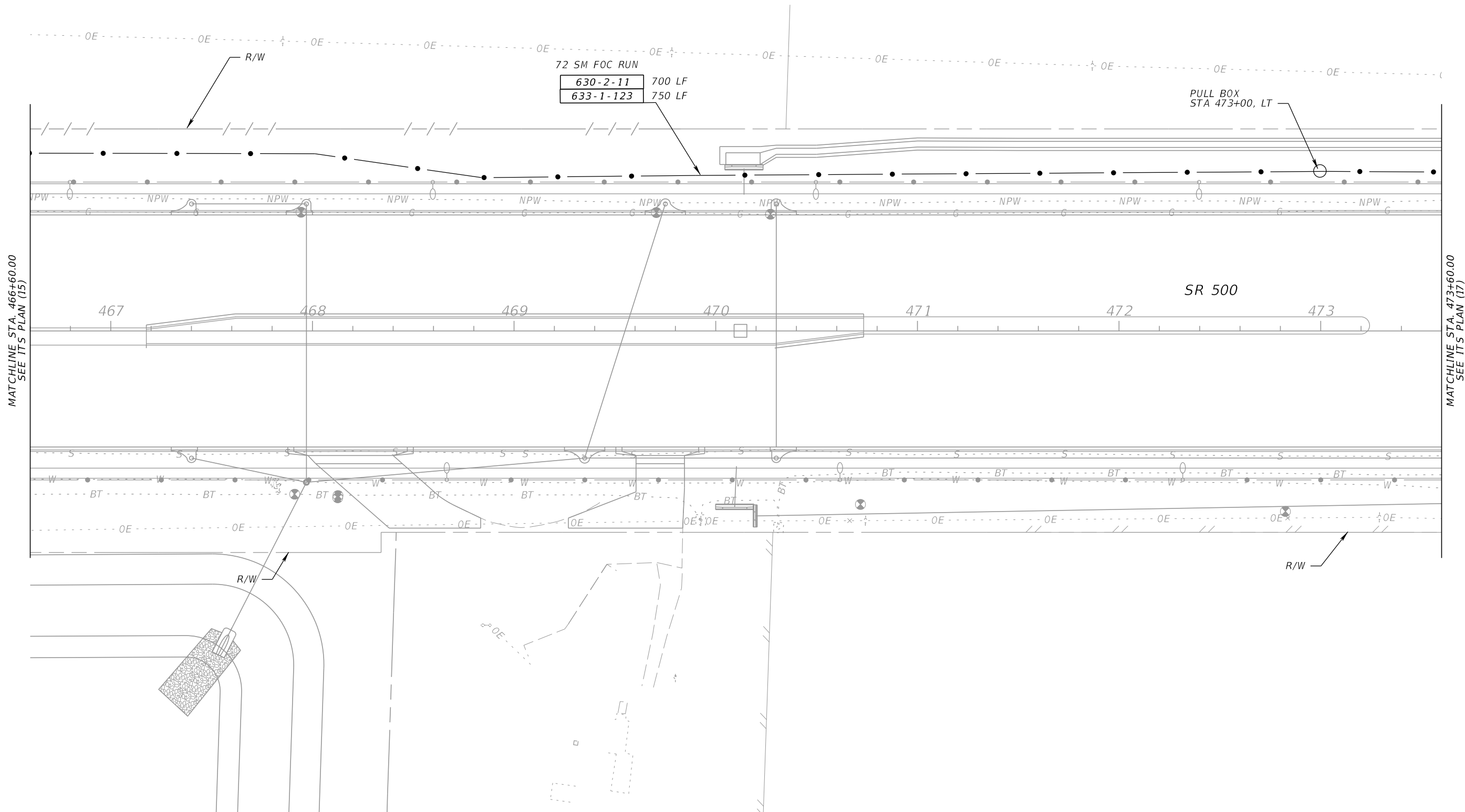
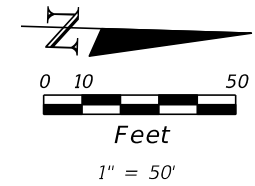
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

ITS PLAN (15)

SHEET NO.
IT-20

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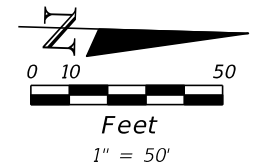


MATCHLINE STA. 466+60.00
SEE ITS PLAN (15)

MATCHLINE STA. 473+60.00
SEE ITS PLAN (17)

REVISIONS				BES Inc 11007 N. 56th St., #208 Temple Terrace, FL 33617 (813) 985-7800 MICHAEL J. NOESEN, P.E. No. 42255	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ITS PLAN (16)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-21
				C.A. No. 9835	46	LAKE	238275-2-52-02		

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



630-2-11	310 LF
633-1-121	50 LF -12 SM DROP CABLE
633-1-123	520 LF-72 SM FOC RUN
633-2-31	24 EA
633-2-32	72 EA
633-3-11	3 EA
633-3-12	1 EA
633-3-15	1 EA
635-2-13	1 EA
639-3-12	1 EA- ELECT. SERVICE DISCONNECT
641-3-163	1 EA
676-2-111	1 EA
682-1-133	1 EA
684-1-1	1 EA
684-2-1	1 EA
684-3-11	1 EA
685-106	1 EA

635-2-11	1 EA
639-1-112	1 AS
639-2-1	60 LF
641-2-12	1 EA

DMS STA 474+75
STRUCTURE NO: TBD

10 LF	630-2-11
12 SM DROP CABLE-250 LF	633-1-121
1 EA	635-2-11
1 EA	635-2-13
1 EA	700-8-115
1 EA	700-10-121

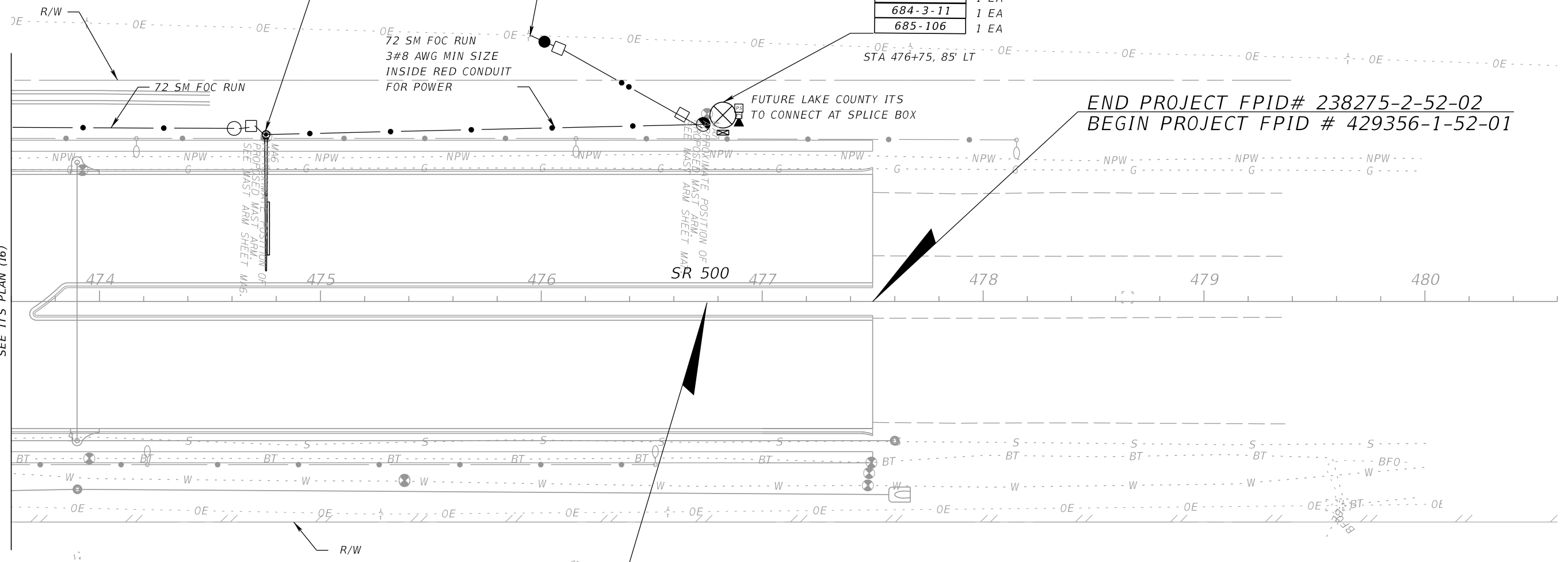
EXISTING POWER SOURCE
STA 476+00 ±
DMS, STA 474+75, LT
(STRUCTURE NO. TBD)

STA 476+75, 85' LT

END PROJECT FPID# 238275-2-52-02
BEGIN PROJECT FPID # 429356-1-52-01

END ITS
STA 476+75

MATCHLINE STA. 473+60.00
SEE ITS PLAN (16)

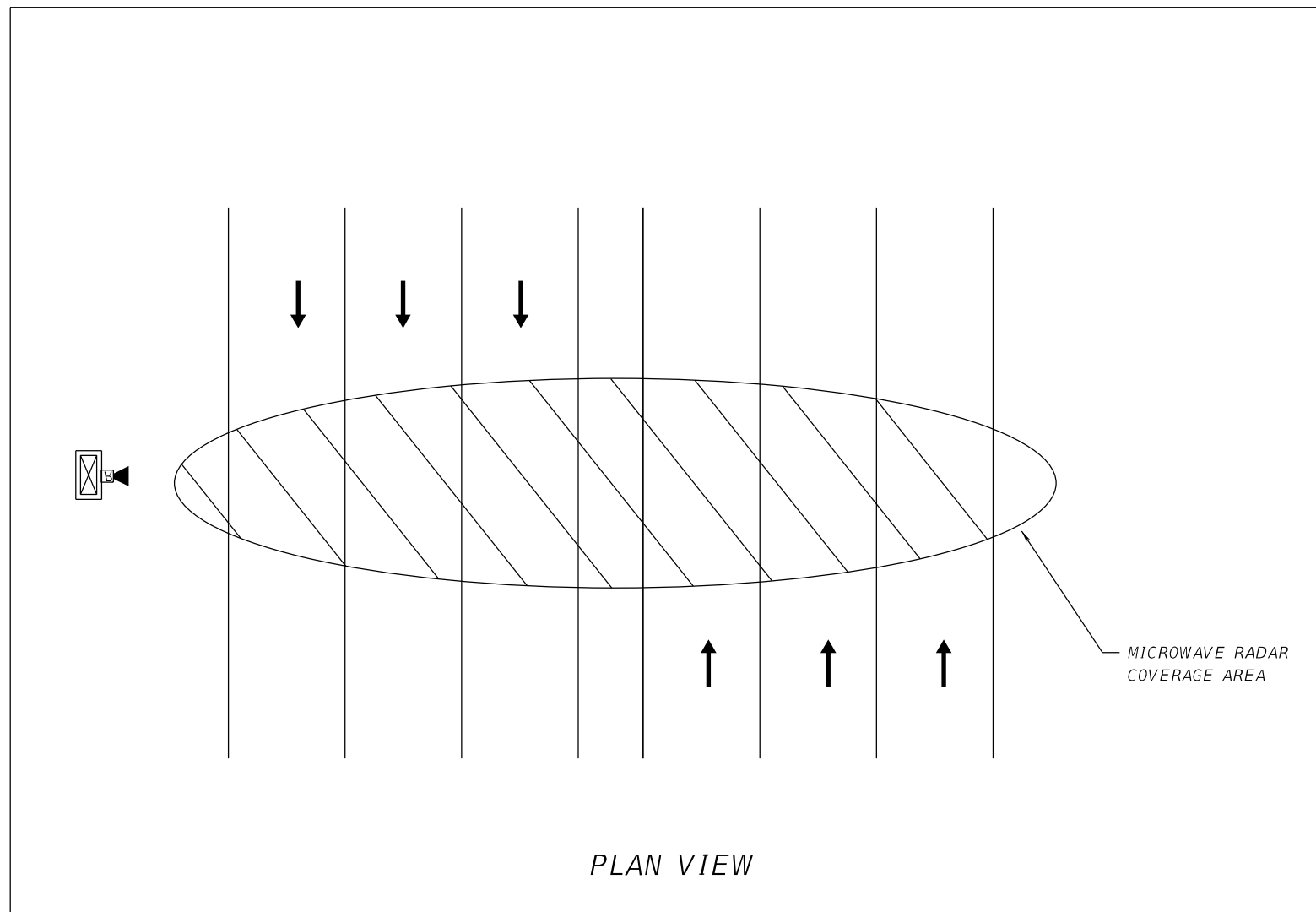
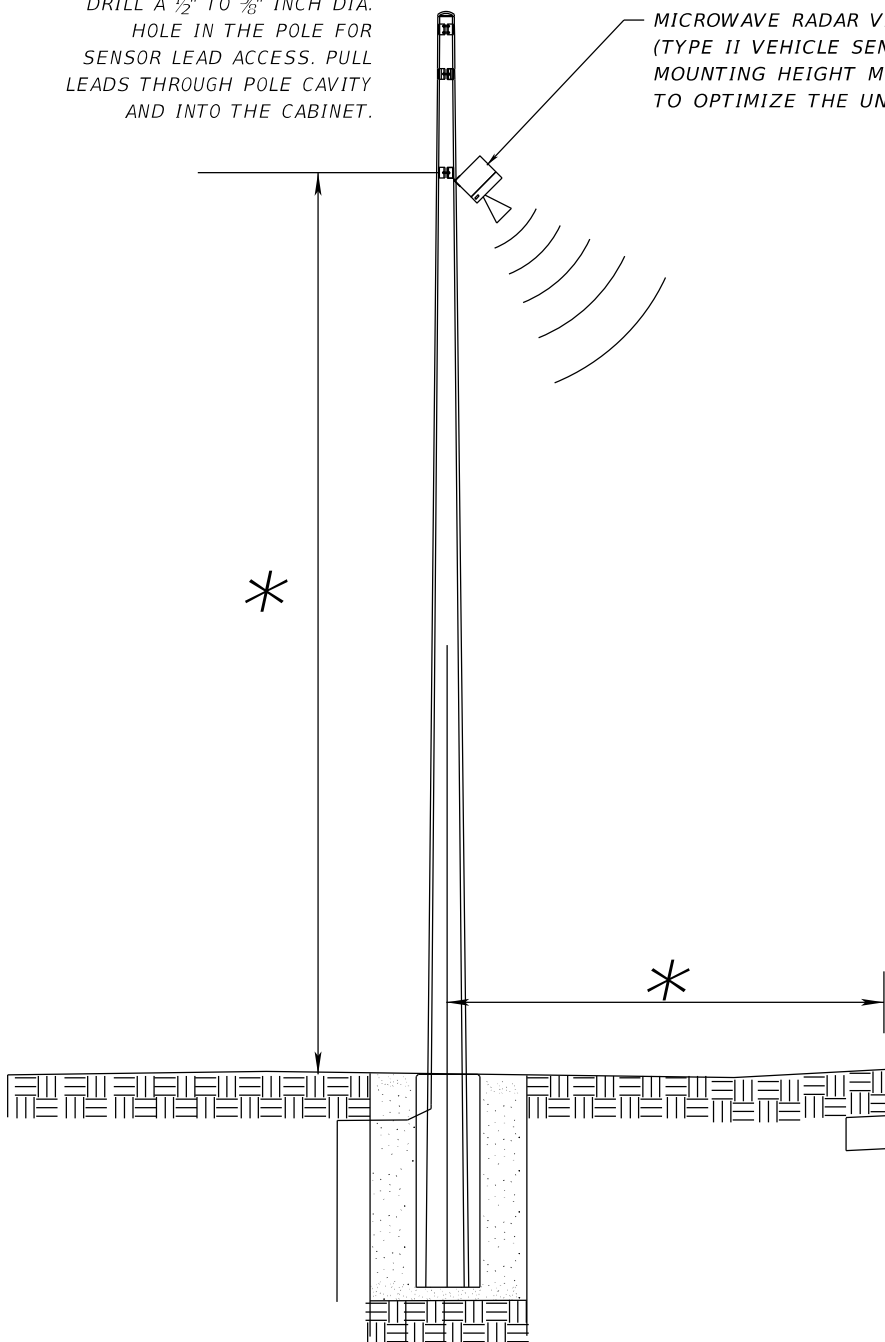


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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					46	LAKE	238275-2-52-02		

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DRILL A 1/2" TO 5/8" INCH DIA. HOLE IN THE POLE FOR SENSOR LEAD ACCESS. PULL LEADS THROUGH POLE CAVITY AND INTO THE CABINET.

MICROWAVE RADAR VEHICLE SENSOR (TYPE II VEHICLE SENSOR-TYPICAL MOUNTING) MOUNTING HEIGHT MUST BE ADJUSTED TO OPTIMIZE THE UNIT'S COVERAGE AREA.



PLAN VIEW

TYPE II VEHICLE SENSOR MICROWAVE RADAR

* MOUNTING HEIGHT AND OFFSET TO MATCH MANUFACTURER'S RECOMMENDATION.

THE MICROWAVE VEHICLE DETECTION SYSTEM (MVDS) MUST BE CAPABLE OF DETECTING UP TO EIGHT LANES OF TRAFFIC (IN EITHER OR BOTH DIRECTIONS) WHEN MOUNTED PERPENDICULAR TO THE ROADWAY.

COVERAGE AREA OF THE UNIT IS AFFECTED BY THE ROADWAY GEOMETRY: DISTANCE FROM THE TRAVEL LANES, MEDIAN TYPE AND WIDTH, BARRIER WALLS, ETC.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

BES Inc
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Temple Terrace, FL 33617
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
46	LAKE	238275-2-52-02

MVDS INSTALLATION DETAIL

SHEET NO.
IT-23

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