

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 429074-1-52-01

(FEDERAL FUNDS)

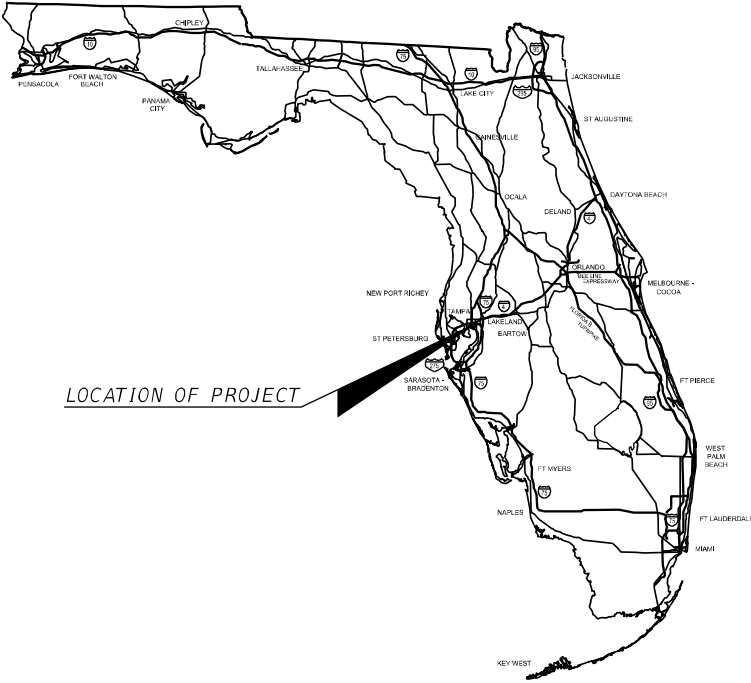
HILLSBOROUGH COUNTY (10060)

STATE ROAD NO. 45
(US41/50TH ST.) FROM N. OF 27TH AVE. S.
TO N. OF E. 10TH AVE.

SIGNALIZATION PLANS

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SIGNALIZATION
SHOP DRAWINGS TO BE SUBMITTED TO:
RONALD C. HILDEBRAND, P.E.
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352

PLANS PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CONTRACT NO. C8Z78
VENDOR NO. F560885615-001
CERTIFICATE OF AUTHORIZATION: 00000696

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

KEY SHEET REVISIONS	
DATE	DESCRIPTION

SIGNALIZATION PLANS
ENGINEER OF RECORD: RONALD C. HILDEBRAND, P.E.

P.E. NO.: 41936

FISCAL YEAR	SHEET NO.
14	T-1

FDOT PROJECT MANAGER: MARY LOU GODFREY, P.E.

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



Gregory G Deese
FL PE #69140
2016.11.17
10:35:38-05'00'

*"The above named professional engineer shall be responsible for the following changes, indicated in redline revision, in accordance with **Rule 61G15-23.004, F.A.C.** This project was constructed in substantial compliance with these plans as provided by the Engineer of Record."*

SIGNALIZATION PLANS

<u>Sheet No.</u>	<u>Sheet Description</u>
T-9	Signal Change

REVISIONS				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNATURE SHEET	SHEET NO. 2G
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				45	HILLSBOROUGH	429074-1-52-01		

TABULATION OF QUANTITIES																								
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET	
			T-5		T-6		T-7		T-8		T-9		T-10		T-11									
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL		
630-2-11	CONDUIT (FURNISH & INSTALL) (OPEN TRENCH) UNDERGROUND	LF	60		90		115		15		120		115		115				630					
630-2-12	CONDUIT (FURNISH & INSTALL) (DIRECTIONAL BORE) UNDERGROUND OR UNDERPAVEMENT	LF	630		285		305		505		385		210		200				2520					
630-2-14	CONDUIT (FURNISH & INSTALL) (ABOVEGROUND)	LF	-		-		-		-		25		-		-				25					
632-7-1	SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1		1		1		1		1		-		-				5					
633-4-1	SIGNALS COMMUNICATION CABLE - TWISTED PAIR CABLE	LF	-		-		-		-		215		-		-				215					
634-4-400	SPAN WIRE ASSEMBLY, ADJUST	PI	-		-		-		1		-		-		-				1					
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	13		10		9		10		14		4		4				64					
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1		-		-		-		1		-		-				2					
639-2-1	ELECTRICAL SERVICE WIRE	LF	210		-		-		-		125		-		-				335					
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1		-		-		-		1		-		-				2					
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	2		-		-		-		2		-		-				4					
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	4		6		6		8		5		-		-				29					
649-31-201	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 36	EA	1		-		-		-		-		-		-				1					
649-31-202	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 46	EA	-		-		-		-		2		-		-				2					
649-31-203	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 60	EA	-		-		-		-		2		-		-				2					
649-31-205	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 78	EA	1		-		-		-		-		-		-				1					
649-31-212	MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O LUMINAIRE, 36-60	EA	1		-		-		-		-		-		-				1					
650-1-311	TRAFFIC SIGNAL, F&I, 3-SECTION, 1-WAY, ALUMINUM	AS	9		-		-		10		10		-		-				29					
650-1-321	TRAFFIC SIGNAL, F&I, 3-SECTION, 2-WAY, ALUMINUM	AS	-		-		-		2		-		-		-				2					
650-1-411	TRAFFIC SIGNAL, F&I, 4-SECTION, 1-WAY, ALUMINUM	AS	3		-		-		-		5		-		-				8					
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNTDOWN, 1 DIRECTION	AS	8		6		6		8		8		-		-				36					
660-1-109	LOOP DETECTOR INDUCTIVE, F&I, TYPE 9	EA	-		-		-		7		-		-		-				7					
660-2-101	LOOP ASSEMBLY, F&I, TYPE A	AS	-		-		-		6		-		-		-				6					
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	AS	-		-		-		6		-		-		-				6					
660-4-11	VEHICLE DETECTION SYSTEM - VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA	1		1		1		-		1		-		-				4					

amy.hudson	4/3/2014	10:12:33 AM	K:\SAR Roadway\048508087 US41\42907415201\signals\TABQSG01.DGN
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TABULATION OF QUANTITIES																								
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET	
			T-5		T-6		T-7		T-8		T-9		T-10		T-11									
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL		PLAN
630-2-11	CONDUIT (FURNISH & INSTALL) (OPEN TRENCH) UNDERGROUND	LF	75	75	90	92 90	115	115	15	15	160	160	115	115	115				685	685		685		
630-2-12	CONDUIT (FURNISH & INSTALL) (DIRECTIONAL BORE) UNDERGROUND OR UNDERPAVEMENT	LF	650	650	285	285	305	305	505	505	405	405	210	210	200	200			2,560	2560		2560		
630-2-14	CONDUIT (FURNISH & INSTALL) (ABOVEGROUND)	LF			-		-		-		25	25	-	-	-	-			25	25		25		
632-7-1	SIGNAL CABLE - NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1	1	1	1	1	1	1	1	1	1	-	-	-	-			5	5		5		
633-4-1	SIGNALS COMMUNICATION CABLE - TWISTED PAIR CABLE	LF	-	-	-	-	-	-	-	-	220	220	-	-	-	-			220	220		220		
634-4-400	SPAN WIRE ASSEMBLY, ADJUST	PI	-	-	-	-	-	-	-	-	1	1	-	-	-	-			1	1		1		
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	13	13	10	10	9	9	10	10	14	14	4	4	4	4			64	64		64		
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1	1	-	-	-	-	-	-	1	1	-	-	-	-			2	2		2		
639-2-1	ELECTRICAL SERVICE WIRE	LF	210	210	-	-	-	-	-	-	125	125	-	-	-	-			335	335		335		
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1	1	-	-	-	-	-	-	1	1	-	-	-	-			2	2		2		
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	2	2	-	-	-	-	-	-	2	2	-	-	-	-			4	4		4		
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	5	5	6	6	6	6	8	8	6	6	-	-	-	-			31	31		31		
649-31-201	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 36	EA	-	1	-	-	-	-	-	-	-	-	-	-	-	-			-	1		1		
649-31-202	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 46	EA	-	-	-	-	-	-	-	-	2	2	-	-	-	-			2	2		2		
649-31-203	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 60	EA	-	-	-	-	-	-	-	-	2	2	-	-	-	-			2	2		2		
649-31-205	MAST ARM, F&I, WIND SPEED-130, SINGLE ARM, W/O LUMINAIRE - 78	EA	1	1	-	-	-	-	-	-	-	-	-	-	-	-			1	1		1		
649-31-212	MAST ARM, F&I, WIND SPEED-130, DOUBLE ARM, W/O LUMINAIRE, 36-60	EA	1	1	-	-	-	-	-	-	-	-	-	-	-	-			1	1		1		
650-1-311	TRAFFIC SIGNAL, F&I, 3-SECTION, 1-WAY, ALUMINUM	AS	9	9	-	-	-	-	10	10	9	9	-	-	-	-			28	28</				

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEWEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-2
06/24/15	△ CHANGED SIGNAL HEADS ON SHEETS T-5 AND T-9, CHANGED POSITION OF MAST ARM C. PED FEATURES, AND CONDUITS ON SHEET T-9.				45	HILLSBOROUGH	429074-1-52-01		

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

GENERAL NOTES:

1. THE CONTRACTOR SHALL MEET THE CRITERIA OUTLINED IN "THE MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNAL DEVICES" (MSTCSD).

2. THE LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. PRIOR TO DIGGING, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES. THE CONTRACTOR SHALL NOTIFY THE "SUNSHINE STATE ONE CALL" NOTIFICATION CENTER NOT LESS THAN TWO FULL BUSINESS DAYS, NOR MORE THAN FIVE DAYS, IN ADVANCE OF ANY OF THE CONTRACTOR'S WORK ACTIVITY WHICH MAY IMPACT ANY UTILITY FACILITY. CALL "SUNSHINE STATE ONE CALL" AT 1-800-432-4770. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY FOR HAVING UNDERGROUND CABLE SITES LOCATED AND IDENTIFIED BY PROPER AUTHORITIES AT TIME OF CONSTRUCTION.

3. ONE WEEK PRIOR TO THE START OF THE TRAFFIC SIGNAL INSTALLATION, THE SIGNAL CONTRACTOR SHALL CONTACT:

A) MR. JIM A. ROSA, F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS CONSTRUCTION LIAISON
FLORIDA DEPARTMENT OF TRANSPORTATION
11201 NORTH MCKINLEY DRIVE
TAMPA, FLORIDA 33612
PHONE: (813) 975-6269
E-MAIL: JAMES.ROSA@DOT.STATE.FL.US

B) MR. GEORGE AUBEL, TRAFFIC SIGNAL SUPERVISOR
HILLSBOROUGH COUNTY SIGNAL SHOP
8420 SABAL INDUSTRIAL BOULEVARD
TAMPA, FLORIDA 33619
PHONE (813) 612-7900
E-MAIL: AUBELG@HILLSBOROUGHCOUNTY.ORG

4. PRIOR TO ALL TRAFFIC SIGNAL CHANGES (I.E., MAINTENANCE OF TRAFFIC CHANGES, NEW SIGNAL INSTALLATIONS, DIFFERENT PAVEMENT CONFIGURATIONS, ETC.), CONTACT RICK NAPORA, F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS, AT (813) 975-6232, AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE FOR IMPLEMENTATION OF APPROPRIATE SIGNAL TIMINGS.

5. THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY (TECO) FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS, AND / OR SIGNAL POLES.

6. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED BY HIM TO THE HILLSBOROUGH COUNTY SIGNAL SHOP IN EXISTING CONDITION, EXCEPT FOR POLES AND SPAN WIRES, WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY HIM. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE OF THE DESIRED DELIVERY DATE. THE COST OF DELIVERY SHALL BE INCLUDED IN THE UNIT PRICE OF THE REMOVAL PAY ITEMS.

7. THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO THE 48 HOUR TEST. UPON THE 48 HOUR TEST, THE ENGINEER SHALL PROVIDE 2 COMPLETE SETS OF AS-BUILT PLANS ON CD'S TO HILLSBOROUGH COUNTY AND ONE HARDCOPY TO DISTRICT SEVEN TRAFFIC OPERATIONS.

8. THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL ELEVATIONS PRIOR TO ORDERING SIGNAL MAST ARMS.

9. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

A. OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.

B. CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS. ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

10. THE EXISTING SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE NEW SIGNAL INSTALLATION HAS PASSED CONDITIONAL ACCEPTANCE TESTING. THE MAINTENANCE OF THE EXISTING SIGNAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. THE CONTRACTOR SHALL HAVE A STATE OF FLORIDA ELECTRICAL CONTRACTOR'S LICENSE PRIOR TO BEGINNING ANY TRAFFIC SIGNAL WORK.

12. ALL GROUND WIRE SPLICE POINTS AND GROUND RODS SHALL BE EXOTHERMICALLY WELDED.

PAY ITEM FOOTNOTES:

13. 630-2-AB: IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED. ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF TWO INCHES, UNLESS OTHERWISE NOTED IN THE PLANS. PAYMENT FOR DIRECT BORING SHALL INCLUDE THE COST OF THE PIPE/CASING INSTALLED AS PART OF THE OPERATION INCLUDING THE TRACING CONDUCTOR TO LOCATE THE PIPE. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS AND JACK AND BORE SLEEVES, ALL OTHER UNDERGROUND AND UNDER-PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF TWO INCHES, UNLESS OTHERWISE SPECIFIED IN THE PLANS. TWO SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL SIGNAL STRAIN POLES AND MAST ARMS. THERE SHALL BE MINIMUM OF THREE RUNS OF TWO INCH CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET AND THE CONTROLLER CABINET. FOUR CONDUITS SHALL BE PROVIDED BETWEEN THE CORNERS OF EACH LEG OF THE INTERSECTION. ONE CONDUIT SHALL CONTAIN HIGH VOLTAGE CABLE, AND THE OTHER CONDUITS SHALL BE SPARES. ALL CONDUIT SHALL BE INSTALLED PRIOR TO ROADWAY BASE OR SIDEWALK CONSTRUCTION. THE TERMINATION ENDS OF ALL POLYVINYL CHLORIDE (PVC) CONDUIT SHALL BE FITTED WITH AN END BELL DUCT FITTING PRIOR TO ANY PULL LINE OR CABLE INSTALLATION PER NEC TO PROTECT THE CABLE FROM DAMAGE. EACH MAST ARM FOUNDATION SHALL HAVE A MINIMUM OF FOUR 2-INCH CONDUITS AND ONE 1-INCH CONDUIT.

14. 632-7-1: 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. THERE SHALL BE ONE NEUTRAL PER APPROACH. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE WITH HILLSBOROUGH COUNTY TRAFFIC OPERATIONS BEFORE ORDERING, AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE AND F.D.O.T. SPECIFICATIONS. CONTACT THE TRAFFIC SIGNAL SUPERVISOR AT (813) 612-7900. TRAFFIC SIGNAL CABLE PROVIDING POWER TO VEHICULAR AND PEDESTRIAN SIGNAL HEADS SHALL NOT BE INSTALLED IN THE SAME CONDUIT CONTAINING VEHICULAR DETECTION AND PEDESTRIAN DETECTOR CABLES.

15. 635-2-11: PULL BOXES FOR THE PALM RIVER ROAD INTERSECTION SHALL BE 17" X 30" X 18". THE PULLBOX COVER/LID SHALL BE DESIGNATED HEAVY DUTY AND HAVE A MINIMUM DESIGN/TEST LOAD OF 15,000 (DESIGN)/22,500 (TEST) LBS. THE PULLBOX ITSELF SHALL HAVE A MINIMUM DESIGN/TEST LOAD OF 22,500 (DESIGN)/33,750 (TEST) LBS. ALL PULL BOXES AND PULL BOX COVERS SHALL MEET OR EXCEED TEST PROVISIONS OF ANSI/SECT. 77-2202.

16. 639-1-122: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING OR CONNECTION FEE IS REQUIRED. THE COST OF ANY SUCH FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR ELECTRICAL POWER SERVICE ASSEMBLY. THE COST OF THIS ITEM SHALL INCLUDE THE COST FOR THE APPROPRIATE METER CAN CONTAINING AN INTERNAL BYPASS SHUNT SWITCH AS REQUIRED BY THE LOCAL POWER COMPANY. THE CONTRACTOR SHALL VERIFY THE TYPE OF METER CAN AND A BREAKER BOX TO USE WITH THE HILLSBOROUGH COUNTY SIGNAL SHOP. POWER SERVICE FROM TECO POLE OR POINT OF SERVICE SHALL BE UNDERGROUND.

17. 646-1-11: ALUMINUM PEDESTALS SHALL BE MOUNTED ON A BREAKAWAY SUPPORT (TRANSFORMER TYPE BASE), WHICH IS INCLUDED IN THIS ITEM.

18. 649-3A-BCC: THE CONTRACTOR SHALL HAND DIG THE FIRST FOUR FEET OF THE HOLE FOR THE POLE FOUNDATION. EACH MAST ARM FOUNDATION SHALL HAVE A MINIMUM OF FOUR 2-INCH CONDUITS AND ONE 1-INCH CONDUIT. THIS PAY ITEM SHALL INCLUDE A 7-INCH MINIMUM - 8.5-INCH MAXIMUM BY 2-FOOT MINIMUM 2.5-FOOT MAXIMUM TERMINAL COMPARTMENT HAND HOLE FOR ALL MAST ARMS.

19. 649-3A-BCC: THE CONTRACTOR SHALL ANTICIPATE THE NEED FOR TEMPORARY CASING TO CONSTRUCT VARIOUS MAST ARM FOUNDATIONS ON THIS PROJECT. THE COST OF TEMPORARY CASING SHALL BE INCLUDED IN THE PRICE BID FOR THIS PAY ITEM.

20. 650-A-BCD: ALL SIGNAL HEADS SHALL HAVE BACKPLATES WITH REFLECTIVE YELLOW BORDERS.

21. 653-191: PEDESTRIAN SIGNALS SHALL BE COUNTDOWN WITH OVERLAY/FILLED/FILLED HAND AND PEDESTRIAN SYMBOLS, AND SHALL BE LISTED IN THE F.D.O.T APPROVED PRODUCT LIST.

PAY ITEM FOOTNOTES (CONTINUED):

22. 660-4-AB: THESE ITEMS INCLUDE ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL A VIDEO DETECTION SYSTEM INCLUDING VIDEO CAMERAS, VIDEO PROCESSORS, INTERFACE UNITS, CABLE PLANTS, MONITORING BRACKETS, AND ANY ADDITIONAL EQUIPMENT REQUIRED TO MAKE A COMPLETE AND ACCEPTABLE SYSTEM. CABLE SHALL HAVE NO SPLICE BETWEEN THE VIDEO CAMERA AND THE CONTROLLER CONNECTION. VIDEO DETECTION SYSTEM SHALL BE COMPATIBLE WITH THE HILLSBOROUGH COUNTY CONTROLLER EQUIPMENT, CABINET, AND TRAFFIC SIGNAL COMPUTER SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH THE MAINTAINING AGENCY FOR UNIT ACCEPTANCE.

23. 663-1-110: EMERGENCY PRE-EMPTION VEHICLE DETECTION UNIT ITEM SHALL BE LISTED IN THE F.D.O.T. APPROVED PRODUCTS LIST AND INCLUDE DETECTORS AND ALL OTHER COMPONENTS, HARDWARE, INTERFACE PANELS, WIRING, ETC., TO PROVIDE A FULLY FUNCTIONAL SYSTEM AND SHALL BE COMPATIBLE WITH THE HILLSBOROUGH COUNTY SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH THE MAINTAINING AGENCY AND F.D.O.T. FOR UNIT ACCEPTANCE.

24. 670-5-ABC: THE CONTRACTOR SHALL NOTIFY THE HILLSBOROUGH COUNTY SIGNAL SHOP AND F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS (VIA E-MAIL) AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE OF TURNING ON A NEW OR MODIFIED CONTROLLER CABINET ASSEMBLY. THE CONTROLLER CABINET FRONT DOOR SHALL OPEN AWAY FROM THE INTERSECTION. THE CONTROLLER CABINET SHALL BE MOUNTED WITH ADEQUATE MAINTENANCE PADS SO BOTH THE FRONT AND REAR DOORS ARE ACCESSIBLE AND NOT OBSTRUCTED. THE CONTROLLER CABINET BASE SHALL BE AT LEAST AS HIGH AS THE CROWN OF THE ROAD AND THE TECHNICIAN SERVICE SLAB SHALL BE A MAXIMUM OF 4" BELOW THE TOP OF THE CONCRETE PAD. THE CABINET SHALL INCLUDE AN EIGHT PHASE BACKPLANE WITH A MINIMUM OF 16 POSITIONS ON THE LOAD BAY AND SHALL INCLUDE THE ADDITIONAL COST OF LABOR, CONCRETE, AND OTHER MATERIALS FOR THE CONTROLLER BASE, PAD, AND STEPS, AS ONE UNIT. THE CONTRACTOR SHALL COORDINATE WITH THE HILLSBOROUGH COUNTY SIGNAL SHOP FOR ACCEPTABLE CHOICES OF TRAFFIC CONTROLLER AND CONTROLLER CABINET. THIS ITEM SHALL INCLUDE TELEMETRY TRANSCEIVER, ALL INTERFACE PANELS, CONTROLLER EQUIPMENT, AND SHALL BE FUNCTIONALLY COMPATIBLE WITH THE SYSTEM EQUIPMENT AND SOFTWARE NOW OPERATING ON THE HILLSBOROUGH COUNTY TRAFFIC SIGNAL COMPUTER SYSTEM. CABINET CIRCUITRY AND CONTROLLER EQUIPMENT SHALL FALL BACK TO TIME BASED COORDINATION IN THE EVENT THE LOSS OF TELEMETRY COMMUNICATIONS OCCURS.

25. 685-106: THE UNINTERRUPTED POWER SUPPLY (UPS) UNIT SHALL BE HOUSED IN A SEPARATE ENCLOSED CABINET OR IN A TRAFFIC SIGNAL CABINET WHICH IS DESIGNED TO HOUSE THE UPS ASSEMBLY IN ADDITION TO THE TRAFFIC SIGNAL CONTROL EQUIPMENT. IF A SEPARATE CABINET IS REQUIRED, THIS PAY ITEM SHALL INCLUDE THE CABINET TO HOUSE THE UPS ASSEMBLY. THE TRAFFIC SIGNAL CABINET CONCRETE BASE SHALL BE LARGE ENOUGH TO SUPPORT THE TRAFFIC SIGNAL CABINET AND THE UPS CABINET. PAYMENT FOR THE ADDITIONAL CONCRETE BASE, INCLUDING LABOR AND MATERIAL, SHALL BE INCLUDED IN THE TRAFFIC CONTROLLER ASSEMBLY PAY ITEM NUMBER. THE CONTRACTOR SHALL COORDINATE WITH DISTRICT SEVEN TRAFFIC OPERATIONS FOR SPECIFICATIONS. THE UPS UNIT SHALL BE OF THE SAME MAKE AND MODEL AS IS CURRENTLY BEING USED BY THE MAINTAINING AGENCY.

26. 690-100: THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING PULL BOXES.

27. 700-5-22: THIS ITEM SHALL BE L.E.D. TYPE. THIS ITEM SHALL INCLUDE THE SIGN ASSEMBLY AND MOUNTING HARDWARE AS NECESSARY FOR INSTALLATION ON THE MAST ARM OR ON SEPARATE SIGN BRACKET ARMS AS SHOWN ON THE PLAN. A TERMINAL STRIP FOR SIGN CONDUCTORS TO BE WIRED TO THE AUXILIARY BREAKER SHALL BE PROVIDED AS PART OF THE CONTROLLER CABINET ASSEMBLY. I.M.S.A. AWG NO. 14 SHALL BE USED. THE BID PRICE SHALL INCLUDE A PHOTOELECTRIC CELL INSTALLED IN THE CONTROLLER CABINET. INTERNALLY ILLUMINATED SIGNS SHALL BE DUAL FACED UNLESS MOUNTED ON THE MAST ARM, AND SHALL OPEN TOWARD THE INTERSECTION (FRONT SIDE).

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

KIMLEY-HORN AND ASSOCIATES, INC.
RONALD C. HILDEBRAND, P.E.
P.E. LICENSE NUMBER 41936
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CERTIFICATE OF AUTHORIZATION: 00000696

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

SIGNALIZATION
GENERAL NOTES
HILLSBOROUGH COUNTY

SHEET NO.

T-3

THESE NOTES APPLY ONLY TO THE INTERSECTION OF 50TH STREET AND PALM RIVER ROAD, WHICH IS MAINTAINED BY HILLSBOROUGH COUNTY.

amy.hudson

4/3/2014

10:12:34 AM

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

GENERAL NOTES:

1. THE CONTRACTOR SHALL MEET THE CRITERIA OUTLINED IN "THE MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNAL DEVICES" (MSTCSD).

2. THE LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. PRIOR TO DIGGING, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES.

3. ONE WEEK PRIOR TO THE START OF THE TRAFFIC SIGNAL INSTALLATION, THE SIGNAL CONTRACTOR SHALL CONTACT:

A) MR. JIM A. ROSA, F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS CONSTRUCTION LIAISON
FLORIDA DEPARTMENT OF TRANSPORTATION
11201 NORTH MCKINLEY DRIVE
TAMPA, FLORIDA 33612
PHONE: (813) 975-6269
E-MAIL: JAMES.ROSA@DOT.STATE.FL.US

B) MR. WAYNE CORNELISON, TRAFFIC SIGNAL SUPERVISOR
CITY OF TAMPA SIGNAL SHOP
3802 E. 26TH AVENUE
TAMPA, FLORIDA 33605
PHONE (813) 622-1969
E-MAIL: WAYNE.CORNELISON@TAMPAGOV.NET

4. PRIOR TO ALL TRAFFIC SIGNAL CHANGES (I.E., MAINTENANCE OF TRAFFIC CHANGES, NEW SIGNAL INSTALLATIONS, DIFFERENT PAVEMENT CONFIGURATIONS, ETC.), CONTACT RICK NAPORA, F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS, AT (813) 975-6232, AND MIKE SCANLON, CITY OF TAMPA TRAFFIC ENGINEERING, AT (813) 274-8105, AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE FOR IMPLEMENTATION OF APPROPRIATE SIGNAL TIMINGS.

5. THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS, AND / OR SIGNAL POLES.

6. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE CITY OF TAMPA SIGNAL SHOP, IN EXISTING CONDITION, EXCEPT FOR POLES, AND SPAN WIRES WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY HIM. COST OF DELIVERY SHALL BE INCLUDED IN THE UNIT PRICE OF THE REMOVAL PAY ITEMS.

7. THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO THE 48 HOUR TEST. UPON THE 48 HOUR TEST, THE ENGINEER SHALL PROVIDE AT LEAST ONE COPY OF THE FINAL AS-BUILT PLANS TO THE CITY OF TAMPA (IN AUTOCAD FORMAT) AND ONE COPY TO DISTRICT TRAFFIC OPERATIONS (IN MICROSTATION FORMAT).

8. THE CONTRACTOR SHALL FIELD VERIFY ALL CRITICAL ELEVATIONS PRIOR TO ORDERING SIGNAL MAST ARMS.

9. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

A. OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.

B. CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS. ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

10. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PROVIDE AND MAINTAIN THE OPERATION OF EXISTING SIGNALIZATION DURING ALL PHASES OF CONSTRUCTION UNTIL PERMANENT SIGNALIZATION IS INSTALLED AND FUNCTIONING PROPERLY. WHEN A CONTRACTOR IS DOING SIGNAL WORK IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING LOOPS AND RUNS, AND TURNING ON OF NEW SIGNALS) WHERE A LANE IS CLOSED, THE PROJECT ENGINEER MAY REQUIRE AN OFF-DUTY LAW ENFORCEMENT OFFICER TO DIRECT TRAFFIC. THE HOURLY RATE OF PAY FOR AN OFF-DUTY LAW ENFORCEMENT OFFICER CAN BE OBTAINED FROM THE OFFICE OF THE LAW ENFORCEMENT OFFICER. THIS IS IN ADDITION TO PROPER MAINTENANCE OF TRAFFIC. PAYMENT SHALL BE MADE UNDER PAY ITEM NUMBER 102-14.

PAY ITEM FOOTNOTES:

11. 630-2-AB: IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED. ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF TWO INCHES, UNLESS OTHERWISE NOTED IN THE PLANS. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS AND JACK AND BORE SLEEVES, ALL OTHER UNDERGROUND AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF TWO INCHES, UNLESS OTHERWISE SPECIFIED IN THE PLANS. TWO SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL SIGNAL STRAIN POLES AND MAST ARMS. THERE SHALL BE MINIMUM OF THREE RUNS OF TWO INCH CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET AND THE CONTROLLER CABINET. THE TERMINATION ENDS OF ALL POLYVINYL CHLORIDE (PVC) PLASTIC CONDUIT ENTERING ALL PULLBOXES AND CABINET BASES SHALL BE FITTED WITH AN END BELL DUCT FITTING PRIOR TO ANY PULL-LINE OR CABLE INSTALLATION. DETECTABLE LOCATING TAPE SHALL BE PLACED OVER THE CENTERLINE OF ALL PVC PIPES AT ONE FOOT BELOW GRADE. PAYMENT FOR DETECTABLE SHALL BE INCLUDED IN THE PAY ITEM FOR CONDUIT.

12. 632-7-1: 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 AND INTERCONNECT CABLE WITH THE CITY OF TAMPA TRAFFIC SIGNAL SUPERVISOR BEFORE ORDERING, AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE, F.D.O.T. SPECIFICATIONS, AND CITY OF TAMPA WIRING STANDARDS. THERE SHALL BE ONE NEUTRAL PER APPROACH. . TRAFFIC SIGNAL CABLE PROVIDING POWER TO VEHICULAR AND PEDESTRIAN SIGNAL HEADS SHALL NOT BE INSTALLED IN THE SAME CONDUIT CONTAINING VEHICULAR DETECTION AND PEDESTRIAN DETECTOR CABLES. (HIGH VOLTAGE AND LOW VOLTAGE CABLE OR WIRE SHALL BE SEPARATED BY CONDUIT AND PULL-BOX.)

13. 633-4-1: INTERCONNECT CABLE SHALL BE 12-PAIR, PE 39, 22 AWG. THIS ITEM SHALL INCLUDE THE COST OF ALL LABOR AND HARDWARE NEEDED TO SPLICE AND CONNECT THE PROPOSED CABLE TO THE EXISTING INTERCONNECT TRUNK LINE IN THE EXISTING AERIAL JUNCTION BOX IN THE SOUTHWEST QUADRANT OF U.S. 41 AND 7TH AVENUE. NO OTHER PAYMENT SHALL BE MADE.

14. 634-4-400: SHALL INCLUDE THE COST OF SIZING ALL SPAN WIRE HARDWARE AND FITTINGS WITH SUFFICIENT STRENGTH TO RESIST BREAKING STRENGTH OF THE WIRE WITH WHICH THEY ARE USED.

15. 639-1-122: THE COST OF THIS ITEM SHALL INCLUDE THE COST FOR THE APPROPRIATE METER CAN CONTAINING AN INTERNAL BYPASS SHUNT SWITCH AS REQUIRED BY THE LOCAL POWER COMPANY. THE CONTRACTOR SHALL VERIFY THE TYPE OF METER CAN AND A BREAKER BOX TO USE WITH THE CITY OF TAMPA SIGNAL SHOP. ELECTRICAL SERVICE AUTHORIZATION AND SERVICE RELEASE SHALL BE COORDINATED IN ADVANCE THROUGH THE TRAFFIC OPERATIONS CHIEF. CONTACT THE TRAFFIC SIGNAL SUPERINTENDENT FOR INSTRUCTIONS AT 622-1966. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING OR CONNECTION FEE IS REQUIRED. THE COST OF ANY SUCH FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR ELECTRICAL POWER SERVICE ASSEMBLY.

16. 641-2-AB/649-3A-BCC: THE CONTRACTOR SHALL HAND DIG THE FIRST FOUR FEET OF THE HOLE FOR THE POLE FOUNDATION. CONTACT MIKE SCANLON, TRAFFIC DESIGN ENGINEER, AT 274-8105 AT LEAST TWO FULL BUSINESS DAYS PRIOR TO POURING FOUNDATION.

17. 646-1-11: ALUMINUM PEDESTALS SHALL BE MOUNTED ON A BREAKAWAY SUPPORT (TRANSFORMER TYPE BASE), WHICH IS INCLUDED IN THIS ITEM.

18. 649-3A-BCC: THE CONTRACTOR SHALL ANTICIPATE THE NEED FOR TEMPORARY CASING TO CONSTRUCT VARIOUS MAST ARM FOUNDATIONS ON THIS PROJECT. THE COST OF TEMPORARY CASING SHALL BE INCLUDED IN THE PRICE BID FOR THIS PAY ITEM.

19. 650-A-BCD: ALL TRAFFIC SIGNAL HEADS SHALL BE ON THE F.D.O.T. APPROVED PRODUCTS LIST, WITH CAST ALUMINUM TOP SECTION AND POLYCARBONATE MIDDLE AND BOTTOM SECTIONS, WITH STAINLESS STEEL HARDWARE, BACKPLATES WITH REFLECTIVE YELLOW BORDERS AND TUNNEL VISORS. ALL SIGNAL INDICATIONS SHALL BE L.E.D. AND MEET CITY SPECIFICATIONS. DISCONNECT HANGARS OR ASTRO BRACKETS SHALL BE ON THE F.D.O.T. APPROVED PRODUCTS LIST AND MEET CITY OF TAMPA SPECIFICATIONS. DISCONNECT WIRING SHALL MEET CITY STANDARDS. CONTACT THE TRAFFIC SIGNAL SUPERINTENDENT FOR DISCONNECT WIRING STANDARDS AT 622-1969.

PAY ITEM FOOTNOTES (CONTINUED):

20. 653-191: PEDESTRIAN SIGNAL ASSEMBLY SHALL BE COUNTDOWN WITH OVERLAY/FILLED/FILLED HAND AND PEDESTRIAN SYMBOLS, AND SHALL BE AN F.D.O.T. APPROVED PRODUCT. EACH ASSEMBLY SHALL HAVE A CAST ALUMINUM HOUSING, USING L.E.D. INTERNATIONAL SYMBOLS, MEETING CITY OF TAMPA SPECIFICATIONS. ALL PUSH BUTTONS SHALL BE WIRED SEPARATELY USING LOW VOLTAGE BELDON WIRE PLACED IN SEPARATE LOW VOLTAGE CONDUIT AND LOW VOLTAGE PULL BOX.

21. 660-2-ABB: THE CONTRACTOR SHALL NOTIFY THE CITY OF TAMPA SIGNAL SHOP AND F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE OF LOOP CUTTING.

22. 660-2-ABB: LOOP DETECTION SYSTEMS SHALL BE HIGH TEMPERATURE LOOP SYSTEMS. SEALANT SHALL BE AN APPROVED EPOXY ON THE F.D.O.T. APPROVED PRODUCTS LIST. ALL LOOPS SHALL HAVE INDIVIDUAL LEAD-INS TO NEAREST PULLBOX. LOOP SPLICES SHALL BE CRIMPED, SOLDERED AND SHRINK WRAPPED TO F.D.O.T. SPECIFICATIONS.

23. 660-4-AB: THESE ITEMS INCLUDE ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL A VIDEO DETECTION SYSTEM INCLUDING VIDEO CAMERAS, VIDEO PROCESSORS INTERFACE UNITS, CABLE PLANTS, MONITORING BRACKETS, AND ANY ADDITIONAL EQUIPMENT REQUIRED TO MAKE A COMPLETE AND ACCEPTABLE SYSTEM. CABLE SHALL HAVE NO SPLICE BETWEEN THE VIDEO CAMERA AND THE CONTROLLER CONNECTION. THE CITY OF TAMPA IS STANDARDIZED ON VIDEO DETECTION, AND ALL EQUIPMENT SHALL BE COMPATIBLE WITH THE CITY OF TAMPA CONTROLLER EQUIPMENT, CABINET, AND TRAFFIC SIGNAL COMPUTER SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF TAMPA SIGNAL SHOP AND FDOT FOR UNIT ACCEPTANCE PRIOR TO ORDERING.

24. 665-1-11: ALL PUSH BUTTONS SHALL BE WIRED SEPARATELY USING LOW VOLTAGE BELDON WIRE PLACED IN SEPARATE LOW VOLTAGE CONDUIT AND LOW VOLTAGE PULL BOX.

25. 670-5-ABC: THE CONTRACTOR SHALL NOTIFY THE CITY OF TAMPA SIGNAL SHOP AND F.D.O.T. DISTRICT SEVEN TRAFFIC OPERATIONS (VIA EMAIL) AT LEAST TWO FULL BUSINESS DAYS IN ADVANCE OF TURNING ON A NEW OR MODIFIED CONTROLLER CABINET ASSEMBLY. THE TECHNICIAN SERVICE SLAB SHALL BE A MAXIMUM OF 4" BELOW THE TOP OF THE CONCRETE PAD. THE CABINET SHALL INCLUDE AN EIGHT PHASE BACKPLANE WITH A MINIMUM OF 16 POSITIONS ON THE LOAD BAY AND SHALL INCLUDE ADDITIONAL COST OF LABOR, CONCRETE, AND OTHER MATERIALS FOR CONTROLLER BASE, PAD, AND STEPS, AS ONE UNIT. THE CITY OF TAMPA IS STANDARDIZED ON TRAFFIC SIGNAL CONTROLLERS AND CABINETS, AND ALL EQUIPMENT SHALL BE COMPATIBLE WITH THE TAMPA SIGNAL SYSTEM. ALL NEW CABINETS SHALL BE NEMA TS2 TYPE 1, 8-PHASE WITH 16 LOAD SWITCH POSITIONS. THIS ITEM SHALL INCLUDE A COMMUNICATIONS INTERFACE PANEL COMPATIBLE WITH THE CITY'S COMMUNICATIONS SYSTEM. IT SHALL ALSO INCLUDE A CONTROLLER CAPABLE OF INTERNAL COMMUNICATIONS WITH THE PROTOCOL 90 SOFTWARE, INCLUDING UPLOAD AND DOWNLOAD OF CONTROLLER TIMINGS. THE CABINET CIRCUITRY SHALL HAVE PROVISIONS, IN THE EVENT OF MTCS COMMUNICATIONS FAILURE, TO FALL BACK TO TIME BASE COORDINATION. THE CONTROLLER SHALL BE CAPABLE OF S.O.P. 10 AND SHALL HAVE THE CAPABILITY OF SENDING AND RECEIVING DATA TO AND FROM A LAPTOP PERSONAL COMPUTER AT THE INTERSECTION. A GPS UNIT SHALL BE INCLUDED FOR TIME SYNC AND THE POSSIBILITY OF INCLUDING A WIRELESS COMMUNICATIONS UNIT. THE TOP ELEVATION OF THE CONTROLLER BASE SHALL BE GREATER THAN THE CROWN OF THE ROADWAY, AND THE CONTROLLER DOOR SHALL OPEN AWAY FROM THE STREET.

26. 685-106: THE UNINTERRUPTED POWER SUPPLY (UPS) UNIT SHALL BE HOUSED IN A SEPARATE ENCLOSED CABINET. THE TRAFFIC SIGNAL CABINET CONCRETE BASE SHALL BE LARGE ENOUGH TO SUPPORT THE TRAFFIC SIGNAL CABINET AND THE UPS CABINET. PAYMENT FOR ADDITIONAL CONCRETE BASE, INCLUDING LABOR AND MATERIAL, SHALL BE INCLUDED IN TRAFFIC CONTROLLER ASSEMBLY PAY ITEM NUMBER. THE UPS CONTROLLER SHALL SUPPORT TCP/IP AND SNMP FUNCTIONALITY FOR REMOTE MONITORING AND MANAGEMENT. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF TAMPA SIGNAL SHOP AND DISTRICT SEVEN TRAFFIC OPERATIONS FOR ACCEPTABLE CHOICES OF UPS ASSEMBLY AND SPECIFICATIONS.

27. 690-100: THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING PULL BOXES.

28. 700-5-22: SHALL BE L.E.D. TYPE. WIRE SHALL BE IMSA AWG 10/2 (SIGNAL CABLE).

THESE NOTES APPLY ONLY TO THE INTERSECTIONS OF 50TH STREET AND
1) CROSSTOWN EXPRESSWAY EASTBOUND RAMPS, 2) CROSSTOWN EXPRESSWAY
WESTBOUND RAMPS, 3) S.R.60/ADAMO DRIVE, AND 4) BROADWAY AVENUE,
WHICH ARE MAINTAINED BY THE CITY OF TAMPA.

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION GENERAL NOTES CITY OF TAMPA	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-4
					45	HILLSBOROUGH	429074-1-52-01		

amy.hudson

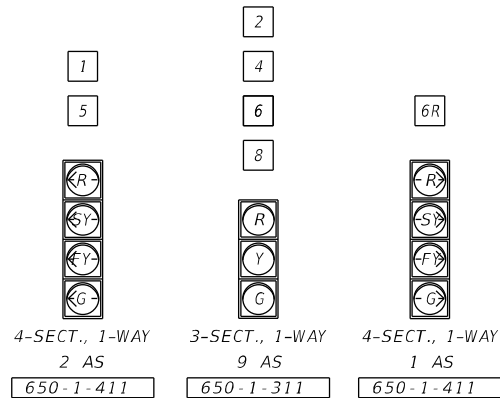
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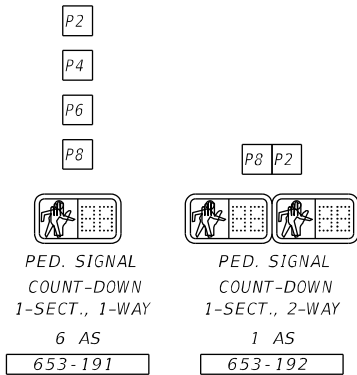
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NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

SIGNAL DISPLAY DETAILS



PEDESTRIAN DISPLAY DETAILS

INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)

S 50th
700 ST 500

S 50th
500 ST 700

Palm River
4900 RD 5000

Palm River
5000 RD 4900

700-5-22

SEE SHEET T-14 FOR DETAILS.

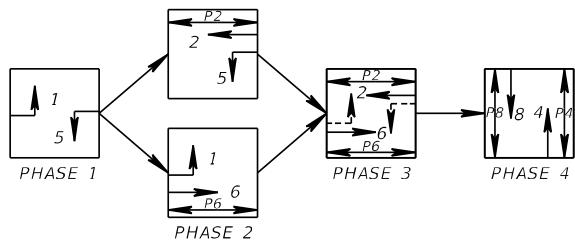
CONTROLLER TIMINGS

PHASE	1	2	3	4	5	6	7	8
DIRECTION	NBL	SBT		E-W	SBL	NBT		
MOVEMENT NUMBER	1	2		4,8	5	6		
MINIMUM GREEN	5	15		10	5	15		
EXTENSION	3	4		4	3	4		
MAXIMUM GREEN 1	10	40		20	10	40		
MAXIMUM GREEN 2								
YELLOW CLEARANCE	5.1	5.1		4.0	5.1	5.1		
ALL RED	2.0	2.0		3.2	2.0	2.0		
PEDESTRIAN WALK	-	7		7	-	7		
FLASHING DON'T WALK	-	16		30	-	13		
RECALL	-	MIN		-	-	MIN		

VIDEO DETECTOR ASSIGNMENTS

CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	2A	6' x 6'	NORMAL	-
1	2B	6' x 6'	NORMAL	-
1	2C	6' x 6'	NORMAL	-
1	5	6' x 20'	NORMAL	-
2	4	6' x 20'	DELAY	5
3	1	6' x 20'	DELAY	5
3	6A	6' x 6'	NORMAL	-
3	6B	6' x 6'	NORMAL	-
3	6R	6' x 20'	DELAY	5
4	8	6' x 20'	DELAY	5

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

PHASING DIAGRAM
(S.O.P. 7 MODIFIED)

NOTES:

- MAJOR STREET IS 50TH STREET (50 MPH), MINOR STREET IS PALM RIVER RD (35 MPH).
- FLASHING OPERATION: MOVEMENTS 2 AND 6 YELLOW, MOVEMENTS 1, 4, 5, AND 8 RED.
- S.O.P. 7 MODIFIED AS SHOWN, WITH CONCURRENT PEDESTRIAN PHASES P2 (MOVEMENT 2), P4 (MOVEMENT 4), P6 (MOVEMENT 6), AND P8 (MOVEMENT 8).
- EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES LEFT TURN MOVEMENTS. EACH LEFT TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PERMISSIVE OPERATION.
- RIGHT TURN FLASHING YELLOW ARROW SHALL FLASH WHEN PEDESTRIAN SIGNAL PHASE P6 IS ACTUATED.
- POWER SERVICE METER BASE AND DISCONNECTS SHALL BE INSTALLED ON THE CONCRETE SERVICE POLES AS SHOWN ON THE PLANS AND PER INDEX NUMBERS 17504 AND 17736.
- SEE SHEET T-19 FOR AN ENLARGED VIEW OF EACH QUADRANT AND THE NUMBER OF CONDUITS PER RUN IN EACH QUADRANT.

EL 7.9'

POLE LOCATION=
STA. 173+51.0
73.0' LT

TO POWER SERVICE POINT AT
EXISTING POWER POLE
NEAR STATION 171+90

210 LF	630-2-12
2 EA	635-2-11
210 LF	639-2-1
1 AS	639-1-122
1 EA	641-2-12

40 LF	630-2-11
1 PI	632-7-1
3 EA	635-2-11
1 EA	639-3-11
1 EA	641-2-12
1 EA	649-31-205
1 EA	660-4-11
1 EA	660-4-12
1 EA	663-1-110
1 AS	670-5-111
1 EA	685-106

EXIST. R/W

10 LF	630-2-11
2 EA	635-2-11
2 EA	646-1-11
2 EA	665-1-11

630-2-12 60 LF

5 CONDUITS - 2" HDPE

EL 8.4'

POLE LOCATION=
STA. 173+98.5
60.0' LT

630-2-11	10 LF
635-2-12	30 LF
635-2-11	2 EA
646-1-11	1 EA
649-31-201	1 EA
660-4-12	1 EA
663-1-110	1 EA
665-1-11	2 EA

EXIST. R/W

EL 7.9'

POLE LOCATION=
STA. 173+99.0
53.0' RT

630-2-12	10 LF
635-2-11	2 EA
649-31-212	1 EA
660-4-12	2 EA
663-1-110	2 EA
665-1-11	2 EA

REMOVAL ITEMS

690-10	10 EA
690-20	8 EA
690-32-2	4 EA
690-50	1 EA
690-60	9 EA
690-70	8 EA
690-90	1 PI
690-100	1 PI
700-3-601	6 EA

MAST ARM NUMBER 10M380

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

KIMLEY-HORN AND ASSOCIATES, INC.
RONALD C. HILDEBRAND, P.E.
P.E. LICENSE NUMBER 41936
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CERTIFICATE OF AUTHORIZATION: 00000696

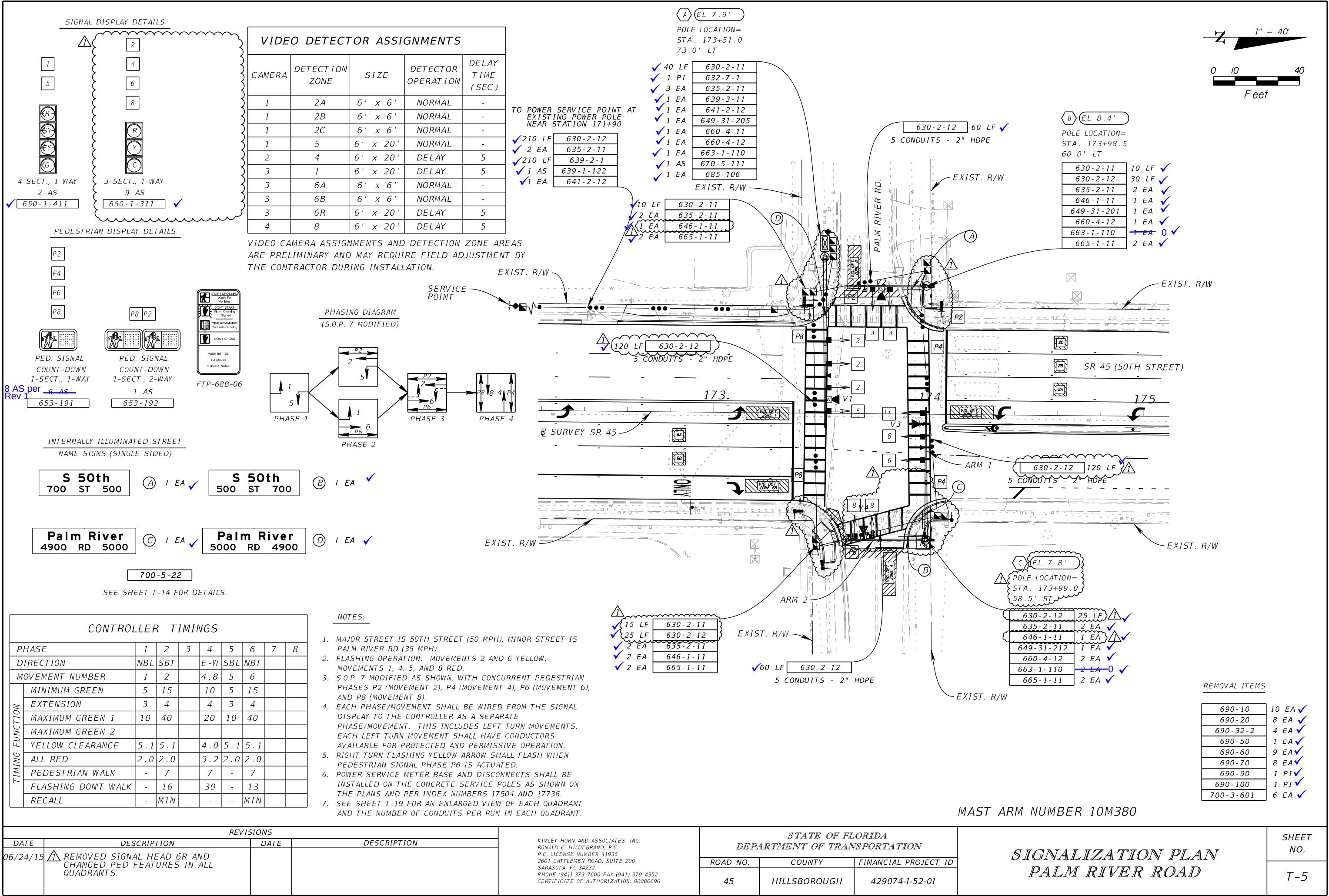
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

SIGNALIZATION PLAN
PALM RIVER ROAD

SHEET
NO.

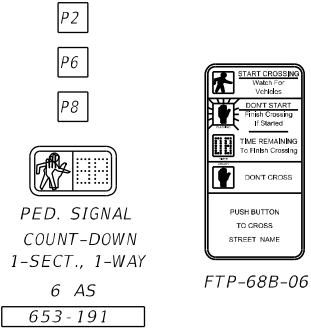
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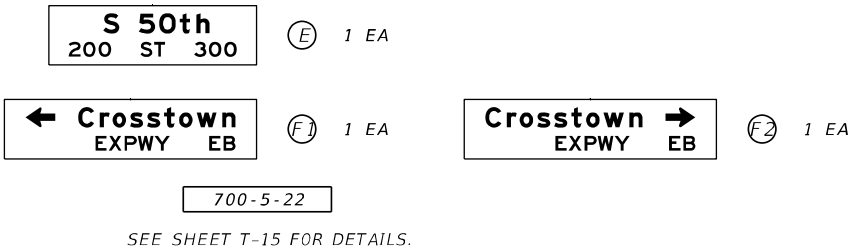
SIGNAL DISPLAY DETAILS

ALL VEHICULAR HEADS ARE EXISTING TO REMAIN.

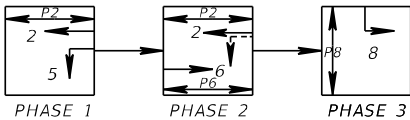
PEDESTRIAN DISPLAY DETAILS



INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)



PHASING DIAGRAM
(S.O.P. 14 MODIFIED)



CONTROLLER TIMINGS

PHASE	1	2	3	4	5	6	7	8
DIRECTION	SBT				SBL	NBT		EB
MOVEMENT NUMBER	2				5	6		
MINIMUM GREEN	10				5	10		10
EXTENSION	3				2			5
MAXIMUM GREEN 1	65				50	65		39
MAXIMUM GREEN 2	85				25	85		45
YELLOW CLEARANCE	4.4				4.4	4.4		4.4
ALL RED	2.1				2.3	2.1		2.5
PEDESTRIAN WALK	7				-	7		7
FLASHING DONT WALK	10				-	10		33
RECALL	MAX				-	MAX		-

VIDEO DETECTOR ASSIGNMENTS

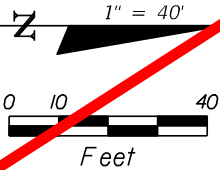
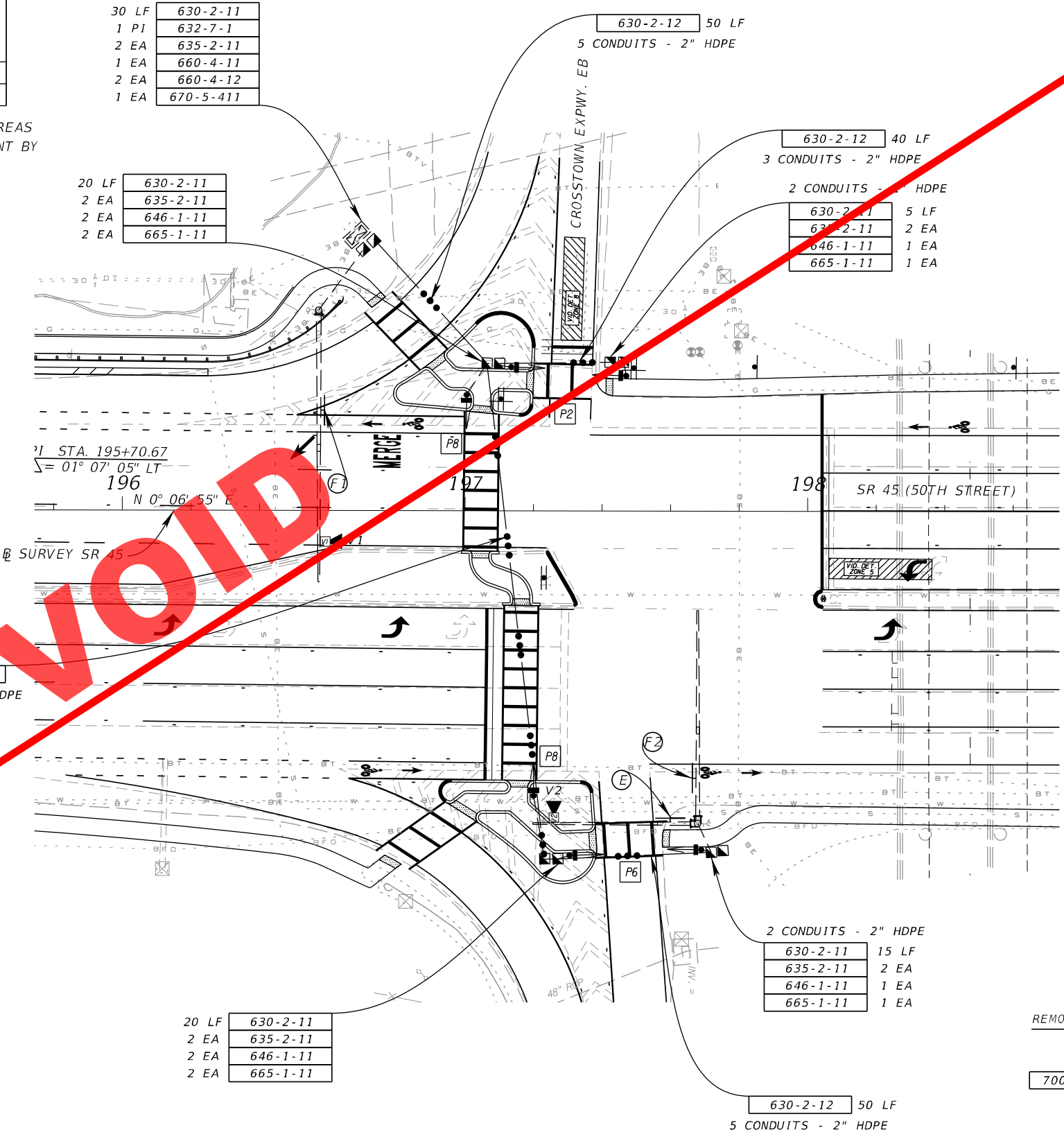
CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	5	6' x 30'	NORMAL	-
2	8	6' x 30'	NORMAL	-

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

THE CONTROLLER ASSEMBLY, MAST ARMS, ELECTRICAL SERVICE ASSEMBLY, AND ASSOCIATED CONDUIT, PULL BOXES, AND CABLING ARE EXISTING TO REMAIN.

30 LF	630-2-11
1 P1	632-7-1
2 EA	635-2-11
1 EA	660-4-11
2 EA	660-4-12
1 EA	670-5-411

20 LF	630-2-11
2 EA	635-2-11
2 EA	646-1-11
2 EA	665-1-11

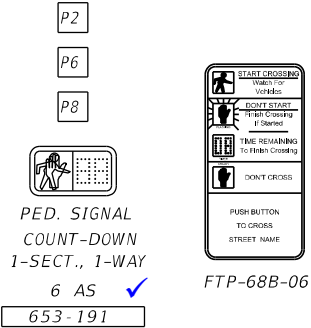


REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN CROSSTOWN EXWY EB	SHEET NO. T-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					45	HILLSBOROUGH	429074-1-52-01		

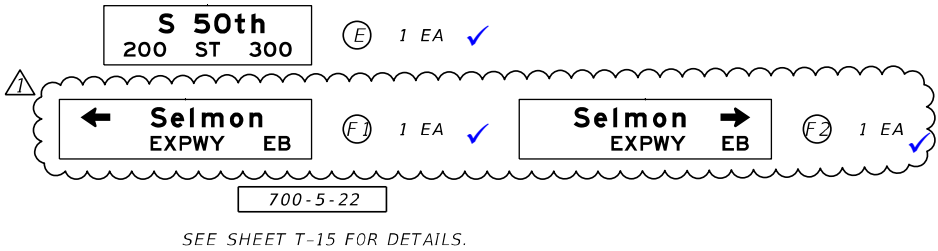
SIGNAL DISPLAY DETAILS

ALL VEHICULAR HEADS ARE EXISTING TO REMAIN.

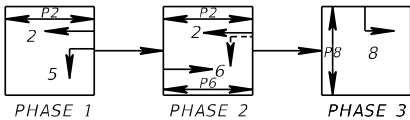
PEDESTRIAN DISPLAY DETAILS



INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)



PHASING DIAGRAM
(S.O.P. 14 MODIFIED)



CONTROLLER TIMINGS

PHASE	1	2	3	4	5	6	7	8
DIRECTION	SBT				SBL	NBT		EB
MOVEMENT NUMBER	2				5	6		8
MINIMUM GREEN	10				5	10		10
EXTENSION	3				2	3		5
MAXIMUM GREEN 1	65				20	65		39
MAXIMUM GREEN 2	85				25	85		45
YELLOW CLEARANCE	4.4				4.4	4.4		4.4
ALL RED	2.1				2.3	2.1		2.5
PEDESTRIAN WALK	7				-	7		7
FLASHING DONT WALK	10				-	10		33
RECALL	MAX				-	MAX		-

VIDEO DETECTOR ASSIGNMENTS

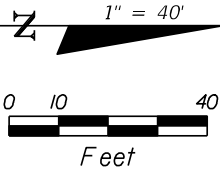
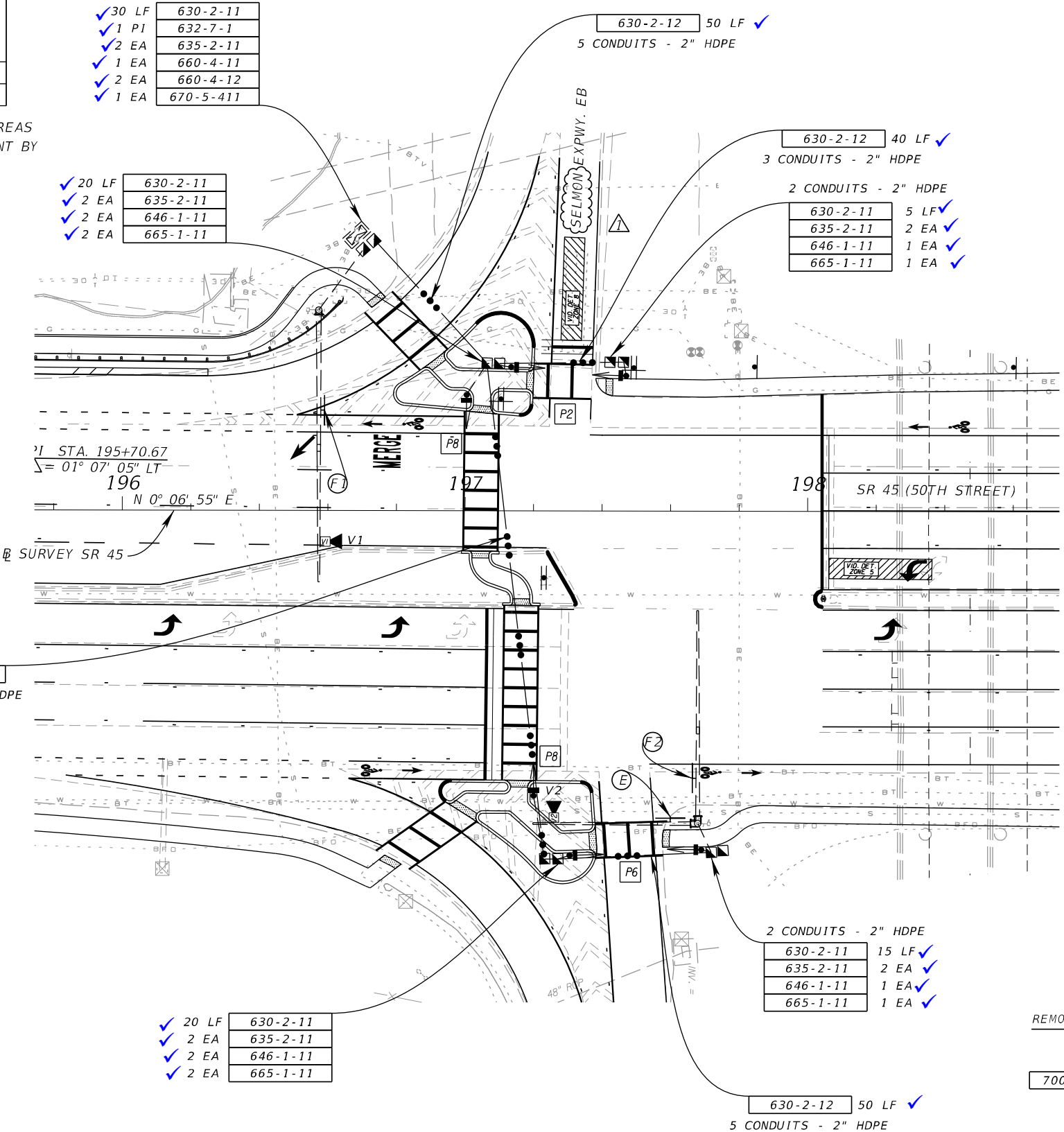
CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	5	6' x 30'	NORMAL	-
2	8	6' x 30'	NORMAL	-

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

THE CONTROLLER ASSEMBLY, MAST ARMS, ELECTRICAL SERVICE ASSEMBLY, AND ASSOCIATED CONDUIT, PULL BOXES, AND CABLING ARE EXISTING TO REMAIN.

✓ 30 LF	630-2-11
✓ 1 P1	632-7-1
✓ 2 EA	635-2-11
✓ 1 EA	660-4-11
✓ 2 EA	660-4-12
✓ 1 EA	670-5-411

✓ 20 LF	630-2-11
✓ 2 EA	635-2-11
✓ 2 EA	646-1-11
✓ 2 EA	665-1-11

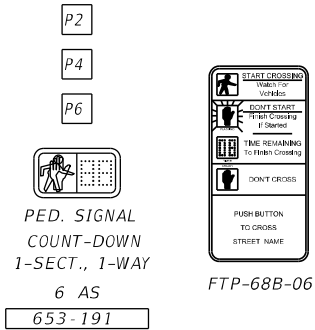


REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN SELMON EXPWY EB	SHEET NO. T-6
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
06/24/15	CHANGED "CROSSTOWN" TO "SELMON".				45	HILLSBOROUGH	429074-1-52-01		

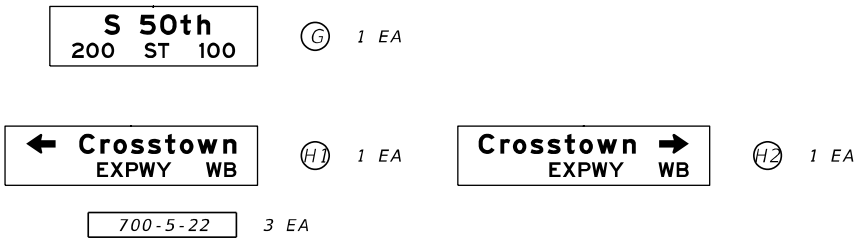
SIGNAL DISPLAY DETAILS

ALL VEHICULAR HEADS ARE EXISTING TO REMAIN.

PEDESTRIAN DISPLAY DETAILS

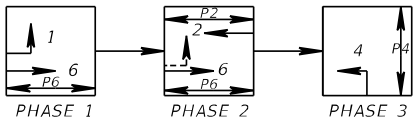


INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)



SEE SHEETS T-15 AND T-16 FOR DETAILS.

PHASING DIAGRAM
(S.O.P. 15 MODIFIED)



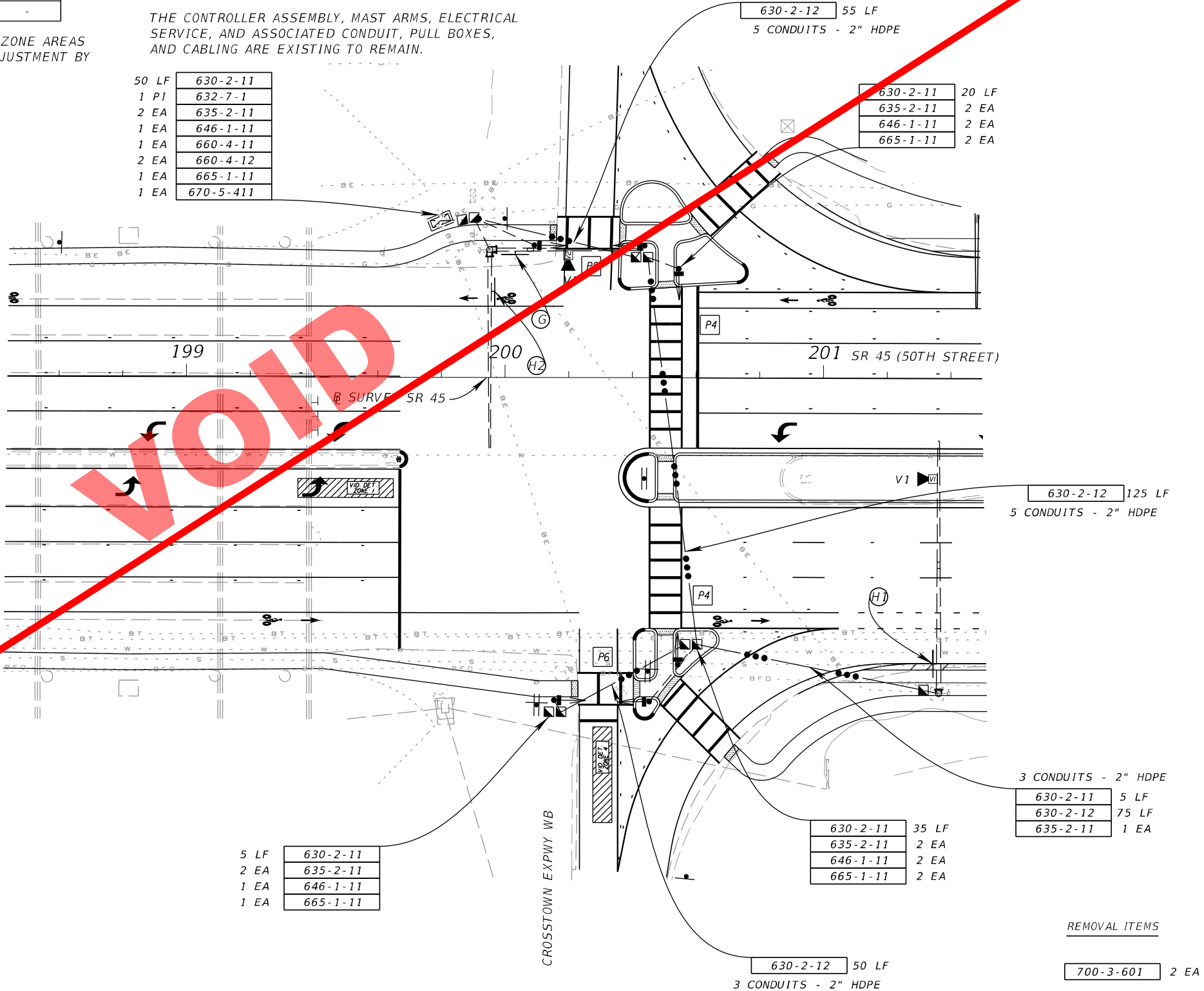
CONTROLLER TIMINGS								
PHASE	1	2	3	4	5	6	7	8
DIRECTION	NBL	SBT		WB		NBT		
MOVEMENT NUMBER	1	2		4		6		
TIMING FUNCTION	MINIMUM GREEN	5	10	10	10			
	EXTENSION	2	3	4	5			
	MAXIMUM GREEN 1	15	70	39	70			
	MAXIMUM GREEN 2	25	85	5	85			
	YELLOW CLEARANCE	4.4	4.4	4.4	4.4			
	ALL RED	2.4	2.0	2.8	2.0			
	PEDESTRIAN WALK		7	7	7			
	FLASHING DON'T WALK	-	10	32	10			
	RECALL	-	MAX	-	MAX			

VIDEO DETECTOR ASSIGNMENTS				
CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	1	6' x 30'	NORMAL	-
2	4	6' x 30'	NORMAL	-

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

THE CONTROLLER ASSEMBLY, MAST ARMS, ELECTRICAL SERVICE, AND ASSOCIATED CONDUIT, PULL BOXES, AND CABLING ARE EXISTING TO REMAIN.

50 LF	630-2-11
1 PI	632-7-1
2 EA	635-2-11
1 EA	646-1-11
1 EA	660-4-11
2 EA	660-4-12
1 EA	665-1-11
1 EA	670-5-411

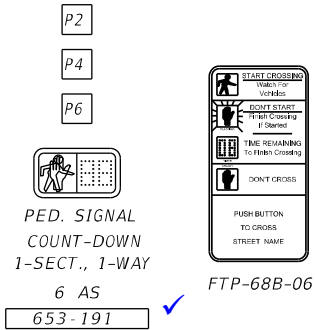


REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN CROSSTOWN EXPWY WB	SHEET NO. T-7
DATE	DESCRIPTION		DATE		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					45	HILLSBOROUGH	429074-1-52-01		

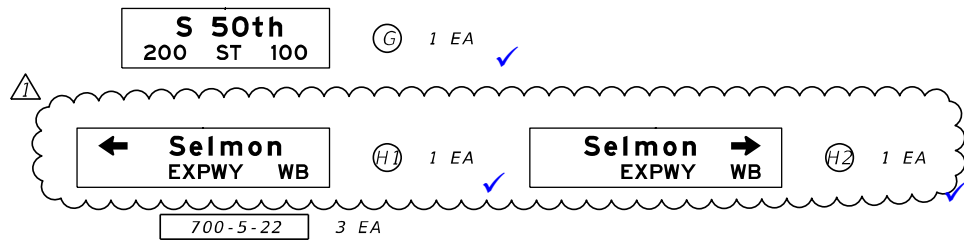
SIGNAL DISPLAY DETAILS

ALL VEHICULAR HEADS ARE EXISTING TO REMAIN.

PEDESTRIAN DISPLAY DETAILS

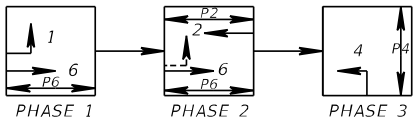


INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)



SEE SHEETS T-15 AND T-16 FOR DETAILS.

PHASING DIAGRAM
(S.O.P. 15 MODIFIED)



CONTROLLER TIMINGS

PHASE	1	2	3	4	5	6	7	8
DIRECTION	NBL	SBT		WB		NBT		
MOVEMENT NUMBER	1	2		4		6		
TIMING FUNCTION	MINIMUM GREEN	5	10	10	10			
	EXTENSION	2	3	4	3			
	MAXIMUM GREEN 1	15	70	39	70			
	MAXIMUM GREEN 2	25	85	45	85			
	YELLOW CLEARANCE	4.4	4.4	4.4	4.4			
	ALL RED	2.4	2.0	2.8	2.0			
	PEDESTRIAN WALK	-	7	7	7			
	FLASHING DON'T WALK	-	10	32	10			
	RECALL	-	MAX	-	MAX			

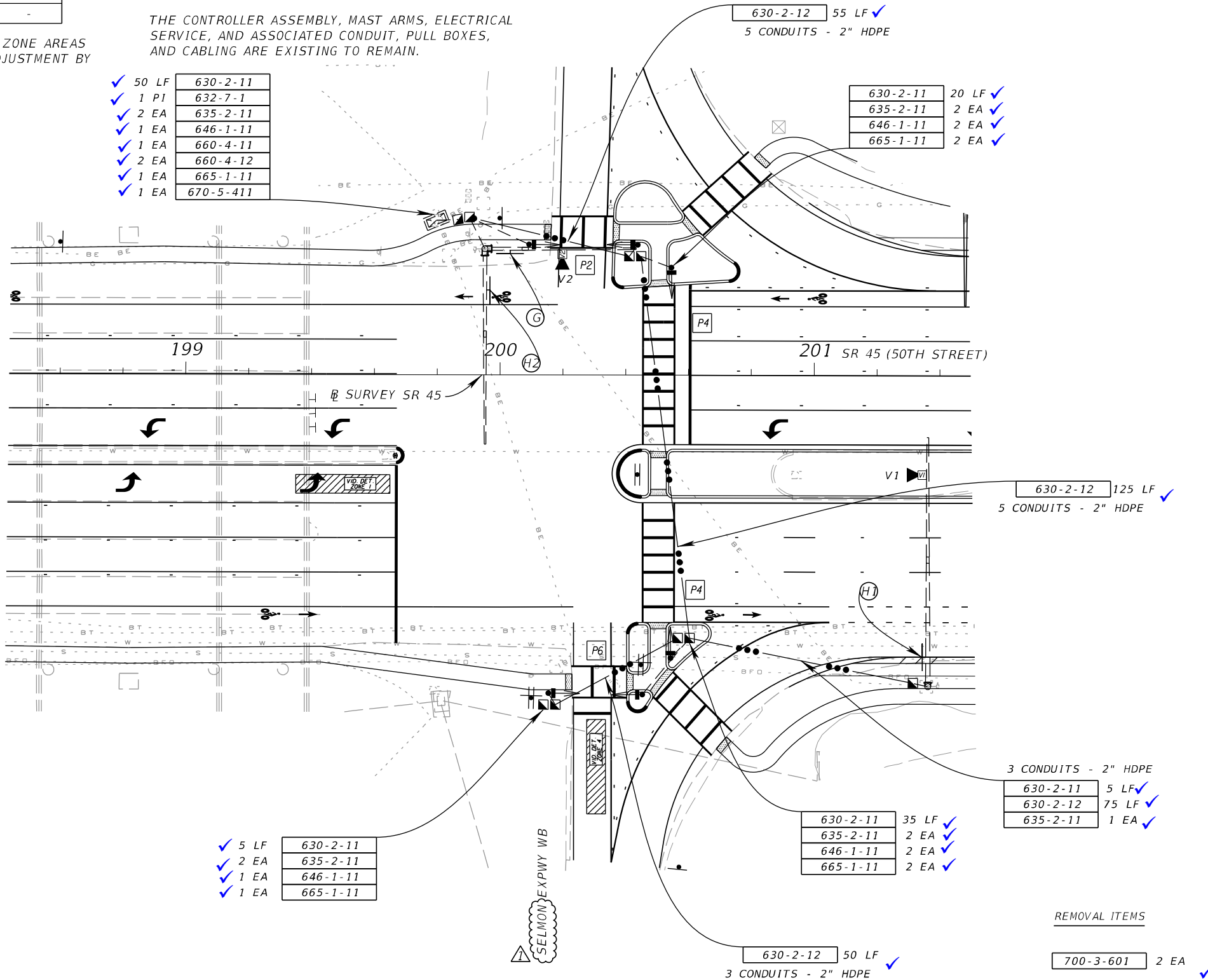
VIDEO DETECTOR ASSIGNMENTS

CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	1	6' x 30'	NORMAL	-
2	4	6' x 30'	NORMAL	-

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

THE CONTROLLER ASSEMBLY, MAST ARMS, ELECTRICAL SERVICE, AND ASSOCIATED CONDUIT, PULL BOXES, AND CABLING ARE EXISTING TO REMAIN.

✓ 50 LF	630-2-11
✓ 1 PI	632-7-1
✓ 2 EA	635-2-11
✓ 1 EA	646-1-11
✓ 1 EA	660-4-11
✓ 2 EA	660-4-12
✓ 1 EA	665-1-11
✓ 1 EA	670-5-411



REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
06/24/15	1 CHANGED "CROSSTOWN" TO "SELMON".		

KIMLEY-HORN AND ASSOCIATES, INC.
RONALD C. HILDEBRAND, P.E.
P.E. LICENSE NUMBER 41936
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CERTIFICATE OF AUTHORIZATION: 00000696

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

SIGNALIZATION PLAN
SELMON EXPWY WB

SHEET
NO.

T-7

3-SECT., 1-WAY
4 AS ✓
650-1-311

3-SECT., 1-WAY
6 AS ✓
650-1-311

3-SECT., 2-WAY
2 AS ✓
650-1-321

P2

P4

P6

P8

PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY

8 AS ✓

FTP-68B-06

SEE SHEETS T-16 AND T-17 FOR DETAILS.

CONTROLLER TIMINGS									
PHASE		1	2	3	4	5	6	7	8
DIRECTION		EBL	WBT	SBL	NBT	WBL	EBT	NBL	SBT
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	5	15	5	15	5	15	5	5
	EXTENSION	3	3	3	3	3	3	3	3
	MAXIMUM GREEN 1	30	65	35	40	30	65	35	40
	MAXIMUM GREEN 2	30	65	35	40	30	65	35	40
	YELLOW CLEARANCE	5.1	5.1	4.4	4.4	5.1	5.1	4.4	4.4
	ALL RED	2.1	2.6	2.5	2.7	2.1	2.6	2.5	2.7
	PEDESTRIAN WALK	-	7	-	7	-	7	-	7
	FLASHING DON'T WALK	-	30	-	23	-	30	-	23
	RECALL	-	MAX	-	-	-	MAX	-	-

✓ 30 LF	630-2-12
✓ 2 EA	635-2-11
✓ 2 EA	646-1-11
✓ 2 EA	665-1-11

✓ 135 LF 630-2-12
5 CONDUITS - 2" HDPE

✓ 6 AS 660-2-106

✓ 6 AS 660-2-101

✓ 25 LF	630-2-12
✓ 2 EA	635-2-11
✓ 2 EA	646-1-11
✓ 2 EA	665-1-11

630-2-12	25 LF ✓
635-2-11	2 EA ✓
646-1-11	2 EA ✓
665-1-11	2 EA ✓

630-2-11	15 LF	✓
632-7-1	1 PI	✓
635-2-11	2 EA	✓
660-1-109	7 EA	✓
670-5-411	1 EA	✓

THE CONTROLLER ASSEMBLY, STRAIN POLES, ELECTRICAL SERVICE, AND ASSOCIATED CONDUIT, PULL BOXES, AND CABLING ARE EXISTING TO REMAIN.

5 CONDUITS - 2" HDPE
630-2-12 ~~55~~ LF

630-2-12 115 LF ✓
CONDUITS - 2" HDPE

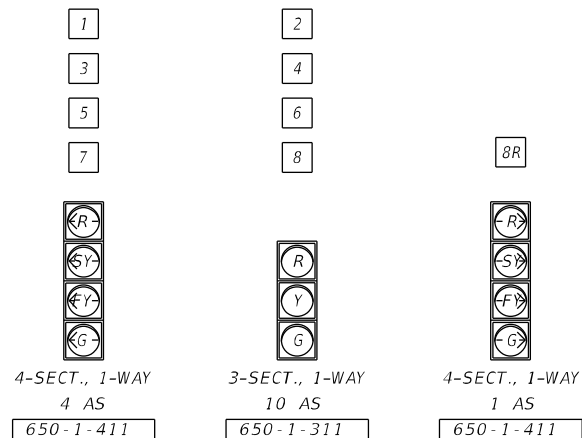
630-2-11	20 LF 0 ✓
635-2-11	2 EA ✓
646-1-11	2 EA ✓
665-1-11	2 EA ✓

690-10	12 EA	✓
690-31	4 EA	✓
690-70	8 EA	✓
690-90	1 PI	✓
690-100	1 PI	✓
700-5-60	4 EA	✓

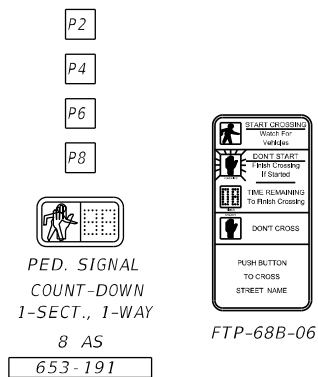
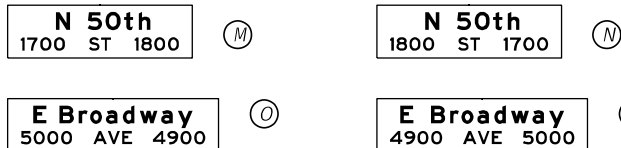
REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN SR 60 / ADAMO DRIVE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-8
					45	HILLSBOROUGH	429074-1-52-01		

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

SIGNAL DISPLAY DETAILS



PEDESTRIAN DISPLAY DETAILS

INTERNALLY ILLUMINATED STREET
NAME SIGNS (SINGLE-SIDED)

700-5-22 4 EA

SEE SHEETS T-17 AND T-18 FOR DETAILS.

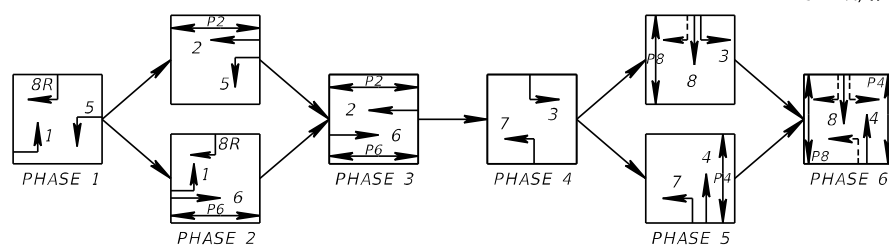
CONTROLLER TIMINGS

PHASE	1	2	3	4	5	6	7	8
DIRECTION	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION								
MINIMUM GREEN	5	10	5	10	5	10	5	10
EXTENSION	3	3	3	3	3	3	3	3
MAXIMUM GREEN 1	15	55	15	35	15	55	15	35
MAXIMUM GREEN 2	25	70	20	35	25	70	20	35
YELLOW CLEARANCE	4.4	4.8	4.4	4.8	4.4	4.8	4.4	4.4
ALL RED	2.4	2.3	3.3	3.4	2.4	2.2	3.3	3.4
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
FLASHING DON'T WALK	-	22	-	32	-	16	-	27
RECALL	-	MAX	-	-	-	MAX	-	-

VIDEO DETECTOR ASSIGNMENTS

CAMERA	DETECTION ZONE	SIZE	DETECTOR OPERATION	DELAY TIME (SEC)
1	5	6' x 30'	NORMAL	-
2	7	6' x 30'	DELAY	5
2	4A	6' x 30'	NORMAL	-
2	4B	6' x 30'	NORMAL	-
3	1	6' x 30'	NORMAL	-
4	3	6' x 30'	DELAY	5
4	8	6' x 30'	NORMAL	-

VIDEO CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION.

PHASING DIAGRAM
(S.O.P. 10 MODIFIED)

NOTES:

- MAJOR STREET IS 50TH STREET (45 MPH NORTH OF THE INTERSECTION, 40 MPH SOUTH OF THE INTERSECTION), MINOR STREET IS BROADWAY AVE (40 MPH).
- FLASHING OPERATION: MOVEMENTS 2 AND 6 YELLOW, MOVEMENTS 1, 3, 4, 5, 7, AND 8 RED.
- S.O.P. 10 MODIFIED AS SHOWN, WITH CONCURRENT PEDESTRIAN PHASES P2 (MOVEMENT 2), P4 (MOVEMENT 4), P6 (MOVEMENT 6), AND P8 (MOVEMENT 8).
- RIGHT TURN ARROW HEAD 8R SHALL FLASH YELLOW WHEN PEDESTRIAN SIGNAL PHASE P8 WALK AND F.D.W. ARE ACTIVE.
- EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES TURN MOVEMENTS. EACH TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PERMISSIVE OPERATION.
- POWER SERVICE METER BASE AND DISCONNECTS SHALL BE INSTALLED ON THE CONCRETE SERVICE POLES AS SHOWN ON THE PLANS AND PER INDEX NUMBERS 17504 AND 17736.
- ALL STATION/OFFSET CALLOUTS SHOWN WERE TAKEN FROM THE Q CONST.
- SEE SHEET T-20 FOR AN ENLARGED VIEW OF EACH QUADRANT AND THE NUMBER OF CONDUITS PER RUN IN EACH QUADRANT.
- THE HIGH VOLTAGE PULL BOX (FOR SIGNAL CABLE) NEAR THE CONTROLLER CABINET SHALL BE 17"X30".

5 CONDUITS - 2" HDPE
120 LF 630-2-12
120 LF 633-4-1

EL 33.5'

POLE LOCATION= STA. 506+66.5
55.0' RT

30 LF	630-2-11
20 LF	630-2-12
20 LF	633-4-1
2 EA	635-2-11
1 EA	646-1-11
1 EA	649-31-202
1 EA	660-4-12
1 EA	665-1-11

10 LF	630-2-11
10 LF	630-2-12
1 PI	632-7-1
10 LF	633-4-1
3 EA	635-2-11
1 AS	639-1-122
1 EA	641-2-12
1 EA	646-1-11
1 EA	660-4-11
1 EA	665-1-11
1 AS	670-5-111
1 EA	685-106

SEE NOTE 9

5 CONDUITS - 2" HDPE
90 LF 630-2-12

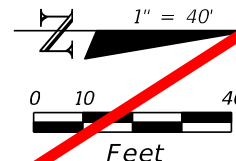
EL 34.0'

POLE LOCATION= STA. 506+42.0
54.5' LT

EL 33.5'

POLE LOCATION= STA. 507+36.0
55.5' LT

630-2-11	10 LF
630-2-12	15 LF
635-2-11	2 EA
646-1-11	1 EA
649-31-202	1 EA
660-4-12	1 EA
665-1-11	2 EA



SR 45 (50TH STREET)

EXIST. R/W

EL 33.8'

POLE LOCATION= STA. 507+77.5
53.5' RT

630-2-11	10 LF
630-2-12	30 LF
635-2-11	2 EA
639-2-1	125 LF
639-3-11	1 EA
641-2-12	1 EA
630-2-11	10 LF
635-2-11	3 EA
646-1-11	1 EA
649-31-203	1 EA
660-4-12	1 EA
665-1-11	2 EA

POWER SERVICE POINT AT
EXISTING POWER POLE
NEAR STATION 507+50 (80' RT)

630-2-12 85 LF
5 CONDUITS - 2" HDPE

REMOVAL ITEMS

690-10	11 EA
690-20	8 EA
690-32-2	4 EA
690-50	1 EA
690-60	7 EA
690-70	8 EA
690-90	1 PI
690-91	195 LF
690-100	1 PI
700-3-601	1 EA
700-5-60	4 EA

MAST ARM NUMBER 10M381

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

KIMLEY-HORN AND ASSOCIATES, INC.
RONALD C. HILDEBRAND, P.E.
P.E. LICENSE NUMBER 41936
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CERTIFICATE OF AUTHORIZATION: 00000696

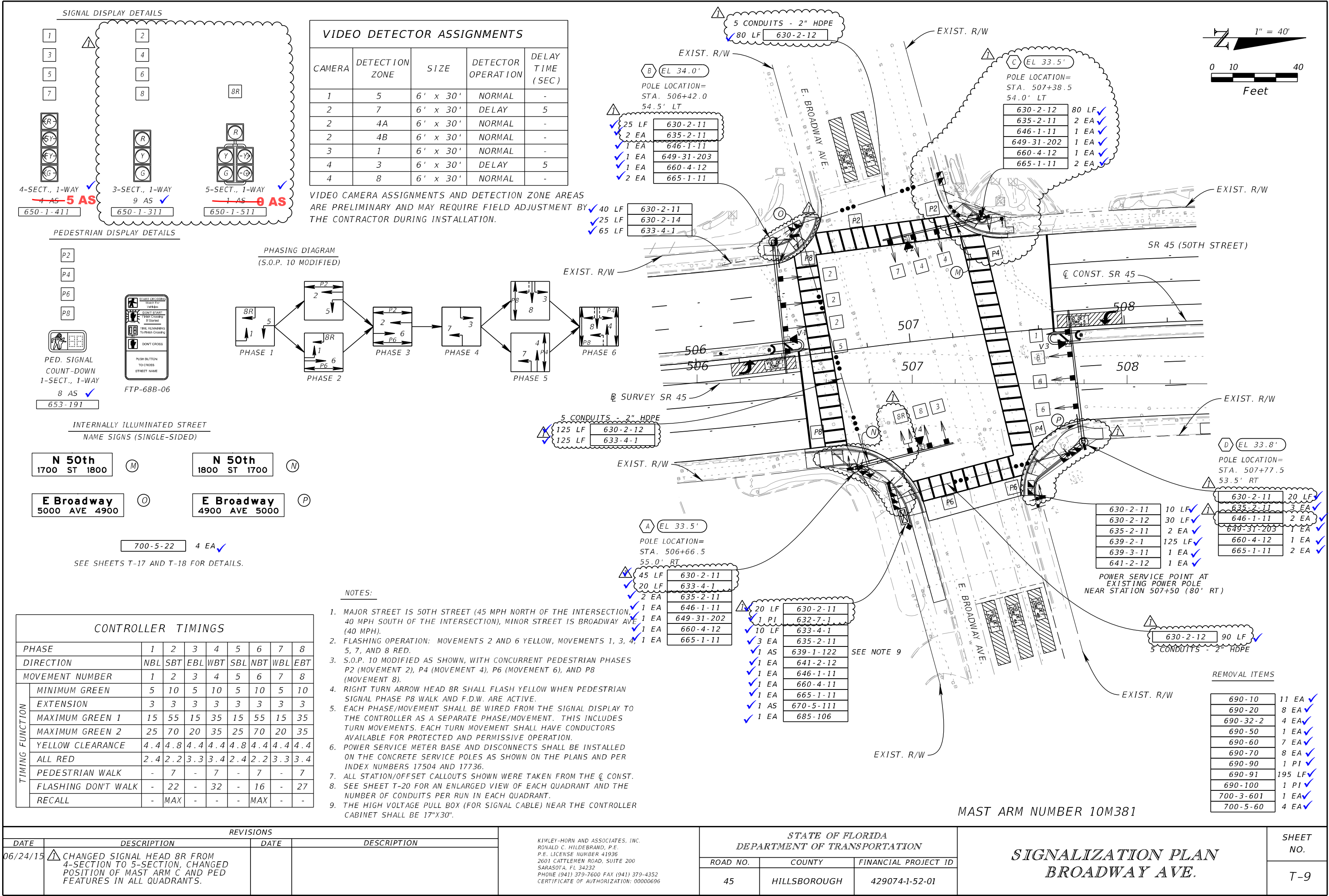
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

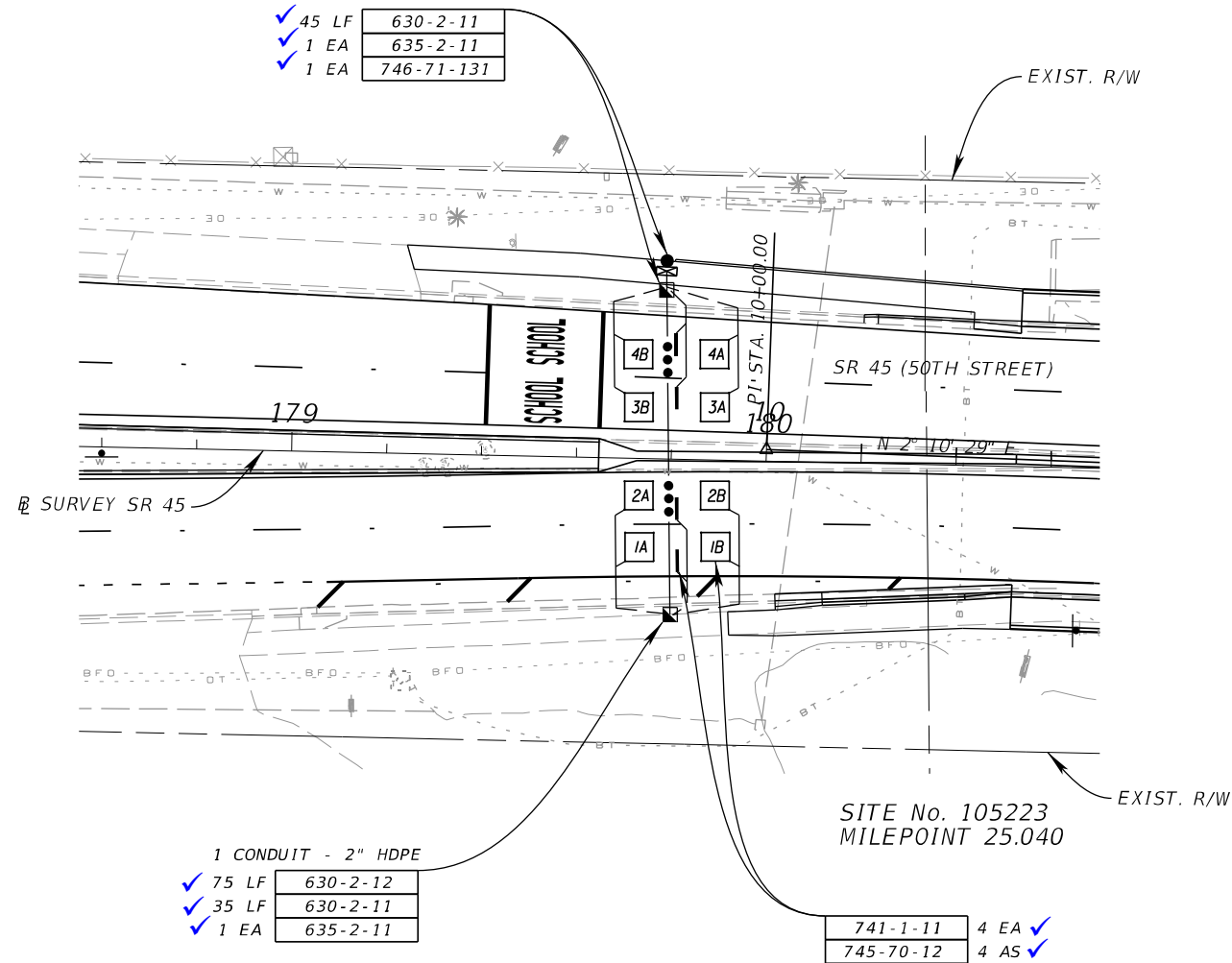
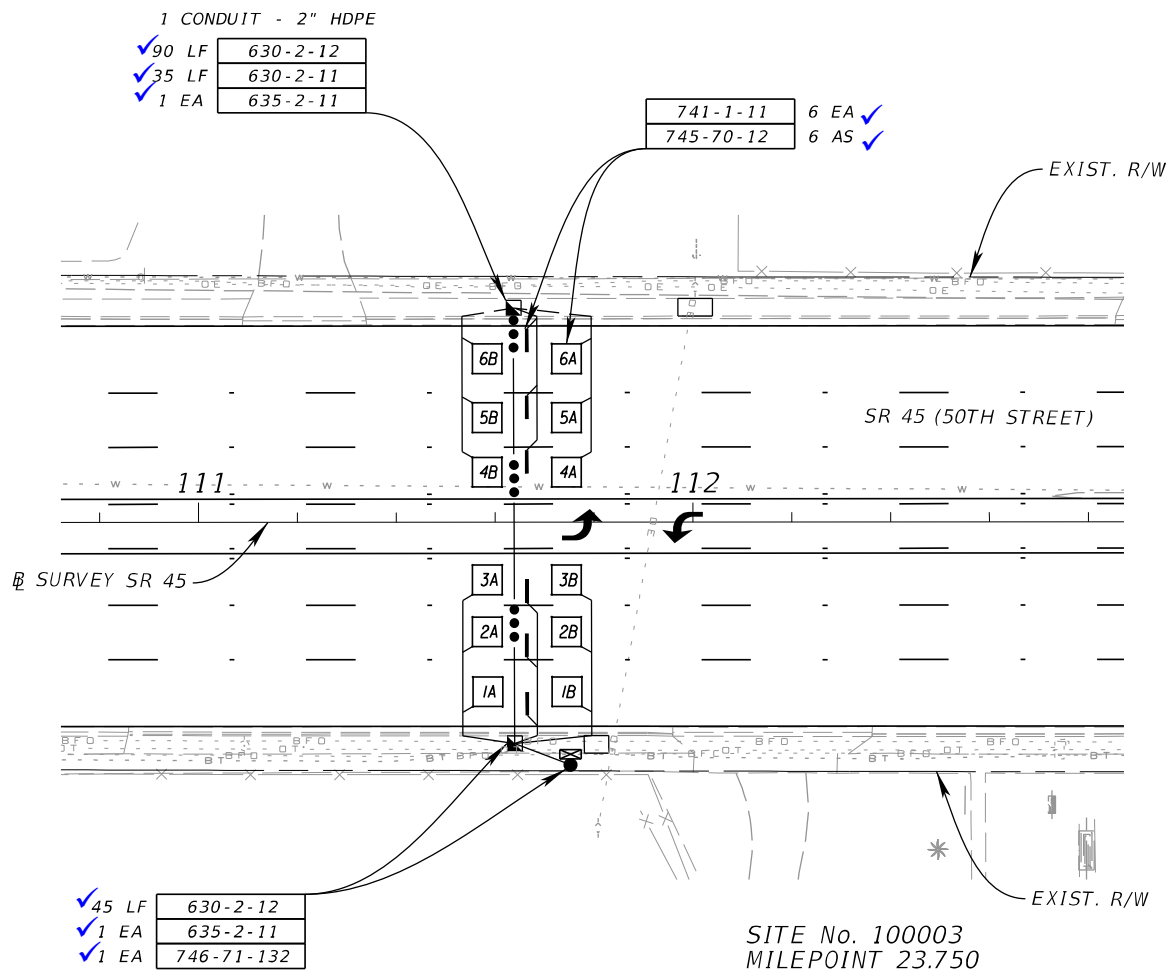
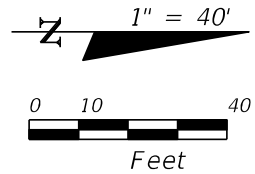
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

SIGNALIZATION PLAN
BROADWAY AVE.SHEET
NO.

T-9

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

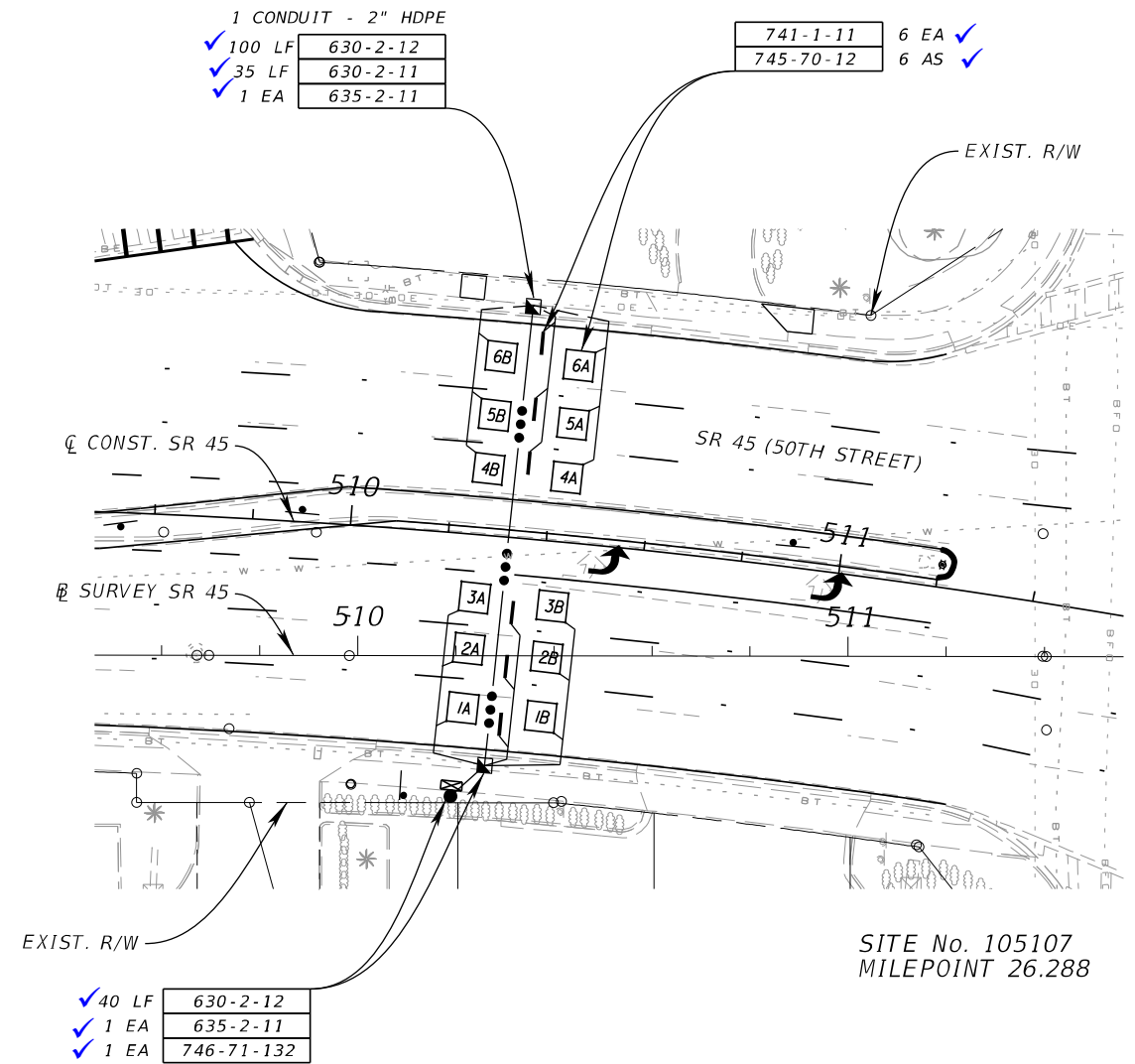
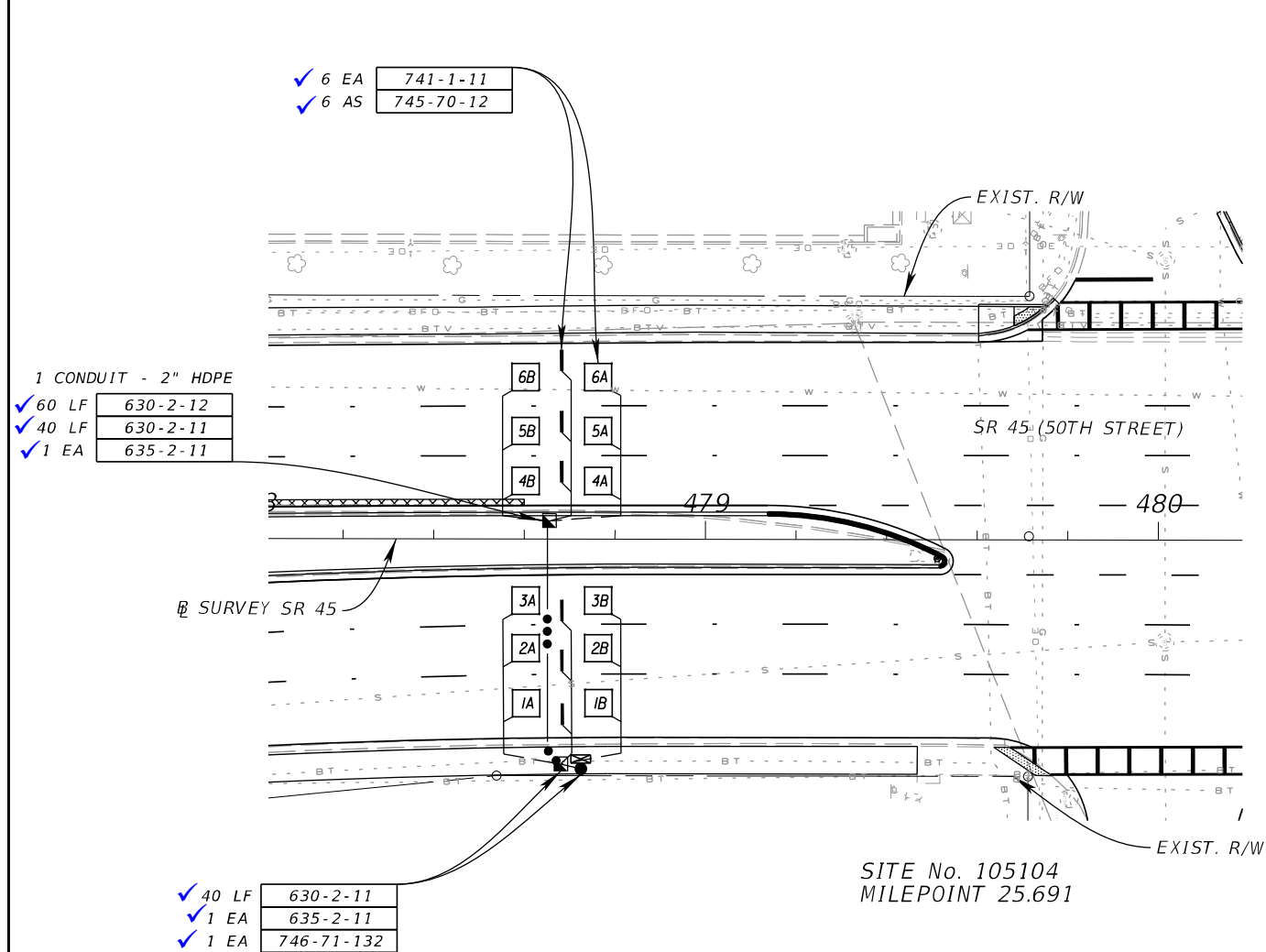
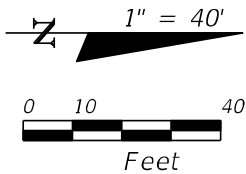




NOTES:

1. PORTABLE TRAFFIC MONITORING SITE (PTMS) TO BE MAINTAINED BY F.D.O.T. THE CONTRACTOR SHALL SUBMIT A COPY OF THE AS-BUILT PLANS TO THE ENGINEER DURING FINAL INSPECTION.
2. THE CONTRACTOR SHALL USE THE STANDARD INDEX 17900 FOR INSTALLATION OF TRAFFIC MONITORING SITES.
3. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC COUNTS COORDINATOR IN THE DISTRICT PLANNING OFFICE AT (813) 975-6413 AT LEAST SEVEN WORKING DAYS PRIOR TO INSTALLATION OF TRAFFIC MONITORING SITES.
4. PULL BOXES SHALL BE CONCRETE WITH STEEL LOCKING LID AND SHALL BE LISTED IN THE DEPARTMENT'S APPROVED PRODUCT LIST.
5. VEHICLE SENSORS SHALL BE PLACED PERPENDICULAR TO THE LANES.
6. INDUCTIVE LOOP AND VEHICLE SENSOR WIRES SHALL BE LABELED BOTH IN THE PULL BOXES AND THE CABINET.
7. WHEN PLACING INDUCTIVE LOOPS AND VEHICLE SENSORS IN CONCRETE PAVEMENT, THEY SHALL NOT CROSS EXPANSION JOINTS. THE LOOPS AND THE SENSORS CAN BE STAGGERED ACROSS THE LANES TO AVOID CROSSING EXPANSION JOINTS.

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TRAFFIC MONITORING SITE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-10
					45	HILLSBOROUGH	429074-1-52-01		

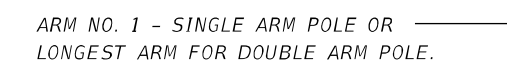


NOTES:

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REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			TRAFFIC MONITORING SITE	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-11
					45	HILLSBOROUGH	429074-1-52-01		

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



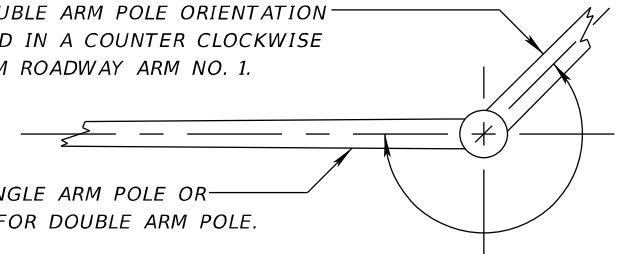
← TOTAL ARM LENGTH

SIGNAL HEAD ASSEMBLY

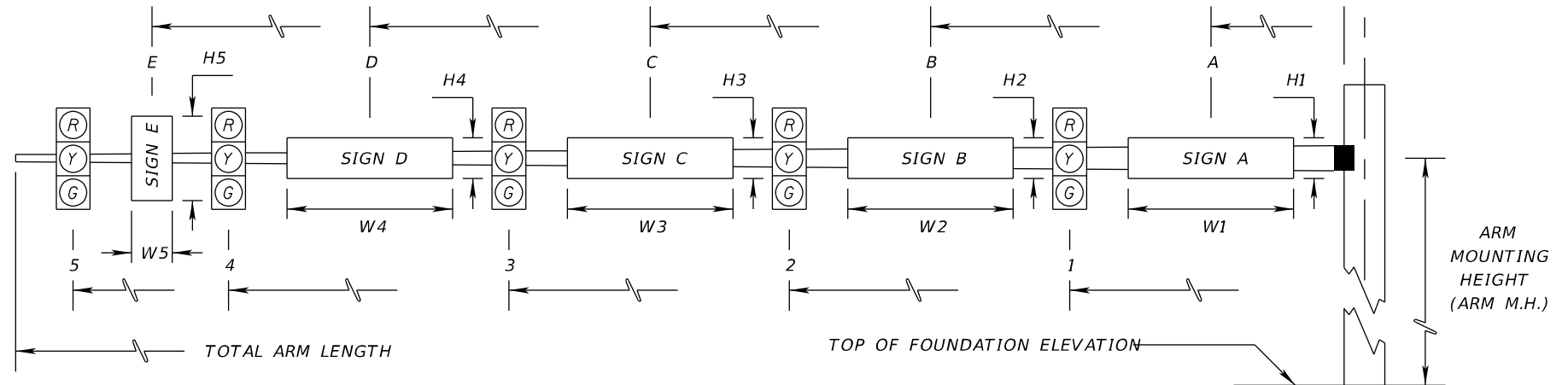
FROM POLE					TOTAL ARM LENGTH	ARM M.H.	4 BETW DUAL A 80/270
*	4	*	5	*			
3	70	4			78	210	
					36	20.5	

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUNDATION ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE								TOTAL ARM LENGTH	ARM M.H.	Δ BETWEEN DUAL ARMS 90/270	DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN															PAINT COLOR
									1	*	2	*	3	*	4	*				5	*	A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	
A	T-5	173+51.0, 73.0' LT	7.9'	1	7.73'	V	Y	N	37	3	48	3	59	3	70	4	78	21.0		27	2	8													
				2																															
B	T-5	173+98.5, 60.0' LT	8.4'	1	8.36'	V	Y	Y	16	3	24	3					36	20.5		6	2	7													
				2																															
C	T-5	173+99.0, 53.0' RT	7.9'	1	8.51'	V	Y	Y	17	4	30	3	41	3	52	4	60	21.5	90	6	2	8													
				2	7.69'	V	Y	Y	24	3	32	3					36	21.5		7	2	7													
				1																															
				2																															
A	T-9	506+66.5, 55.0' RT	33.5'	1	33.35'	V	Y	N	19	4	27	3	35	3	43	4	46	20.5		6	2	7													
				2																															
B	T-9	506+42.0, 54.5' LT	34.0'	1	33.57'	V	Y	Y	16	3	28	3	39	3	50	4	60	20.5		6	2	8													
				2																															
C	T-9	507+36.0, 55.5' LT	33.5'	1	33.25'	V	Y	Y	18	3	29	3	40	4			46	20.5		9	2	7													
				2																															
D	T-9	507+77.5, 53.5' RT	33.8'	1	34.56'	V	Y	Y	16	3	29	3	40	3	51	4	60	21.5		7	2	8													
				2																															
				1																															
				2																															
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				2																															

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MAST ARM TABULATION	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-12
					45	HILLSBOROUGH	429074-1-52-01		



ARM
MOUNTING
HEIGHT
(ARM M.H.)

[illegible]

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MAST ARM TABULATION	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-12
06/24/15	CHANGED SIGNAL HEADS, POSITION OF MAST ARMS, AND PED FEATURES ON SHEETS T-5 AND T-9.				45	HILLSBOROUGH	429074-1-52-01		

[illegible][illegible][illegible][illegible]

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 0000065
DATE	DESCRIPTION	DATE	DESCRIPTION	

[illegible]

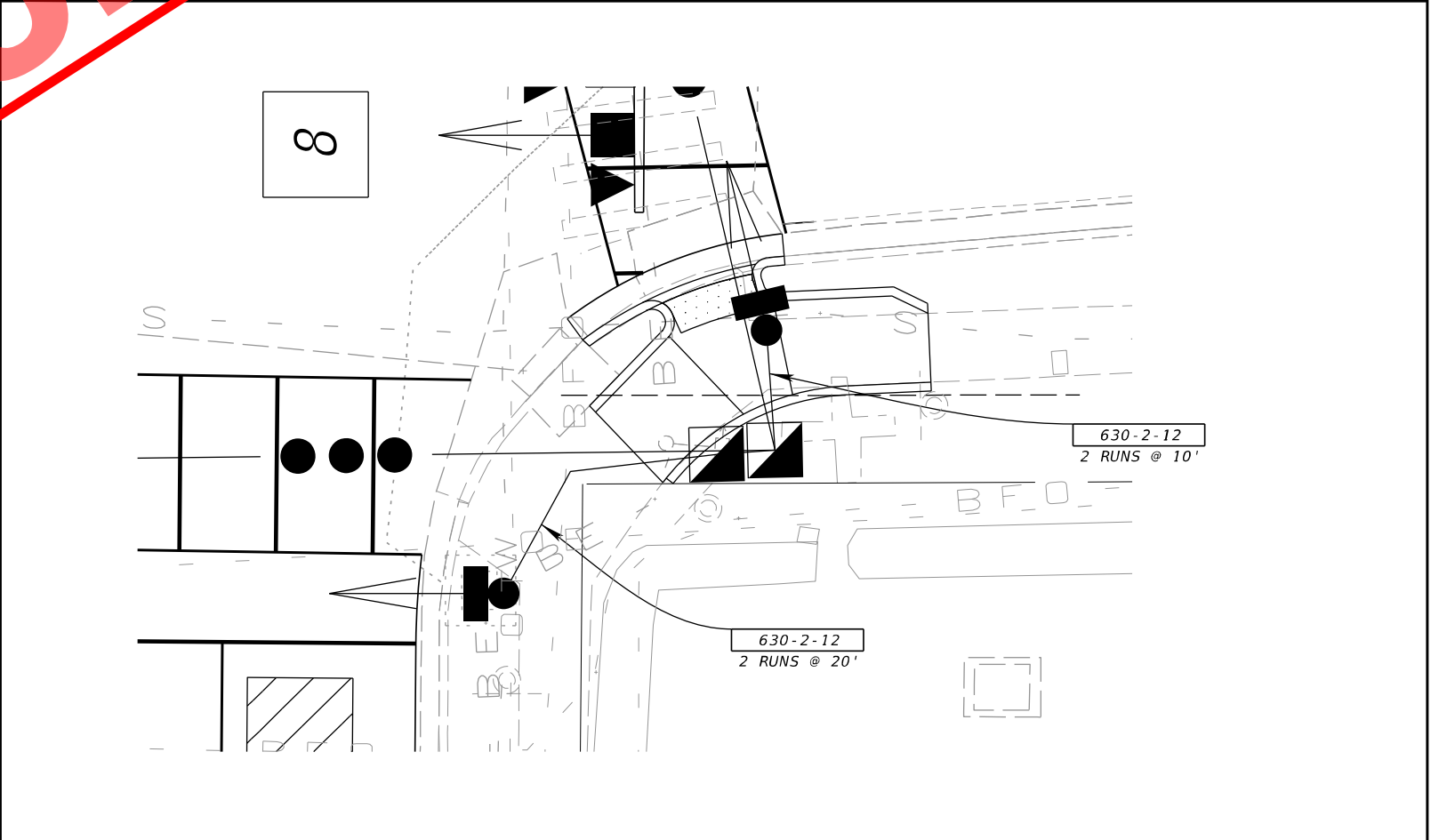
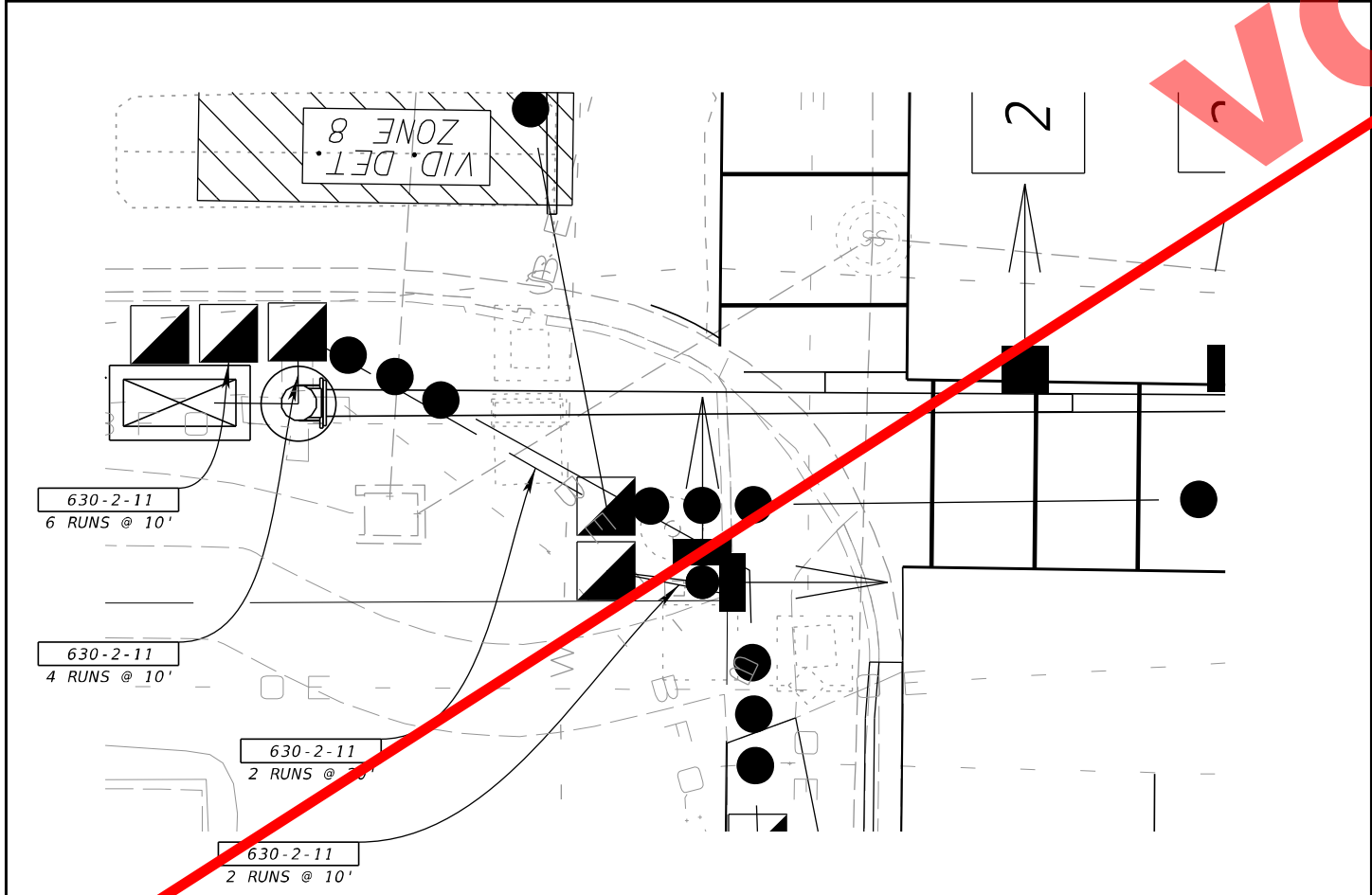
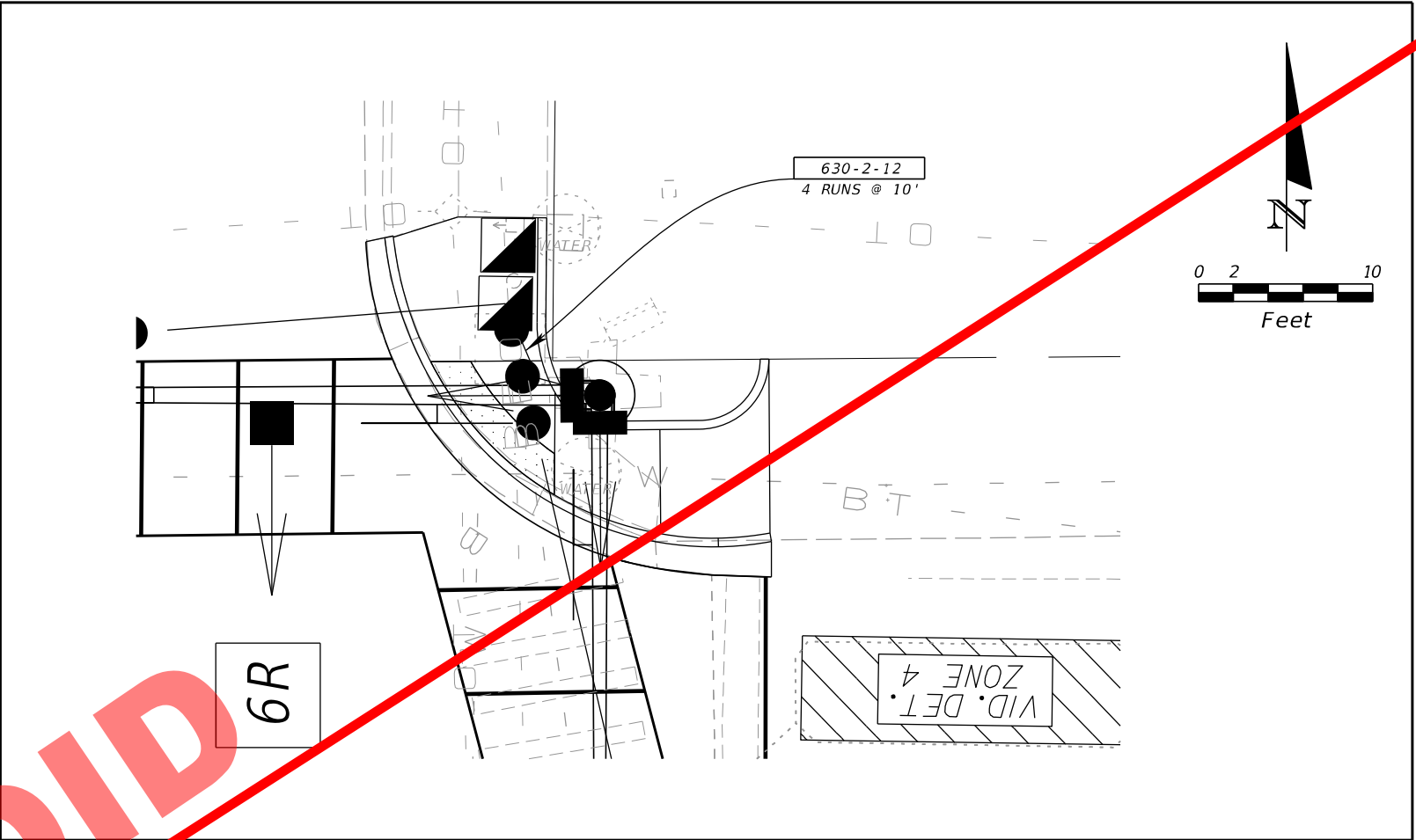
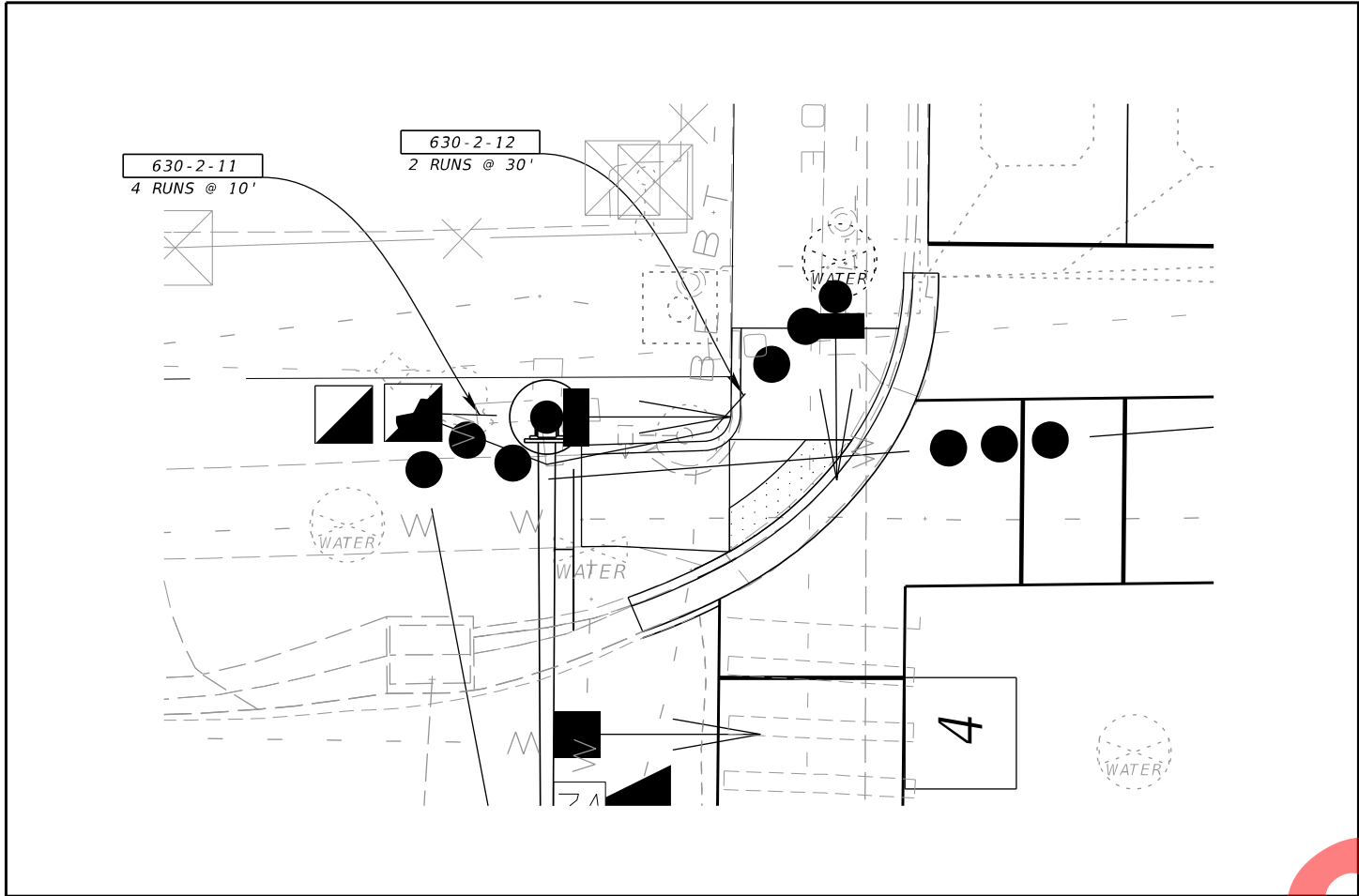
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COPY		E	X	P	W	Y
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COPY						
SPACE						
COPY						
SPACE						
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SPACE						
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SPACE						

[illegible]

COPY		5	0	t	h	
SPACE	17.6	8.2	8.3	6.7	5.3	8
COPY		1	0	0		S
SPACE	6	3.2	6.2	5	4.5	4.9
COPY						
SPACE						
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

<i>GUIDE SIGN WORKSHEET</i>	<i>SHEET NO.</i>
	<i>T-16</i>



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

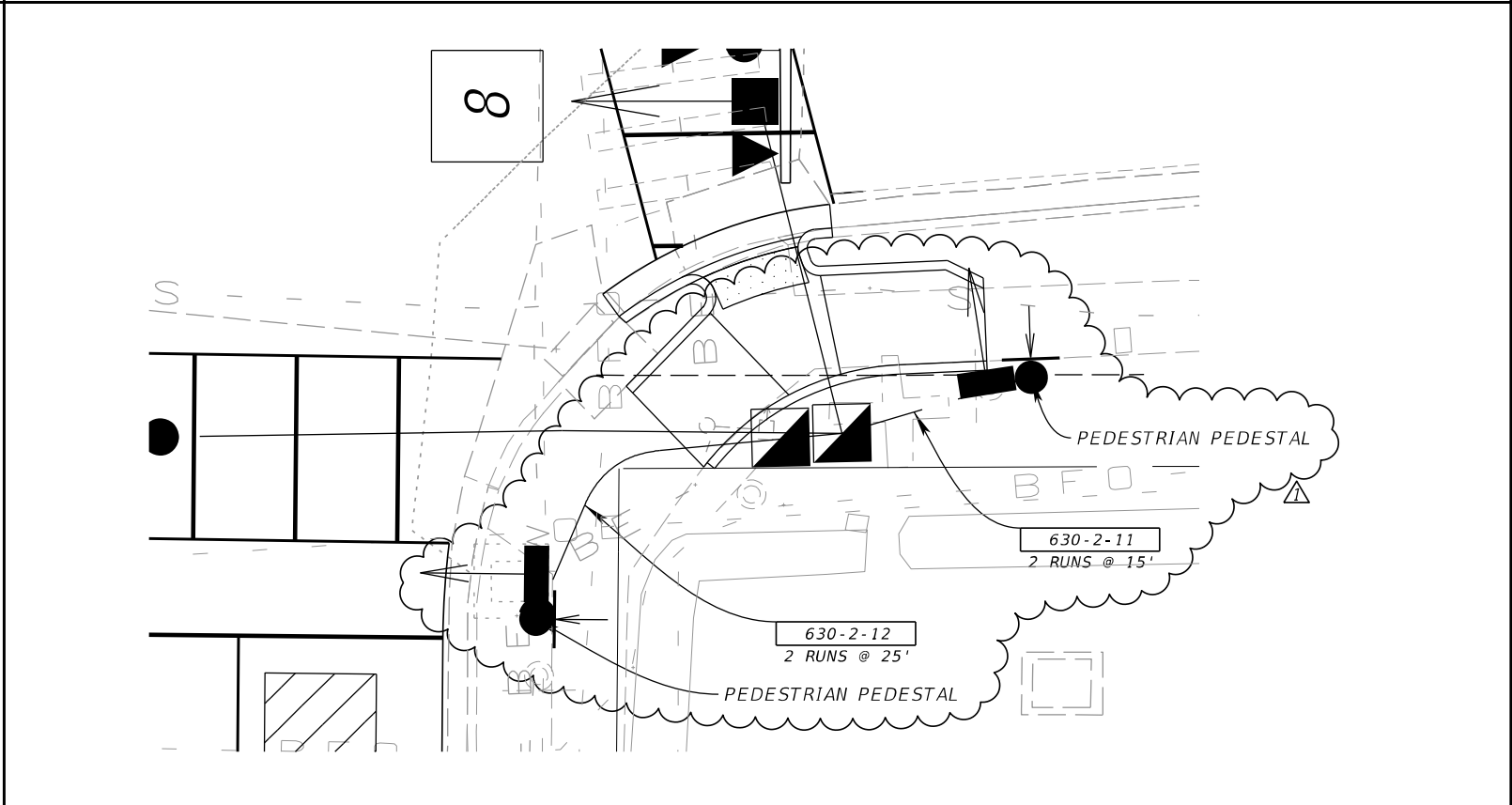
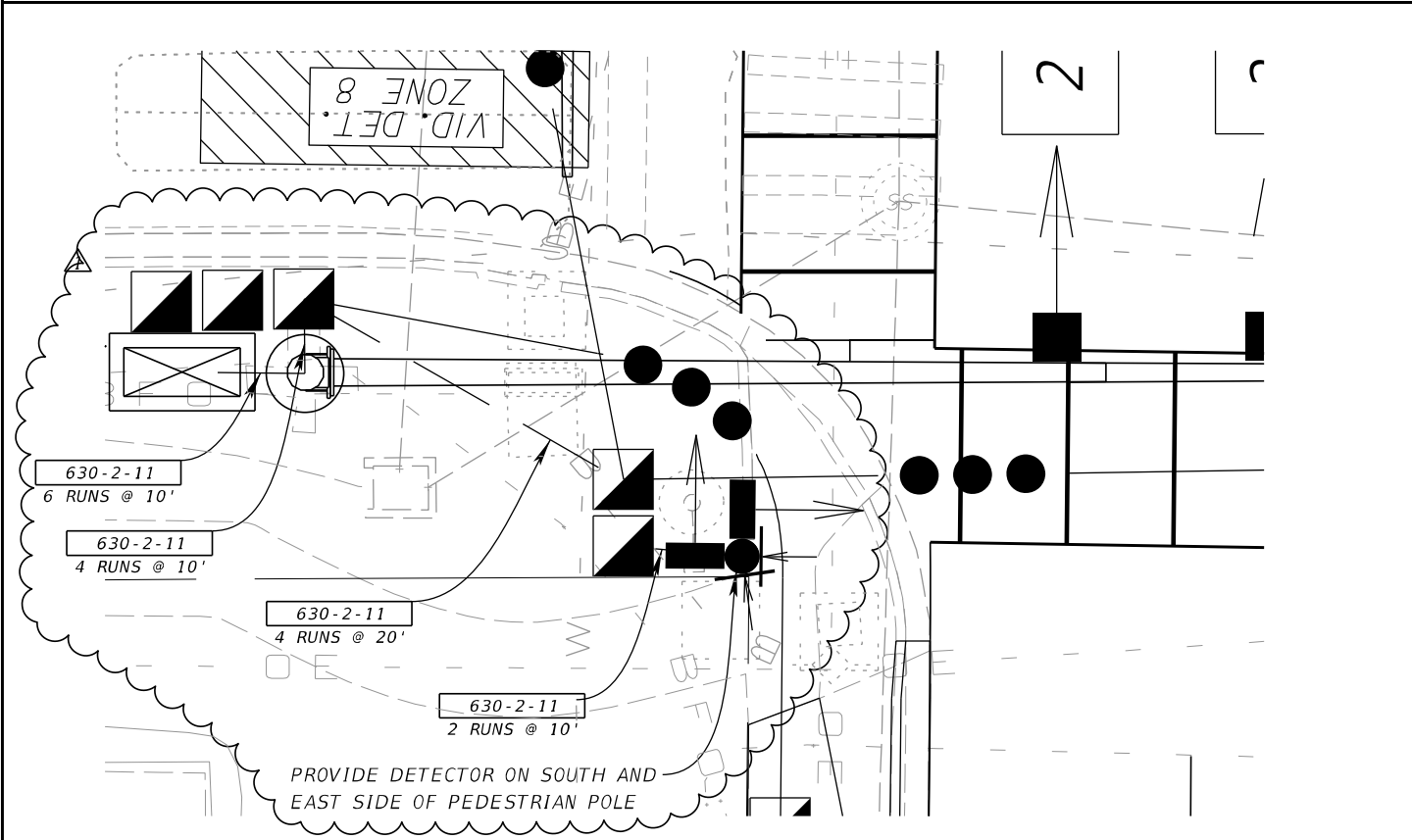
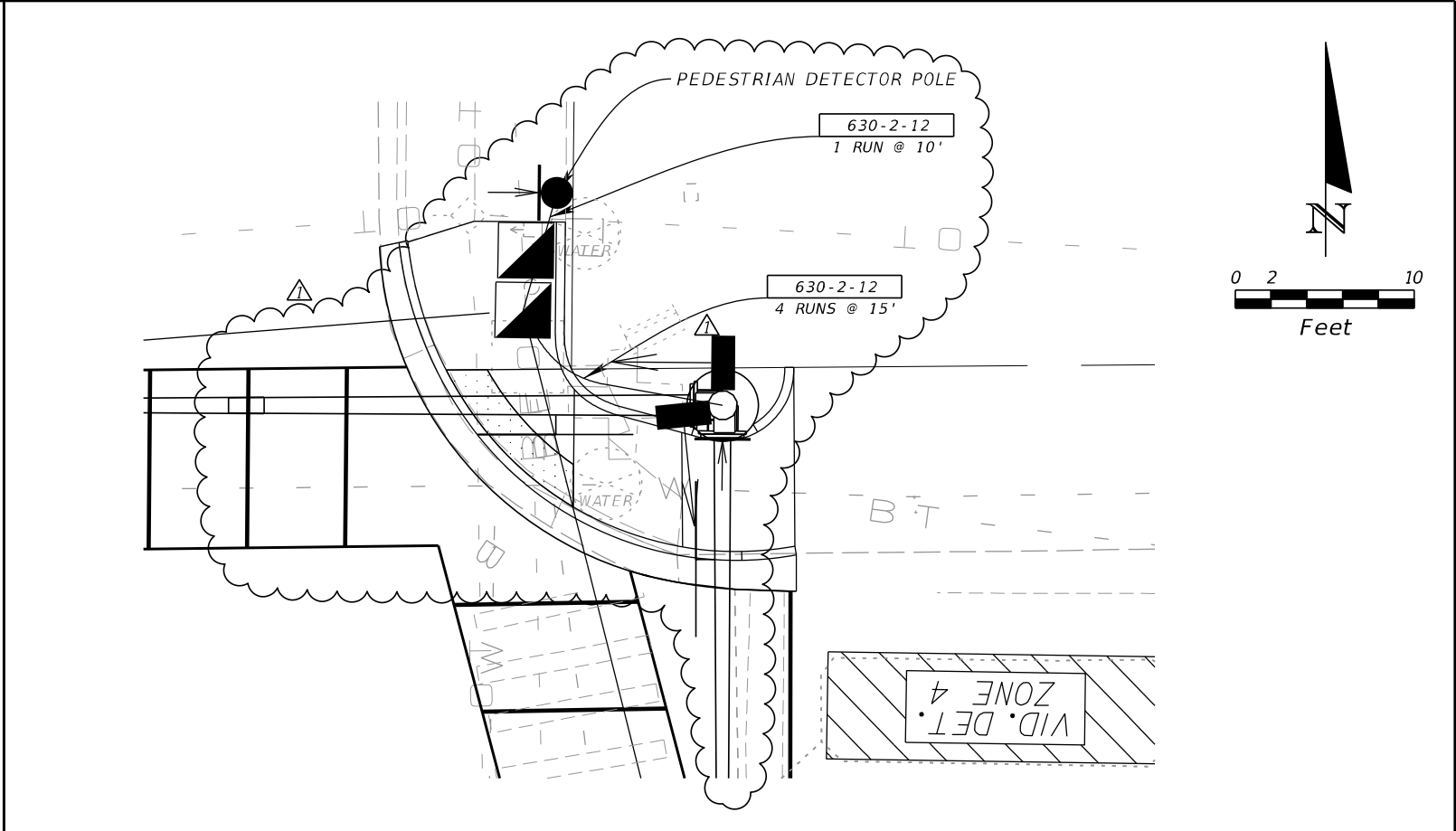
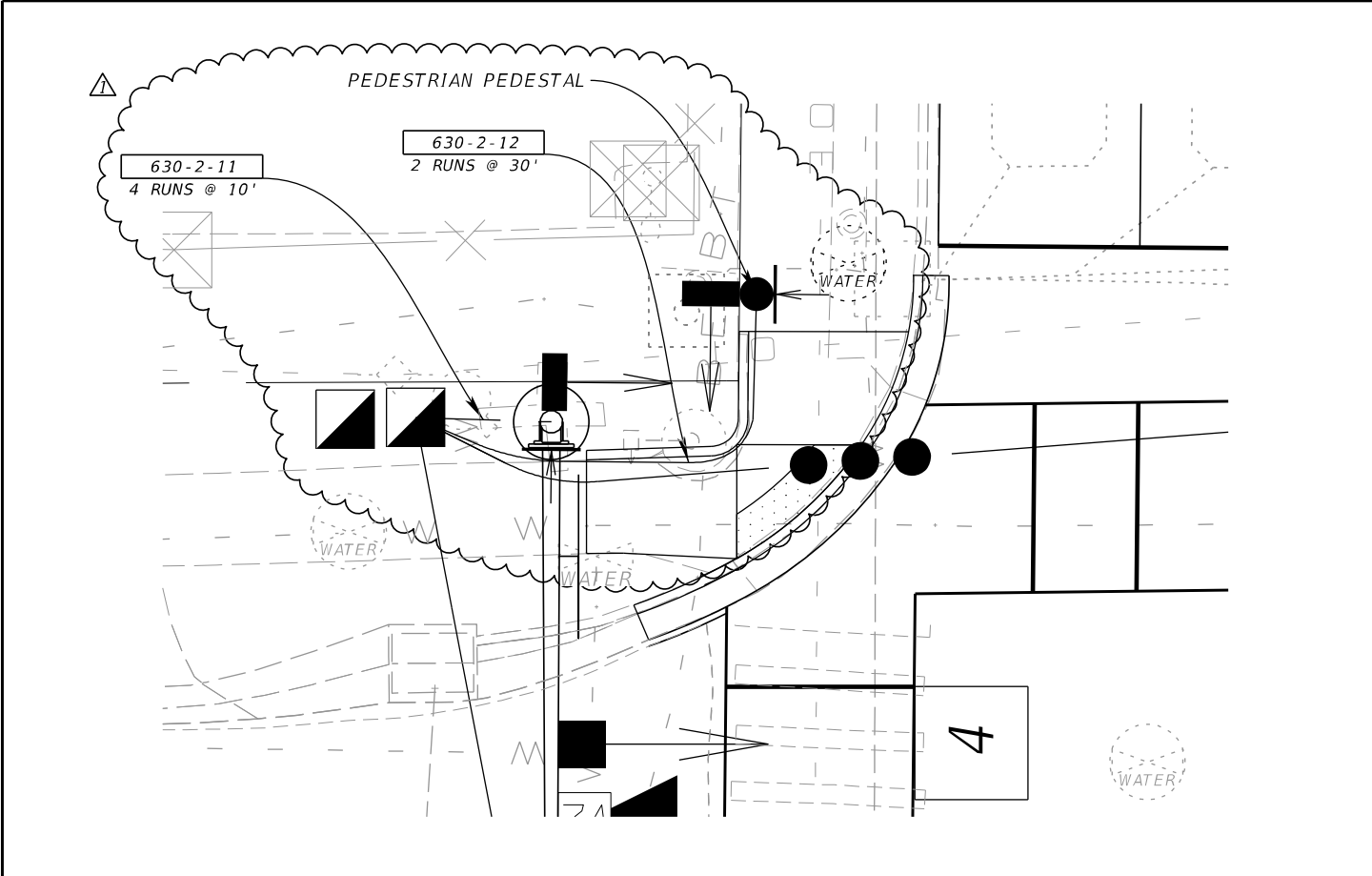
KIMLEY-HORN AND ASSOCIATES, INC.
RONALD C. HILDEBRAND, P.E.
P.E. LICENSE NUMBER 41936
2601 CATTLEMEN ROAD, SUITE 200
SARASOTA, FL 34232
PHONE (941) 379-7600 FAX (941) 379-4352
CERTIFICATE OF AUTHORIZATION: 00000696

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
45	HILLSBOROUGH	429074-1-52-01

CORNER DETAILS PALM RIVER ROAD	

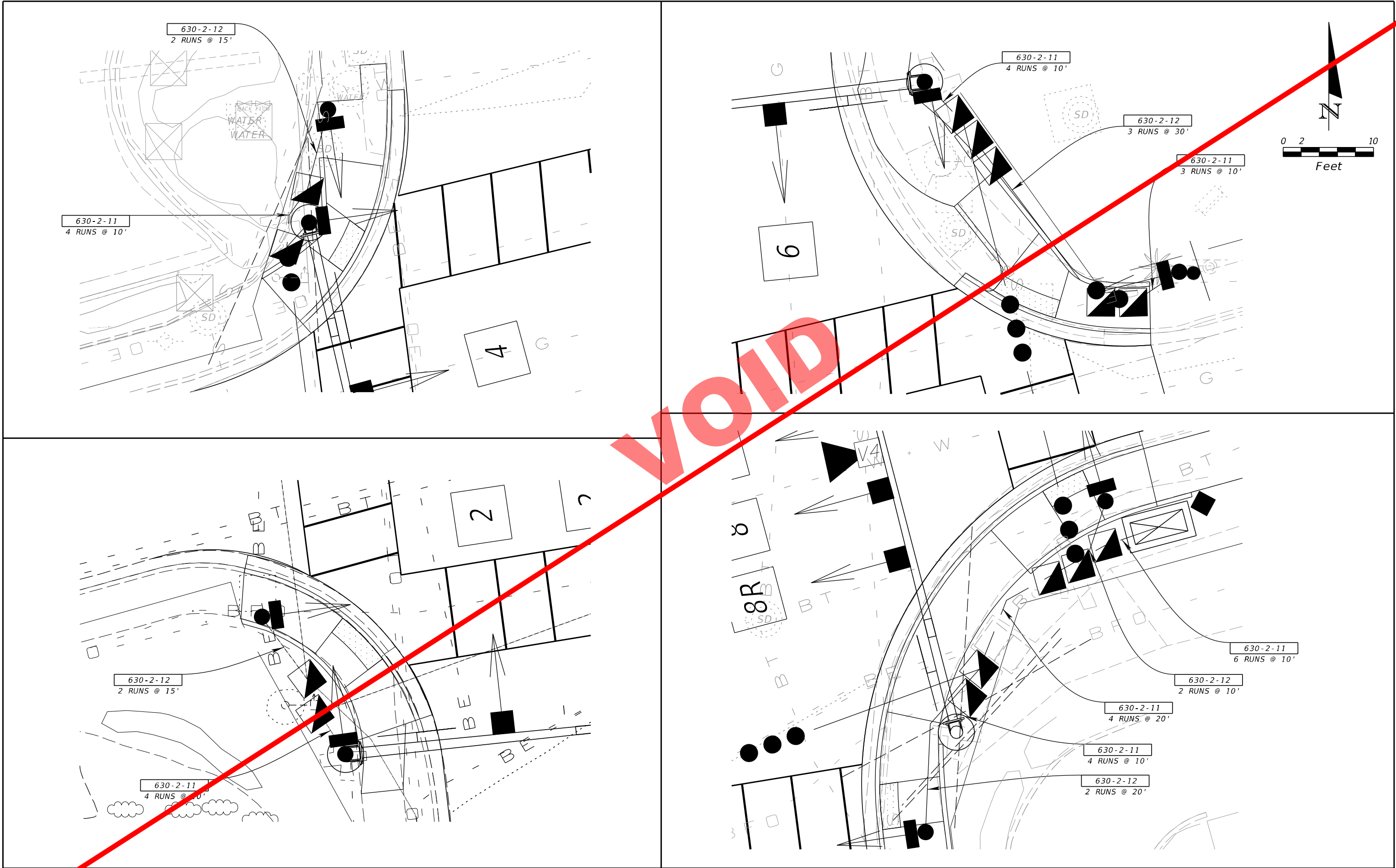
SHEET NO.
T-19

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



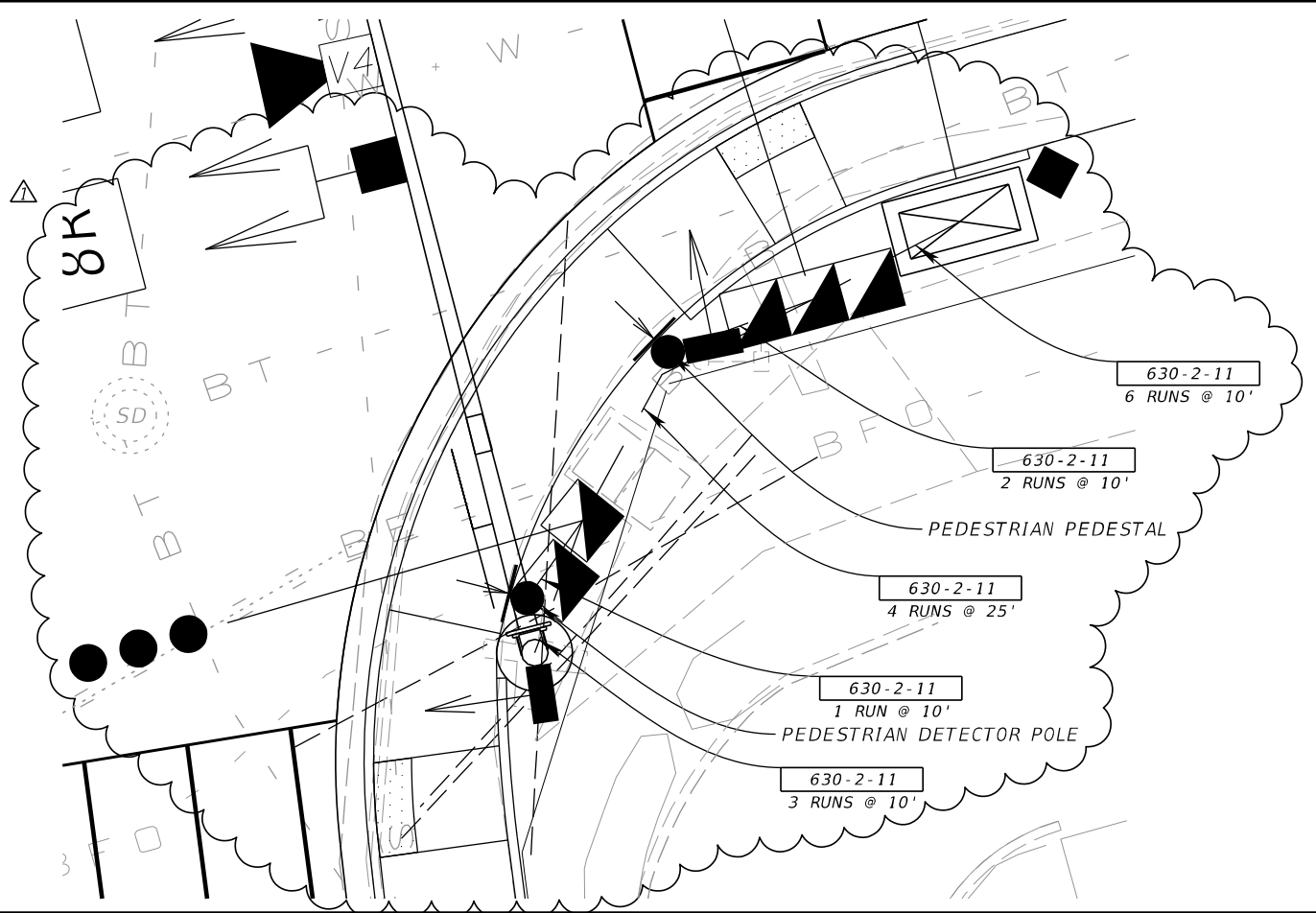
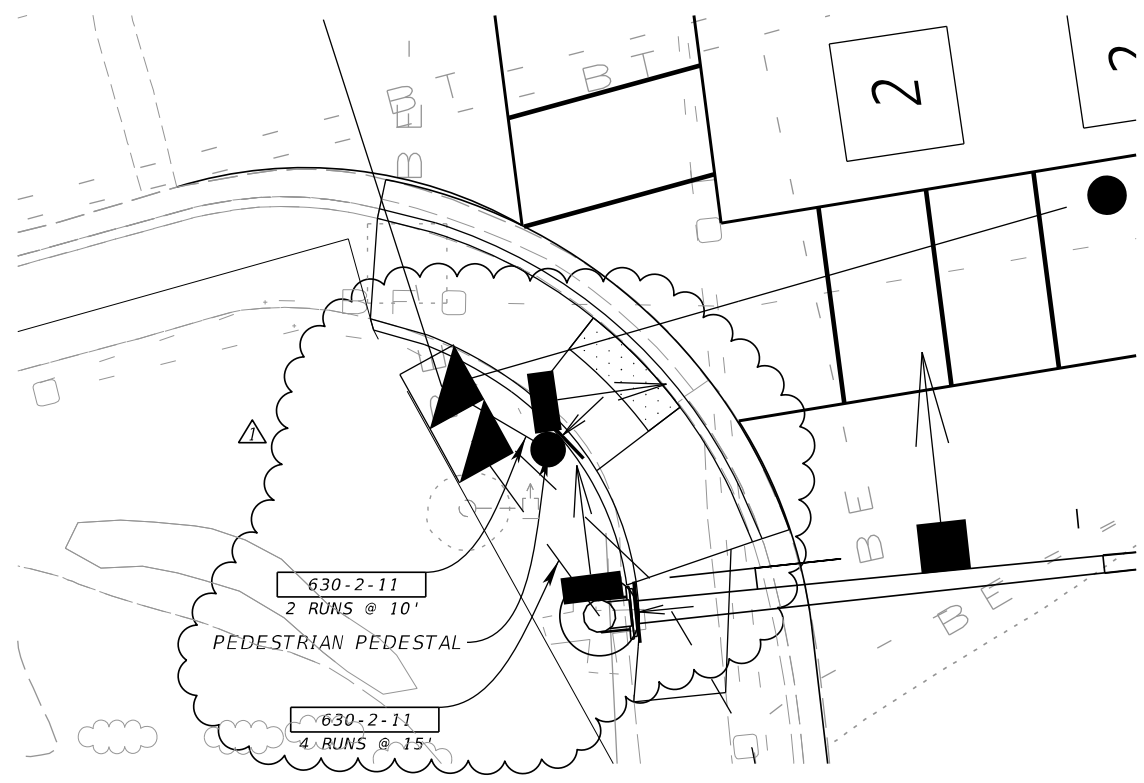
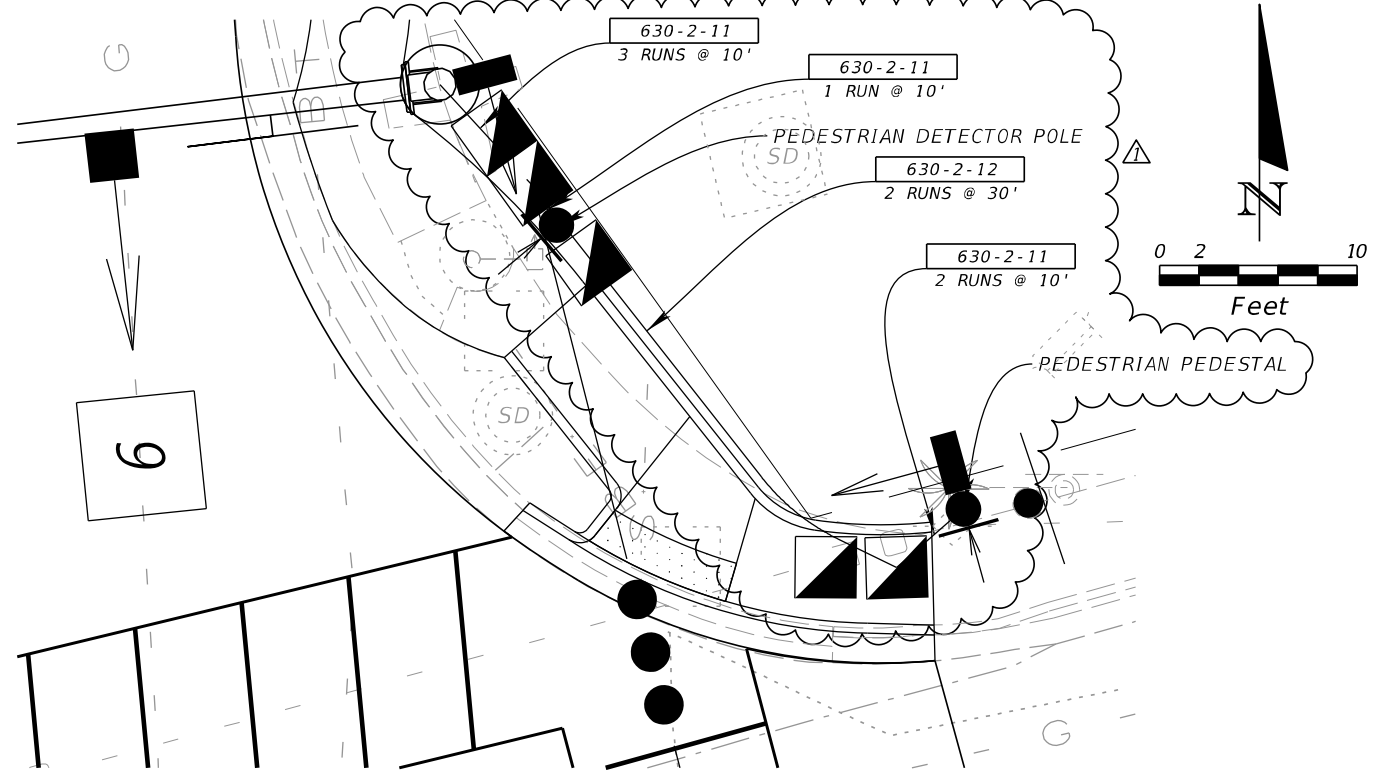
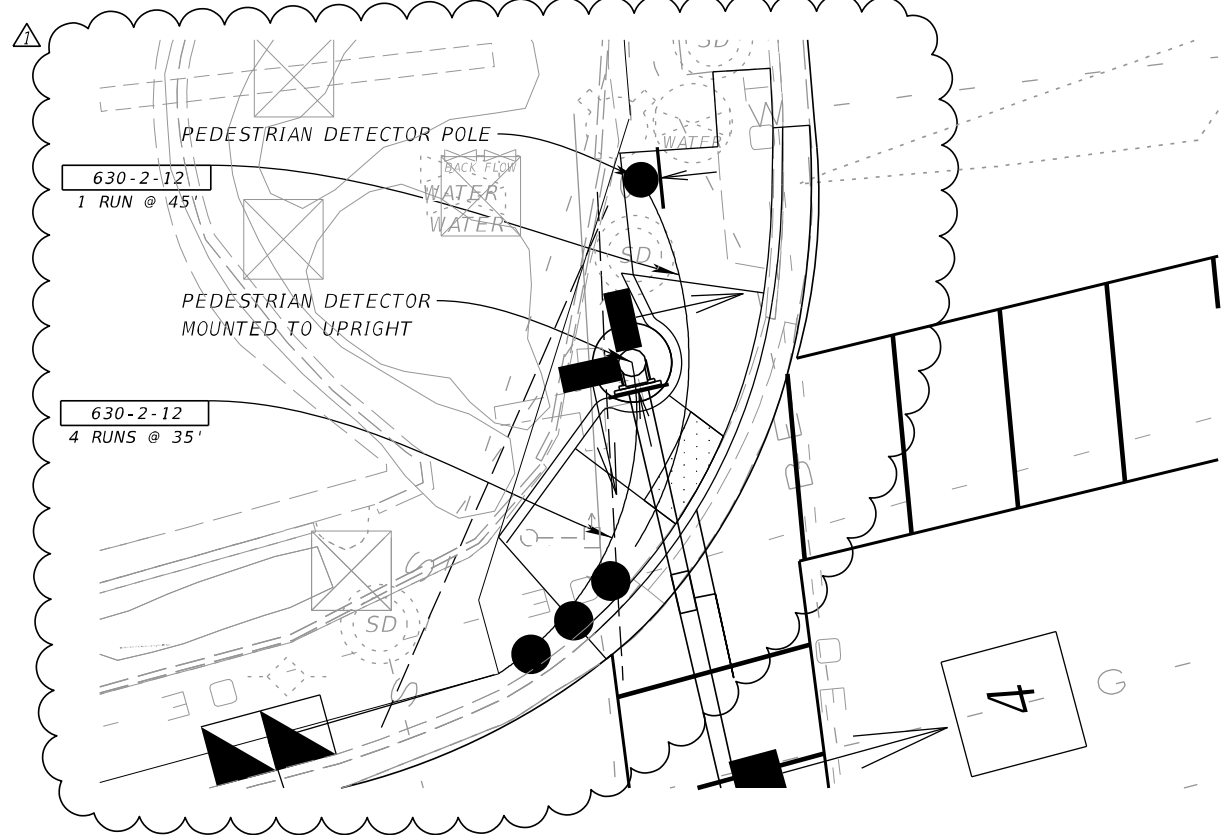
Note: The symbols for poles, pedestals, pedestrian signal heads, and pull boxes are exaggerated on this sheet. In some cases, the pushbuttons and pedestrian signal heads are shown to be separated simply for clarity on the plan views. For each pedestrian signal head to be mounted to a mast arm upright, the Contractor has the option of using either left-side or right-side mounting as long as the head is positioned within the right-of-way and does not obstruct pedestrians' view of a perpendicular signal head. Pedestrian pedestals shall be adjusted as necessary in order to meet field constraints.

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			CORNER DETAILS PALM RIVER ROAD		SHEET NO. T-19
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
06/24/15	REMOVED SIGNAL HEAD 6R AND CHANGED PED FEATURES IN ALL QUADRANTS.				45	HILLSBOROUGH	429074-1-52-01			



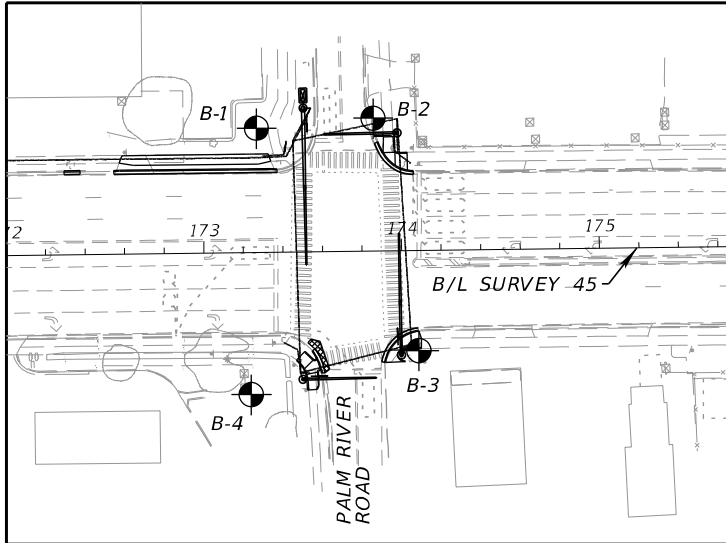
REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			CORNER DETAILS BROADWAY AVE.		SHEET NO. T-20
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					45	HILLSBOROUGH	429074-1-52-01			

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Note: The symbols for poles, pedestals, pedestrian signal heads, and pull boxes are exaggerated on this sheet. In some cases, the pushbuttons and pedestrian signal heads are shown to be separated simply for clarity on the plan views. For each pedestrian signal head to be mounted to a mast arm upright, the Contractor has the option of using either left-side or right-side mounting as long as the head is positioned within the right-of-way and does not obstruct pedestrians' view of a perpendicular signal head. Pedestrian pedestals shall be adjusted as necessary in order to meet field constraints.

REVISIONS				KIMLEY-HORN AND ASSOCIATES, INC. RONALD C. HILDEBRAND, P.E. P.E. LICENSE NUMBER 41936 2601 CATTLEMEN ROAD, SUITE 200 SARASOTA, FL 34232 PHONE (941) 379-7600 FAX (941) 379-4352 CERTIFICATE OF AUTHORIZATION: 00000696	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			CORNER DETAILS BROADWAY AVE.		SHEET NO. T-20
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
06/24/15	CHANGED SIGNAL HEAD 8R FROM 4-SECTION TO 5-SECTION, CHANGED POSITION OF MAST ARM C AND PED FEATURES IN ALL QUADRANTS.				45	HILLSBOROUGH	429074-1-52-01			



BORING LOCATION PLAN

NOTES:

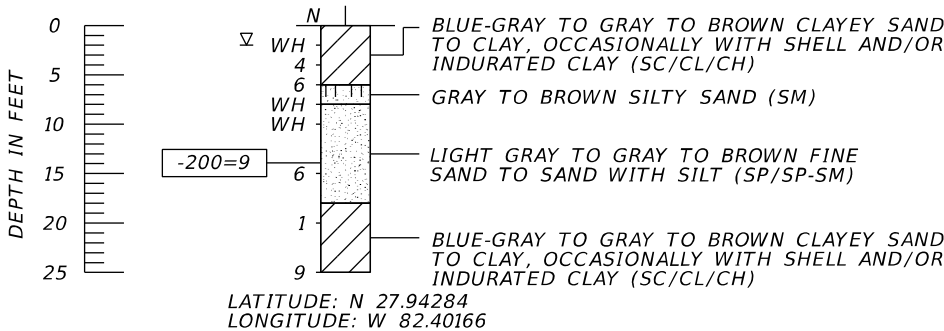
STATION AND OFFSET WERE DETERMINED USING THE MICROSTATION DESIGN FILES PROVIDED BY KIMLEY-HORN AND ASSOCIATES, INC. IN CONJUNCTION WITH THE RECORDED GPS COORDINATES OBTAINED BY TIERRA, INC. IN THE FIELD.

HARD WEATHERED LIMESTONE AND ROCK-LIKE MATERIAL WAS ENCOUNTERED IN SOME OF THE BORINGS PERFORMED. THE CONTRACTOR SHOULD ANTICIPATE THE NEED FOR SPECIALIZED EQUIPMENT TO FACILITATE EXCAVATION OF THIS MATERIAL.

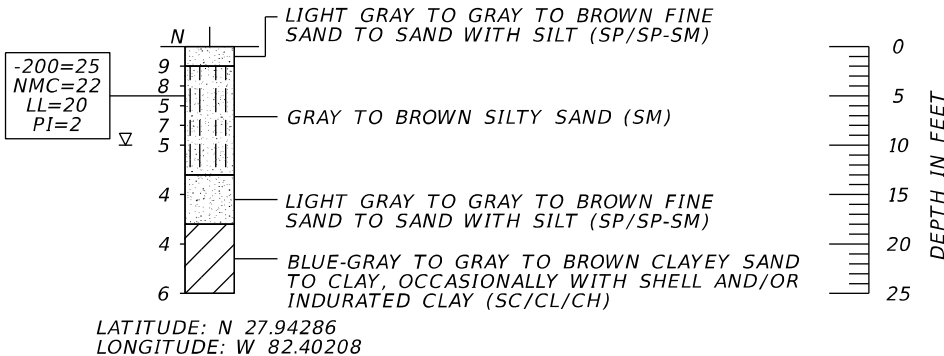
LOOSE SOIL CONDITIONS WERE ENCOUNTERED IN SOME OF THE BORINGS PERFORMED. THE CONTRACTOR SHOULD ANTICIPATE THE NEED FOR TEMPORARY CASING TO STABILIZE THE EXCAVATION DURING CONSTRUCTION.

BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE VICINITY OF THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +15 FEET, NGVD 29. THE CONTRACTOR SHOULD BE PREPARED TO HANDLE POTENTIOMETRIC CONDITIONS, IF ENCOUNTERED, AT NO ADDITIONAL COST TO THE DEPARTMENT.

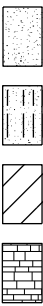
BOR # B-4
STA. 173+23
REF. B/L SURVEY 45
OFF 72 RT
DATE 4/15/2013
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BOR # B-1
STA. 173+27
REF. B/L SURVEY 45
OFF 63 LT
DATE 4/15/2013
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



LEGEND



LIGHT GRAY TO GRAY TO BROWN FINE SAND TO SAND WITH SILT (SP/SP-SM)
GRAY TO BROWN SILTY SAND (SM)
BLUE-GRAY TO GRAY TO BROWN CLAYEY SAND TO CLAY, OCCASIONALLY WITH SHELL AND/OR INDURATED CLAY (SC/CL/CH)
WEATHERED LIMESTONE TO CALCAREOUS CLAY



GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS



APPROXIMATE SPT BORING LOCATION

SP

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.

N

NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

50/4

NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION

HA

HAND AUGERED TO VERIFY UTILITY CLEARANCE

WH

FELL UNDER WEIGHT OF ROD AND HAMMER

WR

FELL UNDER WEIGHT OF ROD

-200

PERCENT PASSING #200 SIEVE

NMC

NATURAL MOISTURE CONTENT (%)

LL

LIQUID LIMIT (%)

PI

PLASTICITY INDEX (%)

OC

ORGANIC CONTENT (%)

GNA

GROUNDWATER NOT APPARENT DUE TO INTRODUCTION OF DRILLING FLUID

B/L SURVEY 45

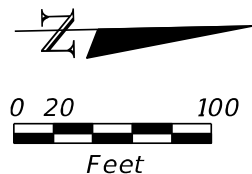
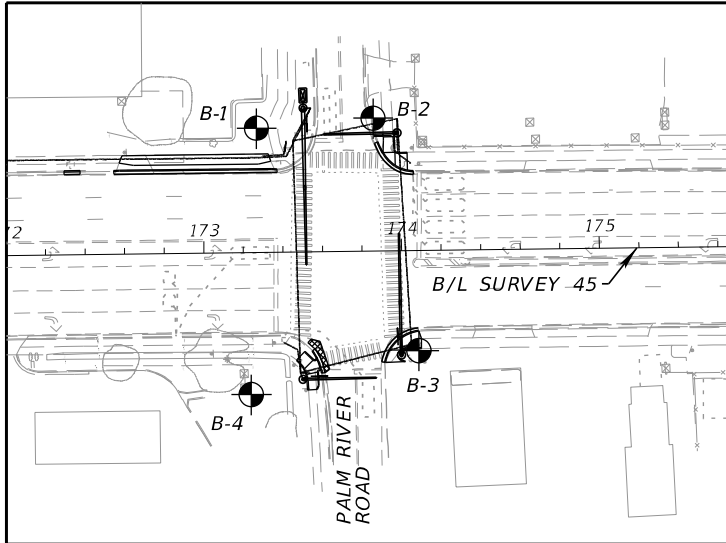
BASELINE OF SURVEY SR 45

RECOMMENDED SOIL PARAMETERS									
BORING NUMBER	DEPTH (FT)	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION/ ULTIMATE SHEAR STRENGTH (PSF)	EARTH PRESSURE COEFFICIENT	
				γ SAT	γ SUB			ACTIVE (Ka)	PASSIVE (Kp)
B-4	0 TO 2	WH 4 TO 6	SC/CL/CH	105	42.6	0	100	1.000	1.00
	2 TO 6		SC/CL/CH	115	52.6	0	500	1.000	1.00
	6 TO 13	WH	SP/SP-SM/SM	100	37.6	26	0	0.391	2.56
	13 TO 18	6	SP/SP-SM	105	42.6	29	0	0.347	2.88
	18 TO 23	1	SC/CL/CH	105	42.6	0	100	1.000	1.00
	23 TO 25	9	SC/CL/CH	120	57.6	0	1100	1.000	1.00
B-1	0 TO 18	4 TO 9 4 TO 6	SP/SP-SM/SM	105	42.6	29	0	0.347	2.88
	18 TO 25		SC/CL/CH	115	52.6	0	750	1.000	1.00
*ULTIMATE SHEAR STRENGTH									

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	LESS THAN 4 4 to 10 10 to 30 30 to 50 GREATER THAN 50	LESS THAN 3 3 to 8 8 to 24 24 to 40 GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	LESS THAN 2 2 to 4 4 to 8 8 to 15 16 to 30 GREATER THAN 30	LESS THAN 1 1 to 3 3 to 6 6 to 12 12 to 24 GREATER THAN 24

SIGNALS

REVISIONS				JON D. MEADE, P.E. P.E. LICENSE NUMBER 71529 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF CORE BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 45	HILLSBOROUGH	429074-1-52-01		T-21



BORING LOCATION PLAN

NOTES:

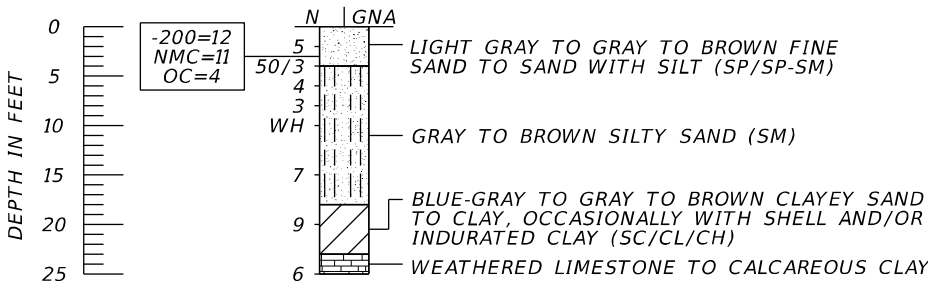
STATION AND OFFSET WERE DETERMINED USING THE MICROSTATION DESIGN FILES PROVIDED BY KIMLEY-HORN AND ASSOCIATES, INC. IN CONJUNCTION WITH THE RECORDED GPS COORDINATES OBTAINED BY TIERRA, INC. IN THE FIELD.

HARD WEATHERED LIMESTONE AND ROCK-LIKE MATERIAL WAS ENCOUNTERED IN SOME OF THE BORINGS PERFORMED. THE CONTRACTOR SHOULD ANTICIPATE THE NEED FOR SPECIALIZED EQUIPMENT TO FACILITATE EXCAVATION OF THIS MATERIAL.

LOOSE SOIL CONDITIONS WERE ENCOUNTERED IN SOME OF THE BORINGS PERFORMED. THE CONTRACTOR SHOULD ANTICIPATE THE NEED FOR TEMPORARY CASING TO STABILIZE THE EXCAVATION DURING CONSTRUCTION.

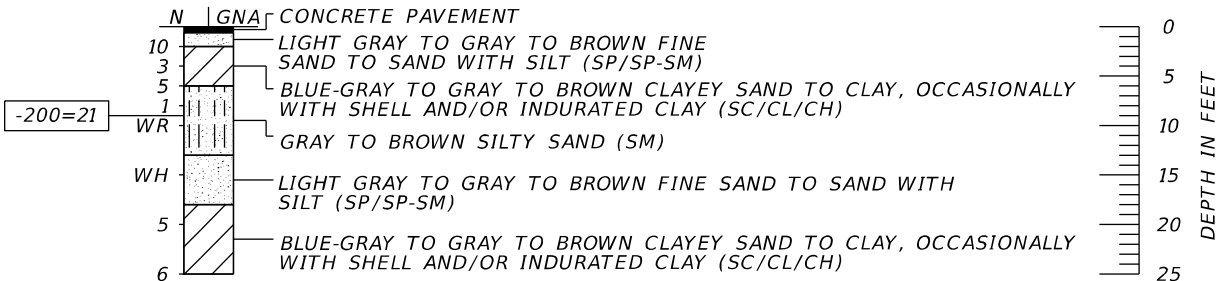
BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE VICINITY OF THE PROJECT SITE RANGES FROM APPROXIMATELY +10 TO +15 FEET, NGVD 29. THE CONTRACTOR SHOULD BE PREPARED TO HANDLE POTENTIOMETRIC CONDITIONS, IF ENCOUNTERED, AT NO ADDITIONAL COST TO THE DEPARTMENT.

BOR # B-2
STA. 173+86
REF. B/L SURVEY 45
OFF 67 LT
DATE 4/17/2013
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



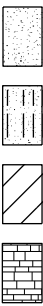
LATITUDE: N 27.94302
LONGITUDE: W 82.40209

BOR # B-3
STA. 174+08
REF. B/L SURVEY 45
OFF 51 RT
DATE 4/15/2013
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



LATITUDE: N 27.94307
LONGITUDE: W 82.40172

LEGEND



LIGHT GRAY TO GRAY TO BROWN FINE SAND TO SAND WITH SILT (SP/SP-SM)
GRAY TO BROWN SILTY SAND (SM)
BLUE-GRAY TO GRAY TO BROWN CLAYEY SAND TO CLAY, OCCASIONALLY WITH SHELL AND/OR INDURATED CLAY (SC/CL/CH)
WEATHERED LIMESTONE TO CALCAREOUS CLAY



GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS



APPROXIMATE SPT BORING LOCATION

SP

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.

N

NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

50/4

NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION

HA

HAND AUGERED TO VERIFY UTILITY CLEARANCE

WH

FELL UNDER WEIGHT OF ROD AND HAMMER

WR

FELL UNDER WEIGHT OF ROD

-200

PERCENT PASSING #200 SIEVE

NMC

NATURAL MOISTURE CONTENT (%)

LL

LIQUID LIMIT (%)

PI

PLASTICITY INDEX (%)

OC

ORGANIC CONTENT (%)

GNA

GROUNDWATER NOT APPARENT DUE TO INTRODUCTION OF DRILLING FLUID

B/L SURVEY 45

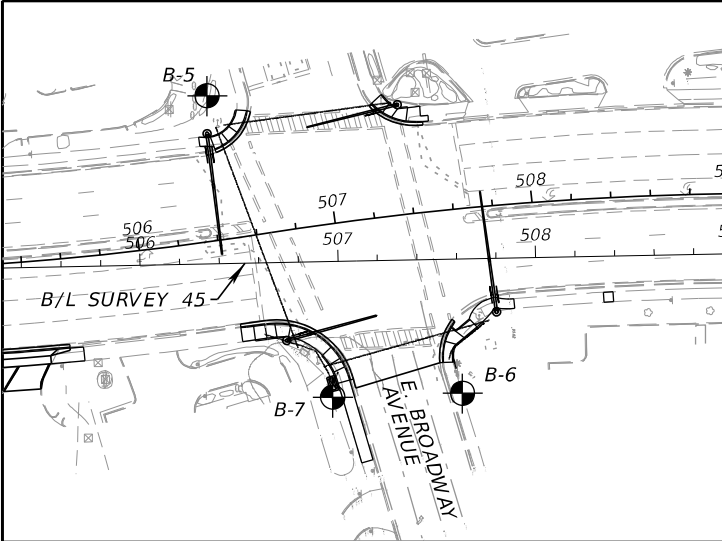
BASELINE OF SURVEY SR 45

RECOMMENDED SOIL PARAMETERS									
BORING NUMBER	DEPTH (FT)	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION/ ULTIMATE SHEAR STRENGTH (PSF)	EARTH PRESSURE COEFFICIENT	
				% SAT	% SUB			ACTIVE (Ka)	PASSIVE (Kp)
B-2	0 TO 2	5	SP/SP-SM	105	42.6	29	0	0.347	2.88
	2 TO 4	50/3	SP/SP-SM	110	47.6	30	0	0.333	3.00
	4 TO 13	WH TO 4	SM	100	37.6	26	0	0.391	2.56
	13 TO 18	7	SM	105	42.6	29	0	0.347	2.88
	18 TO 23	9	SC/CL/CH	120	57.6	0	2500	1.000	1.00
	23 TO 25	6	LIMESTONE	135	72.6	0	4000*	1.000	1.00
B-3	0 TO 2	10	SP/SP-SM	105	42.6	29	0	0.347	2.88
	2 TO 6	3 TO 5	SC/CL/CH	110	47.6	0	400	1.000	1.00
	6 TO 18	WR TO 1	SP/SP-SM/SM	100	37.6	26	0	0.391	2.56
	18 TO 25	5 TO 6	SC/CL/CH	115	52.6	0	500	1.000	1.00
*ULTIMATE SHEAR STRENGTH									

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

SIGNALS

REVISIONS				JON D. MEADE, P.E. P.E. LICENSE NUMBER 71529 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF CORE BORINGS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 45	HILLSBOROUGH	429074-1-52-01		T-22



BORING LOCATION PLAN

NOTES:

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GROUNDWATER NOT APPARENT DUE TO INTRODUCTION OF DRILLING FLUID

B/L SURVEY 45

BASELINE OF SURVEY SR 45

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BORING NUMBER	DEPTH (FT)	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION/ ULTIMATE SHEAR STRENGTH (PSF)	EARTH PRESSURE COEFFICIENT	
				γ SAT	γ SUB			ACTIVE (Ka)	PASSIVE (Kp)
B-5	0 TO 13 13 TO 25	3 TO 6 4 TO 6	SP/SP-SM SC/CL/CH	105 115	42.6 52.6	29 0	0 625	0.347 1.000	2.88 1.00
B-7	0 TO 13 13 TO 25	4 TO 15 11 TO 22	SP/SP-SM SP/SP-SM/SM	105 110	42.6 47.6	29 30	0 0	0.347 0.333	2.88 3.00
B-6	0 TO 25	3 TO 10	SP/SP-SM/SM	105	42.6	29	0	0.347	2.88
*ULTIMATE SHEAR STRENGTH									

