

MANATEE COUNTY

CONTRACT PLANS

FINANCIAL PROJECT ID 433592-4-58-01

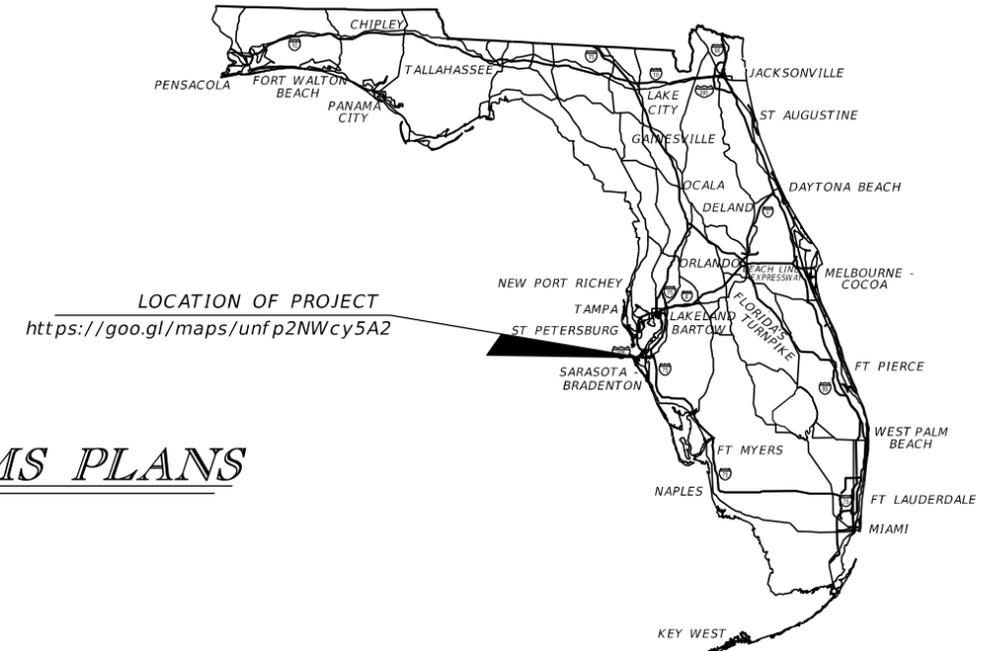
(FEDERAL FUNDS)

MANATEE COUNTY (13010)

STATE ROAD NO. 45 (US 41)

FROM 69TH AVE (BAY DRIVE) TO CORTEZ ROAD)

INTELLIGENT TRANSPORTATION SYSTEMS PLANS



INDEX OF ITS PLANS

SHEET NO.	SHEET DESCRIPTION
IT-1	KEY SHEET
IT-2	SIGNATURE SHEET
IT-3	TABULATION OF QUANTITIES
IT-4	PROJECT LAYOUT
IT-5	GENERAL NOTES
IT-6 - IT-9	ITS PLAN SHEET
IT-10	SPLICING DIAGRAM
IT-11	BLUETOOTH DEVICE MOUNTING DETAIL
IT-12	CCTV CAMERA MOUNTING DETAIL
IT-13	MVDS INSTALLATION DETAIL
IT-14	MAINTENANCE OF COMMUNICATIONS
IT-15 - IT-16	MVDS POLE SPREAD FOOTING DETAILS

INTELLIGENT TRANSPORTATION SYSTEMS PLANS

ENGINEER OF RECORD:

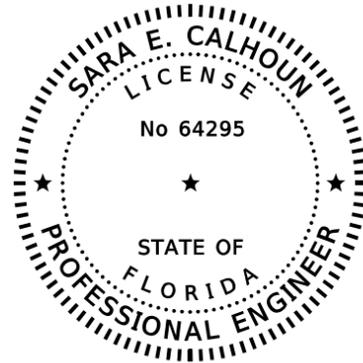
SARA E. CALHOUN, P.E. NO.: 64295
 VIBE
 6914 WEST LINEBAUGH AVENUE
 TAMPA, FL 33625
 (813) 264-2508
 CONTRACT NO.: CA667
 VENDOR NO.: 46-2667875

FDOT PROJECT MANAGER:

AMY BLAIR, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
22-TA004373DJ	23	IT-1

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



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

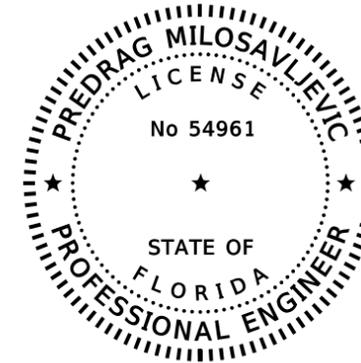
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

VIBE
6914 W. LINEBAUGH AVENUE
TAMPA, FL 33625
SARA E. CALHOUN, P.E. NO. 64295

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

ITS PLANS

SHEET NO.	SHEET DESCRIPTION
IT-1	KEY SHEET
IT-2	SIGNATURE SHEET
IT-3	TABULATION OF QUANTITIES
IT-4	PROJECT LAYOUT
IT-5	GENERAL NOTES
IT-6 - IT-9	ITS PLAN SHEET
IT-10	SPLICING DIAGRAM
IT-11	BLUETOOTH DEVICE MOUNTING DETAIL
IT-12	CCTV CAMERA MOUNTING DETAIL
IT-13	MVDS INSTALLATION DETAIL
IT-14	MAINTENANCE OF COMMUNICATIONS



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.

SCALAR CONSULTING GROUP INC.
4152 W. BLUE HERON BOULEVARD, SUITE 119
RIVIERA BEACH, FL 33404
PREDRAG MILOSAVLJEVIC, P.E. NO. 54961

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

ITS PLANS

SHEET NO.	SHEET DESCRIPTION
IT-2	SIGNATURE SHEET
IT-15 - IT-16	MVDS POLE SPREAD FOOTING DETAILS

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 W. LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 45	MANATEE	433592-4-58-01	IT-2

SIGNATURE SHEET

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			IT-6		IT-7		IT-8		IT-9											
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
611-1-1	ITSFM SUBSURFACE DOCUMENTATION- PROJECT LENGTH	MI															2.913		2.913	
611-2-1	ITSFM LOCATION DOCUMENTATION- INTERSECTION	EA	1		1		1		1								4		4	
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	6		24		19		10								59		59	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	5		304												309		309	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	20		5												25		25	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF			120		263		120								503		503	
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA			4		4		4								12		12	
633-2-32	FIBER OPTIC CONNECTION, INSTALL, TERMINATION	EA			12		12		12								36		36	
633-3-14	FIBER OPTIC CONNECTION HARDWARE, F&I, BUFFER TUBE FAN OUT KIT	EA			1		1		1								3		3	
633-3-16	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL- FIELD TERMINATED	EA			1		1		1								3		3	
633-3-51	FIBER OPTIC CONNECTION HARDWARE, ADJUST/MODIFY SPLICE ENCLOSURE	EA			1		1		1								3		3	
633-6	FIBER OPTIC CABLE LOCATOR	DA															200		200	
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL	LF			511												511		511	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	1		4		3										8		8	
646-2-115	ALUMINUM POLE- INDEX 17900/695-001, FURNISH & INSTALL, 15'	EA			1												1		1	
660-3-11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, CABINET EQUIPMENT	EA			1												1		1	
660-3-12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA			1												1		1	
660-6-121	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, CABINET EQUIPMENT	EA	1														1		1	
660-6-122	VEHICLE DETECTION SYSTEM- AVI, BLUETOOTH, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1														1		1	
676-3-10	SMALL EQUIPMENT ENCLOSURE, FURNISH AND INSTALL, LESS THAN 10"W X 13"H X 11" D	EA			1												1		1	
682-1-113	ITS CCTV CAMERA, F&I, DOME PTZ ENCLOSURE - PRESSURIZED, IP, HIGH DEFINITION	EA					1										1		1	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA			1		1		1								3		3	
684-2-1	DEVICE SERVER, FURNISH & INSTALL	EA			1												1		1	

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			TABULATION OF QUANTITIES	SHEET NO. IT-3
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 45	MANATEE	433592-4-58-01		

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

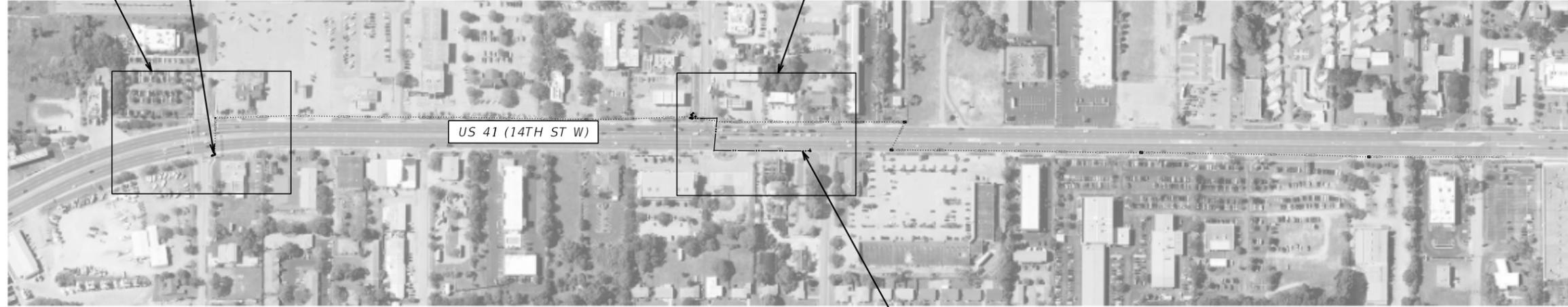
BLUETOOTH DEVICE SITE #1

SHEET IT-6 INTERSECTION #71

FLORIDA BLVD

SHEET IT-7 INTERSECTION #72

63RD AVE W

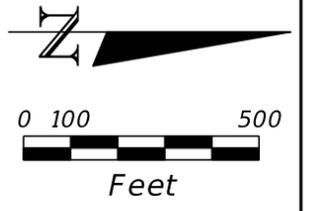


69TH AVE W

68TH AVE W

66TH AVE W

SAUNDERS RD



53RD AVE W

CCTV CAMERA SITE #1

SHEET IT-8 INTERSECTION #76

EAGLE CREEK VILLAGE

46TH AVE DR W

SHEET IT-9 INTERSECTION #77



J ST

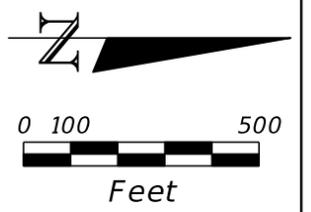
51ST AVE DR W

50TH PLAZA W

49TH AVE DR W

ORLANDO AVE

CORTEZ RD



REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			PROJECT LAYOUT	SHEET NO. IT-4
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 45	MANATEE	433592-4-58-01		

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

GENERAL NOTES:

1. A COPY OF THE COMPLETED ITSFM DATA SHALL BE SUBMITTED FOR REVIEW AT LEAST 4 WEEKS PRIOR TO FINAL ACCEPTANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL TRAINING AND CERTIFICATIONS NECESSARY TO COLLECT AND SUBMIT THE ITSFM DATA. DOCUMENTATION SHOWING THE NECESSARY TRAINING AND CERTIFICATIONS HAVE BEEN OBTAINED AND/OR SCHEDULED SHALL BE SUBMITTED WITHIN 2 WEEKS OF BEGINNING WORK ON THE ATMS INFRASTRUCTURE. CONTACT D1-ITSFM@DOT.STATE.FL.US FOR ITSFM INFORMATION.

AT MINIMUM, THE FOLLOWING ITSFM ATTRIBUTE FORMS SHALL BE COMPLETED:

- ITSFM031
- ITSFM034
- ITSFM035
- ITSFM036
- ITSFM056
- ITSFM057

AT MINIMUM, THE FOLLOWING ITSFM FEATURE IMPORT TEMPLATES SHALL BE COMPLETED:

- ITSFM5002
- ITSFM5006

2. AT THE COMPLETION OF THE PROJECT, PROVIDE AS-BUILT PLANS IN ELECTRONIC FORM (PDF) TO:

FDOT TRAFFIC OPERATIONS
 JUSTIN MERRITT, TSM&O FMS SPECIALIST IV
 801 N. BROADWAY AVE
 P.O. BOX 1249
 BARTOW, FL 33830-1249
 EMAIL: JUSTIN.MERRITT@DOT.STATE.FL.US
 PHONE: 941-708-4426

PAY ITEM NOTES:

633-1-121: THIS PAY ITEM SHALL INCLUDE 12-COUNT FIBER OPTIC CABLE.

633-8-1: FURNISH AND INSTALL ALL POWER AND COMMUNICATION CABLES PER MANUFACTURER'S RECOMMENDATION. ENSURE THAT THESE CABLES COMPLY WITH NEC, SPECIFICATIONS, AND ALL OTHER LOCAL CODE REQUIREMENTS.

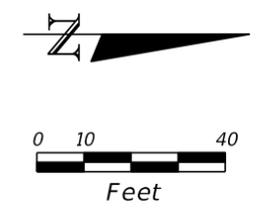
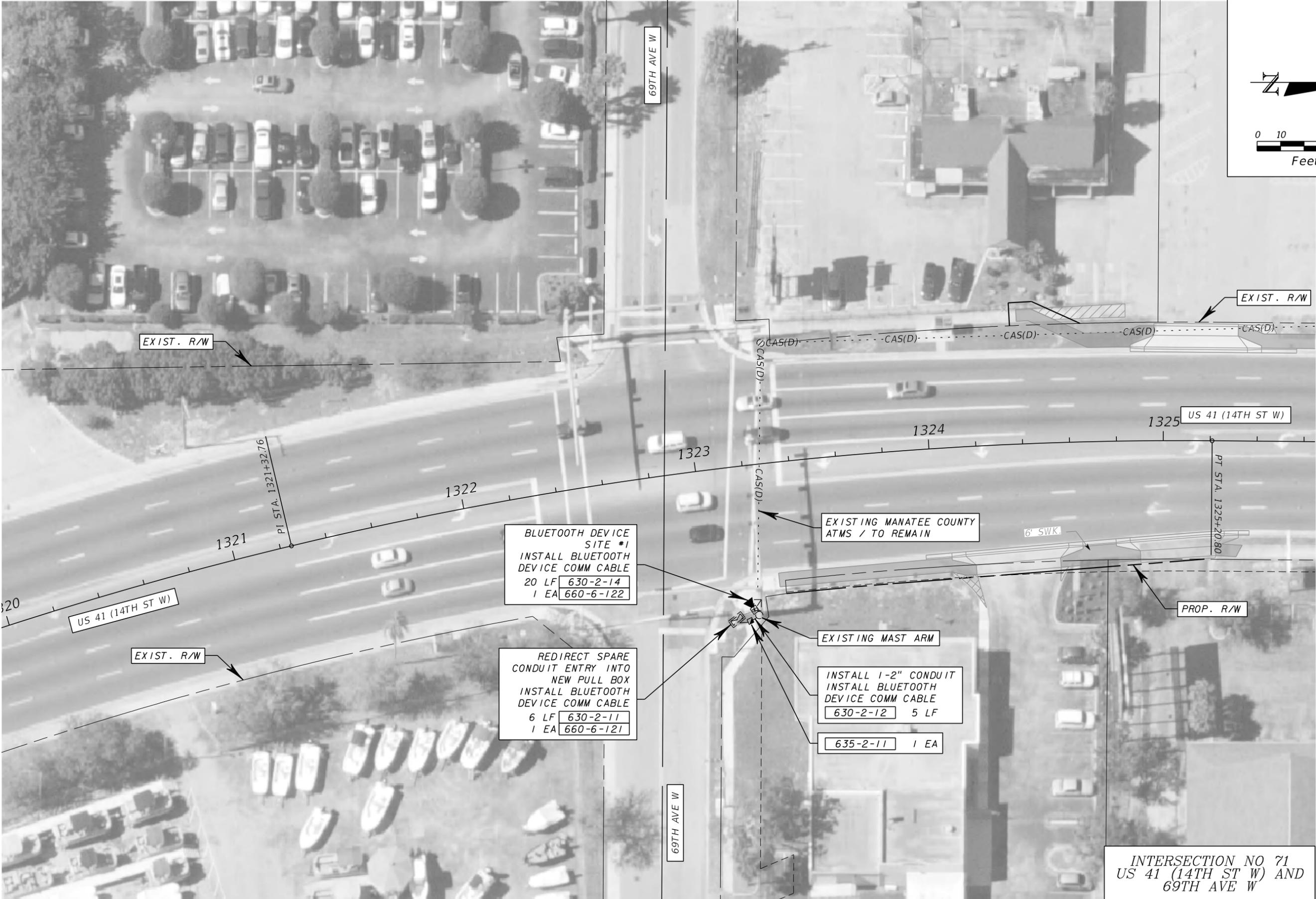
660-3-11 AND 660-3-12: THE CONTRACTOR SHALL BE REQUIRED TO INTEGRATE THE MVDS INTO THE COUNTY'S EXISTING ATMS AND CALIBRATE THE MVDS UNITS IN THE PRESENCE OF COUNTY STAFF. THE MVDS SHALL BE FUNCTIONALLY COMPATIBLE WITH THE SYSTEM EQUIPMENT AND SOFTWARE CURRENTLY OPERATING ON THE MANATEE COUNTY ATMS.

660-6-121 AND 660-6-122: THE CONTRACTOR SHALL BE REQUIRED TO INTEGRATE THE BLUETOOTH READER INTO THE COUNTY'S EXISTING ATMS. THE BLUETOOTH READER SHALL BE FUNCTIONALLY COMPATIBLE WITH THE SYSTEM EQUIPMENT AND SOFTWARE CURRENTLY OPERATING ON THE MANATEE COUNTY ATMS. ALL SUPPLEMENTAL INTERFACE HARDWARE, CABLING, AND OTHER SYSTEM COMPONENTS ARE CONSIDERED INCIDENTAL TO THE CABINET EQUIPMENT.

682-1-113: THE CONTRACTOR SHALL BE REQUIRED TO INTEGRATE THE CCTV CAMERA INTO THE COUNTY'S EXISTING ATMS. THE CCTV CAMERA SHALL BE FUNCTIONALLY COMPATIBLE WITH THE SYSTEM EQUIPMENT AND SOFTWARE CURRENTLY OPERATING ON THE MANATEE COUNTY ATMS.

684-1-1: THE ETHERNET SWITCH SHALL BE FUNCTIONALLY COMPATIBLE WITH THE SYSTEM EQUIPMENT AND SOFTWARE CURRENTLY OPERATING ON THE MANATEE COUNTY ATMS.

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 45	MANATEE		433592-4-58-01



BLUETOOTH DEVICE
SITE #1
INSTALL BLUETOOTH
DEVICE COMM CABLE
20 LF 630-2-14
1 EA 660-6-122

REDIRECT SPARE
CONDUIT ENTRY INTO
NEW PULL BOX
INSTALL BLUETOOTH
DEVICE COMM CABLE
6 LF 630-2-11
1 EA 660-6-121

INSTALL 1-2" CONDUIT
INSTALL BLUETOOTH
DEVICE COMM CABLE
630-2-12 5 LF
635-2-11 1 EA

INTERSECTION NO 71
US 41 (14TH ST W) AND
69TH AVE W

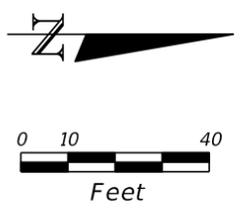
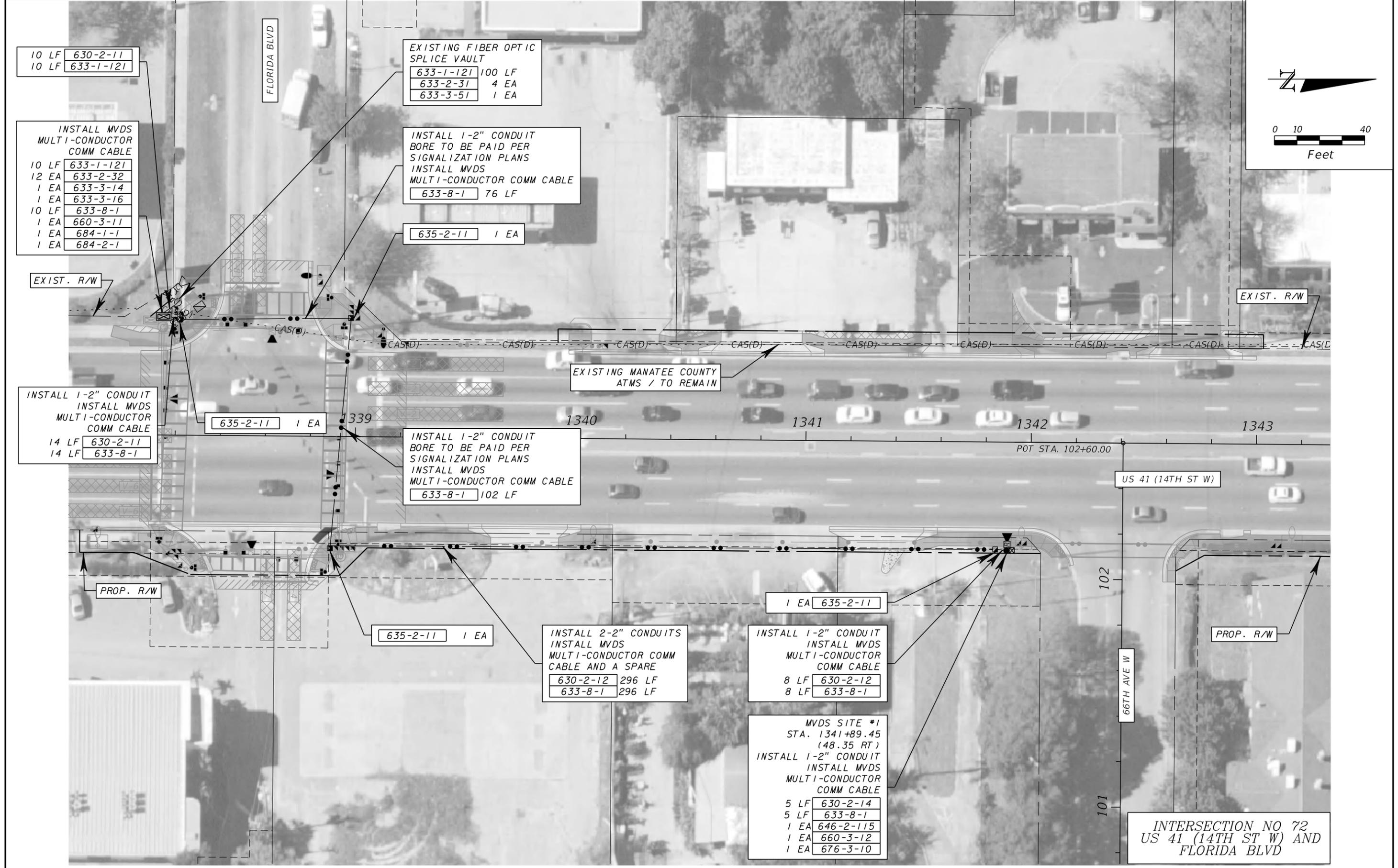
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SARA E. CALHOUN, P.E.
P.E. LICENSE NUMBER 64295
VIBE
6914 WEST LINEBAUGH AVENUE
TAMPA, FL 33625
(813) 264-2508

MANATEE COUNTY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 45	MANATEE	433592-4-58-01

ITS PLAN SHEET (1)

SHEET NO.
IT-6



10 LF 630-2-11
10 LF 633-1-121

EXISTING FIBER OPTIC
SPLICE VAULT
633-1-121 100 LF
633-2-31 4 EA
633-3-51 1 EA

INSTALL 1-2" CONDUIT
BORE TO BE PAID PER
SIGNALIZATION PLANS
INSTALL MVDS
MULTI-CONDUCTOR COMM CABLE
633-8-1 76 LF

635-2-11 1 EA

INSTALL MVDS
MULTI-CONDUCTOR
COMM CABLE
10 LF 633-1-121
12 EA 633-2-32
1 EA 633-3-14
1 EA 633-3-16
10 LF 633-8-1
1 EA 660-3-11
1 EA 684-1-1
1 EA 684-2-1

EXIST. R/W

EXIST. R/W

INSTALL 1-2" CONDUIT
INSTALL MVDS
MULTI-CONDUCTOR
COMM CABLE
14 LF 630-2-11
14 LF 633-8-1

635-2-11 1 EA

INSTALL 1-2" CONDUIT
BORE TO BE PAID PER
SIGNALIZATION PLANS
INSTALL MVDS
MULTI-CONDUCTOR COMM CABLE
633-8-1 102 LF

EXISTING MANATEE COUNTY
ATMS / TO REMAIN

1340

1341

POT STA. 102+60.00

US 41 (14TH ST W)

1343

PROP. R/W

PROP. R/W

635-2-11 1 EA

INSTALL 2-2" CONDUITS
INSTALL MVDS
MULTI-CONDUCTOR COMM
CABLE AND A SPARE
630-2-12 296 LF
633-8-1 296 LF

1 EA 635-2-11

INSTALL 1-2" CONDUIT
INSTALL MVDS
MULTI-CONDUCTOR
COMM CABLE
8 LF 630-2-12
8 LF 633-8-1

MVDS SITE #1
STA. 1341+89.45
(48.35 RT)
INSTALL 1-2" CONDUIT
INSTALL MVDS
MULTI-CONDUCTOR
COMM CABLE
5 LF 630-2-14
5 LF 633-8-1
1 EA 646-2-115
1 EA 660-3-12
1 EA 676-3-10

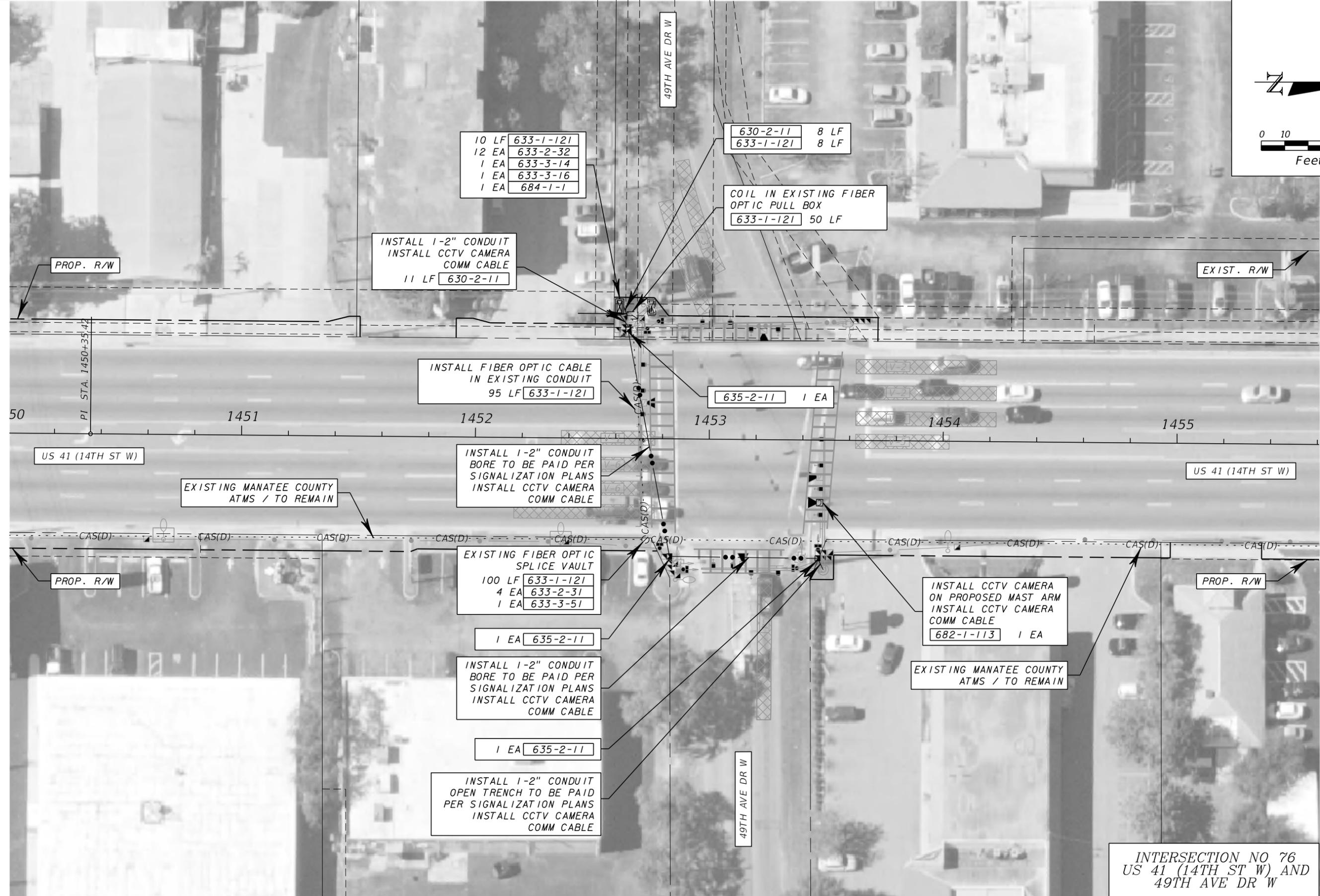
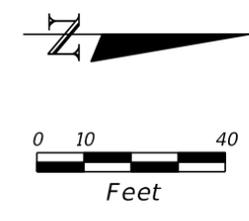
102

66TH AVE W

101

INTERSECTION NO 72
US 41 (14TH ST W) AND
FLORIDA BLVD

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			SHEET NO. IT-7
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 45	MANATEE	433592-4-58-01	

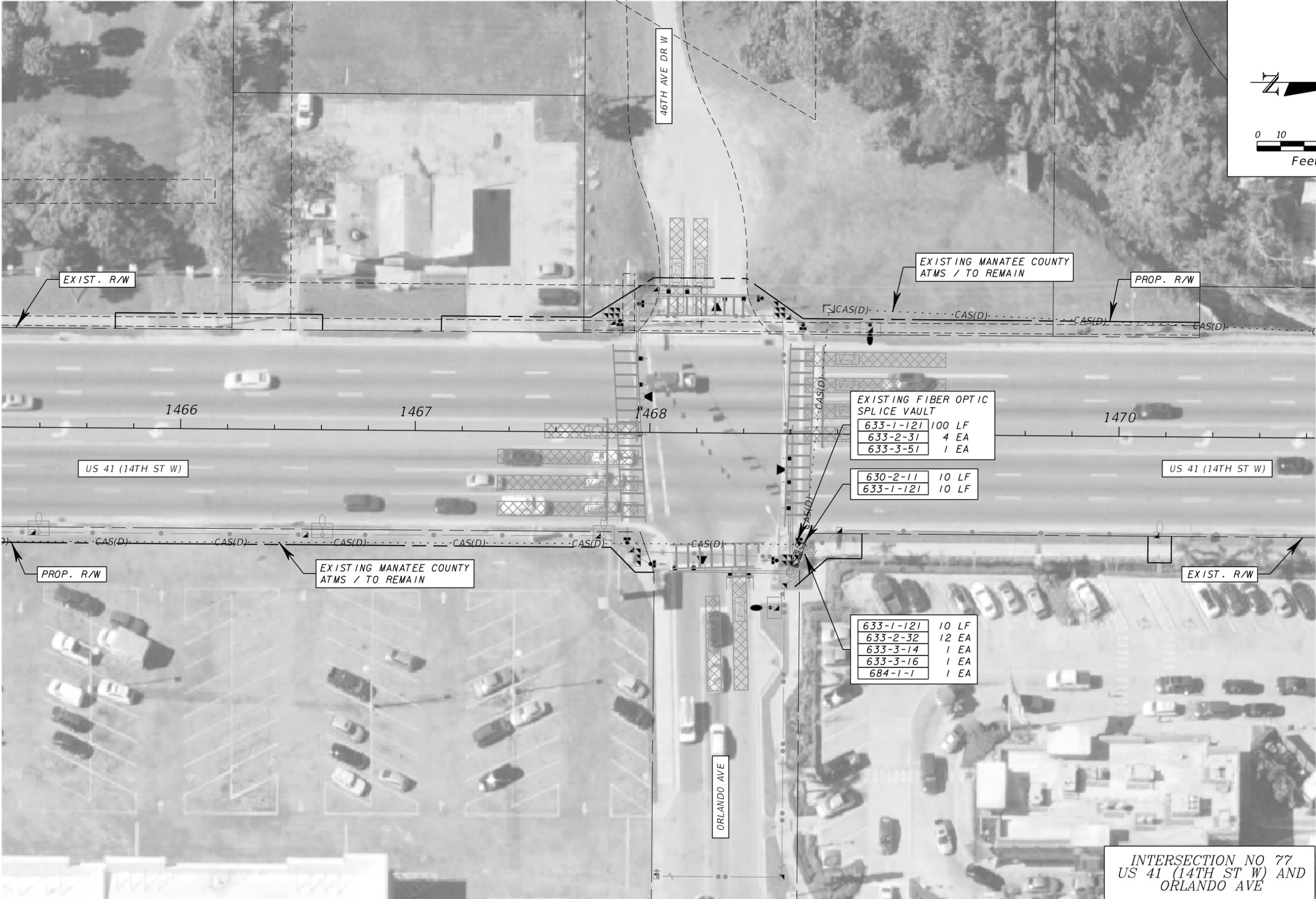
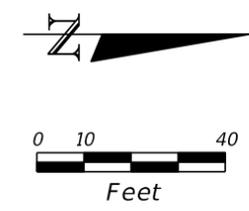


INTERSECTION NO 76
 US 41 (14TH ST W) AND
 49TH AVE DR W

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 45	MANATEE	433592-4-58-01	

ITS PLAN SHEET (3)

IT-8

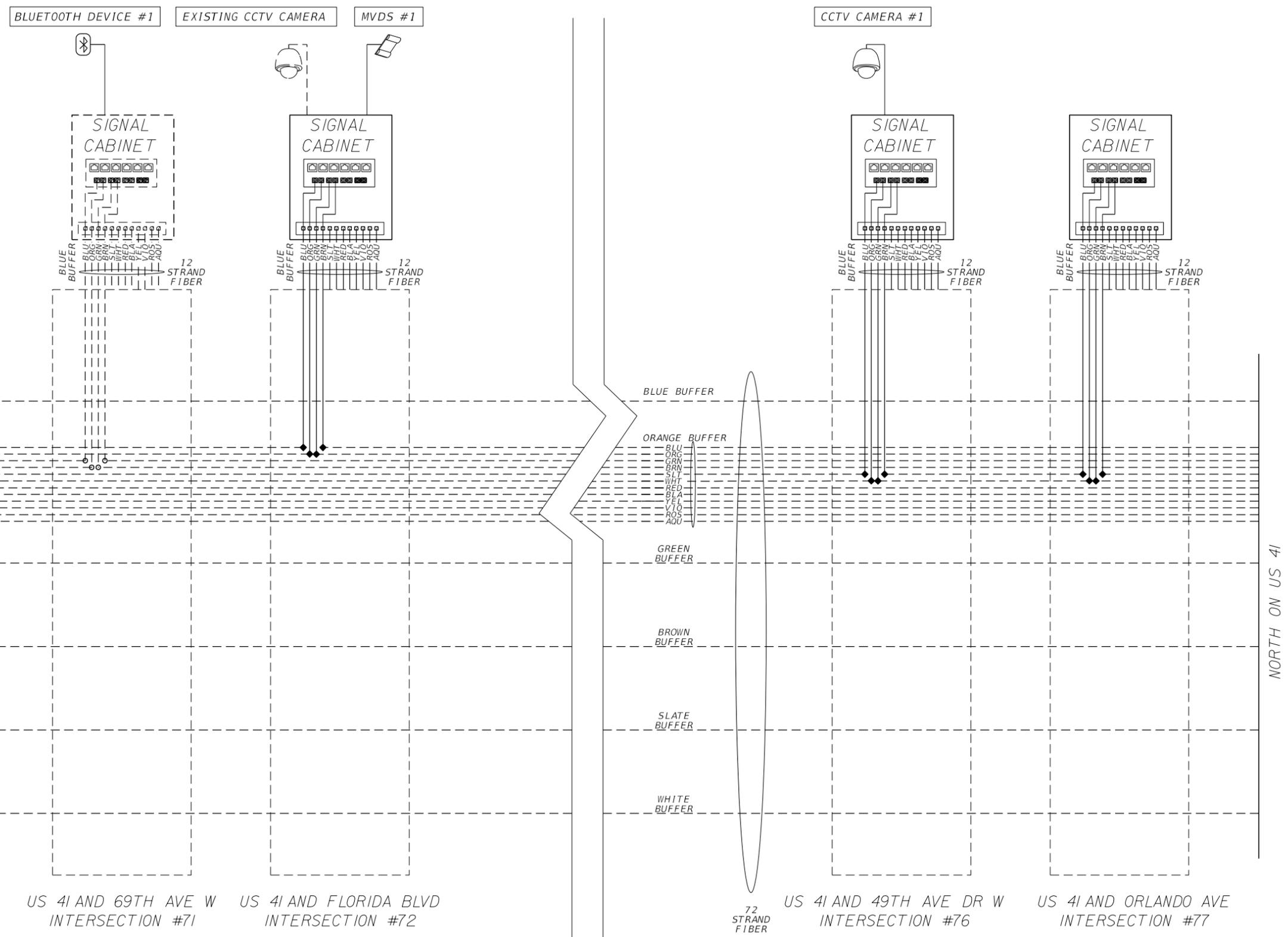


INTERSECTION NO 77
US 41 (14TH ST W) AND
ORLANDO AVE

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 WEST LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			SHEET NO. IT-9
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 45	MANATEE	433592-4-58-01	

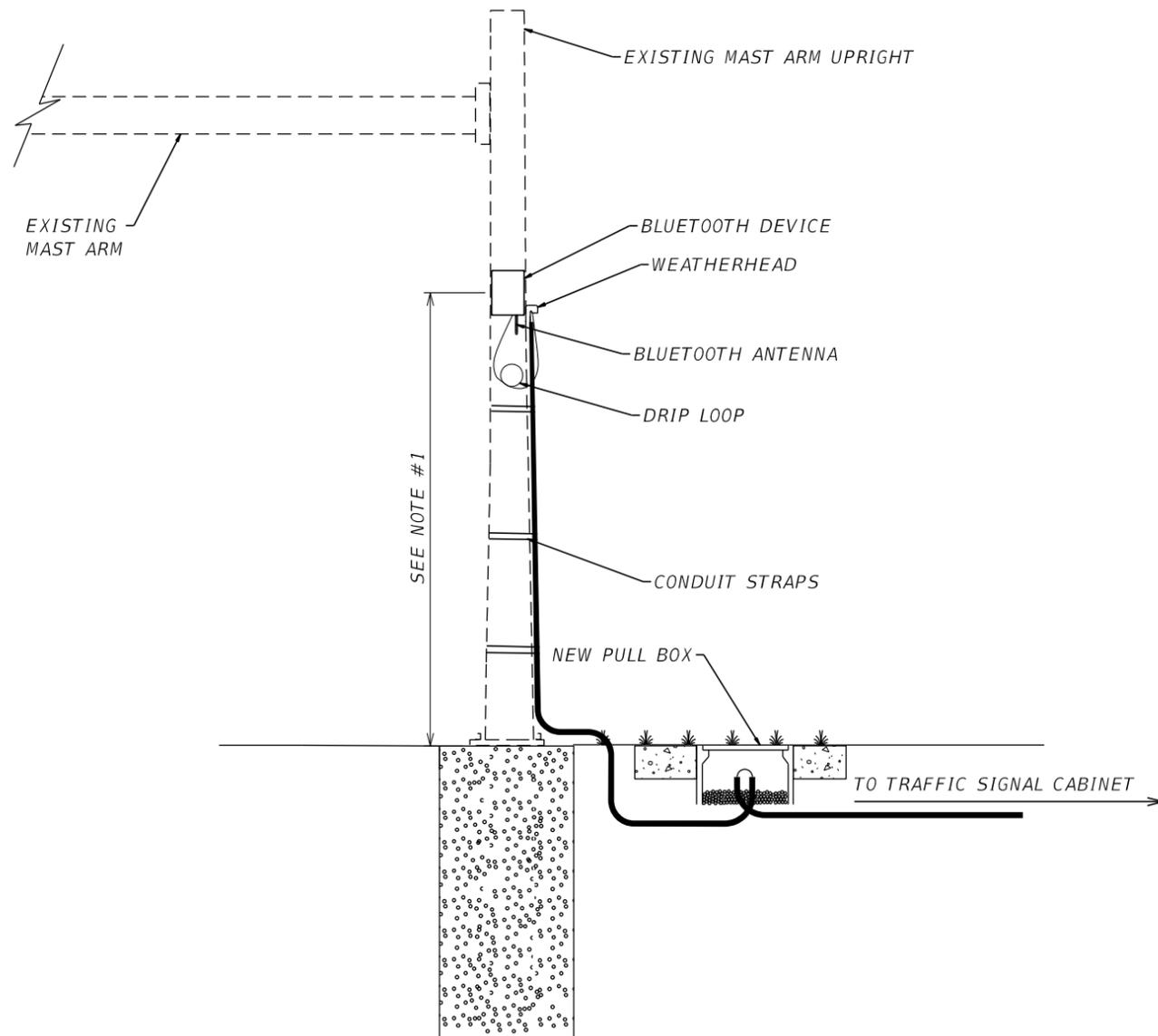
LEGEND

-  NEW CCTV CAMERA
-  EXISTING CCTV CAMERA
-  NEW BLUETOOTH DEVICE
-  NEW MVDS
-  NEW ETHERNET FIELD SWITCH
-  EXISTING ETHERNET FIELD SWITCH
-  NEW FIBER OPTIC PATCH PANEL
-  EXISTING FIBER OPTIC PATCH PANEL
-  EXISTING FIBER OPTIC SPLICE ENCLOSURE
-  NEW SPLICE
-  EXISTING SPLICE



REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 W. LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			SPLICING DIAGRAM	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-10
					SR 45	MANATEE	433592-4-58-01		

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

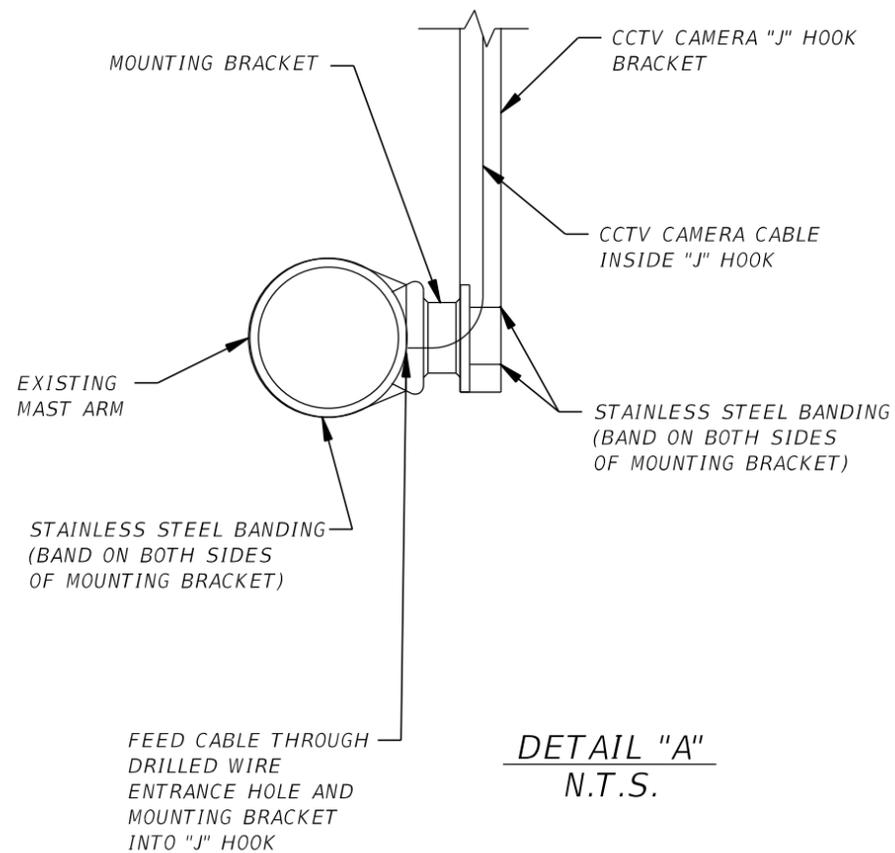


BLUETOOTH DEVICE MOUNTING ON EXISTING MAST ARM
N.T.S

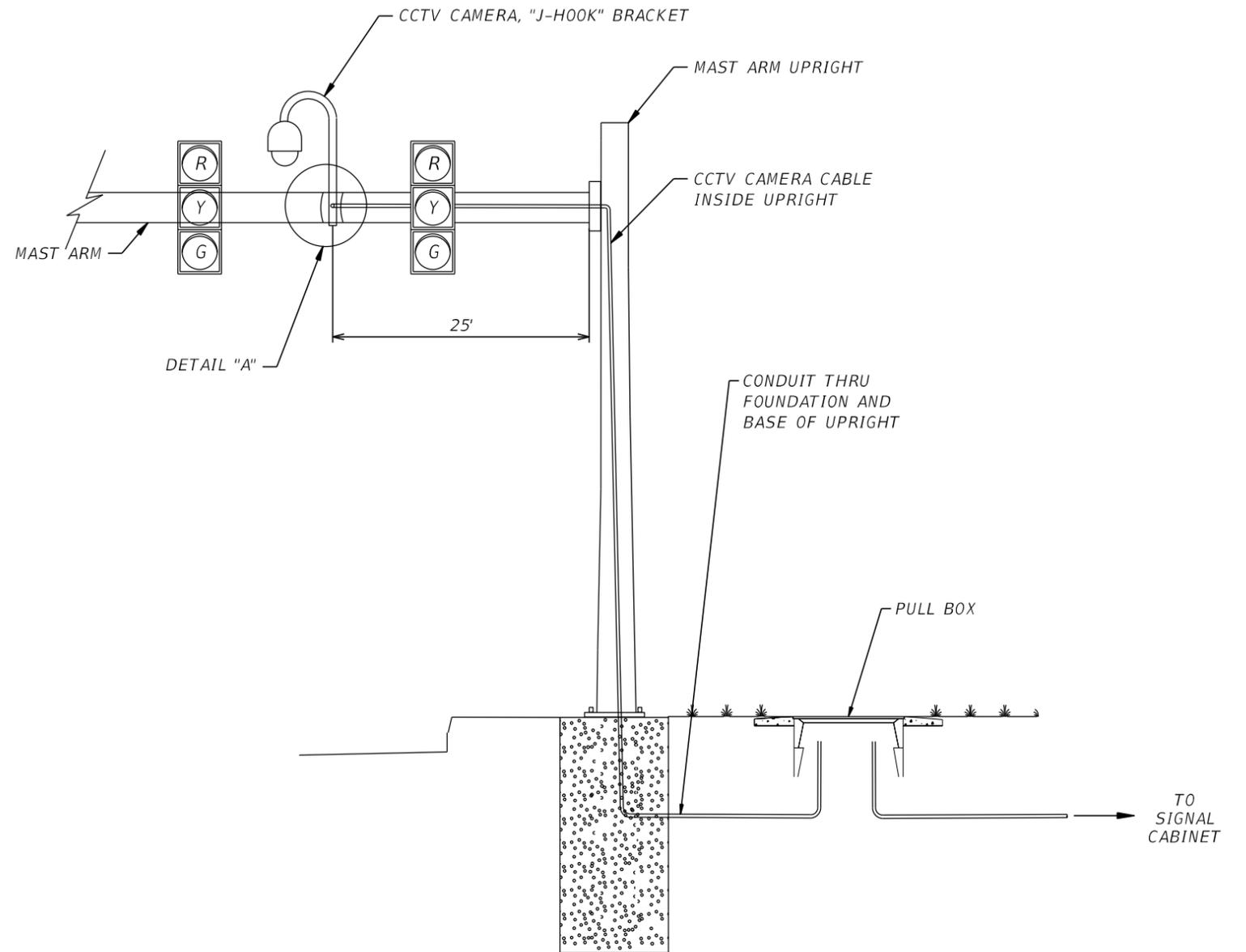
NOTES:

1. MOUNTING HEIGHT OF THE BLUETOOTH DEVICE SHOULD BE PER MANUFACTURER'S RECOMMENDATIONS.
2. COORDINATE THE LOCATION AND INSTALLATION OF ALL REQUIRED IN-CABINET EQUIPMENT WITH MANATEE COUNTY

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 W. LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			BLUETOOTH DEVICE MOUNTING DETAIL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-11
					SR 45	MANATEE	433592-4-58-01		



DETAIL "A"
N.T.S.



CCTV CAMERA MOUNTING ON PROPOSED MAST ARM
N.T.S.

NOTES:

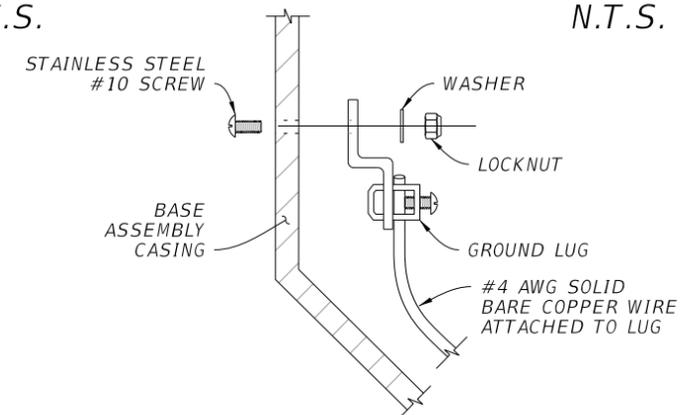
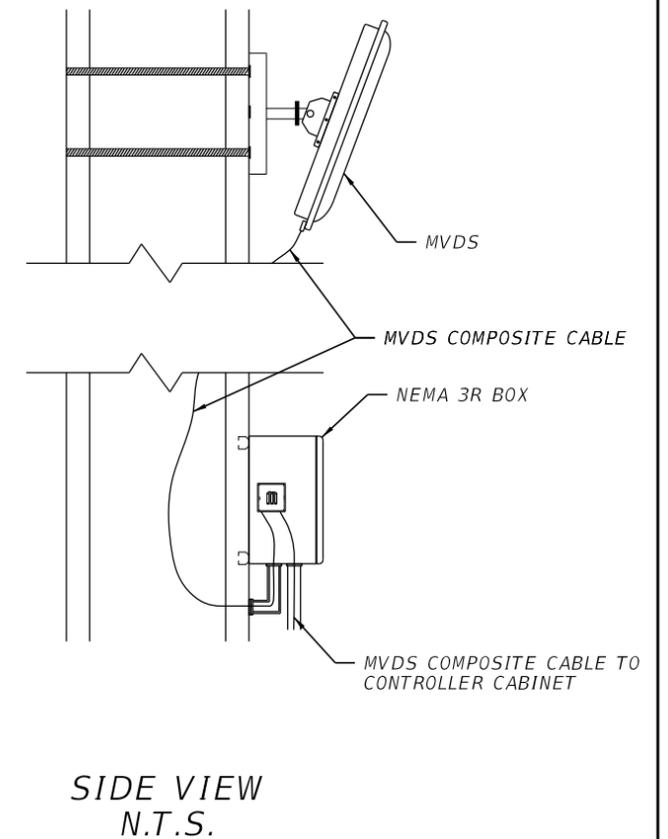
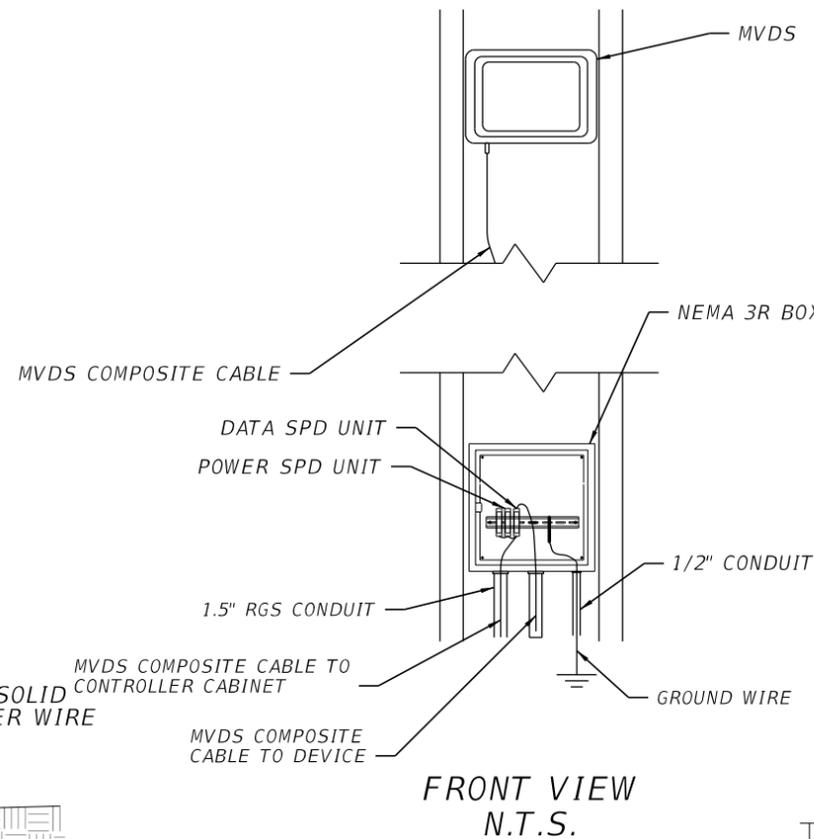
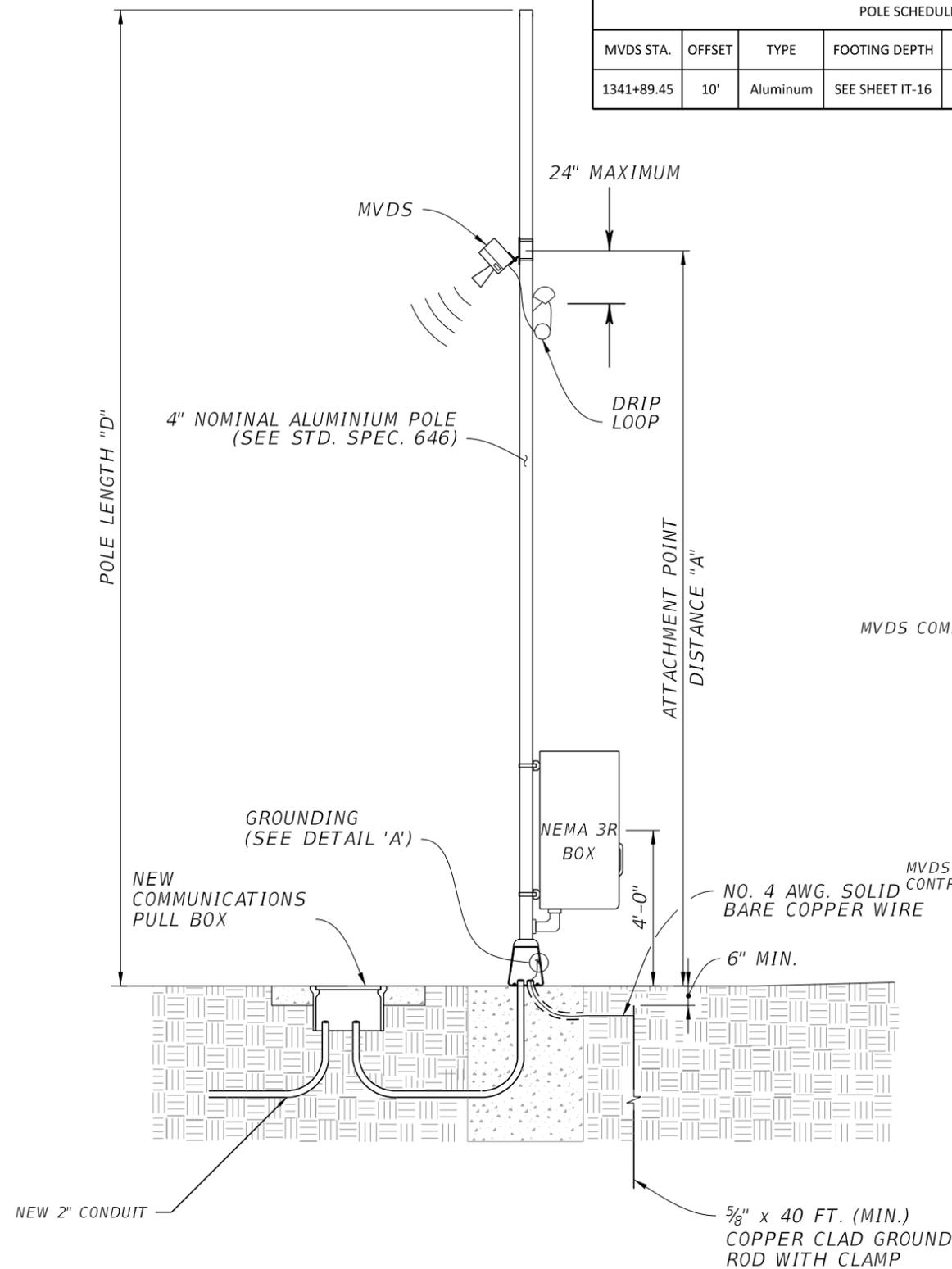
1. THE CONTRACTOR SHALL MOUNT THE "J HOOK" BRACKET AS HIGH AS POSSIBLE SO THAT IT STILL SITS FIRMLY IN THE MOUNTING HARDWARE BRACKET. THE ATTACHMENT SHALL BE INSPECTED BY THE ENGINEER BEFORE THE CCTV CAMERA IS INSTALLED.
2. THE CONTRACTOR SHALL FIELD DRILL A HOLE IN THE MAST ARM OF A MINIMUM DIAMETER TO ACCOMMODATE THE CCTV COMPOSITE CABLE.
3. THE CONTRACTOR SHALL COLD GALVANIZE THE DRILLED HOLE AND PLACE A WEATHER-TIGHT GROMMIT IN THE HOLE PRIOR TO RUNNING THE CCTV COMPOSITE CABLE INTO THE ARM.
4. THE CONTRACTOR SHALL TOUCH UP THE MAST ARM PAINT DUE TO SCRATCHES OR CHIPS DURING THE INSTALLATION OF THE CCTV CAMERA AND COMPOSITE CABLE.
5. THE COST FOR LABOR AND MATERIALS FOR TOUCH UP AND GROMMITS SHALL BE INCLUDED UNDER THE CCTV PAY ITEM 682-1-113.

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 W. LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			CCTV CAMERA MOUNTING DETAIL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-12
					SR 45	MANATEE	433592-4-58-01		

NOTES:

1. WORK THIS SHEET WITH FDOT STANDARD PLANS 695-001.
2. THE NEMA 3R BOX AND MOUNTING ARMS FOR THE MVDS SHALL BE ATTACHED TO THE POLE USING 3/4" STAINLESS STEEL BANDING.
3. INSTALL GROUNDING FOR THE MVDS SITE AS PER SECTION 620 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE MAIN POLE GROUND ROD ASSEMBLY SHALL BE LOCATED IN THE NEAREST PULL BOX FOR MAINTENANCE ACCESS.
4. THE CONTRACTOR SHALL CONFIRM MANUFACTURER RECOMMENDATIONS FOR ALL EQUIPMENT AND MOUNTING HEIGHT DIMENSIONS PRIOR TO INSTALLATION.

POLE SCHEDULE						
MVDS STA.	OFFSET	TYPE	FOOTING DEPTH	A	D	LOCATION
1341+89.45	10'	Aluminum	SEE SHEET IT-16	12'	15'	ADJACENT TO SIDEWALK



MVDS INSTALLATION ON ALUMINUM POLE

DETAIL 'A'

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SARA E. CALHOUN, P.E.
P.E. LICENSE NUMBER 64295
VIBE
6914 W. LINEBAUGH AVENUE
TAMPA, FL 33625
(813) 264-2508

MANATEE COUNTY		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 45	MANATEE	433592-4-58-01

MVDS INSTALLATION DETAIL

SHEET NO.
IT-13

MAINTENANCE OF COMMUNICATIONS (MOC):

1. FOR ALL EXISTING COMMUNICATIONS OUTSIDE THE PROJECT LIMITS AFFECTED BY PROPOSED WORK IN THIS PROJECT, COORDINATION WITH MANATEE COUNTY SHALL BE COMPLETED TO ENSURE CONTINUITY AND WORKING CONDITION OF THE COMMUNICATIONS.
2. THE CONTRACTOR IS TO SUBMIT A MOC PLAN TO THE DEPARTMENT AND/OR COUNTY FOR APPROVAL. THE MOC PLAN IS TO BE SUBMITTED TO THE DEPARTMENT AT LEAST FOUR (4) WEEKS PRIOR TO INTERRUPTING THE EXISTING ATMS COMMUNICATIONS NETWORK. THE MOC PLAN SHALL BE DEFINED AND PROCESSED AS A SHOP DRAWING PER CHAPTER 267 OF THE FDM. THE MOC PLAN SHALL DOCUMENT THE PHASED CUTOVER FOR INSTALLING AND REMOVING ITS INFRASTRUCTURE AS DESIGNATED IN THESE PLANS, AS WELL AS THE TESTING PROCEDURES WITH TESTING LOCATIONS. THE TESTING LOCATIONS CAN BE COORDINATED WITH MANATEE COUNTY. THE DOWNTIME OF THE ITS INFRASTRUCTURE SHALL BE KEPT TO A MINIMUM. THE MAXIMUM ALLOWABLE OUTAGE TIMES FOR THE ITS DEVICES ARE:

ITEM	MAXIMUM ALLOWABLE OUTAGE TIMES
ITS COMMUNICATIONS SUBSYSTEM (BACKBONE)	72 HOURS
ITS COMMUNICATIONS SUBSYSTEM (DROPS)	1 WEEK

MOC PHASING:

- PHASE I: INSTALL NEW CONDUITS AND PULL BOXES AS SHOWN IN THE PLANS.
- PHASE II: INSTALL NEW FIBER OPTIC CABLE AND TERMINATE TO THE NEW PATCH PANELS AS SHOWN IN THE PLANS.
- PHASE III: INSTALL NEW MANAGED FIELD ETHERNET SWITCHES AS SHOWN IN THE PLANS.
- PHASE IV: COMPLETE TESTING OF THE FIBER OPTIC CABLE AND TERMINATIONS AS REQUIRED PER THE STANDARD SPECIFICATIONS. PERFORM FIELD ACCEPTANCE TESTING FOR NEW COMMUNICATIONS SUB-SYSTEM.
- PHASE V: NOTIFY MANATEE COUNTY 14 DAYS PRIOR TO ANY FIBER SPLICING INTO EXISTING MANATEE COUNTY ATMS TRUNK FIBER. PERFORM SPLICING AND PATCH CORD INSTALLATIONS AS SHOWN IN THE PLANS.
- PHASE VI: COMPLETE REMAINING TESTING AS REQUIRED BY STANDARD SPECIFICATIONS.

REVISIONS				SARA E. CALHOUN, P.E. P.E. LICENSE NUMBER 64295 VIBE 6914 W. LINEBAUGH AVENUE TAMPA, FL 33625 (813) 264-2508	MANATEE COUNTY			<p style="text-align: center;">MAINTENANCE OF COMMUNICATIONS</p>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		IT-14
					SR 45	MANATEE	433592-4-58-01		

GENERAL NOTES

DESIGN SPECIFICATIONS:

A) AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 1ST EDITION (2015) WITH 2017 INTERIM REVISIONS.

DESIGN GUIDELINES:

A) FDOT STRUCTURES MANUAL (JANUARY 2020)

B) FDOT DESIGN MANUAL - 2020

C) FDOT STANDARD PLANS - FY 2020-21

DESIGN METHOD:

LOAD RESISTANCE FACTOR DESIGN

CONSTRUCTION SPECIFICATIONS:

FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - JULY 2020

CONCRETE:

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH	LOCATION
II	$f'_c = 3,400$ PSI	MVDS POLE SPREAD FOOTING

REINFORCING STEEL:

REINFORCEMENT SHALL BE ASTM A615, GRADE 60 & SECTION 415 OF THE CONSTRUCTION SPECIFICATIONS.

CONCRETE COVER:

CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE REINFORCEMENT PLACEMENT AND FABRICATION TOLERANCE UNLESS SHOWN AS "MINIMUM COVER." SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES.

9. SOIL PARAMETERS USED IN DESIGN, PER GEOTECHNICAL REPORT BY MS. TERESA PUCKETT, P.E. DATED 02/19/2018:
 SOIL TYPE = SANDY
 WATER TABLE = +10.0
 INTERNAL ANGLE OF FRICTION $F = 29$ DEGREES
 TOTAL SOIL UNIT WEIGHT = 108 PCF
 SUBMERGED SOIL UNIT WEIGHT = 45.6 PCF
 ULTIMATE SOIL BEARING PRESSURE = 3,858 PSF
 FOR ADDITIONAL INFORMATION, SEE REPORT OF CORE BORINGS FOR SIGNALS SHEETS

10. COST OF MVDS POLE SPREAD FOOTINGS, INCLUDING REINFORCEMENT STEEL AND SIDEWALK DEMOLITION AND DISPOSAL, SHALL BE INCLUDED IN PAY ITEM FOR INDIVIDUAL POLES. NO SEPARATE PAY ITEMS FOR MVDS POLE FOOTINGS COST.

11. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITY LINES AT THE FOOTINGS PRIOR TO CONSTRUCTION. CONTACT SUNSHINE STATE ON CALL OF FLORIDA. INC. BEFORE BEGINNING OF EXCAVATION. SEE UTILITY ADJUSTMENTS SHEETS AND VERIFIED UTILITY LOCATE SHEETS.

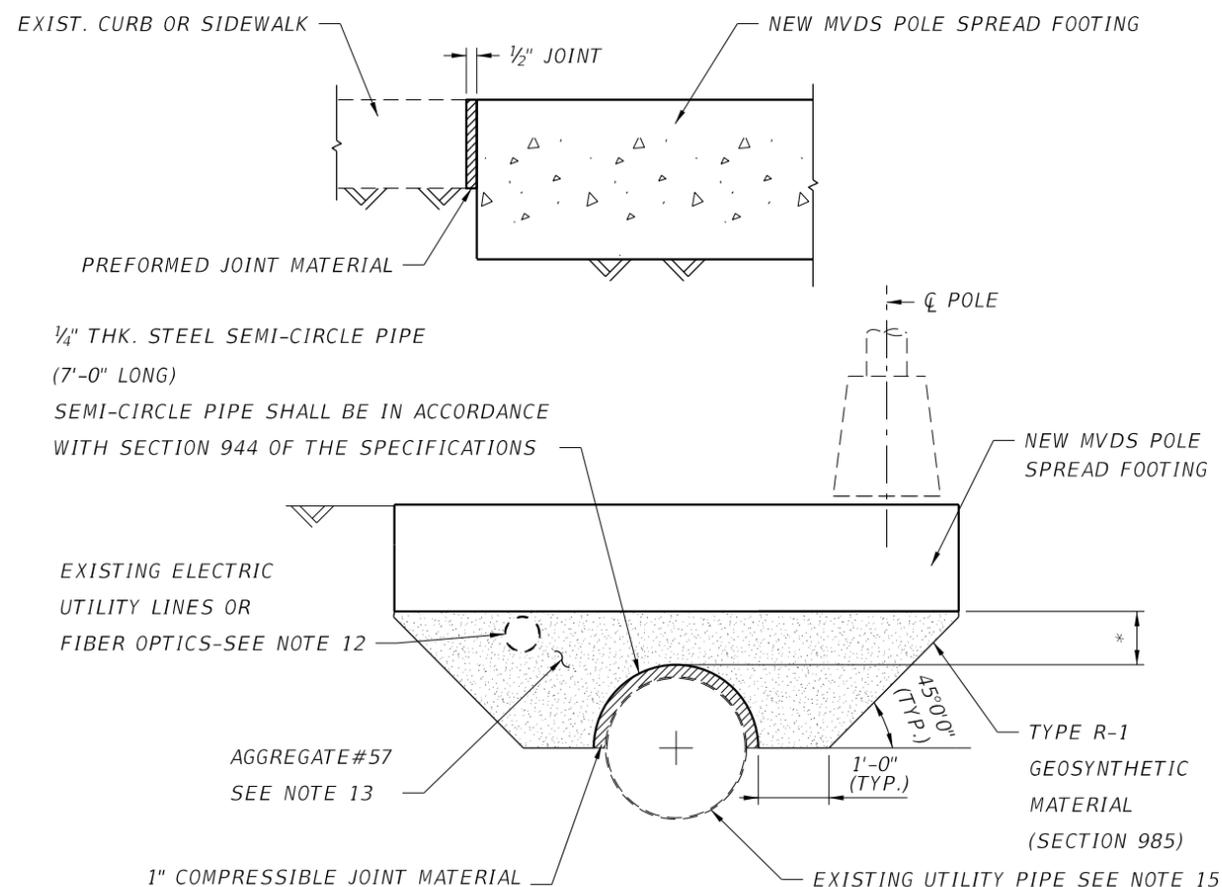
12. AGGREGATE #57 SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE SPECIFICATIONS. COST OF EXCAVATION, SOIL DISPOSAL, SEMICIRCLE STEEL PIPE, COMPRESSIBLE JOINT MATERIAL, GEOSYNTHETIC MATERIAL AND AGGREGATE FILL SHALL BE INCLUDED IN THE PAY ITEM FOR THE PARTICULAR POLE.

13. FILL JOINTS BETWEEN NEW FOOTINGS AND SURROUNDING SIDEWALK OR CURB AND UTILITY PIPES SHALL BE PREMOLDED EXPANSION JOINT MATERIAL IN ACCORDANCE WITH SECTION 932 OF THE SPECIFICATIONS AND SHALL BE SELECTED FROM FDOT APL. NO SEPARATE PAY ITEM FOR THE JOINT COST.

14. * IF THE DIMENSION TO TOP OF WATER MAINS, SANITARY SEWERS, GAS MAINS OR DRAINAGE PIPES IS LESS THAN 2FT PROVIDE UTILITY TREATMENT SHOWN IN DETAIL A. IF THE UTILITY IS LESS THAN 1'-0" TO THE BOTTOM OF THE FOOTER, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

MVDS POLE SPREAD FOOTING NOTES:

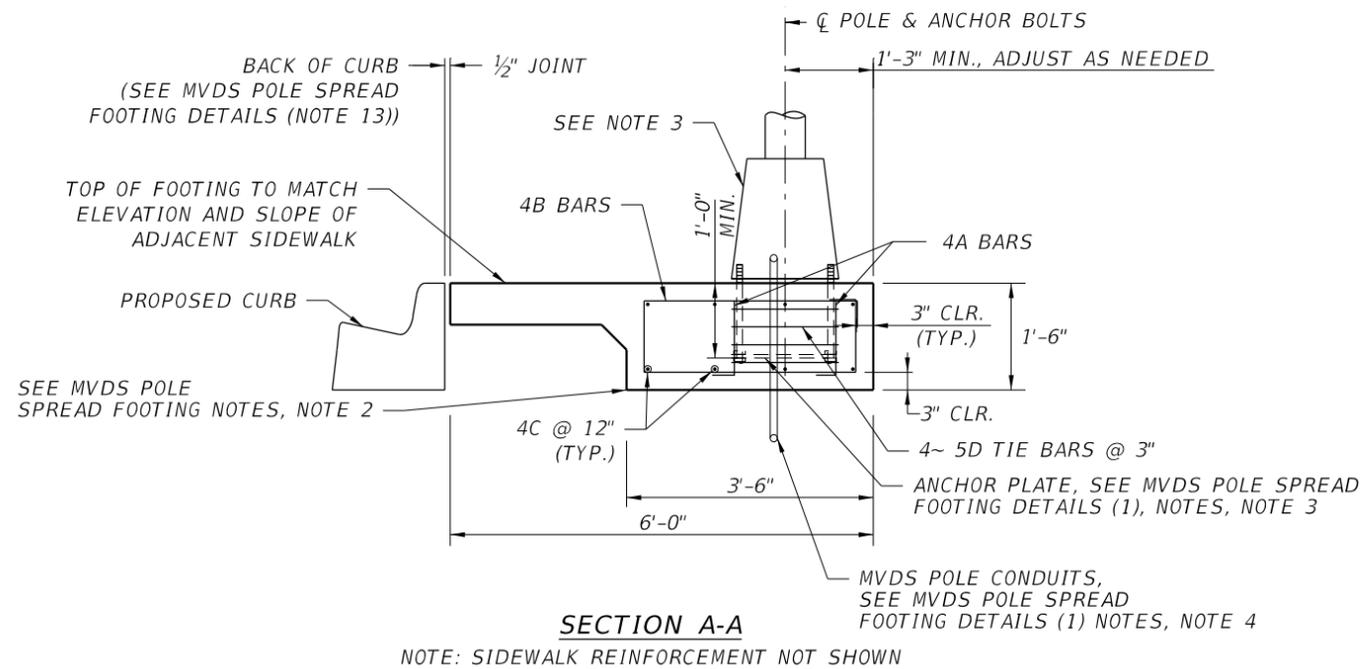
- DESIGN WIND SPEED = 140 MPH
 - COMPACT SOIL UNDER SPREAD FOOTING IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS - SECTION 455.
 - ANCHOR BOLTS SHALL HAVE A MINIMUM OF 4½" INCH CONCRETE COVER AT THE BOTTOM OF THE FOOTING. SHIFT FOOTING REINFORCEMENT AS REQUIRED TO CLEAR BOLTS. ANCHOR BOLT CONFIGURATION AND ANCHOR PLATES SHALL BE COMPATIBLE WITH THE MVDS POLE TRANSFORMER BASE AND ACCOMMODATE THE FOOTING DIMENSIONS. PROVIDE DESIGN CALCULATIONS BASED ON LOADS PROVIDED BELOW, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
 - FOR CONDUIT DETAILS REFER TO STANDARD PLANS INDEX 695-001.
 - DESIGN LOADS: (EXTREME EVENT I LOAD COMBINATION LIMIT STATE)
- | MVDS POLE NO. | MOMENT IN TRANSVERSE DIRECTION (KIP-FT) | SHEAR IN TRANSVERSE DIRECTION (KIPS) | TORSION (KIP-FT) | AXIAL (KIP) | MOMENT IN LONGITUDINAL DIRECTION (KIP-FT) | SHEAR IN LONGITUDINAL DIRECTION (KIP) |
|---------------|---|--------------------------------------|------------------|-------------|---|---------------------------------------|
| SITE #1 | 1.5 | 0.2 | 0.01 | 0.2 | 1.5 | 0.2 |
- IF A POLE IS FURNISHED WHICH PRODUCES GREATER LOADS THAN ARE LISTED ABOVE, REDESIGN THE SPREAD FOOTING AND SUBMIT DRAWINGS AND CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA, TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - WORK SPREAD FOOTING DETAILS SHEET WITH ITS PLANS, UTILITY ADJUSTMENT SHEETS AND STANDARD PLANS INDEX 695-001 (EXCEPT AS MODIFIED ON THESE SHEETS AND THE REQUIRED MODIFICATIONS TO ACCOMMODATE THE SPECIAL FOOTING DIMENSIONS).
 - DO NOT EMBED ELECTRICAL PULL BOXES IN THE SPREAD FOOTING FOUNDATION.



DETAIL A: UNDERGROUND UTILITIES AT SPREAD FOOTINGS

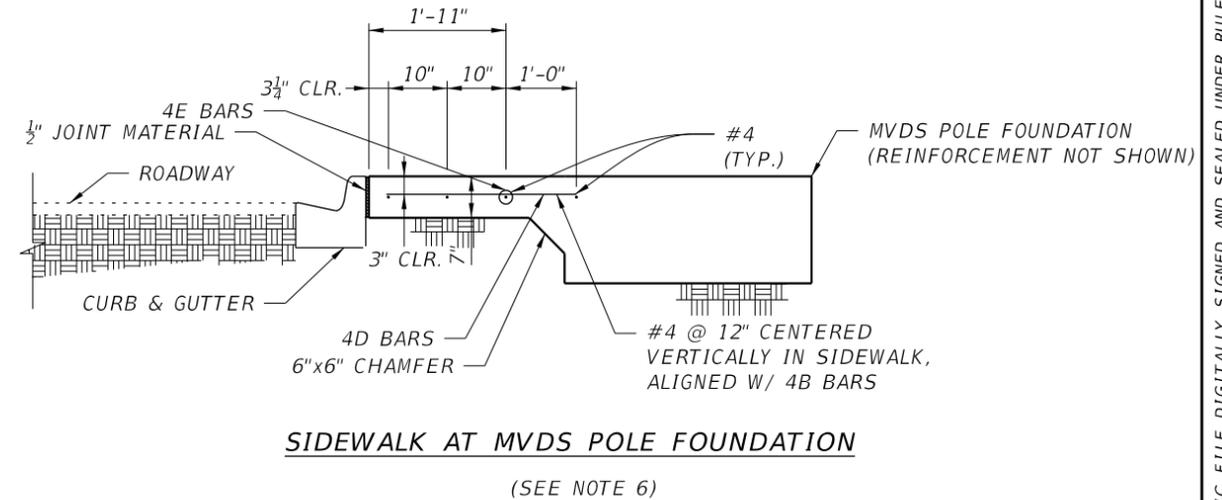
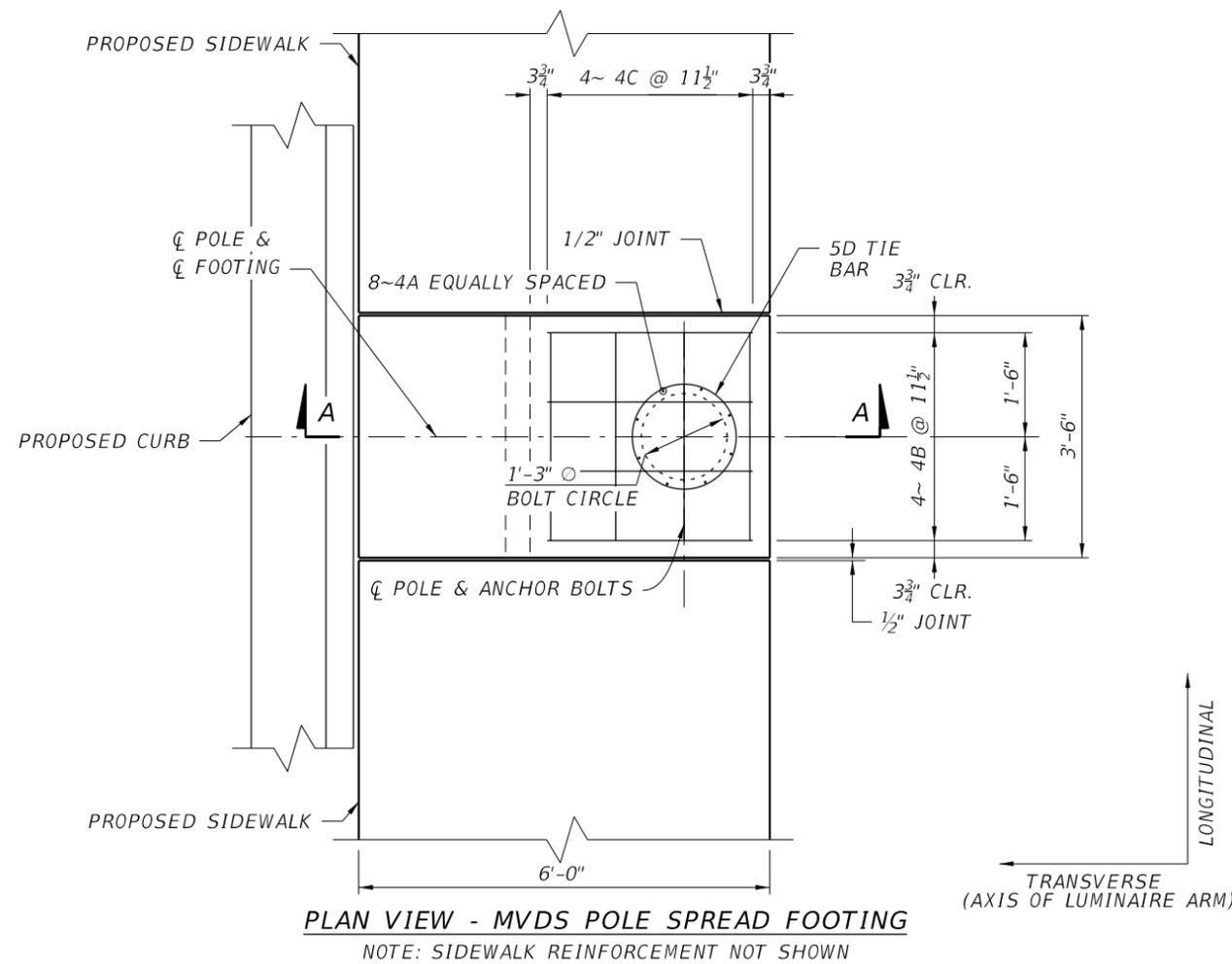
REVISIONS				PREDRAG MILOSAVLJEVIC, PE PE LICENSE NUMBER 54961 SCALAR CONSULTING GROUP INC. 5713 CORPORATE WAY, SUITE 200 WEST PALM BEACH, FL 33407	DRAWN BY: HJS CHECKED BY: PZM/HNS DESIGNED BY: HJS CHECKED BY: PZM	MANATEE COUNTY			SHEET NO. MVDS POLE SPREAD FOOTING DETAILS (1) IT-15
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 45	MANATEE	433592-4-58-01		

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



MARK	LENGTH	NO	TYP	STY	B	C	D
SIZE	DES	FT	IN	BAR	A	G	FR
FOR ONE FOOTING							
4	A	1	8	8	10		
4	B	8	9	4	4	4	1
4	C	8	7	4	4	4	0
4	D	2	8	4	1	4	1
4	E	3	0	4	1	4	1
5	D	8	4	4	24		

ESTIMATED MVDS POLE FOUNDATION QUANTITIES PER FOOTING (MVDS POLE)		
ITEM	UNIT	QUANTITY
CONCRETE	CY	0.8
STEEL	LB	93



- NOTES:
1. WORK THIS SHEET WITH FDOT INDEX NO. 415-001 BAR BENDING DETAILS.
 2. ADJUST SPACING OF BARS A, B AND C TO CLEAR ANCHOR BOLTS.
 3. ALL POLES SHALL HAVE BREAKAWAY TRANSFORMER IN ACCORDANCE WITH STANDARD PLAN INDEX 715-002.
 4. FOR THE LOCATION OF MVDS SITE #1 SEE ITS PLAN SHEET (2).
 5. THE PROVIDED STRUCTURAL DESIGN IS GENERAL IN NATURE. THE CONTRACTOR SHALL VERIFY ALL EXISTING UNDERGROUND UTILITIES AND INFORM THE ENGINEER ABOUT ANY CONFLICT.
 6. TOP SURFACE OF THE FOOTING SHALL BE CAST FLUSH WITH THE TOP SURFACE OF THE ADJACENT SIDEWALK AND SHALL RECEIVE THE SAME SURFACE TREATMENT. ADD THE REINFORCEMENT AS SHOWN IN SIDEWALK AT LIGHT POLE FOUNDATIONS DETAIL.
 7. CONSTRUCTION COSTS ASSOCIATED WITH THE SIDEWALK AT MVDS POLE FOUNDATIONS WILL BE INCLUDED IN CONSTRUCTION COST OF THE MVDS POLE SPREAD FOOTING.

REVISIONS				PREDRAG MILOSAVLJEVIC, PE PE LICENSE NUMBER 54961 SCALAR CONSULTING GROUP INC. 5713 CORPORATE WAY, SUITE 200 WEST PALM BEACH, FL 33407	DRAWN BY: HJS CHECKED BY: PZM/HNS DESIGNED BY: HJS CHECKED BY: PZM	MANATEE COUNTY			SHEET NO. MVDS POLE SPREAD FOOTING DETAILS (2)	IT-16
DATE	DESCRIPTION	DATE	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 45	MANATEE	433592-4-58-01			

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