

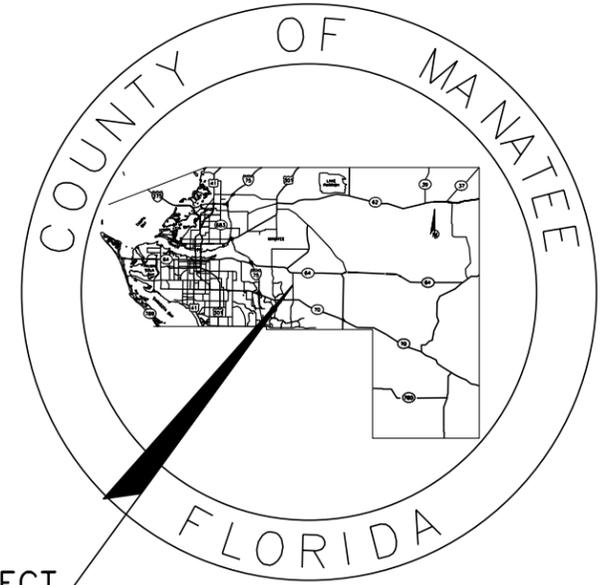
**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

MANATEE COUNTY
PROJECT NUMBER 6107660
LORRAINE ROAD

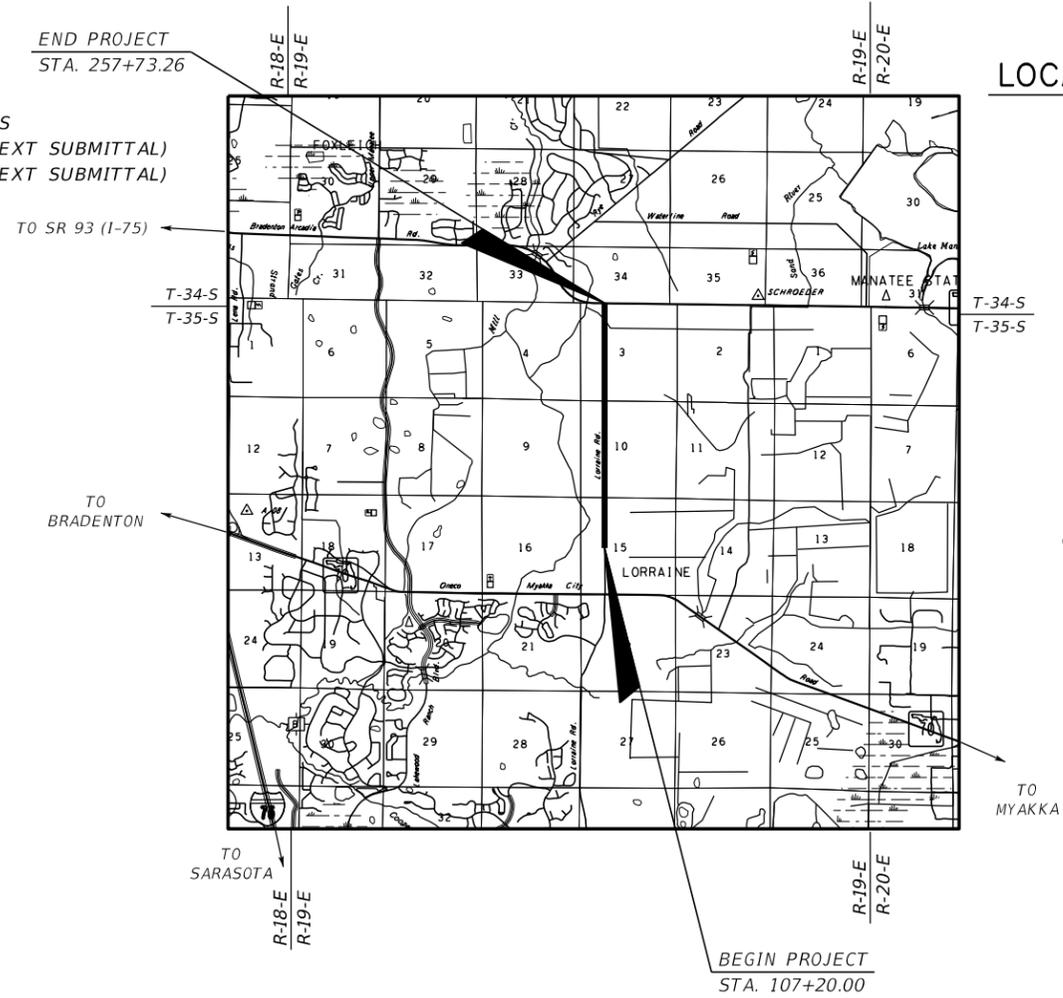
FROM SOUTH OF 59TH CIRCLE/AVE EAST TO SR64 ROUNDABOUT

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-6	TABULATION OF QUANTITIES
T-7	GENERAL NOTES
T-8	PAY ITEM NOTES
T-9 - T-11	SIGNALIZATION PLAN
T-12 - T-33	INTERCONNECT PLAN
T-34	GUIDE SIGN WORKSHEET
T-35 - T-39	SPLICING DIAGRAM
T-40	CABINET, CCTV, MVDS AND BLUETOOTH DETAILS
T-41 - T-42	MAST ARM TABULATION (TO BE INCLUDED IN NEXT SUBMITTAL)
T-43	MAST ARM DATA TABLE (TO BE INCLUDED IN NEXT SUBMITTAL)



LOCATION OF PROJECT

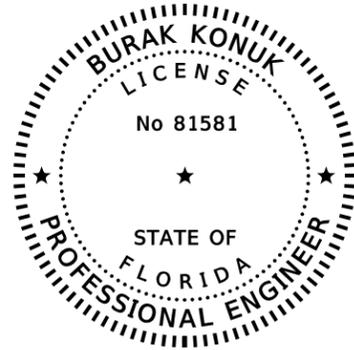
**DRAFT
60% SUBMITTAL
11/2022**



**SIGNALIZATION PLANS
ENGINEER OF RECORD:**
BURAK KONUK, P.E.
P.E. NO.: 81581
HDR ENGINEERING, INC.
4830 W. KENNEDY BLVD., SUITE 400
TAMPA, FL 33609-2548
VENDOR NO. 47-0680568

MANATEE CO. PROJECT MANAGER:
ANTHONY RUSSO, P.E.

FISCAL YEAR	SHEET NO.
22	T-1



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

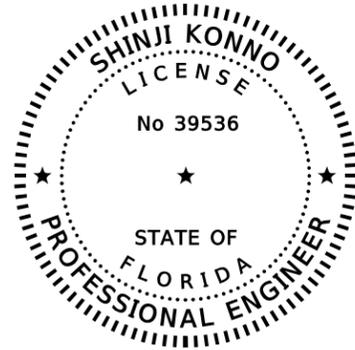
ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HDR ENGINEERING, INC.
4830 W. KENNEDY BLVD., SUITE 400
TAMPA, FLORIDA 33609-2548
BURAK KONUK, P.E. NO. 81581

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

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3 - T-6	TABULATION OF QUANTITIES
T-7	GENERAL NOTES
T-8	PAY ITEM NOTES
T-9 - T-11	SIGNALIZATION PLAN
T-12 - T-33	INTERCONNECT PLAN
T-34	GUIDE SIGN WORKSHEET
T-35 - T-39	SPLICING DIAGRAM
T-40	CABINET, CCTV, MVDS AND BLUETOOTH DETAILS
T-41 - T-42	MAST ARM TABULATION (TO BE INCLUDED IN NEXT SUBMITTAL)



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HDR ENGINEERING, INC.
4830 W. KENNEDY BLVD., SUITE 400
TAMPA, FLORIDA 33609-2548
SHINJI KONNO, P.E. NO. 39536

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

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-43	MAST ARM DATA TABLE (TO BE INCLUDED IN NEXT SUBMITTAL)

		SCALE	AS NOTED	<p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>	DATE	11/2022	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER	BURAK KONUK	<p><i>SIGNATURE SHEET</i></p>	SHEET NO.	T-2
		DESIGNED BY	BK		PROJECT NO.	6107660		FL. LICENSE NO.	81581			
		DRAWN BY	JP									
		CHECKED BY	MO									
No.	REVISIONS		DATE	BY								

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-16		T-17		T-18		T-19		T-20		T-21		T-22		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL				
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	520		610		610		600		550		615		490		3995			
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	195		120		105		115		180		100		215		1030			
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNT	LF														0				
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI														0				
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF														0				
633-1-124	FIBER OPTIC CABLE, F&I, UNDERGROUND, 97 - 144 FIBERS	LF	1530		1560		1530		1530		1560		1530		1510		10750			
633-1-420	FIBER OPTIC CABLE, RELOCATE, UNDERGROUND	LF														0				
633-1-620	FIBER OPTIC CABLE, REMOVE, UNDERGROUND	LF	1460		1460		1460		1460		1460		1460		1460		10220			
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA														0				
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA														0				
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA														0				
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL	EA														0				
633-3-41	FIBER OPTIC CONNECTION HARDWARE, RELOCATE SPLICE ENCLOSURE	EA														0				
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA														0				
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA														0				
633-3-55	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY PATCH PANEL, PRETERMINATED	EA														0				
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA														0				
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	1		1		1		1		1		1		1		7			
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA														0				
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA														0				
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS														0				
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF														0				
639-4-6	EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY	EA														0				
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA														0				
646-1-11	ALUMINUM SIGNALS POLE, FURNISH AND INSTALL, PEDESTAL	EA														0				
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA														0				
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA														0				
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA														0				
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA														0				
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS														0				
650-1-16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS														0				
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS														0				
650-1-70	VEHICULAR TRAFFIC SIGNAL, RELOCATE- INCLUDES REMOVAL AND REINSTALLATION	AS														0				
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS														0				
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA														0				
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA														0				
660-3-42	VEHICLE DETECTION SYSTEM - MICROWAVE, RELOCATE, ABOVE GROUND EQUIPMENT	EA														0				
660-3-52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA														0				
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA														0				
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA														0				
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA														0				
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS														0				
670-5-500	TRAFFIC CONTROLLER ASSEMBLY, RELOCATE CONTROLLER WITH CABINET	AS														0				
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA														0				
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA														0				
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION	EA														0				
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA														0				
700-3-501	SIGN PANEL, RELOCATE, UP TO 12 SF	EA														0				
700-3-502	SIGN PANEL, RELOCATE, 12-20 SF	EA														0				
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA														0				
700-11-391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT - AC POWERED, BLANK OUT SIGN, UP TO 12 SF	AS														0				
700-11-500	ELECTRONIC DISPLAY SIGN, RELOCATE	AS														0				

** QUANTITIES BY SHEET WILL BE INCLUDED IN THE NEXT SUBMITTAL.

SCALE AS NOTED		 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE 11/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER BURAK KONUK	TABULATION OF QUANTITIES (2)	SHEET NO.
DESIGNED BY BK			PROJECT NO. 6107660		FL. LICENSE NO. 81581		T-4
DRAWN BY JP							
CHECKED BY MO							
No.	REVISIONS	DATE	BY				

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		GRAND TOTAL	
			T-9		T-10		T-11		T-12		T-13		T-14		T-15		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	245		235		175		160		560		680		575		2630			
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	345		120		155				35		35		300		990			
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNT	LF															0			
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1		1		1										3			
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF									100						100			
633-1-124	FIBER OPTIC CABLE, F&I, UNDERGROUND, 97 - 144 FIBERS	LF									2480		1530		2030		6040			
633-1-420	FIBER OPTIC CABLE, RELOCATE, UNDERGROUND	LF							480		135				310		925			
633-1-620	FIBER OPTIC CABLE, REMOVE, UNDERGROUND	LF									1460		1460		1460		4380			
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA									292				4		296			
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA									3						3			
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA									25				1		26			
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL	EA	1		1		1										3			
633-3-41	FIBER OPTIC CONNECTION HARDWARE, RELOCATE SPLICE ENCLOSURE	EA													1		1			
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA															0			
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA															0			
633-3-55	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY PATCH PANEL, PRETERMINATED	EA													1		1			
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA	12		13		13										38			
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA									1		1		3		5			
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA									2				1		3			
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA															0			
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1		1		1										3			
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	200		200		200										600			
639-4-6	EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY	EA	1		1		1										3			
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA	1														1			
646-1-11	ALUMINUM SIGNALS POLE, FURNISH AND INSTALL, PEDESTAL	EA	8		8		8										24			
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA			8		8										16			
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA	1														1			
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	1														1			
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA	2														2			
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	7		2		2										11			
650-1-16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS	3														3			
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS	1														1			
650-1-70	VEHICULAR TRAFFIC SIGNAL, RELOCATE- INCLUDES REMOVAL AND REINSTALLATION	AS			8		8										16			
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	8		8		8										24			
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	1														1			
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	6														6			
660-3-42	VEHICLE DETECTION SYSTEM - MICROWAVE, RELOCATE, ABOVE GROUND EQUIPMENT	EA			4		4										8			
660-3-52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA			4		4										8			
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA	1														1			
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1														1			
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	8		8		8										24			
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1														1			
670-5-500	TRAFFIC CONTROLLER ASSEMBLY, RELOCATE CONTROLLER WITH CABINET	AS			1		1										2			
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA	1														1			
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1														1			
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION	EA	1														1			
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA	3														3			
700-3-501	SIGN PANEL, RELOCATE, UP TO 12 SF	EA			2		2										4			
700-3-502	SIGN PANEL, RELOCATE, 12-20 SF	EA			2		2										4			
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	4														4			
700-11-391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT - AC POWERED, BLANK OUT SIGN, UP TO 12 SF	AS	4														4			
700-11-500	ELECTRONIC DISPLAY SIGN, RELOCATE	AS			2		2										4			

** QUANTITIES BY SHEET WILL BE INCLUDED IN THE NEXT SUBMITTAL.

SCALE AS NOTED		 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK FL. LICENSE NO. 81581	SHEET NO. T-3
DESIGNED BY BK			11/2022		PROJECT NO. 6107660		
DRAWN BY JP							
CHECKED BY MO							
No.	REVISIONS	DATE	BY				

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		GRAND TOTAL	
			T-23		T-24		T-25		T-26		T-27		T-28		T-29		PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	560		705		570		585		580		530		590		4120			
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	295					140		140		190		140		905				
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNT	LF					145									145				
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI														0				
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF														0				
633-1-124	FIBER OPTIC CABLE, F&I, UNDERGROUND, 97 - 144 FIBERS	LF	1930		1510		1730		1550		1540		1540		1560		11360			
633-1-420	FIBER OPTIC CABLE, RELOCATE, UNDERGROUND	LF	290													290				
633-1-620	FIBER OPTIC CABLE, REMOVE, UNDERGROUND	LF	1100		730		730		730		730		730		730		5480			
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	4													4				
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA														0				
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA	1													1				
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL	EA														0				
633-3-41	FIBER OPTIC CONNECTION HARDWARE, RELOCATE SPLICE ENCLOSURE	EA	1													1				
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA														0				
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA														0				
633-3-55	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY PATCH PANEL, PRETERMINATED	EA	1													1				
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA														0				
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	2		1		1		1		1		1		1		8			
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA	1													1				
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA					2									2				
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS														0				
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF														0				
639-4-6	EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY	EA														0				
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA														0				
646-1-11	ALUMINUM SIGNALS POLE, FURNISH AND INSTALL, PEDESTAL	EA														0				
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA														0				
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA														0				
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA														0				
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA														0				
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS														0				
650-1-16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS														0				
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS														0				
650-1-70	VEHICULAR TRAFFIC SIGNAL, RELOCATE- INCLUDES REMOVAL AND REINSTALLATION	AS														0				
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS														0				
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA														0				
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA														0				
660-3-42	VEHICLE DETECTION SYSTEM - MICROWAVE, RELOCATE, ABOVE GROUND EQUIPMENT	EA														0				
660-3-52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA														0				
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA														0				
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA														0				
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA														0				
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS														0				
670-5-500	TRAFFIC CONTROLLER ASSEMBLY, RELOCATE CONTROLLER WITH CABINET	AS														0				
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA														0				
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA														0				
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION	EA														0				
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA														0				
700-3-501	SIGN PANEL, RELOCATE, UP TO 12 SF	EA														0				
700-3-502	SIGN PANEL, RELOCATE, 12-20 SF	EA														0				
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA														0				
700-11-391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT - AC POWERED, BLANK OUT SIGN, UP TO 12 SF	AS														0				
700-11-500	ELECTRONIC DISPLAY SIGN, RELOCATE	AS														0				

** QUANTITIES BY SHEET WILL BE INCLUDED IN THE NEXT SUBMITTAL.

SCALE AS NOTED		 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE 11/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER BURAK KONUK	TABULATION OF QUANTITIES (3)	SHEET NO. T-5
DESIGNED BY BK			PROJECT NO. 6107660		FL. LICENSE NO. 81581		
DRAWN BY JP							
CHECKED BY MO							
No.	REVISIONS	DATE	BY				

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		GRAND TOTAL	
			T-30		T-31		T-32		T-33											
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	705		545		600		460								2310		13055	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF			165		100		70								335		3260	
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNT	LF					20										20		165	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI															0		3	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF															0		100	
633-1-124	FIBER OPTIC CABLE, F&I, UNDERGROUND, 97 - 144 FIBERS	LF	1510		1520		1740		1160								5930		34080	
633-1-420	FIBER OPTIC CABLE, RELOCATE, UNDERGROUND	LF															0		1215	
633-1-620	FIBER OPTIC CABLE, REMOVE, UNDERGROUND	LF	730		730		730		520								2710		22790	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA							144								144		444	
633-3-11	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA															0		3	
633-3-12	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA															0		27	
633-3-15	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED PATCH PANEL	EA															0		3	
633-3-41	FIBER OPTIC CONNECTION HARDWARE, RELOCATE SPLICE ENCLOSURE	EA															0		2	
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA							1								1		1	
633-3-52	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE TRAY	EA							12								12		12	
633-3-55	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY PATCH PANEL, PRETERMINATED	EA															0		2	
635-2-11	PULL & SPLICE BOX, F&I, 17" x 30" COVER SIZE	EA															0		38	
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE	EA	1		1		1		1								4		24	
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" RECTANGULAR OR 36" ROUND COVER SIZE	EA															0		4	
635-3-13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	EA						2									2		4	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS															0		3	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF															0		600	
639-4-6	EMERGENCY GENERATOR - PORTABLE, INSTALL HOUSING ONLY	EA															0		3	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA															0		1	
646-1-11	ALUMINUM SIGNALS POLE, FURNISH AND INSTALL, PEDESTAL	EA															0		24	
646-1-60	ALUMINUM SIGNALS POLE, REMOVE	EA															0		16	
649-21-3	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 40'	EA															0		1	
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA															0		1	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA															0		2	
650-1-14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS															0		11	
650-1-16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS															0		3	
650-1-19	VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 5 SECTION CLUSTER, 1 WAY	AS															0		1	
650-1-70	VEHICULAR TRAFFIC SIGNAL, RELOCATE- INCLUDES REMOVAL AND REINSTALLATION	AS															0		16	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS															0		24	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA															0		1	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA															0		6	
660-3-42	VEHICLE DETECTION SYSTEM - MICROWAVE, RELOCATE, ABOVE GROUND EQUIPMENT	EA															0		8	
660-3-52	VEHICLE DETECTION SYSTEM - MICROWAVE, ADJUST & MODIFY, ABOVE GROUND EQUIPMENT	EA															0		8	
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA															0		1	
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA															0		1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA															0		24	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS															0		1	
670-5-500	TRAFFIC CONTROLLER ASSEMBLY, RELOCATE CONTROLLER WITH CABINET	AS															0		2	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA															0		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA															0		1	
685-1-12	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, ONLINE/DOUBLE CONVERSION	EA															0		1	
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA															0		3	
700-3-501	SIGN PANEL, RELOCATE, UP TO 12 SF	EA															0		4	
700-3-502	SIGN PANEL, RELOCATE, 12-20 SF	EA															0		4	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA															0		4	
700-11-391	ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT - AC POWERED, BLANK OUT SIGN, UP TO 12 SF	AS															0		4	
700-11-500	ELECTRONIC DISPLAY SIGN, RELOCATE	AS															0		4	

** QUANTITIES BY SHEET WILL BE INCLUDED IN THE NEXT SUBMITTAL.

SCALE AS NOTED		 <p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>	DATE 11/2022	 <p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER BURAK KONUK	<p>TABULATION OF QUANTITIES (4)</p>	SHEET NO. T-6
DESIGNED BY BK			PROJECT NO. 6107660		FL. LICENSE NO. 81581		
DRAWN BY JP							
CHECKED BY MO							
No.	REVISIONS	DATE	BY				

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PAY ITEM NOTES

1. 630-2-11 & 630-2-12:
CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE NOTED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.

#14 XHHW PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE.

ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS, JACK & BORE SLEEVES, AND DIRECTIONAL BORE CONDUITS, ALL UNDERGROUND AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE SPECIFIED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.

FOUR SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL MAST ARMS. THE SPARE CONDUIT SHALL BE CAPPED IN THE NEAREST PULL BOX. THERE SHALL BE A MINIMUM OF FOUR RUNS OF 2" CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET & THE CONTROLLER CABINET, ITSELF.
2. 632-7-1:
USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLES FOR SIGNAL HEADS AND PEDESTRIAN HEADS.

EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES THE LEFT TURN MOVEMENT WHICH SHALL HAVE CONDUCTORS AVAILABLE FOR EITHER PROTECTED OR PERMISSIVE MOVEMENTS. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH THE MANATEE COUNTY BEFORE ORDERING, AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE AND F.D.O.T. SPECIFICATIONS. THERE SHALL BE ONE NEUTRAL PER APPROACH. THIS PAY ITEM INCLUDES FURNISHING AND INSTALLING THE REQUIRED CABLING FOR THE PROPOSED PEDESTRIAN SIGNAL ASSEMBLIES. ALL PEDESTRIAN DETECTORS SHALL BE WIRED USING SEPARATE CABLE UTILIZING LOW VOLTAGE CONDUIT AND PULL BOXES.
3. 635-2-11 & 635-2-12:
PULL BOXES SHALL BE TRAFFIC BEARING, ALL POLYMER CONSTRUCTION (NOT CONCRETE), PULL BOXES AND LIDS (QUAZITE OR ANOTHER EQUIVALENT FDOT APPROVED MANUFACTURER). PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT.

STANDARD PULL BOX DIMENSIONS SHALL BE 17" X 30" X 12" AND THE LID SHALL BE STAMPED "MANATEE COUNTY TRAFFIC SIGNAL" ON THE COVER. STANDARD FIBER OPTIC COMMUNICATIONS PULL BOX DIMENSIONS SHALL BE 24" X 36" X 24" AND THE LID SHALL BE STAMPED "MANATEE COUNTY COMMUNICATIONS" ON THE COVER.
4. 639-1-122:
THIS PAY ITEM SHALL INCLUDE THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION. ANY CHARGES BY FPL (FLORIDA POWER AND LIGHT) TO BE ON SITE TO DE-ENERGIZE ELECTRIC SERVICE LINES AND MONITOR WORK WHILE LINES ARE REROUTED ONTO THE NEW SERVICE POLE WILL BE INCLUDED UNDER THIS PAY ITEM.

THIS PAY ITEM INCLUDES METER BASE AND SERVICE DISCONNECT. ELECTRICAL SERVICE DISCONNECT SHALL BE COMPRISED OF SIX (6) CIRCUIT DISCONNECT BOX WITH THREE CIRCUIT BREAKERS - ONE 15 AMP FOR INTERNALLY ILLUMINATED STREET NAME SIGNS, ONE 15 AMP FOR FUTURE USE AND ONE 60 AMP FOR CONTROLLER CABINET MAIN BREAKER. ONE 15 AMP BREAKER FOR INTERNALLY ILLUMINATED SIGNS, ONE SIGNAL BREAKER AND SURGE SUPPRESSION BREAKER (FUTURE USE) SHOULD BE INSTALLED.
5. 639-4-6:
MANATEE COUNTY WILL NOT FURNISH THIS ITEM. THE CONTRACTOR SHALL FURNISH AND INSTALL THE HOUSING AND FOUNDATION / PAD. ALL COSTS FOR THE HOUSING FOUNDATION / PAD IS INCLUDED IN THE COST OF THIS PAY ITEM. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY TO OBTAIN THE DESIRED HOUSING DIMENSIONS.
6. 649-21-3, 649-21-6 & 649-21-10:
THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL ELEVATIONS PRIOR TO ORDERING MAST ARM ASSEMBLIES.

USE THREE 2" AND ONE 3/4" CONDUIT STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEALED.

THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLES. SUCH WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE INSTALLATION OF SIGNAL CABLE, INSTALLATION OF MAST ARM FOUNDATIONS OR POLES.

7. 650-1-14, 650-1-16 & 650-1-19:
USE SIGNAL HEAD SUPPORTING HANGER THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5'.

ALL SIGNAL HEADS SHALL HAVE ALUMINUM LOUVERED BACKPLATES INSTALLED. BACKPLATES SHALL BE MANUFACTURED FOR THE SIGNAL HEADS USED & INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. THE BACKPLATE SHALL HAVE A 2" YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER UNLESS SPECIFIED OTHERWISE IN THE PLANS.

THE EXTERNAL COLOR OF SIGNAL HOUSING SHALL BE BLACK. ALL TRAFFIC SIGNAL HEAD INDICATIONS SHALL BE 12" LED. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS. THE COST FOR THE TUNNEL VISORS SHALL BE INCLUDED UNDER THIS PAY ITEM.
8. 653-1-11:
PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, LED COUNTDOWN TYPE. USE LOCKING COLLARS FOR MOUNTING PEDESTRIAN SIGNAL HEADS TO PEDESTRIAN PEDESTALS. USE BREAKAWAY ALUMINUM SQUARE BASE WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS.
9. 660-3-11:
SHALL INCLUDE ALL NECESSARY WAVETRONIX CLICKS UNITS FOR A COMPLETE AND OPERATIONAL SETUP.
10. 660-3-12:
SHALL INCLUDE WAVETRONIX SMARTSENSOR HD MATRIX, HD ADVANCE OR HD TRAFFIC MONITORING SITE MVDS AS NOTED IN PLANS. THIS PAY ITEM WILL INCLUDE ALL NECESSARY MOUNTING BRACKETS AND CLAMPING EQUIPMENT. SHALL INCLUDE ANY COST ASSOCIATED WITH PHYSICAL INSTALLATION OF SENSOR AND ANY SOFTWARE NECESSARY TO PROGRAM THE SENSOR.
11. 660-6-121 & 660-6-122:
THE CONTRACTOR SHALL FURNISH AND INSTALL BLUETOAD (BLUETOOTH UNIT) SPECTRA, POE UNIT AS SHOWN IN THE PLANS. (COORDINATE WITH THE VENDOR).
12. 665-1-11:
SHALL INCLUDE ADDITIONAL COST OF LABOR AND MATERIALS REQUIRED FOR INSTALLATION OF PEDESTRIAN SIGNAL SIGN FTP-68B-06. THIS SIGN SHALL BE MOUNTED ABOVE EACH PEDESTRIAN DETECTOR. ALL PEDESTRIAN PUSH BUTTONS SHALL BE A.D.A. COMPLIANT. STREET NAMES SHALL BE IN ACCORDANCE WITH THE STREET NAMES ON THE PLAN SHEETS.
13. 670-5-111:
USE A NEMA TS2 TYPE 1 CONTROLLER, P-44 CABINET ASSEMBLY 7006-TS2/FL TYPE 6 ENCLOSURE AS SHOWN IN TABLE 7-1 OF THE 2003 NEMA STANDARD TS2. THE NAZTEC ATC CONTROLLER SHALL COME EQUIPPED WITH 6 SERIAL PORTS AND ONE ETHERNET PORT. ALL CONTROLLER EQUIPMENT TO BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING ATMS SYSTEM (NAZTEC'S ATMS.NOW) AND SYNCHROGREEN TRAFFIC CONTROLLER SOFTWARE. THE CABINET SHALL COME EQUIPPED WITH A ETHERNET SWITCH PAID UNDER A SEPARATE PAY ITEM NUMBER AND ALL THE NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO AN ETHERNET-BASED FIBER OPTIC NETWORK. CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.

TRAFFIC SIGNAL CONTROLLER BASE:
THIS ITEM SHALL INCLUDE THE INSTALLATION OF A CONCRETE BASE FOR THE CONTROLLER ASSEMBLY. THE CONTROLLER ASSEMBLY FOUNDATION SHALL HAVE A MINIMUM OF FOUR (4) - 2" CONDUIT SPARES. TWO (2) OF THE SPARES SHALL BE TERMINATED IN THE NEAREST PULL BOX AND FITTED WITH A WEATHERPROOF CAP. THE OTHER TWO (2) SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES. THE CABINET BASE WHEN SECURED TO THE CONCRETE SLAB WITH CONTROLLER CABINET ATTACHED MUST WITHSTAND A MINIMUM WIND LOAD OF 130 MPH OR A 850 LB FORCE APPLIED AT 49" ABOVE THE BOTTOM OF THE BASE WITHOUT CAUSING THE BASE OR CABINET TO COME OUT OF THEIR ANCHORED POSITION OR CAUSE ANY PERMANENT DEFORMATION. ALL COSTS OF LABOR, CONCRETE, AND OTHER MATERIALS FOR THE CONTROLLER ASSEMBLY, TECHNICIAN PADS, STEPS AS REQUIRED, ARE INCLUDED IN THIS ITEM.

INSTALL A PVC SLEEVE TO PREVENT THE GROUND ROD FROM DIRECT EMBEDMENT IN THE SLAB. EXTEND CONDUITS FOR FUTURE USE AT LEAST 18-INCHES FROM THE EDGE OF THE SLAB. TERMINATE UNDERGROUND WITH A COUPLING AND CAP AND SEAL SO THAT THE SEAL CAN BE REMOVED WITHOUT DAMAGING THE COUPLING. ANCHOR THE CONTROLLER CABINET TO THE BASE USING FOUR STAINLESS STEEL 1/2" -13 NC BOLTS.

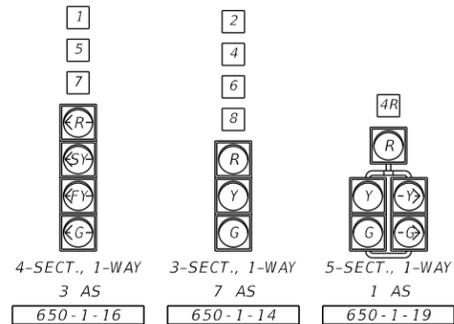
THE CONTROLLER BASE SHALL BE AT LEAST 2' HIGH OR THE SAME ELEVATION AS THE CROWN OF THE ROADWAY, WHICHEVER IS GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24". THE CABINET DOORS SHALL OPEN TOWARDS OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.
- TRAFFIC CONTROLLER: NAZTEC TS2 TYPE 1 980 ATC.
- TRAFFIC CONTROLLER CABINET: NAZTEC TS2 TYPE 1, SIZE: TYPE - VI WITH FRONT AND BACK DOOR ACCESS.

14. 682-1-113:
THE CCTV CAMERA UNIT SHALL BE BOSCH ITS 7000 STARLITE SERIES 1080P 30x40. 1080P 30x40. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) CCTV CAMERA UNIT AS SHOWN IN THE PLANS.
15. 684-1-1:
THE ETHERNET SWITCH SHALL BE A RUGGEDCOM SWITCH MODEL NUMBER RSG920P, PART NUMBER 6GK6092-OPS23-0BA0-ZA05+B05+C02+D02. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) ETHERNET SWITCH AS SHOWN IN THE PLANS.
16. 685-1-12:
SHALL INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) MODEL NO. ALPHA FXM 1100 EQUIPPED WITH AN ETHERNET PORT. ALL UNINTERRUPTIBLE POWER SUPPLIES SHALL SUPPORT SNMP (PROTOCOL) FOR REMOTE MONITORING AND MANAGEMENT. THE UPS SHALL BE SIZED TO ACCOMMODATE THE MAXIMUM CONNECTED LOAD. THE BATTERY BANK SHALL BE SIZED TO PROVIDE A MINIMUM 8 HOURS RUN TIME UNDER FULL LOAD.
17. 700-5-22:
ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE EDGE LIT LED TYPE AND SHALL BE LISTED IN THE FDOT APPROVED PRODUCT LIST. THE COST OF THIS ITEM SHALL INCLUDE PROPERLY DESIGNED AND SIZED ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND ALL MISCELLANEOUS HARDWARE NECESSARY TO MOUNT THE SIGNS AS SHOWN IN THE PLANS. THE SIGNS SHALL BE POWERED USING IMSA 50-2 CABLE. THIS ITEM SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOCCELL ON THE SERVICE POLE OR INSIDE SIGNAL CABINET. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL HAVE 120 VOLT LED BULBS. BULB TUBES LESS THAN 8 FEET SHALL HAVE 28.5 WATTS POWER CONSUMPTION AT 1900 LUMENS AND TUBES 8 FOOT OR GREATER SHALL HAVE 38 WATTS POWER CONSUMPTION AT 2600 LUMENS.

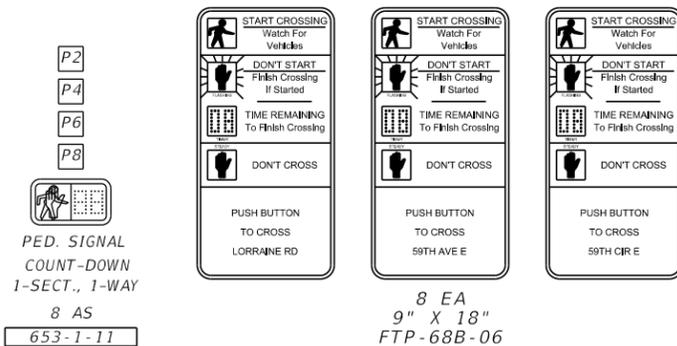
				SCALE AS NOTED	DATE 11/2022	DESIGN ENGINEER BURAK KONUK	SHEET NO. T-8
				DESIGNED BY BK	PROJECT NO. 6107660	FL. LICENSE NO. 81581	
				DRAWN BY JP	 MANATEE COUNTY PUBLIC WORKS		<p style="text-align: center;"><i>PAY ITEM NOTES</i></p>
				CHECKED BY MO			
No.	REVISIONS	DATE	BY	 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609			

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

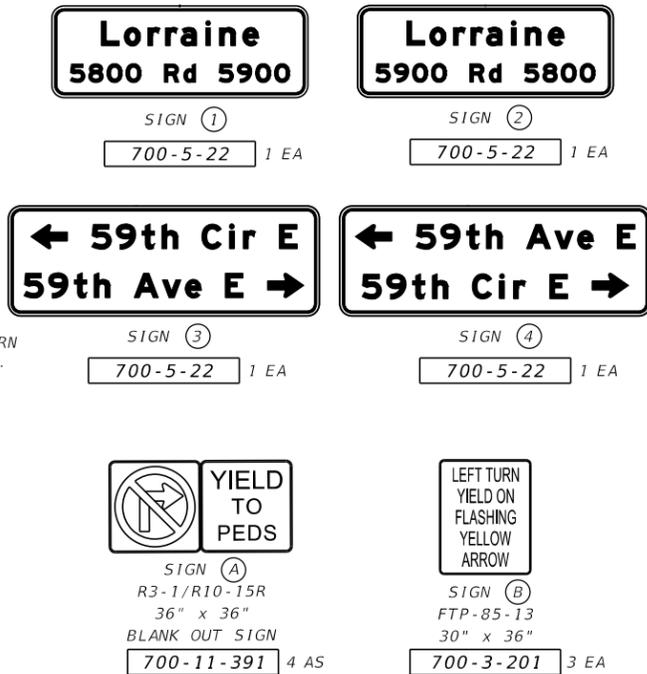
SIGNAL HEAD DETAILS



PEDESTRIAN HEAD DETAILS



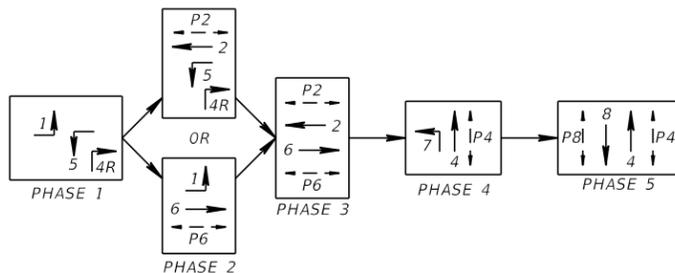
OVERHEAD SIGN DETAILS



NOTES:

1. MAJOR STREET IS LORRAINE RD, MOVEMENTS 1, 2, 5, AND 6. MINOR STREET IS 59TH CIR E / 59TH AVE E, MOVEMENTS 4, 7, AND 8.
2. FURNISH AND INSTALL FTP-68B-06 SIGNS AT ALL PEDESTRIAN DETECTOR LOCATIONS. INCLUDE COST IN THE SERIES 665 PAY ITEMS.
3. SPECIAL SOP WITH THE FOLLOWING:
 - A. CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS P4 AND P8.
 - B. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 & 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.
4. FOR COMPLETE INTERNALLY ILLUMINATED STREET SIGN DETAILS, SEE GUIDE SIGN WORKSHEET.
5. EACH DIRECTIONAL BORE SHALL CONTAIN SIX CONDUITS. ONE FOR SIGNALS AND STREET SIGNS, ONE FOR PEDESTRIAN DETECTION, ONE FOR WAVETRONIX DETECTION, ONE FOR LUMINAIRES, AND TWO SPARES. THE NORTHERN AND WESTERN CROSSINGS SHALL CONTAIN ONE EXTRA CONDUIT FOR FIBER OPTIC INTERCONNECT.
7. ALL STATION/OFFSETS ARE REFERENCED TO THE Q CONST., LORRAINE RD.
8. PROGRAM A 2 SECOND DELAY FOR FLASHING YELLOW.

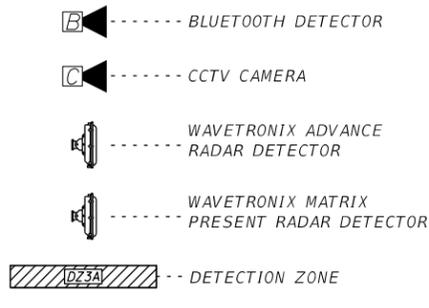
SPECIAL SOP



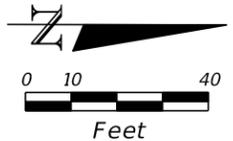
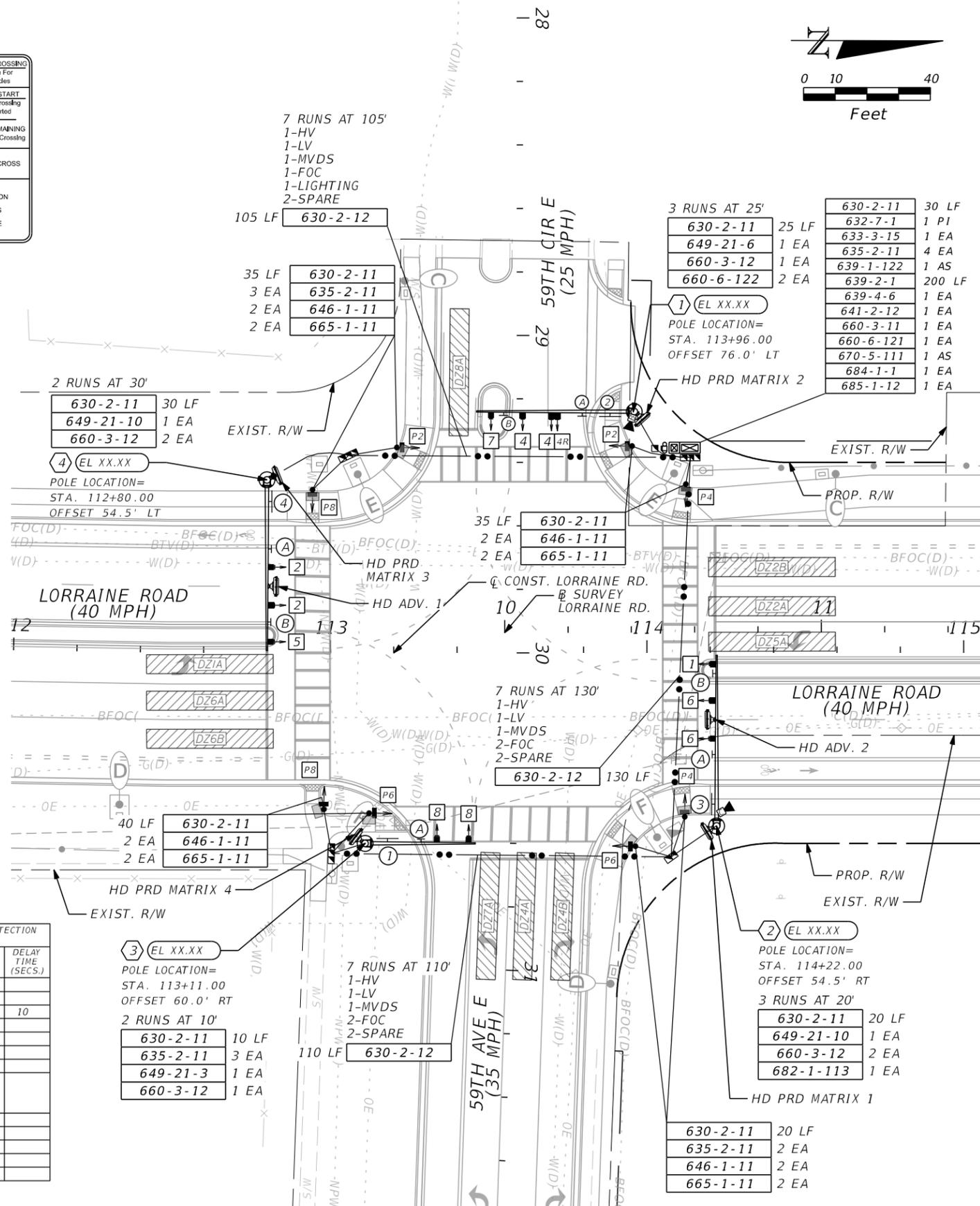
CONTROLLER TIMINGS		1	2	3	4	5	6	7	8
TIMING FUNCTION	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
	MINIMUM GREEN	7	30		20	7	30	7	20
	EXTENSION	3	5		5	3	5	3	5
	MAXIMUM GREEN 1	15	60		40	15	60	15	40
	MAXIMUM GREEN 2			NOT USED					
	YELLOW CLEARANCE	4.4	4.4		4.0	4.4	4.4	4.0	4.0
	ALL RED	2.7	2.0		2.0	4.7	2.0	2.6	2.4
	PEDESTRIAN WALK		7		7		7		7
	PED. CLEARANCE		16		24		19		24
	RECALL		MIN				MIN		

NOTE: TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT AS DETERMINED BY THE ENGINEER.

SPECIAL SYMBOLOGY



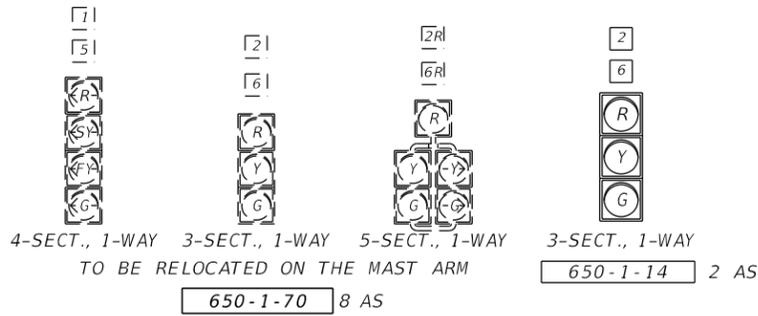
MATRIX AND ADVANCE VEHICLE DETECTION ASSIGNMENTS			
MICROWAVE DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
HD MATRIX 1	7A	TF 7	
	4A, 4B	TF 4	
	4B		10
	4R	TF 5	
HD MATRIX 2	5A	TF 5	
	2A, 2B	TF 2	
HD MATRIX 3	8A	TF 8	
HD MATRIX 4	1A	TF 1	
	6A, 6B	TF 6	
HD ADV.1	DZ-2	TF 2	
HD ADV.2	DZ-6	TF 6	



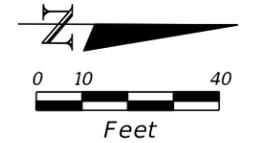
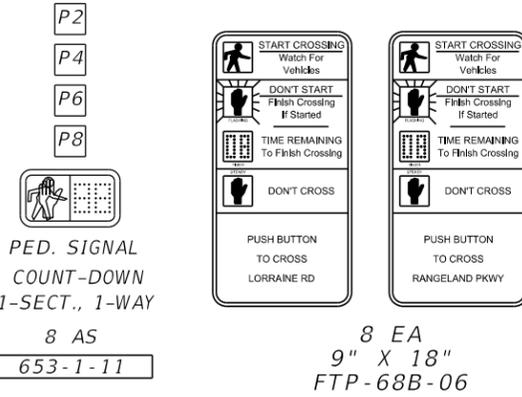
No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	DESIGN ENGINEER	BURAK KONUK	FL. LICENSE NO.	81581	SHEET NO.	T-9
				DESIGNED BY	BK								
				DRAWN BY	JP	MANATEE COUNTY PUBLIC WORKS		SIGNALIZATION PLAN (1)					
				CHECKED BY	MO	MANATEE COUNTY PUBLIC WORKS		FL. LICENSE NO.					
						MANATEE COUNTY PUBLIC WORKS		81581					

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

SIGNAL HEAD DETAILS



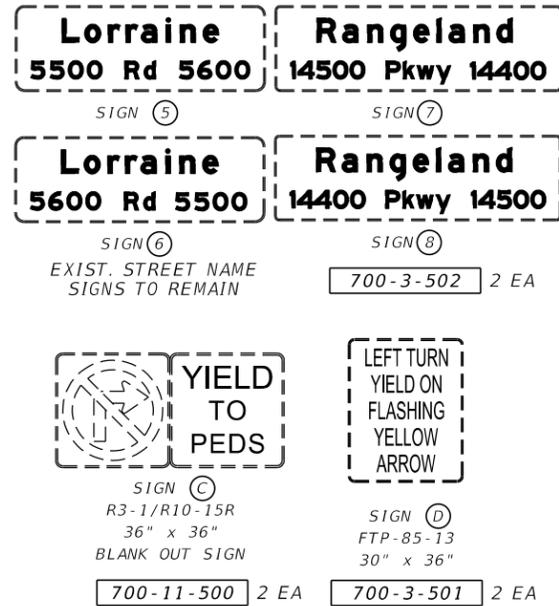
PEDESTRIAN HEAD DETAILS



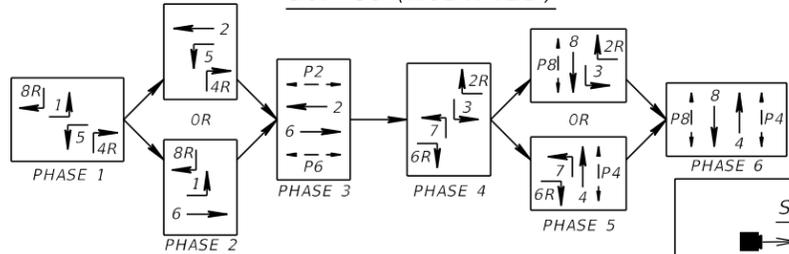
NOTES:

- MAJOR STREET IS LORRAINE RD, MOVEMENTS 1, 2, 5, AND 6. MINOR STREET IS RANGELAND PKWY, MOVEMENTS 3, 4, 7, AND 8.
- FURNISH AND INSTALL FTP-68B-06 SIGNS AT ALL PEDESTRIAN DETECTOR LOCATIONS. INCLUDE COST IN THE SERIES 665 PAY ITEMS.
- STANDARD SOP 10 (MODIFIED) WITH THE FOLLOWING:
 - A. CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS P4 AND P8.
 - B. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 & 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.
 - C. ADD RIGHT TURN OVERLAPS AS SHOWN IN THE MODIFIED SOP.
- EACH DIRECTIONAL BORE SHALL CONTAIN SIX CONDUITS. ONE FOR SIGNALS AND STREET SIGNS, ONE FOR PEDESTRIAN DETECTION, ONE FOR WAVETRONIX DETECTION, ONE FOR LUMINAIRES, AND TWO SPARES. THE NORTHERN AND WESTERN CROSSINGS SHALL CONTAIN ONE EXTRA CONDUIT FOR FIBER OPTIC INTERCONNECT.
- PROGRAM A 2 SECOND DELAY FOR FLASHING YELLOW ARROW.

OVERHEAD SIGN DETAILS



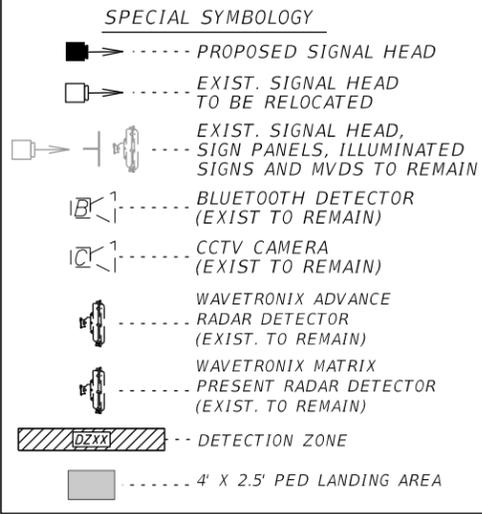
SOP 10 (MODIFIED)



CONTROLLER TIMINGS

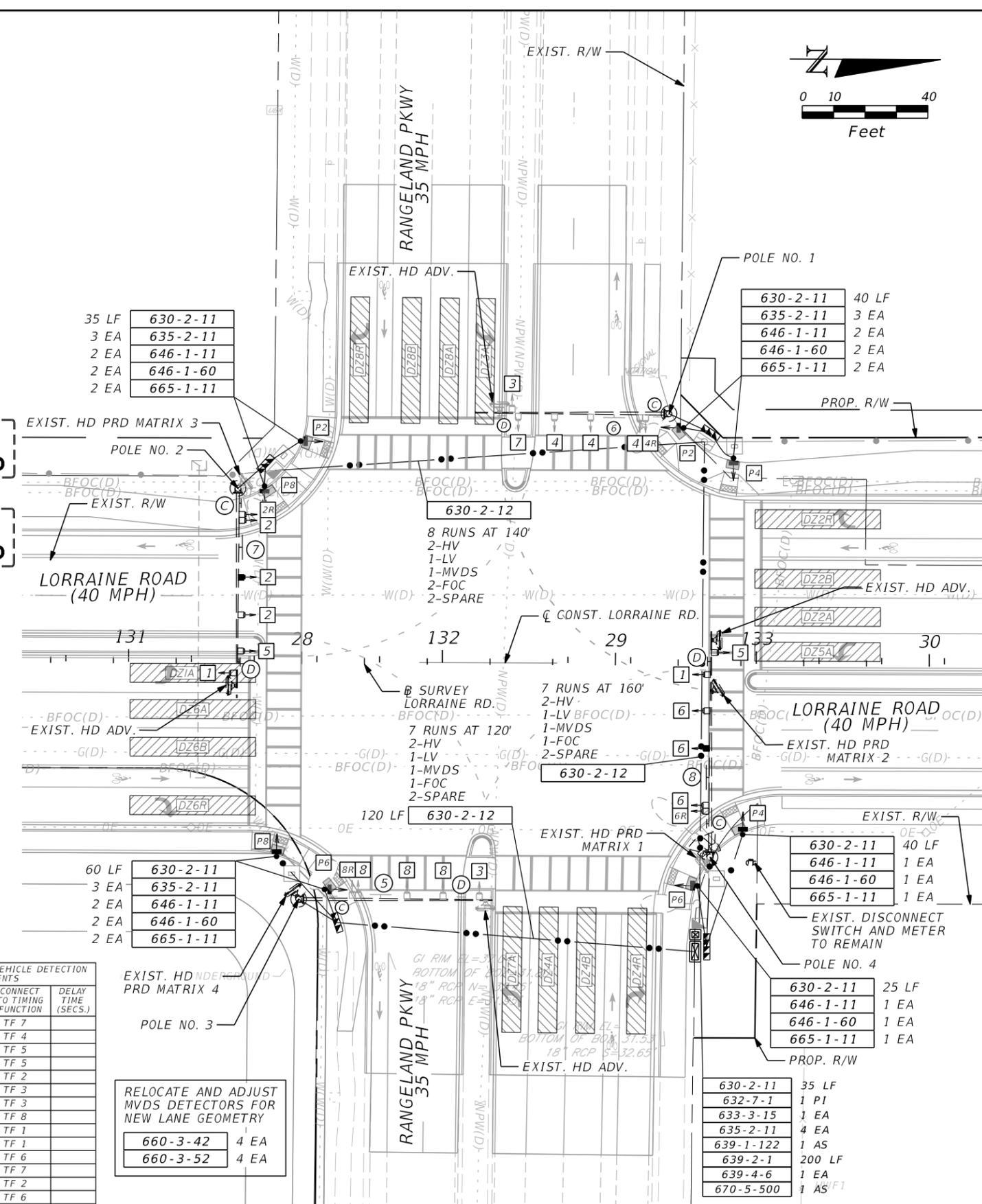
TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	7	30	7	20	7	30	7	20
EXTENSION	3	5	3	5	3	5	3	5
MAXIMUM GREEN 1	15	60	15	40	15	60	15	40
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.4	4.4	4.0	4.0	4.4	4.4	4.0	4.0
ALL RED	2.9	2.0	3.0	2.0	3.1	2.0	3.0	2.0
PEDESTRIAN WALK		7		7		7		7
PED. CLEARANCE		30		29		30		30
RECALL		MIN				MIN		

NOTE: TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT AS DETERMINED BY THE ENGINEER.



MATRIX AND ADVANCE VEHICLE DETECTION ASSIGNMENTS

MICROWAVE DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
HD MATRIX 1	7A	TF 7	
	4A, 4B	TF 4	
	4R	TF 5	
HD MATRIX 2	5A	TF 5	
	2A, 2B	TF 2	
	2R	TF 3	
HD MATRIX 3	3A	TF 3	
	8A, 8B	TF 8	
	8R	TF 1	
HD MATRIX 4	1A	TF 1	
	6A, 6B	TF 6	
	6R	TF 7	
HD ADV.1	DZ-2	TF 2	
HD ADV.2	DZ-6	TF 6	

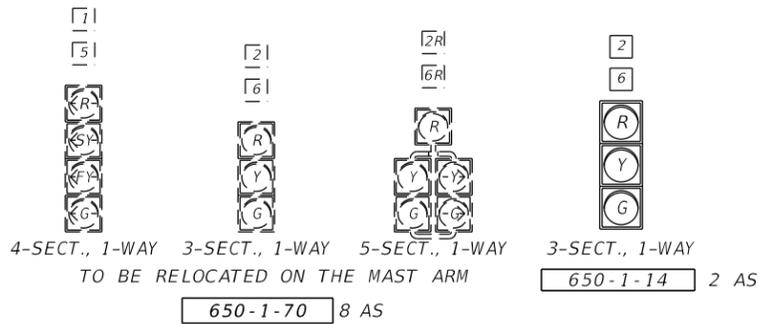


No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER	BURAK KONUK	<p>SIGNALIZATION PLAN (2)</p>	SHEET NO.	T-10
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	JP								
				CHECKED BY	MO								

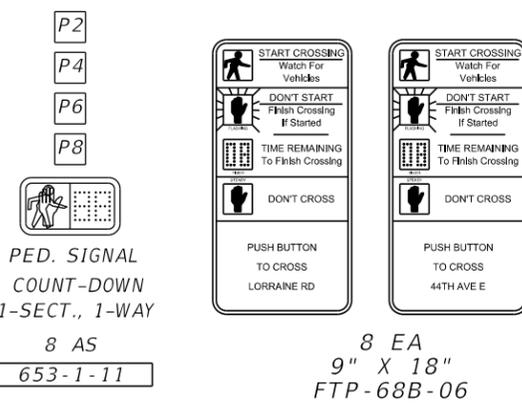
JPANDYA
3/29/2022 6:16:32 PM Default
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SIGNAL HEAD DETAILS



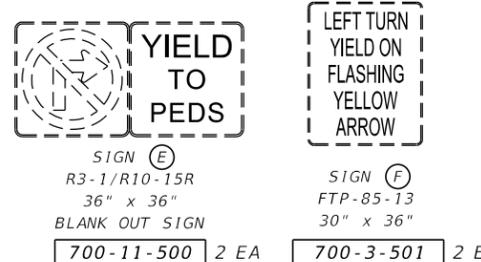
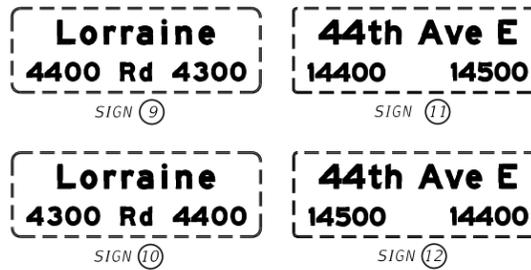
PEDESTRIAN HEAD DETAILS



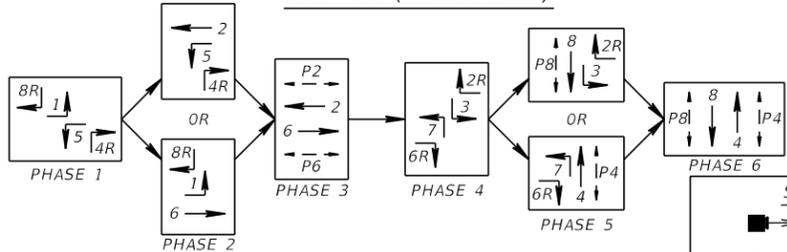
NOTES:

- MAJOR STREET IS LORRAINE RD, MOVEMENTS 1, 2, 5, AND 6. MINOR STREET IS 44th AVE EAST, MOVEMENTS 3, 4, 7, AND 8.
- FURNISH AND INSTALL FTP-68B-06 SIGNS AT ALL PEDESTRIAN DETECTOR LOCATIONS. INCLUDE COST IN THE SERIES 665 PAY ITEMS.
- STANDARD SOP 10 (MODIFIED) WITH THE FOLLOWING:
 - CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS P2, P4, P6 AND P8.
 - WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 & 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.
 - ADD RIGHT TURN OVERLAPS AS SHOWN IN THE MODIFIED SOP.
- EACH DIRECTIONAL BORE SHALL CONTAIN SIX CONDUITS. ONE FOR SIGNALS AND STREET SIGNS, ONE FOR PEDESTRIAN DETECTION, ONE FOR WAVETRONIX DETECTION, ONE FOR LUMINAIRES, AND TWO SPARES. THE BORE ON THE WESTERN LEG SHALL CONTAIN ONE EXTRA CONDUIT FOR FIBER OPTIC INTERCONNECT.
- VALVES FOR THE 24" FM IN THE NE AND NW CORNER OF THE INTERSECTION SHALL REMAIN ACCESSIBLE AND OPERATIONAL AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT VALVE PADS ARE UP TO GRADE UPON PROJECT COMPLETION.
- PROGRAM A 2 SECOND DELAY FOR FLASHING YELLOW ARROW.

OVERHEAD SIGN DETAILS



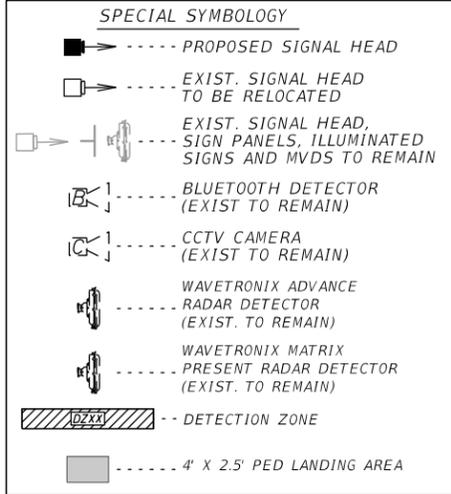
SOP 10 (MODIFIED)



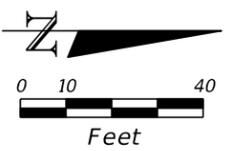
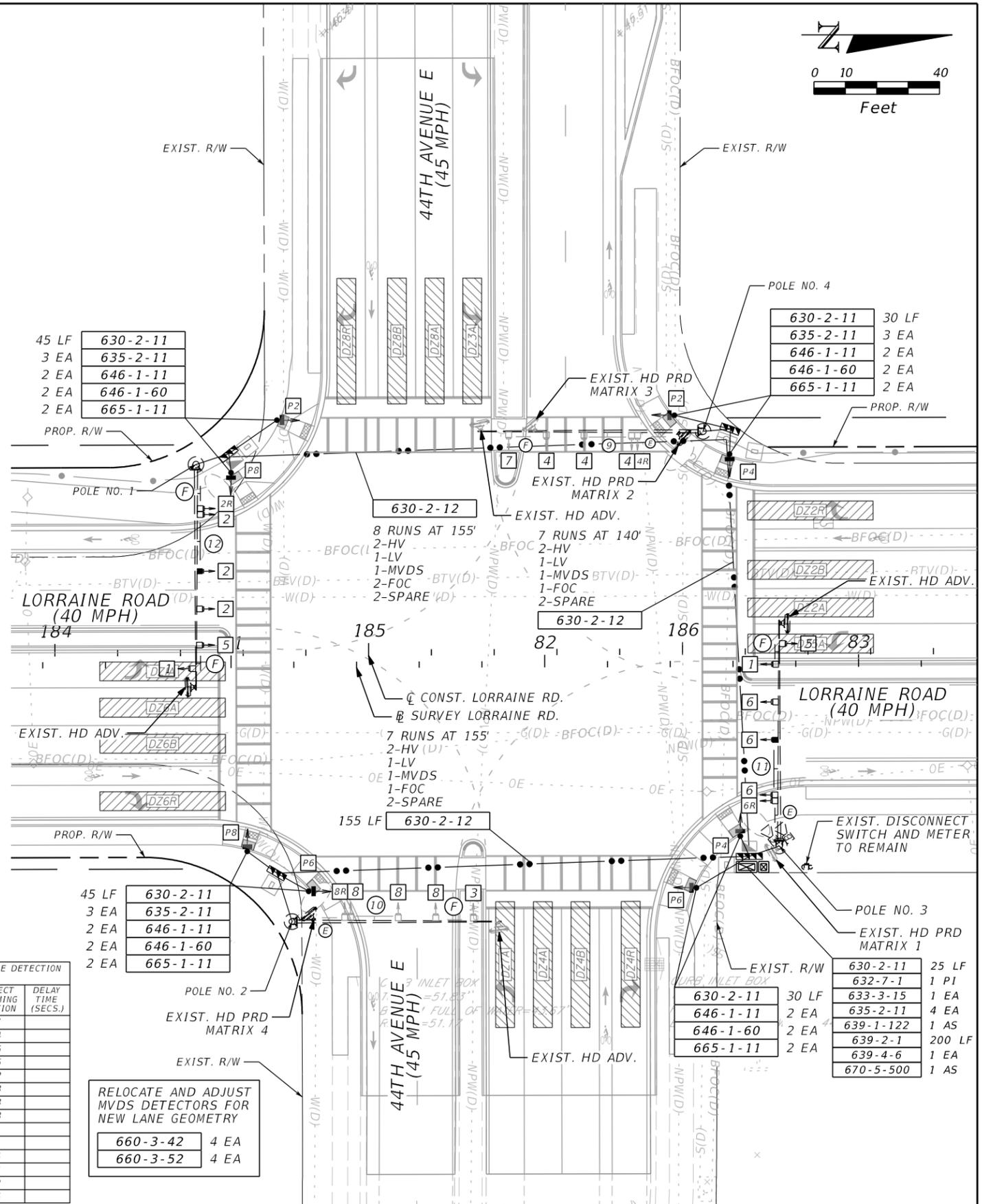
CONTROLLER TIMINGS

TIMING FUNCTION	1	2	3	4	5	6	7	8
MINIMUM GREEN	7	30	5	20	7	30	5	20
EXTENSION	3	5	3	5	3	5	3	5
MAXIMUM GREEN 1	15	60	15	40	15	60	15	40
MAXIMUM GREEN 2	4.4	4.4	4.8	4.8	4.4	4.4	4.8	4.8
YELLOW CLEARANCE	3.6	2.0	3.2	2.0	3.1	2.0	3.2	2.0
PEDESTRIAN WALK	7	7	7	7	7	7	7	7
PED. CLEARANCE	32	30	32	30	32	30	32	30
RECALL		MIN			MIN			

NOTE: TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTMENT AS DETERMINED BY THE ENGINEER.



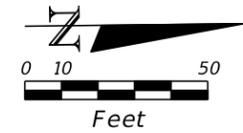
MICROWAVE DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
HD MATRIX 1	7A	TF 7	
	4A, 4B	TF 4	
	4R	TF 5	
	5A	TF 5	
HD MATRIX 2	2A, 2B	TF 2	
	2R	TF 3	
HD MATRIX 3	3A	TF 3	
	8A, 8B	TF 8	
HD MATRIX 4	8R	TF 1	
	1A	TF 1	
HD ADV.1	6A, 6B	TF 6	
	6R	TF 7	
HD ADV.2	DZ-2	TF 2	
	DZ-6	TF 6	



No. _____ REVISIONS _____ DATE _____ BY _____	SCALE AS NOTED DESIGNED BY BK DRAWN BY JP CHECKED BY MO	 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE 11/2022 PROJECT NO. 6107660	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581	SHEET NO. T-11
	11/29/2022 6:17:20 PM Default				SIGNALIZATION PLAN (3)	

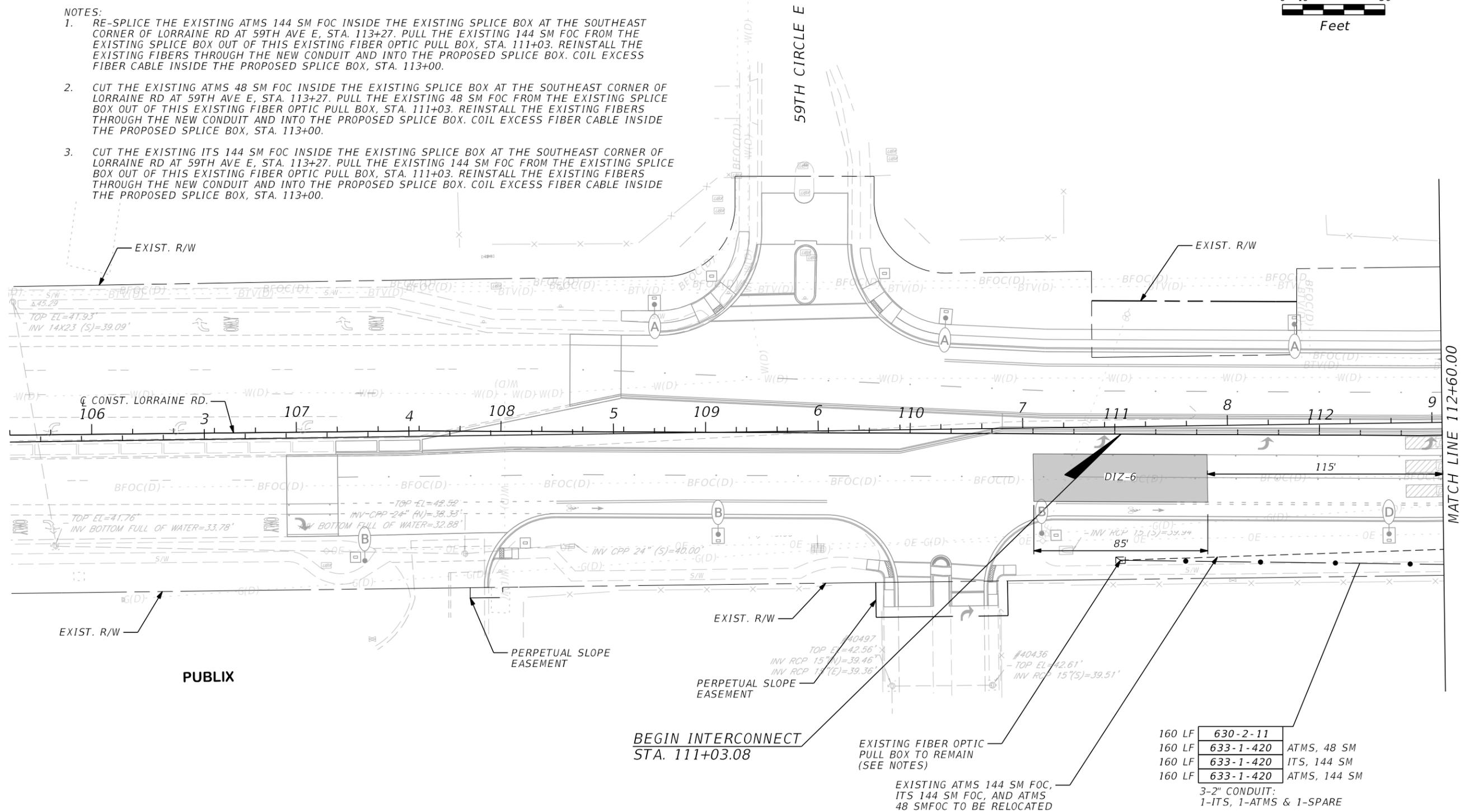
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

LORRAINE ROAD



NOTES:

- RE-SPLICE THE EXISTING ATMS 144 SM FOC INSIDE THE EXISTING SPLICE BOX AT THE SOUTHEAST CORNER OF LORRAINE RD AT 59TH AVE E, STA. 113+27. PULL THE EXISTING 144 SM FOC FROM THE EXISTING SPLICE BOX OUT OF THIS EXISTING FIBER OPTIC PULL BOX, STA. 111+03. REINSTALL THE EXISTING FIBERS THROUGH THE NEW CONDUIT AND INTO THE PROPOSED SPLICE BOX. COIL EXCESS FIBER CABLE INSIDE THE PROPOSED SPLICE BOX, STA. 113+00.
- CUT THE EXISTING ATMS 48 SM FOC INSIDE THE EXISTING SPLICE BOX AT THE SOUTHEAST CORNER OF LORRAINE RD AT 59TH AVE E, STA. 113+27. PULL THE EXISTING 48 SM FOC FROM THE EXISTING SPLICE BOX OUT OF THIS EXISTING FIBER OPTIC PULL BOX, STA. 111+03. REINSTALL THE EXISTING FIBERS THROUGH THE NEW CONDUIT AND INTO THE PROPOSED SPLICE BOX. COIL EXCESS FIBER CABLE INSIDE THE PROPOSED SPLICE BOX, STA. 113+00.
- CUT THE EXISTING ITS 144 SM FOC INSIDE THE EXISTING SPLICE BOX AT THE SOUTHEAST CORNER OF LORRAINE RD AT 59TH AVE E, STA. 113+27. PULL THE EXISTING 144 SM FOC FROM THE EXISTING SPLICE BOX OUT OF THIS EXISTING FIBER OPTIC PULL BOX, STA. 111+03. REINSTALL THE EXISTING FIBERS THROUGH THE NEW CONDUIT AND INTO THE PROPOSED SPLICE BOX. COIL EXCESS FIBER CABLE INSIDE THE PROPOSED SPLICE BOX, STA. 113+00.



LEGEND

DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

160 LF	630-2-11	
160 LF	633-1-420	ATMS, 48 SM
160 LF	633-1-420	ITS, 144 SM
160 LF	633-1-420	ATMS, 144 SM
3-2" CONDUIT:		
1-ITS, 1-ATMS & 1-SPARE		

BEGIN INTERCONNECT
STA. 111+03.08

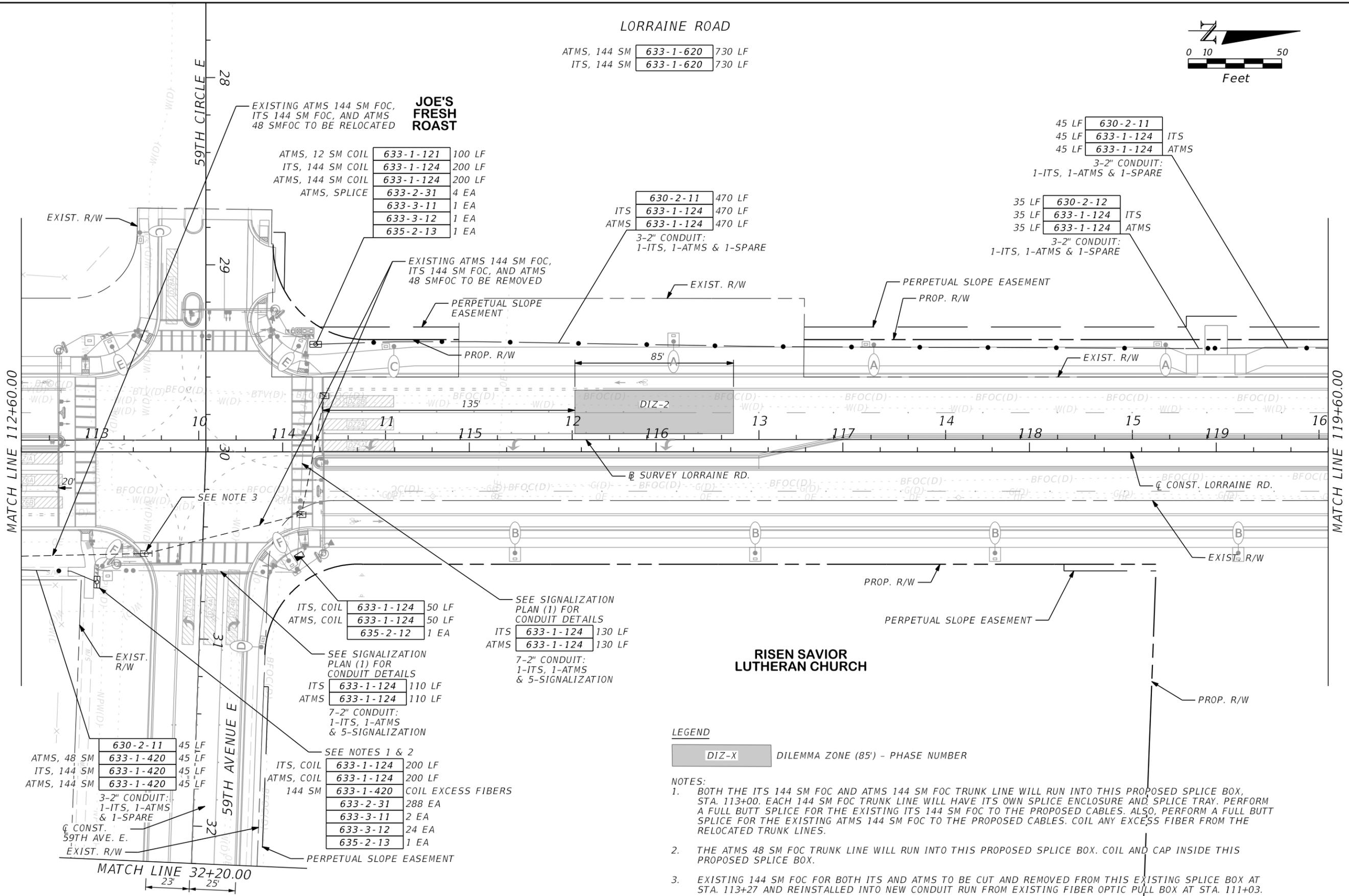
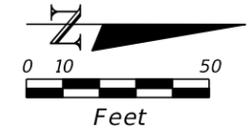
EXISTING FIBER OPTIC
PULL BOX TO REMAIN
(SEE NOTES)

EXISTING ATMS 144 SM FOC,
ITS 144 SM FOC, AND ATMS
48 SMFOC TO BE RELOCATED

SCALE AS NOTED				<p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>	DATE	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER	<p>INTERCONNECT PLAN (1)</p>	SHEET NO.
DESIGNED BY BK					11/2022		BURAK KONUK		T-12
DRAWN BY SM					PROJECT NO.		FL. LICENSE NO.		
CHECKED BY MO				6107660	81581				
No.	REVISIONS	DATE	BY						

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



EXISTING ATMS 144 SM FOC, ITS 144 SM FOC, AND ATMS 48 SMFOC TO BE RELOCATED

ATMS, 12 SM COIL	633-1-121	100 LF
ITS, 144 SM COIL	633-1-124	200 LF
ATMS, 144 SM COIL	633-1-124	200 LF
ATMS, SPLICE	633-2-31	4 EA
	633-3-11	1 EA
	633-3-12	1 EA
	635-2-13	1 EA

ITS	630-2-11	470 LF
	633-1-124	470 LF
ATMS	633-1-124	470 LF

45 LF	630-2-11	ITS
45 LF	633-1-124	ITS
45 LF	633-1-124	ATMS

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

35 LF	630-2-12	ITS
35 LF	633-1-124	ITS
35 LF	633-1-124	ATMS

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

EXISTING ATMS 144 SM FOC, ITS 144 SM FOC, AND ATMS 48 SMFOC TO BE REMOVED

PERPETUAL SLOPE EASEMENT

PROP. R/W

85'

PERPETUAL SLOPE EASEMENT

PROP. R/W

EXIST. R/W

MATCH LINE 112+60.00

MATCH LINE 119+60.00

SEE NOTE 3

B SURVEY LORRAINE RD.

C CONST. LORRAINE RD.

ITS, COIL	633-1-124	50 LF
ATMS, COIL	633-1-124	50 LF
	635-2-12	1 EA

SEE SIGNALIZATION PLAN (1) FOR CONDUIT DETAILS

ITS	633-1-124	130 LF
ATMS	633-1-124	130 LF

7-2" CONDUIT:
1-ITS, 1-ATMS & 5-SIGNALIZATION

SEE SIGNALIZATION PLAN (1) FOR CONDUIT DETAILS

ITS	633-1-124	110 LF
ATMS	633-1-124	110 LF

7-2" CONDUIT:
1-ITS, 1-ATMS & 5-SIGNALIZATION

SEE NOTES 1 & 2

ITS, COIL	633-1-124	200 LF
ATMS, COIL	633-1-124	200 LF
144 SM	633-1-420	COIL EXCESS FIBERS
	633-2-31	288 EA
	633-3-11	2 EA
	633-3-12	24 EA
	635-2-13	1 EA

PERPETUAL SLOPE EASEMENT

RISEN SAVIOR LUTHERAN CHURCH

PROP. R/W

PERPETUAL SLOPE EASEMENT

PROP. R/W

LEGEND

DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

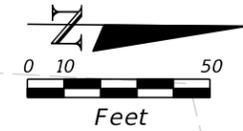
NOTES:

- BOTH THE ITS 144 SM FOC AND ATMS 144 SM FOC TRUNK LINE WILL RUN INTO THIS PROPOSED SPLICE BOX, STA. 113+00. EACH 144 SM FOC TRUNK LINE WILL HAVE ITS OWN SPLICE ENCLOSURE AND SPLICE TRAY. PERFORM A FULL BUTT SPLICE FOR THE EXISTING ITS 144 SM FOC TO THE PROPOSED CABLES. ALSO, PERFORM A FULL BUTT SPLICE FOR THE EXISTING ATMS 144 SM FOC TO THE PROPOSED CABLES. COIL ANY EXCESS FIBER FROM THE RELOCATED TRUNK LINES.
- THE ATMS 48 SM FOC TRUNK LINE WILL RUN INTO THIS PROPOSED SPLICE BOX. COIL AND CAP INSIDE THIS PROPOSED SPLICE BOX.
- EXISTING 144 SM FOC FOR BOTH ITS AND ATMS TO BE CUT AND REMOVED FROM THIS EXISTING SPLICE BOX AT STA. 113+27 AND REINSTALLED INTO NEW CONDUIT RUN FROM EXISTING FIBER OPTIC PULL BOX AT STA. 111+03.

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	DESIGN ENGINEER	BURAK KONUK	FL. LICENSE NO.	81581	SHEET NO.	T-13
				DESIGNED BY	BK								
				DRAWN BY	SM	HDR ENGINEERING, INC.		MANATEE COUNTY PUBLIC WORKS					
				CHECKED BY	MO	4830 W KENNEDY BLVD, SUITE 400		MANATEE COUNTY PUBLIC WORKS					
						TAMPA, FL 33609		MANATEE COUNTY PUBLIC WORKS					

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



ITS 630-2-11 60 LF
 633-1-124 60 LF
 ATMS 633-1-124 60 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

CHABAD OF BRADENTON
 & LAKEWOOD RANCH

ITS 630-2-11 60 LF
 633-1-124 60 LF
 ATMS 633-1-124 60 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-11 275 LF
 633-1-124 275 LF
 ATMS 633-1-124 275 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

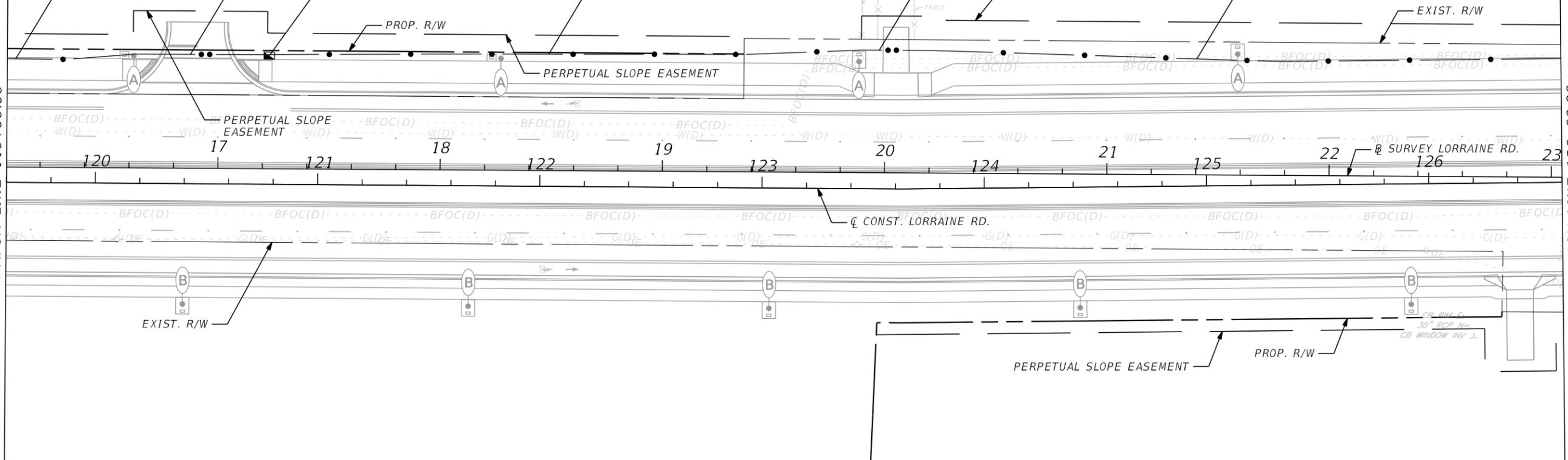
ITS 630-2-12 35 LF
 633-1-124 35 LF
 ATMS 633-1-124 35 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-11 285 LF
 633-1-124 285 LF
 ATMS 633-1-124 285 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS, COIL 633-1-124 50 LF
 ATMS, COIL 633-1-124 50 LF
 635-2-12 1 EA

MATCH LINE 119+60.00

MATCH LINE 126+60.00



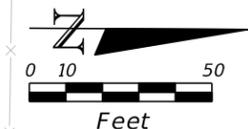
FUTURE HIGH SCHOOL
 PROPERTY

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

No.	REVISIONS	DATE	BY	SCALE AS NOTED	<p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>	DATE	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER	<p>INTERCONNECT PLAN (3)</p>	SHEET NO.	
				DESIGNED BY BK		11/2022		BURAK KONUK		<p>81581</p>	<p>T-14</p>
				DRAWN BY SM		PROJECT NO. 6107660		FL. LICENSE NO.			
				CHECKED BY MO							

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



630-2-11 120 LF
 ITS 633-1-124 120 LF
 ATMS 633-1-124 120 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

630-2-11 375 LF
 ITS 633-1-124 375 LF
 ATMS 633-1-124 375 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

SEE SIGNALIZATION
 PLAN (2) FOR
 CONDUIT DETAILS
 140 LF 630-2-12 ITS
 140 LF 633-1-124 ATMS
 140 LF 633-1-124 ATMS
 8-2" CONDUIT:
 1-ITS, 1-ATMS, 1-SPARE
 & 5-SIGNALIZATION

200 LF 633-1-124 ITS, 144 SM COIL
 200 LF 633-1-124 ATMS, 144 SM COIL
 100 LF 633-1-420 ATMS, 12 SM COIL
 4 EA 633-2-31 ATMS, SPLICE
 1 EA 633-3-12
 1 EA 635-2-13
 1 EA 633-3-41

80 LF 630-2-11 ITS
 80 LF 633-1-124 ATMS
 80 LF 633-1-124 ATMS
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

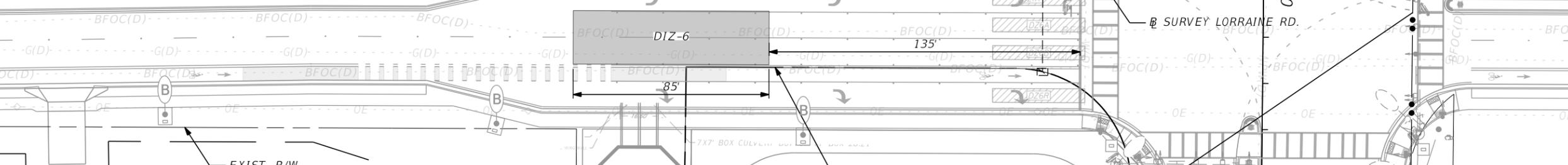
ITS, COIL 633-1-124 50 LF
 ATMS, COIL 633-1-124 50 LF
 635-2-12 1 EA

50 LF 633-1-124 ITS, COIL
 50 LF 633-1-124 ATMS, COIL
 1 EA 635-2-12

MATCH LINE 126+60.00

MATCH LINE 133+60.00

127 24 128 25 129 26 130 27 131 28 132 29 133 30



LEGEND
 DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

- NOTES:**
- DISCONNECT EXISTING 12 SM FOC FROM PATCH PANEL INSIDE THE EXISTING SIGNAL CABINET. CONNECT RELOCATED 12 SM FOC INTO THE PATCH PANEL INSIDE THE CABINET. COIL EXCESS 12 SM FOC INSIDE THE PROPOSED FIBER OPTIC PULL BOX ADJACENT TO THE SIGNAL CABINET.
 - PULL THE EXISTING 12 SM FOC THAT HAS BEEN DISCONNECTED FROM THE EXISTING SIGNAL CABINET OUT OF THIS EXISTING SPLICE BOX LOCATED AT THE NW CORNER. DISCONNECT THE EXISTING 12 SM FOC FROM THE SPLICE TRAY AND RELOCATE THE FIBERS AND THE SPLICE ENCLOSURE INTO THE PROPOSED SPLICE BOX. SPLICE THE EXISTING 12 SM FOC TO THE PROPOSED ATMS 144 SM FOC. RUN THE 12 SM FOC THROUGH THE NEW CONDUIT RUN BACK TO THE EXISTING CABINET.

SEE SIGNALIZATION
 PLAN (2) FOR
 CONDUIT DETAILS
 160 LF 630-2-12 12 SM, ATMS
 160 LF 633-1-420 12 SM, ATMS
 7-2" CONDUIT:
 1-ATMS, 1-SPARE &
 5-SIGNALIZATION
 50 LF 633-1-420 COIL 12 SM, ATMS
 1 EA 635-2-12

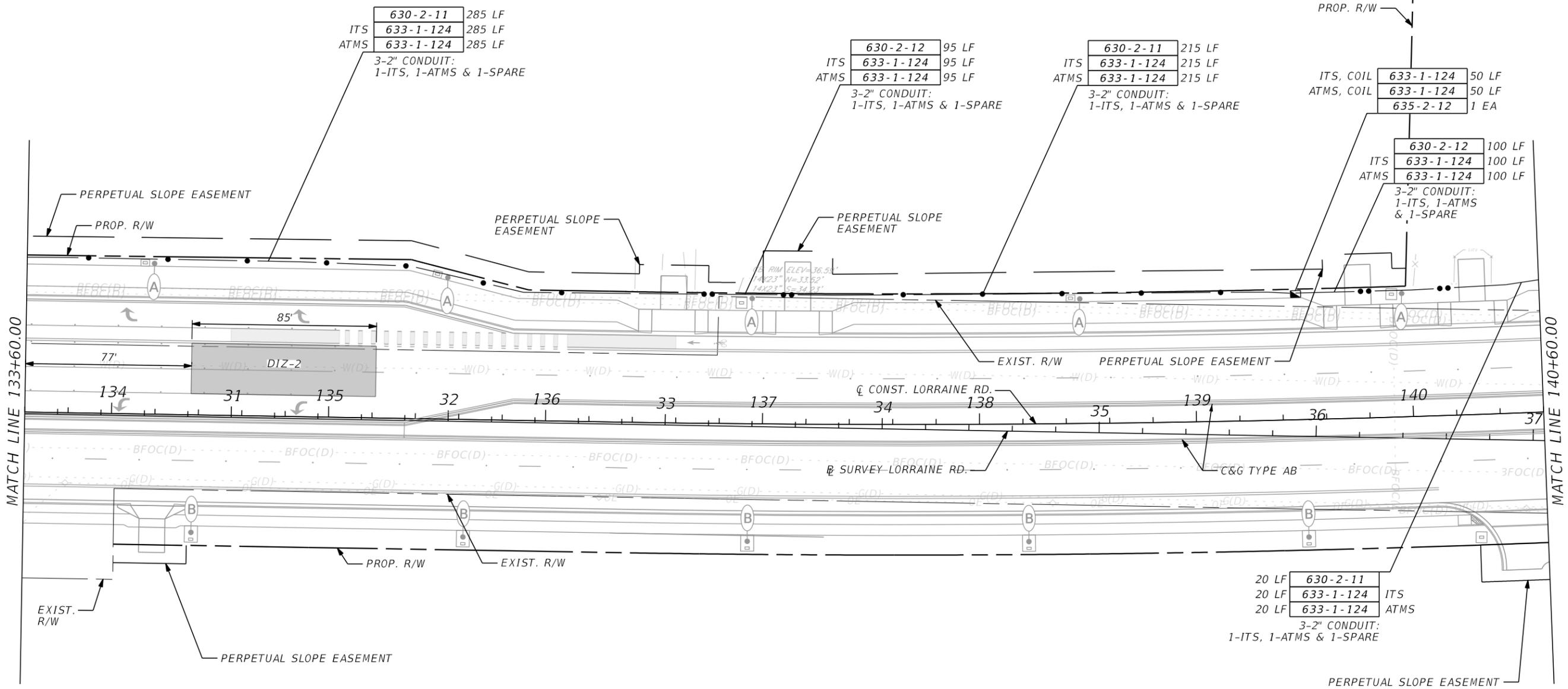
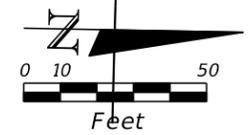
SEE NOTE 1
 633-3-55 1 EA

SCALE AS NOTED				DATE 11/2022		DESIGN ENGINEER BURAK KONUK		SHEET NO. T-15	
DESIGNED BY BK				PROJECT NO. 6107660		FL. LICENSE NO. 81581		INTERCONNECT PLAN (4)	
DRAWN BY SM				MANATEE COUNTY PUBLIC WORKS					
CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609					
No. REVISIONS DATE BY				11/29/2022 6:19:02 PM Default					

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LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



LEGEND

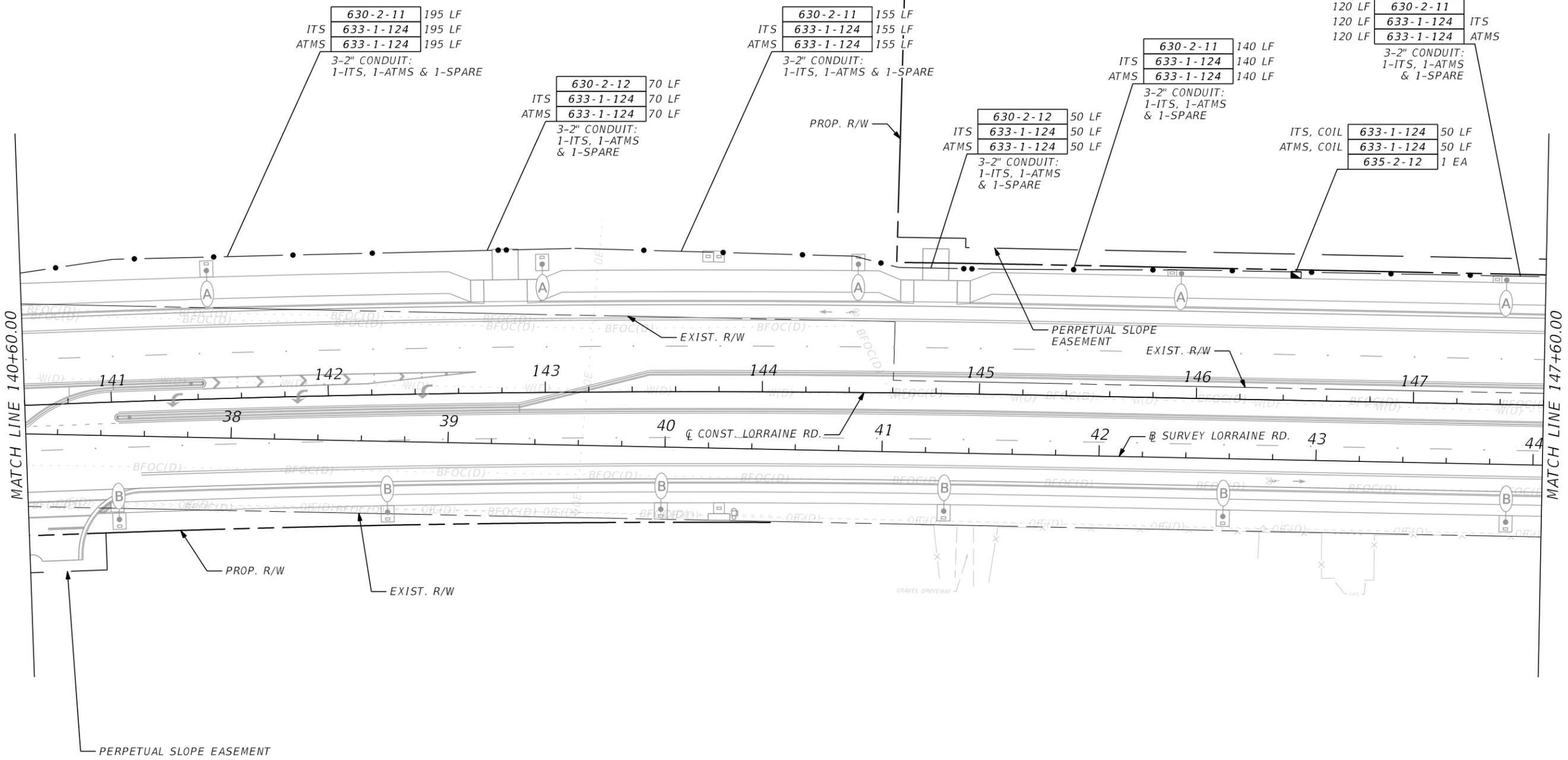
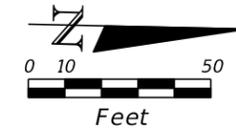
DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

<table border="1"> <tr> <td>SCALE</td> <td>AS NOTED</td> </tr> <tr> <td>DESIGNED BY</td> <td>BK</td> </tr> <tr> <td>DRAWN BY</td> <td>SM</td> </tr> <tr> <td>CHECKED BY</td> <td>MO</td> </tr> </table>				SCALE	AS NOTED	DESIGNED BY	BK	DRAWN BY	SM	CHECKED BY	MO	<p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>		<p>DATE 11/2022</p> <p>PROJECT NO. 6107660</p>		<p>MANATEE COUNTY PUBLIC WORKS</p>		<p>DESIGN ENGINEER BURAK KONUK</p> <p>FL. LICENSE NO. 81581</p>		<p>SHEET NO. T-16</p> <p>INTERCONNECT PLAN (5)</p>	
SCALE	AS NOTED																				
DESIGNED BY	BK																				
DRAWN BY	SM																				
CHECKED BY	MO																				
No.	REVISIONS	DATE	BY																		

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LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



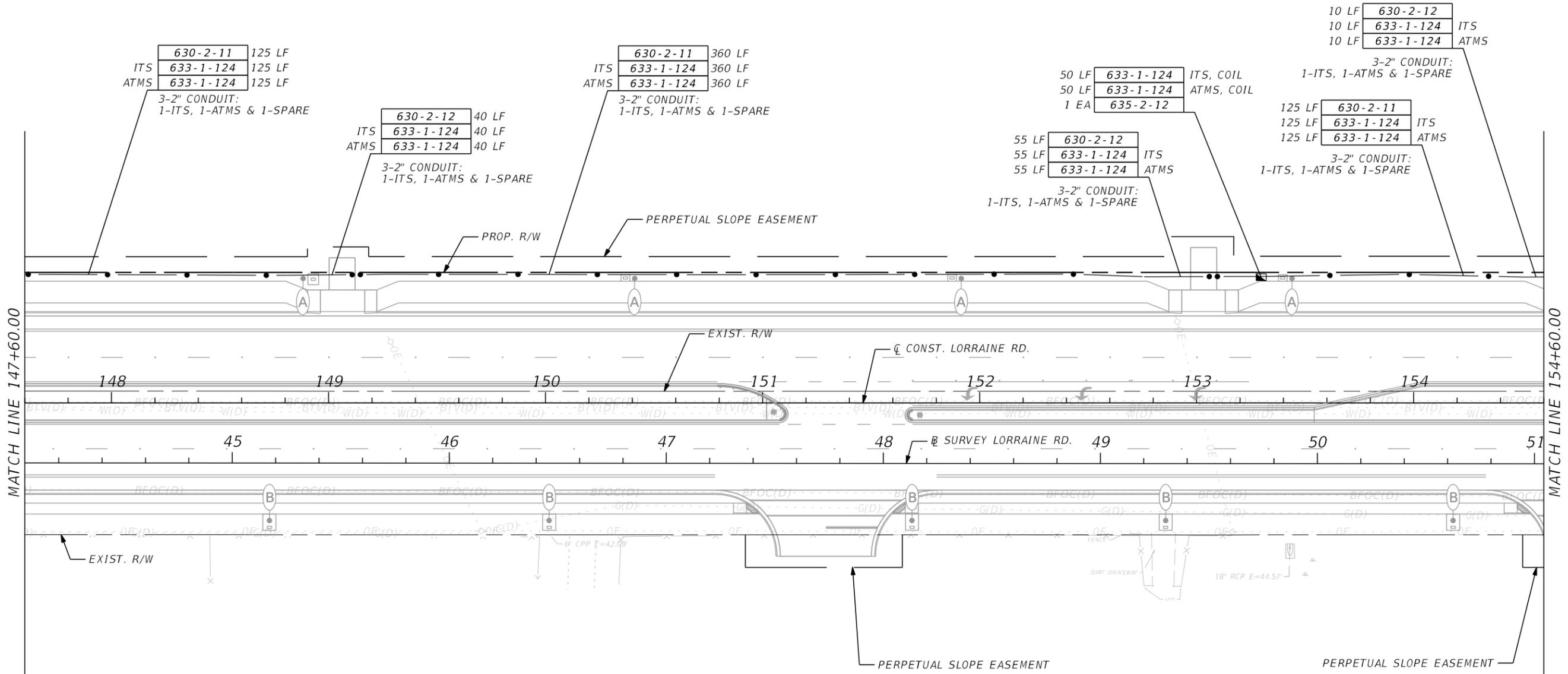
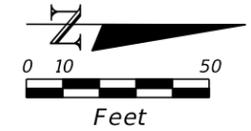
MATCH LINE 140+60.00

MATCH LINE 147+60.00

SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				DATE 11/2022 PROJECT NO. 6107660		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-17	
No. REVISIONS DATE BY				MANATEE COUNTY PUBLIC WORKS		INTERCONNECT PLAN (6)		PW	

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



MATCH LINE 147+60.00

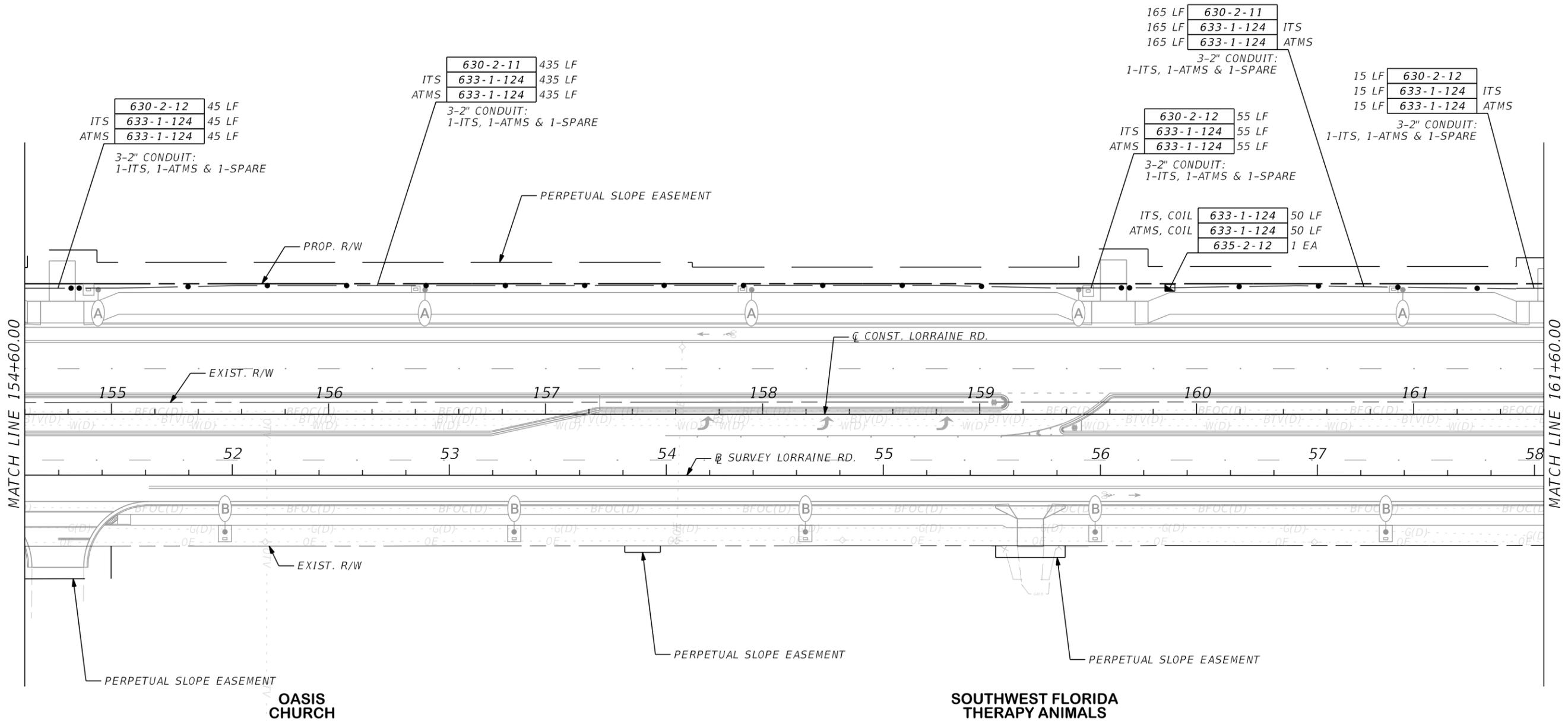
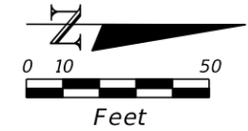
MATCH LINE 154+60.00

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SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-18	
No. REVISIONS DATE BY								INTERCONNECT PLAN (7)					

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



MATCH LINE 154+60.00

MATCH LINE 161+60.00

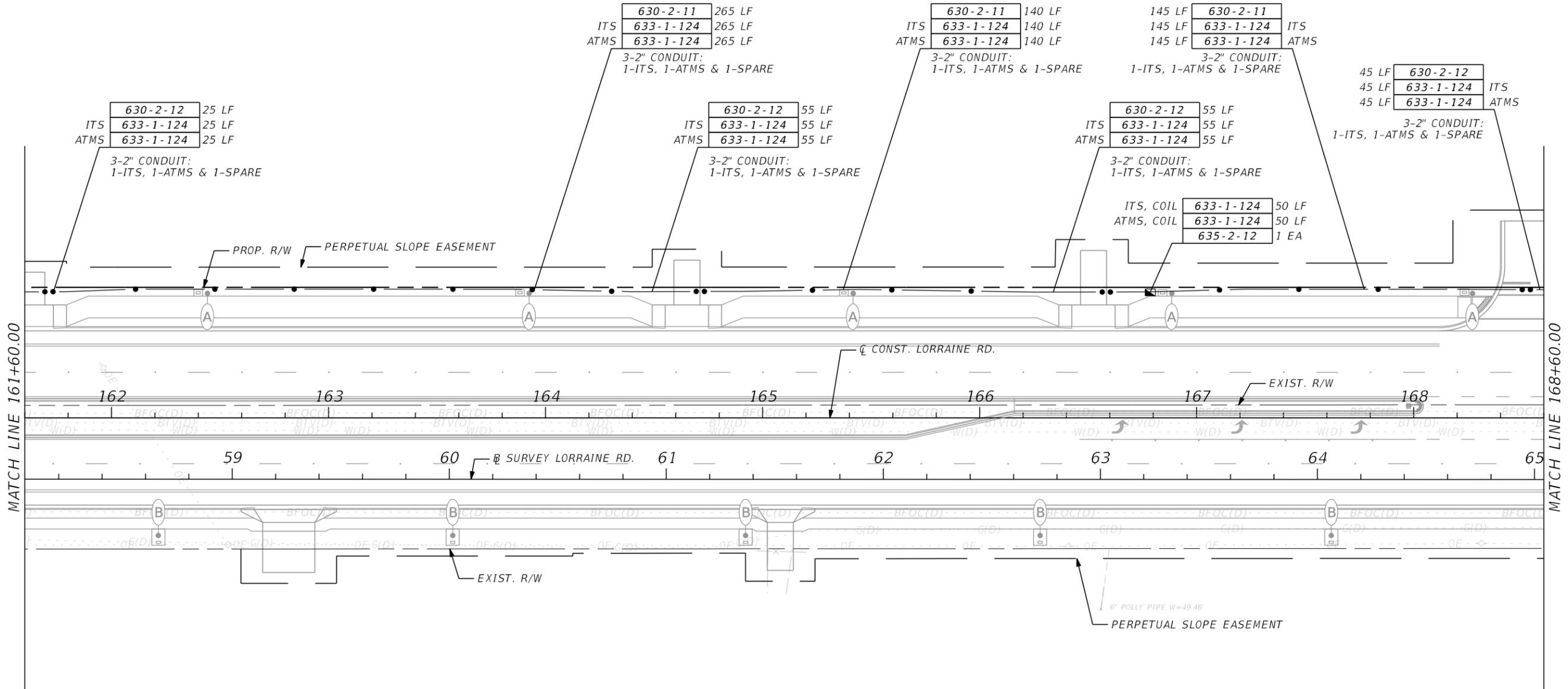
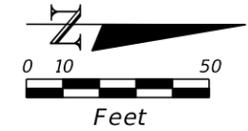
OASIS CHURCH

SOUTHWEST FLORIDA THERAPY ANIMALS

No.	REVISIONS	DATE	BY	SCALE AS NOTED	 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	INTERCONNECT PLAN (8)	SHEET NO.
				DESIGNED BY BK		11/2022		BURAK KONUK		T-19
				DRAWN BY SM		PROJECT NO. 6107660		FL. LICENSE NO. 81581		
				CHECKED BY MO						

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF



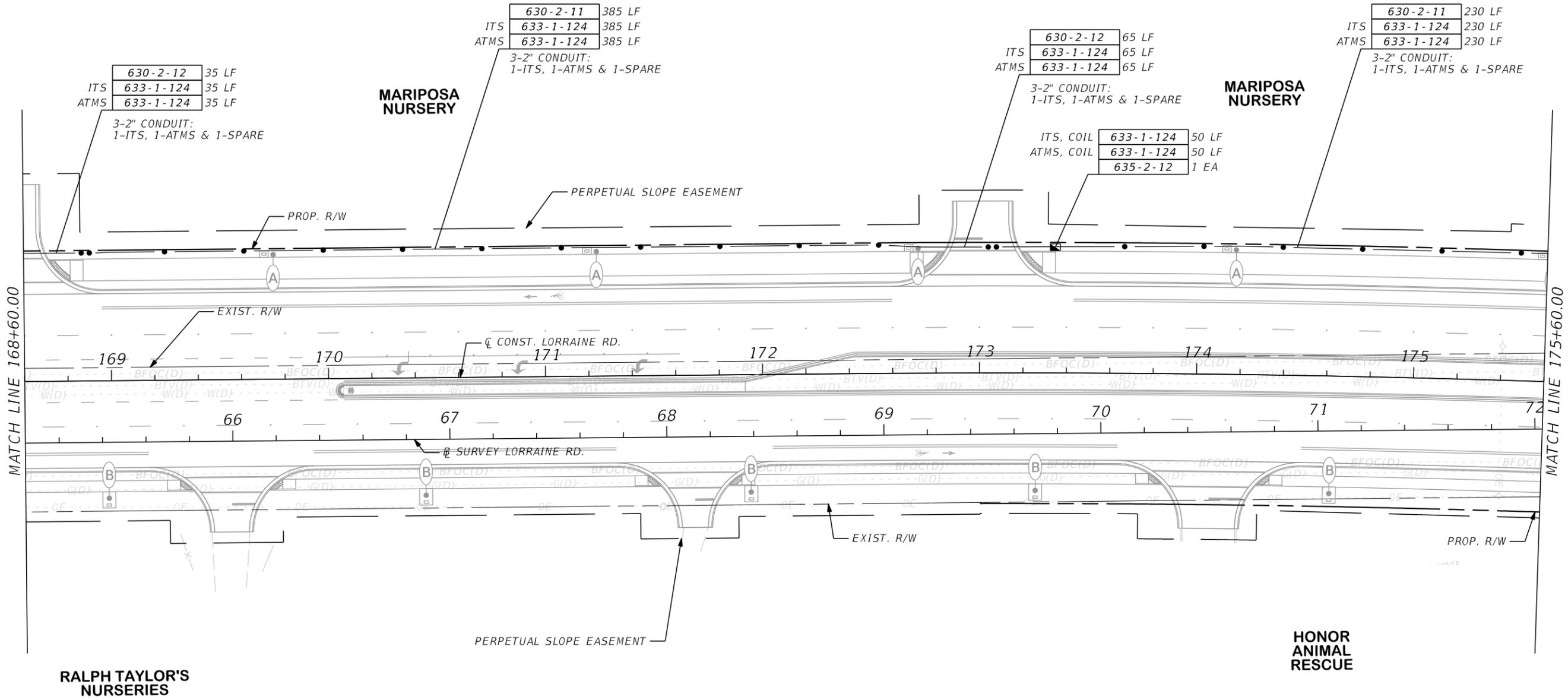
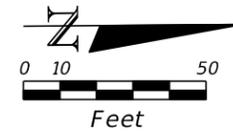
RALPH TAYLOR'S NURSERIES

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (9)	SHEET NO.	T-20
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								
J. PANDYA				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609				11/29/2022 6:21:00 PM Default				PW:\	

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LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF

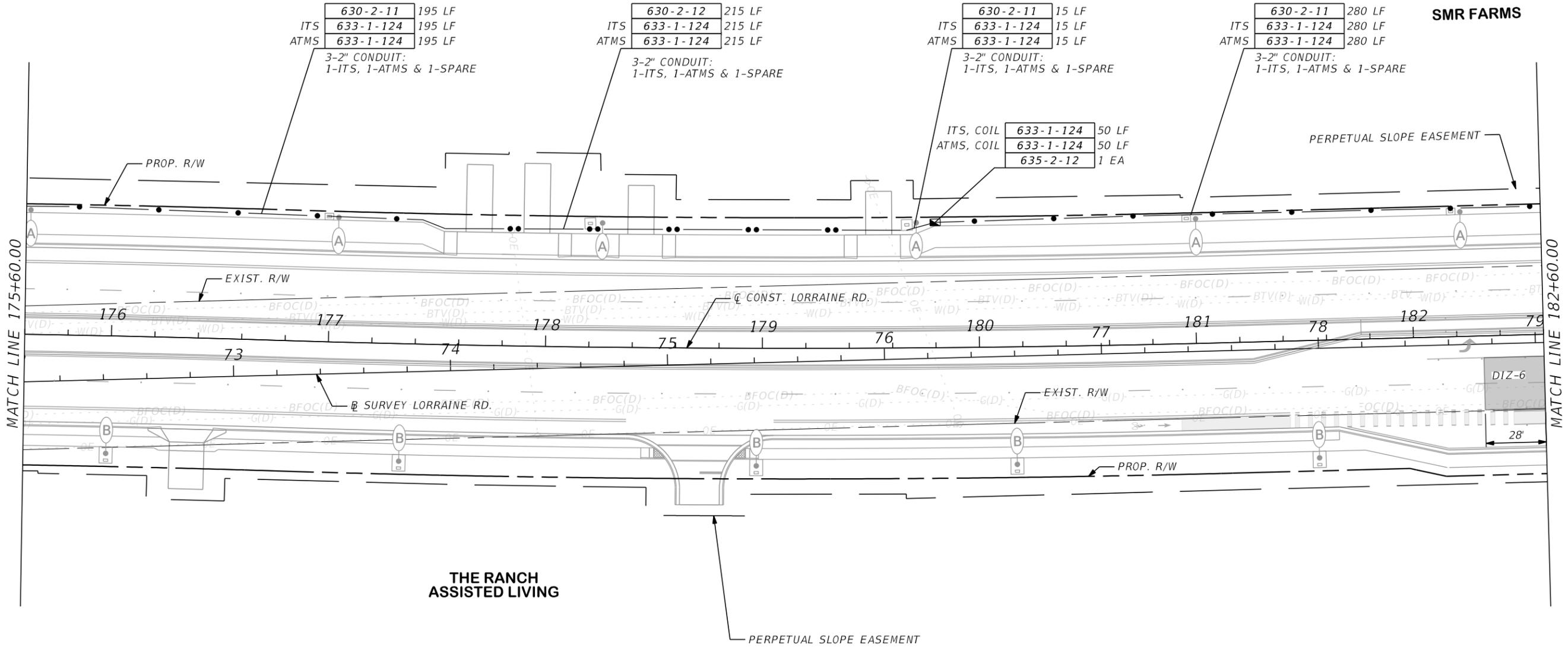
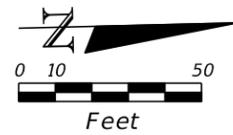


THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-21	
No. REVISIONS DATE BY								INTERCONNECT PLAN (10)					

LORRAINE ROAD

ATMS, 144 SM 633-1-620 730 LF
 ITS, 144 SM 633-1-620 730 LF

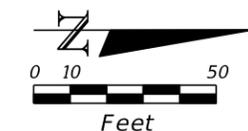


LEGEND

DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (11)	SHEET NO.	T-22
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								
				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609									

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LORRAINE ROAD
 ATMS, 144 SM 633-1-620 370 LF
 ITS, 144 SM 633-1-620 730 LF

ITS, 144 SM COIL 633-1-124 200 LF
 ATMS, 144 SM COIL 633-1-124 200 LF
 ATMS, 12 SM COIL 633-1-420 100 LF
 ATMS, SPLICE 633-2-31 4 EA
 633-3-12 1 EA
 635-2-13 1 EA
 633-3-41 1 EA

630-2-11 350 LF
 ITS 633-1-124 350 LF
 ATMS 633-1-124 350 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

210 LF 630-2-11 ITS
 210 LF 633-1-124 ITS
 210 LF 633-1-124 ATMS
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

SEE SIGNALIZATION PLAN (3) FOR CONDUIT DETAILS
 155 LF 630-2-12 ITS
 155 LF 633-1-124 ITS
 155 LF 633-1-124 ATMS
 8-2" CONDUIT:
 1-ITS, 1-ATMS, 1-SPARE & 5-SIGNALIZATION

50 LF 633-1-124 ITS, COIL
 50 LF 633-1-124 ATMS, COIL
 1 EA 635-2-12

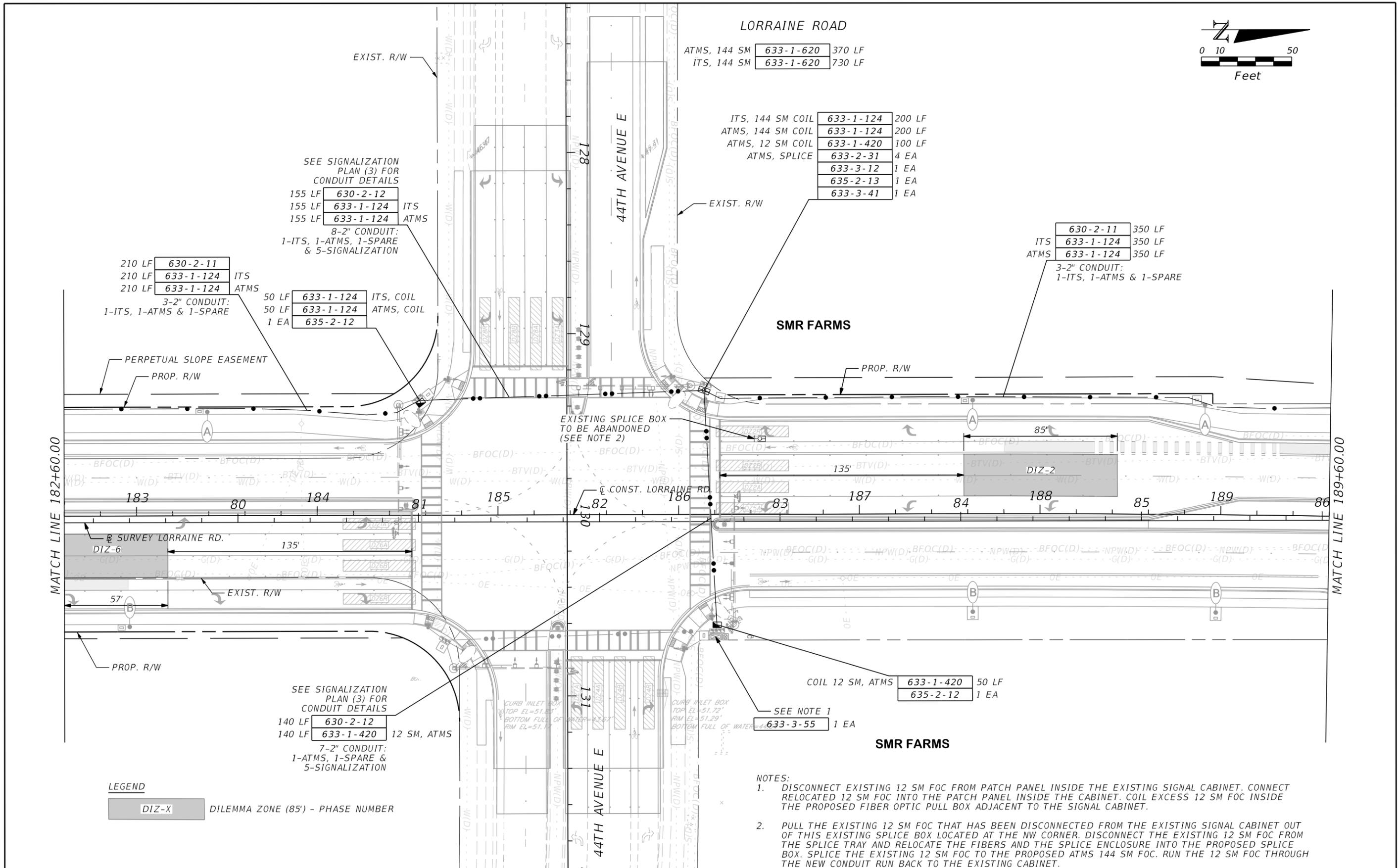
SEE SIGNALIZATION PLAN (3) FOR CONDUIT DETAILS
 140 LF 630-2-12 12 SM, ATMS
 140 LF 633-1-420 7-2" CONDUIT:
 1-ATMS, 1-SPARE & 5-SIGNALIZATION

LEGEND
 DIZ-X DILEMMA ZONE (85') - PHASE NUMBER

COIL 12 SM, ATMS 633-1-420 50 LF
 635-2-12 1 EA

SEE NOTE 1
 633-3-55 1 EA

- NOTES:
- DISCONNECT EXISTING 12 SM FOC FROM PATCH PANEL INSIDE THE EXISTING SIGNAL CABINET. CONNECT RELOCATED 12 SM FOC INTO THE PATCH PANEL INSIDE THE CABINET. COIL EXCESS 12 SM FOC INSIDE THE PROPOSED FIBER OPTIC PULL BOX ADJACENT TO THE SIGNAL CABINET.
 - PULL THE EXISTING 12 SM FOC THAT HAS BEEN DISCONNECTED FROM THE EXISTING SIGNAL CABINET OUT OF THIS EXISTING SPLICE BOX LOCATED AT THE NW CORNER. DISCONNECT THE EXISTING 12 SM FOC FROM THE SPLICE TRAY AND RELOCATE THE FIBERS AND THE SPLICE ENCLOSURE INTO THE PROPOSED SPLICE BOX. SPLICE THE EXISTING 12 SM FOC TO THE PROPOSED ATMS 144 SM FOC. RUN THE 12 SM FOC THROUGH THE NEW CONDUIT RUN BACK TO THE EXISTING CABINET.

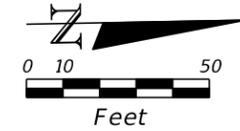


SCALE AS NOTED		<p>HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609</p>	DATE 11/2022	<p>MANATEE COUNTY PUBLIC WORKS</p>	DESIGN ENGINEER BURAK KONUK	<p>INTERCONNECT PLAN (12)</p>	SHEET NO. T-23
DESIGNED BY BK			PROJECT NO. 6107660		FL. LICENSE NO. 81581		
DRAWN BY SM							
CHECKED BY MO							
No.	REVISIONS	DATE	BY				

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF

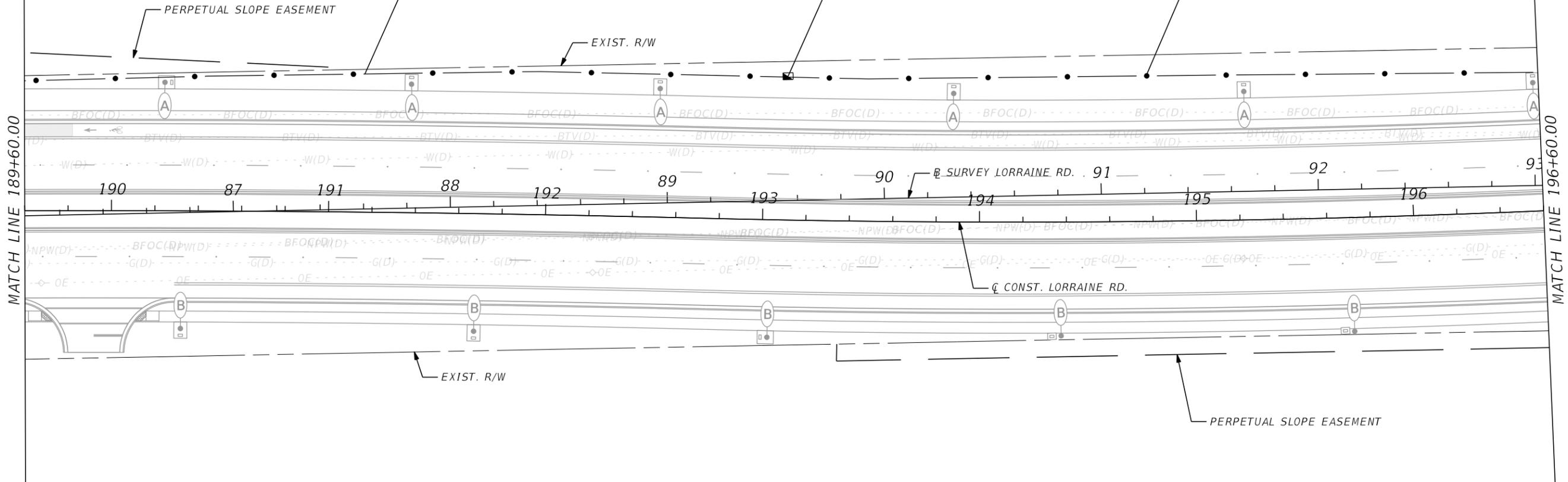


SMR FARMS

ITS 630-2-11 355 LF
 633-1-124 355 LF
 ATMS 633-1-124 355 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

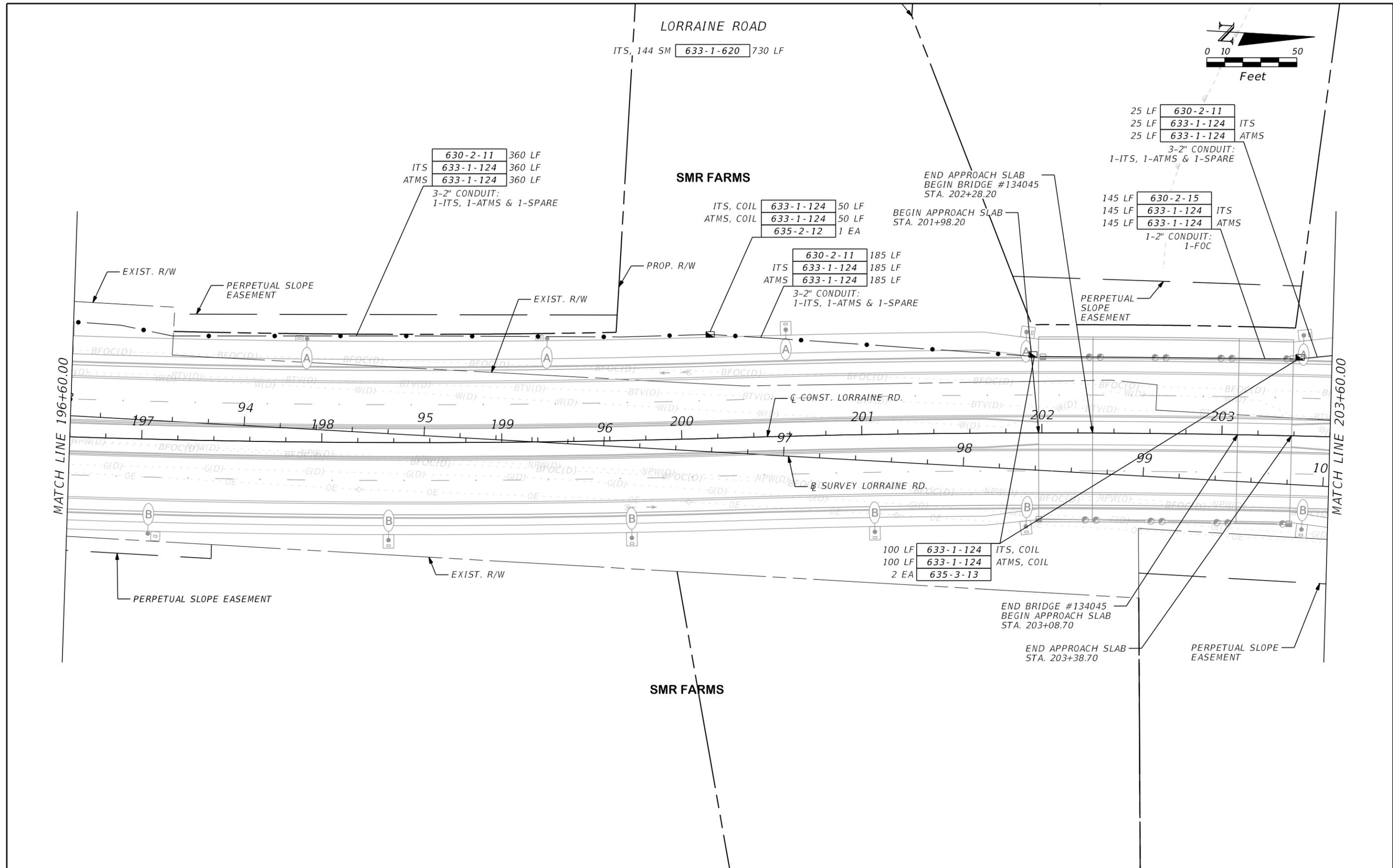
ITS, COIL 633-1-124 50 LF
 ATMS, COIL 633-1-124 50 LF
 635-2-12 1 EA

ITS 630-2-11 350 LF
 633-1-124 350 LF
 ATMS 633-1-124 350 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE



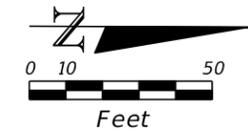
SMR FARMS

SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-24	
No. REVISIONS DATE BY										INTERCONNECT PLAN (13)			



No.	REVISIONS			SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (14)	SHEET NO.	T-25
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								
				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		11/29/2022 6:22:55 PM Default							

LORRAINE ROAD
ITS, 144 SM 633-1-620 730 LF



JH DIESEL
&4X4

ITS 630-2-11 250 LF
ATMS 633-1-124 250 LF
633-1-124 250 LF
3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-12 50 LF
ATMS 633-1-124 50 LF
633-1-124 50 LF
3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

90 LF 630-2-12
90 LF 633-1-124 ITS
90 LF 633-1-124 ATMS
3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

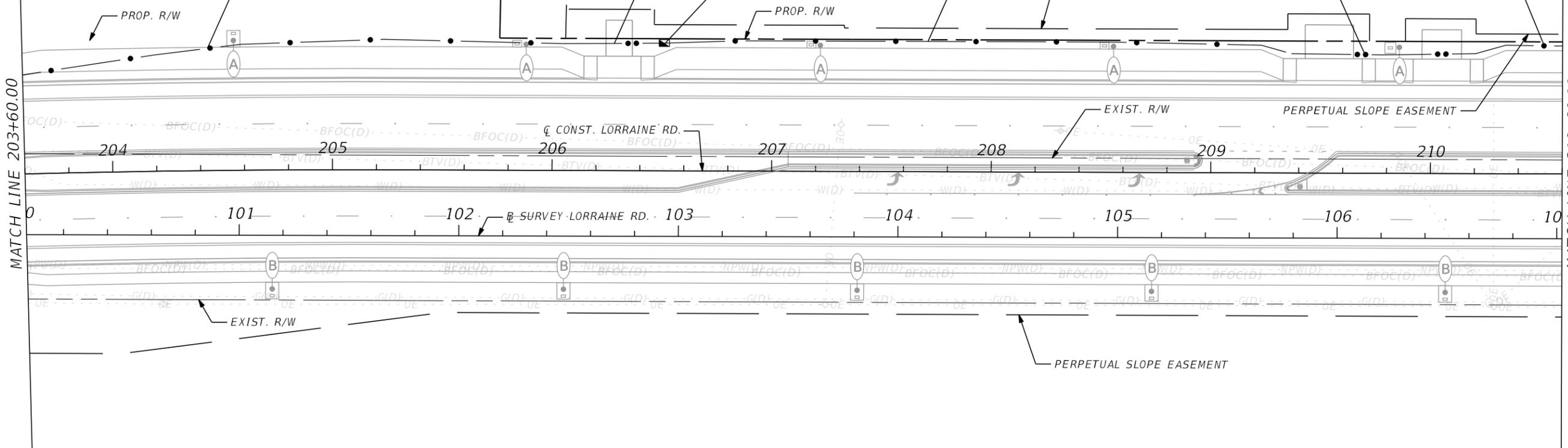
ITS, COIL 633-1-124 50 LF
ATMS, COIL 633-1-124 50 LF
635-2-12 1 EA

ITS 630-2-11 290 LF
ATMS 633-1-124 290 LF
633-1-124 290 LF
3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

45 LF 630-2-11
45 LF 633-1-124 ITS
45 LF 633-1-124 ATMS
3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

MATCH LINE 203+60.00

MATCH LINE 210+60.00

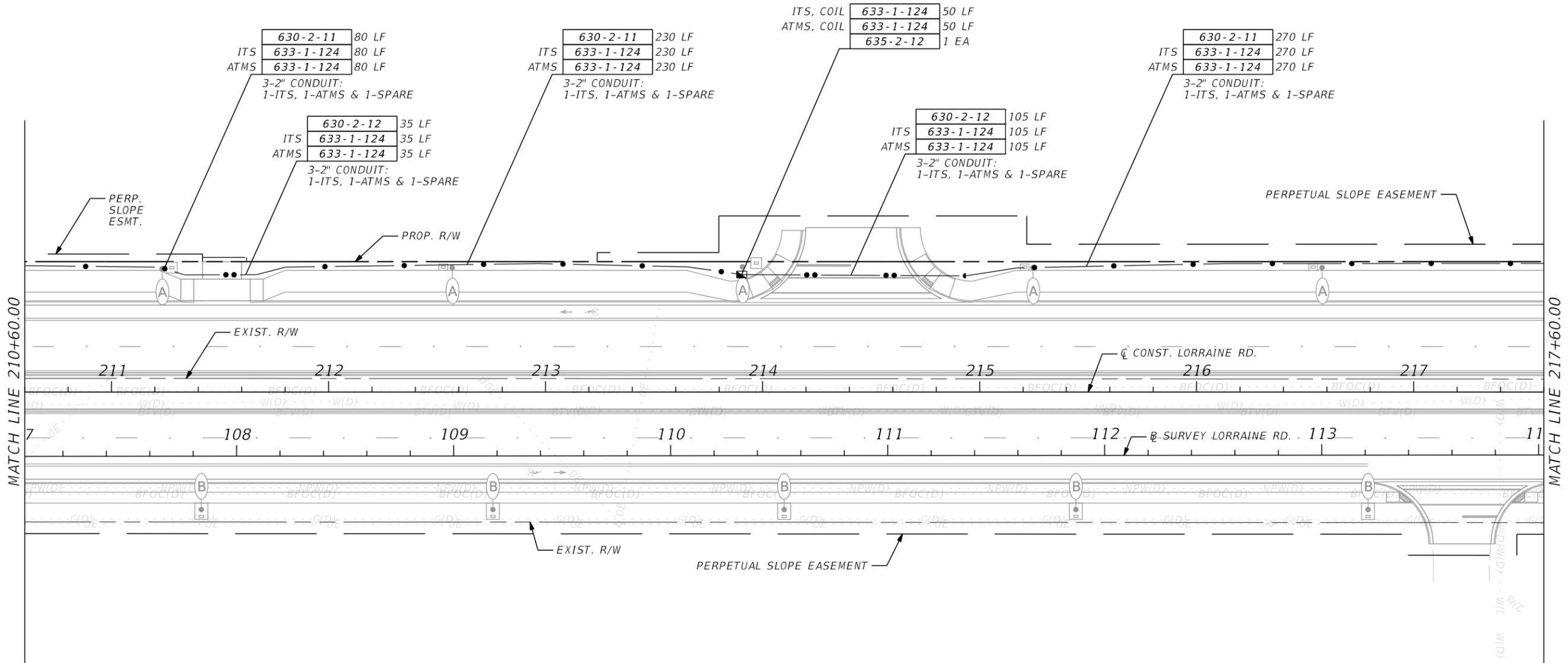
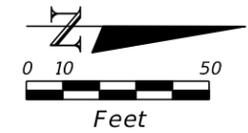


SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-26 INTERCONNECT PLAN (15)	
No.	REVISIONS	DATE	BY	11/29/2022 6:23:21 PM Default									

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF



MATCH LINE 210+60.00

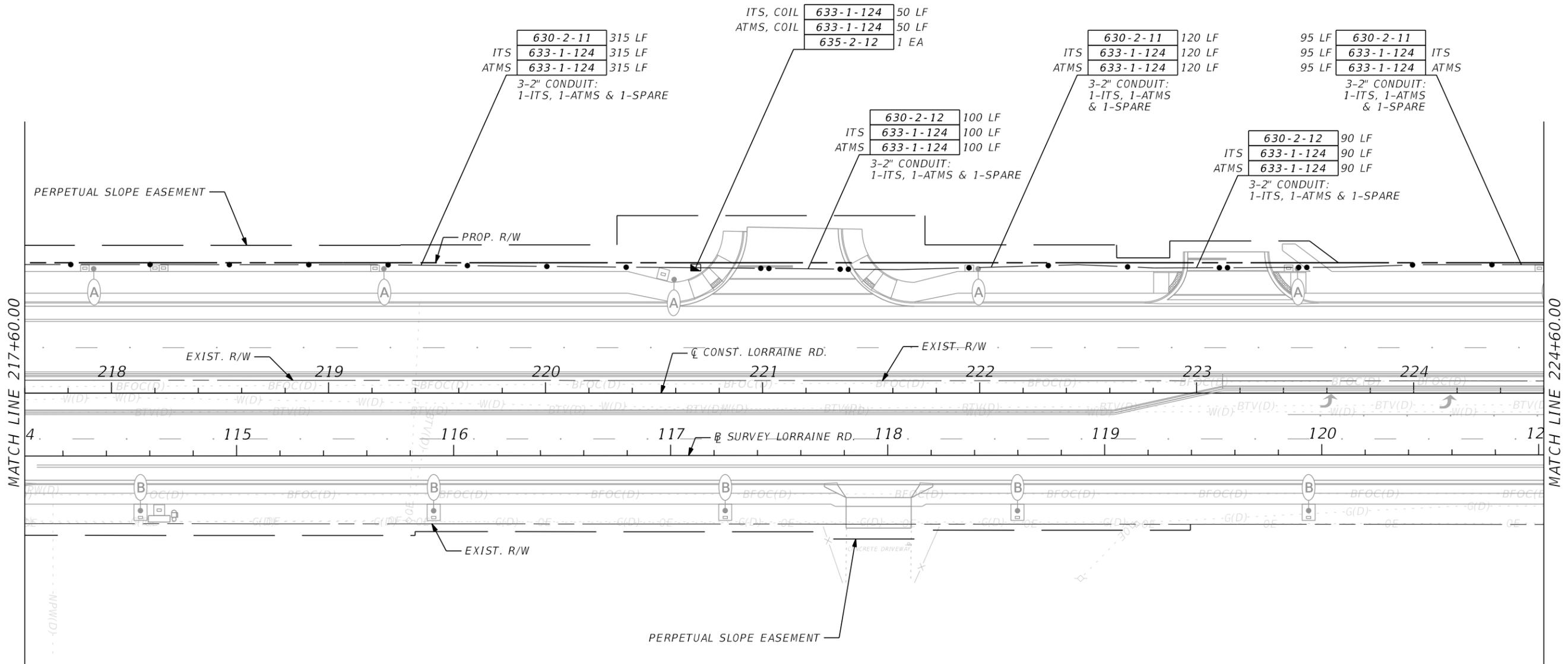
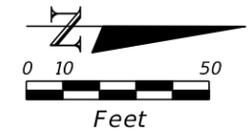
MATCH LINE 217+60.00

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (16)	SHEET NO.	T-27
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				DRAWN BY	SM	HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609							
				CHECKED BY	MO								

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF

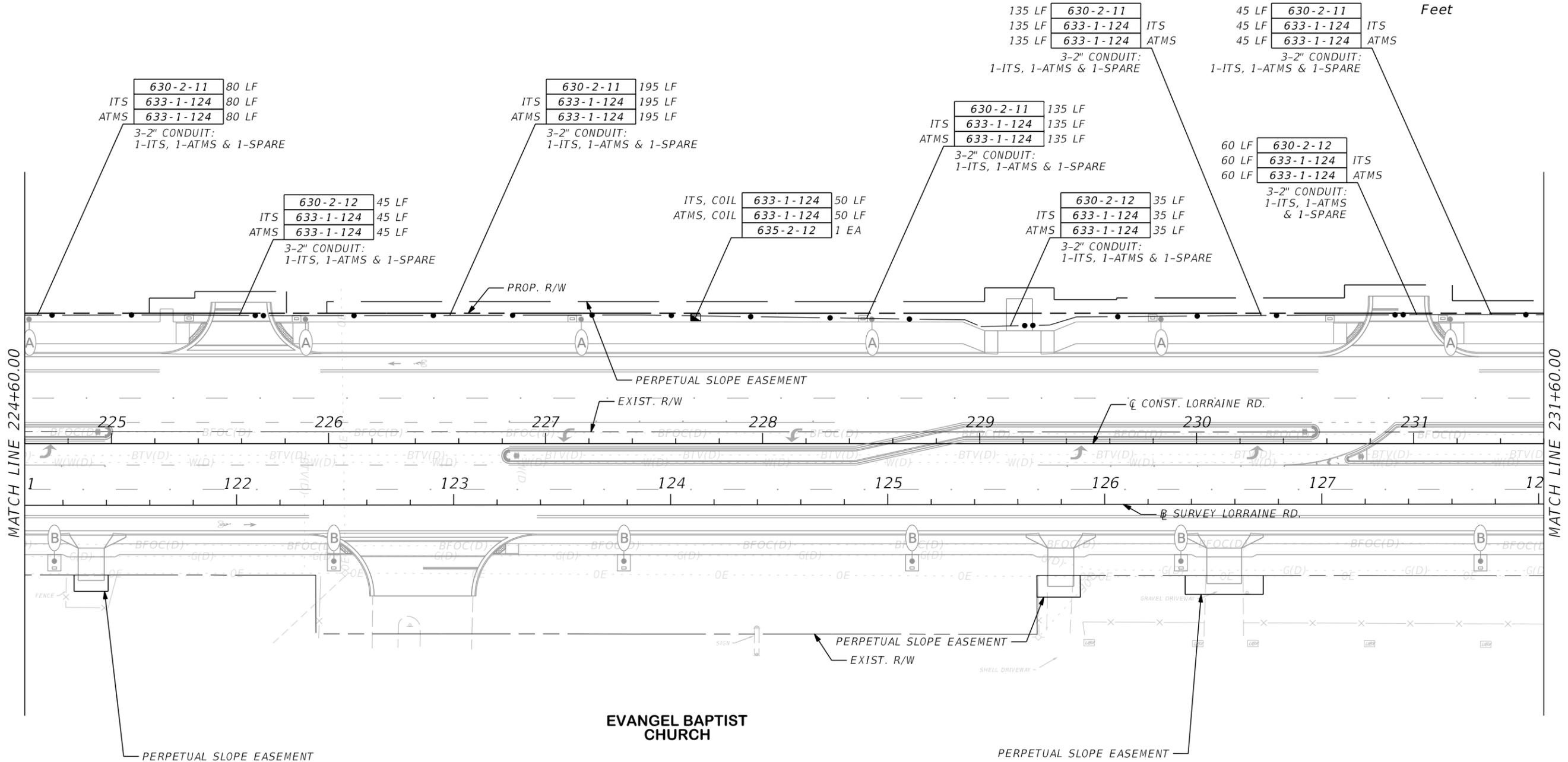
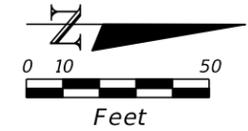


No.	REVISIONS			SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (17)	SHEET NO.	T-28
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								
				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		11/29/2022 6:24:09 PM Default							

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF



ITS 630-2-11 80 LF
 ATMS 633-1-124 80 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-11 195 LF
 ATMS 633-1-124 195 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

135 LF 630-2-11
 135 LF 633-1-124 ITS
 135 LF 633-1-124 ATMS
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

45 LF 630-2-11
 45 LF 633-1-124 ITS
 45 LF 633-1-124 ATMS
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-12 45 LF
 ATMS 633-1-124 45 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS, COIL 633-1-124 50 LF
 ATMS, COIL 633-1-124 50 LF
 635-2-12 1 EA

ITS 630-2-11 135 LF
 ATMS 633-1-124 135 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

ITS 630-2-12 35 LF
 ATMS 633-1-124 35 LF
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

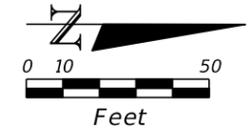
60 LF 630-2-12
 60 LF 633-1-124 ITS
 60 LF 633-1-124 ATMS
 3-2" CONDUIT:
 1-ITS, 1-ATMS & 1-SPARE

SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-29 INTERCONNECT PLAN (18)	
No.	REVISIONS	DATE	BY	11/29/2022 6:24:36 PM Default									

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF



ITS	630-2-11	310 LF
ATMS	633-1-124	310 LF
	633-1-124	310 LF

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

SAVANNA
SUBDIVISION
AT LAKEWOOD RANCH

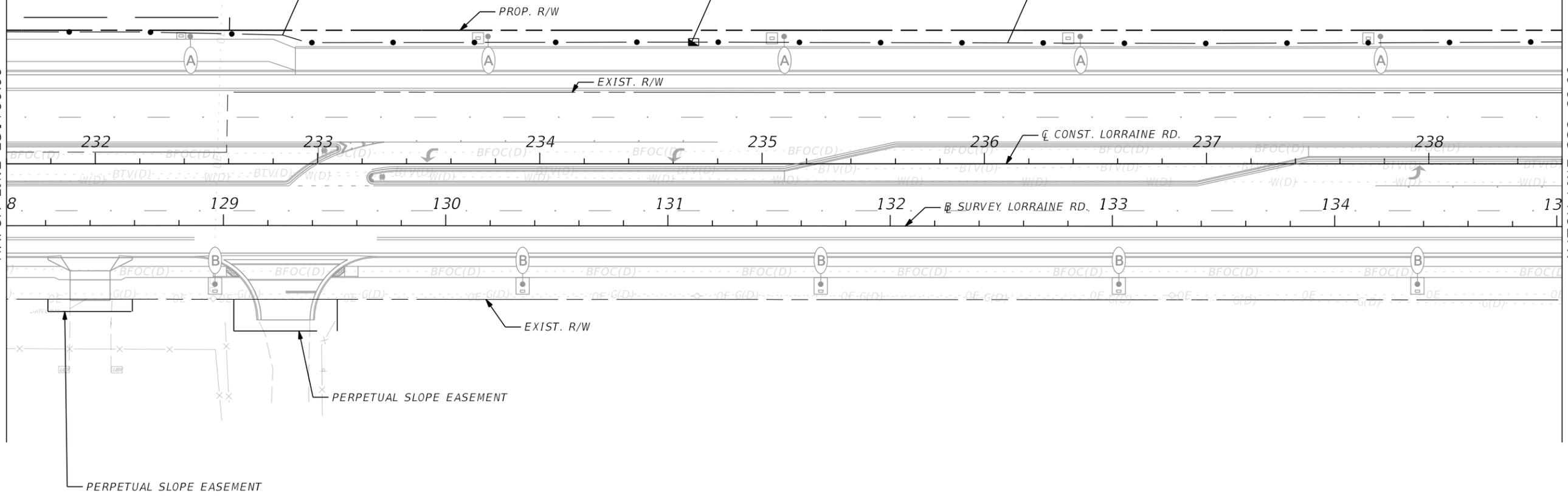
ITS, COIL	633-1-124	50 LF
ATMS, COIL	633-1-124	50 LF
	635-2-12	1 EA

ITS	630-2-11	395 LF
ATMS	633-1-124	395 LF
	633-1-124	395 LF

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

MATCH LINE 231+60.00

MATCH LINE 238+60.00

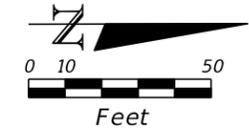


No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (19)	SHEET NO.	T-30
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								
J.PANDYA				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609				11/29/2022 6:24:59 PM Default				PW:\	

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LORRAINE ROAD

ITS, 144 SM 633-1-620 730 LF



SAVANNA SUBDIVISION AT LAKEWOOD RANCH

ITS	630-2-11	40 LF
ATMS	633-1-124	40 LF
	633-1-124	40 LF
3-2" CONDUIT: 1-ITS, 1-ATMS & 1-SPARE		

FLORIDA ROSEMARY DR

ITS	630-2-12	165 LF
ATMS	633-1-124	165 LF
	633-1-124	165 LF
3-2" CONDUIT: 1-ITS, 1-ATMS & 1-SPARE		

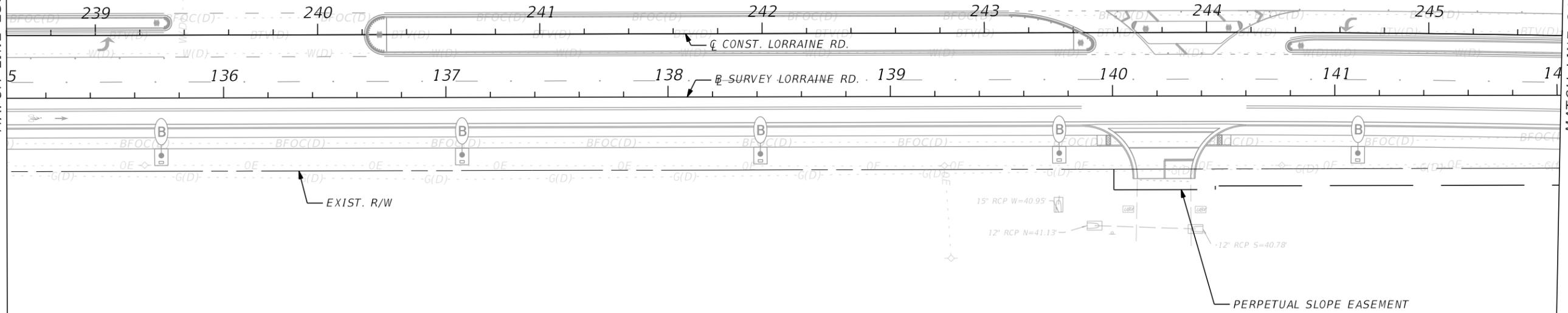
ITS, COIL	633-1-124	50 LF
ATMS, COIL	633-1-124	50 LF
	635-2-12	1 EA

ITS	630-2-11	505 LF
ATMS	633-1-124	505 LF
	633-1-124	505 LF
3-2" CONDUIT: 1-ITS, 1-ATMS & 1-SPARE		

SAVANNA SUBDIVISION AT LAKEWOOD RANCH

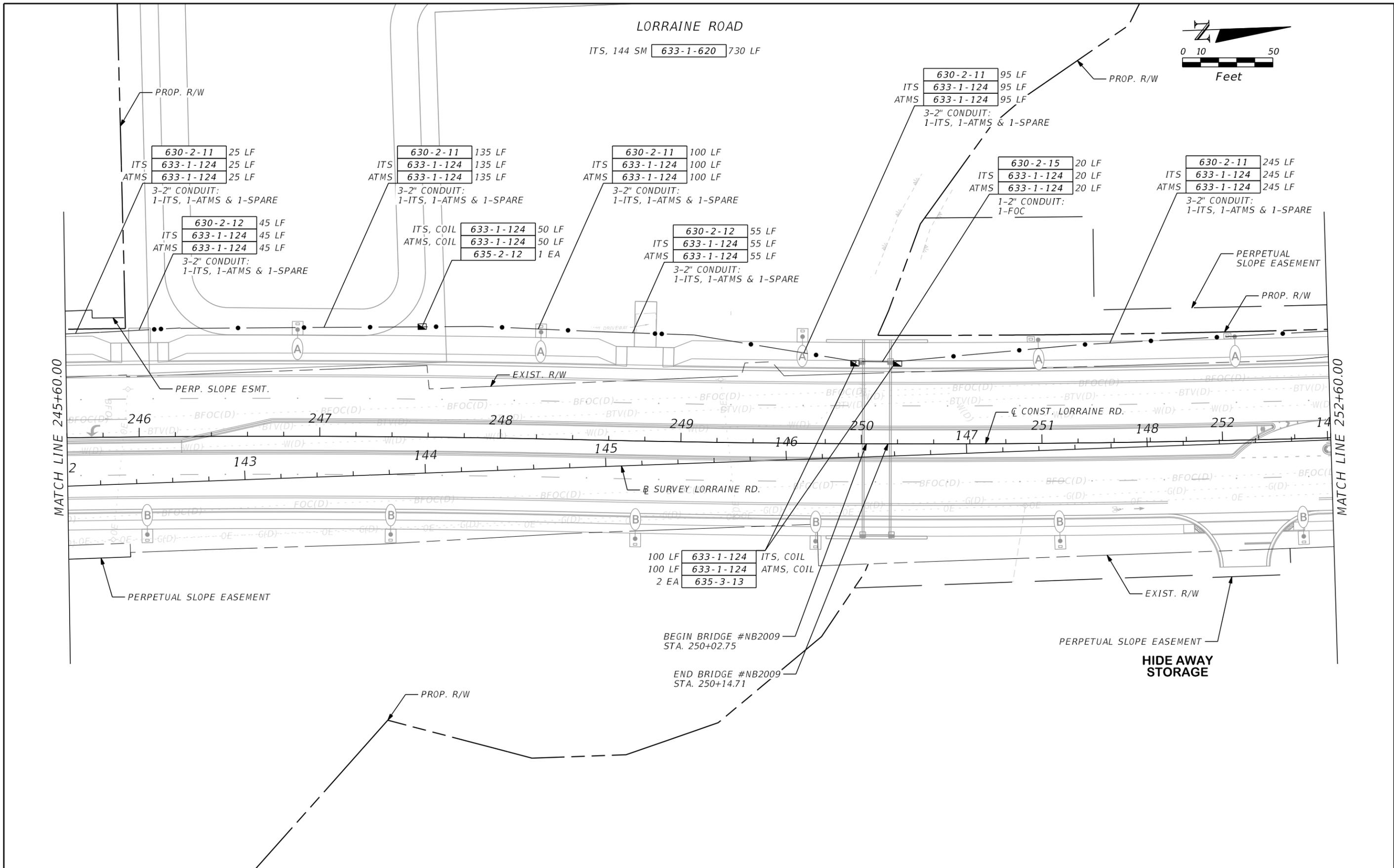
MATCH LINE 238+60.00

MATCH LINE 245+60.00



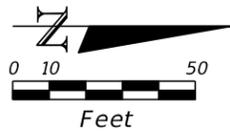
No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	DESIGN ENGINEER	BURAK KONUK	FL. LICENSE NO.	81581	SHEET NO.	T-31
				DESIGNED BY	BK								
					HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		MANATEE COUNTY PUBLIC WORKS	INTERCONNECT PLAN (20)					

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



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SCALE AS NOTED DESIGNED BY BK DRAWN BY SM CHECKED BY MO				HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609		DATE 11/2022 PROJECT NO. 6107660		MANATEE COUNTY PUBLIC WORKS		DESIGN ENGINEER BURAK KONUK FL. LICENSE NO. 81581		SHEET NO. T-32	
No. REVISIONS DATE BY				11/29/2022 6:25:47 PM Default		PW:\		INTERCONNECT PLAN (21)		T-32			



LORRAINE ROAD

ITS, 144 SM 633-1-620 520 LF

EXISTING ITS 144 SM FOC TO REMAIN UNDER FPID 196022-6-52-01

ITS	630-2-11	170 LF
ATMS	633-1-124	170 LF
ATMS	633-1-124	170 LF

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

ITS, COIL	633-1-124	50 LF
ATMS, COIL	633-1-124	50 LF
	635-2-12	1 EA

ITS	630-2-11	290 LF
ATMS	633-1-124	290 LF
ATMS	633-1-124	290 LF

3-2" CONDUIT:
1-ITS, 1-ATMS & 1-SPARE

144 EA	633-2-31
1 EA	633-3-51
12 EA	633-3-52

SEE NOTES

MATCH LINE 252+60.00

9 253 150 254 151 255 152 256 153 257 154 258 155 259

FADE AWAY 64 BARBER SALON

EXISTING ITS FIBER OPTIC SPLICE BOX TO BE REMOVED. THE EXISTING ITS 144 SM FOC TO BE CUT FROM EXISTING SPLICE BOX AT STA. 257+73 AND THEN REMOVED.

HIDE AWAY STORAGE

END INTERCONNECT STA. 257+73.26

- NOTES:
- THE EXISTING ITS 144 SM FOC TRUNK LINE THAT RUNS FROM THIS EXISTING SPLICE BOX AT APPROXIMATELY STA. 257+73 TO THE EXISTING SPLICE BOX AT APPROXIMATELY STA. 255+40 ON LORRAINE RD WILL BE CUT AND REMOVED.
 - PERFORM A FULL BUTT SPLICE TO CONNECT THE PROPOSED 144 SM FOC RUNNING FROM LORRAINE RD TO THE EXISTING 144 SM FOC RUNNING FROM SR 64 INSIDE THIS EXISTING SPLICE BOX LOCATED AT APPROXIMATELY STA. 257+73.

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	INTERCONNECT PLAN (22)	SHEET NO.	T-33
				DRAWN BY	SM		PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				CHECKED BY	MO									

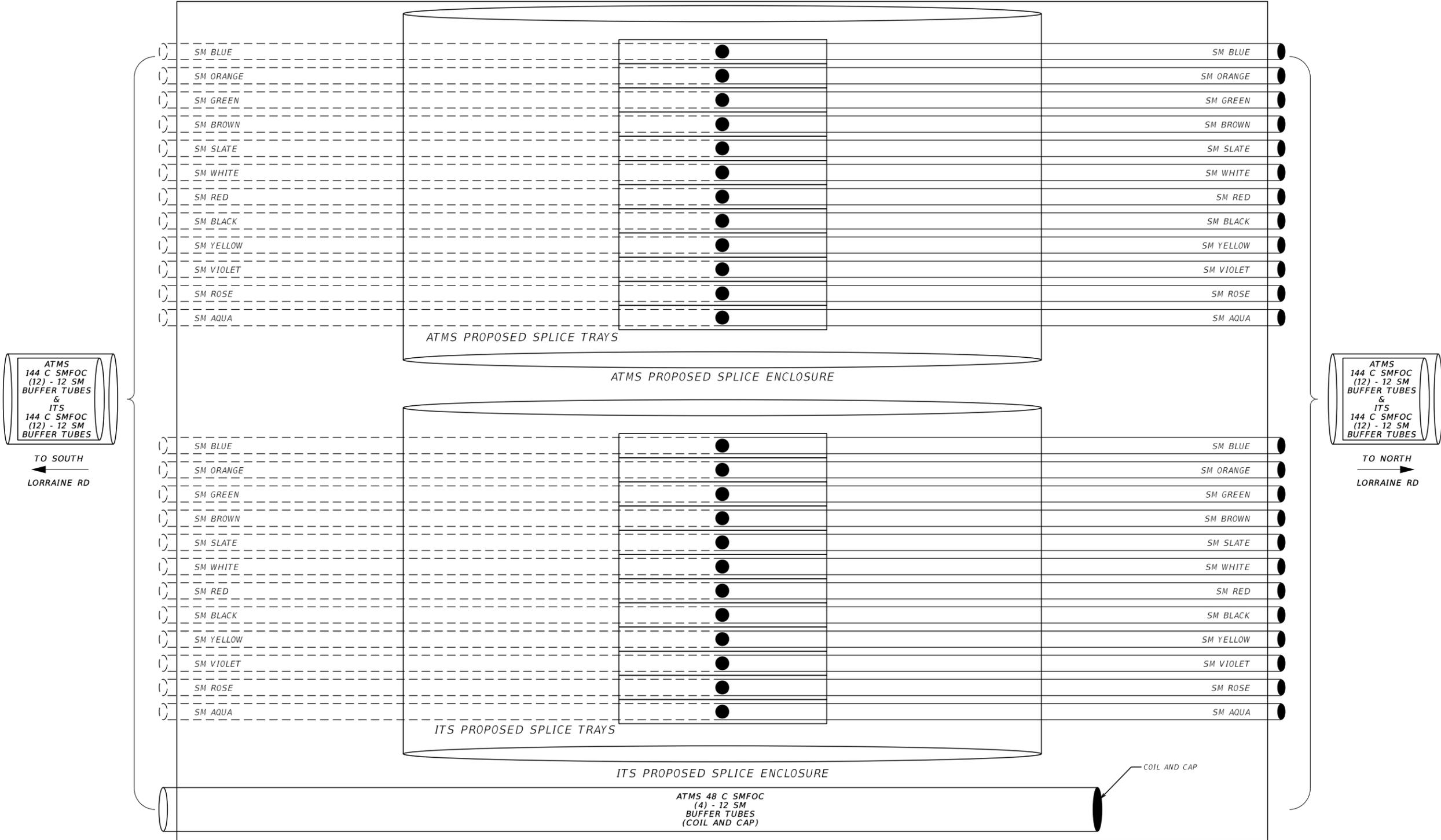
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LORRAINE RD

LEGEND	DESCRIPTION
●	FUSION SPlice
—	PROPOSED SECTION OF FIBER
- - -	EXISTING SECTION OF FIBER
⊗	COIL AND CAP

COLOR CODE TIA/EIA 598A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

- NOTES:
 1. UNUSED FIBERS SHALL BE LEFT COILED, CAPPED, AND STORED IN SPLICE TRAY.
 2. UNUSED BUFFER TUBES SHALL BE LEFT COILED AND STORED IN SPLICE TRAY.



No.	REVISIONS	DATE	BY

SCALE AS NOTED
 DESIGNED BY BK
 DRAWN BY SM
 CHECKED BY MO

HDR
 HDR ENGINEERING, INC.
 4830 W KENNEDY BLVD, SUITE 400
 TAMPA, FL 33609

DATE 11/2022
PROJECT NO. 6107660

Manatee County
 MANATEE COUNTY
 PUBLIC WORKS

DESIGN ENGINEER BURAK KONUK
FL. LICENSE NO. 81581

SPLICING DIAGRAM (1)

SHEET NO. T-35

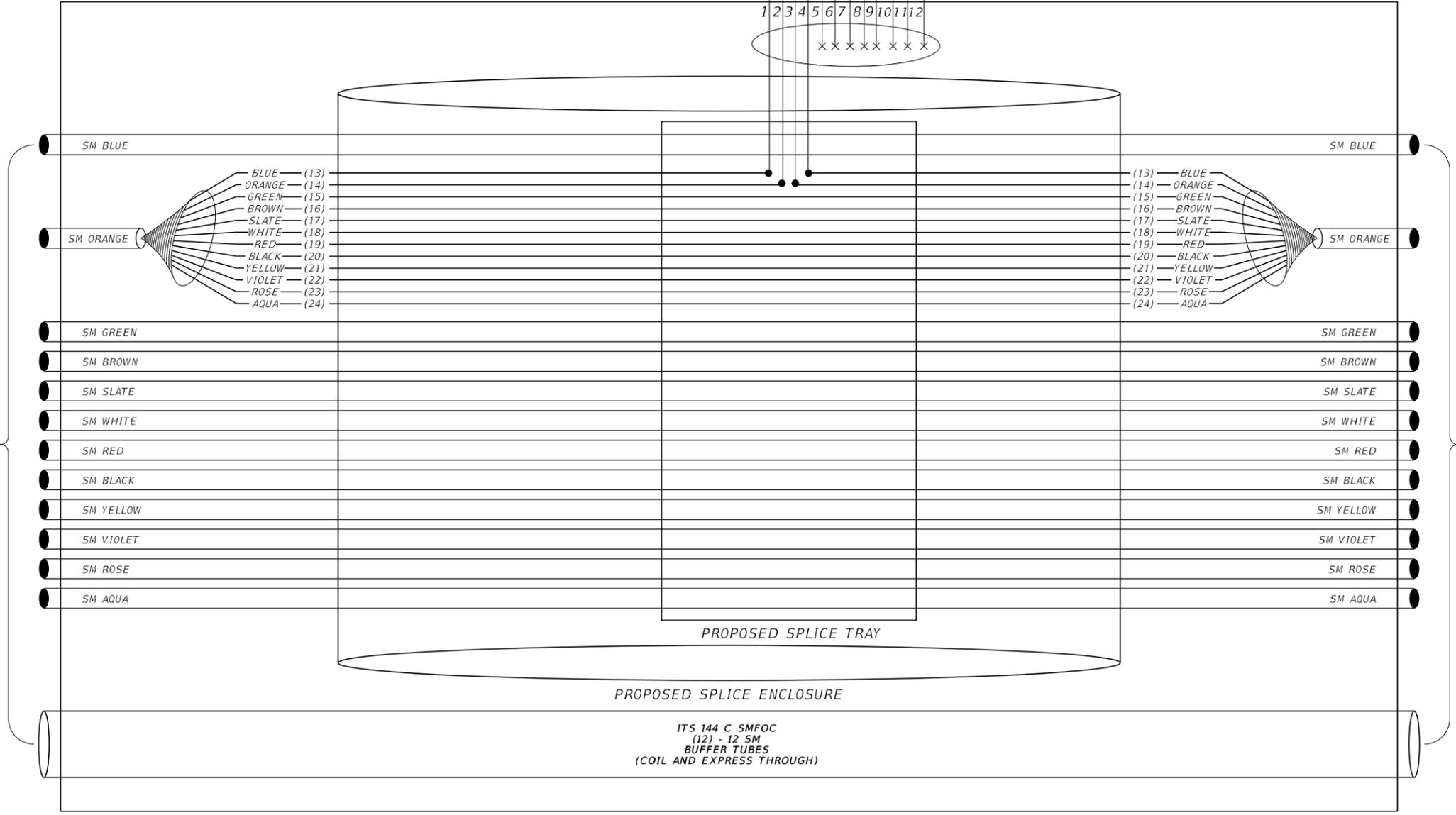
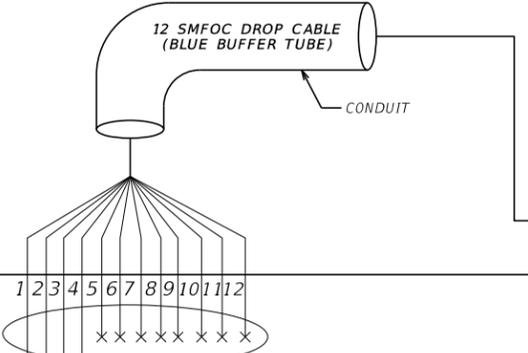
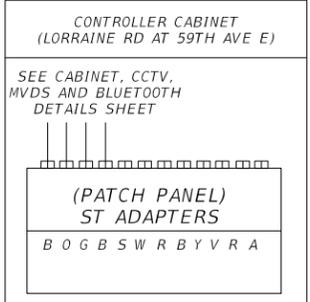
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LORRAINE RD

LEGEND	DESCRIPTION
●	FUSION SPLICE
—	PROPOSED SECTION OF FIBER
- - -	EXISTING SECTION OF FIBER
×	COIL AND CAP

- NOTES:
 1. UNUSED FIBERS SHALL BE LEFT COILED, CAPPED, AND STORED IN SPLICE TRAY.
 2. UNUSED BUFFER TUBES SHALL BE LEFT COILED AND STORED IN SPLICE TRAY.

COLOR CODE TIA/EIA 598A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA



PROPOSED SPLICE BOX
STA 114+18

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DATE	11/2022	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BURAK KONUK	SPLICING DIAGRAM (2)	SHEET NO.	T-36
				DESIGNED BY	BK	PROJECT NO.	6107660		FL. LICENSE NO.	81581			
				DRAWN BY	SM								
				CHECKED BY	MO								

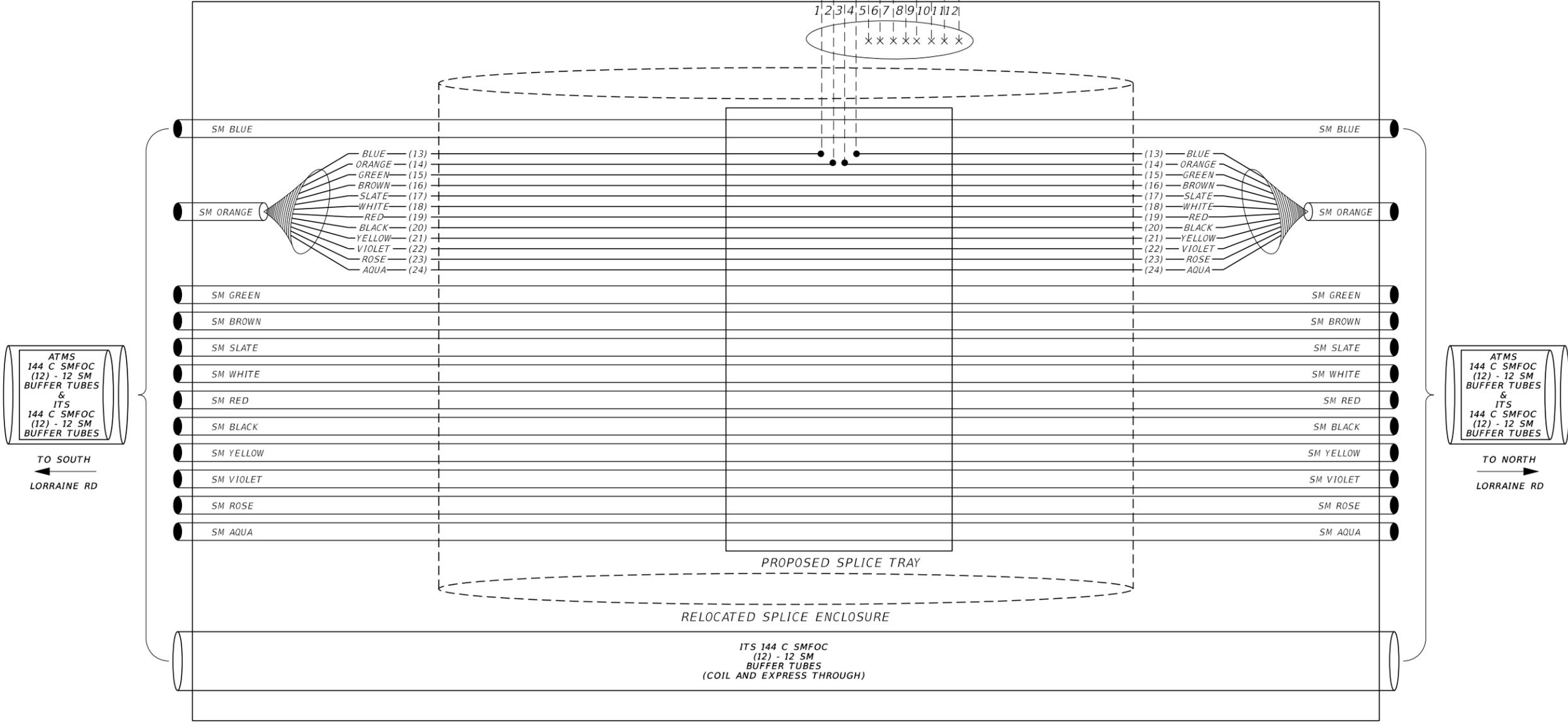
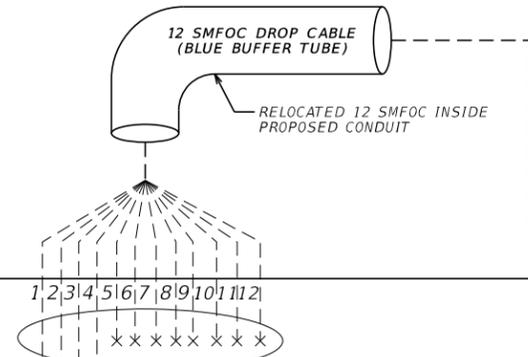
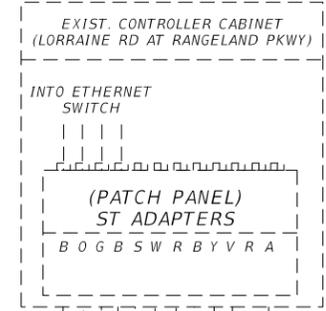
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LORRAINE RD

LEGEND	DESCRIPTION
●	FUSION SPLICE
—	PROPOSED SECTION OF FIBER
- - -	EXISTING SECTION OF FIBER
×	COIL AND CAP

- NOTES:
 1. UNUSED FIBERS SHALL BE LEFT COILED, CAPPED, AND STORED IN SPLICE TRAY.
 2. UNUSED BUFFER TUBES SHALL BE LEFT COILED AND STORED IN SPLICE TRAY.

COLOR CODE TIA/EIA 598A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA



PROPOSED SPLICE BOX
STA 132+83

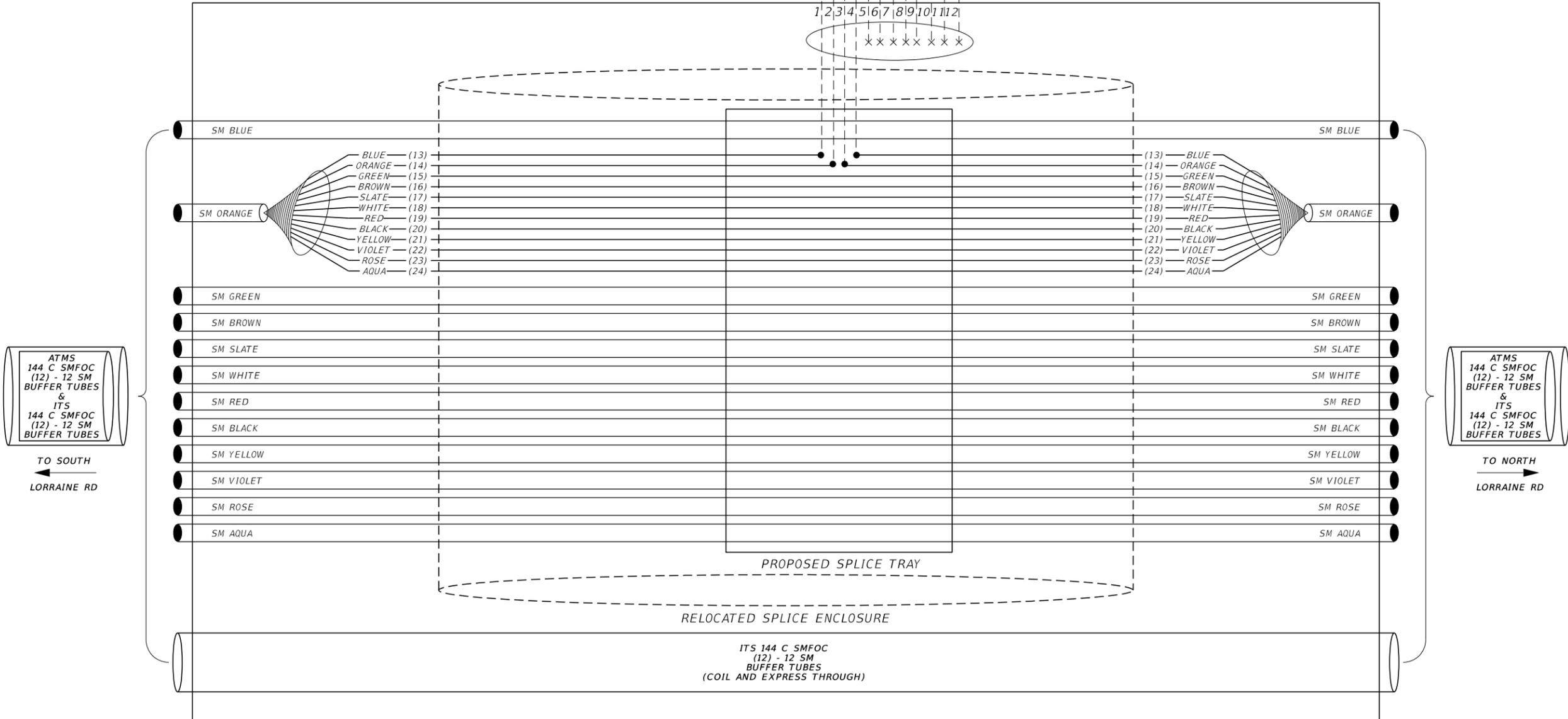
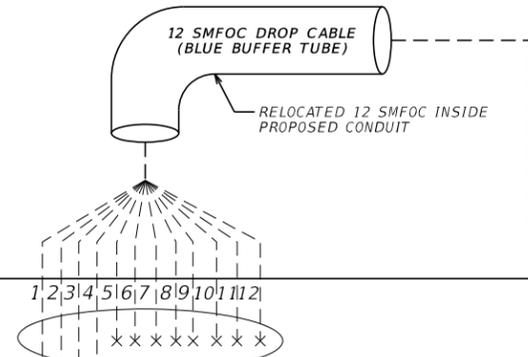
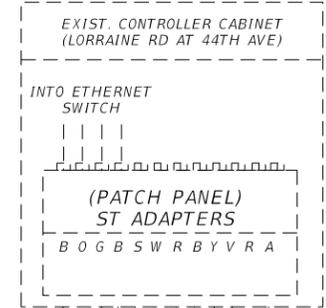
No.	REVISIONS	DATE	BY	SCALE AS NOTED	 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE 11/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER BURAK KONUK	SHEET NO. T-37
				DESIGNED BY BK		PROJECT NO. 6107660		FL. LICENSE NO. 81581	
				DRAWN BY SM					
				CHECKED BY MO					

LORRAINE RD

LEGEND	DESCRIPTION
●	FUSION SPLICE
—	PROPOSED SECTION OF FIBER
- - -	EXISTING SECTION OF FIBER
×	COIL AND CAP

- NOTES:
 1. UNUSED FIBERS SHALL BE LEFT COILED, CAPPED, AND STORED IN SPLICE TRAY.
 2. UNUSED BUFFER TUBES SHALL BE LEFT COILED AND STORED IN SPLICE TRAY.

COLOR CODE TIA/EIA 598A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA



PROPOSED SPLICE BOX
STA 186+14

No.	REVISIONS	DATE	BY	SCALE AS NOTED	DESIGNED BY BK	DRAWN BY SM	CHECKED BY MO	DATE 11/2022	PROJECT NO. 6107660	DESIGN ENGINEER BURAK KONUK	FL. LICENSE NO. 81581	SHEET NO. T-38
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HDR
 HDR ENGINEERING, INC.
 4830 W KENNEDY BLVD, SUITE 400
 TAMPA, FL 33609

Manatee County
 MANATEE COUNTY
 PUBLIC WORKS

SPLICING DIAGRAM (4)

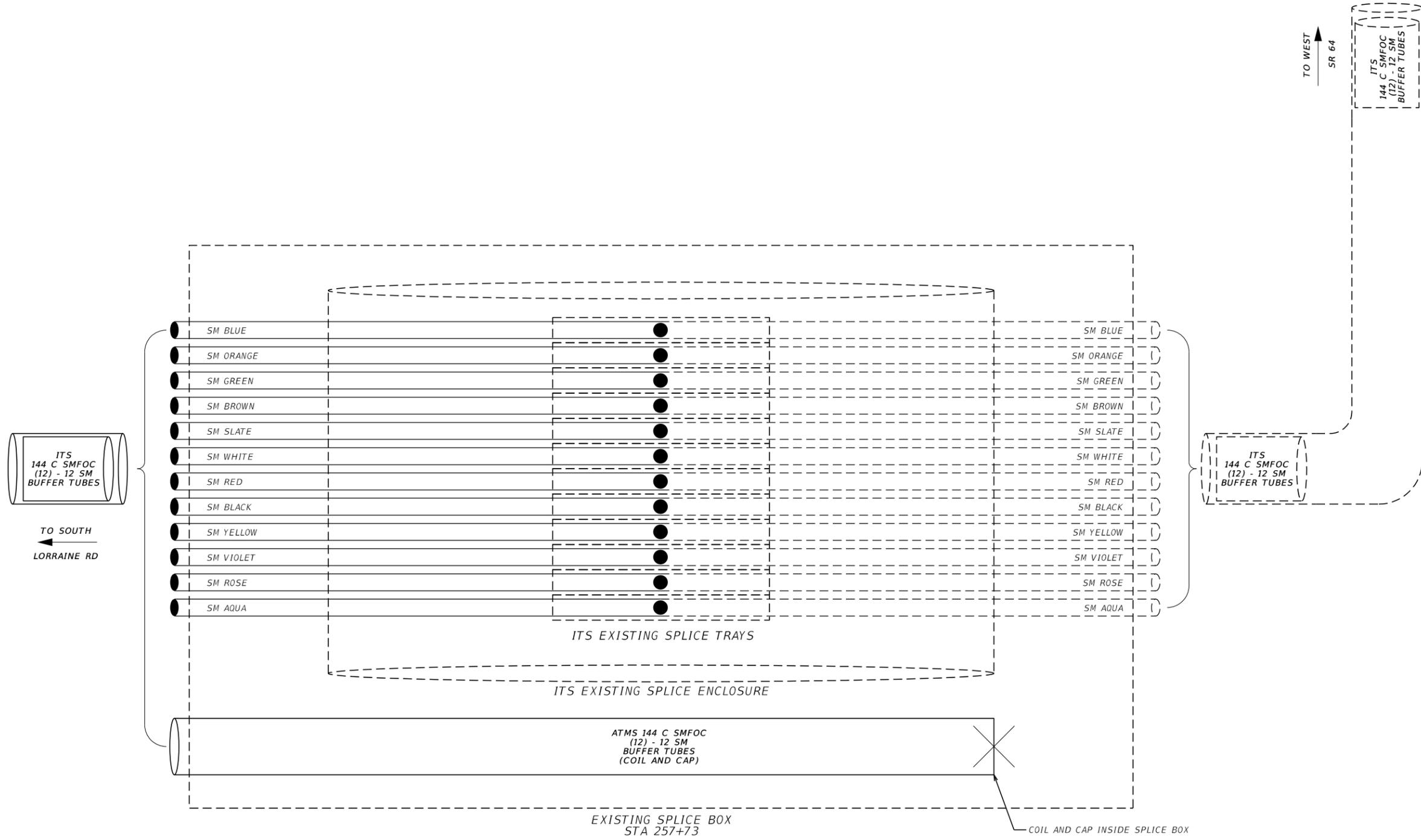
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LORRAINE RD

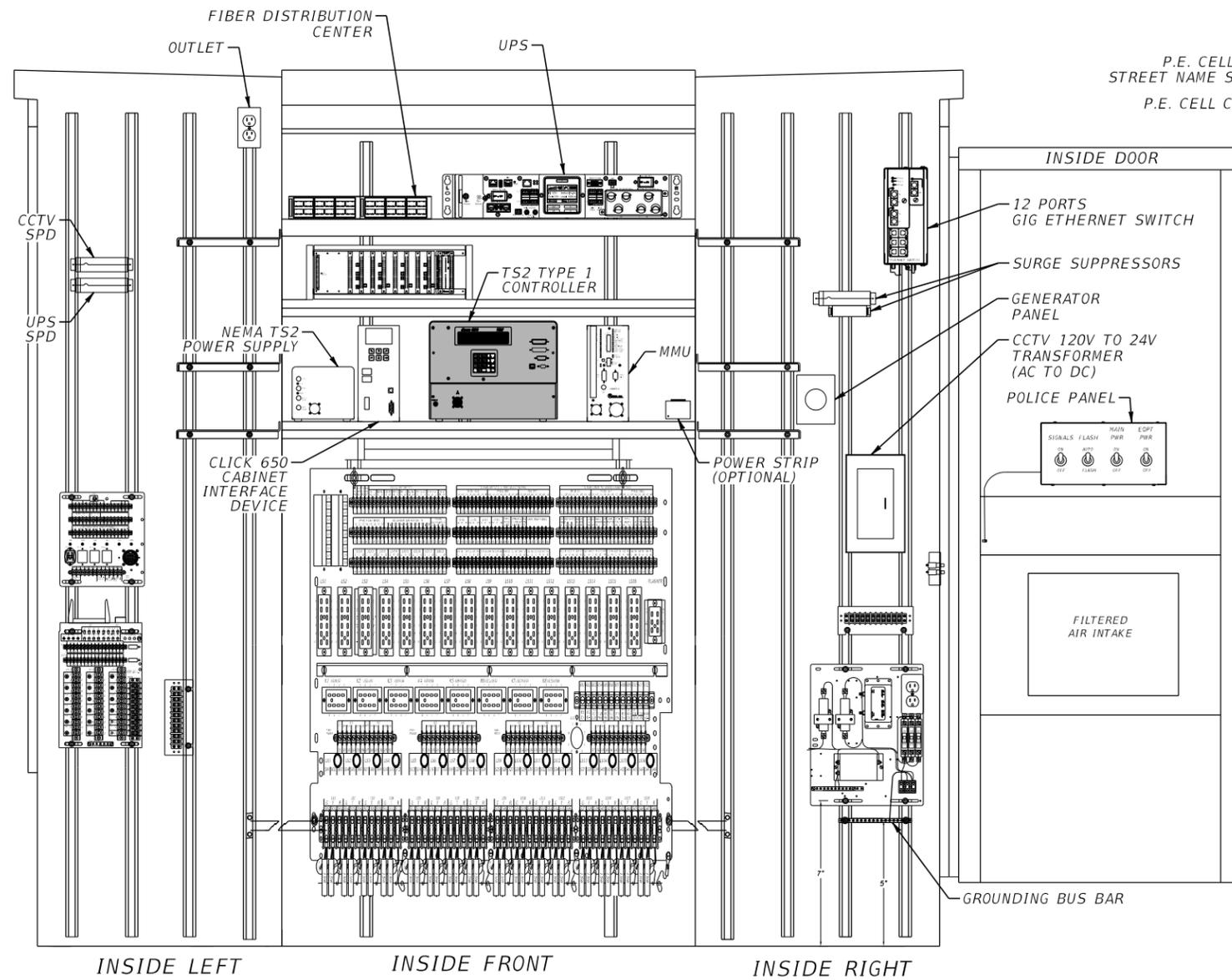
LEGEND	DESCRIPTION
●	FUSION SPLICE
—	PROPOSED SECTION OF FIBER
- - -	EXISTING SECTION OF FIBER
×	COIL AND CAP

COLOR CODE TIA/EIA 598A	
(1) BLUE	(7) RED
(2) ORANGE	(8) BLACK
(3) GREEN	(9) YELLOW
(4) BROWN	(10) VIOLET
(5) SLATE	(11) ROSE
(6) WHITE	(12) AQUA

- NOTES:
 1. UNUSED FIBERS SHALL BE LEFT COILED, CAPPED, AND STORED IN SPLICE TRAY.
 2. UNUSED BUFFER TUBES SHALL BE LEFT COILED AND STORED IN SPLICE TRAY.



No.	REVISIONS	DATE	BY	SCALE AS NOTED	 HDR ENGINEERING, INC. 4830 W KENNEDY BLVD, SUITE 400 TAMPA, FL 33609	DATE 11/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER BURAK KONUK	SPLICING DIAGRAM (5)	SHEET NO. T-39
				DESIGNED BY BK		PROJECT NO. 6107660		FL. LICENSE NO. 81581		
				DRAWN BY SM						
				CHECKED BY MO						



TWO DOOR TRAFFICWARE TYPE VI CABINET

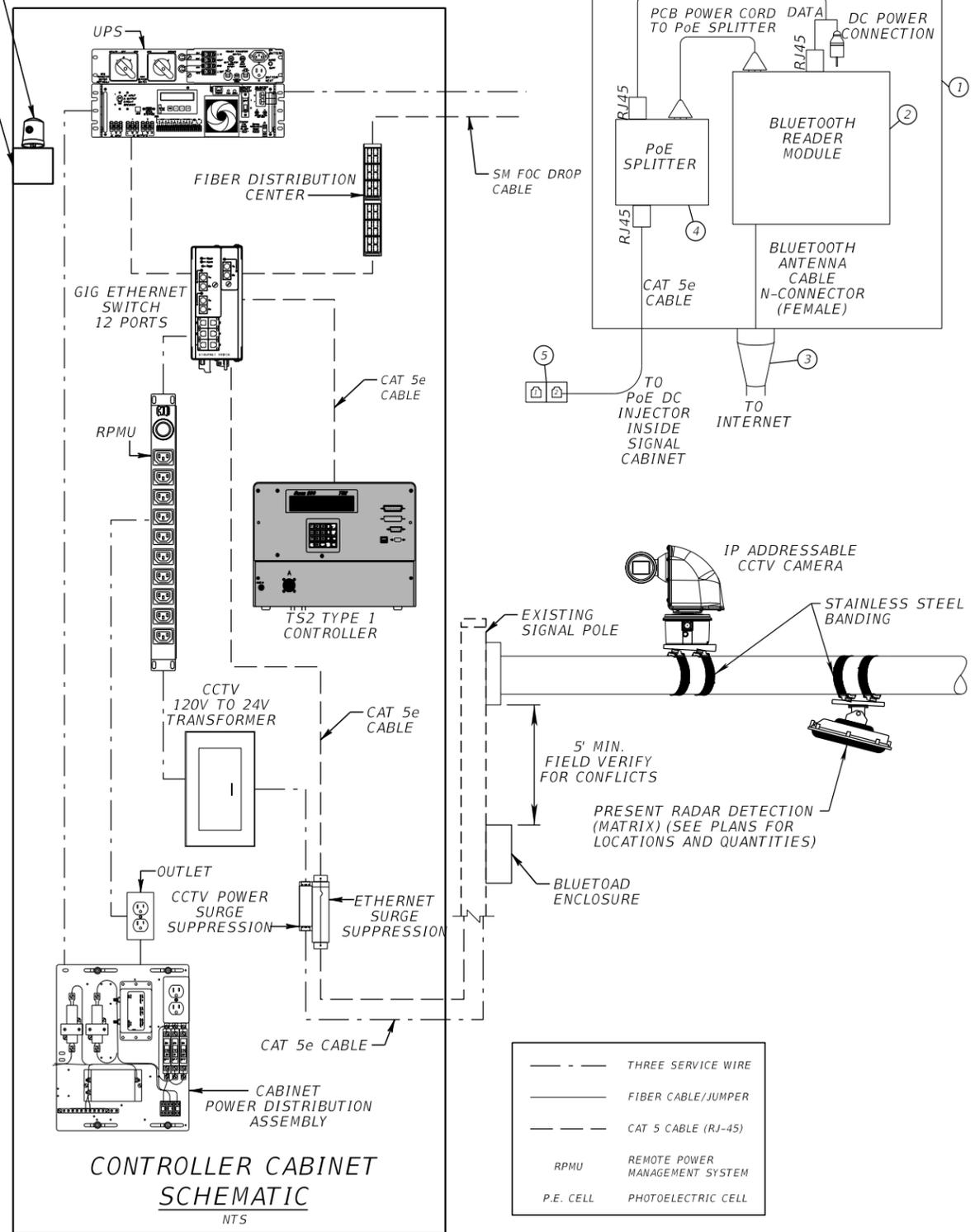
NTS

ETHERNET BASED BLUETOAD SYSTEM - COMPONENTS DETAIL

ITEM ID	DESCRIPTION	NOTE
1	FIBERGLASS ENCLOSURE	SEE NOTE 1
2	BLUETOOTH READER MODULE	ETHERNET BASED
3	BLUETOOTH ANTENNA	OMNI DIRECTIONAL
4	POWER OVER ETHERNET SPLITTER	
5	POWER OVER ETHERNET DC INJECTOR	POWERED BY AC IN TRAFFIC CONTROL CABINET

NOTE 1: FIBERGLASS NEMA 3R RATED ENCLOSURE WITH RAISED SNAP LATCH HINGED COVER 10" X 8" X 5.75". ENCLOSURE SHALL BE ATTACHED TO A POLE USING TWO GALVANNEALED STEEL AM BRACKETS.

CCTV AND ETHERNET-BASED BLUETOOTH CONNECTION DIAGRAM



CONTROLLER CABINET SCHEMATIC

NTS

	THREE SERVICE WIRE
	FIBER CABLE/JUMPER
	CAT 5 CABLE (RJ-45)
	REMOTE POWER MANAGEMENT SYSTEM
	PHOTOELECTRIC CELL

No.	REVISIONS	DATE	BY

SCALE AS NOTED
 DESIGNED BY BK
 DRAWN BY JP
 CHECKED BY MO

HDR
 HDR ENGINEERING, INC.
 4830 W KENNEDY BLVD, SUITE 400
 TAMPA, FL 33609

DATE	11/2022
PROJECT NO.	6107660

Manatee County
 MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER	BURAK KONUK
FL. LICENSE NO.	81581

CABINET, CCTV, MVDS AND BLUETOOTH DETAILS

SHEET NO.	T-40
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