

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

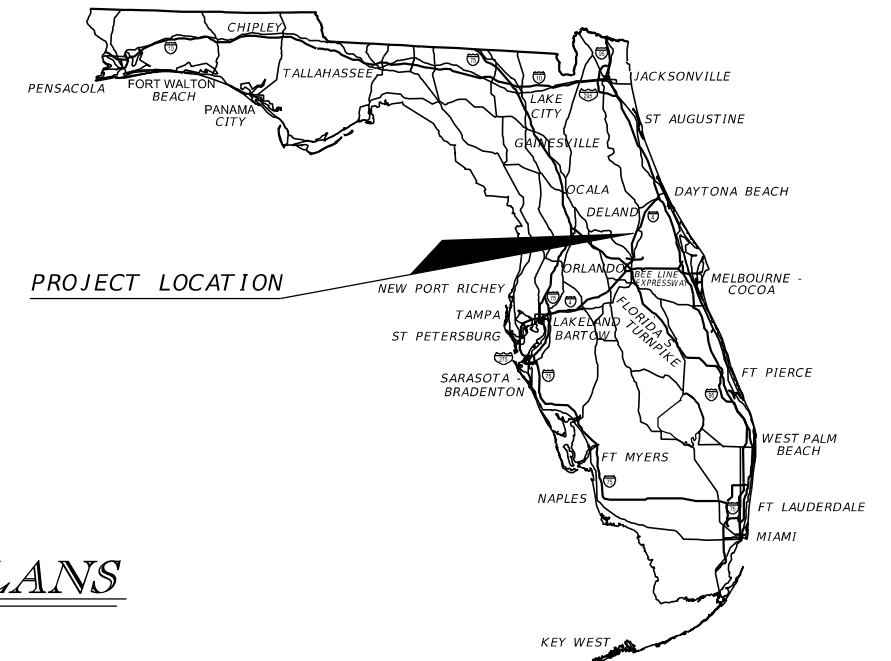
CONTRACT PLANS

FINANCIAL PROJECT ID 240200-2-52-01

(FEDERAL FUNDS)

SEMINOLE COUNTY (77320)

STATE ROAD NO. 429 (WEKIVA PARKWAY SECTION 7A)



INDEX OF ITS PLANS

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INTELLIGENT TRANSPORTATION SYSTEM PLANS

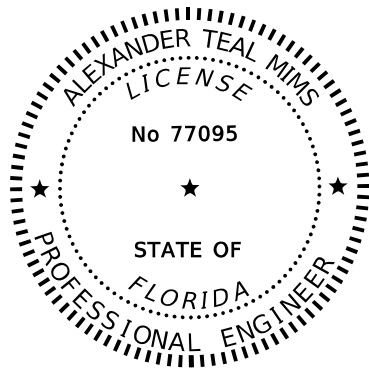
**ITS PLANS
ENGINEER OF RECORD:**

ALEXANDER TEAL MIMS , P.E.
P.E. NO.: 77095
TRAFFIC ENGINEERING DATA SOLUTIONS
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
CONTRACT NO.: C-9B55
VENDOR NO.: 63-0247014
CERTIFICATE OF AUTHORIZATION NO.: 27392

FDOT PROJECT MANAGER:

KEVIN MOSS, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T5626	18	IT-1



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

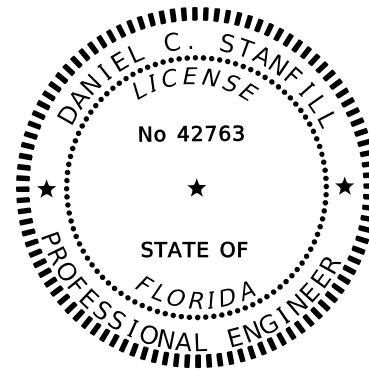
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TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
CERTIFICATION OF AUTHORIZATION: 27392
ALEXANDER TEAL MIMS, P.E. NO 77095

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

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IT-73	DIRECTIONAL BORE AND TRENCHING DETAIL
IT-74	ROUTE MARKER DETAILS



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
919 LAKE BALDWIN LANE
ORLANDO, FL 32814
CERTIFICATION OF AUTHORIZATION: 5882
DANIEL C. STANFILL, P.E. NO. 42763

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

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SHEET NO.	SHEET DESCRIPTION
IT-1A	SIGNATURE SHEET
GI-1 - GI-4	REPORT OF SPT BORINGS

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-1A
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

SIGNATURE SHEET

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																		TOTAL THIS SHEET		REF. SHEET	
			IT-8		IT-9		IT-10		IT-11		IT-12		IT-13		IT-14		IT-15		IT-16		IT-17			
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL		PLAN
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	543		1364		1210		1243		1212		1502		1255		1516		1499		1167		12511	
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF			410		548		514		288				298						839		2897	
630-2-14	CONDUIT, F&I, ABOVEGROUND	LF																						
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS	LF			215								584		1209		761		752		785		4306	
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	943		1899		1899		1898		1900		1702		2353		1516		1499		2297		17906	
633-2-31	FIBER OPTIC CONNECTION, SPLICE	EA			24								6								30		60	
633-2-32	FIBER OPTIC CONNECTION, TERMINATION	EA																						
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	2		1																1		4	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA			2								1								3		6	
633-3-13	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA			12								6								18		36	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED	EA			1								1								7		3	
633-3-17	FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL	EA			1								1								2		4	
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, F&I	LF			10																10		20	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	2		6		4		2		4		3		4		3		4		6		38	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA					1														7		2	
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR	EA	2		2		3		3		2		1		4						4		21	
635-3-11	JUNCTION BOX, F&I, AERIAL	EA																						
635-3-12	JUNCTION BOX, F&I, MOUNTED	EA			1								1								1		3	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS			1																7		2	
639-2-1	ELECTRIC SERVICE WIRE	LF			27.5								369		809		761		752		657		3623	
639-3-11	ELECTRICAL SERVICE DISCONNECT, POLE MOUNT	EA			1																1		2	
639-6-1	ELECTRICAL POWER SERVICE - TRANSFORMER, F&I	EA																			1		1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11	EA			2																2		4	
641-2-15	PRESTRESSED CONCRETE POLE, F&I, TYPE P-V	EA											1										1	
641-3-186	CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86'	EA			1																1		2	
641-3-263	CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63'	EA																						
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA			1																1		2	
660-3-11	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT	EA			1								1								1		3	
660-3-12	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT	EA			1								1								1		3	
676-2-122	ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D	EA			1																1		2	
676-2-143	ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D	EA																						
682-1-133	ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, 1P, HIGH DEFINITION	EA			1																1		2	
684-1-1	MANAGED FIELD ETHERNET SWITCH, F&I	EA			1																1		2	
684-2-1	DEVICE SERVER, F&I	EA			1								1								1		3	
684-5-1	MEDIA CONVERTER, F&I	EA											1										1	
685-1-11	UNINTERRUPTIBLE POWER SUPPLY, F&I, LINE INTERACTIVE	EA			1																1		2	
700-9-137	WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF	EA																						

<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					ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES			SHEET NO. IT-2
REVISIONS																								
DATE	DESCRIPTION	DATE	DESCRIPTION																					
ROAD NO. SR 429		COUNTY SEMINOLE		FINANCIAL PROJECT ID 240200-2-52-01																				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																		TOTAL THIS SHEET		REF. SHEET				
			IT-18		IT-19		IT-20		IT-21		IT-22		IT-23		IT-24		IT-25		IT-26		IT-27			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	82		1500					1500		1593		989		1492		72		53		291		1500		13424	
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF										59		948												1423	
630-2-14	CONDUIT, F&I, ABOVEGROUND	LF										385														385	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS	LF							855		1081		210									527		758		3431	
633-1-122	FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS	LF															1212				1284					2496	
633-1-123	FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS	LF			1500		1496		1700		1704		2641		1964		2151		2299		1500					16955	
633-2-31	FIBER OPTIC CONNECTION, SPLICE	EA						6		42		24				56		54								182	
633-2-32	FIBER OPTIC CONNECTION, TERMINATION	EA								12																12	
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		5		2			1		3								12	
633-3-13	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA						6		30		12						18								66	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED	EA						1		7		1						1								4	
633-3-17	FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL	EA						1		4		1						2								8	
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, F&I	LF										10						10								20	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA			2		3		3		6		6		4		4		4				2			34	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA																									
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR	EA	1						1		1		5		2		3		5							18	
635-3-11	JUNCTION BOX, F&I, AERIAL	EA										2														2	
635-3-12	JUNCTION BOX, F&I, MOUNTED	EA							1			1							1							3	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS										1		1												2	
639-2-1	ELECTRIC SERVICE WIRE	LF	24						640		720		437		759		808		767		758					4913	
639-3-11	ELECTRICAL SERVICE DISCONNECT, POLE MOUNT	EA										1		2												4	
639-6-1	ELECTRICAL POWER SERVICE - TRANSFORMER, F&I	EA																								1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11	EA										2		1												3	
641-2-15	PRESTRESSED CONCRETE POLE, F&I, TYPE P-V	EA							1																	1	
641-3-186	CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86'	EA											1													2	
641-3-263	CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63'	EA																									
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA												1												2	
660-3-11	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT	EA							1				1													3	
660-3-12	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT	EA							1				1													3	
676-2-122	ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D	EA											1													2	
676-2-143	ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D	EA											1													1	
682-1-133	ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, 1P, HIGH DEFINITION	EA																								2	
684-1-1	MANAGED FIELD ETHERNET SWITCH, F&I	EA											1		1											3	
684-2-1	DEVICE SERVER, F&I	EA																								3	
684-5-1	MEDIA CONVERTER, F&I	EA							1																	1	
685-1-11	UNINTERRUPTIBLE POWER SUPPLY, F&I, LINE INTERACTIVE	EA																								2	
700-9-137	WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF	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					ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ROAD NO. COUNTY FINANCIAL PROJECT ID SR 429 SEMINOLE 240200-2-52-01			SHEET NO. IT-3	
REVISIONS																									
DATE	DESCRIPTION	DATE	DESCRIPTION																						

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TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																		TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			IT-28		IT-29		IT-30		IT-31		IT-32		IT-33		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	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	1500		1164		937		521		651		246										5019	30954	
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF		335		346		207		99		183											1170	5490	
630-2-14	CONDUIT, F&I, ABOVEGROUND	LF																						385	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS	LF	758		1156		360																2274	10011	
633-1-122	FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS	LF																						2496	
633-1-123	FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS	LF	1500		2299		2283																6082	40943	
633-2-31	FIBER OPTIC CONNECTION, SPLICE	EA					6																6	248	
633-2-32	FIBER OPTIC CONNECTION, TERMINATION	EA																							12
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA					2																2	10	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA					1																1	19	
633-3-13	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA					6																6	108	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED	EA					7																1	8	
633-3-17	FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL	EA					1																1	13	
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, F&I	LF																							40
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	4		5		5																14	86	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA							3		1												4	6	
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR	EA			5		5				1		1										12	51	
635-3-11	JUNCTION BOX, F&I, AERIAL	EA																							2
635-3-12	JUNCTION BOX, F&I, MOUNTED	EA					1																1	7	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY	AS																							4
639-2-1	ELECTRIC SERVICE WIRE	LF	758		756		145																1659	10195	
639-3-11	ELECTRICAL SERVICE DISCONNECT, POLE MOUNT	EA																							6
639-6-1	ELECTRICAL POWER SERVICE - TRANSFORMER, F&I	EA																							2
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II	EA																							7
641-2-15	PRESTRESSED CONCRETE POLE, F&I, TYPE P-V	EA																							2
641-3-186	CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86'	EA																							4
641-3-263	CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63'	EA					1																1	1	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA																							4
660-3-11	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT	EA					1																1	7	
660-3-12	VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT	EA					1																1	7	
676-2-122	ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D	EA																							4
676-2-143	ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D	EA																							1
682-1-133	ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, IP, HIGH DEFINITION	EA																							4
684-1-1	MANAGED FIELD ETHERNET SWITCH, F&I	EA																							5
684-2-1	DEVICE SERVER, F&I	EA					1																1	7	
684-5-1	MEDIA CONVERTER, F&I	EA					1																1	3	
685-1-11	UNINTERRUPTIBLE POWER SUPPLY, F&I, LINE INTERACTIVE	EA																							4
700-9-137	WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF	EA																							2

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-4
					SR 429	SEMINOLE	240200-2-52-01		

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GENERAL:

1. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED AT THE TIME OF INSTALLATION WITH PERMANENT, LEGIBLE, WEATHER PROOF TAGS THAT ARE SECURELY ATTACHED TO EACH CABLE. ALL SERVICE EQUIPMENT SHALL BE LABELED PER NEC REQUIREMENTS.
2. THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE EQUIPMENT, DESIGN AND SHOP DRAWINGS FOR ALL MATERIALS PROPOSED FOR THIS PROJECT. EQUIPMENT MUST BE APPROVED BY THE ENGINEER BEFORE PROCUREMENT ORDER IS FILLED.
3. ANY SIGNIFICANT VARIATION FROM THE PROPOSED ROUTING OF THE CONDUIT AND PLACEMENT OF THE PROJECT ELEMENTS SHALL BE VERIFIED WITH AND APPROVED BY THE ENGINEER AND THE FDOT AND SHALL BE INCORPORATED IN THE "AS-BUILT" PLANS.
4. 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 THE PROJECT TO SCHEDULE AN INSPECTION OF ITS STRUCTURES.
5. NO ITS POLES, SERVICE POLES, OR PULL BOXES ARE TO BE INSTALLED WITHIN THE FLORIDA GAS TRANSMISSION EASEMENT.

CONDUIT:

1. WHEN INSTALLING FIBER OPTIC CABLE IN CONDUIT WHERE PULL BOX SPACING EXCEEDS OF 1000' FIBER SHOULD BE INSTALLED USING CABLE BLOWING METHODS IDENTIFIED IN FDOT SPECIFICATIONS.
2. CONDUIT INSTALLATION NEAR THE SR 429 MAINLINE MSE WALL SHOULD CLOSELY FOLLOW THE ALIGNMENT DEPICTED IN THESE PLANS TO PREVENT CONFLICTS WITH PROPOSED AND FUTURE LANDSCAPING AREA PLANTINGS.

PULL BOXES:

1. UNLESS SPECIFIED OTHERWISE IN THE PLANS, ALL PULL BOX COVERS SHALL BE NON-METALLIC.
2. CABLING WHICH SHARES THE SAME PULL BOXES MUST COMPLY WITH FDOT AND NEC REQUIREMENTS.
3. MAXIMUM PULL BOX SPACING FOR ELECTRICAL CONDUITS RUNS SHALL BE 600', UNLESS OTHERWISE INDICATED IN THESE PLANS.

ITS EQUIPMENT INSTALLATION:

1. ELECTRICAL WIRING AND EQUIPMENT INSTALLATION SHALL CONFORM TO THE MOST RECENT VERSIONS OF THE NEC OR THE NESC WHERE APPLICABLE.
2. PROVIDE DRIP LOOPS, FOR EXPOSED CABLING, AS NECESSARY TO PREVENT WATER FROM RUNNING DOWN THE CABLE AND ENTERING EQUIPMENT, POLES, CONDUITS, OR EQUIPMENT CABINETS/ENCLOSURES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE POWER COMPANIES TO PROVIDE POWER TO PROPOSED DEVICES PER PROJECT REQUIREMENTS. POWER SERVICE DETAILS DEPICTED IN THESE PLANS ARE TO BE CONSIDERED AS MINIMUM REQUIREMENTS AND DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLETING A FULLY FUNCTIONAL INSTALLATION, INCLUDING ANY ADDITIONAL WORK REQUIRED THAT IS NOT DETAILED IN THESE PLANS.
4. ALL BATTERIES USED FOR UPS SYSTEMS LOCATED WITHIN ITS LOCAL HUBS SHALL BE GEL CELL BATTERIES WITH SILVER ALLOY GRIDS.
5. FIBER OPTIC CABLE RUNS SHOULD BE INSTALLED USING A SINGLE LENGTH OF CABLE BETWEEN THE CABLE TERMINI; BUTT SPLICING TO EXTEND THE LENGTH OF FIBER OPTIC CABLE SHOULD BE AVOIDED WITHIN THE PROJECT LIMITS.
6. TC TRAY CABLE SHALL BE: 600V RATED WITH STRANDED COPPER CONDUCTORS; INCLUDE XHHW OR THHN/THWN INSULATION ON EACH INDIVIDUAL CONDUCTOR WITH AN OVERALL PVC JACKET; AND MEET UL 1277 REQUIREMENTS FOR TYPE TC POWER AND CONTROL CABLES. TRAY CABLE SHALL INCLUDE THE SIZE AND NUMBER OF CONDUCTORS INDICATED IN THESE PLANS. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED WITH GREEN INSULATION.
7. THE PIN AND SLEEVE STYLE CONNECTOR USED TO TERMINATE THE TEMPORARY RWIS SITE ELECTRICAL CORD SHALL BE IEC 60309 COMPLIANT BY BEING MANUFACTURED TO EN 60309-1 AND EN 60309-2 STANDARDS. THESE CONNECTORS SHALL BE IP67 RATED AND MEET IP69K PROTECTION STANDARDS WHEN THE FEMALE AND MALE CONNECTORS ARE MATED, AND WHEN THE CONNECTOR IS NOT IN USE BY APPLICATION OF WATERTIGHT CAPS.

PAY ITEM DESCRIPTION:

1. 633-3-16 SHALL INCLUDE: FACTORY TERMINATED FIBER OPTIC JUMPERS AS REQUIRED TO PROVIDE THE CONNECTIONS INDICATED IN THE PLANS.
2. 646-1-11 SHALL NOT INCLUDE A POLE OR POST, BUT SHALL INCLUDE AN ALUMINUM CAP FOR THE THREADED TOP OF THE TRANSFORMER BASE TO PROTECT AGAINST THE ENTRY OF PRECIPITATION, DIRT, AND DEBRIS WHEN NO TEMPORARY RWIS SITE POLE IS INSTALLED.
3. 660-3-11 & 660-3-12: MVDS DEVICES UTILIZED SHALL BE CAPABLE OF NEGATIVE (WRONG WAY) SPEED DETECTION.
4. 676-2-122, 676-2-143 & 635-3-12 SHALL INCLUDE A CYBERLOCK CYLINDER AS PART OF THE CABINET LOCKING MECHANISM THAT IS COMPATIBLE WITH FDOT DISTRICT FIVE'S ELECTRONIC KEY SYSTEM. THE CONTRACTOR MAY INSTALL #2 KEY LOCKS TEMPORARILY DURING CONSTRUCTION IF MEANS OF ACCESSING CABINETS USING CYBERLOCK KEYS BY THE CONTRACTOR IS A CONCERN.
5. 685-1-11 SHALL INCLUDE: A REMOTE POWER MANAGEMENT STRIP (RPM) THAT ALLOW MONITORING AND CONTROL OVER IP NETWORKS. THE RPM SHALL: UTILIZE 120VAC NOMINAL INPUT POWER; HAVE A 15AMP MAIN BREAKER; PROVIDE A MINIMUM OF 8 OUTLETS EACH CAPABLE OF REMOTE ON/OFF CONTROL; AND BE ENVIRONMENTALLY HARDENED AND SUITABLE FOR USE IN UNCONDITIONED OUTDOOR ENCLOSURES BY MEETING OR EXCEEDING NEMA TS2 ENVIRONMENTAL STANDARDS FOR OPERATIONAL TEMPERATURE RANGE.
6. 700-9-137 WALK-IN DYNAMIC MESSAGE SIGN SHALL PROVIDE A FULL-COLOR DISPLAY WITH 20MM PIXEL DENSITY, AND BE CABLE OF 18-INCH CHARACTER HEIGHTS WITH THREE LINES OF TEXT AND 22 CHARACTERS PER LINE AT A FONT SIZE OF 23x15.

UTILITY:

1. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE Vv, Vh, 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.

ITS PLAN SHEET LEGEND:

- | | | | |
|--|---|--|--|
| | PROPOSED ELECTRICAL PULL BOX | | UTILITY COMPANY HANDHOLE (POINT OF SERVICE CONNECTION) |
| | PROPOSED FIBER OPTIC PULL BOX | | PROPOSED GROUND MOUNTED CABINET |
| | PROPOSED FIBER OPTIC SPLICE BOX (30" X 60") | | PROPOSED POLE MOUNTED CABINET |
| | PROPOSED AERIAL JUNCTION BOX | | PROPOSED MICROWAVE VEHICLE DETECTOR |
| | PROPOSED ITS POLE | | PROPOSED CCTV CAMERA |
| | PROPOSED 12' TYPE II SERVICE POLE | | PROPOSED UNDERGROUND CONDUIT |
| | PROPOSED POWER SERVICE H-FRAME | | PROPOSED DIRECTIONALLY BORED CONDUIT |
| | UTILITY POLE WITH SERVICE TRANSFORMER BY POWER COMPANY (FINAL LOCATION TBD) | | MVDS DETECTION ZONE |
| | | | TEMPORARY RWIS PEDESTAL |

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

GENERAL NOTES

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CLOSED CIRCUIT TELEVISION (CCTV) TABLE

CCTV #	STATION	MILE POST	ITS POLE	PLAN SHEET
429-1	964+26	0.834	1	IT-9
429-2	1021+58	1.920	3	IT-17
429-3	1061+64	2.678	5	IT-23
429-4	1084+60	3.113	6	IT-26

TEMPORARY ROAD WEATHER INFORMATION SYSTEM (RWIS) TABLE

RWIS #	STATION	MILE POST	PLAN SHEET
429-1	964+12	0.834	IT-9
429-2	1021+44	1.920	IT-17
429-3	1061+50	2.678	IT-23
429-4	1084+46	3.113	IT-26

DYNAMIC MESSAGE SIGNS (DMS) TABLE

DMS #	STATION	MILE POST	PLAN SHEET
429-1	1052+00	2.496	IT-22
429-2	1052+00	2.496	IT-22

MICROWAVE VEHICLE DETECTOR (MVDS) TABLE

MVDS #	STATION	MILE POST	ITS POLE	PLAN SHEET	LANES	RAMPS	APPROXIMATE DISTANCE TO FIRST TRAVEL LANE	APPROXIMATE DISTANCE TO LAST TRAVEL LANE	MVDS MOUNTING HEIGHT	MOUNTING STRUCTURE	NOTES
429-1	964+26	0.834	1	IT-9	4	-	21.5'	119.5'	45.0'	ROUND SPUN CONCRETE POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)
429-2	991+85	1.357	2	IT-13	4	-	23.5'	121.5'	29.0'	SQUARE CONCRETE STRAIN POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)
429-3	1021+58	1.920	3	IT-17	4	-	21.5'	119.5'	46.0'	ROUND SPUN CONCRETE POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)
429-4	1041+61	2.299	4	IT-21	4	-	21.5'	119.5'	30.0'	SQUARE CONCRETE STRAIN POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)
429-5	1061+64	2.678	5	IT-23	4	1	21.5'	133.5'	50.0'	ROUND SPUN CONCRETE POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES AND 1 WB OFF-RAMP)
429-6	1084+60	3.113	6	IT-26	4	-	21.5'	119.5'	45.0'	ROUND SPUN CONCRETE POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)
429-7	1109+49	3.585	7	IT-30	4	-	21.5'	119.5'	48.0'	ROUND SPUN CONCRETE POLE	DETECTING SR 429 (2 EB LANES / 2 WB LANES)

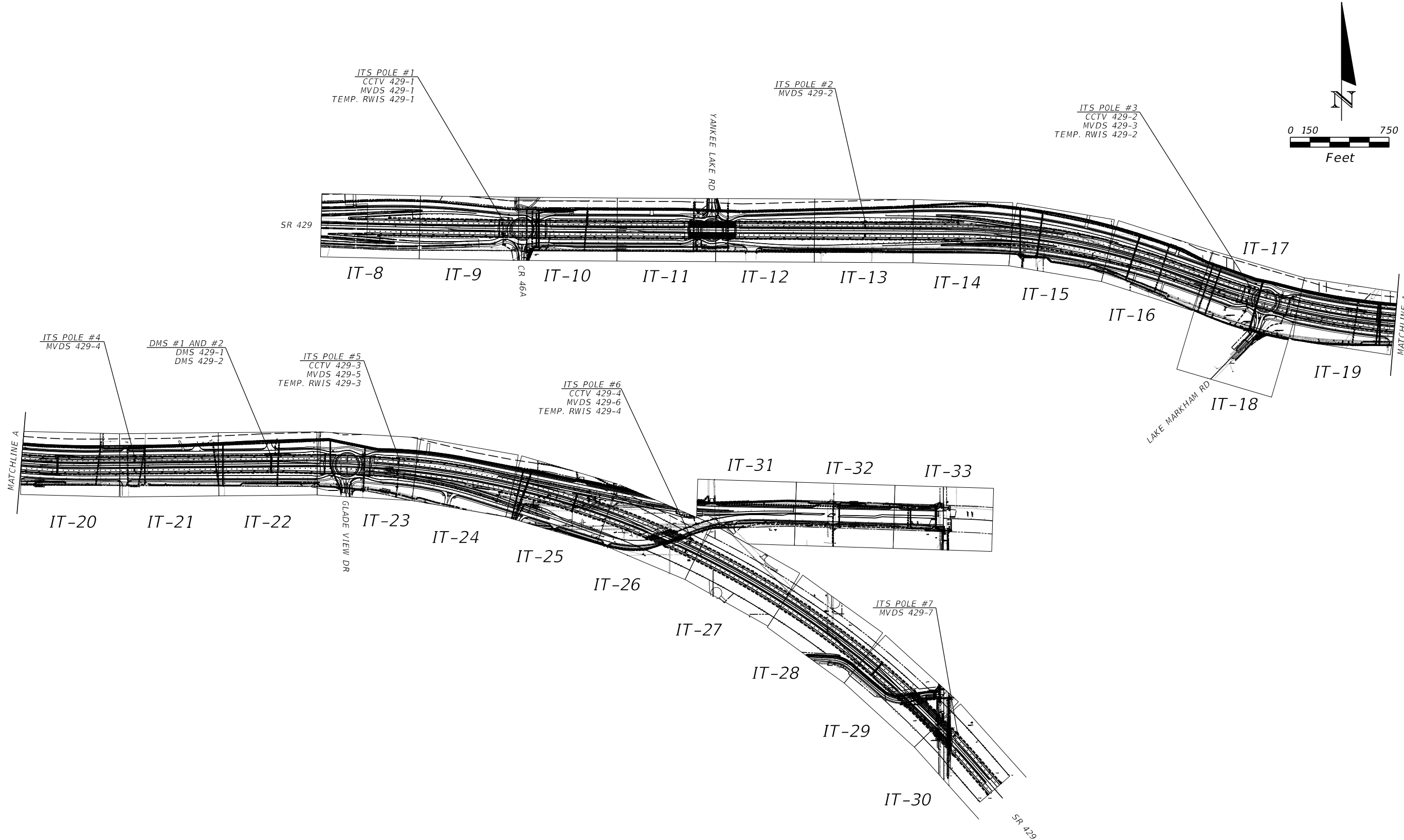
NOTES:

1. THE MVDS DETECTOR UNIT SHOULD BE TILTED FROM VERTICAL SO THAT THE UNIT IS AIMED AT THE CENTER OF THE LANES TO BE MONITORED; TYPICALLY THIS IS LOCATED IN THE CENTER OF THE MEDIAN AREA FOR THE DIVIDED HIGHWAY SECTIONS.
2. THE MVDS UNIT SHOULD BE ALIGNED SO THAT THE HORIZONTAL ANGLE OF THE UNIT IS WITHIN APPROXIMATELY TWO DEGREES OF PERPENDICULAR TO THE FLOW OF TRAFFIC. AN ALIGNMENT TOOL SHALL BE USED TO VERIFY THE ALIGNMENT ACCURACY.
3. MVDS DEVICES THAT ARE MOUNTED WITHIN 20 FEET OF EACH OTHER SHALL BE CONFIGURED TO OPERATE ON SEPARATE OPERATING FREQUENCIES, REGARDLESS OF THE POINTING DIRECTION OF THE UNITS.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
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DEVICE SCHEDULE

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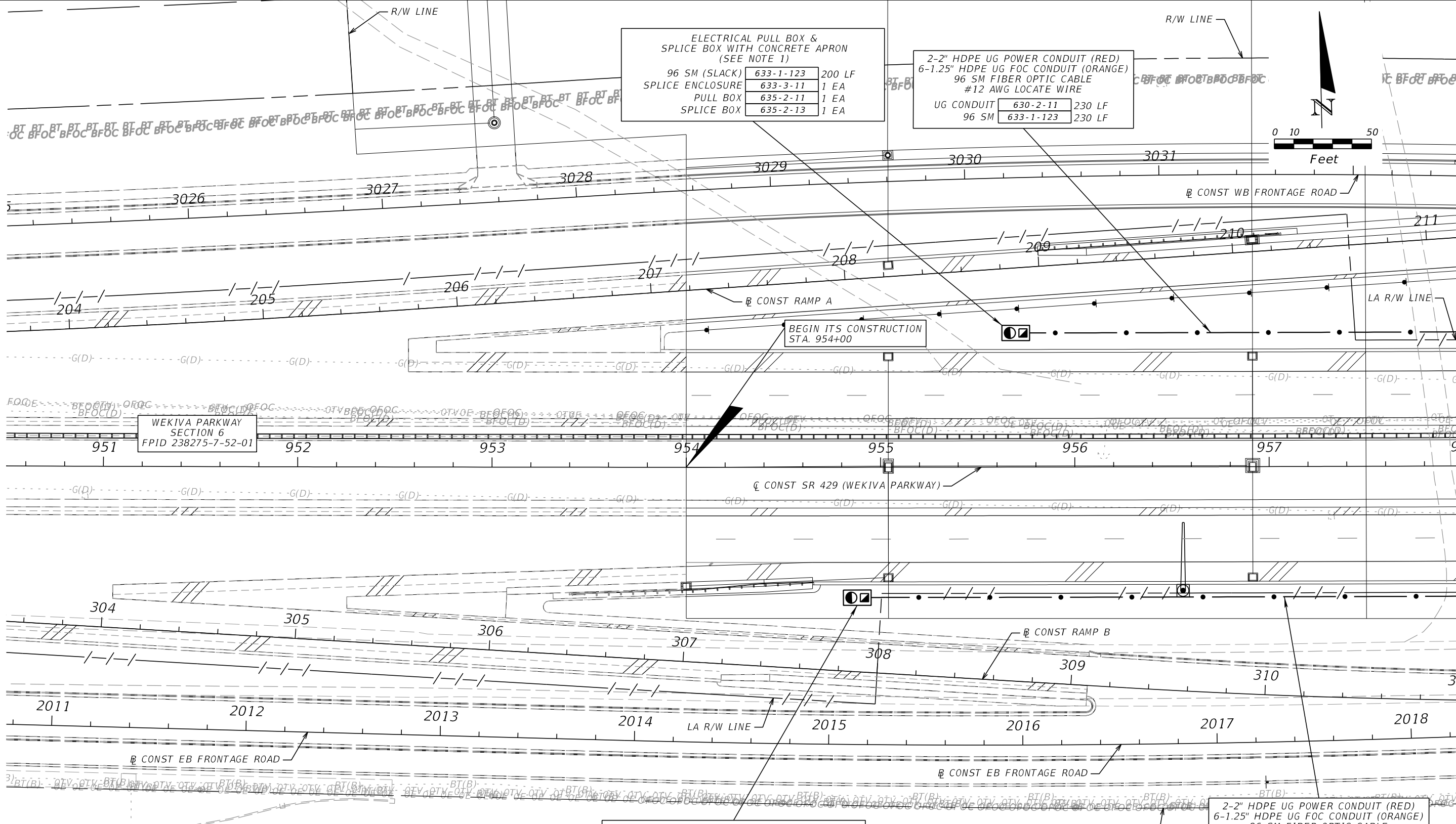
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

PROJECT LAYOUT

SHEET NO.
IT-7

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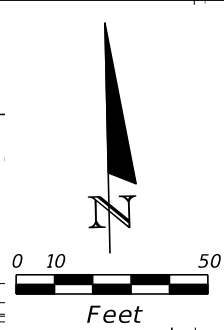


ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON (SEE NOTE 1)

96 SM (SLACK)	633-1-123	200 LF
SPLICE ENCLOSURE	633-3-11	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	230 LF
96 SM	633-1-123	230 LF



WEKIVA PARKWAY
SECTION 6
FPID 238275-7-52-01

NOTE:
1. THE SPLICE ENCLOSURES PROVIDED ARE FOR FUTURE CONNECTIONS OF THE FIBER OPTIC CABLE TO ADJACENT WEKIVA PARKWAY PROJECT SECTION 6.

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON (SEE NOTE 1)

96 SM (SLACK)	633-1-123	200 LF
SPLICE ENCLOSURE	633-3-11	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	313 LF
96 SM	633-1-123	313 LF

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DEPARTMENT OF TRANSPORTATION

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SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-8

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MATCH LINE STA. 958+00.00

ITS POLE #1, LOCAL HUB #1
MVDS 429-1, CCTV 429-1
STA. 964+26, MP 0.834, OFF. 70.48' LT

12 SM	633-1-121	15 LF
SPLICES	633-2-31	12 EA
SPLICE TRAY	633-3-12	1 EA
PIGTAILS (12 SM)	633-3-13	12 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	1 EA
BATTERY ENCLOSURE	635-3-12	1 EA
SERVICE DISCONNECT	639-3-11	1 EA
CONCRETE POLE W/ LOWERING DEVICE (86')	641-3-186	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
TYPE 336S CABINET	676-2-122	1 EA
CCTV	682-1-133	1 EA
ETHERNET SWITCH	684-1-1	1 EA
DEVICE SERVER	684-2-1	1 EA
UPS	685-1-11	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	123 LF
96 SM	633-1-123	123 LF

TEMPORARY RWIS PEDESTAL 429-1
STA. 964+12, MP 0.834, OFF. 70.49' LT

UG CONDUIT	630-2-11	10 LF
MULTI-CONDUCTOR COMM. CABLE	633-8-1	10 LF
3/C #12 AWG SOOW CABLE	639-2-1	10 LF
TEMPORARY RWIS PEDESTAL	646-1-11	1 EA

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

12 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
SPLICES	633-2-31	12 EA
SPLICE ENCLOSURE	633-3-11	1 EA
SPLICE TRAY	633-3-12	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	215 LF
96 SM	633-1-123	215 LF

2-#6 AWG & 1-#6 AWG GND. (120VAC)
1-2" HDPE DB POWER CONDUIT (RED)

UG CONDUIT	630-2-11	116 LF
SERVICE WIRE	639-2-1	3 @ 116 LF

2-#6 AWG & 1-#6 AWG GND. (120VAC)
1-2" HDPE DB POWER CONDUIT (RED)

DIRECTIONAL BORE	630-2-12	72 LF
PULL BOX	635-2-11	1 EA
SERVICE WIRE	639-2-1	3 @ 72 LF

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE H-FRAME

PULL BOX	635-2-11	1 EA
POWER SERVICE (UG)	639-1-122	1 AS
12' TYPE II POLE	641-2-12	2 EA

3-#1 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)

UG CONDUIT	630-2-11	77 LF
SERVICE WIRE	639-2-1	3 @ 77 LF

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	535 LF
96 SM	633-1-123	535 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	2 EA
SPLICE BOX	635-2-13	1 EA

MATCH LINE STA. 958+00.00

MATCH LINE STA. 965+50.00

REVISIONS			
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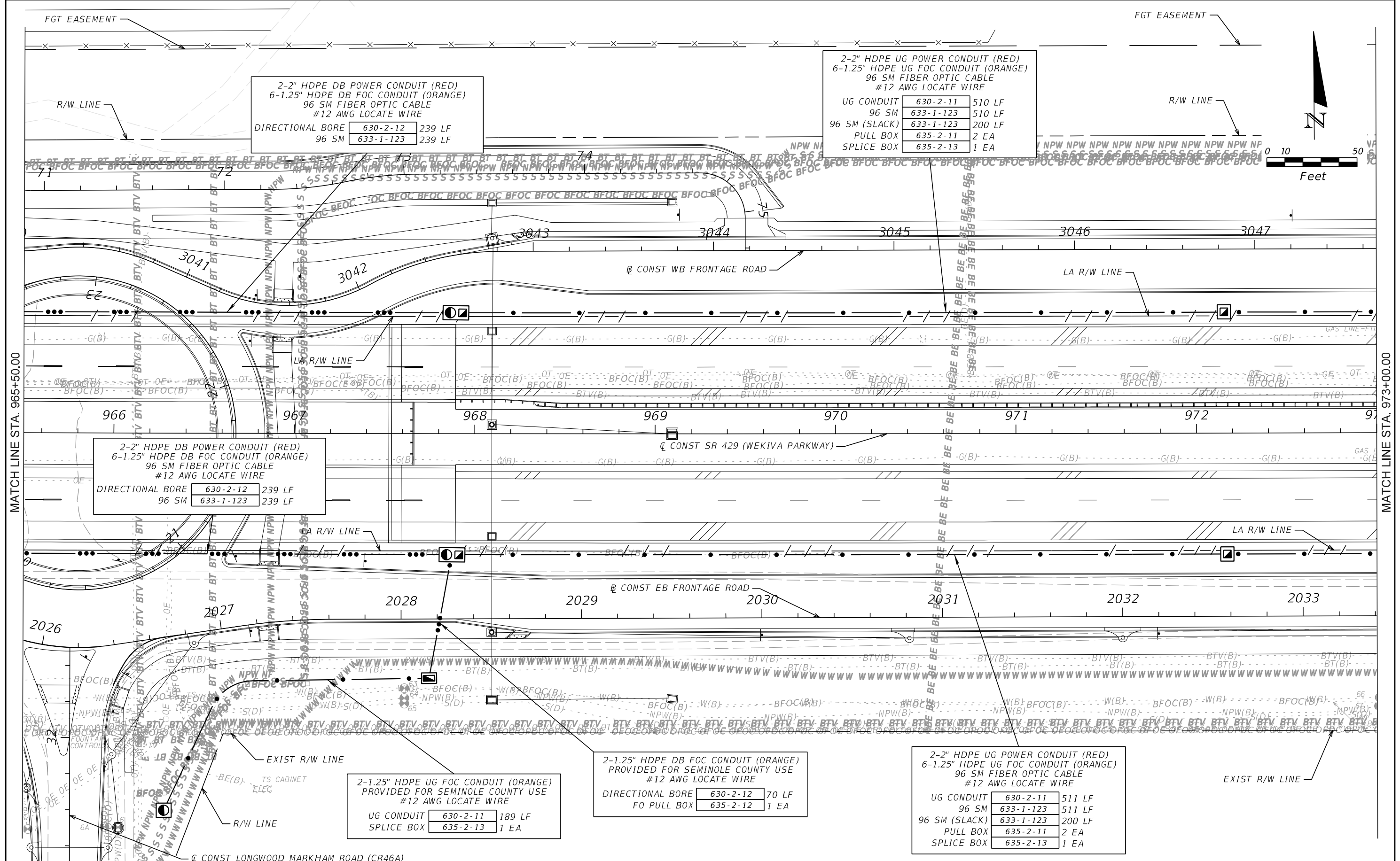
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SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-9

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2-2" HDPE DB POWER CONDUIT (RED)
 6-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	239 LF
	96 SM	633-1-123
		239 LF

2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	510 LF
96 SM	633-1-123	510 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	2 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
 6-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	239 LF
	96 SM	633-1-123
		239 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE

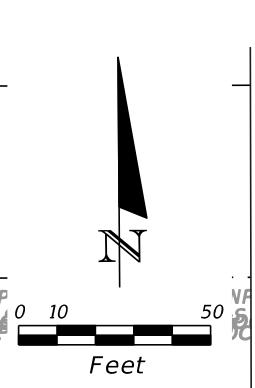
UG CONDUIT	630-2-11	189 LF
SPLICE BOX	635-2-13	1 EA

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	70 LF
FO PULL BOX	635-2-12	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	511 LF
96 SM	633-1-123	511 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	2 EA
SPLICE BOX	635-2-13	1 EA



MATCH LINE STA. 965+50.00

MATCH LINE STA. 973+00.00

REVISIONS			
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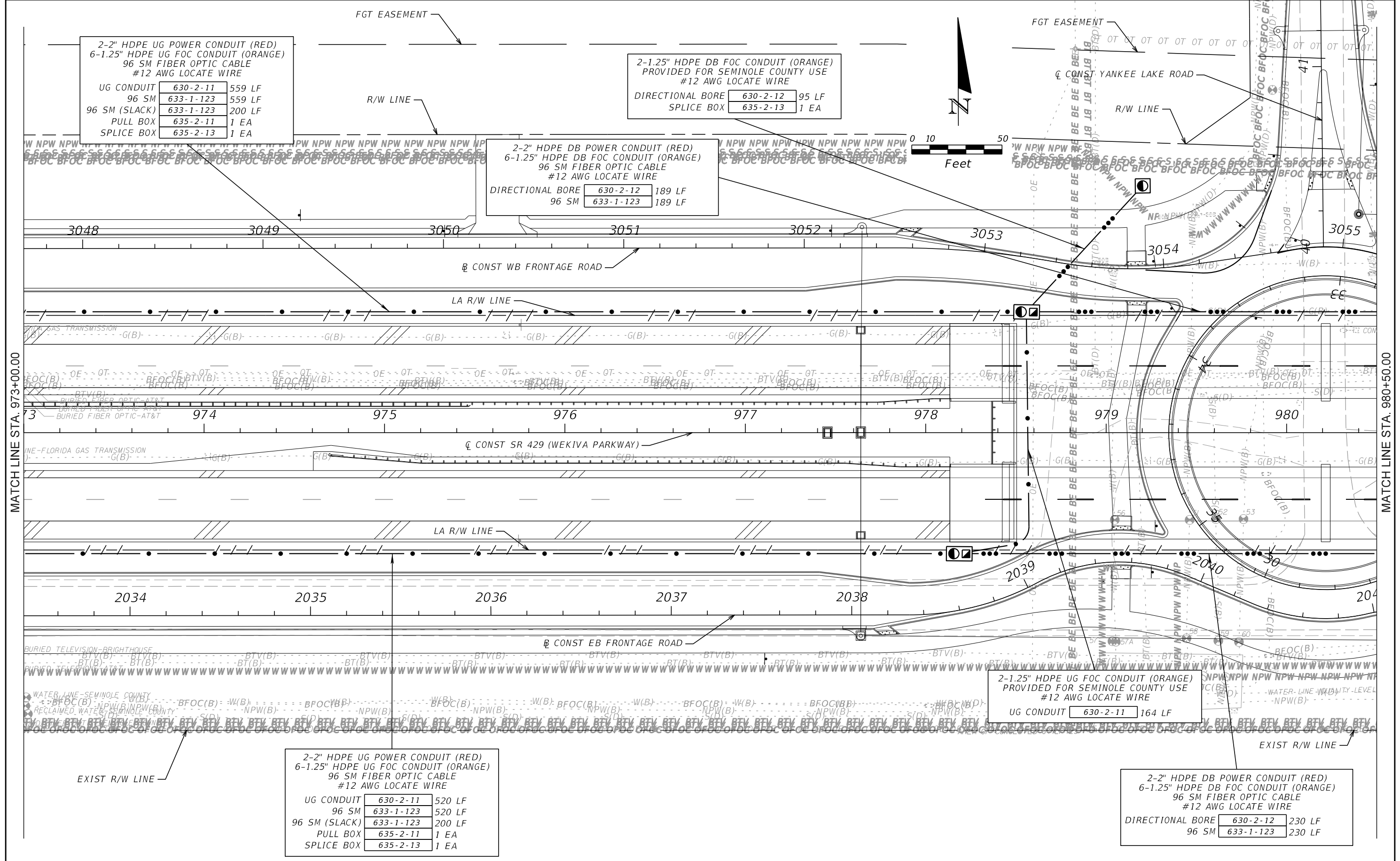
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ITS PLAN SHEET

SHEET NO.
IT-10

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2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	559 LF
96 SM	633-1-123	559 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	95 LF
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
 6-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	189 LF
96 SM	633-1-123	189 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	164 LF
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2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	520 LF
96 SM	633-1-123	520 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
 6-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	230 LF
96 SM	633-1-123	230 LF

MATCH LINE STA. 973+00.00

MATCH LINE STA. 980+50.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

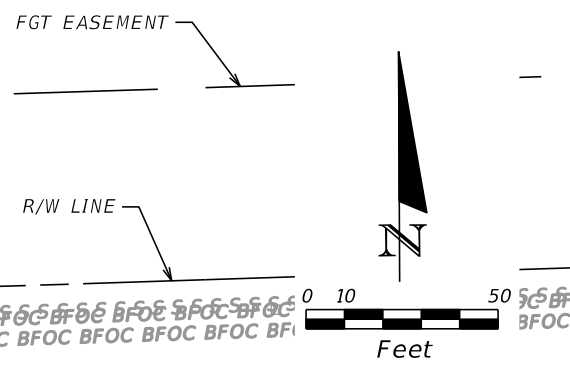
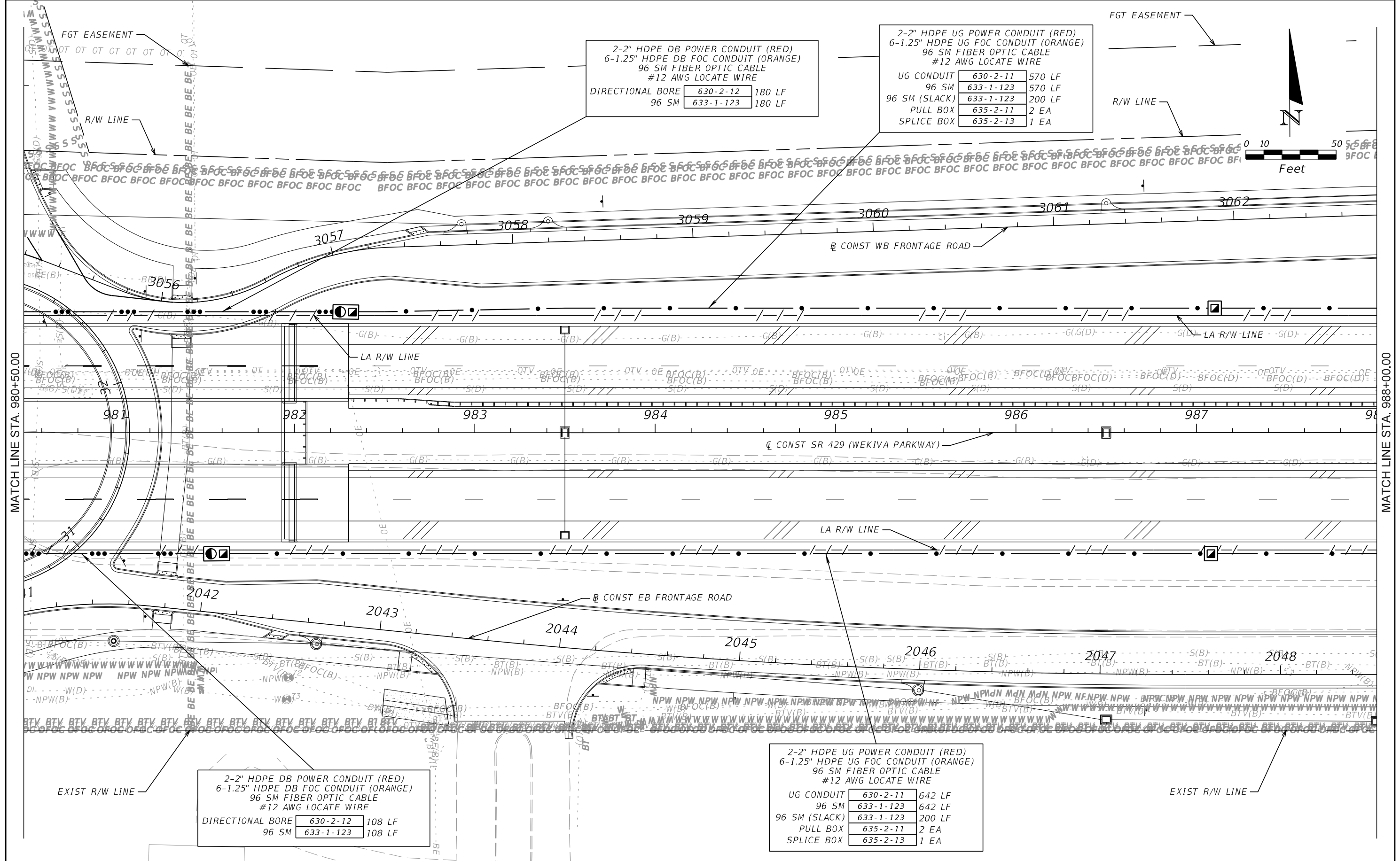
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-11

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



MATCH LINE STA. 980+50.00

MATCH LINE STA. 988+00.00

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

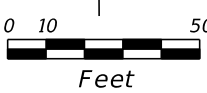
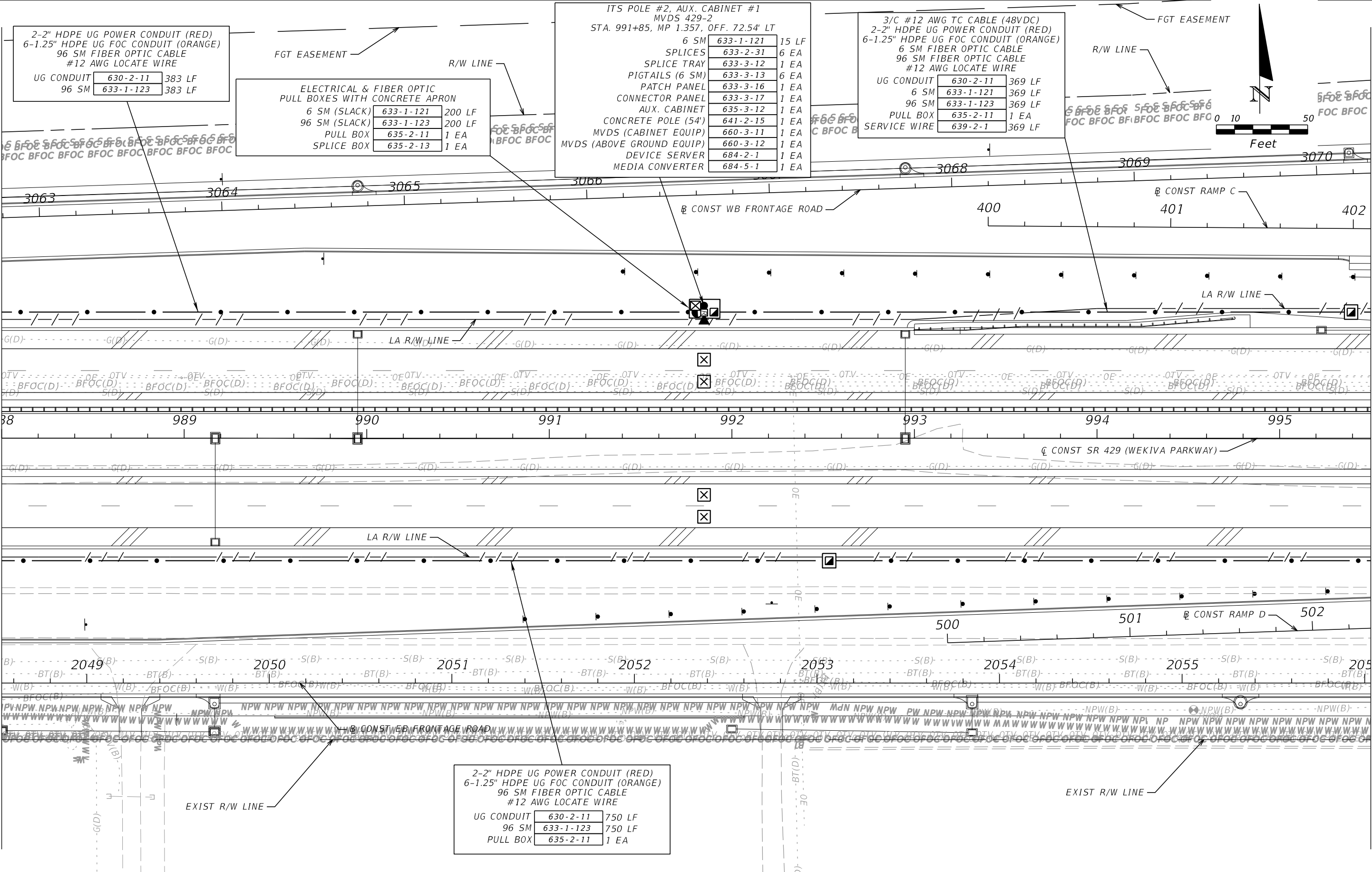
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-12

MATCH LINE STA. 988+00.00

MATCH LINE STA. 995+50.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-13

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	338 LF
6 SM	633-1-121	338 LF
6 SM (SLACK)	633-1-121	200 LF
96 SM	633-1-123	338 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA
SERVICE WIRE	639-2-1	338 LF

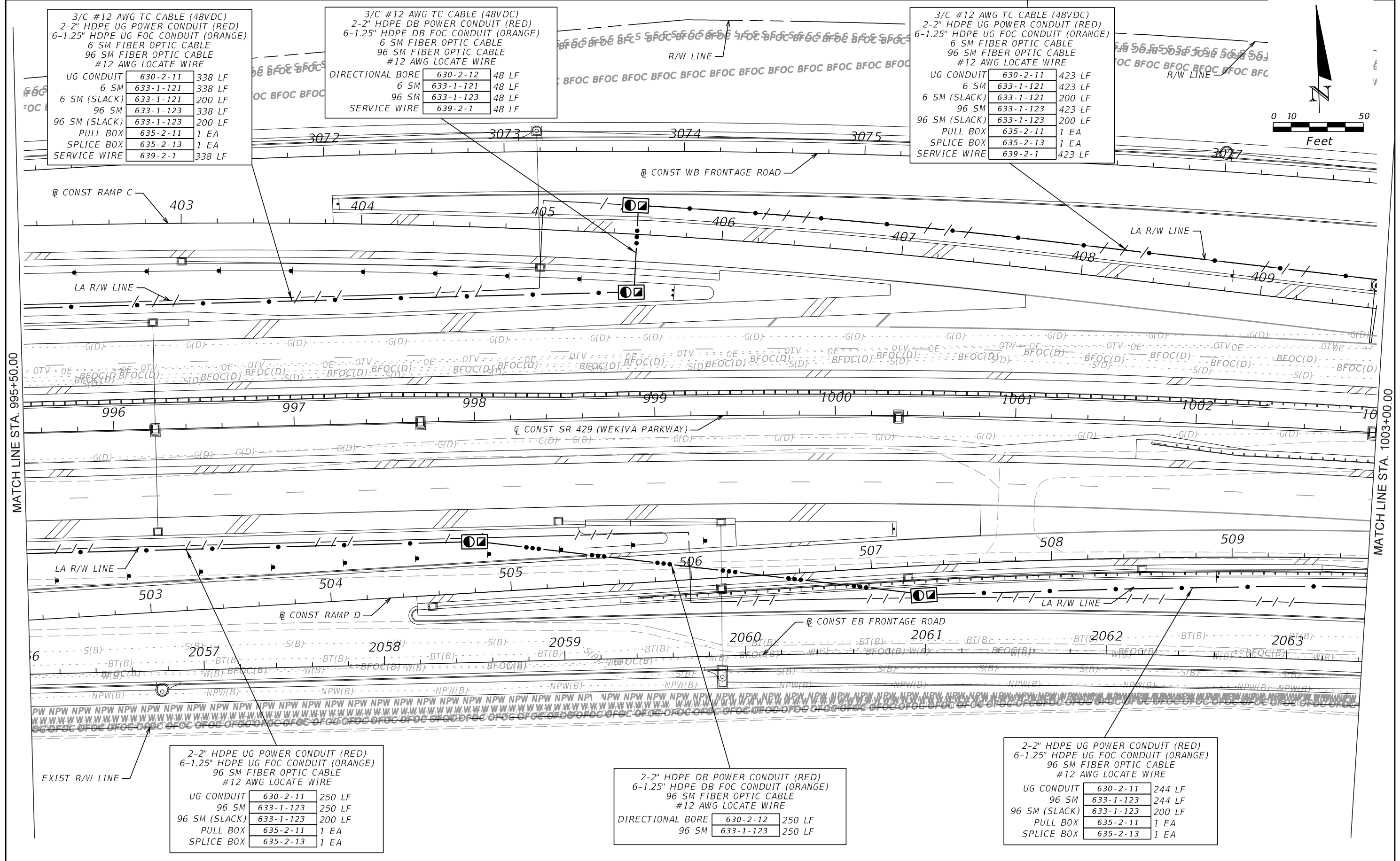
3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	48 LF
6 SM	633-1-121	48 LF
96 SM	633-1-123	48 LF
SERVICE WIRE	639-2-1	48 LF

3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	423 LF
6 SM	633-1-121	423 LF
6 SM (SLACK)	633-1-121	200 LF
96 SM	633-1-123	423 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA
SERVICE WIRE	639-2-1	423 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	250 LF
96 SM	633-1-123	250 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	250 LF
96 SM	633-1-123	250 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	244 LF
96 SM	633-1-123	244 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA



MATCH LINE STA. 995+50.00

MATCH LINE STA. 1003+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
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 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

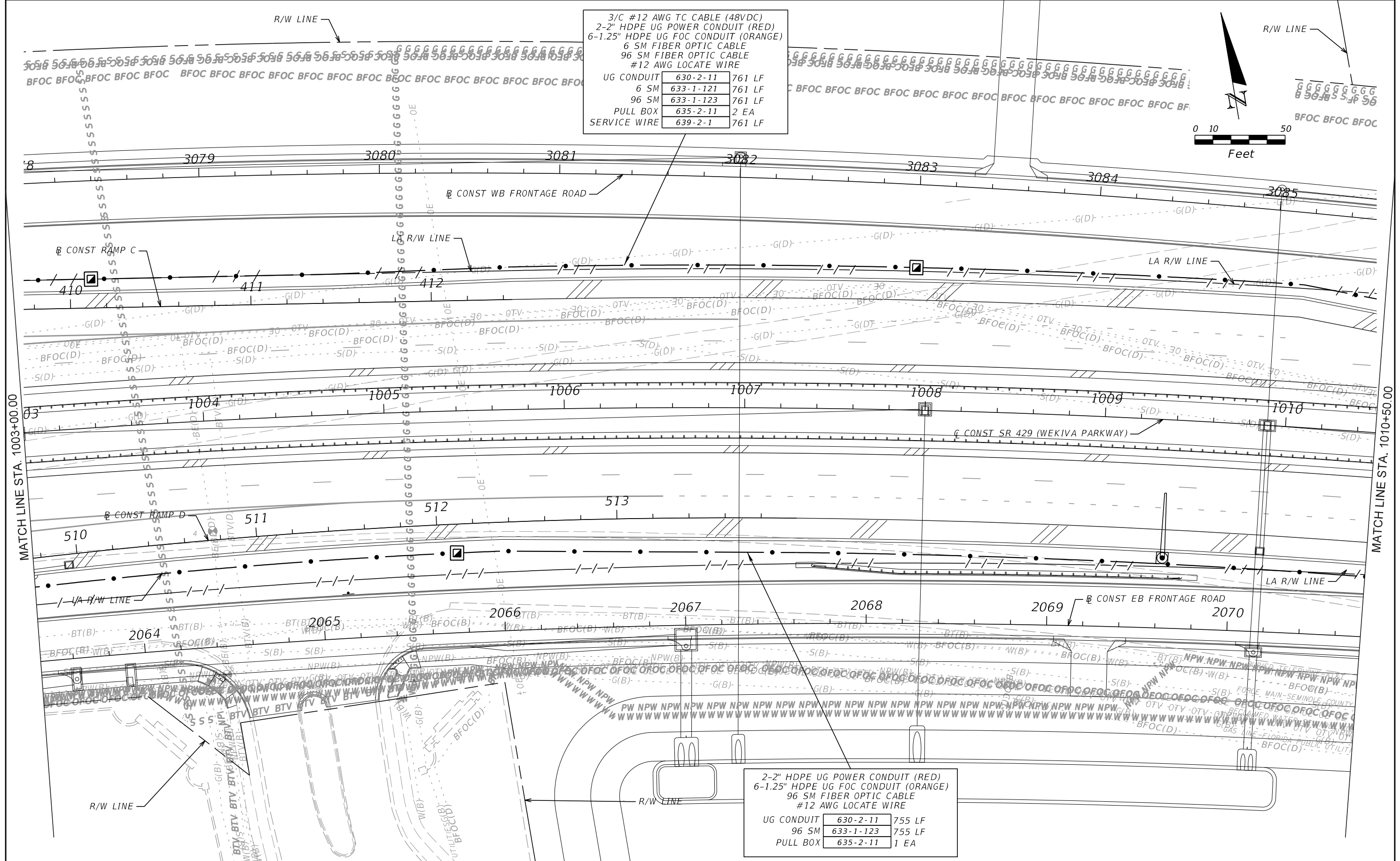
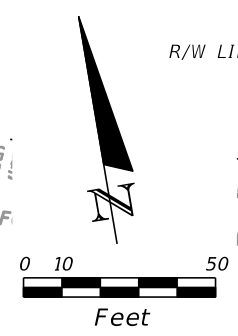
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-14

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

3/C #12 AWG TC CABLE (48VDC)	
2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
6 SM FIBER OPTIC CABLE	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 761 LF
6 SM	633-1-121 761 LF
96 SM	633-1-123 761 LF
PULL BOX	635-2-11 2 EA
SERVICE WIRE	639-2-1 761 LF



2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 755 LF
96 SM	633-1-123 755 LF
PULL BOX	635-2-11 1 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

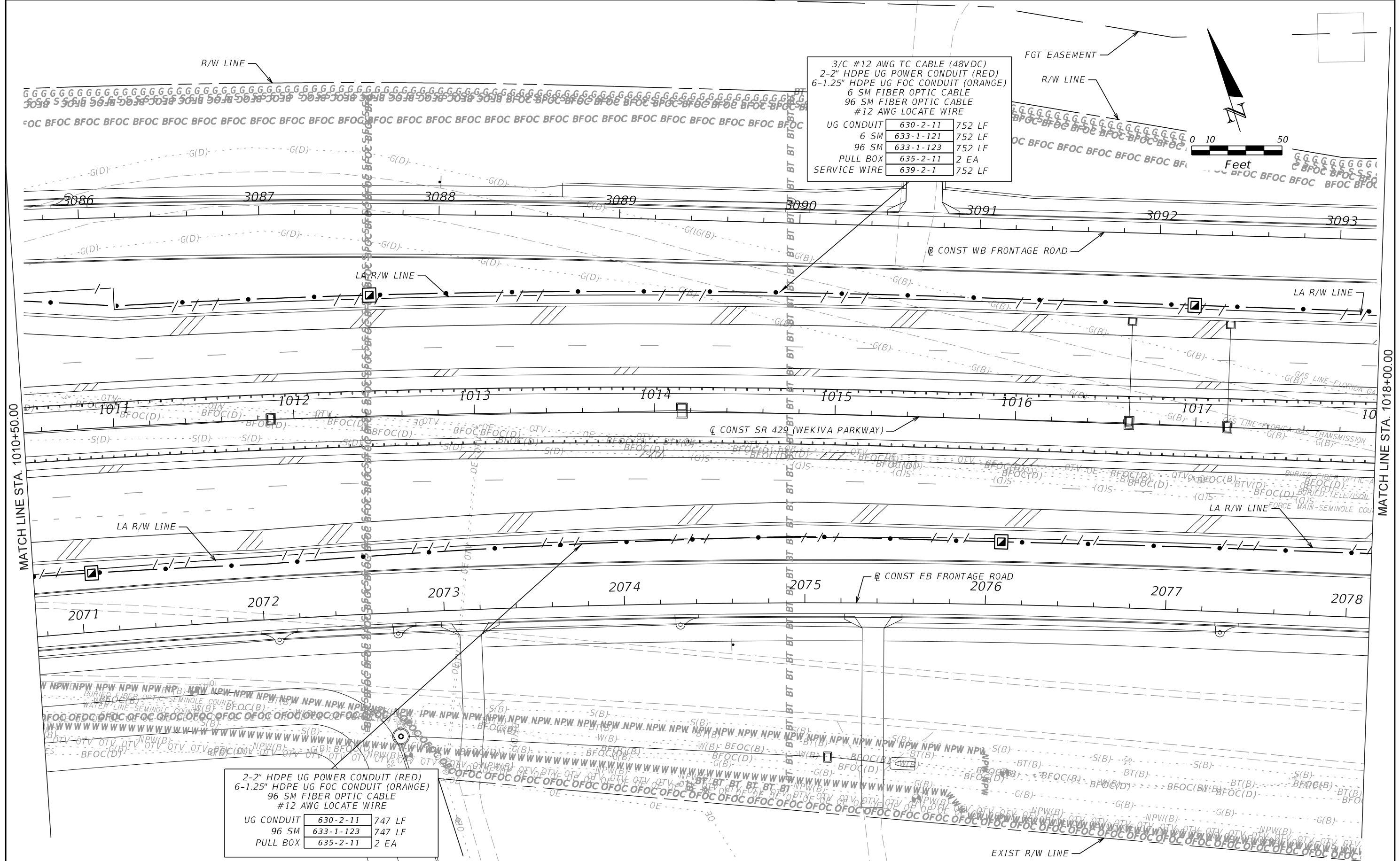
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
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 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-15

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



3/12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	752 LF
6 SM	633-1-121	752 LF
96 SM	633-1-123	752 LF
PULL BOX	635-2-11	2 EA
SERVICE WIRE	639-2-1	752 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	747 LF
96 SM	633-1-123	747 LF
PULL BOX	635-2-11	2 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

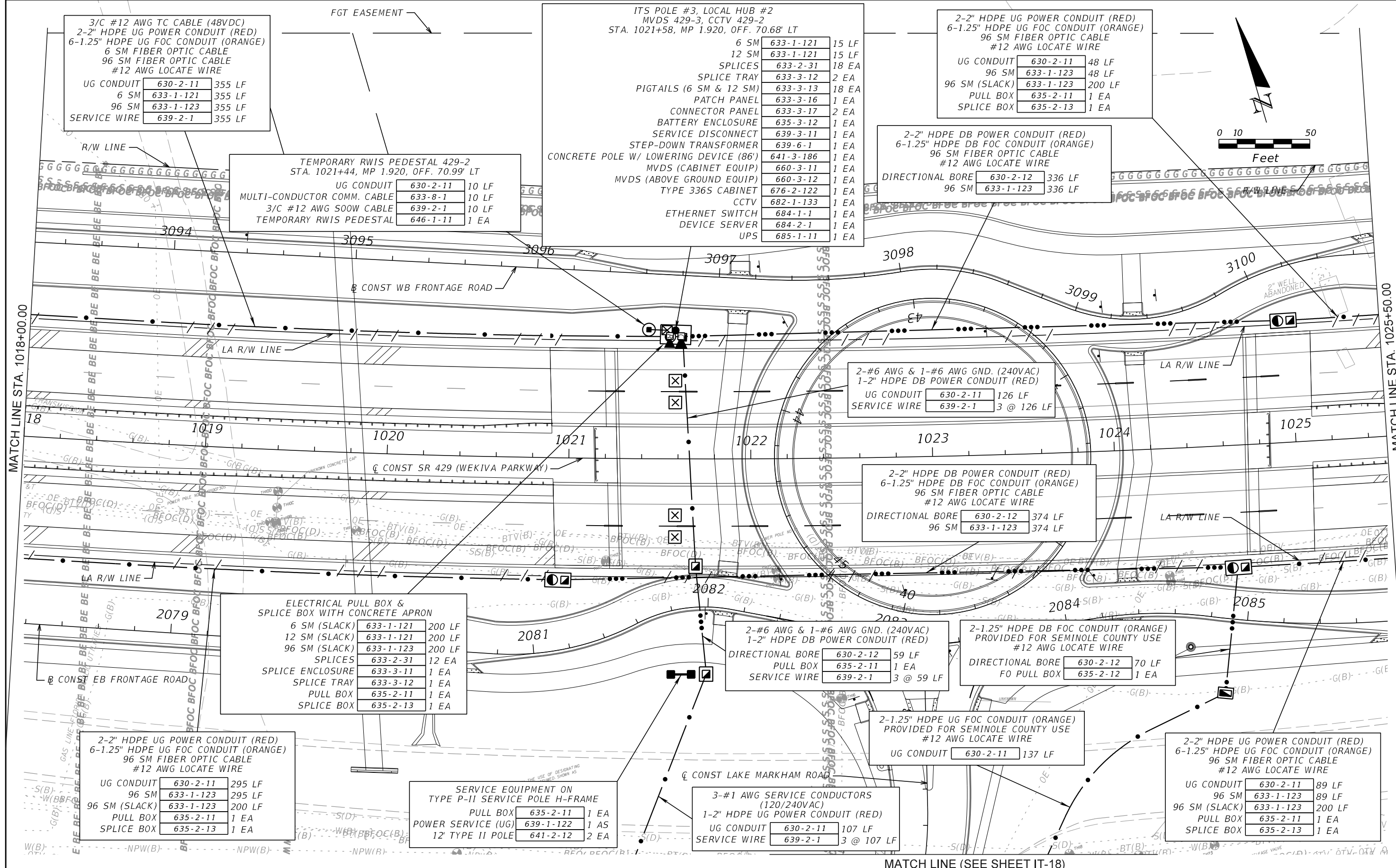
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-16

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



3/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	355 LF
6 SM	633-1-121	355 LF
96 SM	633-1-123	355 LF
SERVICE WIRE	639-2-1	355 LF

TEMPORARY RWIS PEDESTAL 429-2
STA. 1021+44, MP 1.920, OFF. 70.99' LT

UG CONDUIT	630-2-11	10 LF
MULTI-CONDUCTOR COMM. CABLE	633-8-1	10 LF
3/C #12 AWG SOWW CABLE	639-2-1	10 LF
TEMPORARY RWIS PEDESTAL	646-1-11	1 EA

ITS POLE #3, LOCAL HUB #2
MVDS 429-3, CCTV 429-2
STA. 1021+58, MP 1.920, OFF. 70.68' LT

6 SM	633-1-121	15 LF
12 SM	633-1-121	15 LF
SPLICES	633-2-31	18 EA
SPLICE TRAY	633-3-12	2 EA
PIGTAILS (6 SM & 12 SM)	633-3-13	18 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	2 EA
BATTERY ENCLOSURE	635-3-12	1 EA
SERVICE DISCONNECT	639-3-11	1 EA
STEP-DOWN TRANSFORMER	639-6-1	1 EA
CONCRETE POLE W/ LOWERING DEVICE (86')	641-3-186	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
TYPE 336S CABINET	676-2-122	1 EA
CCTV	682-1-133	1 EA
ETHERNET SWITCH	684-1-1	1 EA
DEVICE SERVER	684-2-1	1 EA
UPS	685-1-11	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	48 LF
96 SM	633-1-123	48 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	336 LF
96 SM	633-1-123	336 LF

2-#6 AWG & 1-#6 AWG GND. (240VAC)
1-2" HDPE DB POWER CONDUIT (RED)

UG CONDUIT	630-2-11	126 LF
SERVICE WIRE	639-2-1	3 @ 126 LF

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	374 LF
96 SM	633-1-123	374 LF

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

6 SM (SLACK)	633-1-121	200 LF
12 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
SPLICES	633-2-31	12 EA
SPLICE ENCLOSURE	633-3-11	1 EA
SPLICE TRAY	633-3-12	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-#6 AWG & 1-#6 AWG GND. (240VAC)
1-2" HDPE DB POWER CONDUIT (RED)

DIRECTIONAL BORE	630-2-12	59 LF
PULL BOX	635-2-11	1 EA
SERVICE WIRE	639-2-1	3 @ 59 LF

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	70 LF
FO PULL BOX	635-2-12	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	295 LF
96 SM	633-1-123	295 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE H-FRAME

PULL BOX	635-2-11	1 EA
POWER SERVICE (UG)	639-1-122	1 AS
12' TYPE II POLE	641-2-12	2 EA

3-#1 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)

UG CONDUIT	630-2-11	107 LF
SERVICE WIRE	639-2-1	3 @ 107 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	137 LF
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2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	89 LF
96 SM	633-1-123	89 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

3-#1 AWG SERVICE CONDUCTORS
(120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)
UG CONDUIT

630-2-11	24 LF
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SERVICE WIRE

639-2-1	3 @ 24 LF
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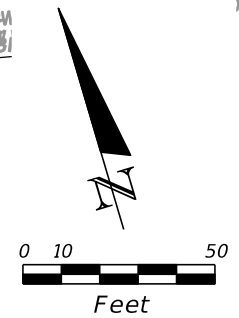
POWER SERVICE #2
120/240VAC, 1PH, 3 WIRE
(SHARE WITH LIGHTING LOAD
CENTER C)

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE
UG CONDUIT

630-2-11	58 LF
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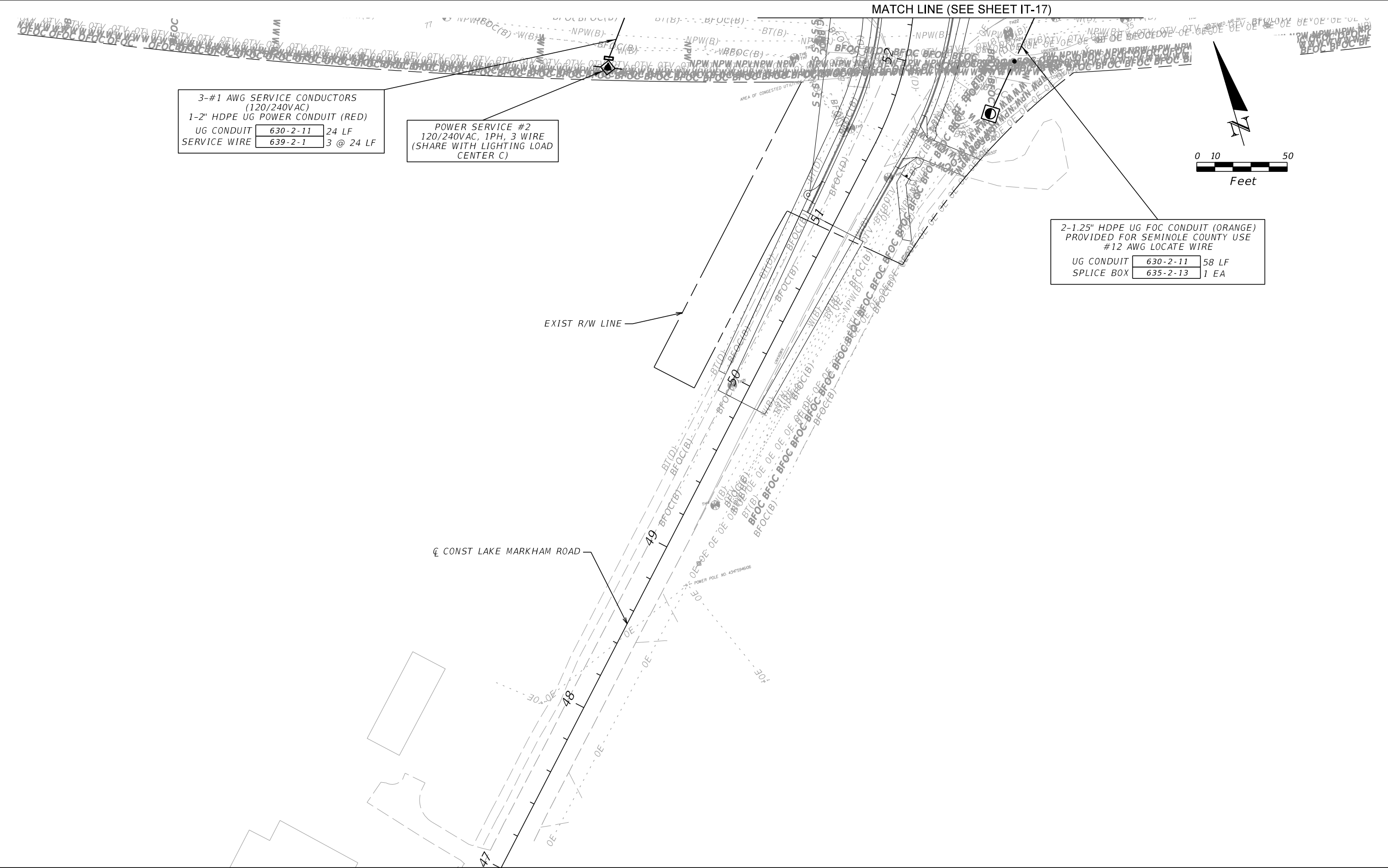
SPLICE BOX

635-2-13	1 EA
----------	------



EXIST R/W LINE

CL CONST LAKE MARKHAM ROAD



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

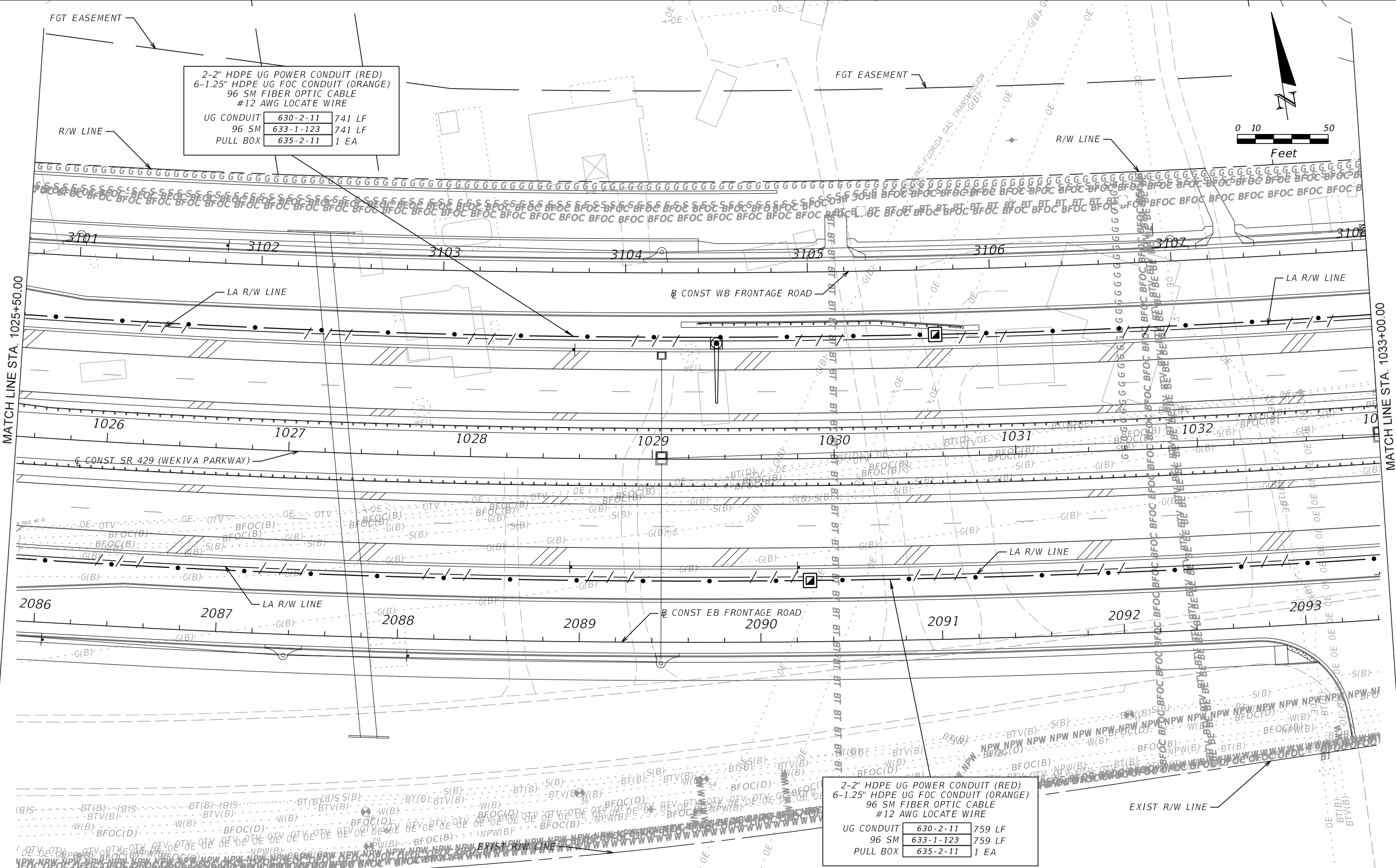
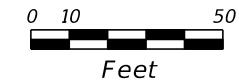
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-18

2-2" HDPE UG POWER CONDUIT (RED)	630-2-11	741 LF
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	633-1-123	741 LF
96 SM FIBER OPTIC CABLE	635-2-11	1 EA
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	741 LF
96 SM	633-1-123	741 LF
PULL BOX	635-2-11	1 EA



2-2" HDPE UG POWER CONDUIT (RED)	630-2-11	759 LF
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	633-1-123	759 LF
96 SM FIBER OPTIC CABLE	635-2-11	1 EA
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	759 LF
96 SM	633-1-123	759 LF
PULL BOX	635-2-11	1 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

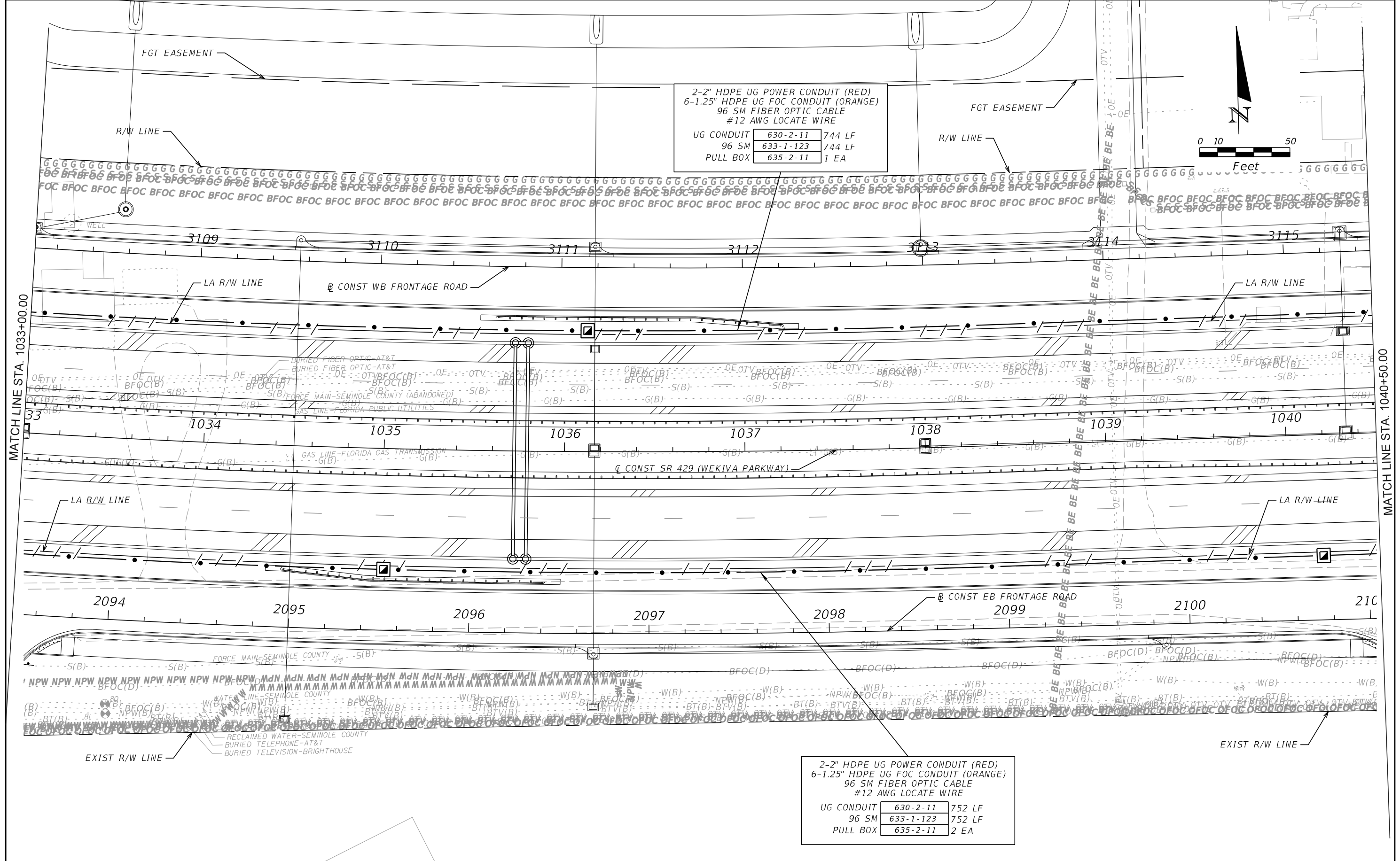
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-19

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	744 LF
96 SM	633-1-123	744 LF
PULL BOX	635-2-11	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
 6-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	752 LF
96 SM	633-1-123	752 LF
PULL BOX	635-2-11	2 EA

MATCH LINE STA. 1033+00.00

MATCH LINE STA. 1040+50.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

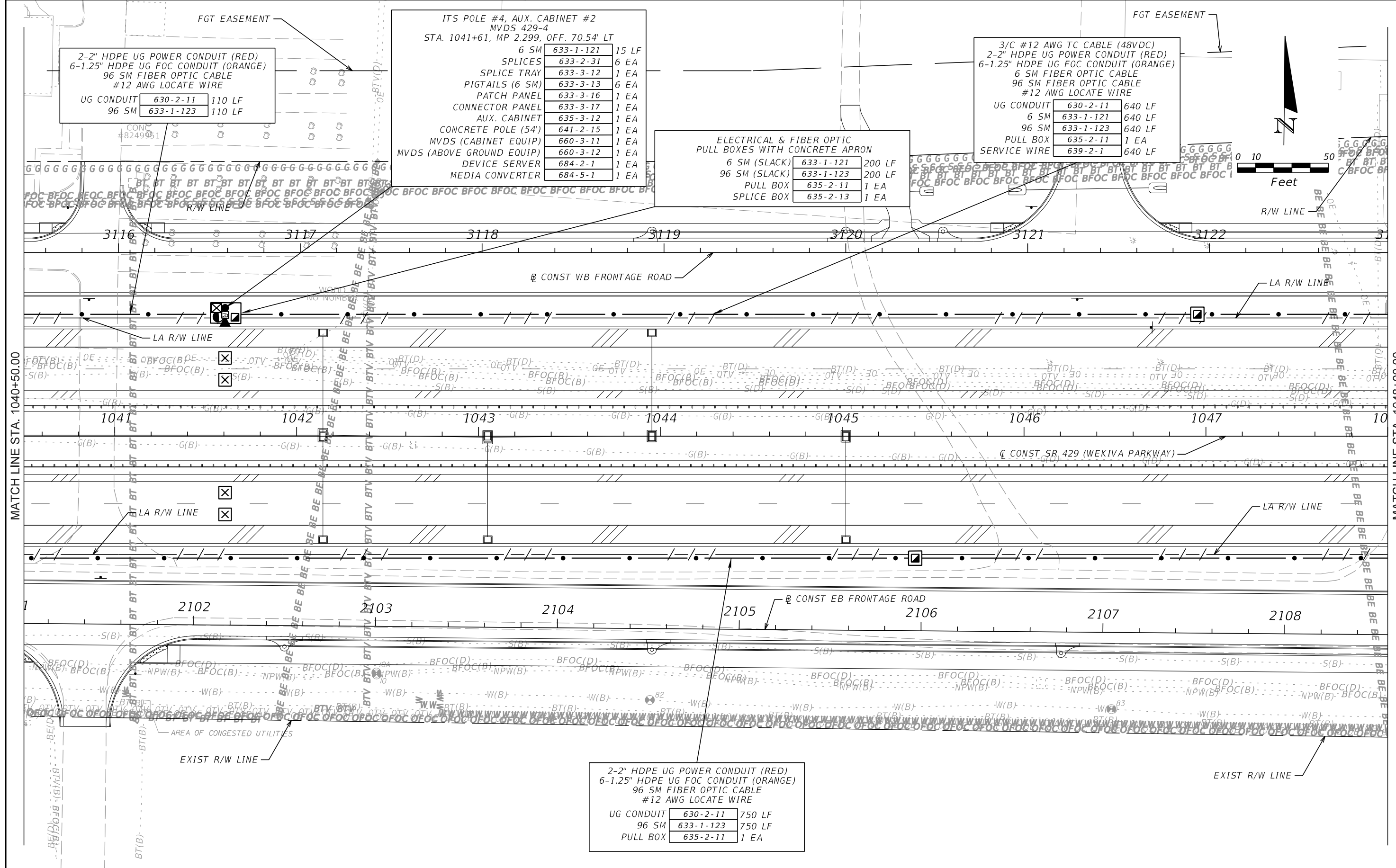
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-20

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 110 LF
	633-1-123 110 LF

ITS POLE #4, AUX. CABINET #2		
MVDS 429-4		
STA. 1041+61, MP 2.299, OFF. 70.54' LT		
6 SM	633-1-121	15 LF
SPLICES	633-2-31	6 EA
SPLICE TRAY	633-3-12	1 EA
PIGTAILS (6 SM)	633-3-13	6 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	1 EA
AUX. CABINET	635-3-12	1 EA
CONCRETE POLE (54')	641-2-15	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
DEVICE SERVER	684-2-1	1 EA
MEDIA CONVERTER	684-5-1	1 EA

ELECTRICAL & FIBER OPTIC		
PULL BOXES WITH CONCRETE APRON		
6 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

3/C #12 AWG TC CABLE (48VDC)	
2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
6 SM FIBER OPTIC CABLE	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 640 LF
6 SM	633-1-121 640 LF
96 SM	633-1-123 640 LF
PULL BOX	635-2-11 1 EA
SERVICE WIRE	639-2-1 640 LF

2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 750 LF
	633-1-123 750 LF
PULL BOX	635-2-11 1 EA

MATCH LINE STA. 1040+50.00

MATCH LINE STA. 1048+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

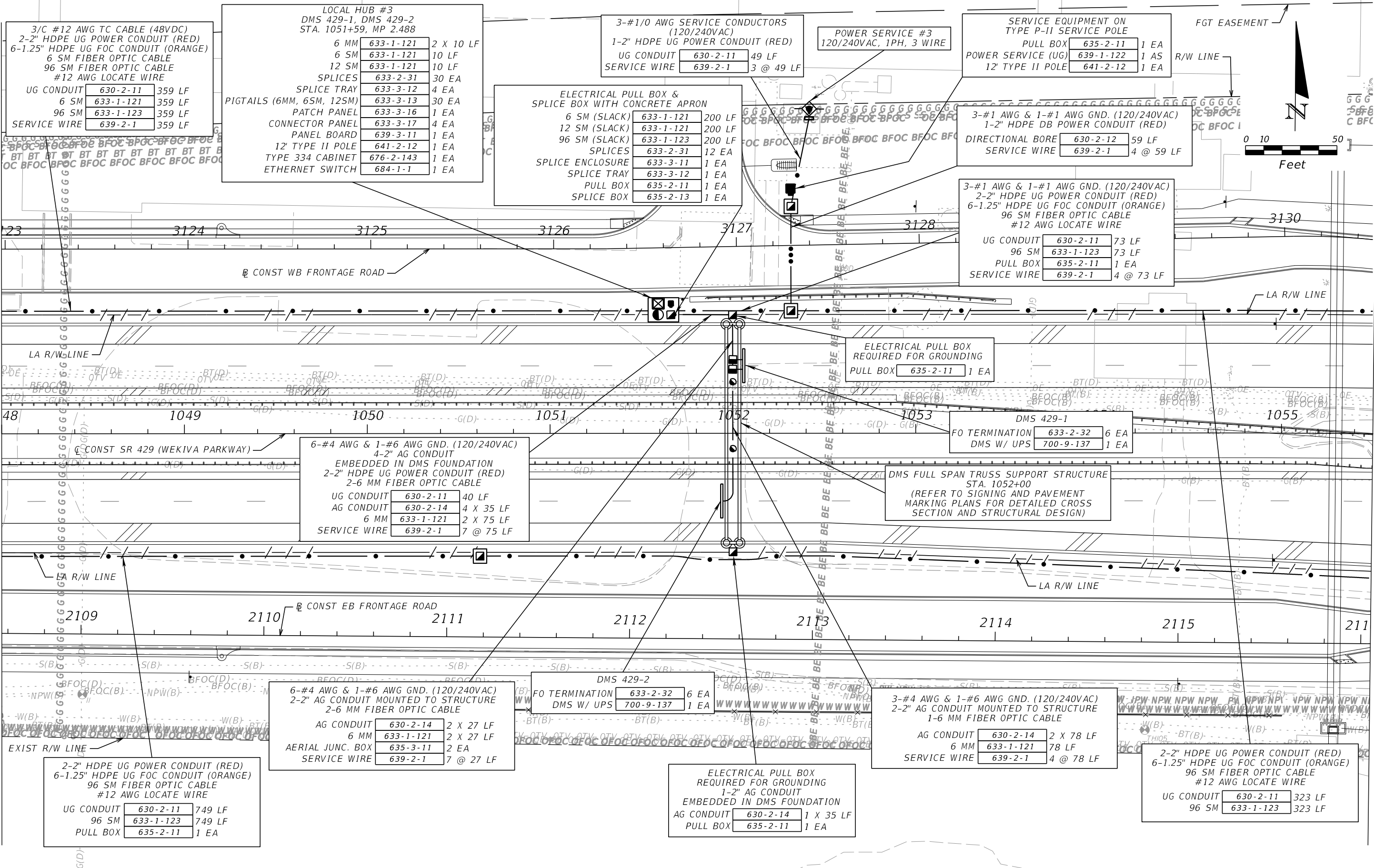
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-21

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



3/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	359 LF
6 SM	633-1-121	359 LF
96 SM	633-1-123	359 LF
SERVICE WIRE	639-2-1	359 LF

LOCAL HUB #3
DMS 429-1, DMS 429-2
STA. 1051+59, MP 2.488

6 MM	633-1-121	2 X 10 LF
6 SM	633-1-121	10 LF
12 SM	633-1-121	10 LF
SPLICES	633-2-31	30 EA
SPLICE TRAY	633-3-12	4 EA
PIGTAILS (6MM, 6SM, 12SM)	633-3-13	30 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	4 EA
PANEL BOARD	639-3-11	1 EA
12' TYPE II POLE	641-2-12	1 EA
TYPE 334 CABINET	676-2-143	1 EA
ETHERNET SWITCH	684-1-1	1 EA

3-#1/0 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)
UG CONDUIT 630-2-11 49 LF
SERVICE WIRE 639-2-1 3 @ 49 LF

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

6 SM (SLACK)	633-1-121	200 LF
12 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
SPLICES	633-2-31	12 EA
SPLICE ENCLOSURE	633-3-11	1 EA
SPLICE TRAY	633-3-12	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

POWER SERVICE #3
120/240VAC, 1PH, 3 WIRE

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE

PULL BOX	635-2-11	1 EA
POWER SERVICE (UG)	639-1-122	1 AS
12' TYPE II POLE	641-2-12	1 EA

3-#1 AWG & 1-#1 AWG GND. (120/240VAC)
1-2" HDPE DB POWER CONDUIT (RED)
DIRECTIONAL BORE 630-2-12 59 LF
SERVICE WIRE 639-2-1 4 @ 59 LF

3-#1 AWG & 1-#1 AWG GND. (120/240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	73 LF
96 SM	633-1-123	73 LF
PULL BOX	635-2-11	1 EA
SERVICE WIRE	639-2-1	4 @ 73 LF

6-#4 AWG & 1-#6 AWG GND. (120/240VAC)
4-2" AG CONDUIT
EMBEDDED IN DMS FOUNDATION
2-2" HDPE UG POWER CONDUIT (RED)
2-6 MM FIBER OPTIC CABLE

UG CONDUIT	630-2-11	40 LF
AG CONDUIT	630-2-14	4 X 35 LF
6 MM	633-1-121	2 X 75 LF
SERVICE WIRE	639-2-1	7 @ 75 LF

DMS FULL SPAN TRUSS SUPPORT STRUCTURE
STA. 1052+00
(REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR DETAILED CROSS SECTION AND STRUCTURAL DESIGN)

DMS 429-2

FO TERMINATION DMS W/ UPS	633-2-32	6 EA
DMS W/ UPS	700-9-137	1 EA

6-#4 AWG & 1-#6 AWG GND. (120/240VAC)
2-2" AG CONDUIT MOUNTED TO STRUCTURE
2-6 MM FIBER OPTIC CABLE

AG CONDUIT	630-2-14	2 X 27 LF
6 MM	633-1-121	2 X 27 LF
AERIAL JUNC. BOX	635-3-11	2 EA
SERVICE WIRE	639-2-1	7 @ 27 LF

3-#4 AWG & 1-#6 AWG GND. (120/240VAC)
2-2" AG CONDUIT MOUNTED TO STRUCTURE
1-6 MM FIBER OPTIC CABLE

AG CONDUIT	630-2-14	2 X 78 LF
6 MM	633-1-121	78 LF
SERVICE WIRE	639-2-1	4 @ 78 LF

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	749 LF
96 SM	633-1-123	749 LF
PULL BOX	635-2-11	1 EA

ELECTRICAL PULL BOX REQUIRED FOR GROUNDING
1-2" AG CONDUIT
EMBEDDED IN DMS FOUNDATION

AG CONDUIT	630-2-14	1 X 35 LF
PULL BOX	635-2-11	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	323 LF
96 SM	633-1-123	323 LF

MATCH LINE STA. 1048+00.00

MATCH LINE STA. 1055+50.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-22

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	61 LF
96 SM	633-1-123	61 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

TEMPORARY RWIS PEDESTAL 429-3
STA. 1061+50, MP 2.678, OFF. 70.44' LT

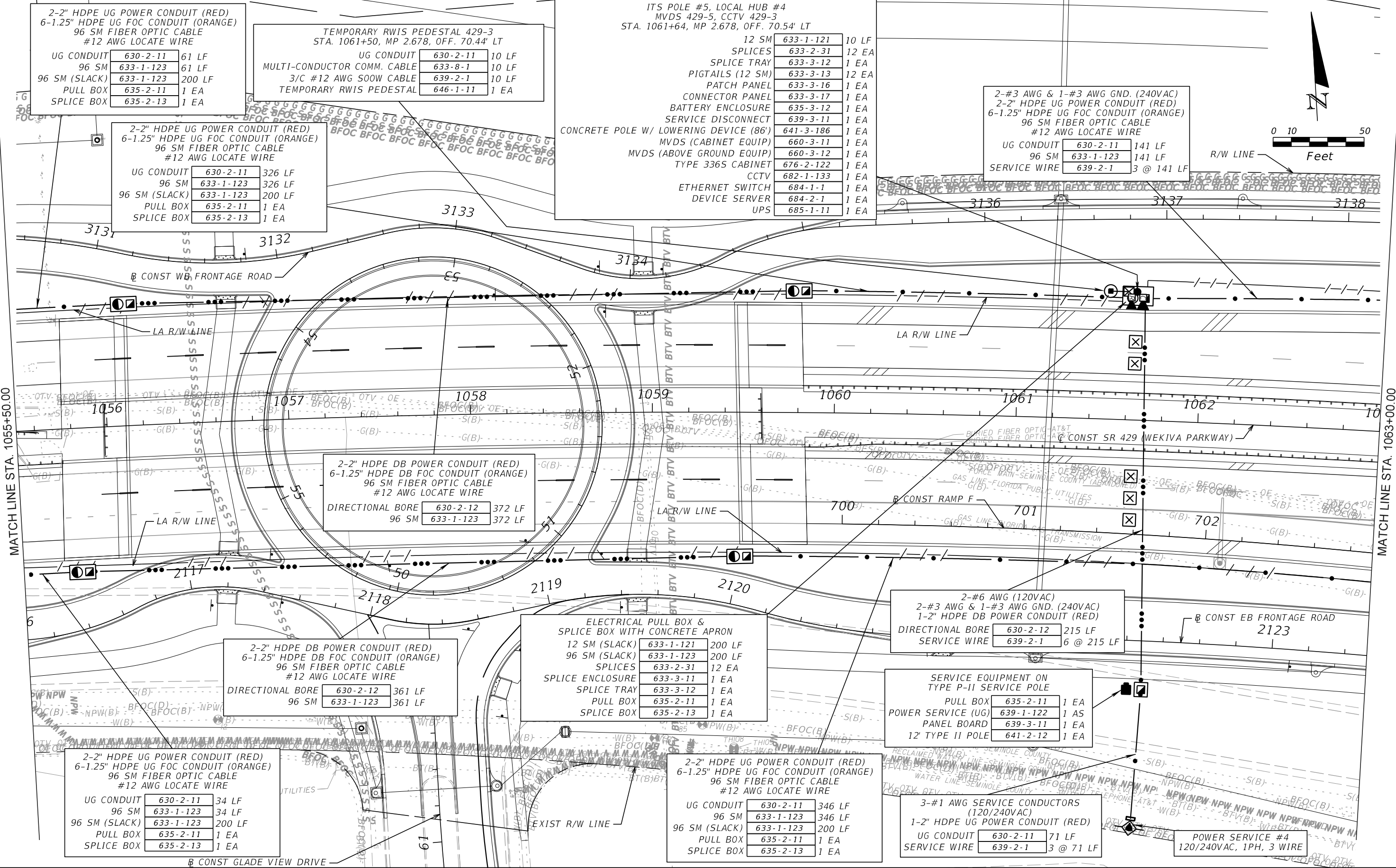
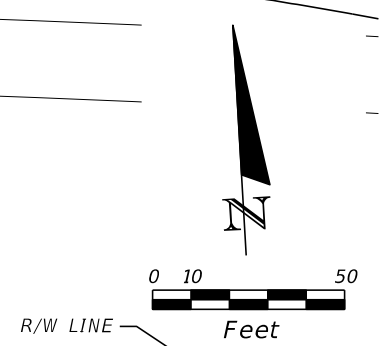
UG CONDUIT	630-2-11	10 LF
MULTI-CONDUCTOR COMM. CABLE	633-8-1	10 LF
3/C #12 AWG SOOW CABLE	639-2-1	10 LF
TEMPORARY RWIS PEDESTAL	646-1-11	1 EA

ITS POLE #5, LOCAL HUB #4
MVDS 429-5, CCTV 429-3
STA. 1061+64, MP 2.678, OFF. 70.54' LT

12 SM	633-1-121	10 LF
SPLICES	633-2-31	12 EA
SPLICE TRAY	633-3-12	1 EA
PIGTAILS (12 SM)	633-3-13	12 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	1 EA
BATTERY ENCLOSURE	635-3-12	1 EA
SERVICE DISCONNECT	639-3-11	1 EA
CONCRETE POLE W/ LOWERING DEVICE (86')	641-3-186	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
TYPE 336S CABINET	676-2-122	1 EA
CCTV	682-1-133	1 EA
ETHERNET SWITCH	684-1-1	1 EA
DEVICE SERVER	684-2-1	1 EA
UPS	685-1-11	1 EA

2-#3 AWG & 1-#3 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	141 LF
96 SM	633-1-123	141 LF
SERVICE WIRE	639-2-1	3 @ 141 LF



2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	372 LF
96 SM	633-1-123	372 LF

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

12 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
SPLICES	633-2-31	12 EA
SPLICE ENCLOSURE	633-3-11	1 EA
SPLICE TRAY	633-3-12	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-#6 AWG (120VAC)
2-#3 AWG & 1-#3 AWG GND. (240VAC)
1-2" HDPE DB POWER CONDUIT (RED)

DIRECTIONAL BORE	630-2-12	215 LF
SERVICE WIRE	639-2-1	6 @ 215 LF

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE

PULL BOX	635-2-11	1 EA
POWER SERVICE (UG)	639-1-122	1 AS
PANEL BOARD	639-3-11	1 EA
12' TYPE II POLE	641-2-12	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	34 LF
96 SM	633-1-123	34 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	346 LF
96 SM	633-1-123	346 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

3-#1 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)

UG CONDUIT	630-2-11	71 LF
SERVICE WIRE	639-2-1	3 @ 71 LF

POWER SERVICE #4
120/240VAC, 1PH, 3 WIRE

REVISIONS	
DATE	DESCRIPTION

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Traffic Engineering Data Solutions, Inc.
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CERTIFICATION OF AUTHORIZATION # 27392

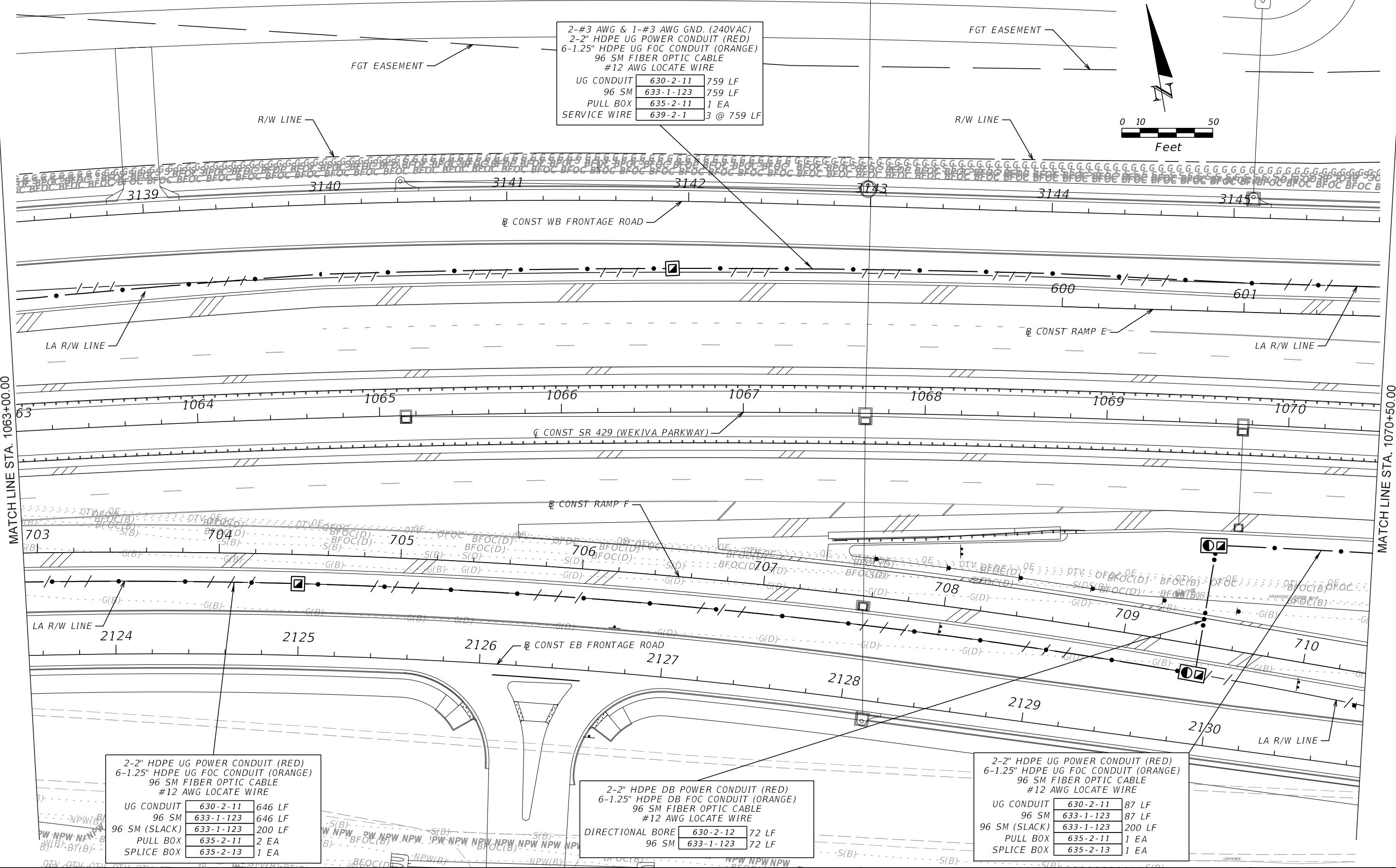
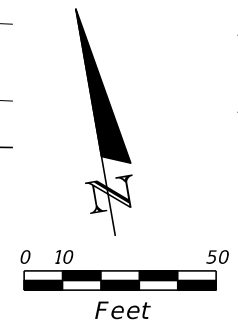
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-23

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

2-#3 AWG & 1-#3 AWG GND. (240VAC)	
2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 759 LF
96 SM	633-1-123 759 LF
PULL BOX	635-2-11 1 EA
SERVICE WIRE	639-2-1 3 @ 759 LF



2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 646 LF
96 SM	633-1-123 646 LF
96 SM (SLACK)	633-1-123 200 LF
PULL BOX	635-2-11 2 EA
SPLICE BOX	635-2-13 1 EA

2-2" HDPE DB POWER CONDUIT (RED)	
6-1.25" HDPE DB FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
DIRECTIONAL BORE	630-2-12 72 LF
96 SM	633-1-123 72 LF

2-2" HDPE UG POWER CONDUIT (RED)	
6-1.25" HDPE UG FOC CONDUIT (ORANGE)	
96 SM FIBER OPTIC CABLE	
#12 AWG LOCATE WIRE	
UG CONDUIT	630-2-11 87 LF
96 SM	633-1-123 87 LF
96 SM (SLACK)	633-1-123 200 LF
PULL BOX	635-2-11 1 EA
SPLICE BOX	635-2-13 1 EA

REVISIONS			
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

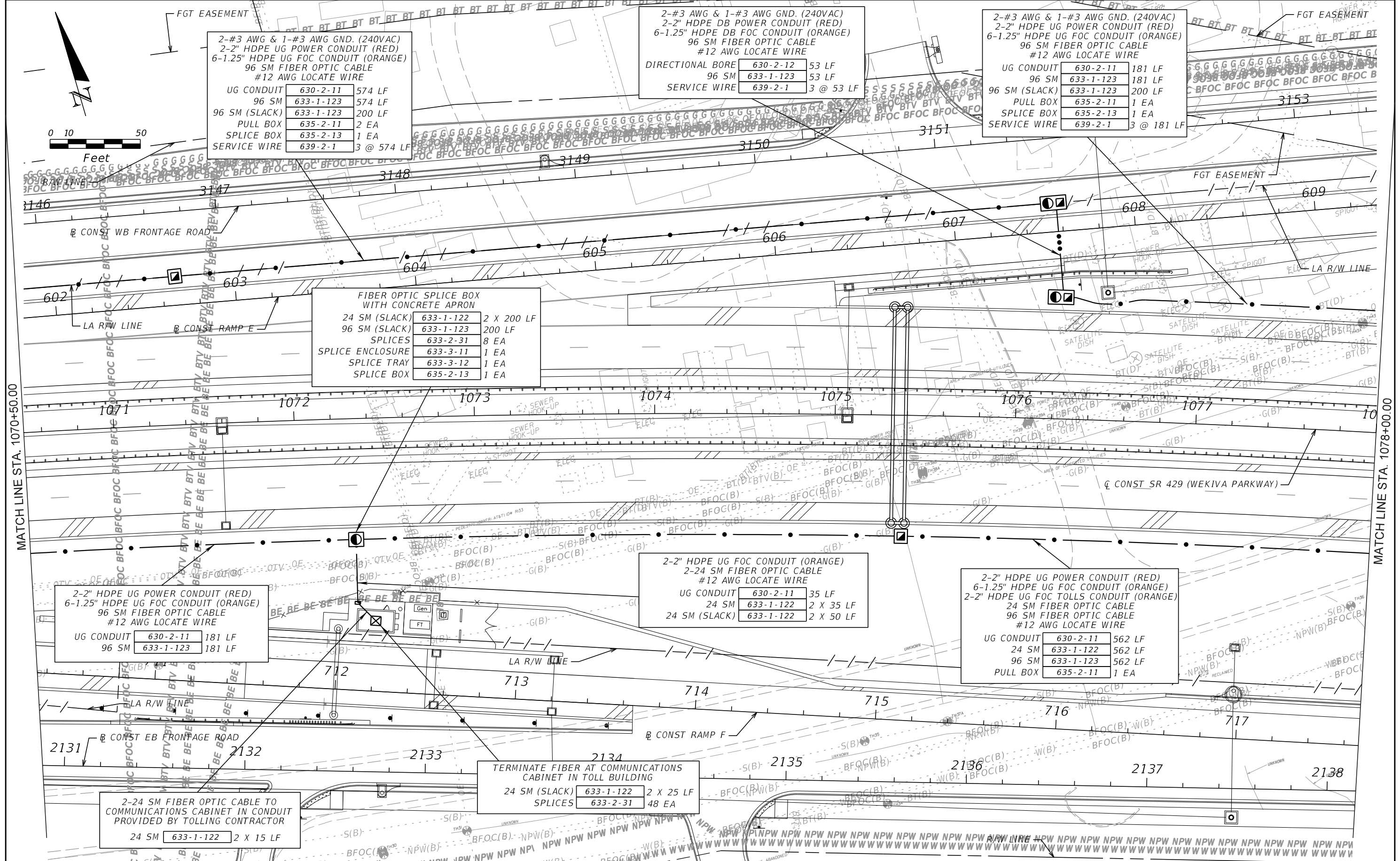
ITS PLAN SHEET

SHEET NO.
IT-24

MATCH LINE STA. 1063+00.00

MATCH LINE STA. 1070+50.00

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



2-#3 AWG & 1-#3 AWG GND. (240VAC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	574 LF
96 SM	633-1-123	574 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	2 EA
SPLICE BOX	635-2-13	1 EA
SERVICE WIRE	639-2-1	3 @ 574 LF

2-#3 AWG & 1-#3 AWG GND. (240VAC)		
2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	53 LF
96 SM	633-1-123	53 LF
SERVICE WIRE	639-2-1	3 @ 53 LF

2-#3 AWG & 1-#3 AWG GND. (240VAC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	181 LF
96 SM	633-1-123	181 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA
SERVICE WIRE	639-2-1	3 @ 181 LF

FIBER OPTIC SPLICE BOX WITH CONCRETE APRON		
24 SM (SLACK)	633-1-122	2 X 200 LF
96 SM (SLACK)	633-1-123	200 LF
SPLICES	633-2-31	8 EA
SPLICE ENCLOSURE	633-3-11	1 EA
SPLICE TRAY	633-3-12	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG FOC CONDUIT (ORANGE)		
2-24 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	35 LF
24 SM	633-1-122	2 X 35 LF
24 SM (SLACK)	633-1-122	2 X 50 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
2-2" HDPE UG FOC TOLLS CONDUIT (ORANGE)		
24 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	562 LF
24 SM	633-1-122	562 LF
96 SM	633-1-123	562 LF
PULL BOX	635-2-11	1 EA

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	181 LF
96 SM	633-1-123	181 LF

TERMINATE FIBER AT COMMUNICATIONS CABINET IN TOLL BUILDING		
24 SM (SLACK)	633-1-122	2 X 25 LF
SPLICES	633-2-31	48 EA

2-24 SM FIBER OPTIC CABLE TO COMMUNICATIONS CABINET IN CONDUIT PROVIDED BY TOLLING CONTRACTOR		
24 SM	633-1-122	2 X 15 LF

MATCH LINE STA. 1070+50.00

MATCH LINE STA. 1078+00.00

REVISIONS			
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 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-25

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

ITS POLE #6, LOCAL HUB #5
MVDS 429-6, CCTV-4
STA. 1084+60, MP 3.113, OFF. 70.53' LT

6 SM	633-1-121	15 LF
12 SM	633-1-121	15 LF
SPLICES	633-2-31	18 EA
SPLICE TRAY	633-3-12	2 EA
PIGTAILS (6 SM, 12 SM)	633-3-13	18 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	2 EA
BATTERY ENCLOSURE	635-3-12	1 EA
SERVICE DISCONNECT	639-3-11	1 EA
STEP-DOWN TRANSFORMER	639-6-1	1 EA
CONC. POLE W/ LOWERING DEVICE (86')	641-3-186	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
TYPE 336S CABINET	676-2-122	1 EA
CCTV	682-1-133	1 EA
ETHERNET SWITCH	684-1-1	1 EA
DEVICE SERVER	684-2-1	1 EA
UPS	685-1-11	1 EA

TERMINATE FIBER AT COMMUNICATIONS CABINET IN TOLL BUILDING
24 SM (SLACK) 633-1-122 25 LF
SPLICES 633-2-31 24 EA

2-24 SM FIBER OPTIC CABLE TO COMMUNICATIONS CABINET IN CONDUIT PROVIDED BY TOLLING CONTRACTOR
24 SM 633-1-122 15 LF

2-2" HDPE UG FOC CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 53 LF
24 SM 633-1-122 53 LF
24 SM (SLACK) 633-1-122 50 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE) PROVIDED FOR SEMINOLE COUNTY USE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 73 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
2-2" HDPE UG FOC CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 179 LF
24 SM 633-1-122 179 LF

FIBER OPTIC SPLICE BOX WITH CONCRETE APRON
24 SM (SLACK) 633-1-122 200 LF
SPLICE BOX 635-2-13 1 EA

2-#3 AWG & 1-#3 AWG GND. (240VAC)
2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
DIRECTIONAL BORE 630-2-12 137 LF
96 SM 633-1-123 137 LF
SERVICE WIRE 639-2-1 3 @ 137 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
2-2" HDPE UG FOC CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 216 LF
24 SM 633-1-122 216 LF

2-#3 AWG & 1-#3 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 523 LF
96 SM 633-1-123 523 LF
96 SM (SLACK) 633-1-123 200 LF
PULL BOX 635-2-11 1 EA
SPLICE BOX 635-2-13 1 EA
SERVICE WIRE 639-2-1 3 @ 523 LF

TEMPORARY RWIS PEDESTAL 429-4
STA. 1084+46, MP 3.113, OFF. 70.55' LT
UG CONDUIT 630-2-11 10 LF
MULTI-CONDUCTOR COMM. CABLE 633-8-1 10 LF
3/C #12 SOOW CABLE 639-2-1 10 LF
TEMPORARY RWIS PEDESTAL 646-1-11 1 EA

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON
6 SM (SLACK) 633-1-121 200 LF
12 SM (SLACK) 633-1-121 200 LF
96 SM (SLACK) 633-1-123 200 LF
SPLICES 633-2-31 12 EA
SPLICE ENCLOSURE 633-3-11 1 EA
SPLICE TRAY 633-3-12 1 EA
PULL BOX 635-2-11 1 EA
SPLICE BOX 635-2-13 1 EA

3/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 97 LF
6 SM 633-1-121 97 LF
96 SM 633-1-123 97 LF
SERVICE WIRE 639-2-1 97 LF

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
2-2" HDPE UG FOC CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 346 LF
24 SM 633-1-122 346 LF
96 SM 633-1-123 346 LF

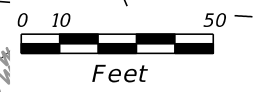
ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON
24 SM (SLACK) 633-1-122 200 LF
96 SM (SLACK) 633-1-123 200 LF
PULL BOX 635-2-11 1 EA
SPLICE BOX 635-2-13 1 EA

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
DIRECTIONAL BORE 630-2-12 154 LF
96 SM 633-1-123 154 LF

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE #12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 242 LF
96 SM 633-1-123 242 LF
96 SM (SLACK) 633-1-123 200 LF
PULL BOX 635-2-11 1 EA
SPLICE BOX 635-2-13 1 EA

MATCH LINE STA. 1078+00.00

MATCH LINE STA. 1085+50.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

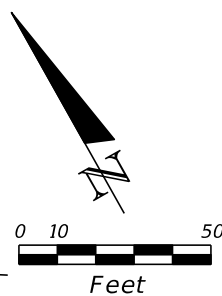
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-26

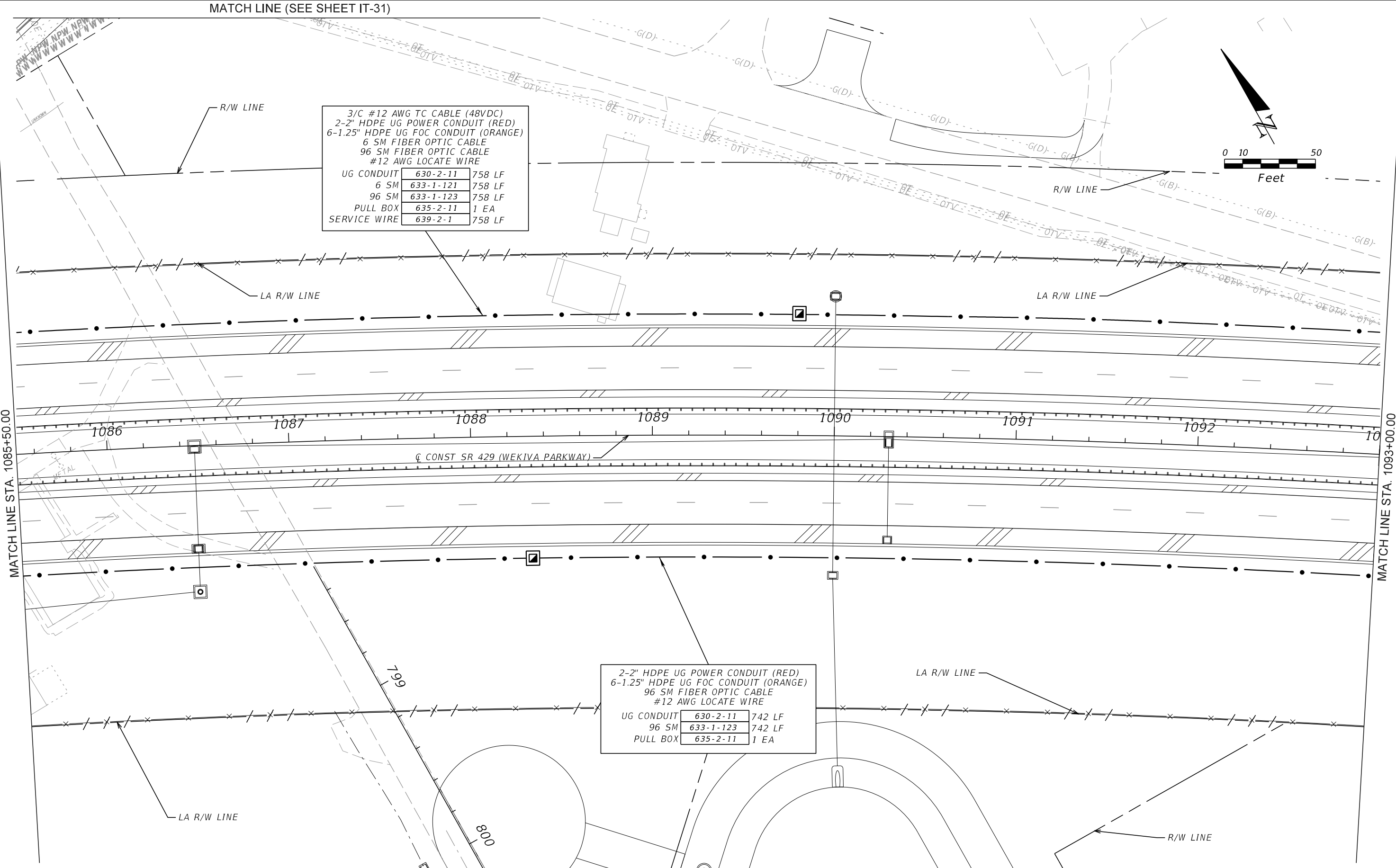
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MATCH LINE (SEE SHEET IT-31)



3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	758 LF
6 SM	633-1-121	758 LF
96 SM	633-1-123	758 LF
PULL BOX	635-2-11	1 EA
SERVICE WIRE	639-2-1	758 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	742 LF
96 SM	633-1-123	742 LF
PULL BOX	635-2-11	1 EA



MATCH LINE STA. 1085+50.00

MATCH LINE STA. 1093+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

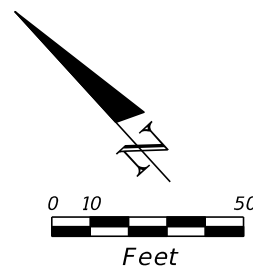
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
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ITS PLAN SHEET

SHEET NO.
IT-27

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3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	448 LF
6 SM	633-1-121	448 LF
6 SM (SLACK)	633-1-121	200 LF
96 SM	633-1-123	448 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA
SERVICE WIRE	639-2-1	448 LF

3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	91 LF
6 SM	633-1-121	91 LF
6 SM (SLACK)	633-1-121	200 LF
96 SM	633-1-123	91 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	2 EA
SPLICE BOX	635-2-13	2 EA
SERVICE WIRE	639-2-1	91 LF

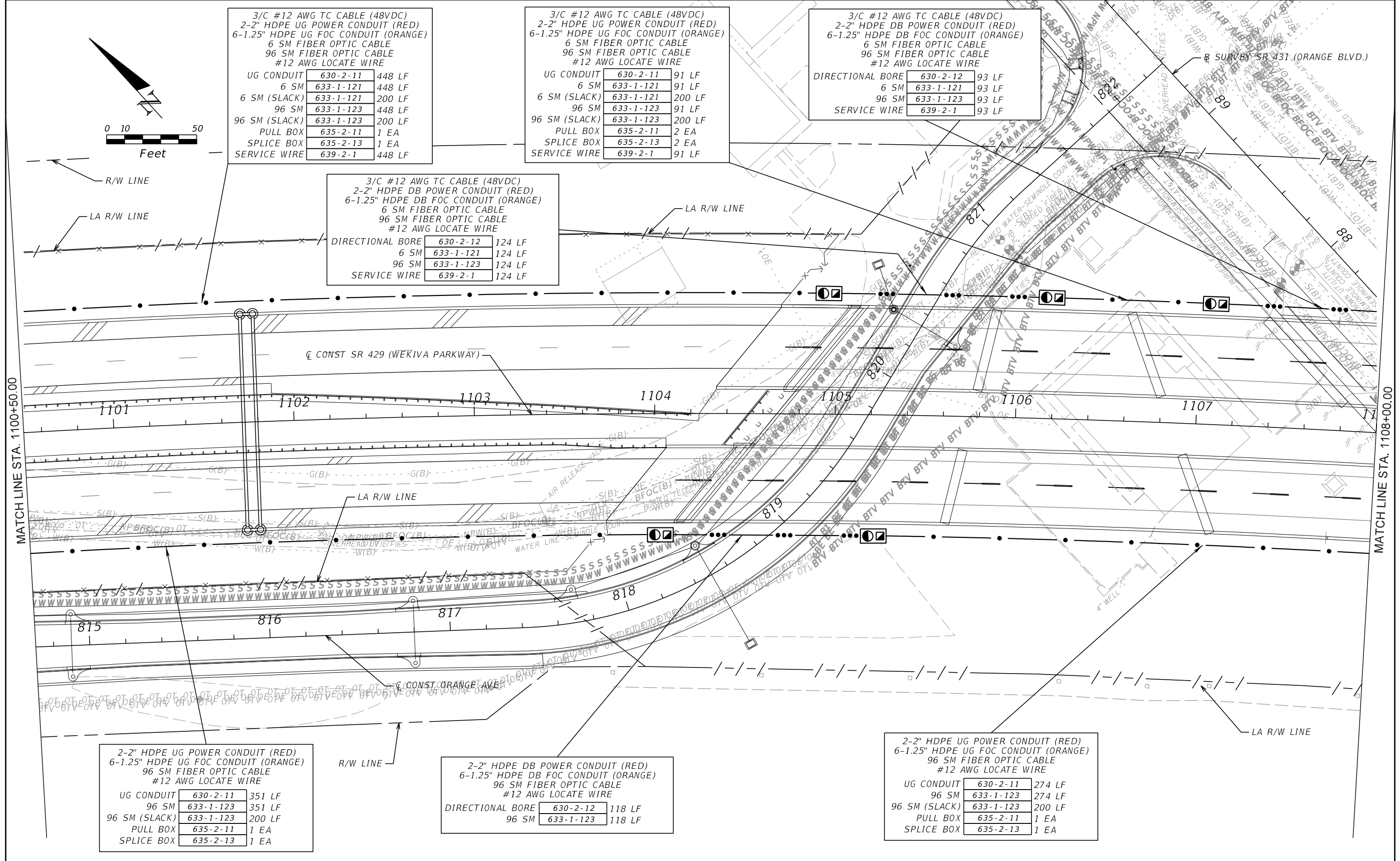
3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	93 LF
6 SM	633-1-121	93 LF
96 SM	633-1-123	93 LF
SERVICE WIRE	639-2-1	93 LF

3/C #12 AWG TC CABLE (48VDC)		
2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
6 SM FIBER OPTIC CABLE		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	124 LF
6 SM	633-1-121	124 LF
96 SM	633-1-123	124 LF
SERVICE WIRE	639-2-1	124 LF

2-2" HDPE DB POWER CONDUIT (RED)		
6-1.25" HDPE DB FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
DIRECTIONAL BORE	630-2-12	118 LF
96 SM	633-1-123	118 LF

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	274 LF
96 SM	633-1-123	274 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)		
6-1.25" HDPE UG FOC CONDUIT (ORANGE)		
96 SM FIBER OPTIC CABLE		
#12 AWG LOCATE WIRE		
UG CONDUIT	630-2-11	351 LF
96 SM	633-1-123	351 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

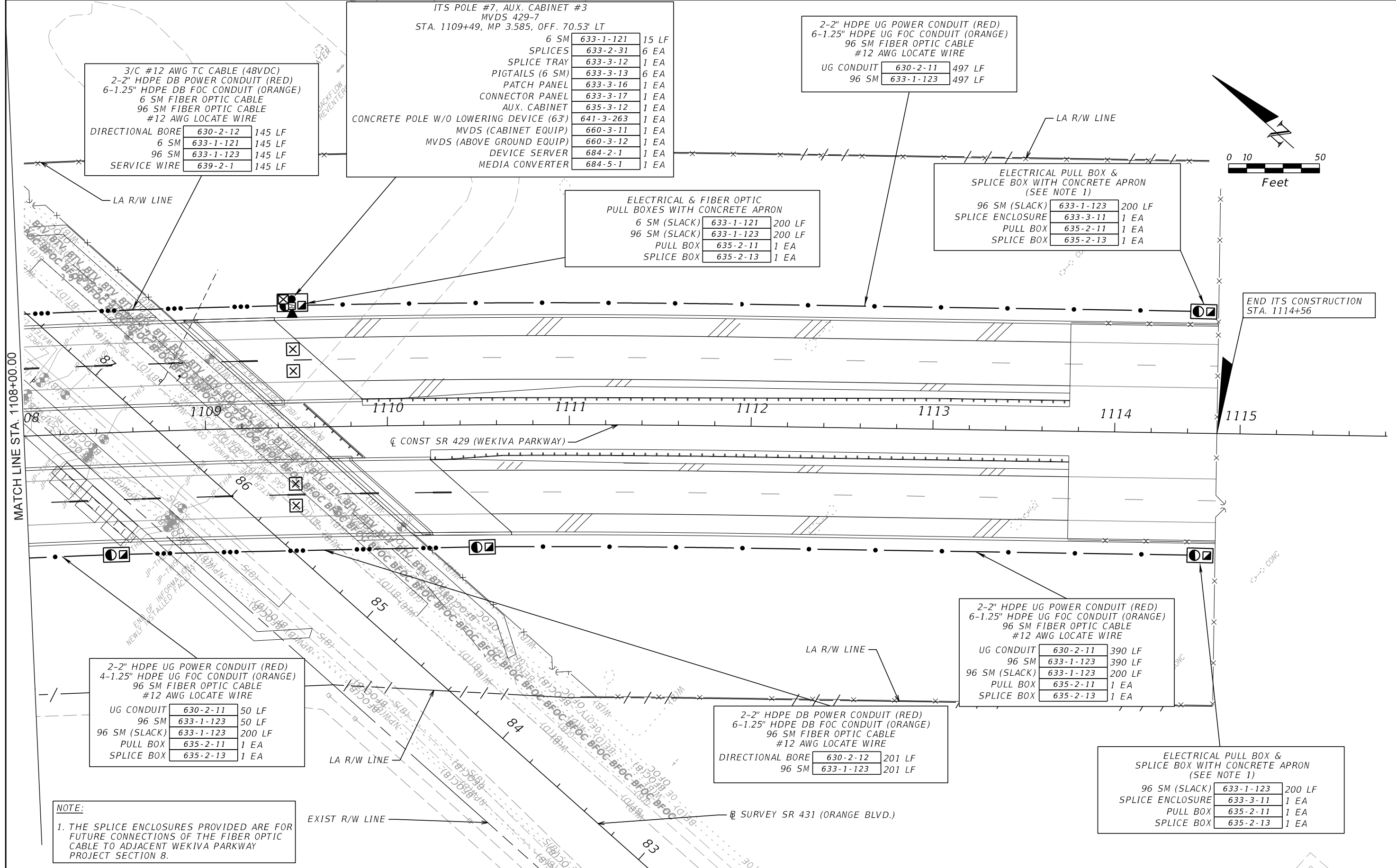
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-29

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3/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	145 LF
6 SM	633-1-121	145 LF
96 SM	633-1-123	145 LF
SERVICE WIRE	639-2-1	145 LF

ITS POLE #7, AUX. CABINET #3
MVDS 429-7
STA. 1109+49, MP 3.585, OFF. 70.53' LT

6 SM	633-1-121	15 LF
SPLICES	633-2-31	6 EA
SPLICE TRAY	633-3-12	1 EA
PIGTAILS (6 SM)	633-3-13	6 EA
PATCH PANEL	633-3-16	1 EA
CONNECTOR PANEL	633-3-17	1 EA
AUX. CABINET	635-3-12	1 EA
CONCRETE POLE W/O LOWERING DEVICE (63')	641-3-263	1 EA
MVDS (CABINET EQUIP)	660-3-11	1 EA
MVDS (ABOVE GROUND EQUIP)	660-3-12	1 EA
DEVICE SERVER	684-2-1	1 EA
MEDIA CONVERTER	684-5-1	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	497 LF
96 SM	633-1-123	497 LF

ELECTRICAL & FIBER OPTIC
PULL BOXES WITH CONCRETE APRON

6 SM (SLACK)	633-1-121	200 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

ELECTRICAL PULL BOX &
SPLICE BOX WITH CONCRETE APRON
(SEE NOTE 1)

96 SM (SLACK)	633-1-123	200 LF
SPLICE ENCLOSURE	633-3-11	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	50 LF
96 SM	633-1-123	50 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE UG POWER CONDUIT (RED)
6-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	390 LF
96 SM	633-1-123	390 LF
96 SM (SLACK)	633-1-123	200 LF
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

2-2" HDPE DB POWER CONDUIT (RED)
6-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	201 LF
96 SM	633-1-123	201 LF

ELECTRICAL PULL BOX &
SPLICE BOX WITH CONCRETE APRON
(SEE NOTE 1)

96 SM (SLACK)	633-1-123	200 LF
SPLICE ENCLOSURE	633-3-11	1 EA
PULL BOX	635-2-11	1 EA
SPLICE BOX	635-2-13	1 EA

NOTE:
1. THE SPLICE ENCLOSURES PROVIDED ARE FOR FUTURE CONNECTIONS OF THE FIBER OPTIC CABLE TO ADJACENT WEKIVA PARKWAY PROJECT SECTION 8.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

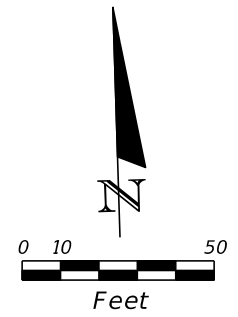
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

ITS PLAN SHEET

SHEET NO.
IT-30

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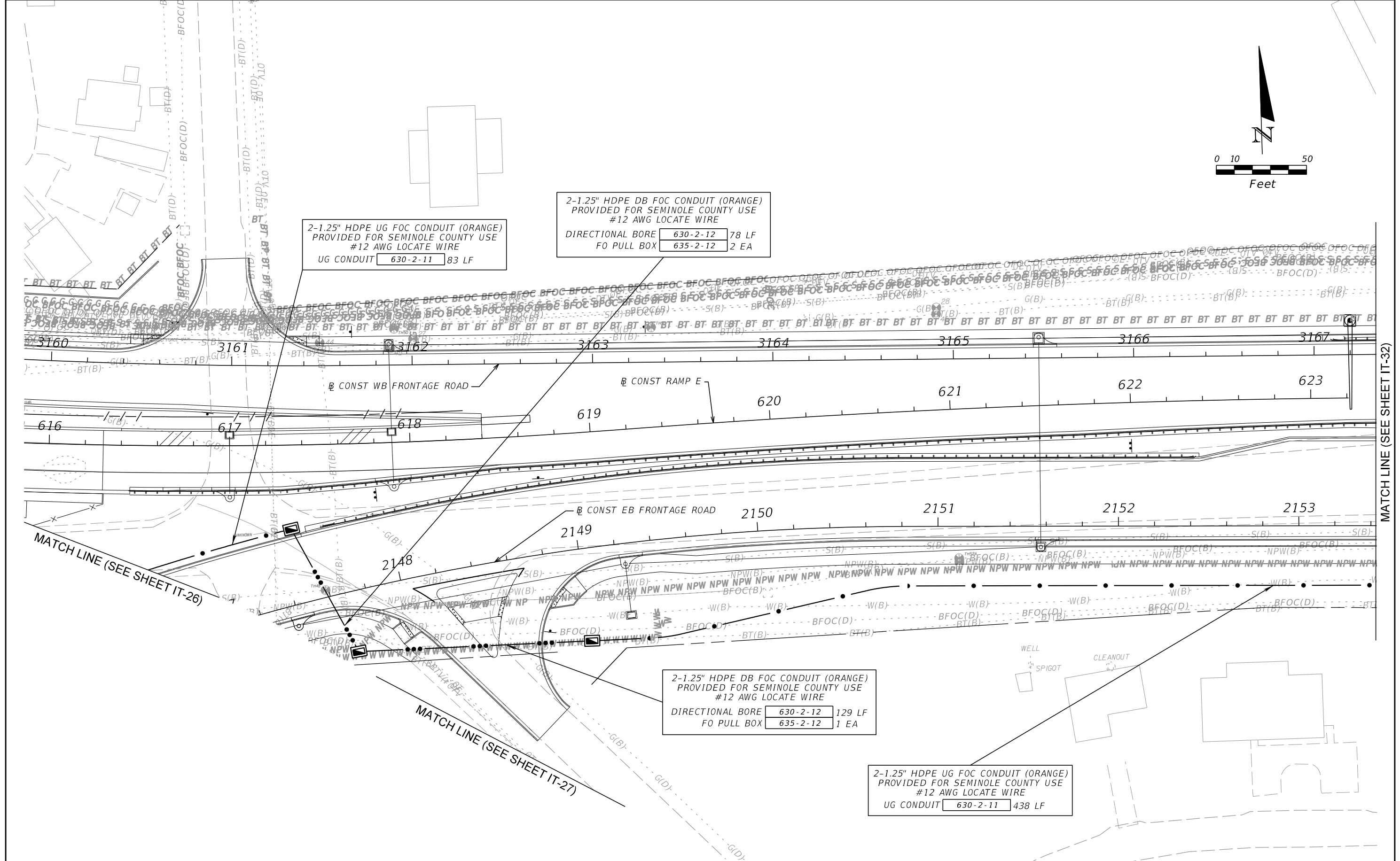


2-1.25" HDPE DB FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE
 DIRECTIONAL BORE 630-2-12 78 LF
 FO PULL BOX 635-2-12 2 EA

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE
 UG CONDUIT 630-2-11 83 LF

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE
 DIRECTIONAL BORE 630-2-12 129 LF
 FO PULL BOX 635-2-12 1 EA

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
 PROVIDED FOR SEMINOLE COUNTY USE
 #12 AWG LOCATE WIRE
 UG CONDUIT 630-2-11 438 LF



MATCH LINE (SEE SHEET IT-32)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

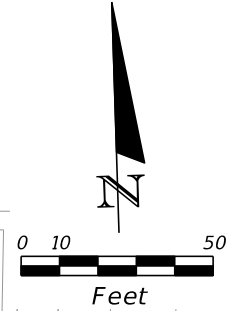
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ITS PLAN SHEET

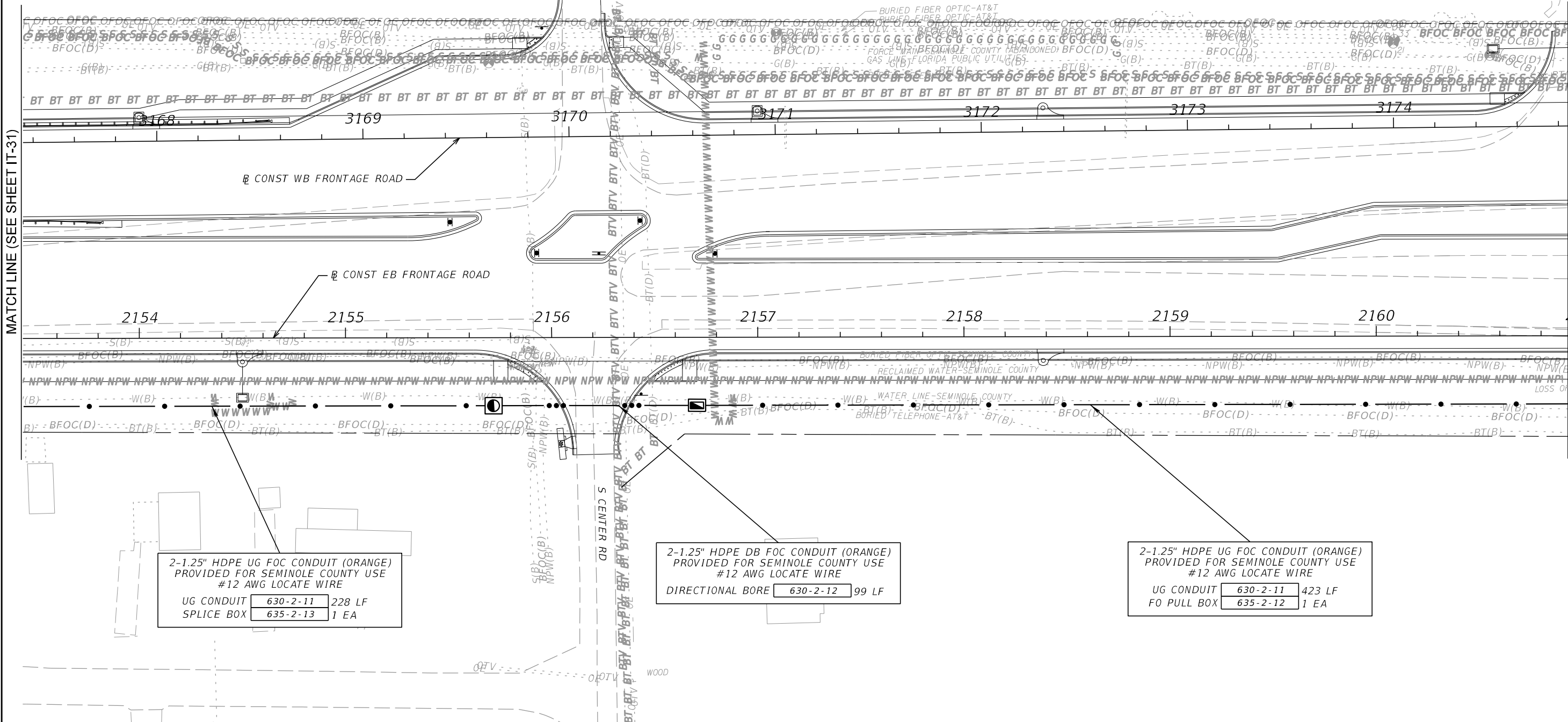
SHEET NO.
IT-31

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MATCH LINE (SEE SHEET IT-31)

MATCH LINE (SEE SHEET IT-33)



2-1.25" HDPE UG FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	228 LF
SPLICE BOX	635-2-13	1 EA

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE 630-2-12 99 LF

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	423 LF
FO PULL BOX	635-2-12	1 EA

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

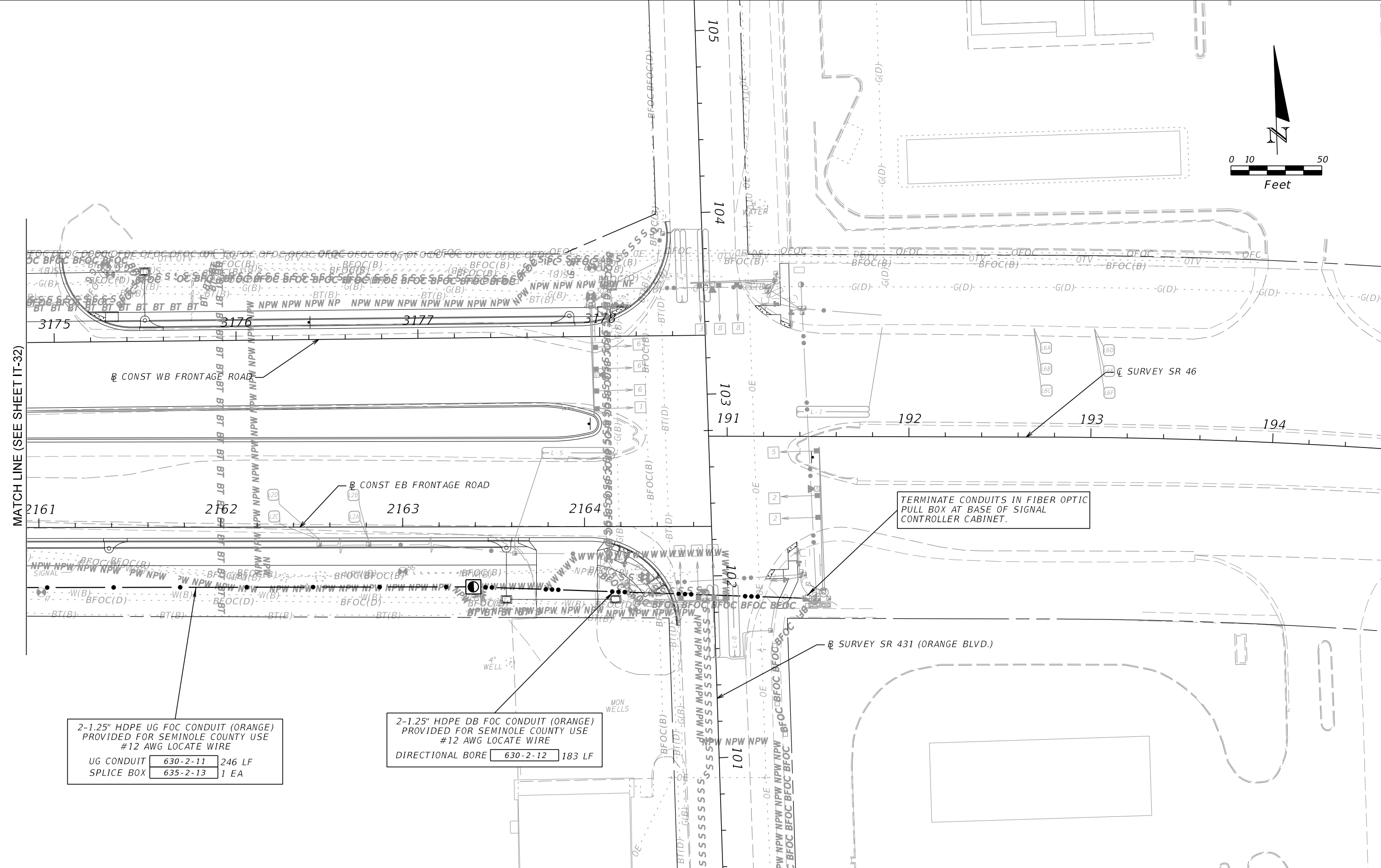
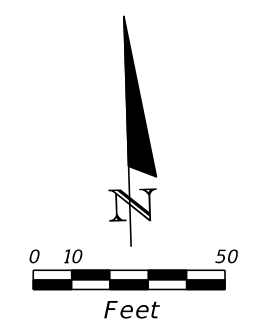
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SHEET NO.
IT-32

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MATCH LINE (SEE SHEET IT-32)

2-1.25" HDPE UG FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

UG CONDUIT	630-2-11	246 LF
SPLICE BOX	635-2-13	1 EA

2-1.25" HDPE DB FOC CONDUIT (ORANGE)
PROVIDED FOR SEMINOLE COUNTY USE
#12 AWG LOCATE WIRE

DIRECTIONAL BORE	630-2-12	183 LF
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ITS PLAN SHEET

SHEET NO.
IT-33

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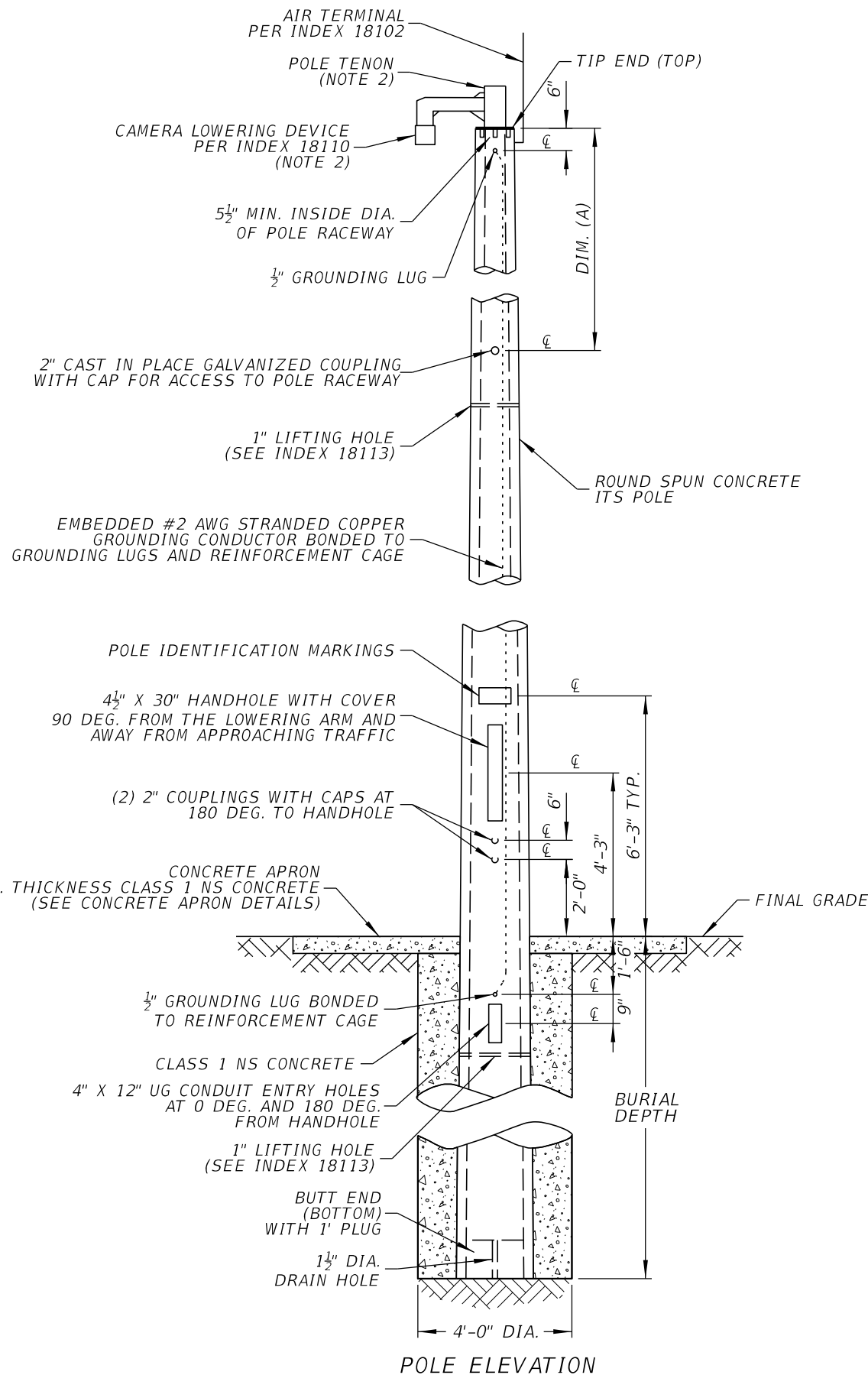
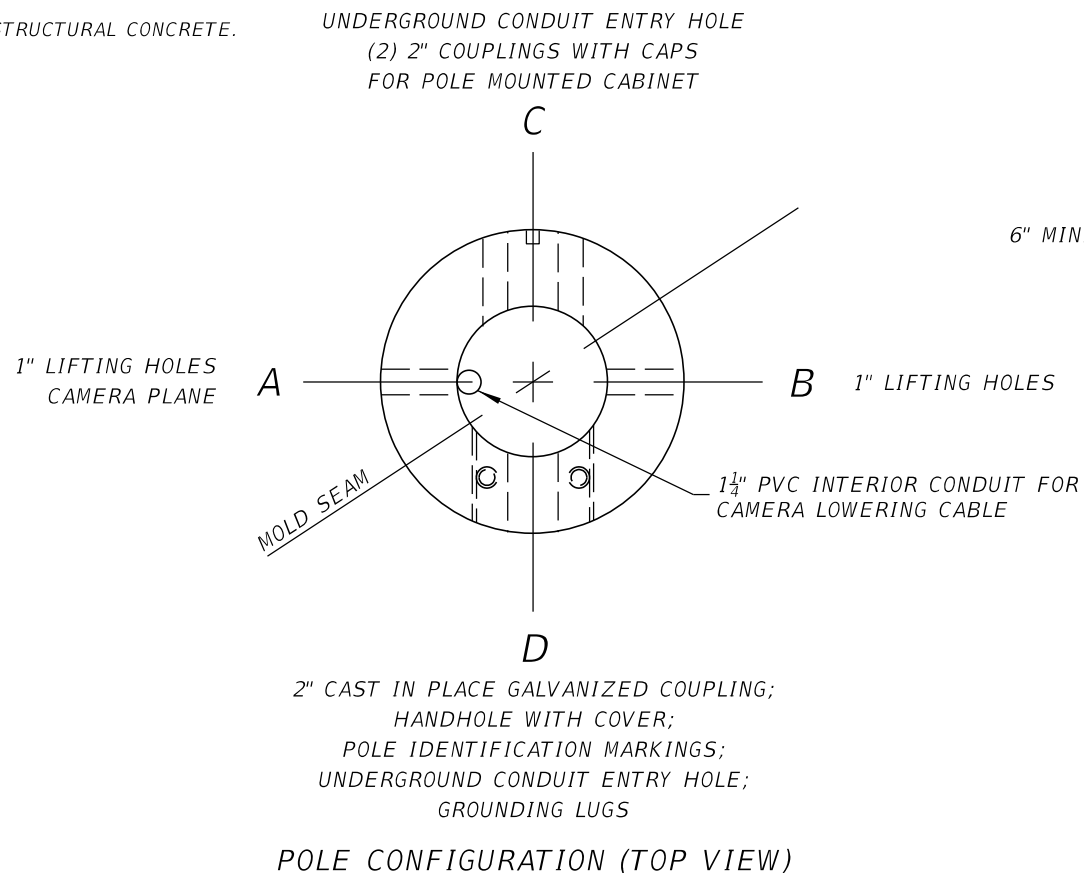
ROUND SPUN CONCRETE POLE DATA SUMMARY TABLE

ITS POLE	STATION	OFFSET	DEVICES ON POLE	POLE MATERIAL	POLE LENGTH*	POLE HEIGHT**	DIM. A	BURIAL DEPTH	LOWERING DEVICE	MIN. REQUIRED ULTIMATE MOMENT CAPACITY AT GRADE (KIP-FT)
1	964+26	70.48' LT	CCTV / MVDS	CONCRETE	86'	70'	21'	16'	YES	233
3	1021+58	70.68' LT	CCTV / MVDS	CONCRETE	86'	70'	21'	16'	YES	233
5	1061+64	70.54' LT	CCTV / MVDS	CONCRETE	86'	70'	21'	16'	YES	233
6	1084+60	70.53' LT	CCTV / MVDS	CONCRETE	86'	70'	21'	16'	YES	233
7	1109+49	70.53' LT	MVDS	CONCRETE	63'	50'	2'	13'	NO	87

* MEASURED FROM TOP END (TOP) TO BUTT END (BOTTOM) OF POLE.
 ** MEASURED FROM FINAL GRADE TO TIP END (TOP) OF POLE.

NOTES:

- UNLESS OTHERWISE INDICATED ON THIS SHEET, CONCRETE POLES LISTED IN THE TABLE ABOVE SHALL BE CONSTRUCTED AND INSTALLED PER FDOT INDEX 18113.
- IF THE PROPOSED DEVICES ON THE POLE DO NOT INCLUDE A CCTV CAMERA, THEN NO LOWERING DEVICE OR POLE TENON SHALL BE PROVIDED, AND A REMOVABLE CAP PLATE SHALL BE INSTALLED ON THE TIP END (TOP) OF THE POLE.
- POLES SHALL BE INSTALLED PLUMB, AND IN THE CENTER OF THE FOUNDATION SHAFT SUCH THAT THE DISTANCE FROM THE FACE OF THE POLE TO THE EDGE OF THE FOUNDATION SHAFT IS EQUAL ON ALL SIDES.
- ALL ITS POLES SHALL BE FULLY EMBEDDED IN CLASS I NON-STRUCTURAL CONCRETE.



REVISIONS			
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SR 429	SEMINOLE	240200-2-52-01

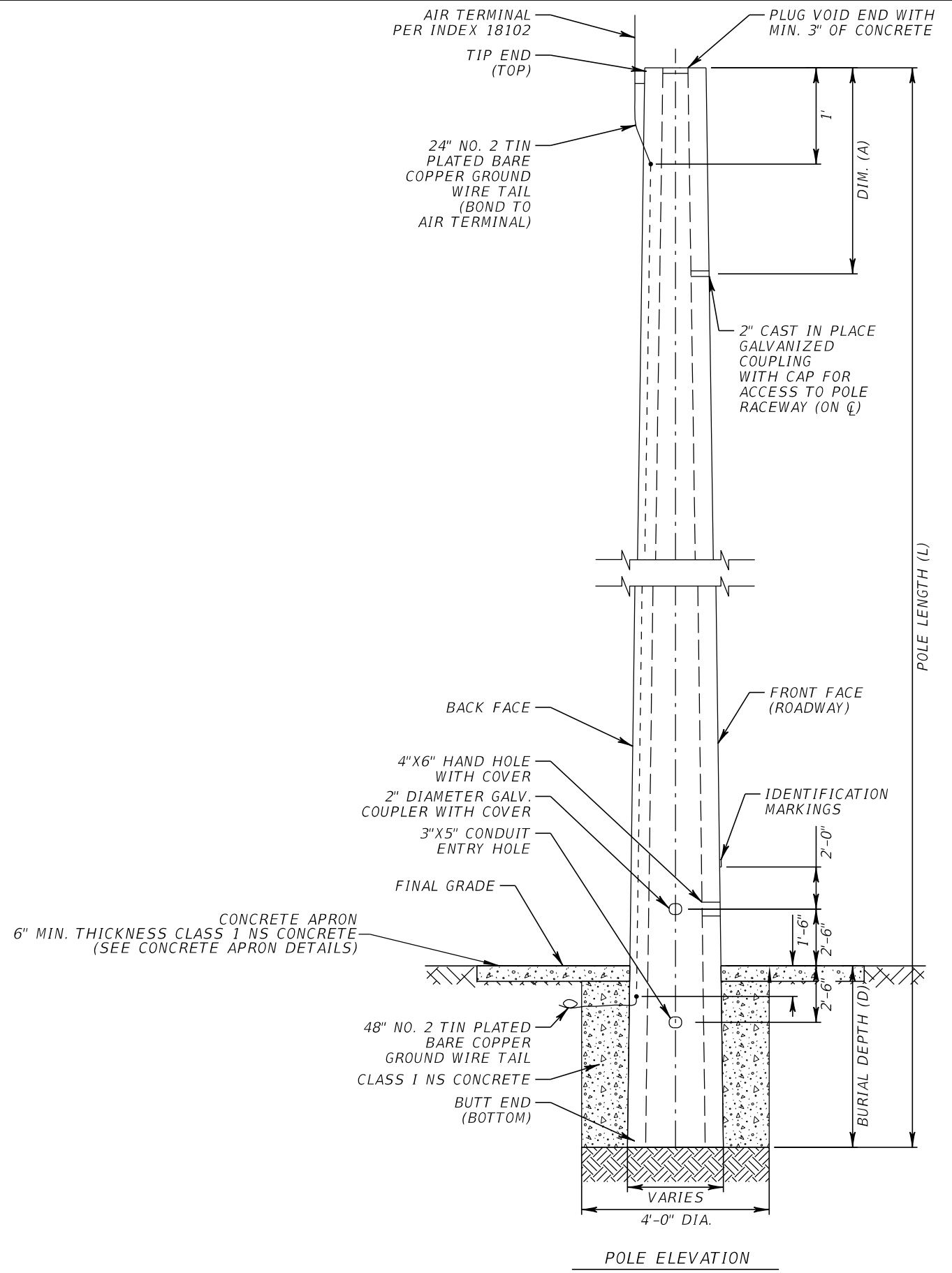
POLE DATA SHEET

SHEET NO.
 IT-34

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SQUARE CONCRETE STRAIN POLE DATA SUMMARY TABLE								
ITS POLE	STATION	OFFSET	DEVICES ON POLE	DIM L	DIM D	DIM A	POLE TYPE	MIN. REQUIRED ULTIMATE MOMENT CAPACITY AT GRADE (KIP-FT)
2	991+85	72.54' LT	MVDS	54'	14'	5'	P-V	157
4	1041+61	70.54' LT	MVDS	54'	14'	5'	P-V	157

- NOTES:**
- UNLESS OTHERWISE INDICATED ON THIS SHEET, CONCRETE POLES LISTED IN THE TABLE ABOVE SHALL BE CONSTRUCTED AND INSTALLED PER FDOT INDEX 17725.
 - POLES SHALL BE INSTALLED PLUMB, AND IN THE CENTER OF THE FOUNDATION SHAFT SUCH THAT THE DISTANCE FROM THE FACE OF THE POLE TO THE EDGE OF THE FOUNDATION SHAFT IS EQUAL ON ALL SIDES.
 - ALL ITS POLES SHALL BE FULLY EMBEDDED IN CLASS 1 NON-STRUCTURAL CONCRETE.



REVISIONS			
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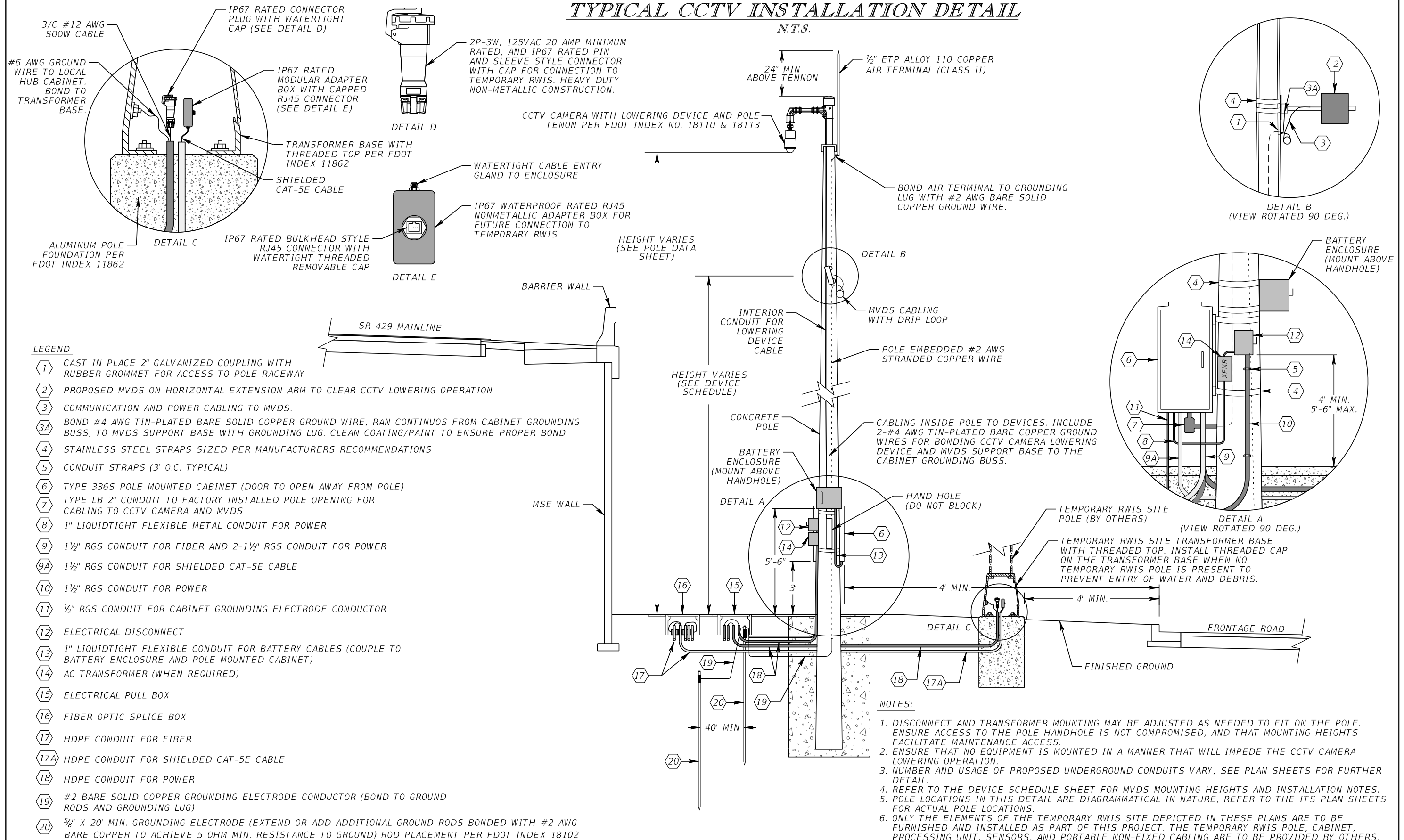
POLE DATA SHEET

SHEET NO.
IT-35

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TYPICAL CCTV INSTALLATION DETAIL

N.T.S.



LEGEND

- 1 CAST IN PLACE 2" GALVANIZED COUPLING WITH RUBBER GROMMET FOR ACCESS TO POLE RACEWAY
- 2 PROPOSED MVDS ON HORIZONTAL EXTENSION ARM TO CLEAR CCTV LOWERING OPERATION
- 3 COMMUNICATION AND POWER CABLING TO MVDS.
- 3A BOND #4 AWG TIN-PLATED BARE SOLID COPPER GROUND WIRE, RAN CONTINUOUS FROM CABINET GROUNDING BUSS, TO MVDS SUPPORT BASE WITH GROUNDING LUG. CLEAN COATING/PAIN TO ENSURE PROPER BOND.
- 4 STAINLESS STEEL STRAPS SIZED PER MANUFACTURERS RECOMMENDATIONS
- 5 CONDUIT STRAPS (3' O.C. TYPICAL)
- 6 TYPE 336S POLE MOUNTED CABINET (DOOR TO OPEN AWAY FROM POLE)
- 7 TYPE LB 2" CONDUIT TO FACTORY INSTALLED POLE OPENING FOR CABLING TO CCTV CAMERA AND MVDS
- 8 1" LIQUIDTIGHT FLEXIBLE METAL CONDUIT FOR POWER
- 9 1 1/2" RGS CONDUIT FOR FIBER AND 2-1 1/2" RGS CONDUIT FOR POWER
- 9A 1 1/2" RGS CONDUIT FOR SHIELDED CAT-5E CABLE
- 10 1 1/2" RGS CONDUIT FOR POWER
- 11 1/2" RGS CONDUIT FOR CABINET GROUNDING ELECTRODE CONDUCTOR
- 12 ELECTRICAL DISCONNECT
- 13 1" LIQUIDTIGHT FLEXIBLE CONDUIT FOR BATTERY CABLES (COUPLE TO BATTERY ENCLOSURE AND POLE MOUNTED CABINET)
- 14 AC TRANSFORMER (WHEN REQUIRED)
- 15 ELECTRICAL PULL BOX
- 16 FIBER OPTIC SPLICE BOX
- 17 HDPE CONDUIT FOR FIBER
- 17A HDPE CONDUIT FOR SHIELDED CAT-5E CABLE
- 18 HDPE CONDUIT FOR POWER
- 19 #2 BARE SOLID COPPER GROUNDING ELECTRODE CONDUCTOR (BOND TO GROUND RODS AND GROUNDING LUG)
- 20 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL GROUND RODS BONDED WITH #2 AWG BARE COPPER TO ACHIEVE 5 OHM MIN. RESISTANCE TO GROUND) ROD PLACEMENT PER FDOT INDEX 18102

- ### NOTES:
1. DISCONNECT AND TRANSFORMER MOUNTING MAY BE ADJUSTED AS NEEDED TO FIT ON THE POLE. ENSURE ACCESS TO THE POLE HANDHOLE IS NOT COMPROMISED, AND THAT MOUNTING HEIGHTS FACILITATE MAINTENANCE ACCESS.
 2. ENSURE THAT NO EQUIPMENT IS MOUNTED IN A MANNER THAT WILL IMPEDE THE CCTV CAMERA LOWERING OPERATION.
 3. NUMBER AND USAGE OF PROPOSED UNDERGROUND CONDUITS VARY; SEE PLAN SHEETS FOR FURTHER DETAIL.
 4. REFER TO THE DEVICE SCHEDULE SHEET FOR MVDS MOUNTING HEIGHTS AND INSTALLATION NOTES.
 5. POLE LOCATIONS IN THIS DETAIL ARE DIAGRAMMATICAL IN NATURE, REFER TO THE ITS PLAN SHEETS FOR ACTUAL POLE LOCATIONS.
 6. ONLY THE ELEMENTS OF THE TEMPORARY RWIS SITE DEPICTED IN THESE PLANS ARE TO BE FURNISHED AND INSTALLED AS PART OF THIS PROJECT. THE TEMPORARY RWIS POLE, CABINET, PROCESSING UNIT, SENSORS, AND PORTABLE NON-FIXED CABLING ARE TO BE PROVIDED BY OTHERS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

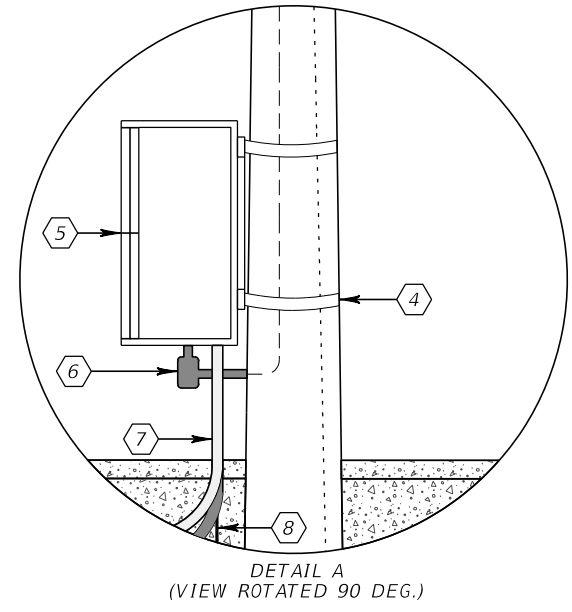
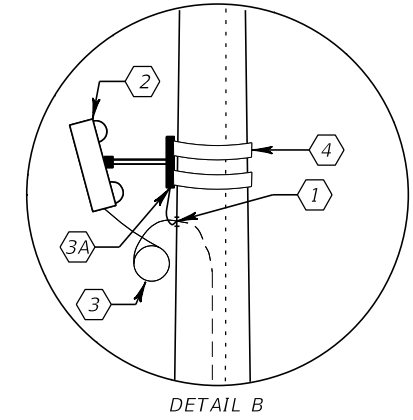
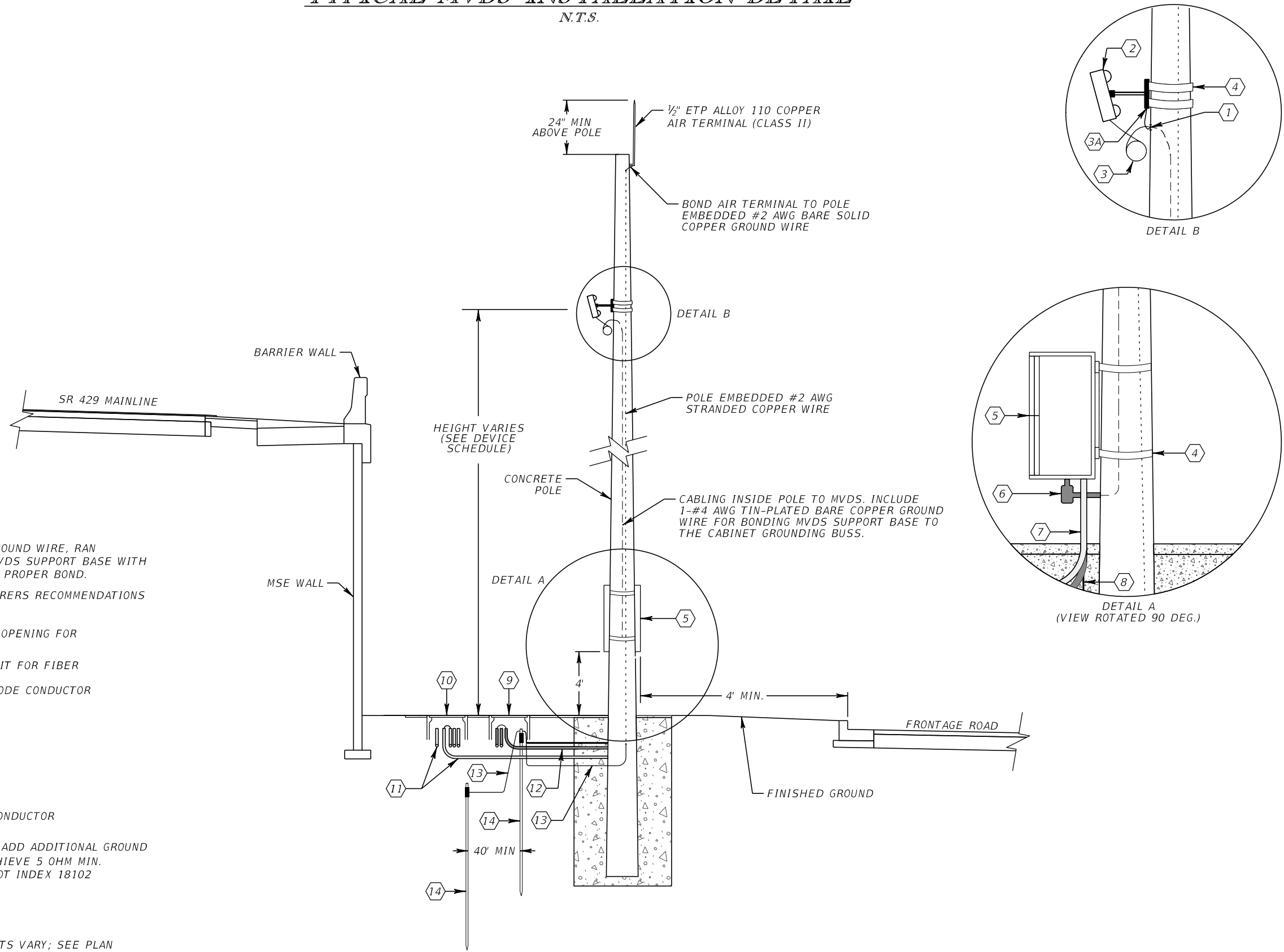
**TYPICAL INSTALLATION
DETAILS**

SHEET NO.
IT-36

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TYPICAL MVDS INSTALLATION DETAIL

N.T.S.



LEGEND

- 1 CAST IN PLACE 2" GALVANIZED COUPLING WITH RUBBER GROMMET FOR ACCESS TO POLE RACEWAY
- 2 MVDS WITH APPROVED MOUNTING HARDWARE
- 3 COMMUNICATION AND POWER CABLING TO MVDS
- 3A BOND #4 AWG TIN-PLATED BARE SOLID COPPER GROUND WIRE, RAN CONTINUOUS FROM CABINET GROUNDING BUSS, TO MVDS SUPPORT BASE WITH GROUNDING LUG. CLEAN COATING/PAINT TO ENSURE PROPER BOND.
- 4 STAINLESS STEEL STRAPS SIZED PER MANUFACTURERS RECOMMENDATIONS
- 5 MVDS AUXILIARY CABINET
- 6 TYPE LB 2" CONDUIT TO FACTORY INSTALLED POLE OPENING FOR CABLING TO MVDS
- 7 1 1/2" RGS CONDUIT FOR POWER AND 1 1/2" RGS CONDUIT FOR FIBER
- 8 1/2" RGS CONDUIT FOR CABINET GROUNDING ELECTRODE CONDUCTOR
- 9 ELECTRICAL PULL BOX
- 10 FIBER OPTIC SPLICE BOX
- 11 HDPE CONDUIT FOR FIBER
- 12 HDPE CONDUIT FOR POWER
- 13 #2 BARE SOLID COPPER GROUNDING ELECTRODE CONDUCTOR (BOND TO GROUND RODS AND GROUNDING LUG)
- 14 3/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL GROUND RODS BONDED WITH #2 AWG BARE COPPER TO ACHIEVE 5 OHM MIN. RESISTANCE TO GROUND) ROD PLACEMENT PER FDOT INDEX 18102

NOTES:

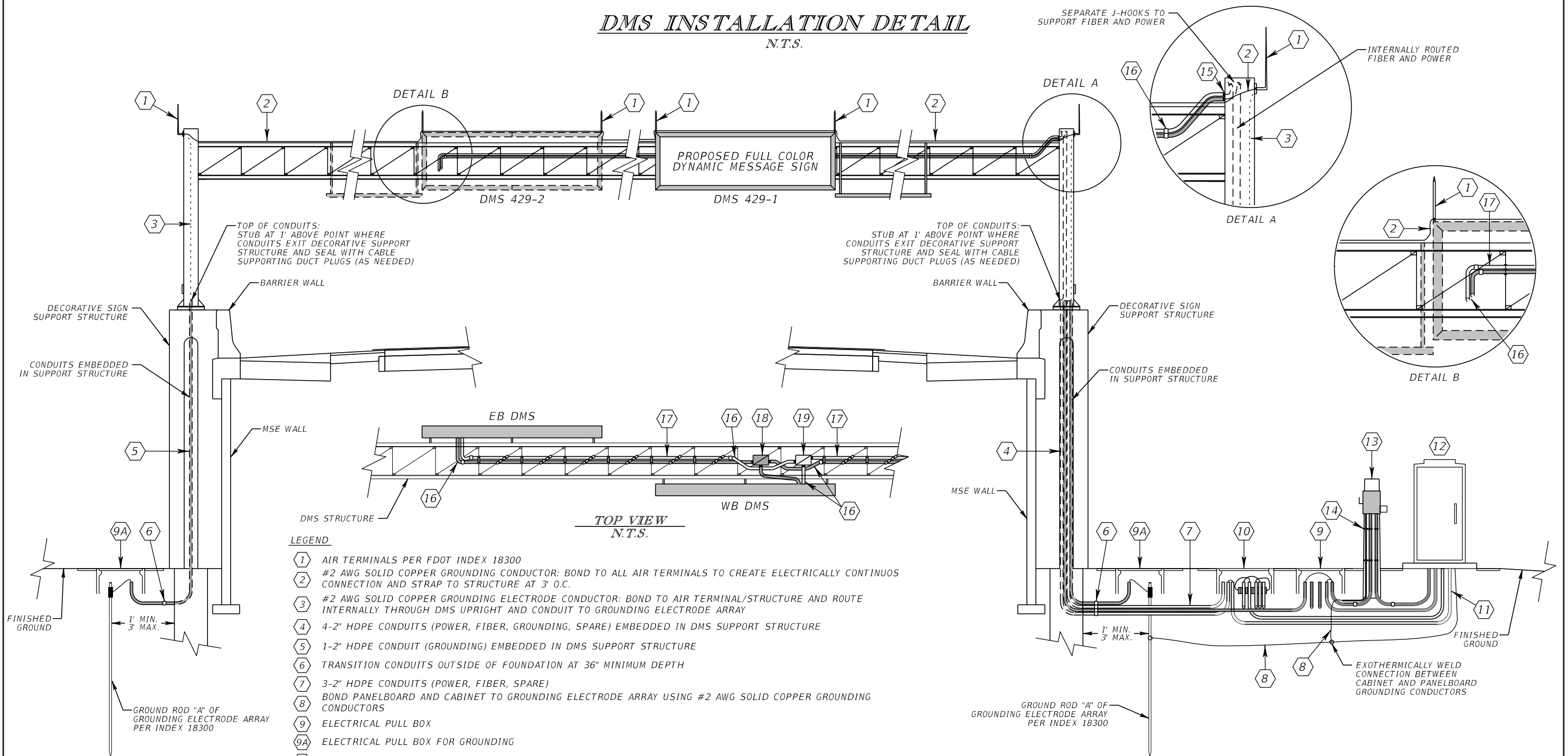
1. NUMBER AND USAGE OF PROPOSED UNDERGROUND CONDUITS VARY; SEE PLAN SHEETS FOR FURTHER DETAIL.
2. REFER TO THE DEVICE SCHEDULE SHEET FOR MVDS MOUNTING HEIGHTS AND INSTALLATION NOTES.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TYPICAL INSTALLATION DETAILS	SHEET NO. IT-37
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

DMS INSTALLATION DETAIL

N.T.S.



LEGEND

- ① AIR TERMINALS PER FDOT INDEX 18300
- ② #2 AWG SOLID COPPER GROUNDING CONDUCTOR; BOND TO ALL AIR TERMINALS TO CREATE ELECTRICALLY CONTINUOUS CONNECTION AND STRAP TO STRUCTURE AT 3' O.C.
- ③ #2 AWG SOLID COPPER GROUNDING ELECTRODE CONDUCTOR; BOND TO AIR TERMINAL/STRUCTURE AND ROUTE INTERNALLY THROUGH DMS UPRIGHT AND CONDUIT TO GROUNDING ELECTRODE ARRAY
- ④ 4-2" HDPE CONDUITS (POWER, FIBER, GROUNDING, SPARE) EMBEDDED IN DMS SUPPORT STRUCTURE
- ⑤ 1-2" HDPE CONDUIT (GROUNDING) EMBEDDED IN DMS SUPPORT STRUCTURE
- ⑥ TRANSITION CONDUITS OUTSIDE OF FOUNDATION AT 36" MINIMUM DEPTH
- ⑦ 3-2" HDPE CONDUITS (POWER, FIBER, SPARE)
- ⑧ BOND PANELBOARD AND CABINET TO GROUNDING ELECTRODE ARRAY USING #2 AWG SOLID COPPER GROUNDING CONDUCTORS
- ⑨ ELECTRICAL PULL BOX
- ⑨A ELECTRICAL PULL BOX FOR GROUNDING
- ⑩ FIBER OPTIC SPLICE BOX
- ⑪ 4-2" HDPE CONDUITS (2-POWER & 2-FIBER) THROUGH GROUND MOUNTED CABINET BASE
- ⑫ TYPE 334 GROUND MOUNTED CABINET
- ⑬ NEMA 3R PANELBOARD MOUNTED ON 12' TYPE P-II SERVICE POLE
- ⑭ 2-2" RGS CONDUITS (POWER) AND 1-1/2" RGS CONDUIT (GROUNDING) STRAPPED TO SERVICE POLE AT 3' O.C.
- ⑮ 2-2" LIQUIDTIGHT FLEXIBLE METAL CONDUITS (POWER & FIBER) CONNECTED TO DMS UPRIGHT POLE WITH TREADED COUPLINGS
- ⑯ 2-2" LIQUIDTIGHT FLEXIBLE METAL CONDUITS (POWER & FIBER) CONNECTED TO DMS PANELS, JUNCTION BOXES, AND RGS CONDUITS WITH LIQUIDTIGHT CONDUIT CONNECTORS. INSTALL REDUCER FITTINGS AS NECESSARY FOR CONNECTION TO DMS PANEL.
- ⑰ 2-2" RGS CONDUITS (POWER & FIBER) STRAPPED TO TRUSS MEMBERS WITH STAINLESS STEEL STRAPS
- ⑱ SURFACE MOUNT JUNCTION BOX MOUNTED TO TRUSS MEMBER FOR POWER (12"x12"x3" NOMINAL SIZE)
- ⑲ SURFACE MOUNT JUNCTION BOX MOUNTED TO TRUSS MEMBER FOR FIBER (12"x12"x3" NOMINAL SIZE)

NOTES:

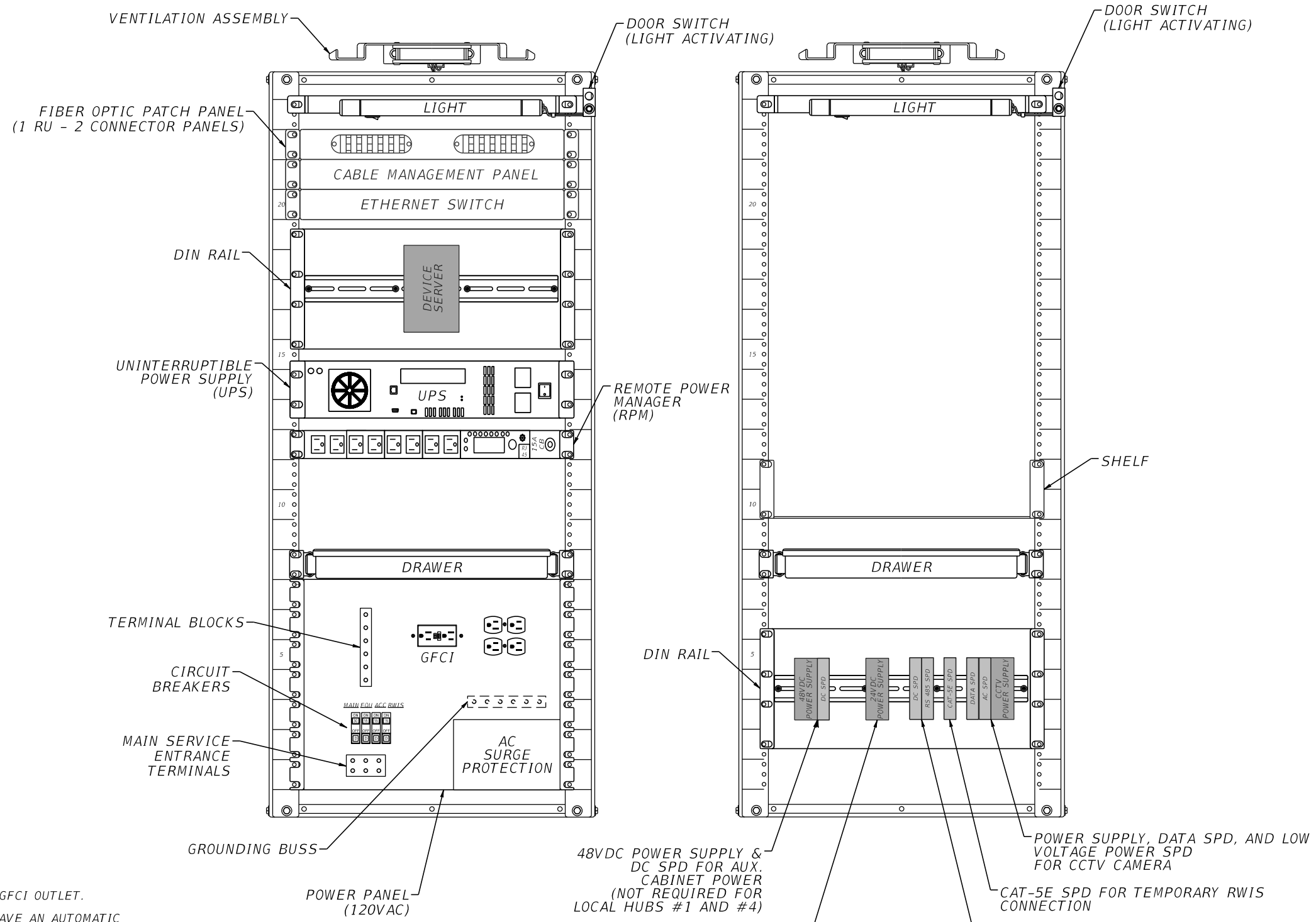
1. DMS STRUCTURE DEPICTED ON THIS SHEET IS FOR ILLUSTRATIVE PURPOSES ONLY; REFER TO SIGNING AND STRUCTURAL PLANS FOR FURTHER INFORMATION REGARDING THE DMS SUPPORT STRUCTURE AND DMS PANEL ALIGNMENT.
2. ENSURE THAT MINIMUM BEND RADIUS FOR FIBER OPTIC CABLE IS MAINTAINED IN CONFORMANCE WITH THE CABLE MANUFACTURERS RECOMMENDED VALUES DURING INSTALLATION (SHORT TERM/DYNAMIC) AND AFTER INSTALLATION (LONG TERM/STATIC). INSTALL CONDUIT CONTAINING FIBER OPTIC CABLE IN A MANNER THAT SUPPORTS THIS REQUIREMENT.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-38
					SR 429	SEMINOLE	240200-2-52-01		

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FRONT VIEW

BACK VIEW

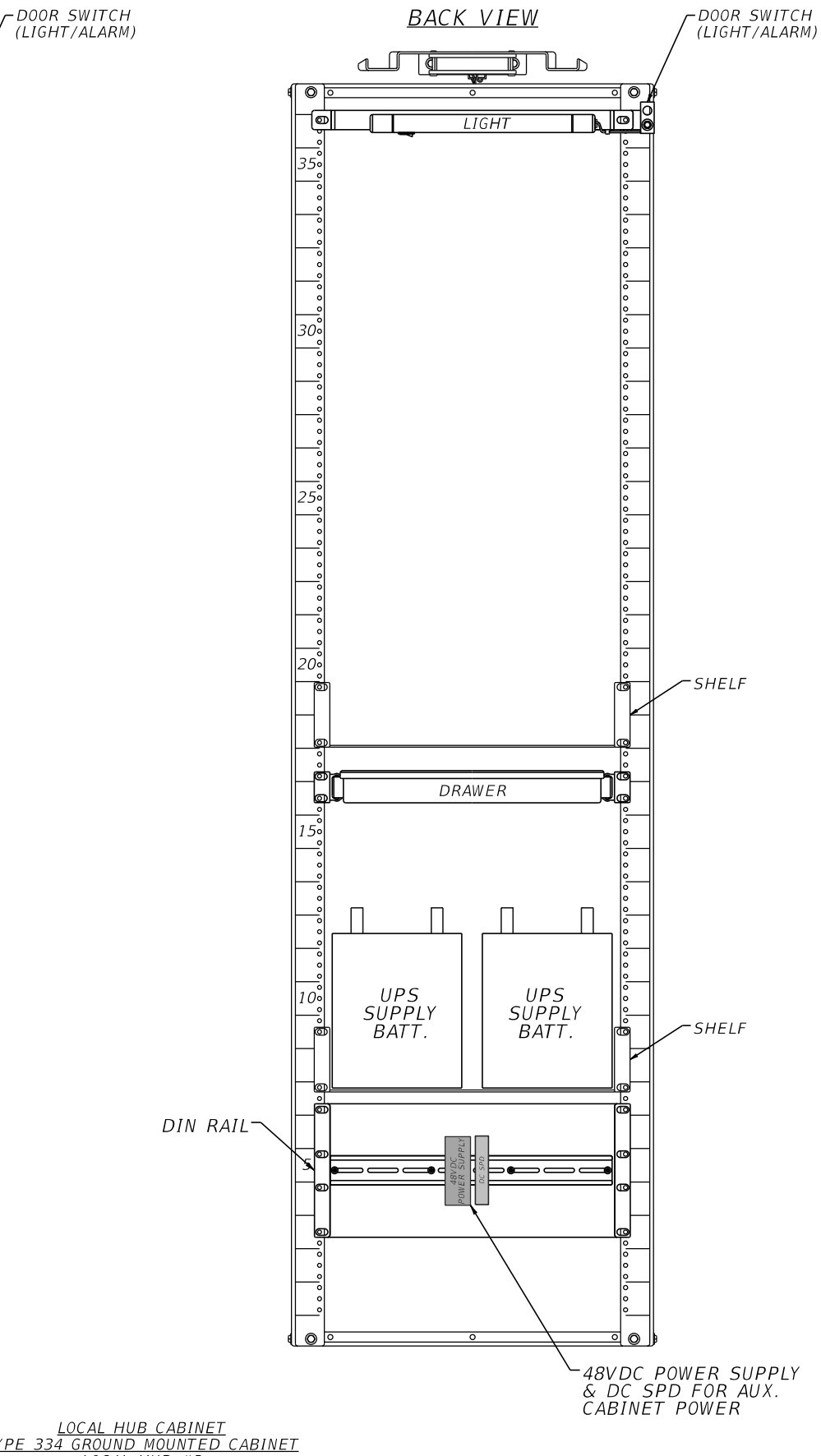
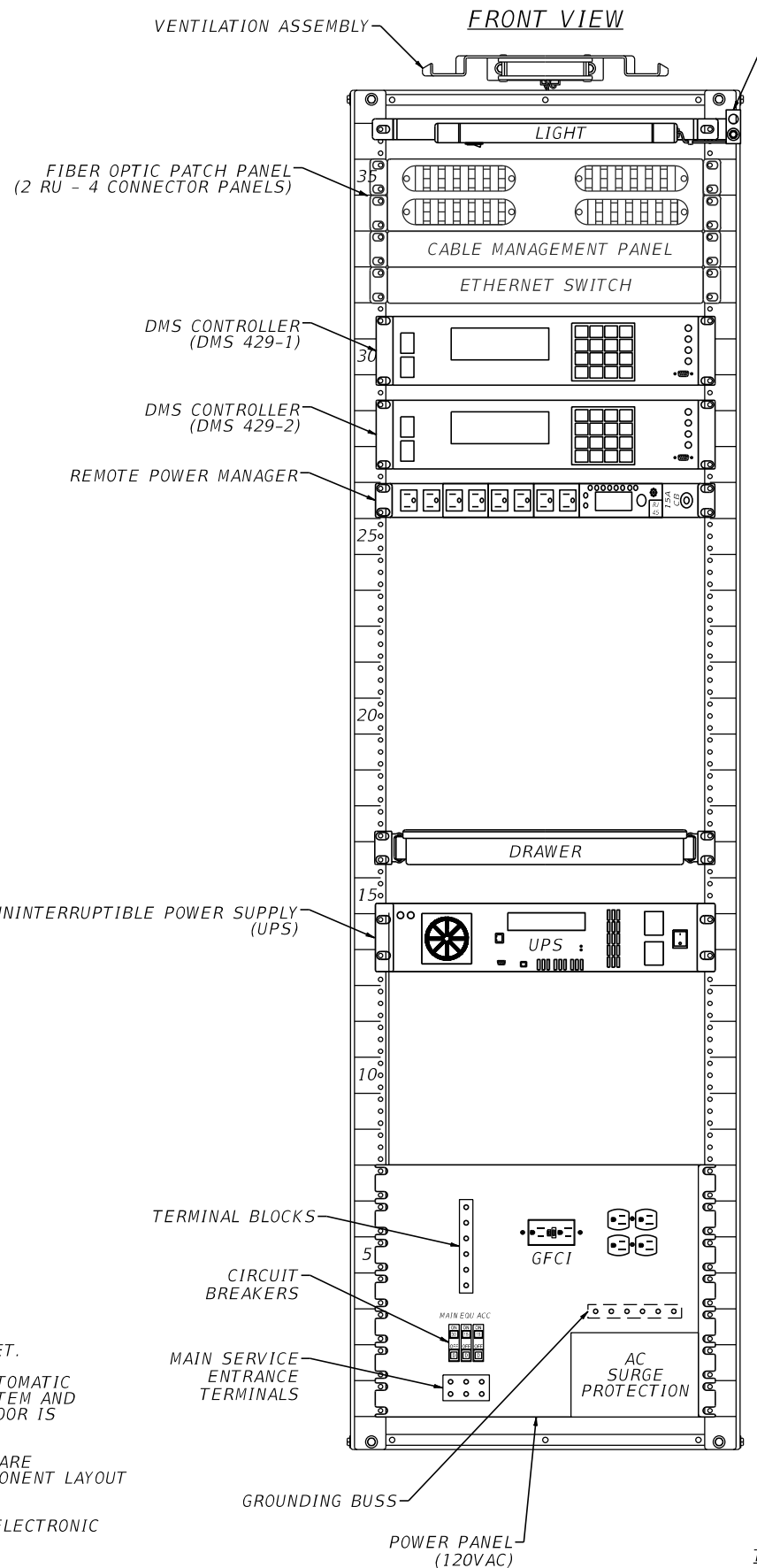


NOTES:

1. UPS SHALL NOT BE PLUGGED INTO GFCI OUTLET.
2. ALL LOCAL HUB CABINETS SHALL HAVE AN AUTOMATIC TEMPERATURE CONTROLLED VENTILATION SYSTEM AND LIGHTS WHICH ACTIVATE WHEN A CABINET DOOR IS OPENED.
3. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE, POWER PANEL ASSEMBLY COMPONENT LAYOUT AND ORIENTATION MAY VARY.
4. CABINET DOORS SHALL INCLUDE CYBERLOCK ELECTRONIC CYLINDERS TO CONTROL CABINET ACCESS.

LOCAL HUB CABINET
TYPE 3365 POLE MOUNTED
LOCAL HUBS #1, #2, #4, & #5

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	



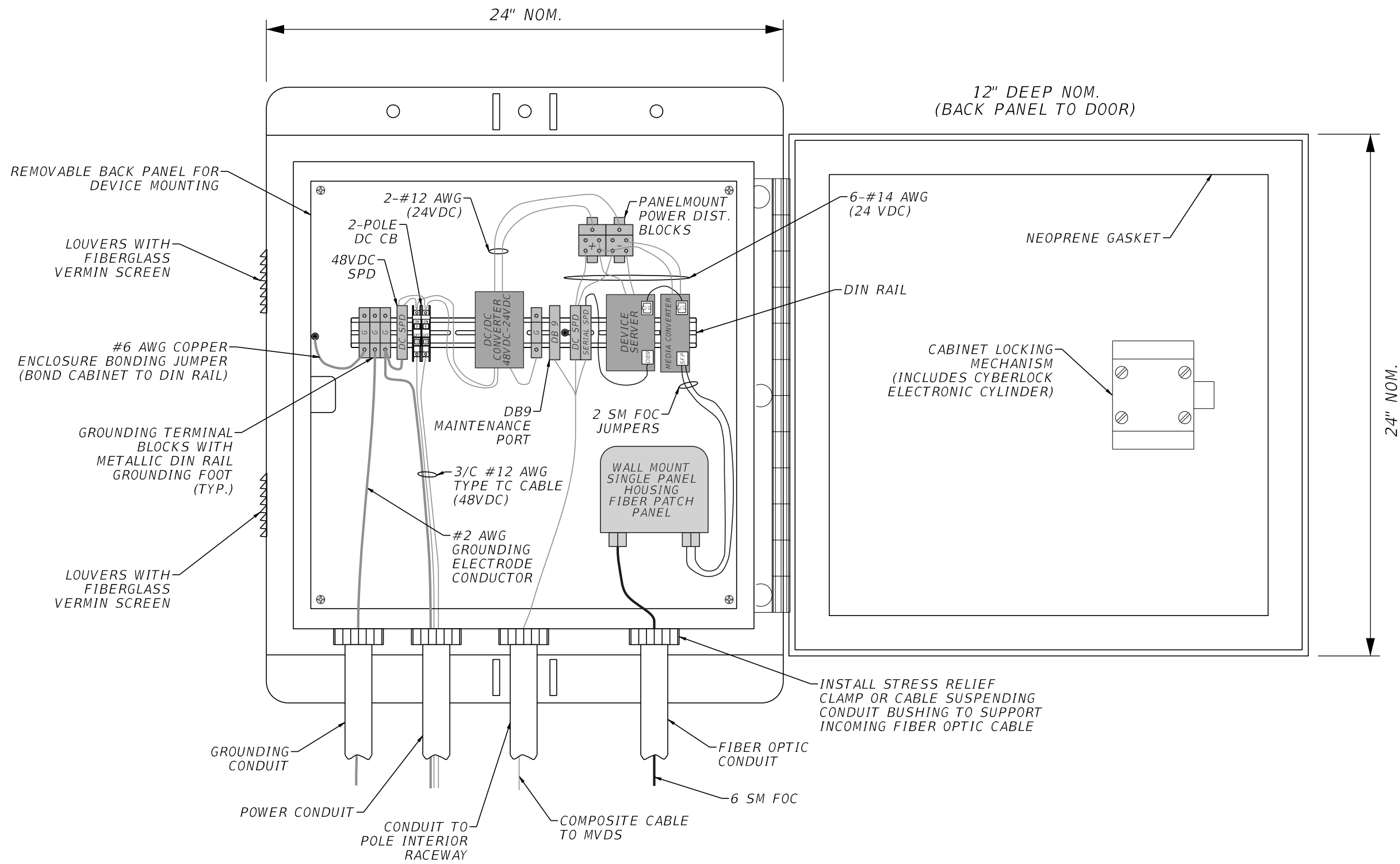
NOTES:

1. UPS SHALL NOT BE PLUGGED INTO GFCI OUTLET.
2. ALL LOCAL HUB CABINETS SHALL HAVE AN AUTOMATIC TEMPERATURE CONTROLLED VENTILATION SYSTEM AND LIGHTS WHICH ACTIVATE WHEN A CABINET DOOR IS OPENED.
3. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE, POWER PANEL ASSEMBLY COMPONENT LAYOUT AND ORIENTATION MAY VARY.
4. CABINET DOORS SHALL INCLUDE CYBERLOCK ELECTRONIC CYLINDERS TO CONTROL CABINET ACCESS.

LOCAL HUB CABINET
TYPE 334 GROUND MOUNTED CABINET
LOCAL HUB #3

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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NOTES:

1. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ADJUST AS NEEDED TO FIT WITHIN THE CABINET. CONNECTIVITY OF SPD DEVICES MAY VARY; INSTALL EQUIPMENT ACCORDING TO MANUFACTURERS INSTRUCTIONS.
2. CABINET SHALL BE 1/8" THICK 5052 ALUMINUM.
3. CABINET SHALL BE MANUFACTURED TO NEMA 3R SPECIFICATIONS.
4. WALL MOUNT SINGLE PANEL HOUSING FIBER PATCH PANEL SHALL BE CAPABLE OF HOUSING A MINIMUM OF ONE SPLICE TRAY FOR UP TO SIX SINGLE FIBER FUSION SPLICES AND ONE CONNECTOR PANEL FOR TERMINATION OF THE 6 SM FOC FROM LOCAL HUB CABINETS.

**TYPICAL MVDS AUXILIARY CABINET
POLE MOUNTED NEMA 3R ENCLOSURE
AUXILIARY CABINETS 1-3
(N.T.S.)**

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

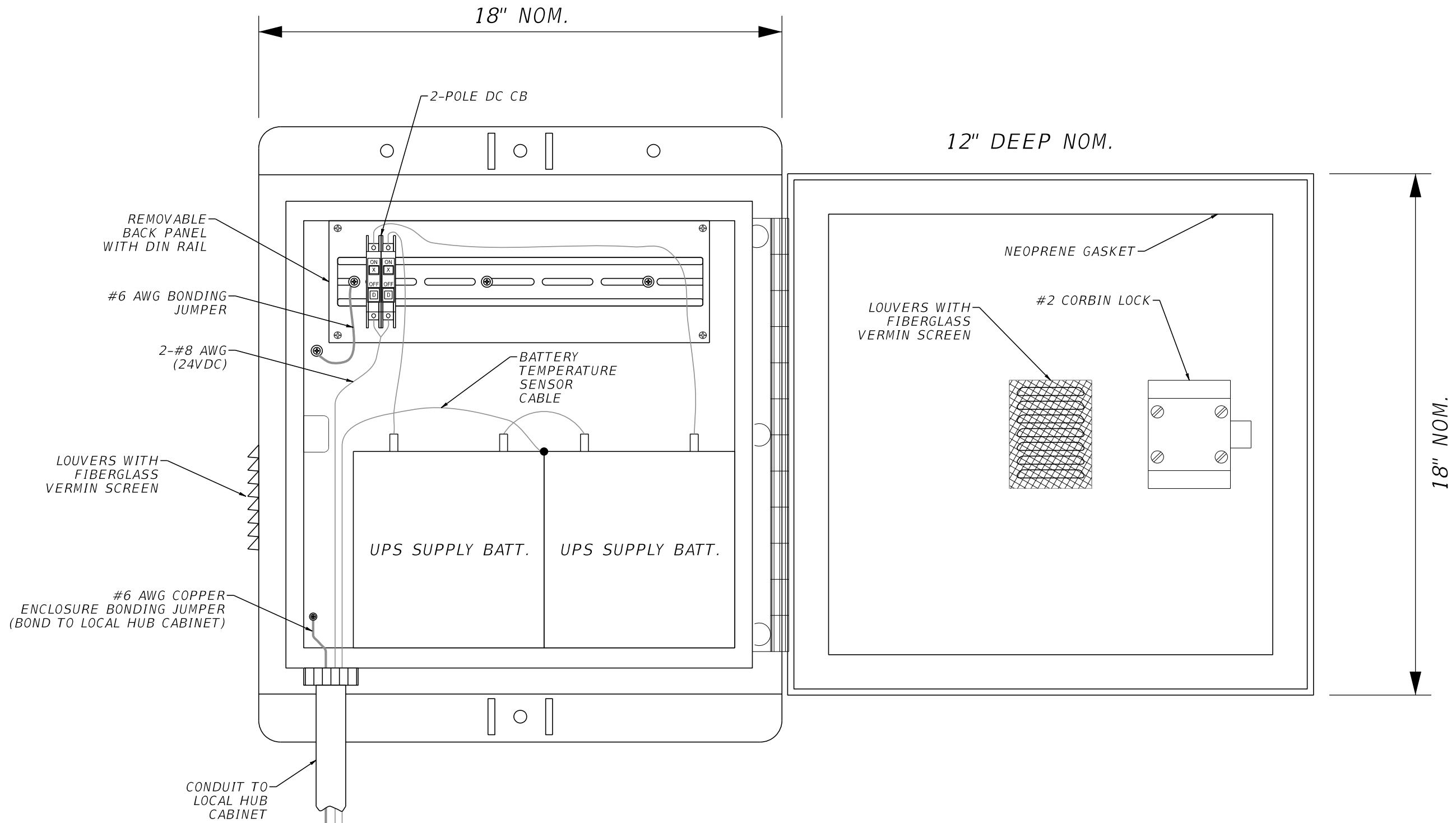
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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CABINET DETAILS

SHEET NO.
IT-41

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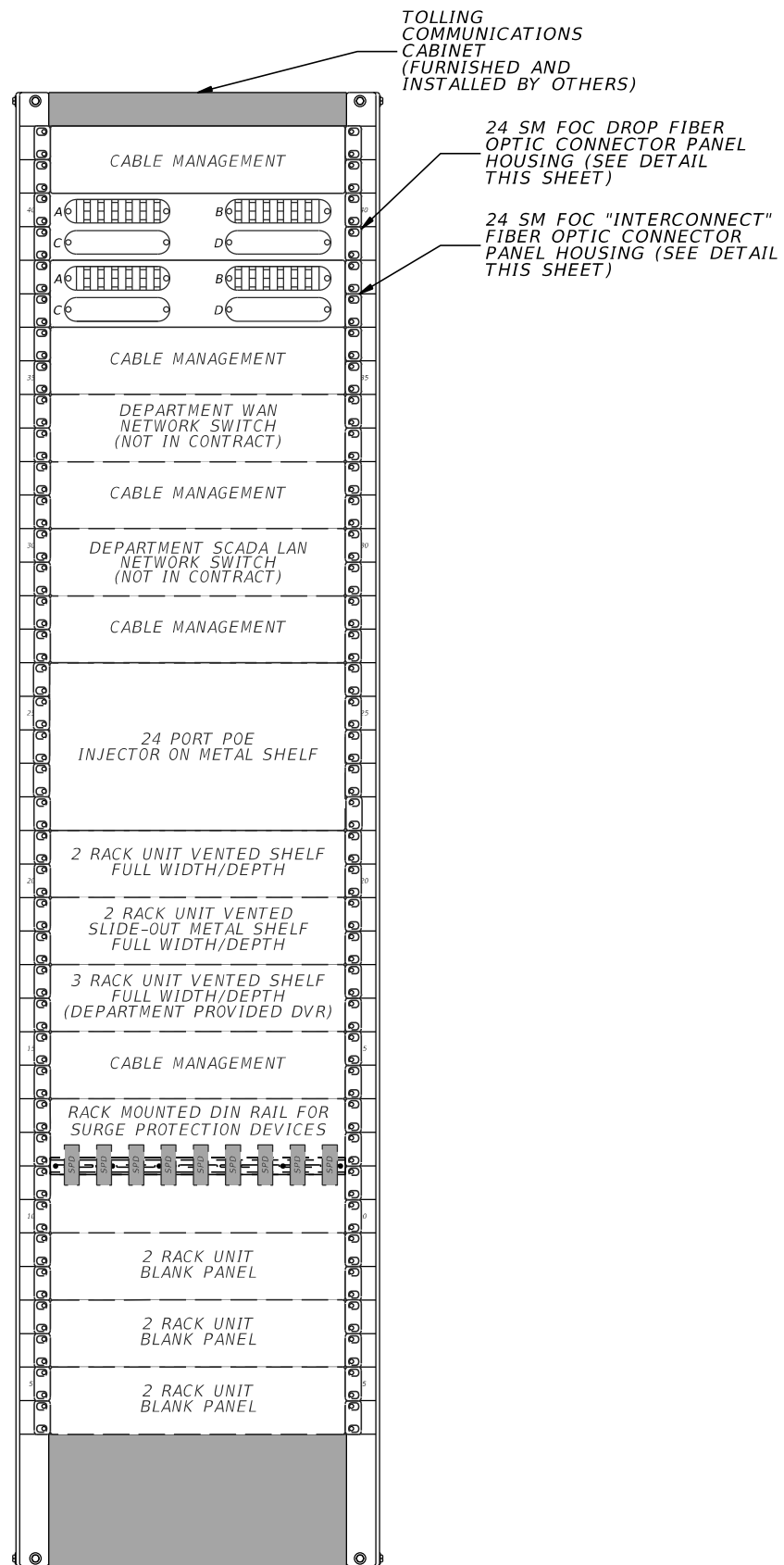


TYPICAL BATTERY ENCLOSURE
POLE MOUNTED NEMA 3R ENCLOSURE
(N.T.S.)

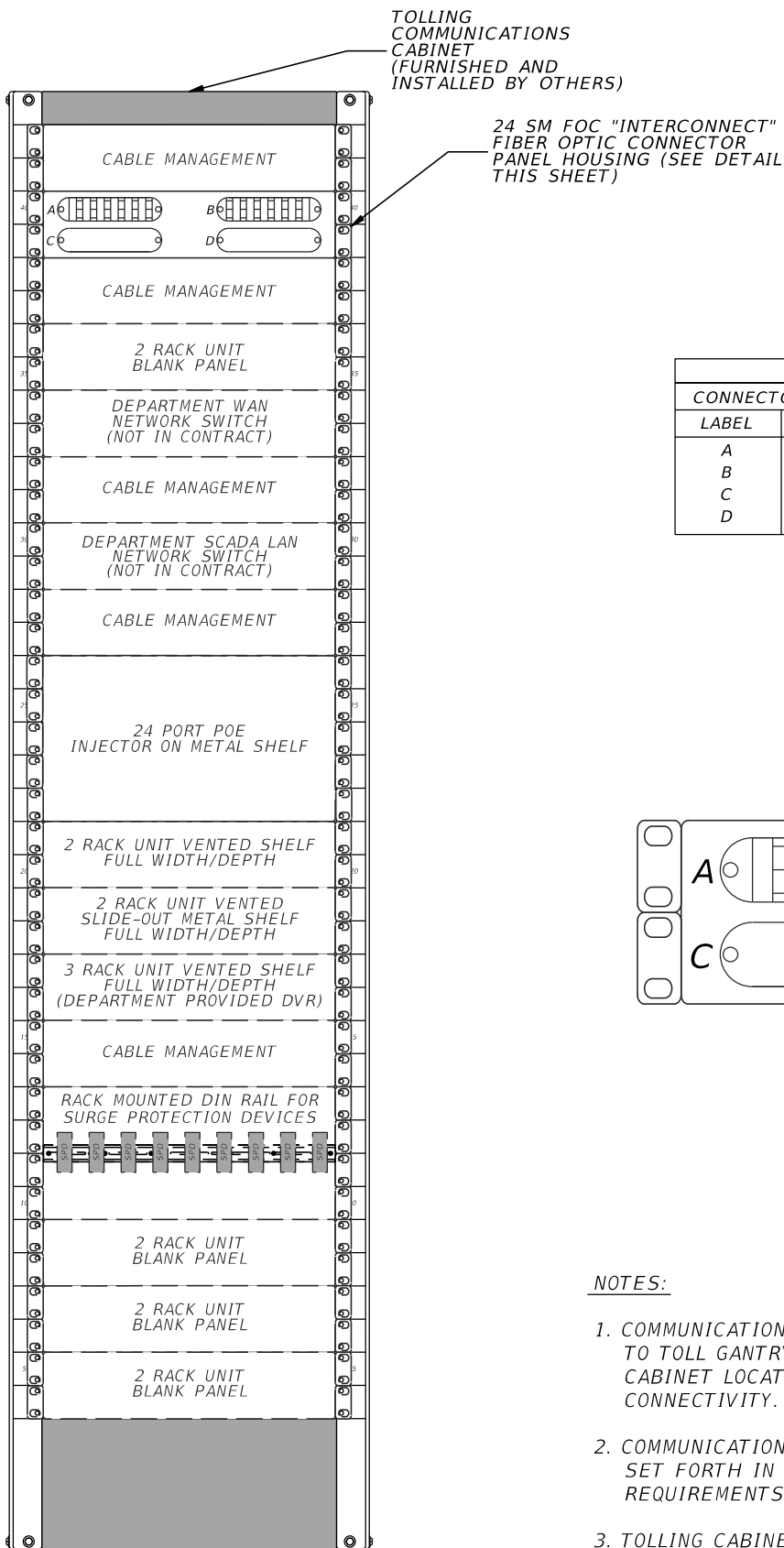
- NOTES:
1. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ADJUST AS NEEDED TO FIT.
 2. CABINET SHALL BE 1/8" THICK 5052 ALUMINUM.
 3. CABINET SHALL BE MANUFACTURED TO NEMA 3R SPECIFICATIONS.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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COMMUNICATION CABINET RACK DETAIL
TOLL BUILDING - RAMP F
"MASTER"



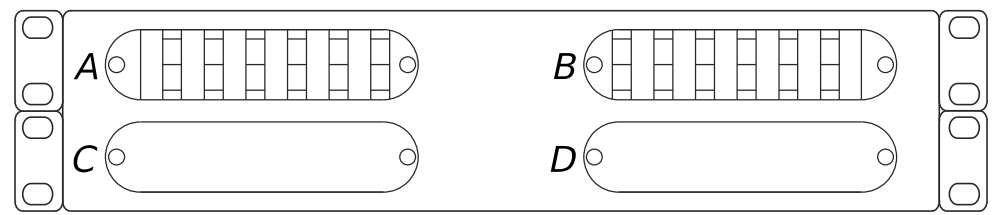
COMMUNICATION CABINET RACK DETAIL
TOLL BUILDING - RAMP E
"SLAVE"

LEGEND

CONNECTOR PANEL		PANEL FIBER PORT	
LABEL	BUFFER	LABEL	FIBER
A	BLUE	1	BLUE
B	ORANGE	2	ORANGE
C	BLANK	3	GREEN
D	BLANK	4	BROWN
		5	SLATE
		6	WHITE
		7	RED
		8	BLACK
		9	YELLOW
		10	VIOLET
		11	ROSE
		12	AQUA



CONNECTOR PANEL DETAIL



CONNECTOR PANEL HOUSING DETAIL

NOTES:

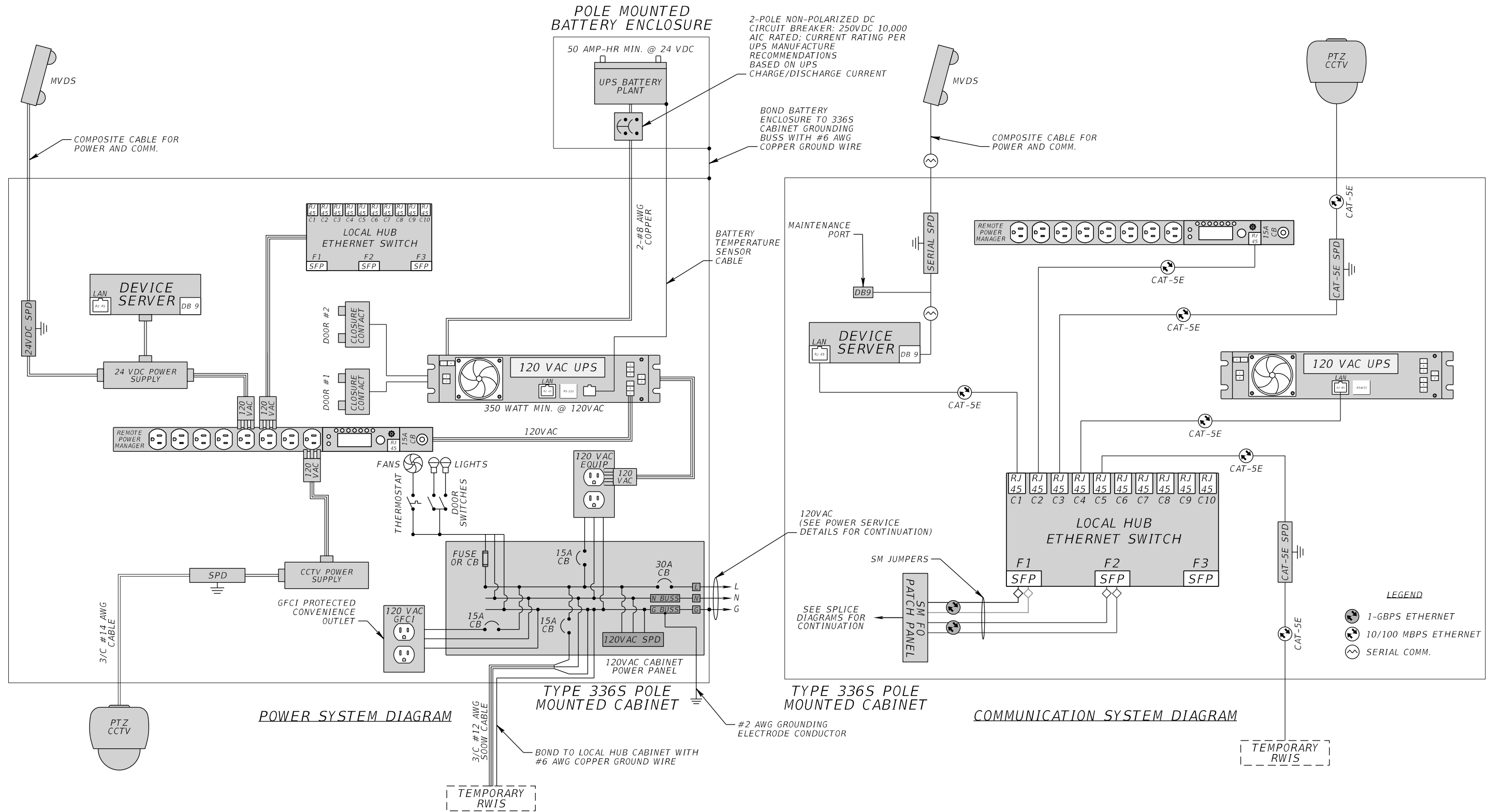
1. COMMUNICATION CABINET RACK DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. REFER TO TOLL GANTRY BUILDING PLANS FOR FURTHER INFORMATION REGARDING THE COMMUNICATIONS CABINET LOCATION, INCLUDED EQUIPMENT, ELECTRICAL COMPONENT SPECIFICATIONS, AND DEVICE CONNECTIVITY.
2. COMMUNICATIONS CABINET AND ASSOCIATED EQUIPMENT MUST COMPLY WITH THE REQUIREMENTS SET FORTH IN THE MOST RECENT VERSION OF THE "FLORIDA'S TURNPIKE GENERAL TOLLING REQUIREMENTS."
3. TOLLING CABINET AND EQUIPMENT FURNISHMENT AND INSTALLATION, WITH THE EXCEPTION OF OUTSIDE PLANT FIBER TERMINATION SPLICING, IS TO BE PROVIDED BY THE TOLLING CONTRACTOR. ITS CONTRACTOR SHALL SPLICE THE OUTSIDE PLANT FIBER OPTIC CABLES TO PIGTAILS PROVIDED BY THE TOLLING CONTRACTOR IN RACKMOUNTED FIBER OPTIC CONNECTOR PANEL HOUSINGS (PATCH PANELS) MOUNTED IN THE PROPOSED COMMUNICATION CABINETS AS INDICATED ON THIS SHEET.

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 429	SEMINOLE		240200-2-52-01

NOTES:

1. CIRCUIT BREAKER FOR THE TEMPORARY RWIS SITE CIRCUIT SHALL BE LEFT IN THE OPEN POSITION WHEN NO RWIS DEVICE IS PRESENT. REFER TO THE TYPICAL INSTALLATION DETAILS FOR ADDITIONAL TEMPORARY RWIS SITE WIRING REQUIREMENTS.

WIRING DIAGRAMS: LOCAL HUBS #1 & #4



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SR 429	SEMINOLE	240200-2-52-01

WIRING DIAGRAMS

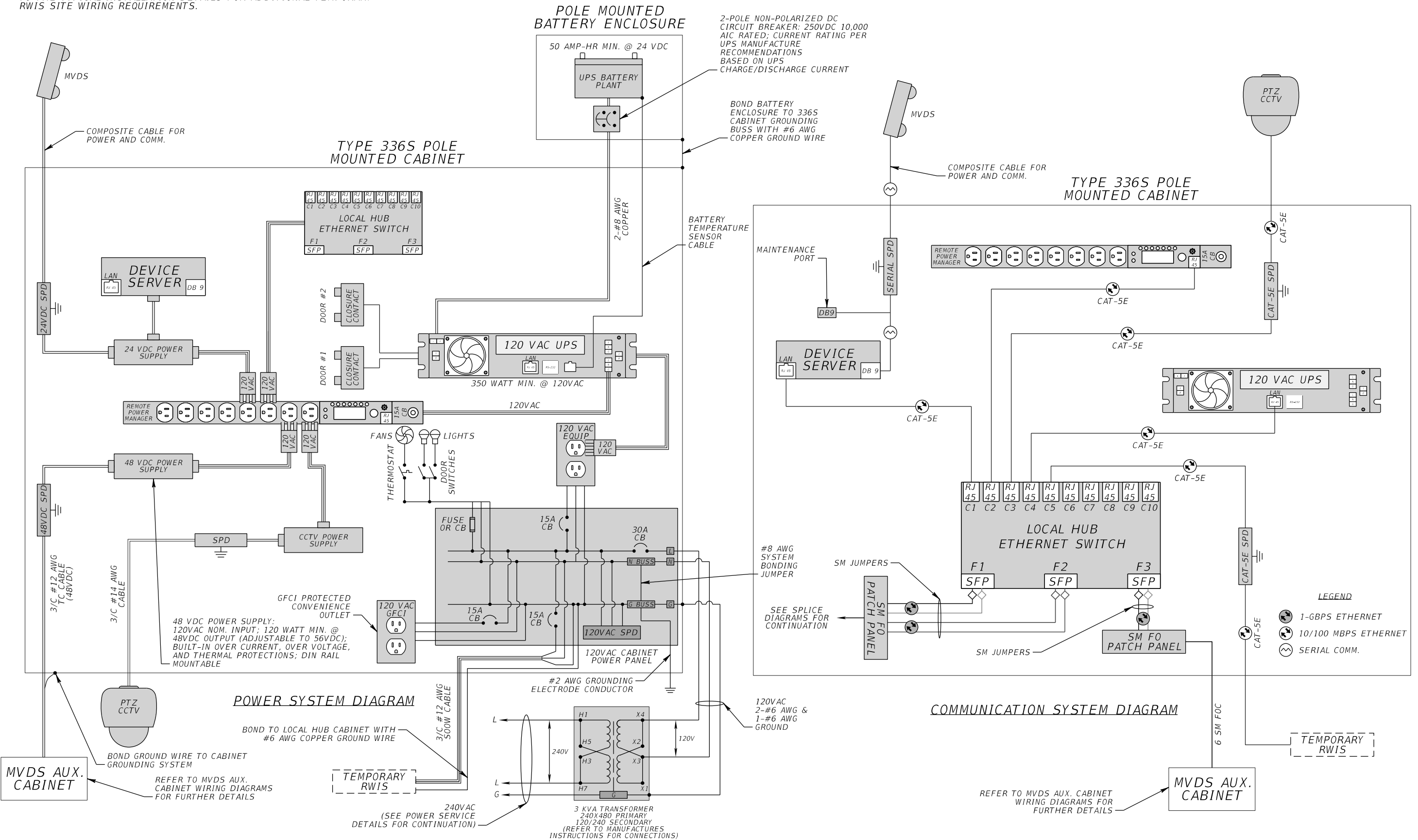
SHEET NO.
IT-44

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NOTES:

1. CIRCUIT BREAKER FOR THE TEMPORARY RWIS SITE CIRCUIT SHALL BE LEFT IN THE OPEN POSITION WHEN NO RWIS DEVICE IS PRESENT. REFER TO THE TYPICAL INSTALLATION DETAILS FOR ADDITIONAL TEMPORARY RWIS SITE WIRING REQUIREMENTS.

WIRING DIAGRAMS: LOCAL HUBS #2 & #5



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

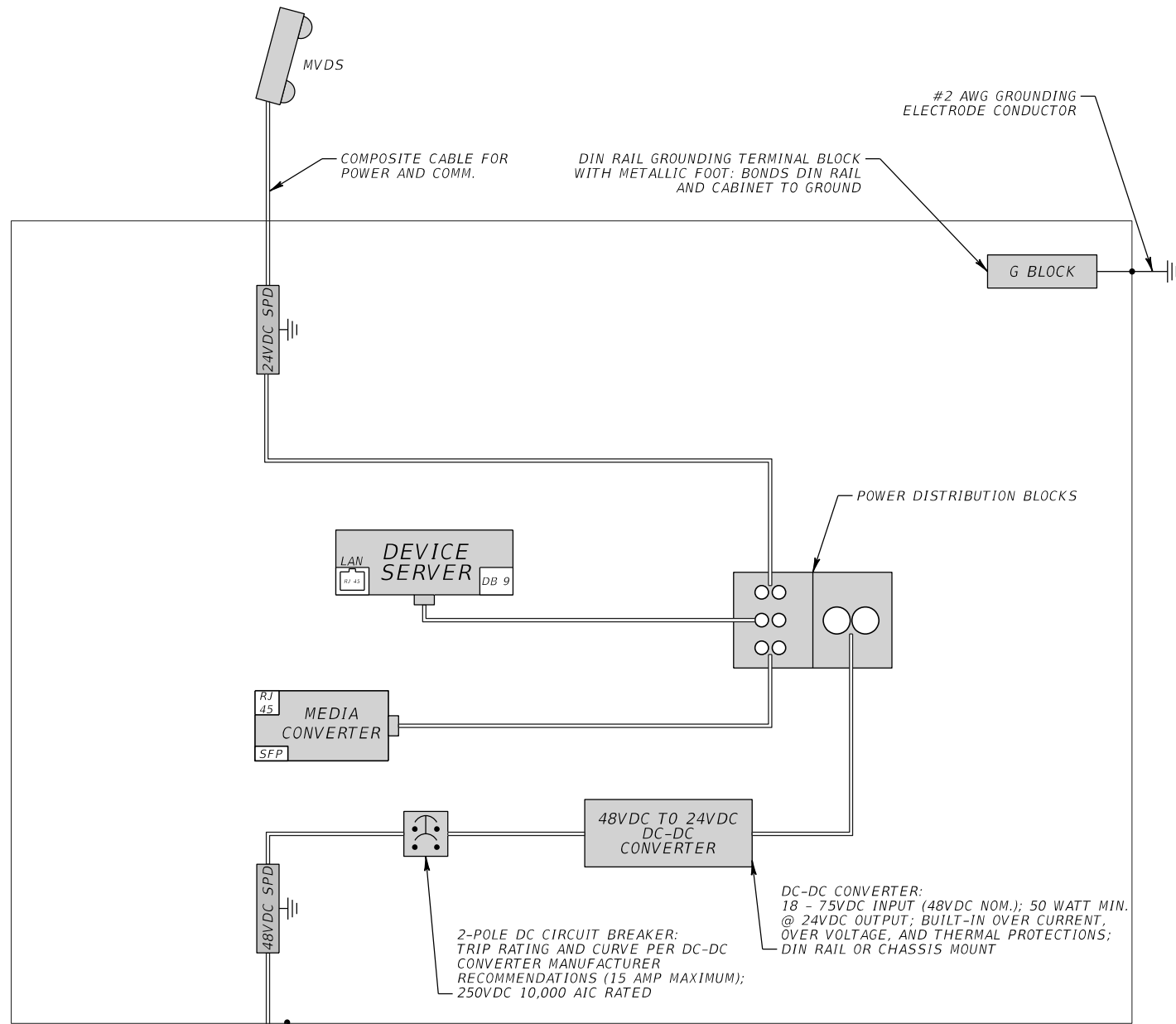
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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 80 Spring Vista Drive Phone: 386.753.0558
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

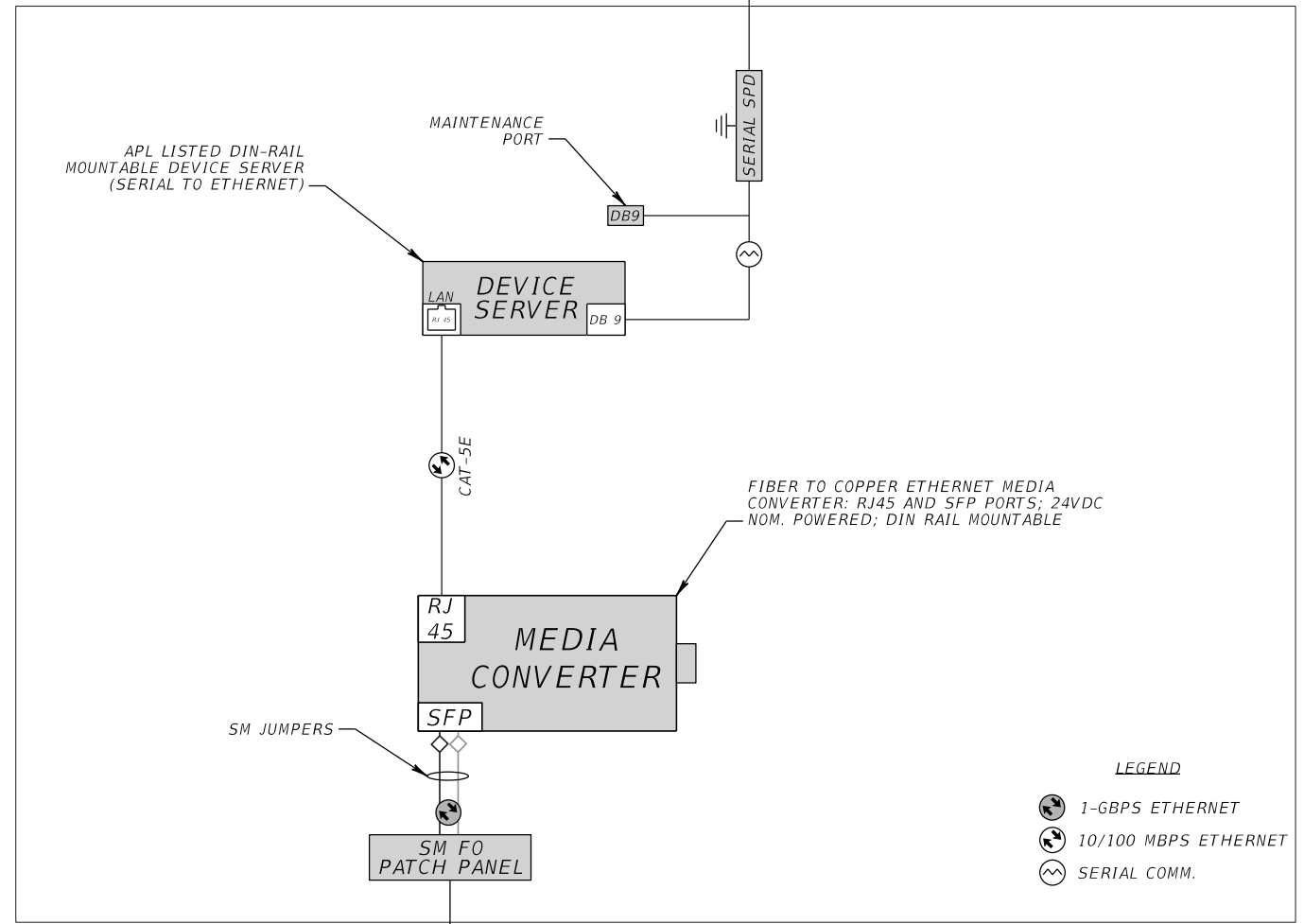
WIRING DIAGRAMS	SHEET NO. IT-46
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WIRING DIAGRAMS: AUXILIARY CABINETS #1 - #3



MVDS AUXILIARY CABINET



REFER TO LOCAL HUB CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

REFER TO LOCAL HUB CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

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SR 429	SEMINOLE	240200-2-52-01

WIRING DIAGRAMS

SHEET NO.
IT-47

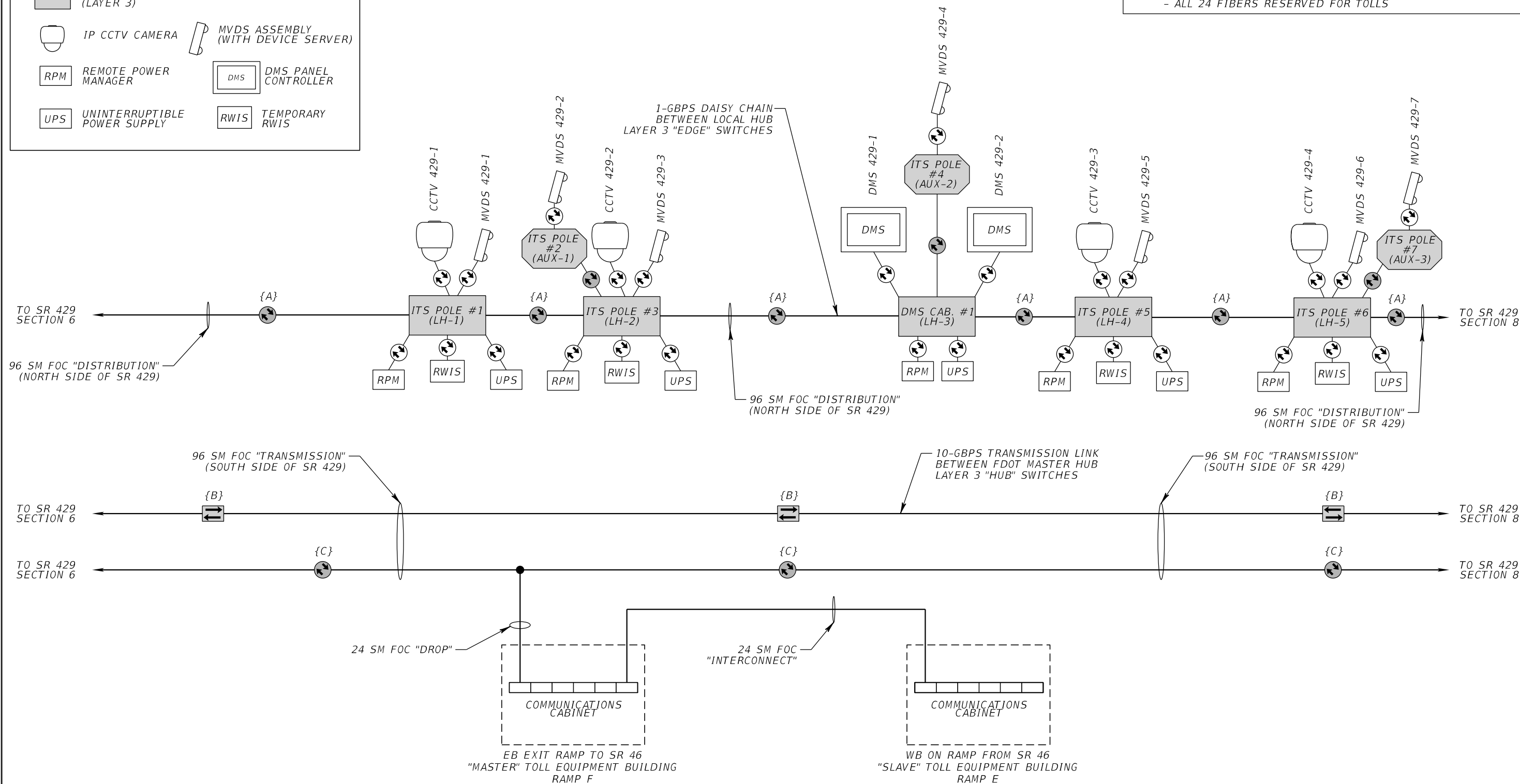
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LEGEND

- 10-GBPS (FULL DUPLEX) ETHERNET
- 1-GBPS (FULL DUPLEX) ETHERNET
- 10/100 MBPS (FULL DUPLEX) ETHERNET
- MEDIA CONVERTER IN CABINET
- LOCAL HUB ETHERNET SWITCH (LAYER 3)
- IP CCTV CAMERA
- MVDS ASSEMBLY (WITH DEVICE SERVER)
- REMOTE POWER MANAGER
- DMS PANEL CONTROLLER
- UNINTERRUPTIBLE POWER SUPPLY
- TEMPORARY RWIS

FIBER ALLOCATION LEGEND:

- BACKBONE = 96 SM FOC "DISTRIBUTION" (NORTH SIDE OF SR 429)**
- {A} BROWN BUFFER
 - FIBERS 1-2: 1-GBPS DAISY CHAIN BETWEEN LOCAL HUBS
 - FIBERS 3-6: SPARES TO EACH LOCAL HUB
 - FIBERS 7-12: UNUSED
- BACKBONE = 96 SM FOC "TRANSMISSION" (SOUTH SIDE OF SR 429)**
- {B} GREEN BUFFER
 - FIBERS 1-12: RESERVED FOR 10-GBPS CONNECTION BETWEEN MASTER HUBS
- {C} RED & BLACK BUFFERS:
 - ALL 24 FIBERS RESERVED FOR TOLLS



REVISIONS			
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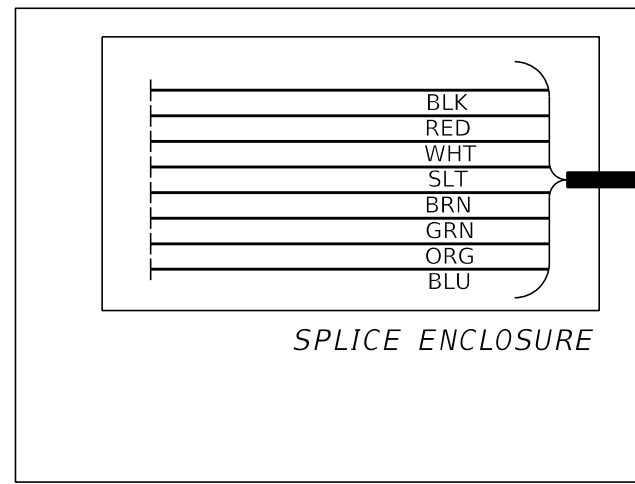
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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**NETWORK BLOCK
DIAGRAM**

SHEET NO.
IT-48

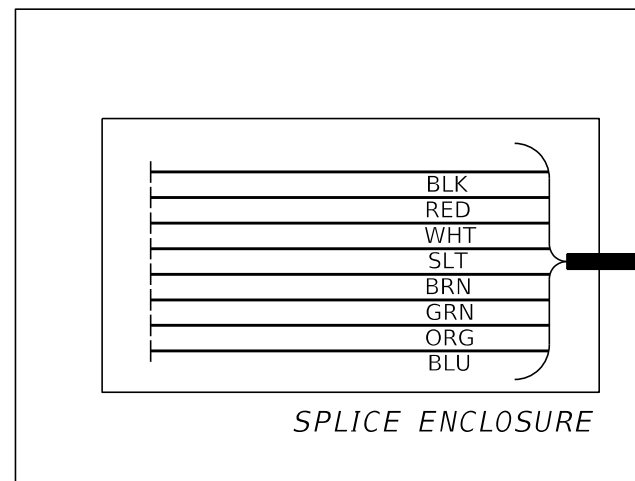
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FIBER OPTIC
SPLICE BOX
STA. 955+67 [LT]

96 SM FOC "DISTRIBUTION"

MATCHLINE (SEE NEXT SHEET)



FIBER OPTIC
SPLICE BOX
STA. 954+85 [RT]

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE NEXT SHEET)

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
├	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE

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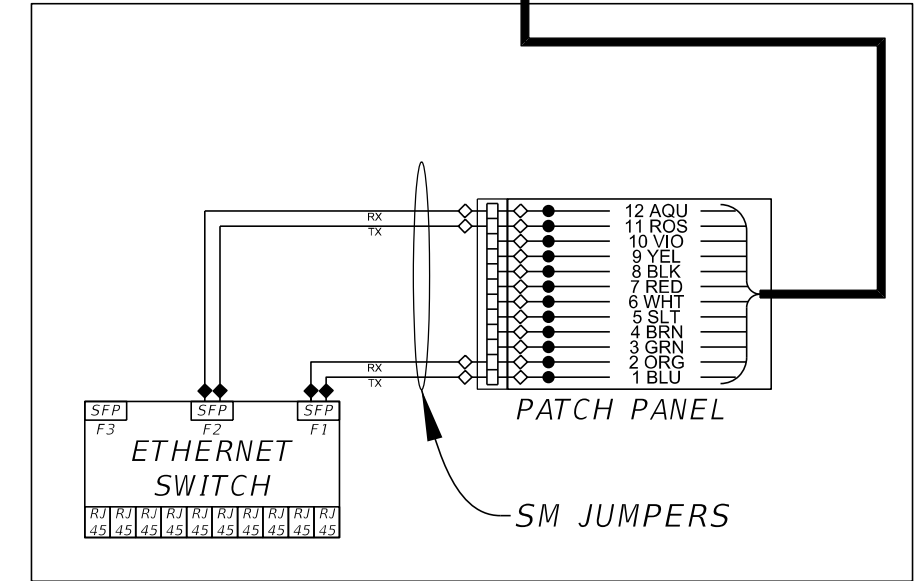
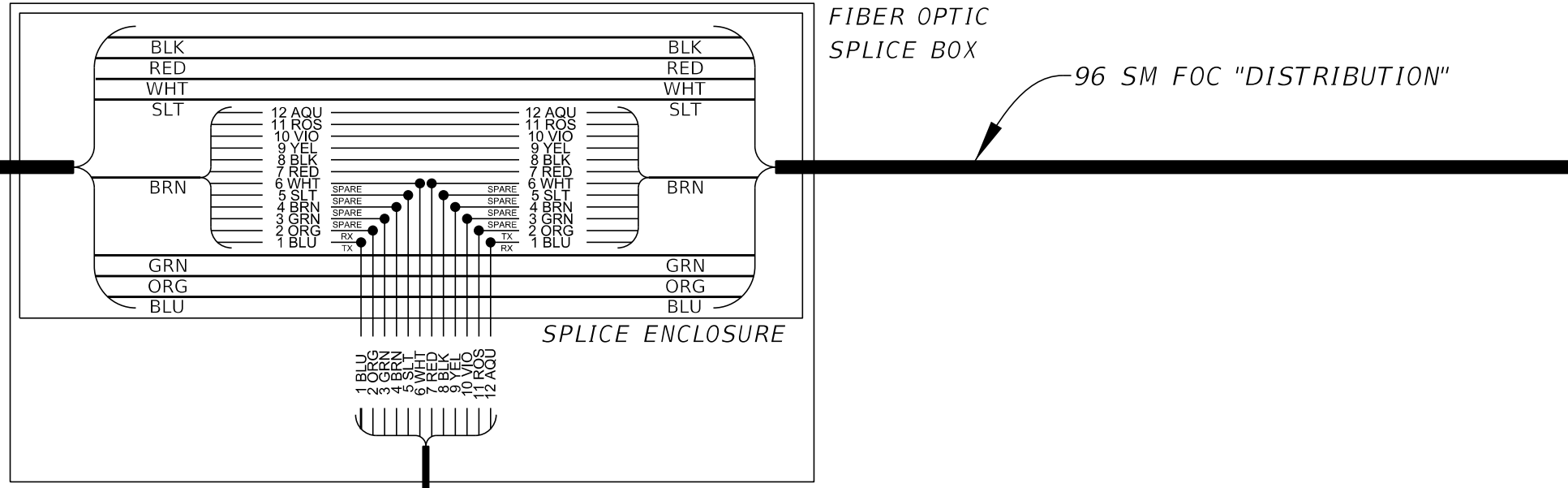
FIBER OPTIC
SPLICING DIAGRAMS

SHEET
NO.

IT-49

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

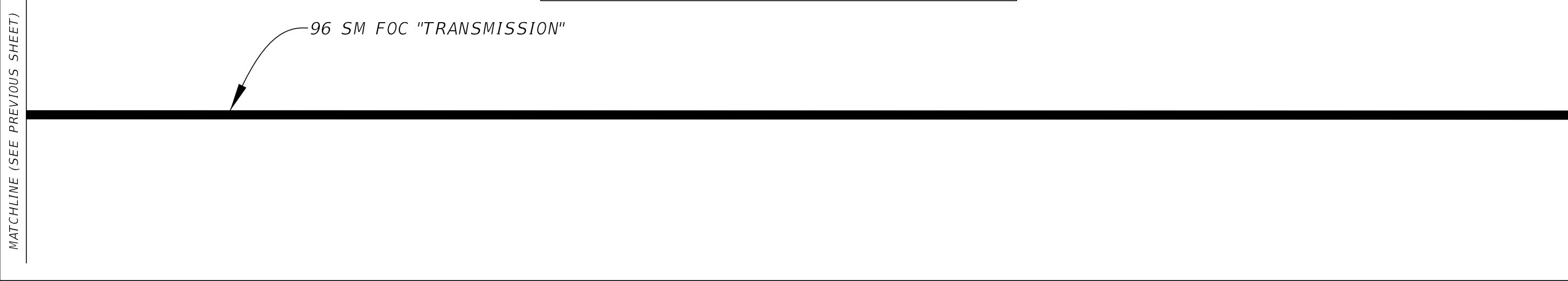


ITS POLE #1
LOCAL HUB #1
STA. 964+26 [LT]

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
├	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-50
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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96 SM FOC "DISTRIBUTION"

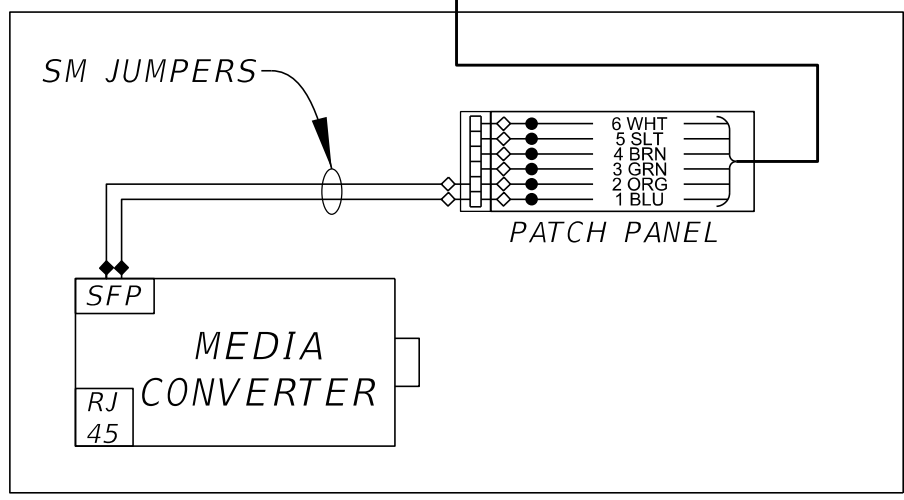
FIBER OPTIC
SPLICE BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

SM JUMPERS



ITS POLE #2
AUXILIARY CABINET #1
STA. 991+85 [LT]

LEGEND

- PROPOSED FUSION SPLICE
- ◇ SC TERMINATION
- ◆ LC TERMINATION
- ST TERMINATION
- ┌ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			FIBER OPTIC SPLICING DIAGRAMS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-51
					SR 429	SEMINOLE	240200-2-52-01		

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MATCHLINE (SEE PREVIOUS SHEET)

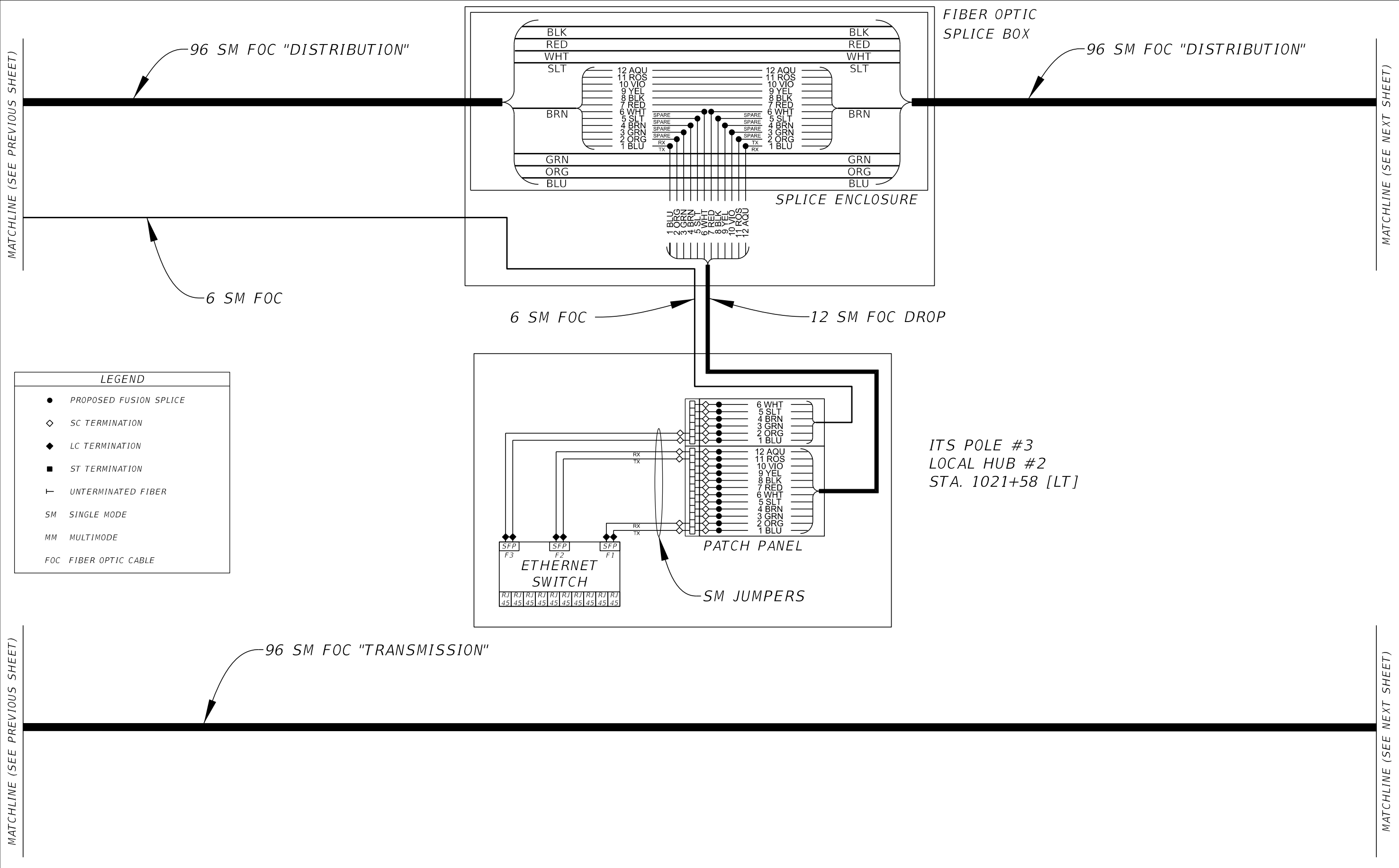
MATCHLINE (SEE NEXT SHEET)

LEGEND

- PROPOSED FUSION SPLICE
- ◇ SC TERMINATION
- ◆ LC TERMINATION
- ST TERMINATION
- ┌ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-52
					SR 429	SEMINOLE	240200-2-52-01		

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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

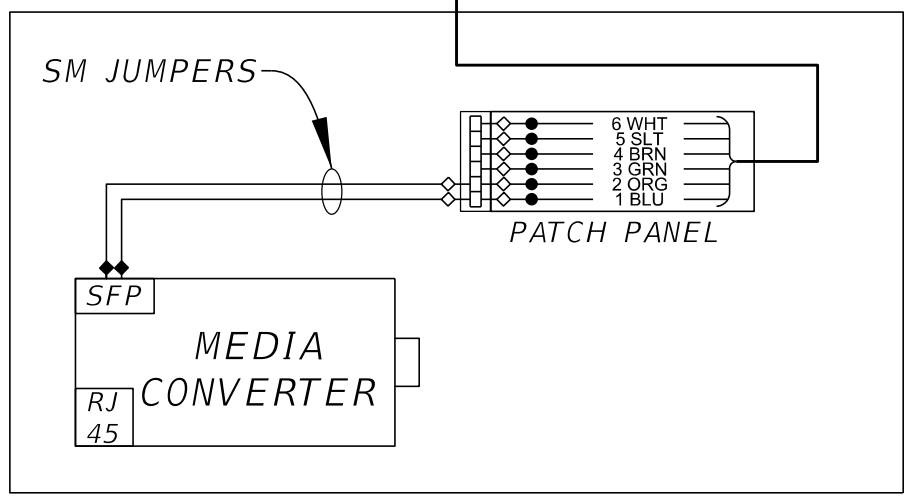
FIBER OPTIC
SPLICE BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

SM JUMPERS



ITS POLE #4
AUXILIARY CABINET #2
STA. 1041+61 [LT]

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
├	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE

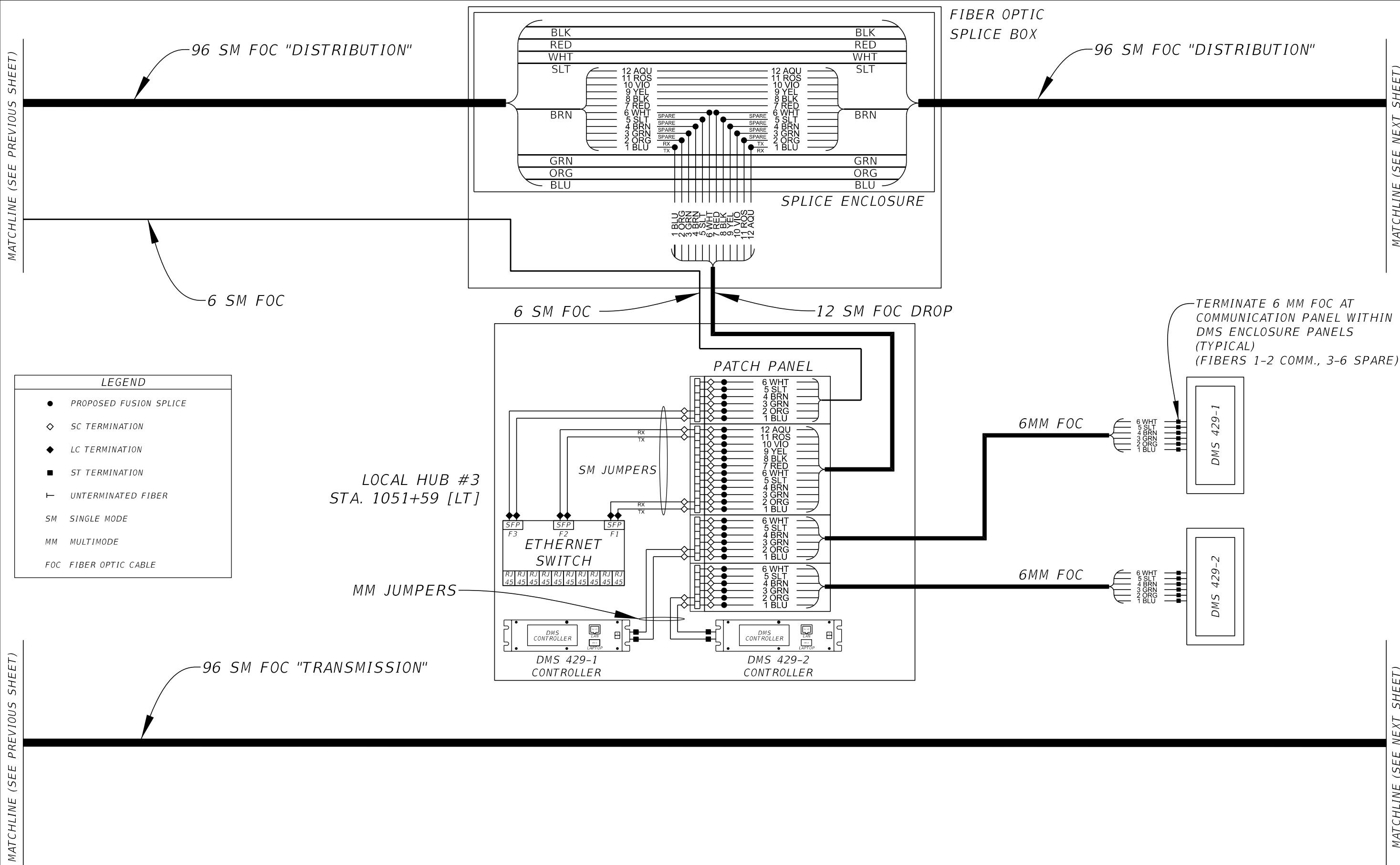
96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. FIBER OPTIC SPLICING DIAGRAMS IT-53
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-54

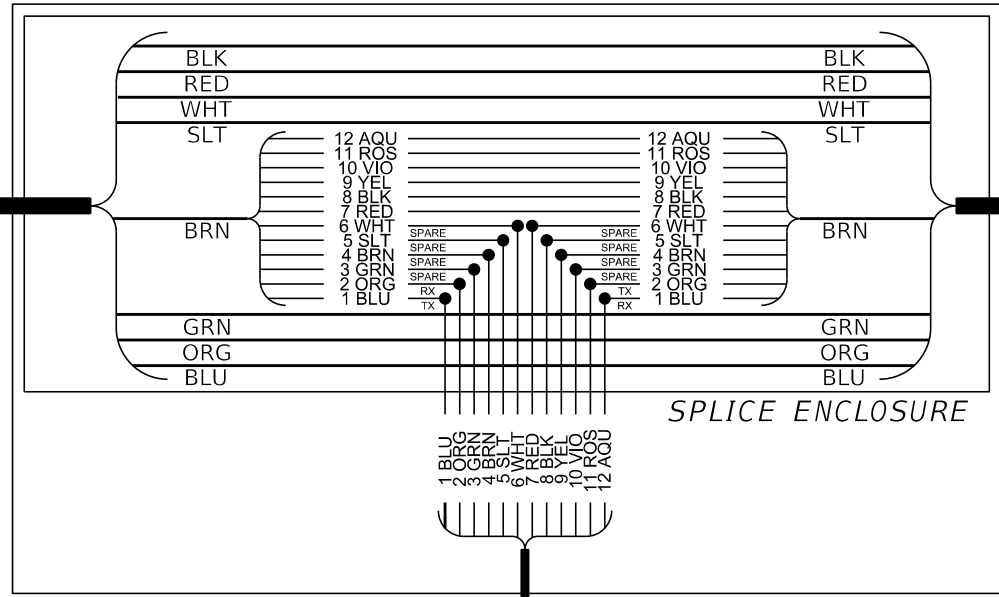
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MATCHLINE (SEE PREVIOUS SHEET)

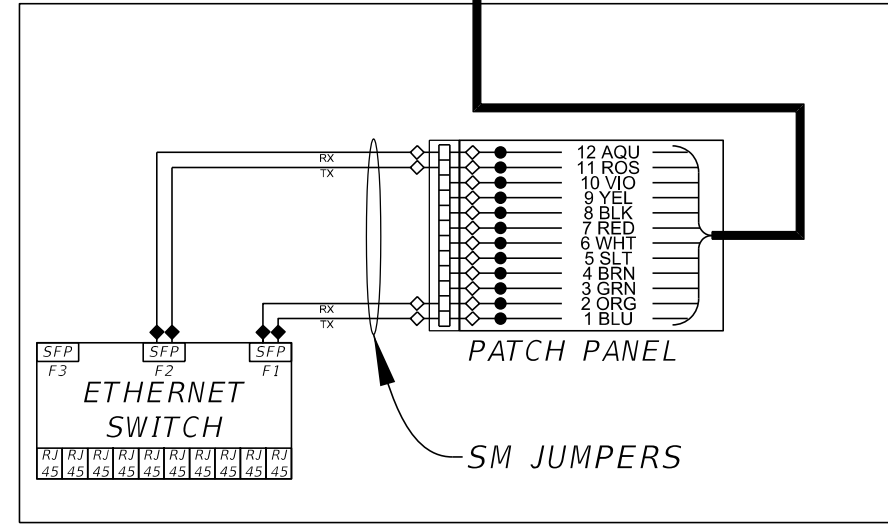
MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

96 SM FOC "DISTRIBUTION"



12 SM FOC DROP



ITS POLE #5
LOCAL HUB #4
STA. 1061+64 [LT]

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

LEGEND

- PROPOSED FUSION SPLICE
- ◇ SC TERMINATION
- ◆ LC TERMINATION
- ST TERMINATION
- ┌ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

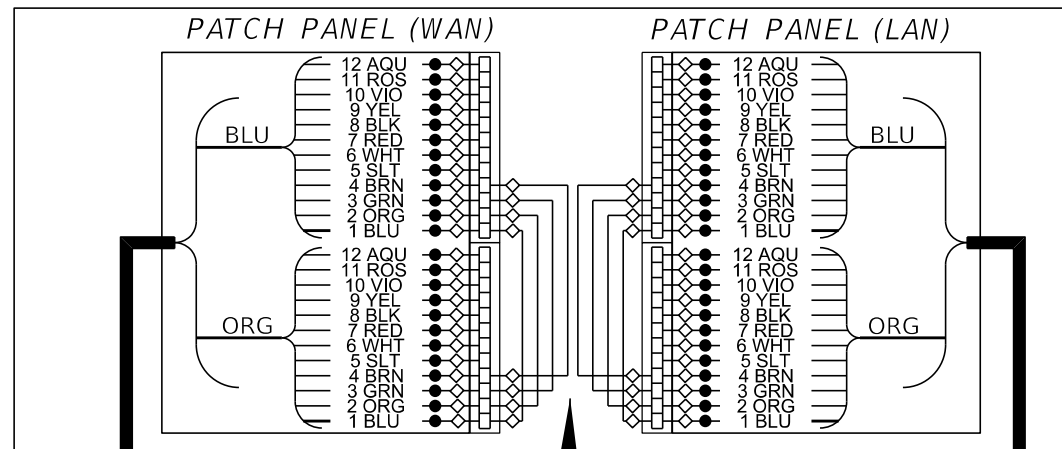
REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-55
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"



"MASTER" TOLL EQUIPMENT BUILDING
COMMUNICATIONS CABINET
TOLL SITE - RAMP F

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
├	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE

24 SM FOC DROP

FIBER OPTIC
PULL BOX

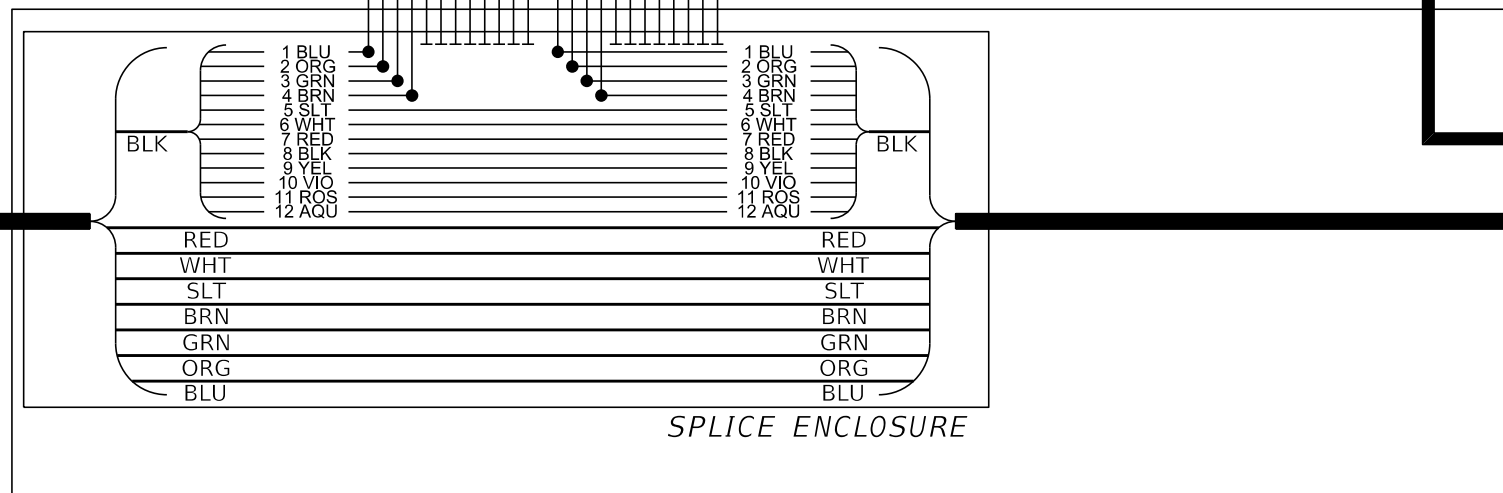
SM JUMPERS
(SC-SC DUPLEX)

24 SM FOC "INTERCONNECT"

96 SM FOC "TRANSMISSION"

FIBER OPTIC
SPLICING BOX
STA. 1072+32

24 SM FOC "INTERCONNECT"



96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

FIBER OPTIC
SPLICING DIAGRAMS

SHEET
NO.
IT-56

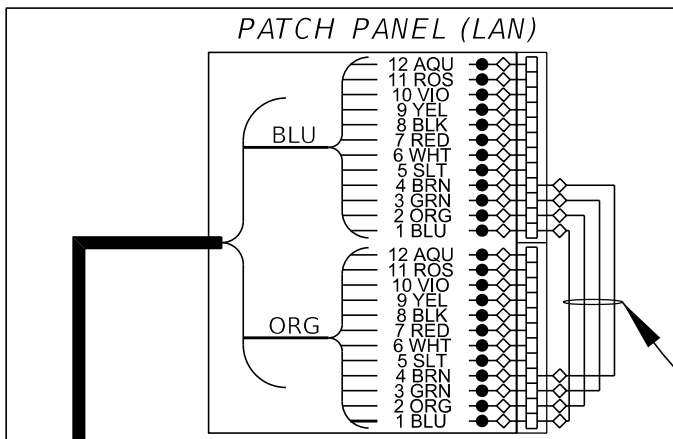
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
┌	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE



"SLAVE" TOLL EQUIPMENT BUILDING
COMMUNICATIONS CABINET
TOLL SITE - RAMP E

SM JUMPERS
(SC-SC DUPLEX)

24 SM FOC "INTERCONNECT"

FIBER OPTIC
SPLICE BOX

FIBER OPTIC
SPLICE BOX

FIBER OPTIC
SPLICE BOX
STA. 1081+47

24 SM FOC "INTERCONNECT"

96 SM FOC "TRANSMISSION"

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-57
					SR 429	SEMINOLE	240200-2-52-01		

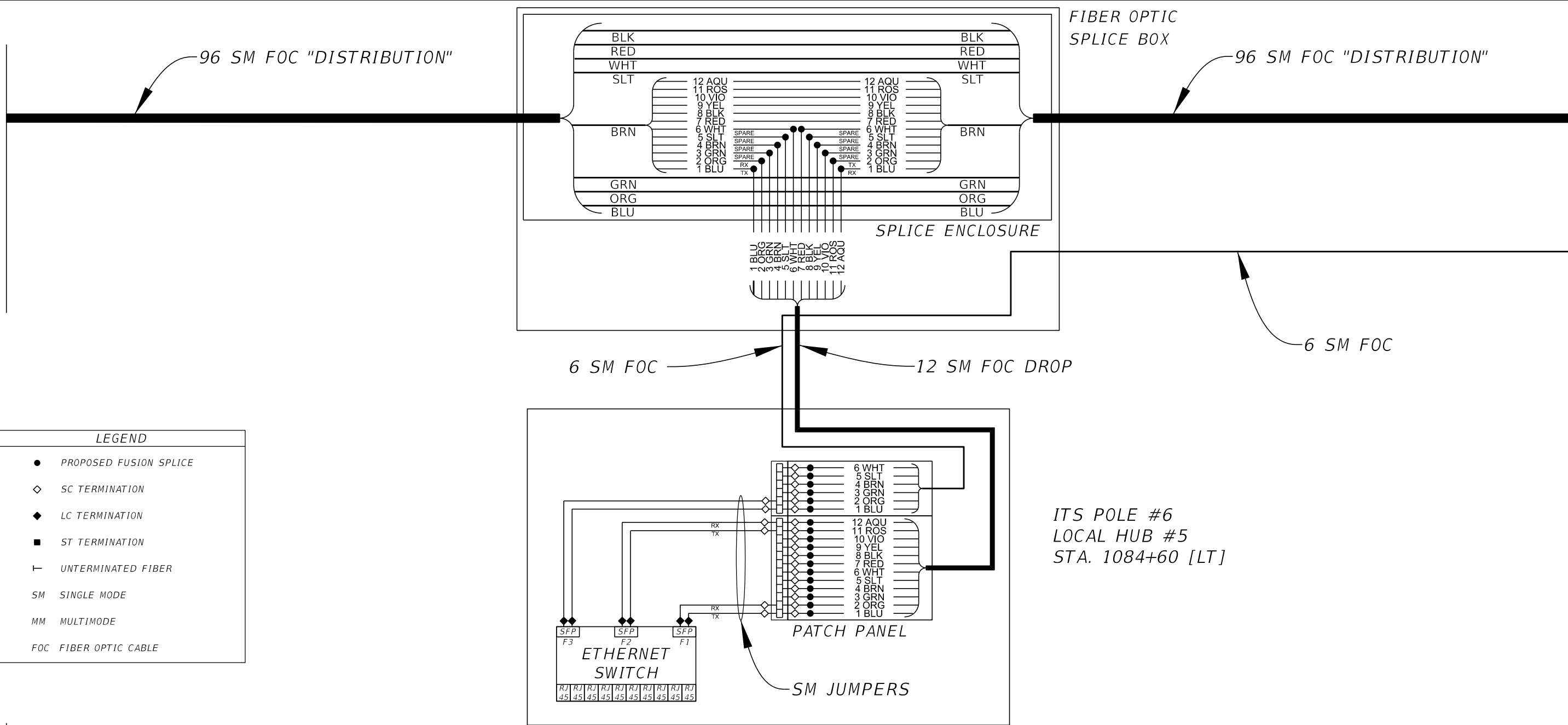
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



LEGEND

- PROPOSED FUSION SPLICE
- ◇ SC TERMINATION
- ◆ LC TERMINATION
- ST TERMINATION
- ┌ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

ITS POLE #6
 LOCAL HUB #5
 STA. 1084+60 [LT]

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			FIBER OPTIC SPLICING DIAGRAMS	SHEET NO. IT-58
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				SR 429	SEMINOLE	240200-2-52-01			

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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

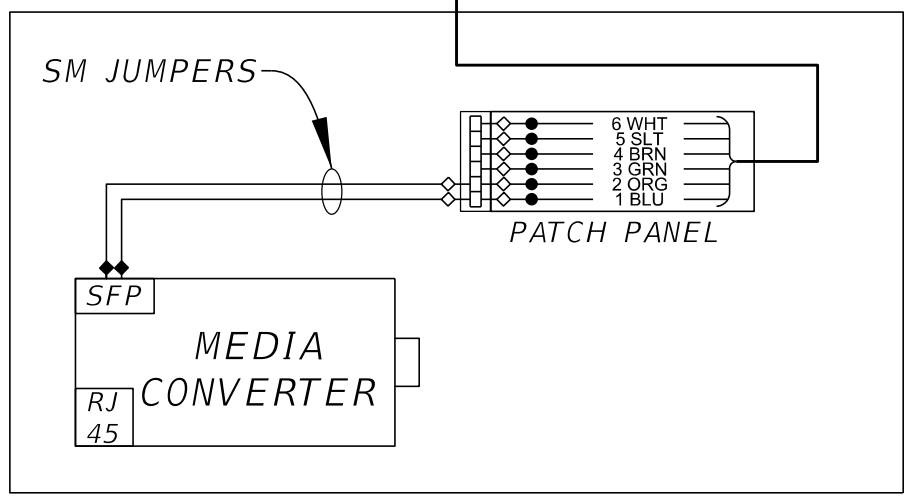
FIBER OPTIC
SPLICE BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

LEGEND	
●	PROPOSED FUSION SPLICE
◇	SC TERMINATION
◆	LC TERMINATION
■	ST TERMINATION
├	UNTERMINATED FIBER
SM	SINGLE MODE
MM	MULTIMODE
FOC	FIBER OPTIC CABLE



ITS POLE #7
AUXILIARY CABINET #3
STA. 1109+49 [LT]

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

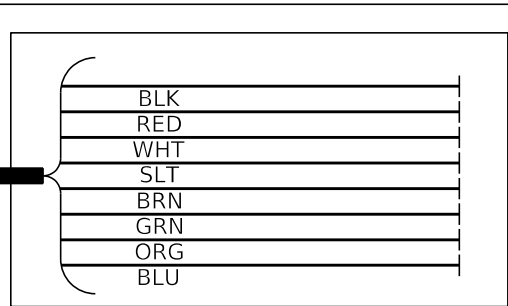
REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-59
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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MATCHLINE (SEE PREVIOUS SHEET)

96 SM FOC "DISTRIBUTION"

FIBER OPTIC
SPLICE BOX
STA. 1114+45 [LT]



SPLICE ENCLOSURE

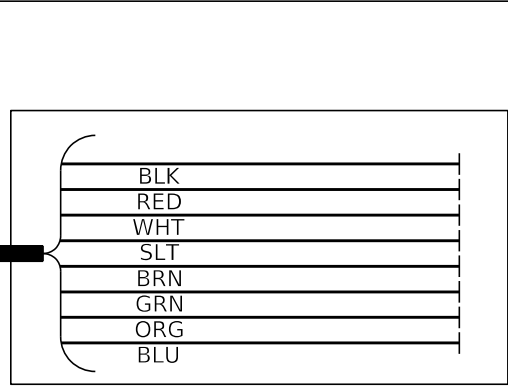
LEGEND

- PROPOSED FUSION SPLICE
- ◇ SC TERMINATION
- ◆ LC TERMINATION
- ST TERMINATION
- └ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

MATCHLINE (SEE PREVIOUS SHEET)

96 SM FOC "TRANSMISSION"

FIBER OPTIC
SPLICE BOX
STA. 1114+45 [RT]



SPLICE ENCLOSURE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

<p>FIBER OPTIC SPLICING DIAGRAMS</p>

SHEET NO.
IT-60

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FIBER OPTIC LOSS BUDGET

FROM DEVICE	TO DEVICE	RECOMMENDED TRANSCEIVER TYPE	FIBER OPTIC LINK LOSS											POWER MARGIN				
			ESTIMATED TRANSMISSION DISTANCE (Mi.)	FIBER TYPE	OPERATING WAVELENGTH (nm)	FIBER ATTENUATION (dB/km)	TOTAL FIBER ATTENUATION [INCLUDES 10% CONTINGENCY] (dB)	# OF CONNECTORS	CONNECTOR LOSS PER CONNECTOR (dB)	TOTAL CONNECTOR LOSS (dB)	# OF SPLICES	SPLICE LOSS PER SPLICE (dB)	TOTAL SPLICE LOSS (dB)	TOTAL LINK LOSS (dB)	RECEIVER SENSITIVITY (dBm)	TRANSMITTER OUTPUT (dBm)	DYNAMIC RANGE (dB)	LINK LOSS MARGIN (dB)
Local Hub #1	Local Hub #2	1000BASE-LX	1.240	SM	1310	0.35	0.77	4	0.5	2	2	0.1	0.2	2.97	-19	-11	8	5.03
Local Hub #2	Local Hub #3	1000BASE-LX	0.660	SM	1310	0.35	0.41	4	0.5	2	2	0.1	0.2	2.61	-19	-11	8	5.39
Local Hub #3	Local Hub #4	1000BASE-LX	0.302	SM	1310	0.35	0.19	4	0.5	2	2	0.1	0.2	2.39	-19	-11	8	5.61
Local Hub #4	Local Hub #5	1000BASE-LX	0.562	SM	1310	0.35	0.35	4	0.5	2	2	0.1	0.2	2.55	-19	-11	8	5.45
Local Hub #2	Auxilliary Cabinet #1	1000BASE-LX	0.643	SM	1310	0.35	0.40	2	0.5	1	0	0.1	0	1.40	-19	-11	8	6.60
Local Hub #3	Auxilliary Cabinet #2	1000BASE-LX	0.229	SM	1310	0.35	0.14	2	0.5	1	0	0.1	0	1.14	-19	-11	8	6.86
Local Hub #5	Auxilliary Cabinet #3	1000BASE-LX	0.571	SM	1310	0.35	0.35	2	0.5	1	0	0.1	0	1.35	-19	-11	8	6.65

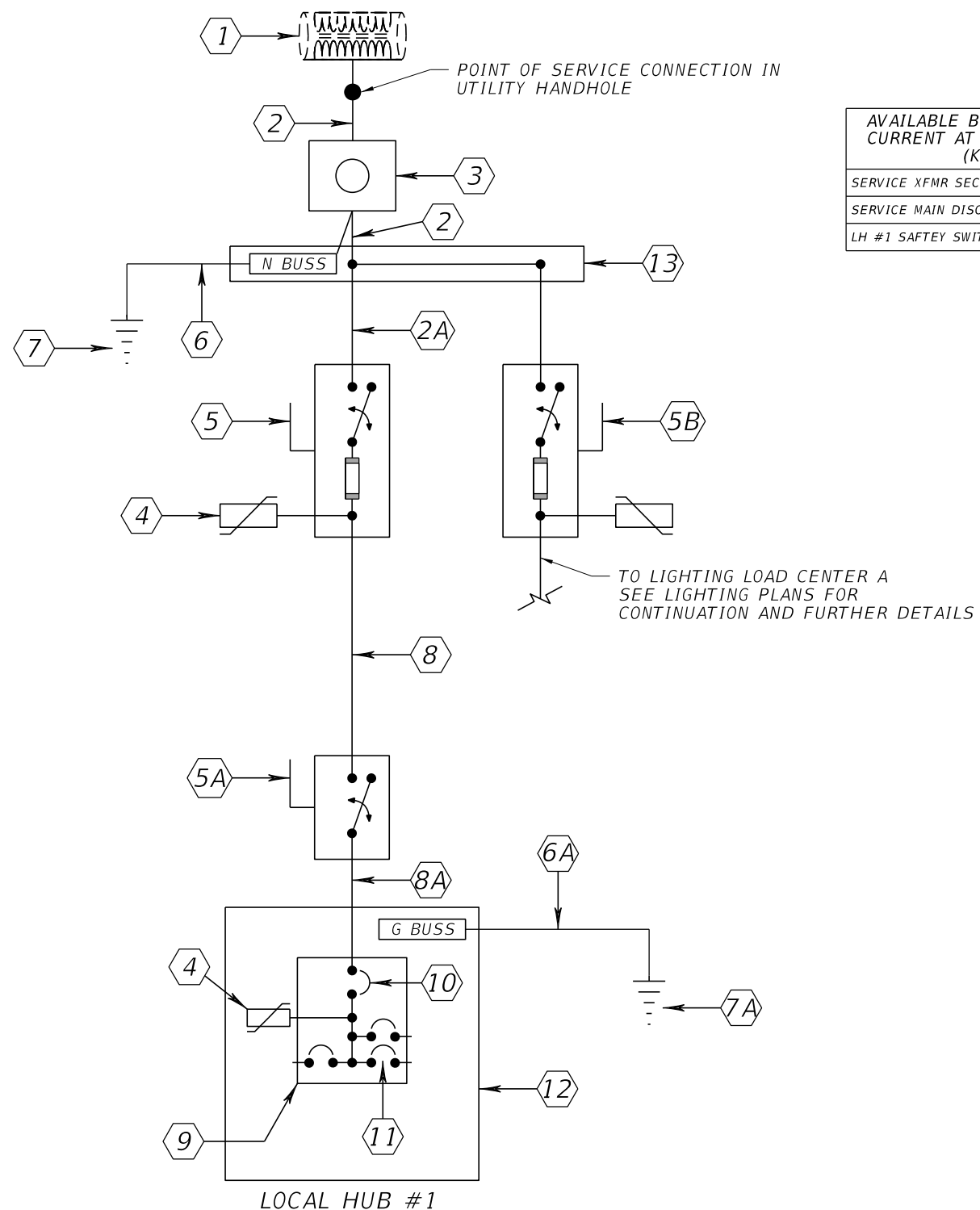
NOTES:

- EQUIPMENT PERFORMANCE PROVIDED IN THE TABLE ABOVE ARE BASED ON TYPICAL VALUES AND MAY VARY FROM MANUFACTURER TO MANUFACTURER.
- NUMBER OF SPLICES, CONNECTORS, AND FIBER OPTIC TRANSMISSION DISTANCE SHOULD BE CONSIDERED APPROXIMATE AND MAY VARY FROM INSTALLED VALUES DEPENDING ON INSTALLATION PROCEDURES AND FIELD CONDITIONS.
- THE TABLE ABOVE IS MEANT TO PROVIDE GUIDANCE IN SELECTING OPTICAL TRANSCEIVERS CAPABLE OF COMMUNICATION LINKS INDICATED IN THESE PLANS, AND AS A BASIS FOR POST INSTALLATION TESTING OF FIBER OPTIC LINKS. IF THE CONTRACTOR WOULD PREFER TO USE DIFFERENT OPTICAL TRANSCEIVERS THAN THOSE INDICATED IN THE TABLE ABOVE, ENSURE THAT THE TRANSCEIVERS ARE CAPABLE OF THE TRANSMISSION DISTANCES REQUIRED, ARE CONSISTENT WITH FDOT SPECIFICATIONS, COMPATIBLE WITH OTHER EQUIPMENT, AND PROVIDE EQUIVALENT DATA THROUGHPUT SPEEDS.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			FIBER OPTIC LOSS BUDGET	SHEET NO. IT-61
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

POWER SOURCE #1
ONE-LINE DIAGRAM



AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	8.0
LH #1 SAFTEY SWITCH	0.63

LEGEND:

- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 2A 120V SINGLE PHASE CIRCUIT; TAPPED IN WIRE TROUGH TO SERVICE CONDUCTORS; 1-#6 AWG UNGROUNDED CONDUCTOR AND 1-#6 AWG GROUNDED CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTNING ARRESTOR)
- 5 ITS SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 40 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 100 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE; BOND ENCLOSURE TO GROUNDED CONDUCTOR (NEUTRAL) WITH #6 AWG MAIN BONDING JUMPER
- 5A POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, NON-FUSIBLE, SINGLE THROW SAFETY SWITCH; 240V RATED; 100 AMP RATED; 10K SSCR MIN.; NEMA 3R PADLOCKABLE ENCLOSURE. DO NOT SWITCH THE GROUNDED CONDUCTOR.
- 5B LIGHTING SERVICE MAIN DISCONNECT: SEE LIGHTING PLANS FOR FURTHER DETAIL
- 6 #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR (COMMON). BOND THE SERVICE GROUNDED CONDUCTOR (NEUTRAL) TO GROUND IN WIRE TROUGH AT NEUTRAL BUSS.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 3/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 CABINET POWER PANEL
- 10 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 11 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 POLE MOUNTED TYPE 336S CABINET
- 13 NEMA 3R WIRE TROUGH SIZED PER NEC FILL REQUIREMENTS; CONTAINING 1/4" THICK X 2" WIDE (MIN.) COPPER GROUNDING BUSS TO SERVE AS COMMON GROUNDING ELECTRODE CONDUCTOR

NOTES:

1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

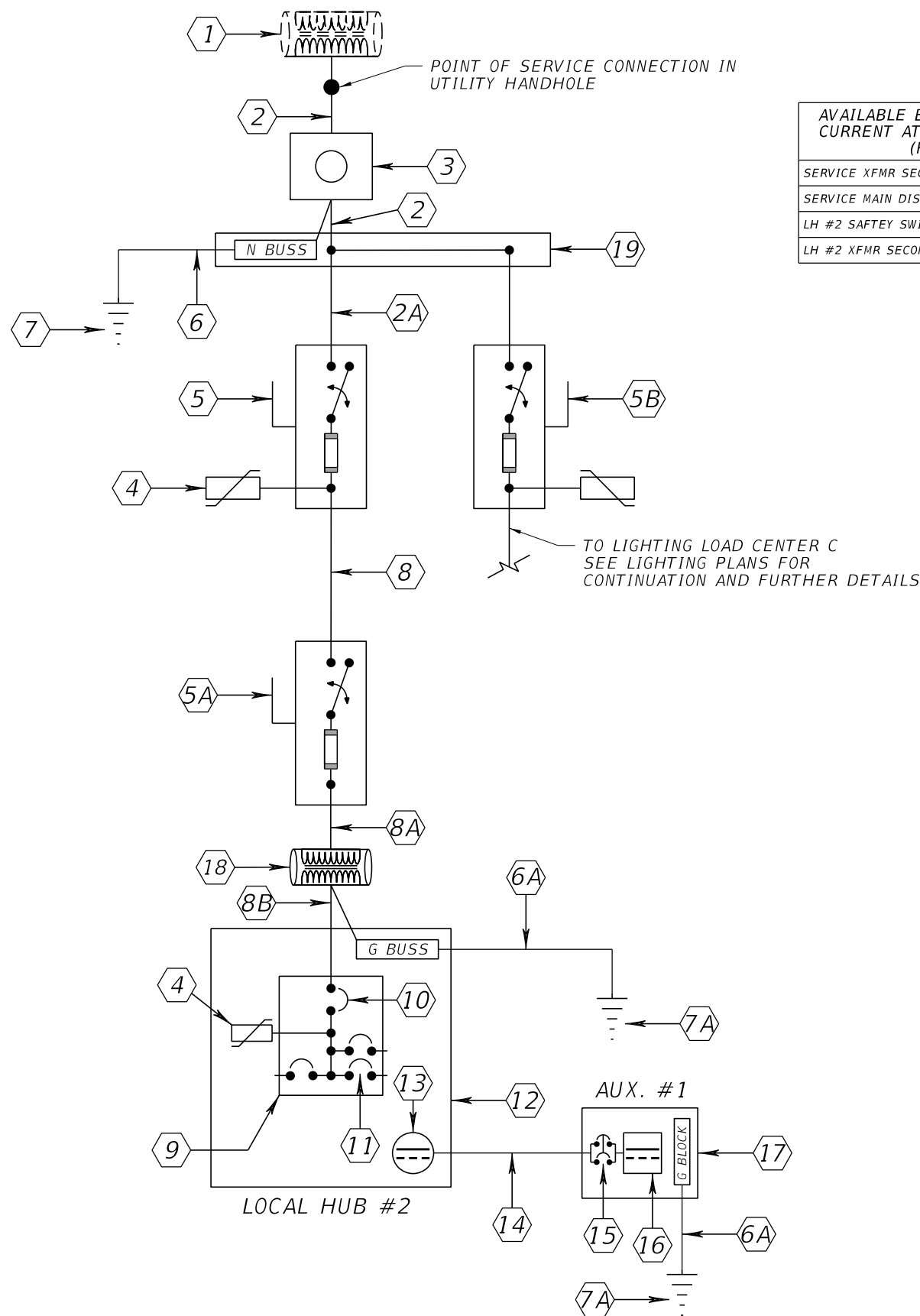
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

POWER SERVICE DETAILS

SHEET NO.
IT-62

POWER SOURCE #2
ONE-LINE DIAGRAM



AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	5.4
LH #2 SAFTEY SWITCH	1.2
LH #2 XFMR SECONDARY	0.56

LEGEND:

- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 2A 240V SINGLE PHASE CIRCUIT; TAPPED IN WIRE TROUGH TO SERVICE CONDUCTORS; 2-#6 AWG UNGROUNDED CONDUCTORS AND 1-#6 AWG GROUNDED CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTNING ARRESTOR)
- 5 ITS SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 40 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 100 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE; BOND ENCLOSURE TO GROUNDED CONDUCTOR (NEUTRAL) WITH #6 AWG MAIN BONDING JUMPER
- 5A POLE MOUNTED SAFTEY SWITCH: GENERAL DUTY, TWO-POLE, FUSIBLE, SINGLE THROW; FUSED AT 20 AMPS; 240V RATED; 100 AMP RATED; 10K AIC MIN. RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 5B LIGHTING SERVICE MAIN DISCONNECT: SEE LIGHTING PLANS FOR FURTHER DETAIL
- 6 #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR (COMMON). BOND THE SERVICE GROUNDED CONDUCTOR (NEUTRAL) TO GROUND IN WIRE TROUGH AT NEUTRAL BUSS.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 240V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8B 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 CABINET POWER PANEL
- 10 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 11 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 POLE MOUNTED TYPE 336S CABINET
- 13 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 14 48VDC CIRCUIT: 3/C #12 AWG TYPE TC CABLE
- 15 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 16 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 POLE MOUNTED AUXILIARY CABINET
- 18 3 KVA POLE MOUNTED DRY TYPE OUTDOOR TRANSFORMER: 240x480V PRIMARY AND 120/240V SECONDARY; NEMA 3R ENCLOSURE; BOND TRANSFORMER SECONDARY TO EFFECTIVE GROUND-FAULT CURRENT PATH PER NEC REQUIREMENTS; REFER TO WIRING DIAGRAMS FOR FURTHER DETAIL
- 19 NEMA 3R WIRE TROUGH SIZED PER NEC FILL REQUIREMENTS; CONTAINING 1/4" THICK X 2" WIDE (MIN.) COPPER GROUNDING BUSS TO SERVE AS COMMON GROUNDING ELECTRODE CONDUCTOR

NOTES:

- 1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
- 2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
- 3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-63
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

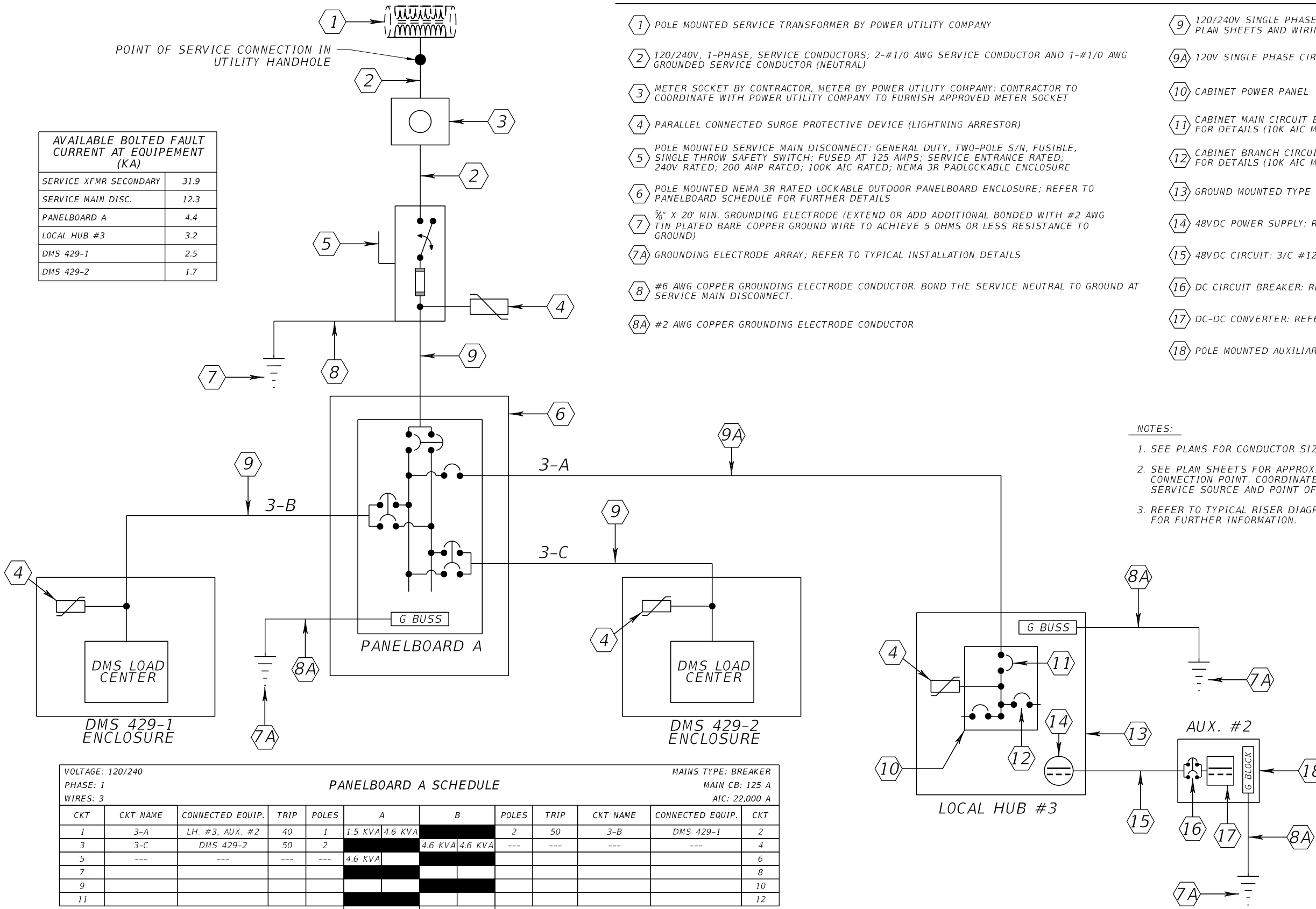
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POWER SOURCE #3
ONE-LINE DIAGRAM

LEGEND:

POINT OF SERVICE CONNECTION IN UTILITY HANDHOLE

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	12.3
PANELBOARD A	4.4
LOCAL HUB #3	3.2
DMS 429-1	2.5
DMS 429-2	1.7



- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1/0 AWG SERVICE CONDUCTOR AND 1-#1/0 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTNING ARRESTOR)
- 5 POLE MOUNTED SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 125 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 200 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 6 POLE MOUNTED NEMA 3R RATED LOCKABLE OUTDOOR PANELBOARD ENCLOSURE; REFER TO PANELBOARD SCHEDULE FOR FURTHER DETAILS
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 #6 AWG COPPER GROUNDING ELECTRODE CONDUCTOR. BOND THE SERVICE NEUTRAL TO GROUND AT SERVICE MAIN DISCONNECT.
- 8A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 9 120/240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS AND WIRING DIAGRAMS
- 9A 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN PLAN SHEETS
- 10 CABINET POWER PANEL
- 11 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 13 GROUND MOUNTED TYPE 334 CABINET
- 14 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 15 48VDC CIRCUIT: 3/C #12 AWG TYPE TC CABLE
- 16 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 18 POLE MOUNTED AUXILIARY CABINET

NOTES:

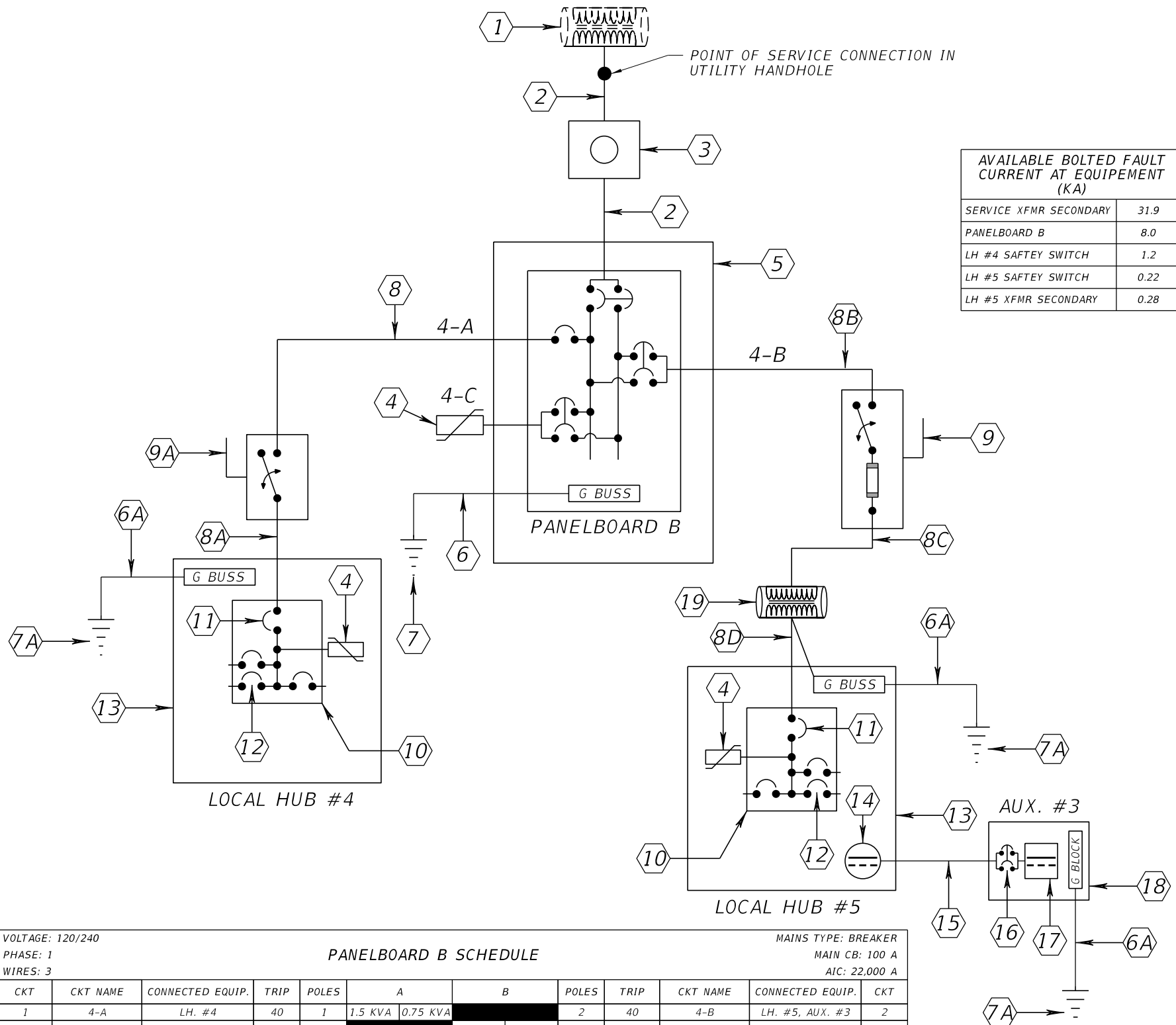
1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

PANELBOARD A SCHEDULE											
VOLTAGE: 120/240 PHASE: 1 WIRES: 3					MAINS TYPE: BREAKER MAIN CB: 125 A AIC: 22,000 A						
CKT	CKT NAME	CONNECTED EQUIP.	TRIP	POLES	A	B	POLES	TRIP	CKT NAME	CONNECTED EQUIP.	CKT
1	3-A	LH. #3, AUX. #2	40	1	7.5 KVA	4.6 KVA	2	50	3-B	DMS 429-1	2
3	3-C	DMS 429-2	50	2	4.6 KVA	4.6 KVA	---	---	---	---	4
5	---	---	---	---	4.6 KVA	---	---	---	---	---	6
7	---	---	---	---	---	---	---	---	---	---	8
9	---	---	---	---	---	---	---	---	---	---	10
11	---	---	---	---	---	---	---	---	---	---	12
LOAD PER 120V LEG:					10.7 KVA	9.2 KVA					
TOTAL LOAD:					19.9 KVA						
TOTAL AMPS @ 240V:					82.9 A						

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			POWER SERVICE DETAILS	SHEET NO. IT-64
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		

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POWER SOURCE #4
ONE-LINE DIAGRAM



AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)

SERVICE XFMR SECONDARY	31.9
PANELBOARD B	8.0
LH #4 SAFETY SWITCH	1.2
LH #5 SAFETY SWITCH	0.22
LH #5 XFMR SECONDARY	0.28

LEGEND:

- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTNING ARRESTOR)
- 5 POLE MOUNTED MAIN SERVICE PANEL: POLE MOUNTED NEMA 3R RATED LOCKABLE OUTDOOR SERVICE ENTRANCE RATED PANELBOARD ENCLOSURE; REFER TO PANELBOARD SCHEDULE FOR FURTHER DETAILS
- 6 #6 AWG COPPER GROUNDING ELECTRODE CONDUCTOR. BOND THE SERVICE NEUTRAL TO GROUND IN MAIN SERVICE PANEL.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8B 240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8C 240V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8D 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, FUSIBLE, SINGLE THROW; FUSED AT 20 AMPS; 240V RATED; 100 AMP RATED; 10K AIC MIN. RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 9A POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, NON-FUSIBLE, SINGLE THROW; 240V RATED; 100 AMP RATED; 10K SSCR MIN.; NEMA 3R PADLOCKABLE ENCLOSURE. DO NOT SWITCH THE GROUNDED CONDUCTOR.
- 10 CABINET POWER PANEL
- 11 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 13 POLE MOUNTED TYPE 336S CABINET
- 14 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 15 48VDC CIRCUIT: 3/C #12 AWG TYPE TC CABLE
- 16 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 18 POLE MOUNTED AUXILIARY CABINET
- 19 3 KVA POLE MOUNTED DRY TYPE OUTDOOR TRANSFORMER: 240x480V PRIMARY AND 120/240V SECONDARY; NEMA 3R ENCLOSURE; BOND TRANSFORMER SECONDARY TO EFFECTIVE GROUND-FAULT CURRENT PATH PER NEC REQUIREMENTS; REFER TO WIRING DIAGRAMS FOR FURTHER DETAIL

VOLTAGE: 120/240
PHASE: 1
WIRES: 3

PANELBOARD B SCHEDULE

MAINS TYPE: BREAKER
MAIN CB: 100 A
AIC: 22,000 A

CKT	CKT NAME	CONNECTED EQUIP.	TRIP	POLES	A	B	POLES	TRIP	CKT NAME	CONNECTED EQUIP.	CKT
1	4-A	LH. #4	40	1	1.5 KVA	0.75 KVA	2	40	4-B	LH. #5, AUX. #3	2
3	4-C	SPD	30	2		SPD					4
5	---	---	---	---	SPD						6
7											8
9											10
11											12

LOAD PER 120V LEG: 2.25 KVA 0.75 KVA
TOTAL LOAD: 3.00 KVA
TOTAL AMPS @ 240V: 12.5 A

- NOTES:
- SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
 - SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
 - REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

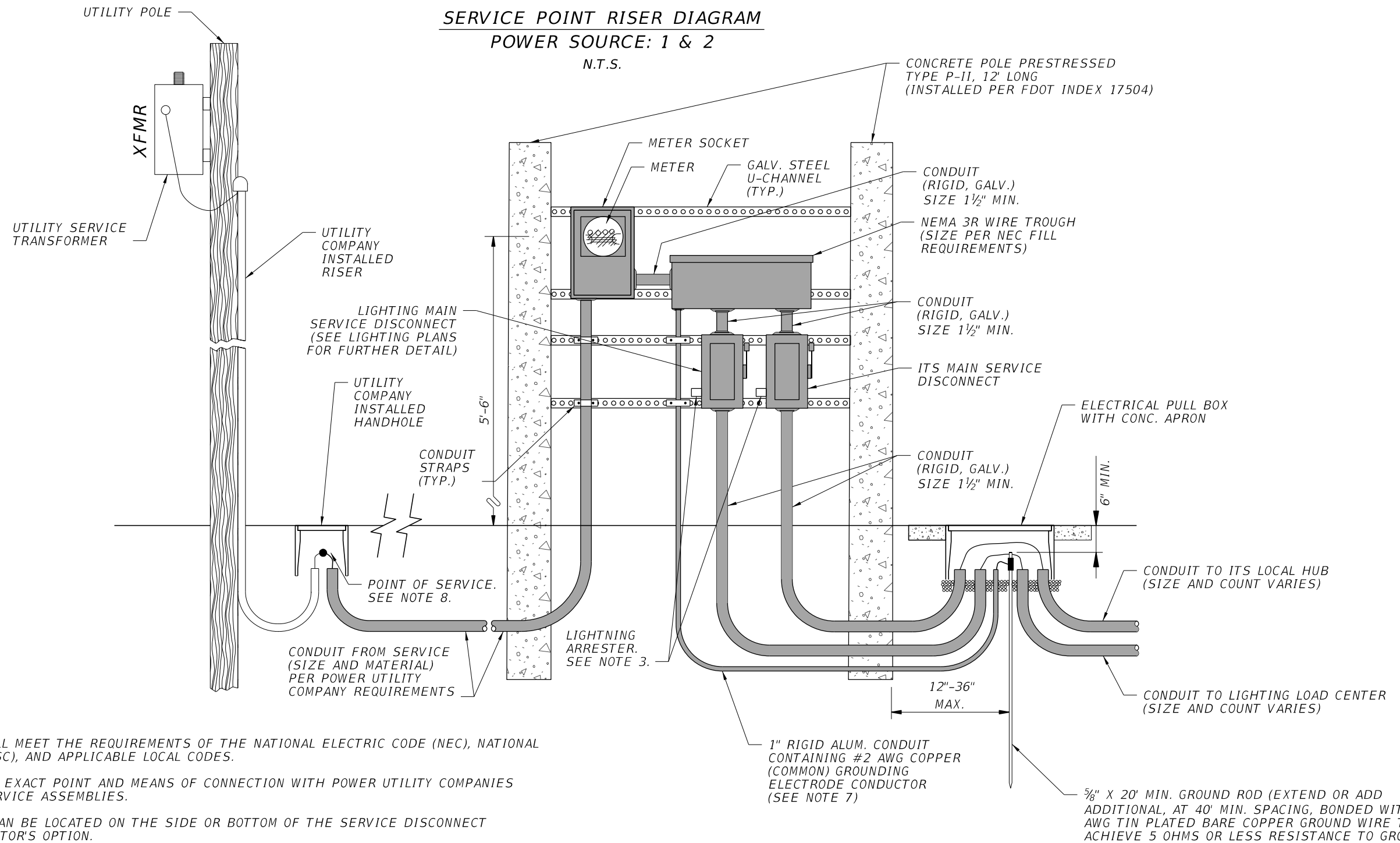
REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			POWER SERVICE DETAILS SHEET NO. IT-65
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

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SERVICE POINT RISER DIAGRAM

POWER SOURCE: 1 & 2

N.T.S.



NOTES:

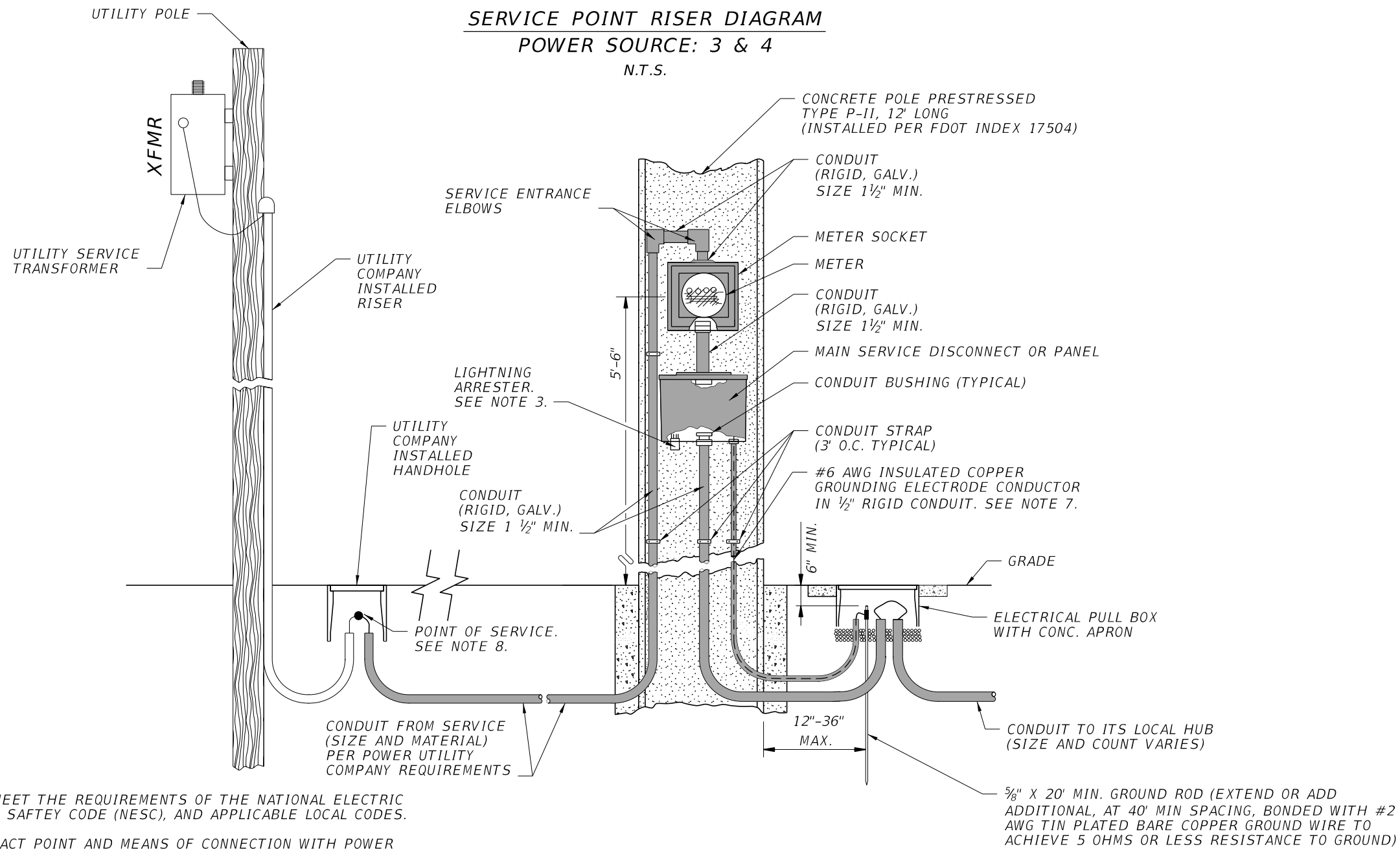
1. SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), NATIONAL ELECTRIC SAFETY CODE (NEC), AND APPLICABLE LOCAL CODES.
2. CONTRACTOR TO COORDINATE EXACT POINT AND MEANS OF CONNECTION WITH POWER UTILITY COMPANIES PRIOR TO CONSTRUCTING SERVICE ASSEMBLIES.
3. THE LIGHTNING ARRESTER CAN BE LOCATED ON THE SIDE OR BOTTOM OF THE SERVICE DISCONNECT ENCLOSURE AT THE CONTRACTOR'S OPTION.
4. MEET ALL GROUNDING REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.
5. THE MAIN SERVICE DISCONNECTS SHALL BE LOCKABLE BY PADLOCK AND FOUR KEYS PROVIDED TO THE MAINTAINING AGENCY. THE DOOR SHALL HAVE A MINIMUM OF THREE HINGES AND BE LOCKABLE. NO SCREWS TO BE USED TO ATTACH DOOR.
6. ALL SERVICE EQUIPMENT ENCLOSURES SHALL BE NEMA 3R OR BETTER RATED. WEATHER TIGHT HUBS SHALL BE USED AT LOCATIONS WHERE CONDUITS ATTACH TO ENCLOSURES.
7. CONDUIT CONTAINING GROUNDING ELECTRODE CONDUCTORS SHALL BE EITHER RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT. IF STEEL CONDUIT (FERROUS) IS USED ENSURE CONDUIT IS BONDED TO GROUNDING ELECTRODE CONDUCTOR AT BOTH ENDS IN ACCORDANCE WITH THE NEC.
8. CONTRACTOR TO PROVIDE 10' OF SLACK SERVICE CONDUCTOR WITHIN HANDHOLE FOR CONNECTION BY POWER UTILITY COMPANY.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-66
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
						SR 429	SEMINOLE	

SERVICE POINT RISER DIAGRAM

POWER SOURCE: 3 & 4

N.T.S.

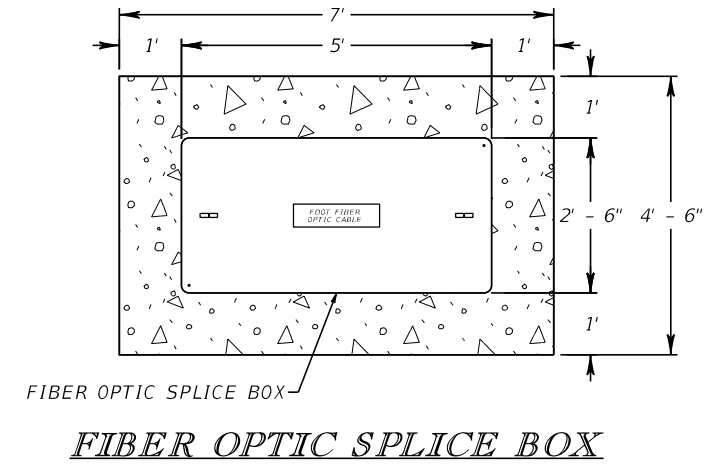
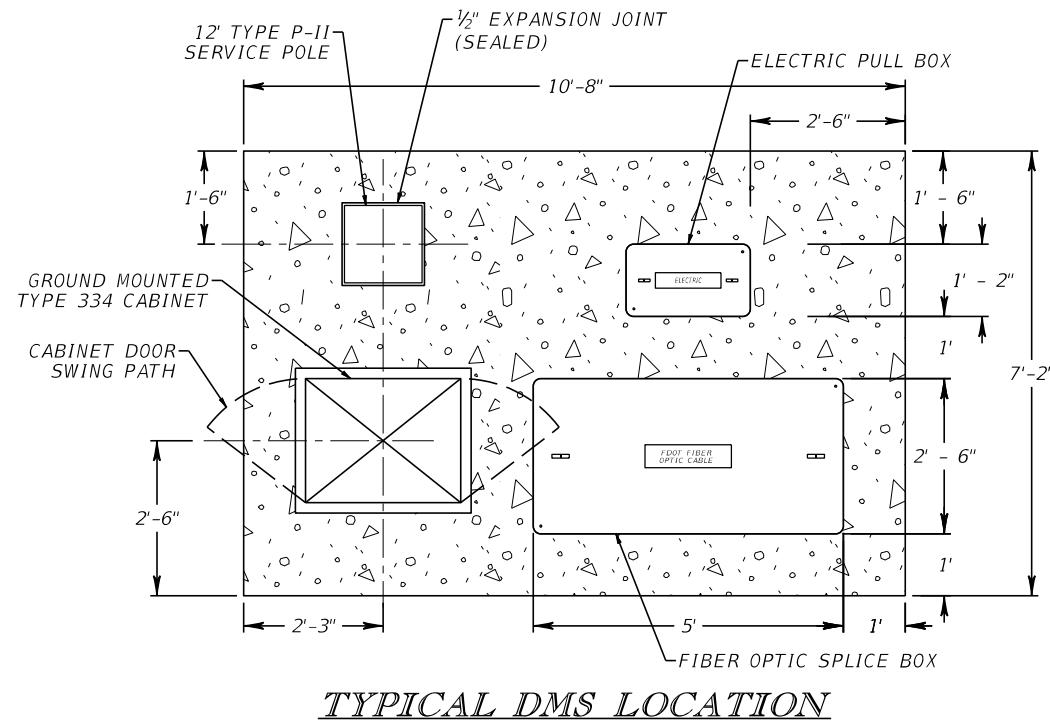
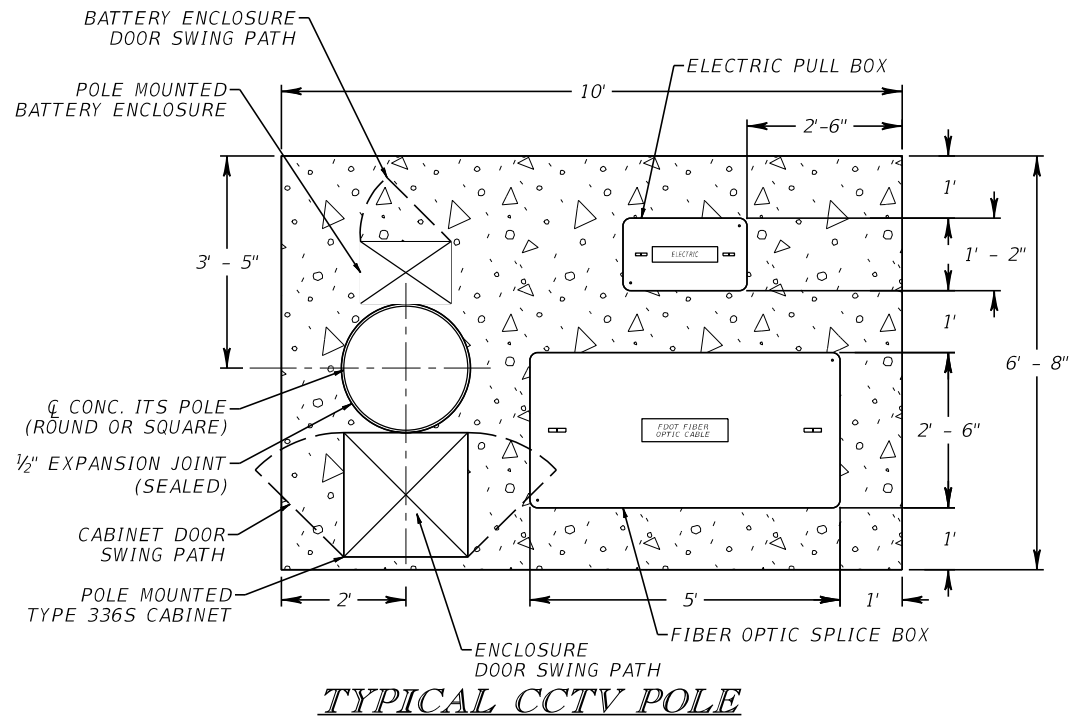


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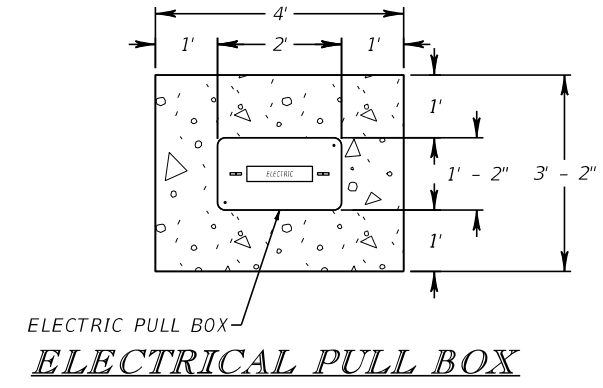
1. SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), NATIONAL ELECTRIC SAFETY CODE (NEC), AND APPLICABLE LOCAL CODES.
2. CONTRACTOR TO COORDINATE EXACT POINT AND MEANS OF CONNECTION WITH POWER UTILITY COMPANIES PRIOR TO CONSTRUCTING SERVICE ASSEMBLIES.
3. THE LIGHTNING ARRESTER CAN BE LOCATED ON THE SIDE OR BOTTOM OF THE SERVICE DISCONNECT ENCLOSURE AT THE CONTRACTOR'S OPTION.
4. MEET ALL GROUNDING REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.
5. THE MAIN SERVICE DISCONNECT OR PANEL SHALL BE LOCKABLE BY PADLOCK AND FOUR KEYS PROVIDED TO THE MAINTAINING AGENCY. THE DOOR SHALL HAVE A MINIMUM OF THREE HINGES AND BE LOCKABLE. NO SCREWS TO BE USED TO ATTACH DOOR.
6. ALL SERVICE EQUIPMENT ENCLOSURES SHALL BE NEMA 3R OR BETTER RATED. WEATHER TIGHT HUBS SHALL BE USED AT LOCATIONS WHERE CONDUITS ATTACH TO ENCLOSURES.
7. CONDUIT CONTAINING GROUNDING ELECTRODE CONDUCTORS SHALL BE EITHER RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT. IF STEEL CONDUIT (FERROUS) IS USED ENSURE CONDUIT IS BONDED TO GROUNDING ELECTRODE CONDUCTOR AT BOTH ENDS IN ACCORDANCE WITH THE NEC.
8. CONTRACTOR TO PROVIDE 10' OF SLACK SERVICE CONDUCTOR WITHIN HANDHOLE FOR CONNECTION BY POWER UTILITY COMPANY.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-67
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

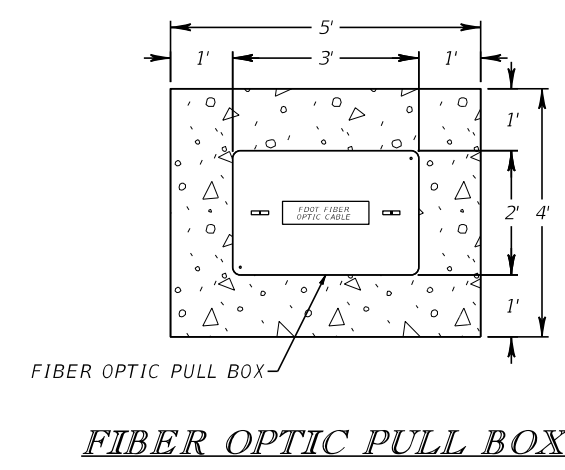
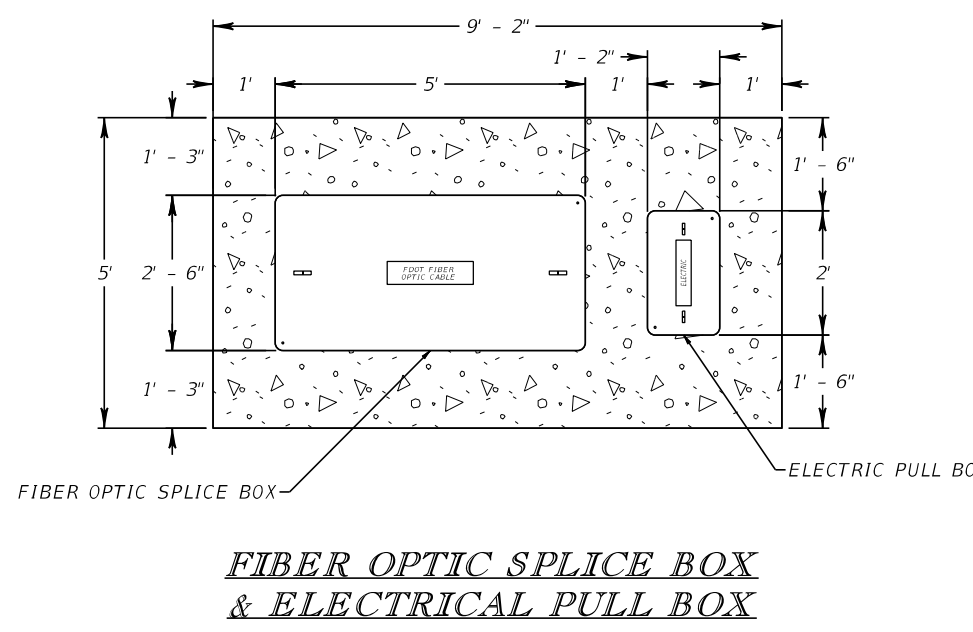
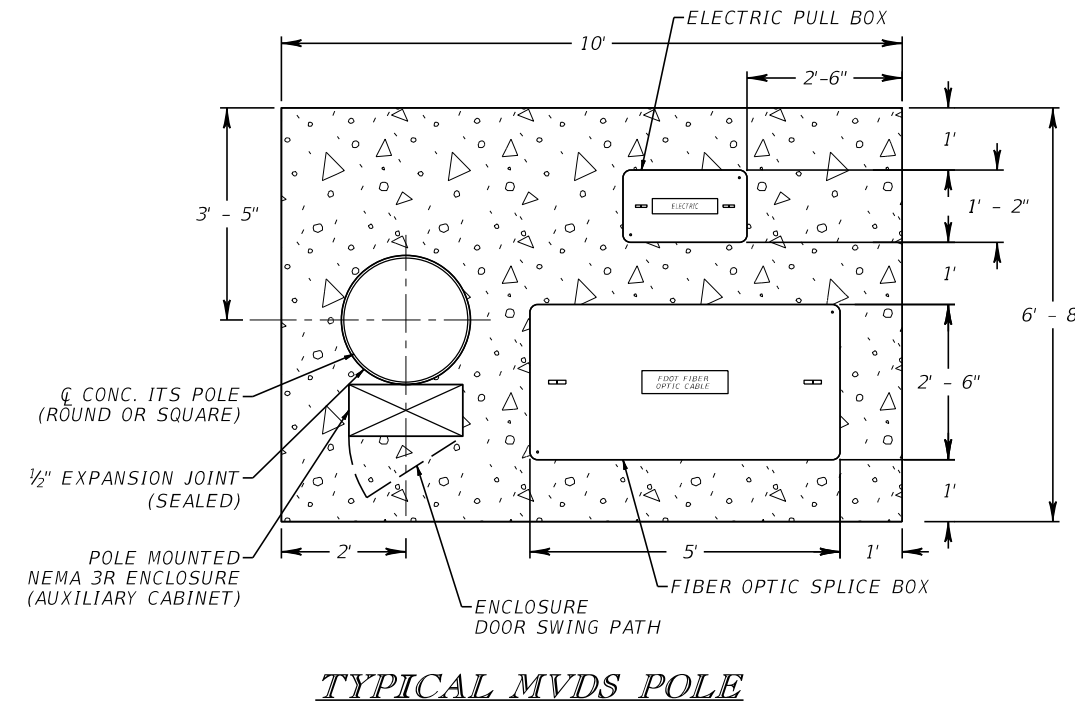
CONCRETE APRON DETAILS
N.T.S.



FIBER OPTIC SPLICE BOX



ELECTRICAL PULL BOX



FIBER OPTIC PULL BOX

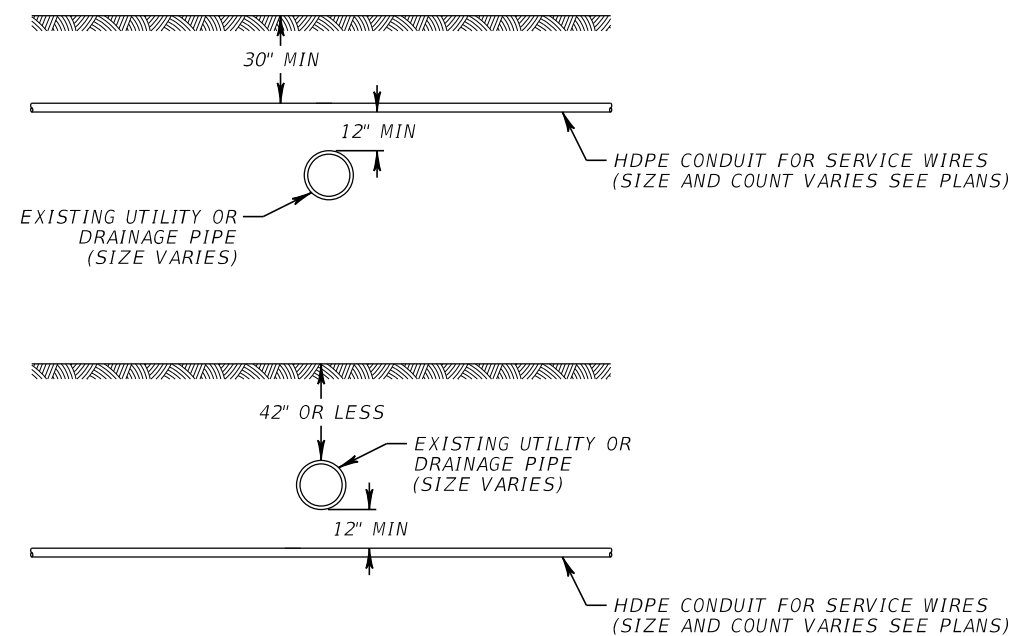
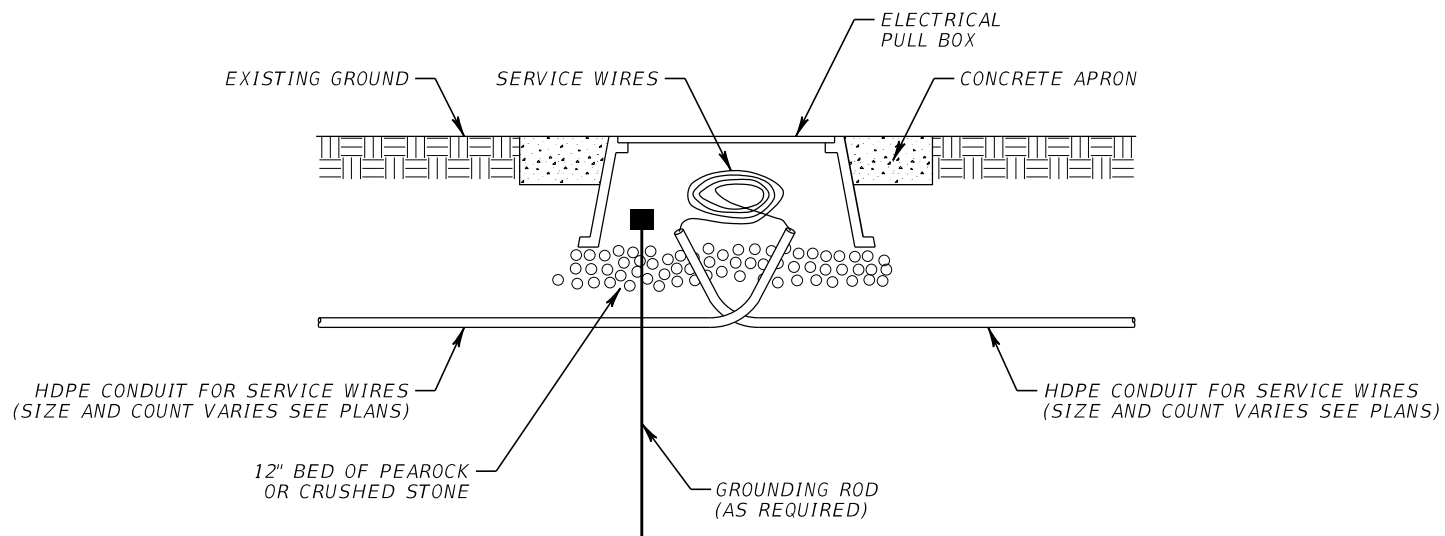
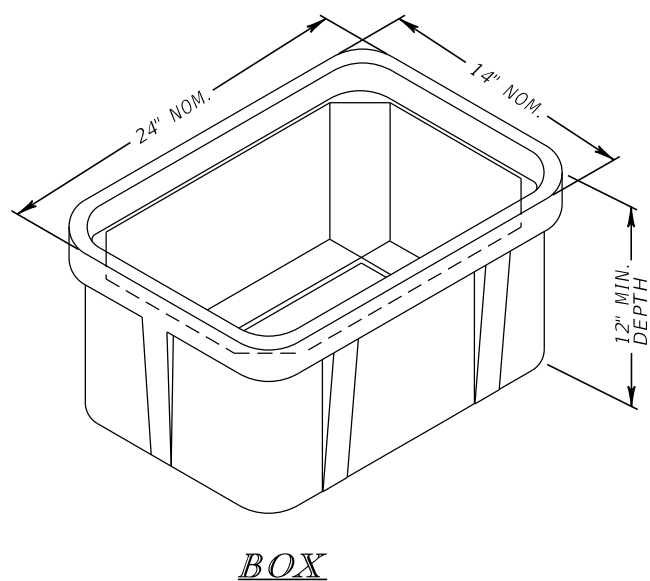
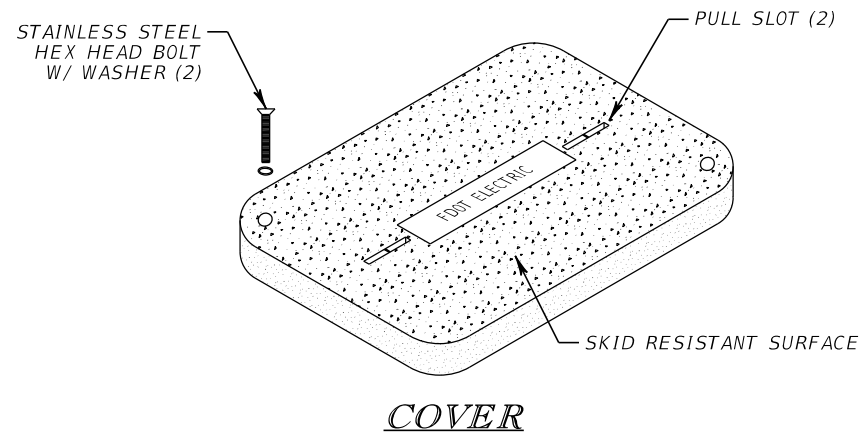
NOTE:
1. CONCRETE REINFORCEMENT AND INSTALLATION REQUIREMENTS TO BE PER INDEX 17700.
2. APRON DIMENSIONS ARE APPROXIMATE AND MAY BE MODIFIED TO ACCOMMODATE FIELD CONDITIONS.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. IT-68
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 429	SEMINOLE	240200-2-52-01	

CONCRETE APRON DETAILS

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ELECTRICAL PULL BOX AND CONDUIT DETAILS
N.T.S.



NOTES:

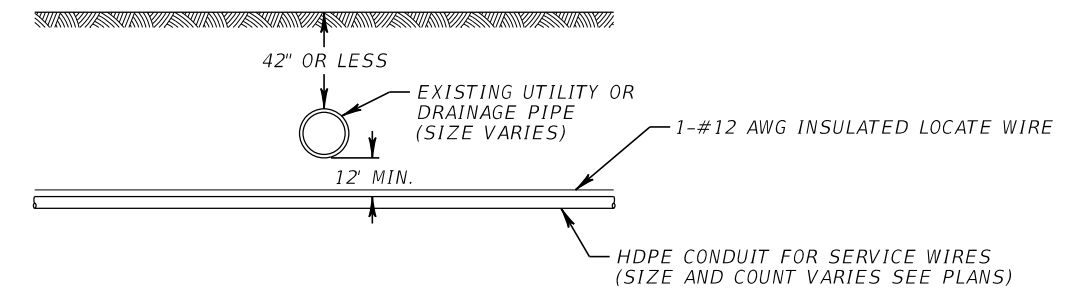
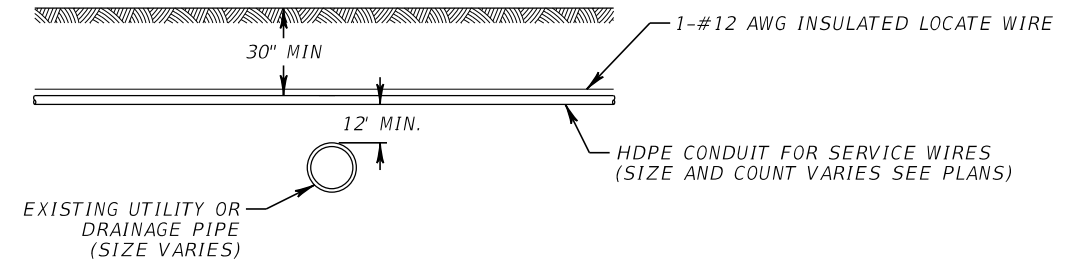
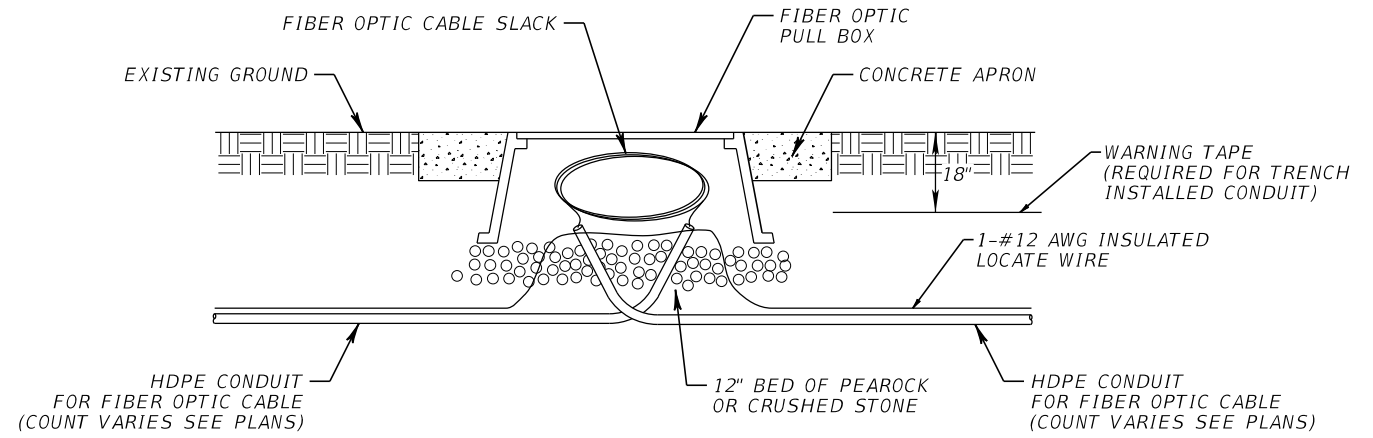
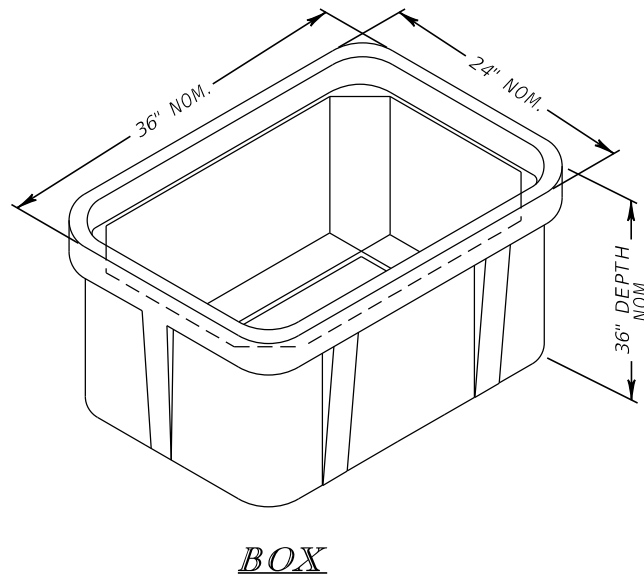
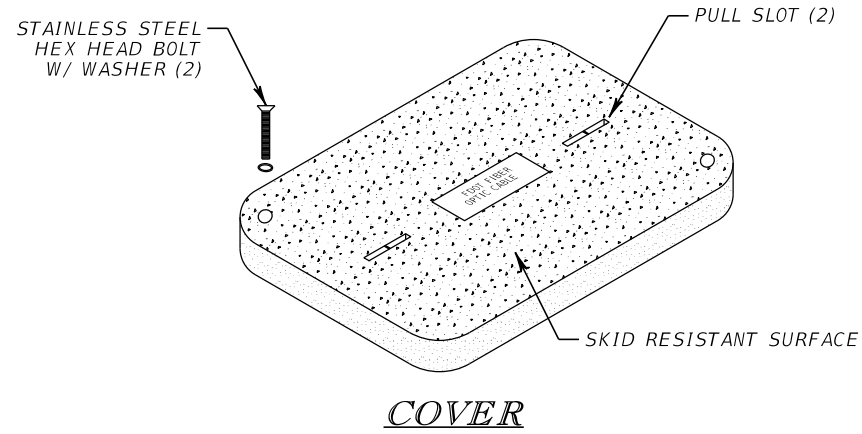
1. ELECTRICAL PULL BOX SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
3. ALL PULL BOXES, AND PULL BOX COVERS, SHALL BE NON-METALLIC.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. PULL BOX & CONDUIT DETAILS IT-69
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
						SR 429	SEMINOLE	

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FIBER OPTIC PULL BOX AND CONDUIT DETAILS

N.T.S.



NOTES:

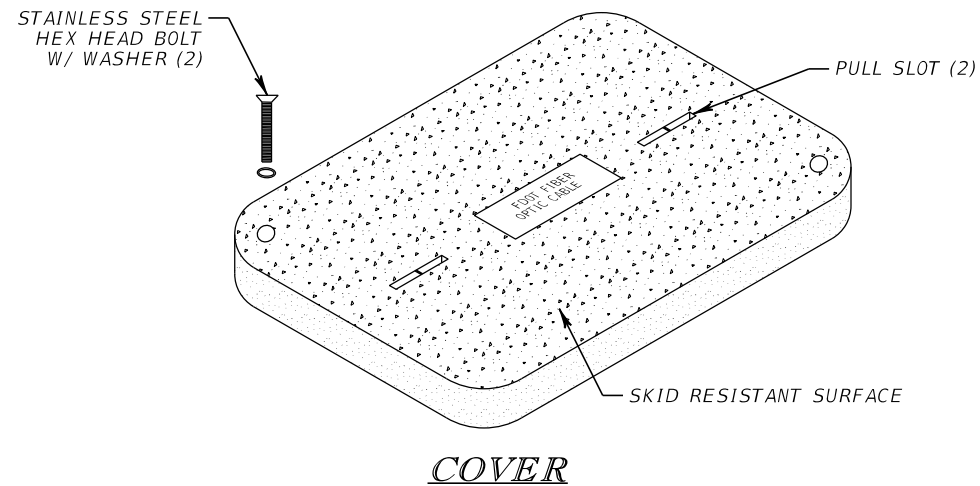
1. FIBER OPTIC PULL BOXES SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT \varnothing SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
3. SPARE FIBER OPTIC CABLE IS TO BE WOUND NEATLY AND CAREFULLY, AS NOT TO EXCEED THE MAX. BENDING RADIUS OF THE FIBER OPTIC CABLE.
4. ALL PULL BOXES, AND PULL BOX COVERS, SHALL BE NON-METALLIC.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PULL BOX & CONDUIT DETAILS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-70
						SR 429	SEMINOLE		240200-2-52-01

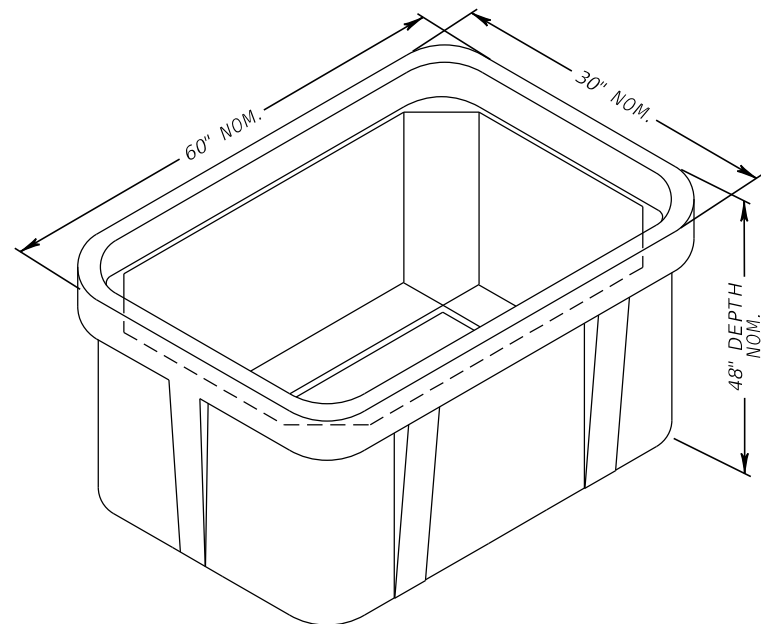
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FIBER OPTIC SPLICE BOX AND CONDUIT DETAILS

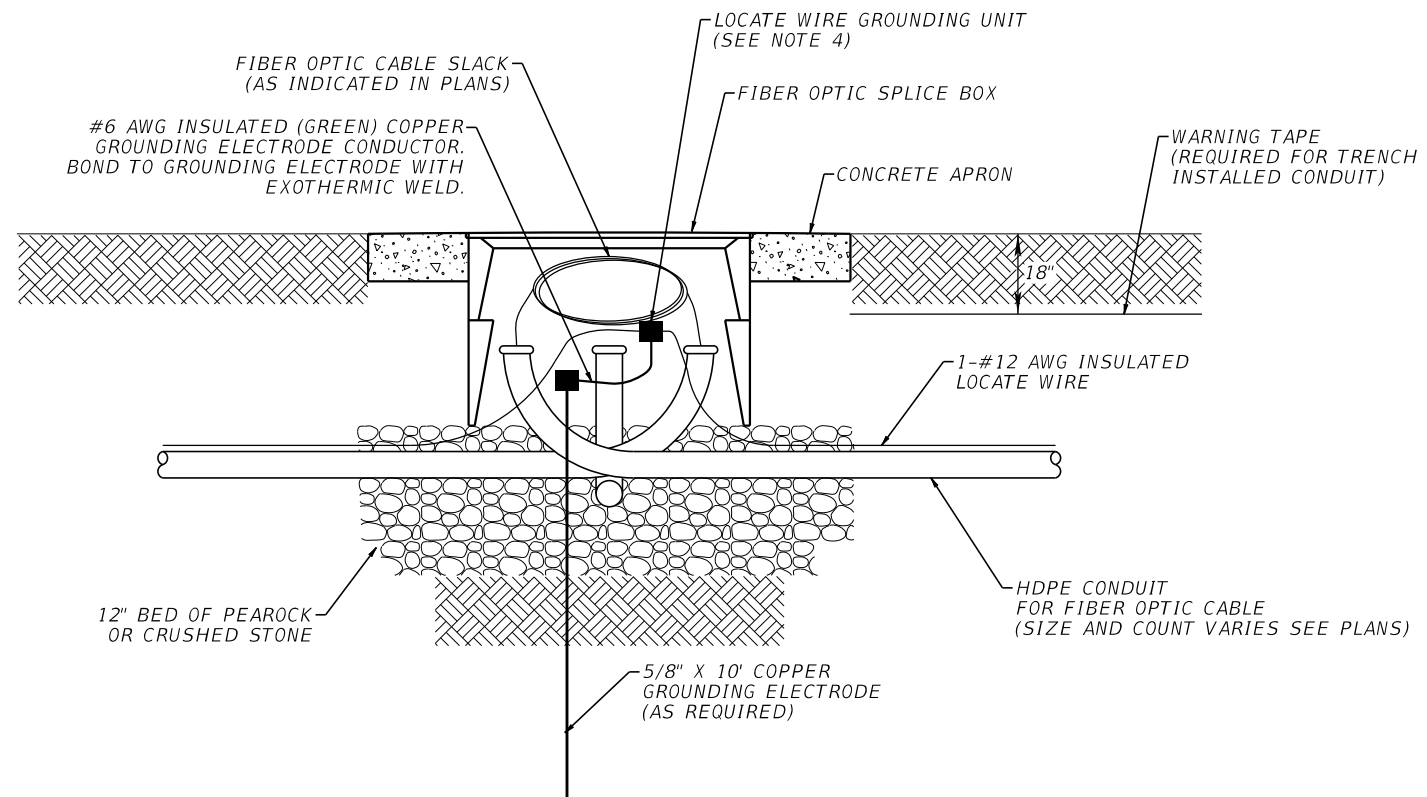
N.T.S.



COVER



BOX



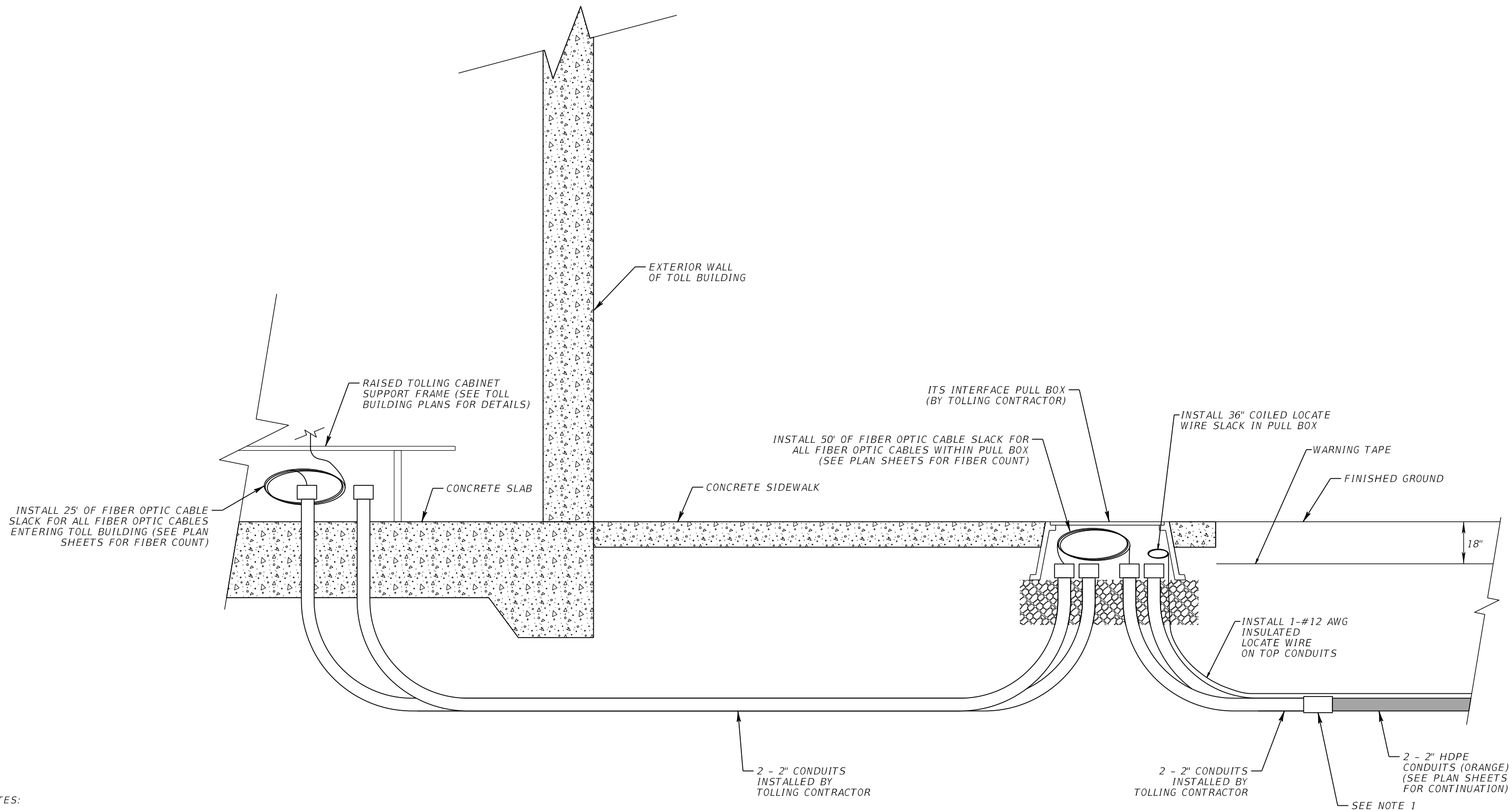
NOTES:

1. FIBER OPTIC SPLICE BOXES SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT \varnothing SHALL BE ALIGNED TO TOP EDGE OF SPLICE BOX TO FACILITATE CABLE PULLING.
3. SPARE FIBER OPTIC CABLE IS TO BE WOUND NEATLY AND CAREFULLY, AS NOT TO EXCEED THE MAXIMUM BENDING RADIUS OF THE FIBER OPTIC CABLE. NEATLY STORE ALL SPLICE ENCLOSURES WITHIN A SPLICE BOX. ATTACH THE SPLICE ENCLOSURE TO THE SPLICE BOX INTERIOR WALL TO PREVENT THE ENCLOSURE FROM LYING ON THE BOTTOM OF THE SPLICE BOX.
4. WIRE GROUNDING UNIT REQUIRED, AT A MINIMUM, WITHIN EVERY FIBER OPTIC SPLICE BOX FOR THE LENGTH OF THE PROJECT AND AT LOCATE WIRE TERMINI. MOUNT WIRE GROUNDING UNIT TO INTERIOR WALL OF FIBER OPTIC SPLICE BOX.
5. ALL SPLICE BOXES, AND SPLICE BOX COVERS, SHALL BE NON-METALLIC.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PULL BOX & CONDUIT DETAILS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-71
						SR 429	SEMINOLE		240200-2-52-01

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TYPICAL TOLLING BUILDING FIBER ENTRY & CONDUIT CONNECTION DETAIL
N.T.S.



NOTES:

1. CONNECT PROPOSED ITS CONDUITS TO STUBBED AND CAPPED CONDUITS, LEADING TO THE ITS INTERFACE PULL BOX, PROVIDED BY TOLLING CONTRACTOR WITH APPROVED CONDUIT COUPLERS. THE TOLLING CONTRACTOR WILL STUB AND CAP THE CONDUITS LEADING TO THE ITS INTERFACE PULL BOX 5' PAST THE CONCRETE SIDEWALK.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

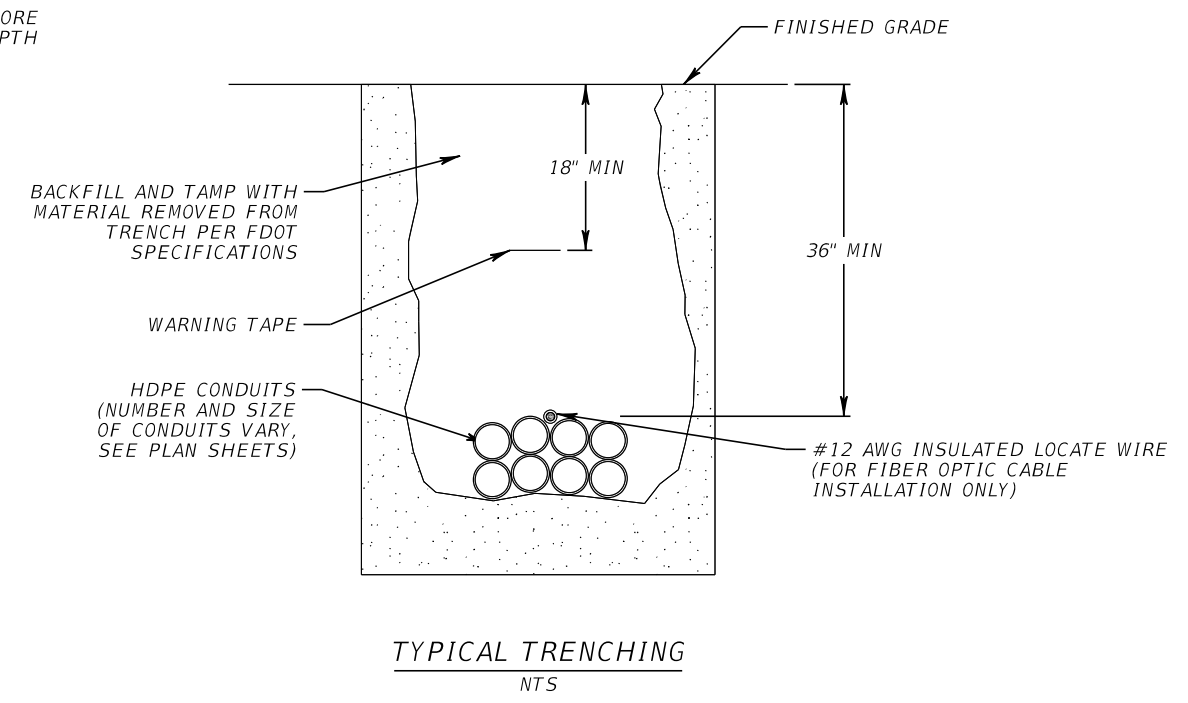
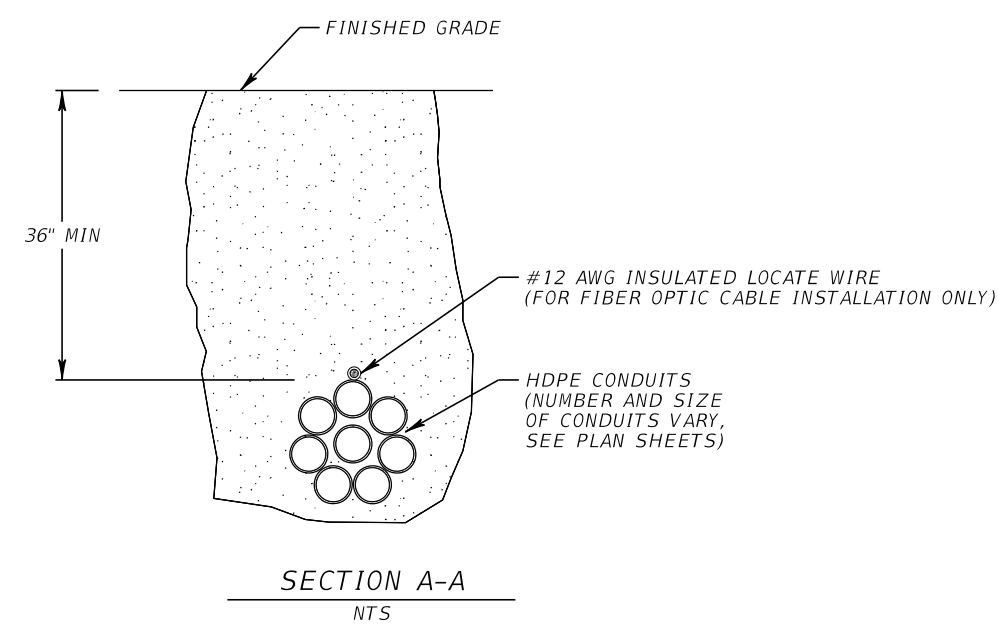
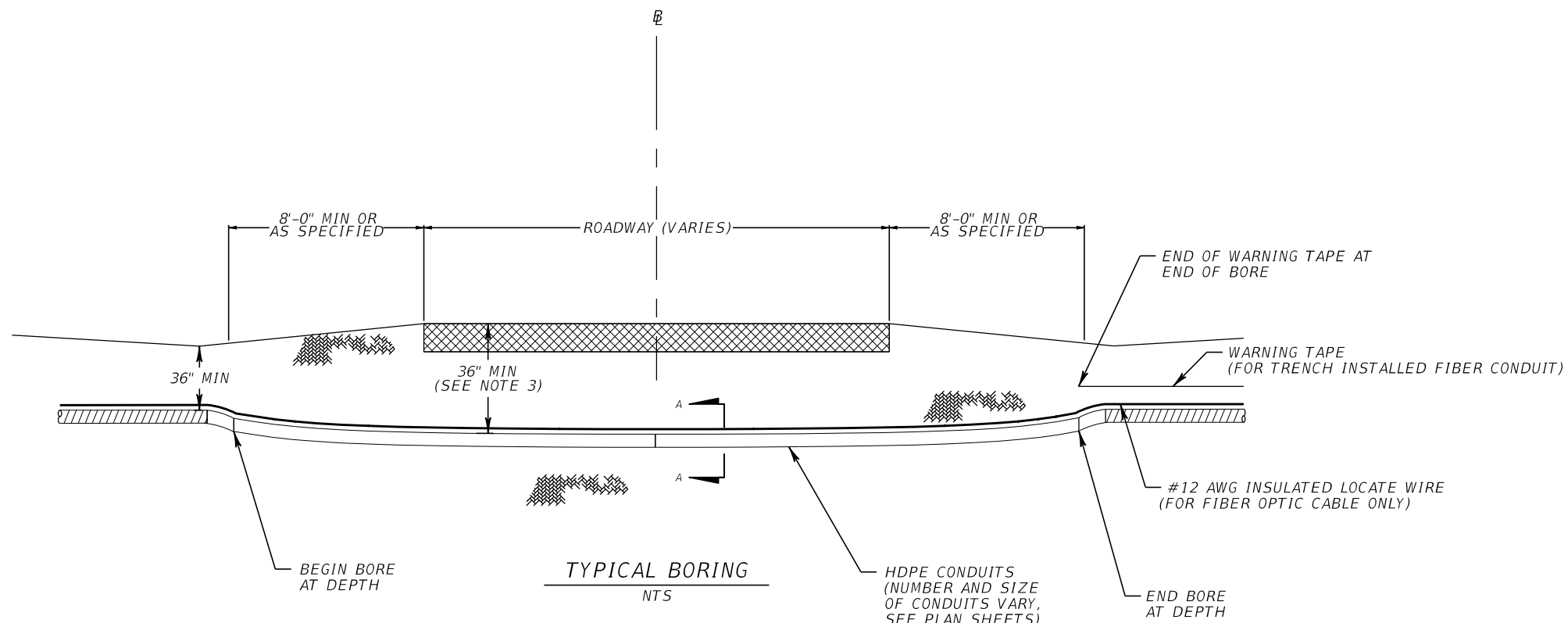
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

PULL BOX & CONDUIT DETAILS

SHEET NO.

IT-72



NOTES:

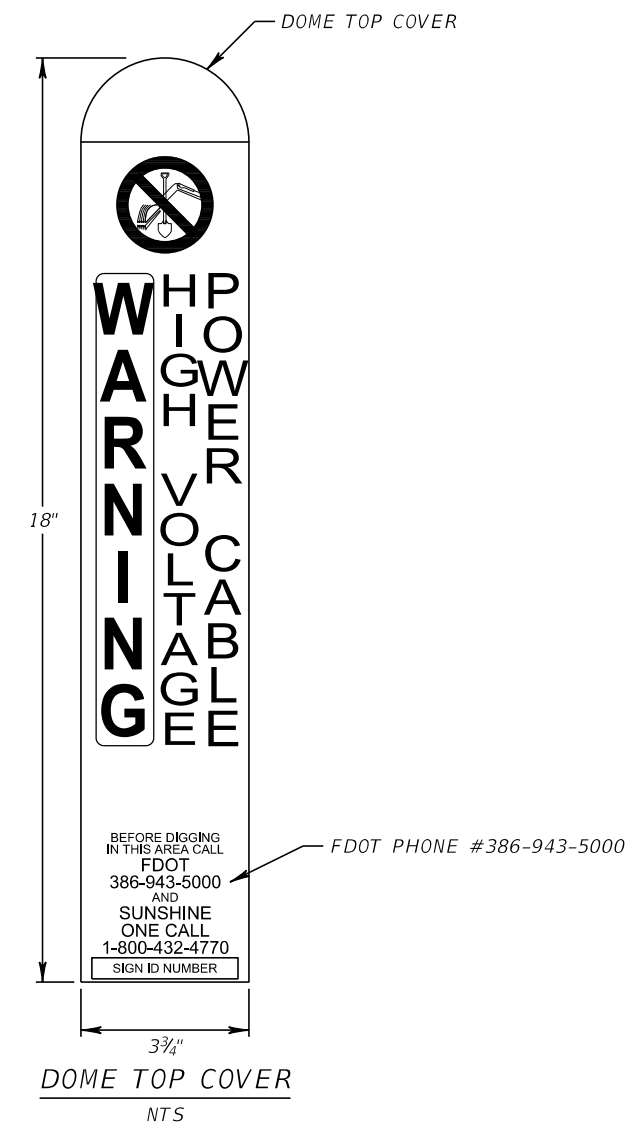
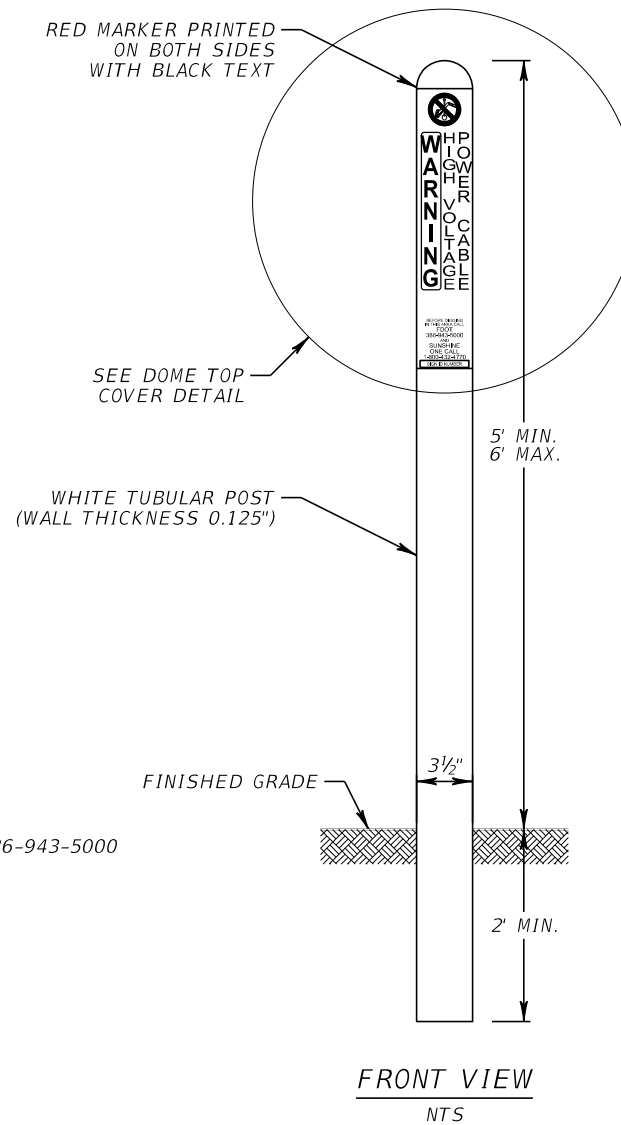
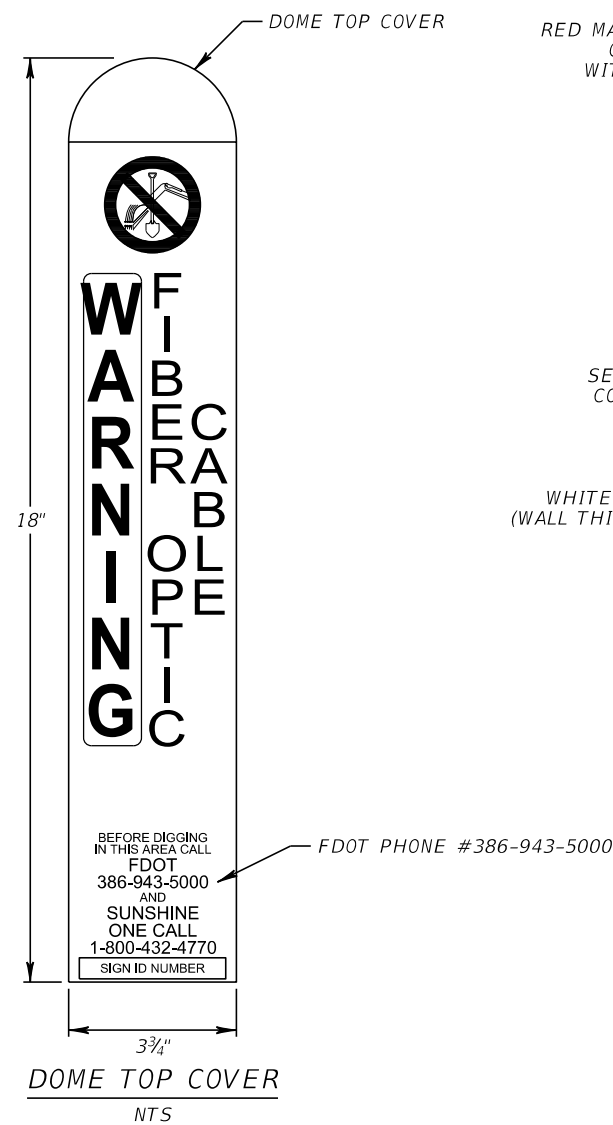
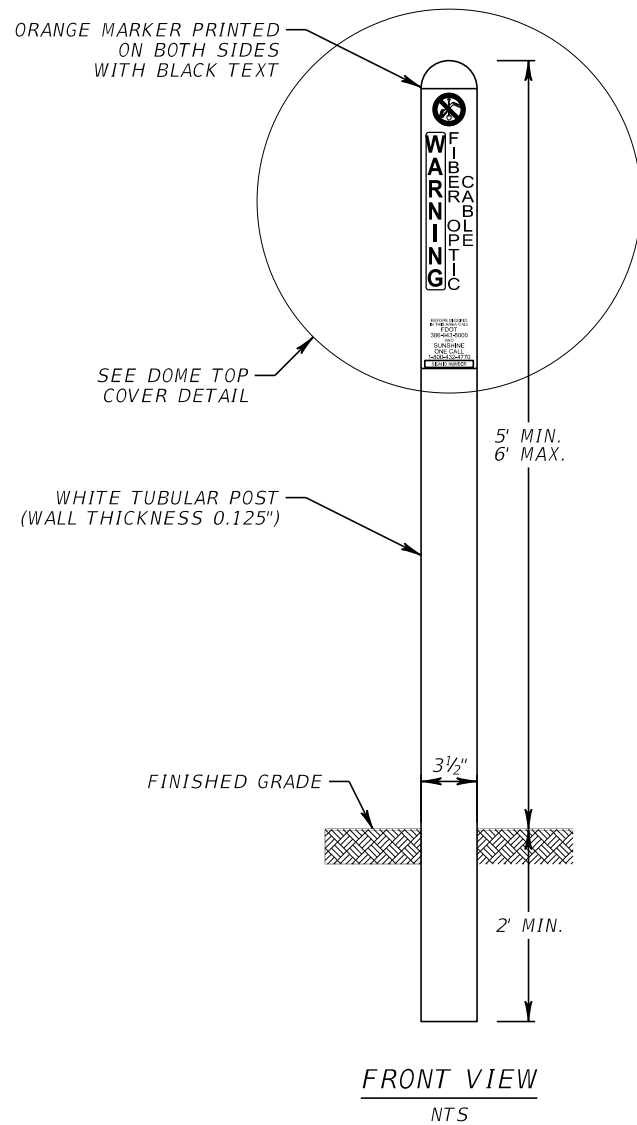
1. UTILITIES IN THE PATH OF THE BORE SHALL BE LOCATED AND THE DEPTH OF THE BORE CROSSING SHALL BE ADJUSTED TO CROSS UNDER OR OVER THE UTILITIES WITH 12" MINIMUM SEPARATION; MINIMUM DEPTH, AS INDICATED ON THIS SHEET, SHALL BE MAINTAINED.
2. MINIMUM DEPTH FOR DIRECTIONALLY BORED CONDUIT SHALL BE TEN (10) TIMES THE REAMER DIAMETER FOR REAMER SIZES GREATER THAN 8".
3. CONDUIT BUNDLE CONFIGURATION MAY VARY FROM THE TYPICAL BORING SECTION DEPICTED ON THIS SHEET. THE CONTRACTOR MAY ELECT TO INSTALL AN SDR 11 HDPE ENCASING PIPE FOR DIRECTIONAL BORED CONDUIT SECTIONS, ANY COST RELATED TO THE FURNISH AND INSTALLATION OF THE ENCASING PIPE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONDUIT BORING. THE HDPE ENCASING PIPE, IF INSTALLED, SHALL MUST MEET THE MINIMUM DEPTH REQUIREMENTS OF DIRECTIONALLY BORED CONDUITS.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			DIRECTIONAL BORE AND TRENCHING DETAIL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 429	SEMINOLE		240200-2-52-01

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FIBER OPTIC CABLE ROUTE MARKER

ELECTRICAL CABLE ROUTE MARKER



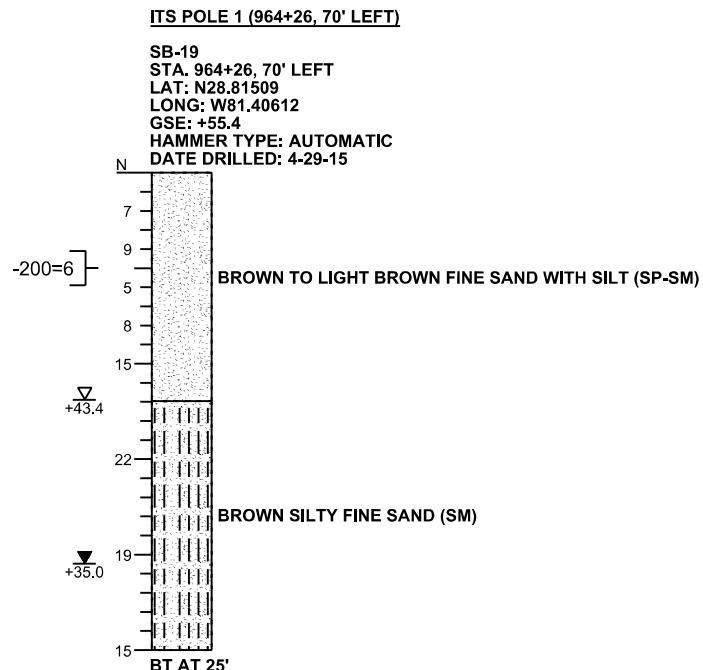
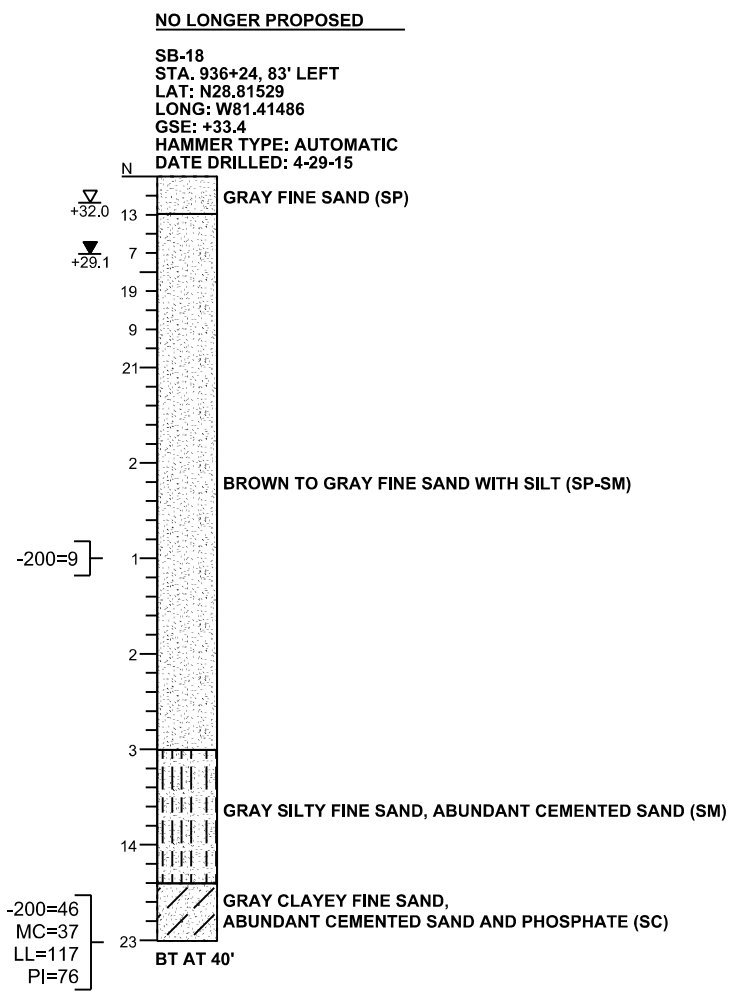
NOTES:

1. IN INSTANCES WHERE FIBER AND POWER CONDUITS ARE INSTALLED IN-LINE (ADJACENT TO OR ON TOP OF EACH OTHER), THE MARKERS SHALL ALTERNATE BETWEEN FIBER AND HIGH VOLTAGE POWER.
2. A DOME TOP COVER SHALL BE INSTALLED ON EACH MARKER: ORANGE FOR FIBER AND RED FOR POWER.
3. POST EMBEDMENT AND ANCHORING SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS.

REVISIONS				ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			ROUTE MARKER DETAILS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 429	SEMINOLE		240200-2-52-01

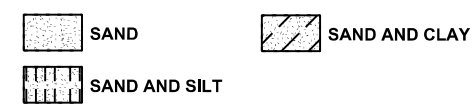
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ELEVATION (FT. NAVD88)



LEGEND

- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
- ▽ ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD88) 24 HOURS AFTER DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
- MC= PERCENT NATURAL MOISTURE CONTENT
- LL= LIQUID LIMIT
- PI= PLASTICITY INDEX



GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING SUB-METER ACCURACY GPS UNIT (TRIMBLE GEO 7X). GROUND SURFACE ELEVATIONS ESTIMATED FROM PROJECT CROSS SECTIONS. BORING LOCATIONS REFERENCE THE SR 429 CENTERLINE.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE +22 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +22 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.
 HAMMER TYPE: AUTOMATIC

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

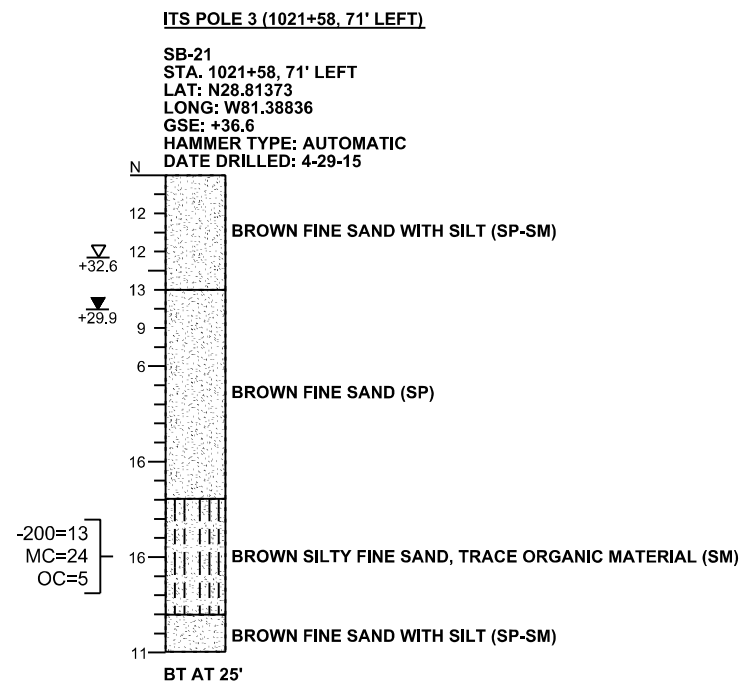
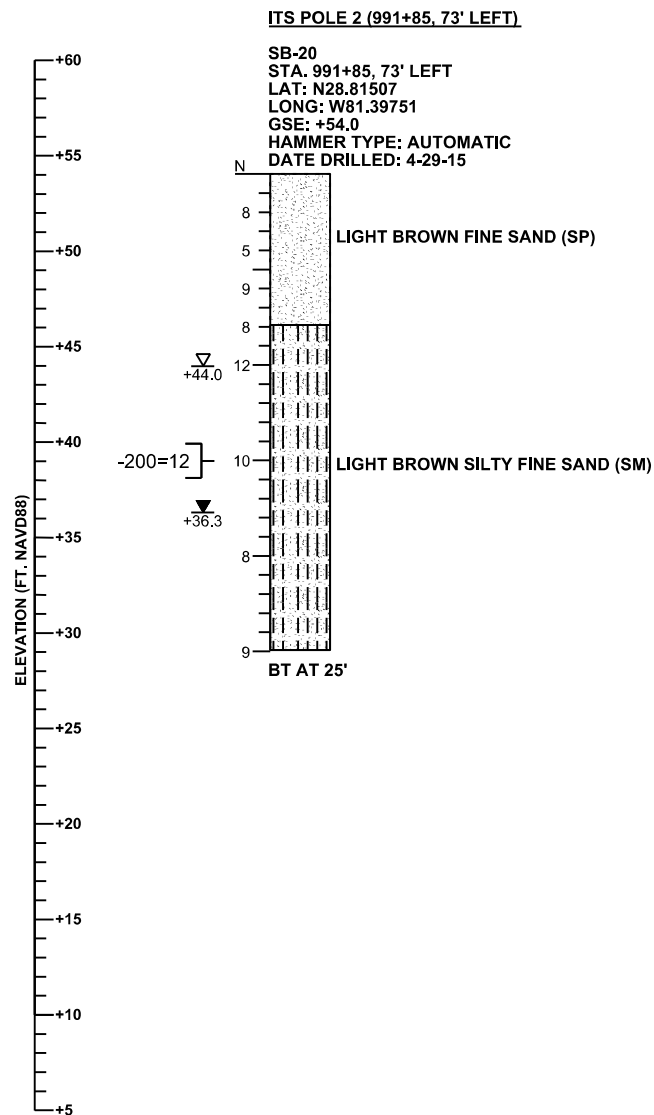
AUTOMATIC HAMMER		
GRANULAR SOILS	N VALUE (blows per foot)	RELATIVE DENSITY
SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE
AUTOMATIC HAMMER		
NON-GRANULAR SOILS	N VALUE (blows per foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
	OVER 24	HARD

SB-18 SECTION: 21 TOWNSHIP: 19 SOUTH RANGE: 29 EAST

SB-19 SECTION: 39 TOWNSHIP: 19 SOUTH RANGE: 29 EAST

REVISIONS				DANIEL C. STANFILL, P.E. P.E. LICENSE NUMBER 42763 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 919 LAKE BALDWIN LANE ORLANDO, FL 32814 CERTIFICATE OF AUTHORIZATION 00005882	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF SPT BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		GI-1

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LEGEND

- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
- ▽ ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD88) 24 HOURS AFTER DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE
- MC= PERCENT NATURAL MOISTURE CONTENT
- OC= PERCENT ORGANIC CONTENT



GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING SUB-METER ACCURACY GPS UNIT (TRIMBLE GEO 7X). GROUND SURFACE ELEVATIONS ESTIMATED FROM PROJECT CROSS SECTIONS. BORING LOCATIONS REFERENCE THE SR 429 CENTERLINE.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE +25 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +25 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.
 HAMMER TYPE: AUTOMATIC

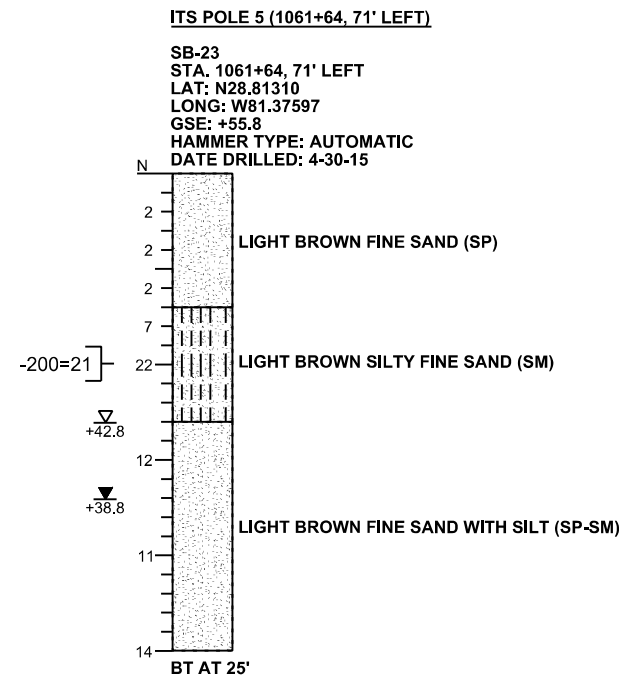
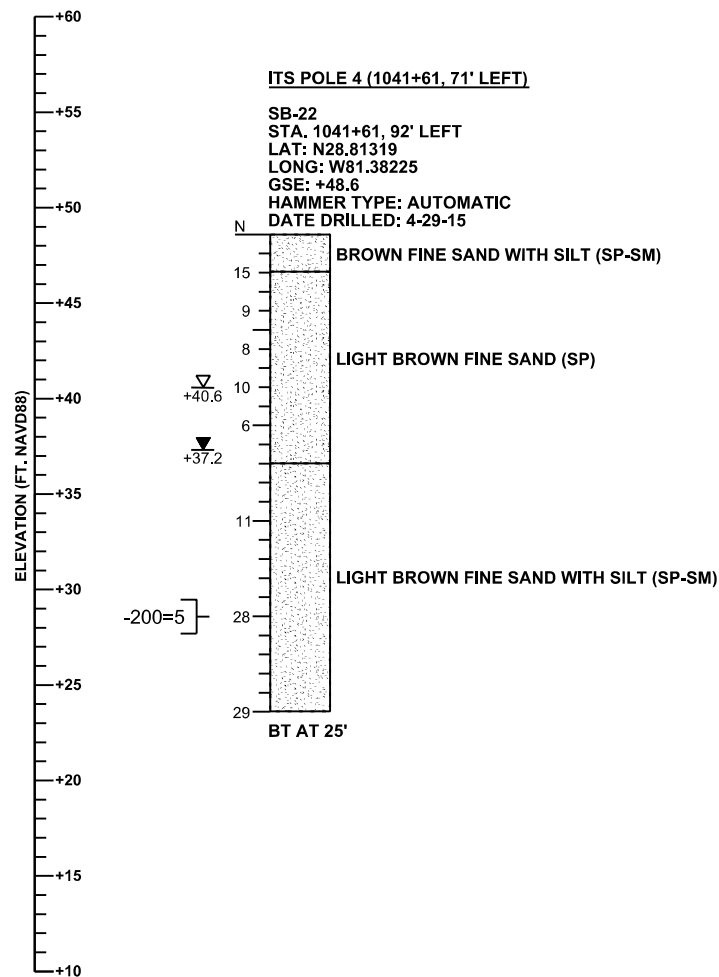
CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

GRANULAR SOILS	AUTOMATIC HAMMER N VALUE (blows per foot)	
	RELATIVE DENSITY	
SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE
NON-GRANULAR SOILS	AUTOMATIC HAMMER N VALUE (blows per foot)	
	CONSISTENCY	
	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
OVER 24	HARD	

SB-20
 SECTION: 22
 TOWNSHIP: 19 SOUTH
 RANGE: 29 EAST

SB-21
 SECTION: 26
 TOWNSHIP: 19 SOUTH
 RANGE: 29 EAST

REVISIONS				DANIEL C. STANFILL, P.E. P.E. LICENSE NUMBER 42763 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 919 LAKE BALDWIN LANE ORLANDO, FL 32814 CERTIFICATE OF AUTHORIZATION 00005882	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF SPT BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		



LEGEND

- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT.NAVD88)
- ▽+40.6
- ▽+37.2 ENCOUNTERED GROUNDWATER ELEVATION (FT.NAVD88) ON DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE

- SAND
- SAND AND SILT

GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING SUB-METER ACCURACY GPS UNIT (TRIMBLE GEO 7X). GROUND SURFACE ELEVATIONS ESTIMATED FROM PROJECT CROSS SECTIONS. BORING LOCATIONS REFERENCE THE SR 429 CENTERLINE.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE +28 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +28 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.
 HAMMER TYPE: AUTOMATIC

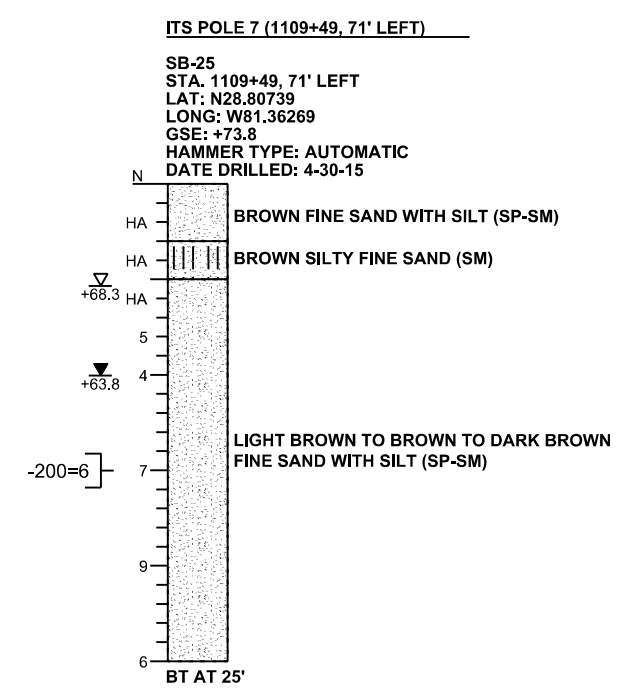
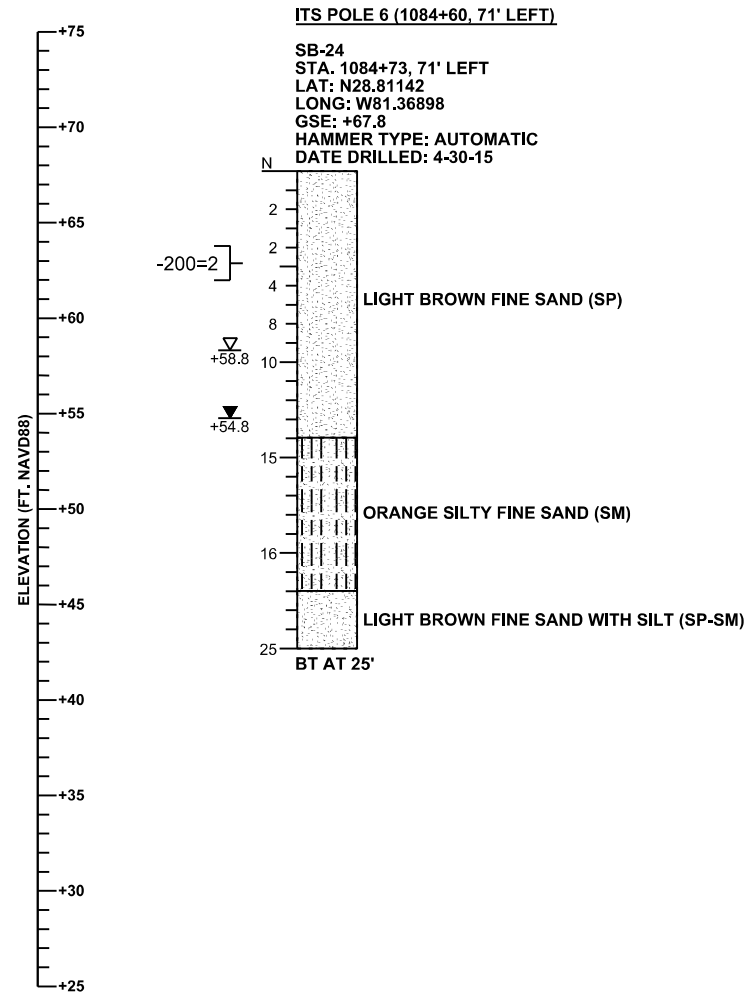
CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

AUTOMATIC HAMMER N VALUE		
GRANULAR SOILS	(blows per foot)	RELATIVE DENSITY
SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE
AUTOMATIC HAMMER N VALUE		
NON-GRANULAR SOILS	(blows per foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
	OVER 24	HARD

SB-22
 SECTION: 26
 TOWNSHIP: 19 SOUTH
 RANGE: 29 EAST

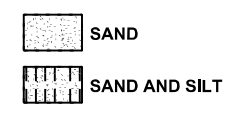
SB-23
 SECTION: 25
 TOWNSHIP: 19 SOUTH
 RANGE: 29 EAST

REVISIONS				DANIEL C. STANFILL, P.E. P.E. LICENSE NUMBER 42763 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 919 LAKE BALDWIN LANE ORLANDO, FL 32814 CERTIFICATE OF AUTHORIZATION 00005882	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF SPT BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		



LEGEND

- GSE GROUND SURFACE ELEVATION (FT. NAVD88)
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- HA HAND AUGERED FOR UTILITY CLEARANCE
- ▽ ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION (FT. NAVD88)
- ▽ ENCOUNTERED GROUNDWATER ELEVATION (FT. NAVD88) ON DATE DRILLED
- BT BORING TERMINATED AT DEPTH INDICATED
- 200= PERCENT PASSING NO. 200 U.S. STANDARD SIEVE



GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING SUB-METER ACCURACY GPS UNIT (TRIMBLE GEO 7X). GROUND SURFACE ELEVATIONS ESTIMATED FROM PROJECT CROSS SECTIONS. BORING LOCATIONS REFERENCE THE SR 429 CENTERLINE.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE +30 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +30 FT. NAVD88.

SPLIT SPOON SAMPLER:
 INSIDE DIAMETER: 1.375 IN.
 OUTSIDE DIAMETER: 2.0 IN.
 AVERAGE HAMMER DROP: 30 IN.
 HAMMER WEIGHT: 140 LBS.
 HAMMER TYPE: AUTOMATIC

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

AUTOMATIC HAMMER		
GRANULAR SOILS	N VALUE (blows per foot)	RELATIVE DENSITY
SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE
AUTOMATIC HAMMER		
NON-GRANULAR SOILS	N VALUE (blows per foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
	OVER 24	HARD

SB-24
 SECTION: 25
 TOWNSHIP: 19 SOUTH
 RANGE: 29 EAST

SB-25
 SECTION: 30
 TOWNSHIP: 19 SOUTH
 RANGE: 30 EAST

REVISIONS				DANIEL C. STANFILL, P.E. P.E. LICENSE NUMBER 42763 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 919 LAKE BALDWIN LANE ORLANDO, FL 32814 CERTIFICATE OF AUTHORIZATION 00005882	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF SPT BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 429	SEMINOLE	240200-2-52-01		GI-4

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