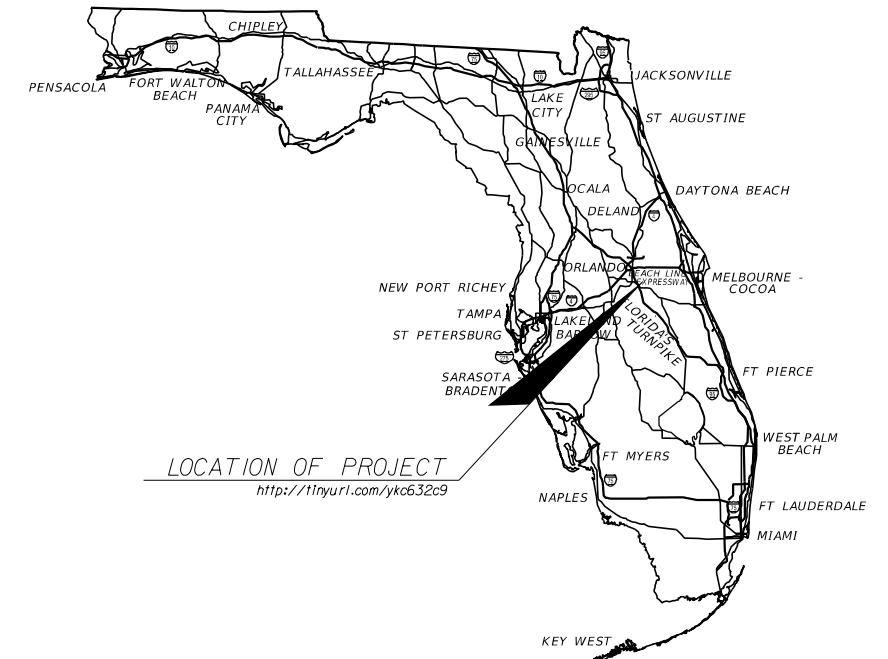




BOARD OF COUNTY COMMISSIONERS
OSCEOLA COUNTY, FLORIDA
ENGINEERING DEPARTMENT

SIGNALIZATION PLANS FOR
COUNTY CONTRACT NO. PS-22-13174-DG
JACK BRACK ROAD WIDENING
FROM NARCOOSSEE ROAD TO ABSHER ROAD



CONTRACT PLANS COMPONENTS

- ROADWAY
- SIGNING AND PAVEMENT MARKING
- SIGNALIZATION
- LIGHTING
- INTELLIGENT TRANSPORTATION SYSTEMS

INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
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T-3	TABULATION OF QUANTITIES
T-4 - T-5	GENERAL NOTES
T-6 - T-8	SIGNALIZATION PLAN
T-9	GUIDE SIGN WORKSHEET
T-10	MAST ARM TABULATION

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2024-25 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, FY 2024-25 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

Osceola County Board of County Commissioners Road Construction Specifications at the following website: <http://tinyurl.com/yc2mzhpp>

BOARD OF COUNTY COMMISSIONERS

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COUNTY ADMINISTRATION

DON FISHER, COUNTY MANAGER

PUBLIC WORKS DEPARTMENT

MEHUL PAREKH, P.E., PUBLIC WORKS DIRECTOR
 NICHOLAS HARTLEY, P.E., ASSISTANT TRANSPORTATION & TRANSIT DIRECTOR

SIGNALIZATION PLANS
ENGINEER OF RECORD:

ALEX HINKLE, P.E.
 P.E. LICENSE NUMBER 82354
 PROTEAN DESIGN GROUP
 100 EAST PINE STREET, SUITE 600
 ORLANDO, FL 32801
 (407) 246-0044
 VENDOR NO.: F593216593003

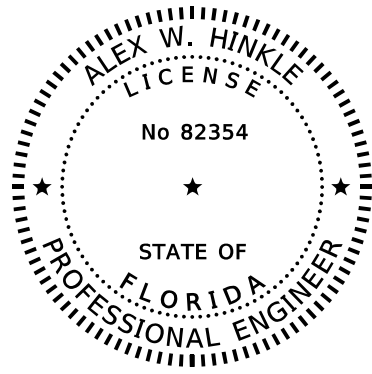
OSCEOLA COUNTY PROJECT MANAGER

JOSE J. SANTIAGO, CFM

60% SUBMITTAL
APRIL 2024

FISCAL YEAR	SHEET NO.
25	T-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
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ON ANY ELECTRONIC COPIES.

PROTEAN DESIGN GROUP
100 EAST PINE STREET, SUITE 600
ORLANDO, FL 32801
ALEX W. HINKLE, P.E. NO.: 82354

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

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
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T-10	MAST ARM TABULATION


REVISIONS			ENGINEER OF RECORD	OSCEOLA COUNTY ENGINEERING DEPARTMENT 1 Courthouse Square, Suite 1100 Kissimmee, Florida 34741-5488 Voice: (407) 343-2600 Fax (407) 343-2623	SIGNATURE SHEET	SHEET NO.
DATE	BY	DESCRIPTION				T-2
			ALEX W. HINKLE, P.E. LICENSE NUMBER: 82354 PROTEAN DESIGN GROUP 100 EAST PINE STREET, SUITE 600 ORLANDO, FL 32801			

**JACK BRACK ROAD
WIDENING**

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-6		T-7		T-8													
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	108		103												211		211	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	260														260		260	
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI			1												1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	20														20		20	
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY THE CONTRACTOR	AS	1														1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	138		26												164		164	
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA			1												1		1	
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA	1		1												2		2	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA			6												6		6	
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	3														3		3	
650-1-14	VEHICULAR TRAFFIC SIGNAL, FURNISH AND INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS						6									6		6	
650-1-16	VEHICULAR TRAFFIC SIGNAL, FURNISH AND INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS						1									1		1	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS						6									6		6	
660-4-11	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL CABINET EQUIPMENT	EA			1												1		1	
660-4-12	VEHICLE DETECTION SYSTEM- VIDEO, FURNISH & INSTALL ABOVE GROUND EQUIPMENT	EA	3														3		3	
663-1-121	SIGNAL PRIORITY PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, REPLACE CABINET ELECTRONICS	EA			1												1		1	
663-1-122	SIGNAL PRIORITY PREEMPTION SYSTEM, FURNISH AND INSTALL, GPS, DETECTOR	EA			1												1		1	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA			6												6		6	
670-5-112	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION	AS			1												1		1	
682-1-133	ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON-PRESSURIZED, IP, HIGH DEFINITION	EA	1														1		1	
685-1-13	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA			1												1		1	
700-3-201	SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, UP TO 12 SF	EA						1									1		1	
700-5-22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA						3									3		3	

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

REVISIONS DATE BY DESCRIPTION			JACK BRACK ROAD WIDENING		ENGINEER OF RECORD ALEX W. HINKLE, P.E. LICENSE NUMBER: 82354 PROTEAN DESIGN GROUP 100 EAST PINE STREET, SUITE 600 ORLANDO, FL 32801		 OSCEOLA COUNTY ENGINEERING DEPARTMENT 1 Courthouse Square, Suite 1100 Kissimmee, Florida 34741-5488 Voice: (407) 343-2600 Fax (407) 343-2623		TABULATION OF QUANTITIES			SHEET NO. T-3
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CONTACTS

ABBREVIATION	DISCIPLINE	NAME	EMAIL	PHONE
TMC	OSCEOLA COUNTY TRAFFIC MANAGEMENT CENTER	CARLOS BONILLA	TMC@OSCEOLA.ORG	407-742-9201
T&T	OSCEOLA COUNTY TRANSPORTATION AND TRANSIT	NICHOLA HARTLEY, P.E.	NICHOLAS.HARTLEY@OSCEOLA.ORG	407-742-0518
TRAFFIC OPS	OSCEOLA COUNTY TRAFFIC OPERATIONS	AARON TORRES	AARON.TORRES@OSCEOLA.ORG	407-738-9405
EOR	ENGINEER OF RECORD	ALEX W. HINKLE	AHINKLE@PROTEANDG.COM	407-246-0044x121

GENERAL

- UNLESS OTHERWISE NOTED IN THE TECHNICAL SPECIFICATIONS: INSTALLATION ACCEPTANCE, AND PAYMENT FOR ALL ITEMS REQUIRED IN THESE PLANS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING, REFERENCED IN THE KEY SHEET: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), FDOT STANDARD PLANS, FDOT DESIGN MANUAL, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND OSCEOLA COUNTY CONTRACTOR SIGNAL SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY TRAFFIC OPS AND TMC AT LEAST 48 HOURS BEFORE BEGINNING ANY RELATED TRAFFIC SIGNAL WORK. SHOULD COMMUNICATION TO AN INTERSECTION BE DISRUPTED, CORRESPONDENCE SHALL INCLUDE CONTACT NAME, PHONE NUMBER, PURPOSE, LOCATION, AND DURATION OF OUTAGE.
- THE CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE UNDER CONSTRUCTION CONCURRENTLY WITH THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ASPECTS OF SCHEDULING AND WORK WITH OTHER AGENCIES AND CONTRACTORS IN CHARGE OF CONCURRENT PROJECTS.
- FINAL LOCATIONS OF ANY DEVICES INCLUDING CABINETS SHALL BE APPROVED BY TRAFFIC OPS AND THE EOR PRIOR TO PLACEMENT OF THE FOUNDATION IF THE LOCATION HAS CHANGED FROM THE PLAN.
- FINAL LOCATION OF CCTV CAMERAS SHALL BE APPROVED IN THE FIELD BY TRAFFIC OPS PRIOR TO INSTALLATION, REGARDLESS OF WHERE THE SIGNAL PLANS SPECIFY IT TO BE INSTALLED.
- ANY FIBER INTERCONNECT CABLE THAT IS CUT OR DAMAGED DURING CONSTRUCTION MUST BE REPLACED AS AN ENTIRE RUN AND SHALL BE RE-SPLICED WITHIN THE SPLICE CLOSURE AT THE END OF THE RUN. SPLICING FIBER INTERCONNECT CABLE BETWEEN SPLICE CLOSURES IS NOT PERMITTED. THE CONTRACTOR SHALL BEAR ALL EXPENSES ASSOCIATED WITH THE INSTALLATION OF THE NEW INTERCONNECT CABLE.
- THREE SPARE CONDUCTORS SHALL BE INSTALLED FOR EACH VEHICLE PHASE PER OSCEOLA COUNTY STANDARD.
- A PERMANENT TAG SHALL BE PLACED AT ALL WIRE TERMINATIONS DESIGNATING THE PHASE USED. ALL UNUSED SIGNAL WIRES SHALL BE BONDED TO THE POLE GROUND AT THE BOTTOM AND INDIVIDUALLY TAPED WITHIN SIGNAL HEADS. EACH DETECTOR PUSH BUTTON SHALL BE FED WITH AN INDIVIDUAL TWO CONDUCTOR BELDEN CABLE, WITH THE SHIELD WIRE BONDED TO THE POLE GROUND. THE OUTSIDE INSULATION JACKET OF ALL SIGNAL CABLES SHALL REMAIN INTACT FROM THE SIGNAL HEADS TO THE FIELD TERMINATION POINTS.
- NO UN-JACKETED INDIVIDUAL CONDUCTORS SHALL REST IN ANY FIELD DRILLED STRUCTURES OR ASSEMBLIES.
- NO MIXING OF HIGH VOLTAGE, LOW VOLTAGE, POWER, AND FIBER CABLES WILL BE PERMITTED IN ANY CONDUITS OR PULL BOXES.
- SOLID COLORED INSULATION CONDUCTORS SHOULD BE USED FOR THROUGH ROADWAY PHASES AND TRACERS USED FOR TURN PHASES.
- ALL LUMINAIRES AND ILLUMINATED STREET NAME SIGNS SHALL BE CONTROLLED BY ONE MASTER PHOTOCCELL LOCATED OUTSIDE THE ELECTRICAL SERVICE DISCONNECT WIRED TO A DEDICATED CIRCUIT BREAKER WITHIN THE ELECTRICAL SERVICE DISCONNECT.
- THE CONTRACTOR SHALL VERIFY STRUCTURE ORIENTATION PRIOR TO PLACEMENT. STRUCTURES OF INCORRECT ORIENTATION SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL VERIFY THAT ALL STRUCTURES ARE SET TO ELEVATIONS THAT WILL MEET VERTICAL CLEARANCE REQUIREMENTS SPECIFIED IN FDOT, MUTCD, AND COUNTY STANDARDS PRIOR TO INSTALLING STRUCTURAL MATERIAL. IF A DISCREPANCY IS FOUND, CONTACT THE ENGINEER OF RECORD.
- IF THE CONTRACTOR CALLS FOR AN INSPECTION AND THE CONTRACTOR IS NOT PREPARED FOR THE INSPECTION (I.E. THE INSPECTION HAS TO BE RESCHEDULED), THE CONTRACTOR SHALL BE BACK CHARGED FOR ALL COSTS ASSOCIATED WITH THE INSPECTION.

SUBMITTALS

- ALL SUBMITTAL DATA ON OSCEOLA COUNTY PROJECTS SHOULD BE SUBMITTED TO VIA EMAIL TO T&T AND TRAFFIC OPS.

SURVEY

- ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

UTILITIES

- THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST 48 HOURS IN ADVANCE OF ANY OPERATION THAT MAY CONFLICT WITH OVERHEAD OR UNDERGROUND UTILITIES, INCLUDING POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED.

LIST OF UTILITY OWNERS: COMPANY	CONTACT	TELEPHONE #
AT&T DISTRIBUTION	JASON BOCK	(321) 388-9707
CENTURYLINK - LOCAL	RELOCATIONS@LUMEN.COM	N/A
CHARTER COMMUNICATIONS	JOHN SMITH	(407) 532-8520
COMCAST COMMUNICATIONS	THOMAS OSEBOLD	(352) 315-8527 / (352) 267-7620
OSCEOLA COUNTY	JACK LOTT	(407) 742-7534 / (407) 742-7813
OUC - ELECTRIC	JUAN DIAZ	(321) 436-6215
TOHO WATER AUTHORITY	KEVIN BURGESS	(407) 425-0452
UNITI FIBER	JAMES MOSLEY	(251) 654-8216
VERIZON / MCI	TIM COLE	(407) 702-6425 / (407) 506-8635
ZAYO GROUP	KATE PETERS	(815) 274-7274

- THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.

DRILLED SHAFTS


- THE COUNTY SHALL HIRE A CTQP CERTIFIED CONSTRUCTION ENGINEERING AND INSPECTION (CEI) FIRM, AND A CONCRETE TESTING LABORATORY FOR THE PURPOSE OF INSPECTING ALL DRILLED SHAFT INSTALLATIONS PER CURRENT FDOT STANDARDS. THE FIRM SHALL THEN SUBMIT A SIGNED AND SEALED REPORT VERIFIED BY THE PE IN RESPONSIBLE CHARGE OF THE DRILLED SHAFT INSPECTOR TO THE DEPARTMENT FOR APPROVAL. CONTRACTOR TO ALSO COORDINATE WITH OSCEOLA COUNTY TO PERFORM VT INSPECTION AT TIME OF DRILLED SHAFT POUR. FAILURE TO OBTAIN THESE SERVICES PRIOR TO THE CONSTRUCTION OF THE DRILLED SHAFT(S) SHALL RESULT IN REJECTION OF THE DRILLED SHAFT(S).
- THE SIGNAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO CONFLICTS EXIST DURING THE SOFT DIGS WITH DRILL SHAFT LOCATIONS AND MUST NOTIFY THE ENGINEER OF RECORD WHEN THEY ARISE. THE SIGNAL CONTRACTOR IS RESPONSIBLE FOR ALL ASSOCIATED COST, NOT COMPLYING WITH THIS SIGNAL NOTE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING APPROVED SHOP DRAWINGS SHOWING THE BOLT PATTERN AND ARM ORIENTATION PRIOR TO THE PRE-DRILL SHAFT MEETING.

MAST ARMS

- THE MAST ARMS SHALL BE PAINTED "MIDNIGHT NEUTRAL" (SHERWIN WILLIAMS J4-55-34), APPLIED ACCORDING TO FDOT STANDARD SPECIFICATIONS 560 (CODES Z-C AND B-8 FOR PRIME AND INTERMEDIATE COATS). THIS INCLUDES ANY LUMINAIRES INSTALLED ON THE MAST ARM.

AS-BUILT PLANS

- AS DEFINED IN THE FDOT STANDARD SPECIFICATIONS, SECTION 611-2.3, SEVEN DAYS PRIOR TO SIGNAL CONDITIONAL ACCEPTANCE INSPECTION BY THE MAINTAINING AGENCY, THE CONTRACTOR SHALL PROVIDE A PDF OF THE AS BUILT PLANS TO OSCEOLA COUNTY TRANSPORTATION AND TRANSIT. THE CONTRACTOR SHALL ALSO LEAVE ONE AS-BUILT PLAN IN THE DRAWER OF THE SIGNAL CABINET. IN ADDITION TO AS BUILT PLANS, CONTRACTOR SHALL SUBMIT BORE LOGS.

REVISIONS			ENGINEER OF RECORD	 OSCEOLA COUNTY ENGINEERING DEPARTMENT 1 Courthouse Square, Suite 1100 Kissimmee, Florida 34741-5488 Voice: (407) 343-2600 Fax (407) 343-2623	SHEET NO.
DATE	BY	DESCRIPTION			
			ALEX W. HINKLE, P.E. LICENSE NUMBER: 82354 PROTEAN DESIGN GROUP 100 EAST PINE STREET, SUITE 600 ORLANDO, FL 32801	T-4	

PAY ITEM NOTES

1. 630-2-11 & 630-2-12 AN ORANGE #12 AWG LOCATE WIRE SHALL BE INSTALLED WITHIN ANY UNUSED CONDUIT AND SPLICED WITHIN THE PULL BOX TO PROVIDE ELECTRICAL CONTINUITY. THERE SHALL BE ONE SPARE 2" UNDERGROUND CONDUIT INSTALLED PER RUN. THIS SHALL BE REFLECTED IN THE CALLOUT. THERE SHALL BE A SEPARATE CONDUIT FOR VIDEO OR LOOP RUNS FROM SIGNAL POWER CONDUITS. UNDER NO CIRCUMSTANCES SHALL LOOP AND VIDEO RUNS BE HOUSED IN THE SAME CONDUIT AS SIGNAL POWER.
2. 635-2-11 & 635-2-12 PULL BOXES SHALL BE TIER 15 "QUAZITE" OR QUAZITE EQUIVALENT IN LID DIMENSIONS, CORNER RADIUS, AND THICKNESS. COVERS SHALL BE STAMPED:
"OSCEOLA COUNTY TRAFFIC SIGNAL" FOR ALL SIGNALIZED APPLICATIONS.
"OSCEOLA COUNTY ATMS ELECTRIC" FOR ALL ATMS ELECTRIC APPLICATIONS.
3. 641-2-12 INCLUDES THE COST OF PROVIDING CONCRETE SERVICE POLE TO MOUNT SIGNAL DISCONNECT WHEN NOT PERMITTED TO BE MOUNTED ON POWER COMPANY POLE. SERVICE POLE SHALL BE EXPOSED 12' ABOVE GRADE WITH DISCONNECT MOUNTED AT 8'. SURGE ARRESTOR SHALL BE WIRED ON THE LOAD SIDE OF THE DISCONNECT.
4. 646-1-11 ALL PEDESTRIAN PEDESTALS SHALL BE PROVIDED WITH ALUMINUM BREAKAWAY TRANSFORMER-TYPE BASES.
5. 649-21-3, 649-21-6 & 649-21-10 BID PRICE FOR INSTALLATION OF MAST ARMS SHALL INCLUDE FOUNDATION CONSTRUCTION, INCLUDING CSL TUBES (NUMBER AND CONFIGURATION OF CSL TUBES SHALL COMPLY WITH STANDARDS AND SPECIFICATIONS SECTION 455-16.4 CSL TUBES AND FDOT STANDARD PLAN.)
6. 650-1-14 & 650-1-16 ALL TRAFFIC SIGNAL HEADS SHALL BE ALUMINUM. AN ARTICULATED ASTRO-BRACKET SHALL BE PROVIDED UNDER THIS PAY ITEM IF NEEDED FOR PROPER ORIENTATION OF HORIZONTAL SIGNAL HEAD ON A SKEWED ARM OR APPROACH. RETRO REFLECTIVE BACK PLATE BORDERS ARE REQUIRED ON ALL BACK PLATES. ANY FOUR SECTION SIGNAL HEADS WITH THE FLASHING YELLOW ARROW SHALL HAVE THE FTP-85-13 SIGN INSTALLED ADJACENT TO THE HEAD ASSEMBLY TO THE RIGHT.
7. 653-1-11 LED PEDESTRIAN SIGNALS ARE TO BE SINGLE SECTION AND PROVIDED WITH INTERNATIONAL STYLE LENSES AND COUNTDOWN FEATURE.
8. 660-4-11 & 660-4-12 CONTRACTOR TO FURNISH AND INSTALL ITERIS VANTAGE NEXT WITH VECTOR SYSTEM. CONTRACTOR TO COORDINATE WITH THE DEVICE MANUFACTURER FOR PROPER SET UP OF EQUIPMENT. PROPER GROUNDING MUST BE PROVIDED INCLUDING A BOND WIRE ATTACHED TO THE CAMERA ASSEMBLY RUNNING TO THE POLE GROUND, THIS ITEM INCLUDES EXTERIOR USE CABLING, AND MOUNTING BRACKETS NECESSARY TO MEET THE PERFORMANCE EXPECTATIONS OF THE SYSTEM. PAYMENT INCLUDES ALL LABOR (MAN-HOURS) AND EQUIPMENT NECESSARY TO DEVELOP AN ACCEPTANCE TESTING PLAN AND TO COMPLETE A SUCCESSFUL FIELD ACCEPTANCE TEST OF THE VIDEO DETECTION SYSTEM.
9. 663-1-121 & 663-1-122 CONTRACTOR TO FURNISH AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES GPS RECEIVER AND ANTENNA. CONTRACTOR TO FURNISH AND INSTALL GLOBAL TRAFFIC TECHNOLOGIES SYSTEM-SPECIFIC MULTI-PAIR CABLE. THE CONTRACTOR WILL PERFORM ALL SIGNAL PREEMPTION TESTING, MAPPING AND SYSTEM ACTIVATION. GPS ANTENNA SHALL BE LOCATED ON THE STRAIN POLE OR MAST ARM UPRIGHT NEAREST TO THE CABINET.
10. 665-1-11 PEDESTRIAN PUSH BUTTONS SHALL INCLUDE A MUTCD PEDESTRIAN SIGN, R10-3i FOR EACH BUTTON. THE BUTTON AND SIGN SHALL BE PLACED ON THE FACE OF THE POLE. CONTACT THE ENGINEER BEFORE PROCEEDING IF ALL A.D.A. REQUIREMENTS CANNOT BE MET REGARDING THE PLACEMENT AND ACCESSIBILITY OF THE BUTTONS. AUDIBLE PUSH BUTTONS SHALL ONLY BE INSTALLED WHEN CALLED FOR ON PLAN SHEETS.
11. 670-5-112 THE CONTROLLER ASSEMBLY SHALL BE ECONOLITE R77 TS2 TYPE 1 OPERATION, AND CONSIST OF AN ECONOLITE COBALT 2100 CONTROLLER. THE TOP OF THE CONTROLLER PAD SHALL BE AT LEAST SIX INCHES ABOVE THE ROADWAY ELEVATION. THIS PAY ITEM SHALL ALSO INCLUDE COMPLETE INSTALLATION AND INTIGRATION OF THE GPS PRIORITY CONTROL PREEMPTION EQUIPMENT. A TECHNICIAN SERVICE PAD 30" IN WIDTH SHALL ALSO BE PROVIDED. WHENEVER POSSIBLE, THE CABINET IS TO BE PLACED SO THAT THE DOOR OPENS AWAY FROM THE INTERSECTION AND OPENS FULLY WITHIN THE RIGHT OF WAY. THIS PAY ITEM INCLUDES THE COST OF THE CONCRETE FOR THE CONTROLLER PAD AND THE SERVICE PAD. FOR MORE DETAILED SPECIFICATIONS CONTACT TRAFFIC OPS.
12. 682-1-133 ALL NEW CCTV CAMERAS SHALL BE SHALL BE BOSCH BG5-ITS-1080P-30x6, MOUNTED TO HAVE THE ABILITY TO VIEW 360-DEGREE ANGLE BY PLACING THE CAMERA ON THE MAST ARM USING A CANDY CANE TYPE SUPPORT RISE.
13. 685-1-13 ALL UPS SYSTEMS SHALL BE ALPHA XM 1100 OR AN EQUIVALENT ALPHA MODEL THAT MEETS OSCEOLA COUNTY'S COMMUNICATION SYSTEM REQUIREMENTS. UPS CABINETS SHALL BE INSTALLED SEPARATELY FROM THE CONTROLLER ASSEMBLY, NO PIGGY BACK MOUNTS.
14. 700-5-22 ILLUMINATED STREET SIGNS SHALL BE L.E.D. PRODUCING 50 LUMENS PER WATT. SIGNS SHALL BE DOUBLE-SIDED AND MOUNTED TO SEPARATE CANTILEVER ARMS BELOW THE MAST ARMS. THE SIGNS SHALL BE CONTROLLED BY ONE MASTER PHOTOCCELL LOCATED OUTSIDE THE ELECTRICAL SERVICE DISCONNECT WIRED TO A DEDICATED CIRCUIT BREAKER WITHIN THE ELECTRICAL SERVICE DISCONNECT.

LEGEND:

SYMBOL	DESCRIPTION
	TRAFFIC SIGNAL (3-SECTION OR 4-SECTION)
	PULL BOX 13" X 24" (SIGNALS)
	PULL BOX 24" X 36" (FIBER)
	SPLICE VAULT
	VIDEO DETECTION CAMERA
	CCTV CAMERA
	GPS PREEMPTION DEVICE
	CONDUIT (OPEN TRENCH)
	CONDUIT (DIRECTIONAL BORE)
	VEHICLE DETECTION ZONE
	SIGNAL CABINET
	UPS CABINET
	CONCRETE PEDESTAL (TYPE P-IIA)

CR CONDUIT RUN

CR1: 2 RUNS W/
(1) 2" CONDUIT - POWER
(1) 2" CONDUIT - SPARE

CR2: 7 RUNS W/
(1) 2" CONDUIT - POWER
(2) 2" CONDUIT - SIGNAL
(1) 2" CONDUIT - VIDEO
(1) 2" CONDUIT - PED DETECTOR
(2) 2" CONDUITS - SPARE

CR3: 6 RUNS W/
(1) 2" CONDUIT - SIGNAL
(1) 2" CONDUIT - VIDEO
(1) 2" CONDUIT - PED DETECTOR
(1) 2" CONDUIT - FIBER
(2) 2" CONDUIT - SPARE

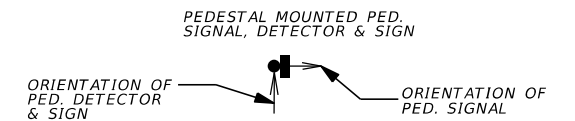
CR4: 5 RUNS W/
(1) 2" CONDUIT - SIGNAL
(1) 2" CONDUIT - VIDEO
(1) 2" CONDUIT - PED DETECTOR
(2) 2" CONDUITS - SPARE

CR5: 4 RUNS W/
(1) 2" CONDUIT - SIGNAL
(1) 2" CONDUIT - VIDEO
(2) 2" CONDUITS - SPARE

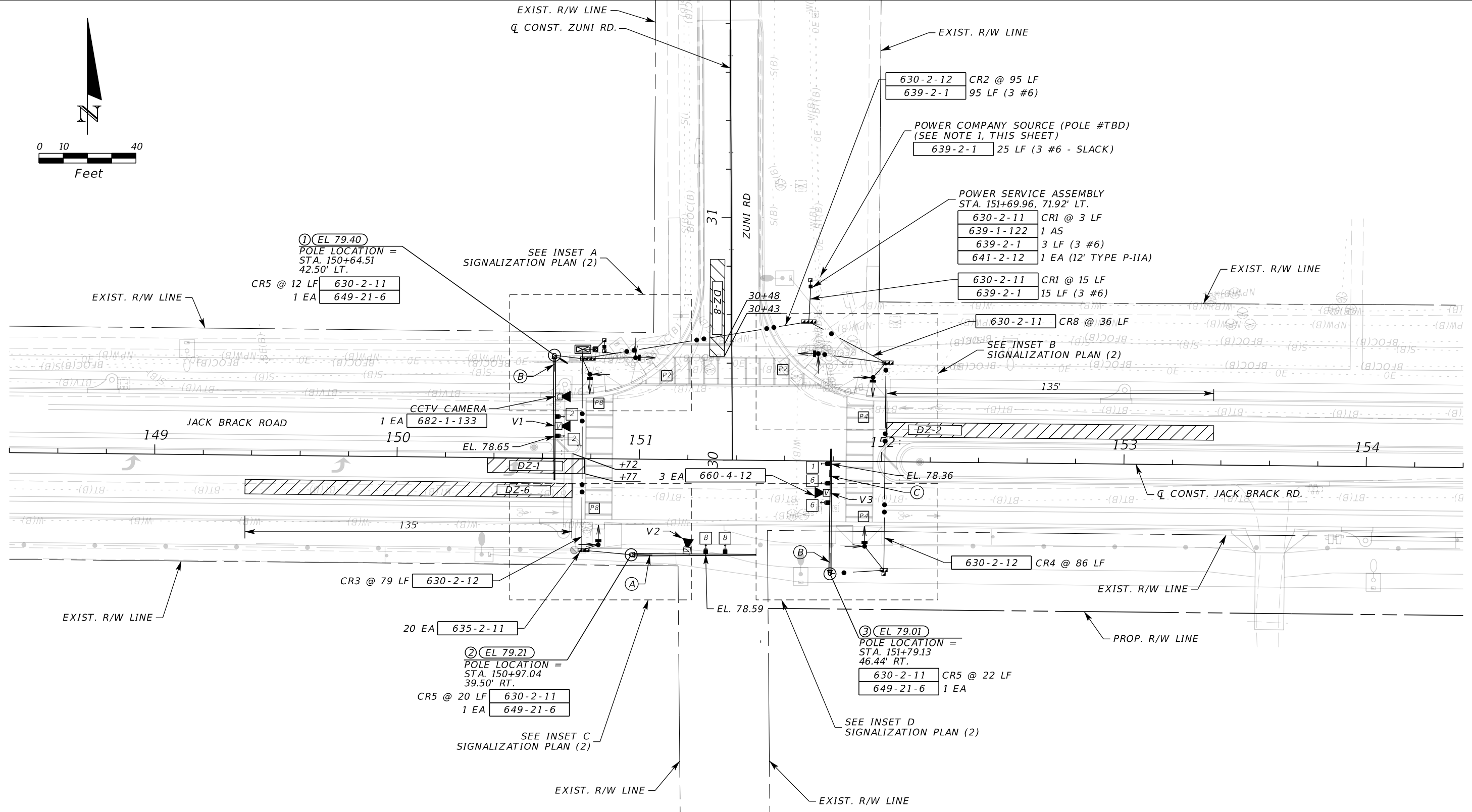
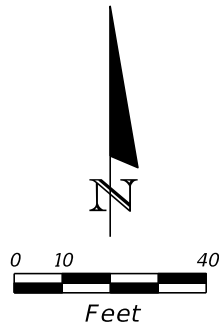
CR6: 2 RUNS W/
(1) 2" CONDUIT - PED SIGNAL
(1) 2" CONDUIT - PED DETECTOR

CR7: 12 RUNS W/
(4) 2" CONDUITS - SIGNAL
(1) 2" CONDUIT - VIDEO
(1) 2" CONDUIT - PED DETECTOR
(1) 2" CONDUIT - FIBER
(1) 2" CONDUIT - POWER
(4) 2" CONDUITS - SPARE

CR8: 4 RUNS W/
(1) 2" CONDUIT - SIGNAL
(1) 2" CONDUIT - VIDEO
(1) 2" CONDUIT - PED DETECTOR
(1) 2" CONDUIT - SPARE



REVISIONS			ENGINEER OF RECORD		OSCEOLA COUNTY ENGINEERING DEPARTMENT 1 Courthouse Square, Suite 1100 Kissimmee, Florida 34741-5488 Voice: (407) 343-2600 Fax (407) 343-2623	GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION					T-5
			JACK BRACK ROAD WIDENING				



NOTE:
 1. OUC TO PROVIDE ELECTRICAL POWER SERVICE WIRE FROM POWER COMPANY SOURCE (TRANSFORMER) TO PROPOSED PULL BOX LOCATED ADJACENT TO THE UTILITY POLE AND MAKE FINAL CONNECTIONS.

JACK BRACK ROAD AT ZUNI RD.
 OSCEOLA COUNTY SIGNAL ID: TBD

REVISIONS		
DATE	BY	DESCRIPTION

**JACK BRACK ROAD
 WIDENING**

ENGINEER OF RECORD
 ALEX W. HINKLE, P.E.
 LICENSE NUMBER: 82354
 PROTEAN DESIGN GROUP
 100 EAST PINE STREET, SUITE 600
 ORLANDO, FL 32801



SIGNALIZATION PLAN (1)

SHEET NO.
 T-6

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

SIGNAL CABINET #1
STA. 150+76.21, 45.05' LT.

CR7 @ 9 LF	630-2-11
1 PI	632-7-1
9 LF (3 #6)	639-2-1
1 EA	660-4-11
1 EA	663-1-121
1 EA	663-1-122
1 AS	670-5-112

POWER SERVICE DISCONNECT
STA. 150+85.10, 46.17' LT.

630-2-11	CR1 @ 5 LF
639-2-1	5 LF (3 #6)
639-3-11	1 EA
641-2-12	1 EA (12' TYPE P-IIA)

P8 PED POLE
STA. 150+79.23, 34.81' LT.

CR6 @ 7 LF	630-2-11
1 EA	646-1-11
1 EA	665-1-11

UPS CABINET #1
STA. 150+81.37, 45.10' LT.

630-2-11	CR1 @ 5 LF
639-2-1	12 LF (3 #6)
685-1-13	1 EA

P2 PED POLE
STA. 150+98.02, 41.84' LT.

630-2-11	CR6 @ 21 LF
646-1-11	1 EA
665-1-11	1 EA

INSET A
JACK BRACK ROAD @ ZUNI RD
NORTHWEST QUADRANT

P2 PED POLE
STA. 151+73.39, 44.27' LT.

630-2-11	CR6 @ 28 LF
646-1-11	1 EA
665-1-11	1 EA

P4 PED POLE
STA. 151+96.08, 34.68' LT.

630-2-11	CR6 @ 8 LF
646-1-11	1 EA
665-1-11	1 EA

INSET B
JACK BRACK ROAD @ ZUNI RD
NORTHEAST QUADRANT

P8 PED POLE
STA. 150+83.41, 35.50' RT.

CR6 @ 7 LF	630-2-11
1 EA	646-1-11
1 EA	665-1-11

P4 PED POLE
STA. 151+93.31, 34.98' RT.

630-2-11	CR6 @ 13 LF
646-1-11	1 EA
665-1-11	1 EA

INSET C
JACK BRACK ROAD @ ZUNI RD
SOUTHWEST QUADRANT

INSET D
JACK BRACK ROAD @ ZUNI RD
SOUTHEAST QUADRANT

REVISIONS		
DATE	BY	DESCRIPTION

**JACK BRACK ROAD
WIDENING**

ENGINEER OF RECORD
ALEX W. HINKLE, P.E.
LICENSE NUMBER: 82354
PROTEAN DESIGN GROUP
100 EAST PINE STREET, SUITE 600
ORLANDO, FL 32801



SIGNALIZATION PLAN (2)

SHEET NO.
T-7

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

NOTES:

- THE MAJOR STREET IS JACK BRACK ROAD, MOVEMENTS 2 AND 6. THE MINOR STREET IS ZUNI RD., MOVEMENT 8.
- SIGNAL OPERATING PLAN 12 AS SHOWN BELOW WITH THE FOLLOWING:
 - WHEN THE SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER MOVEMENTS SHALL FLASH RED.
 - WHEN A PEDESTRIAN CALL IS ACTIVE FOR MOVEMENT P2, FLASHING YELLOW ARROW OPERATION FOR MOVEMENT 1 SHALL BE OMITTED.
- POSTED SPEEDS:
 JACK BRACK ROAD: 35 MPH
 ZUNI RD.: 35 MPH

VIDEO DETECTOR UNIT #	ASSIGNED TO MOVEMENT	ZONE	ZONE SIZE	DELAY (SEC)
V1	2	DZ-2	6' X 135'	
V2	8	DZ-8	6' X 40'	5
V3	1	DZ-1	6' X 40'	
	6	DZ-6	6' X 135'	

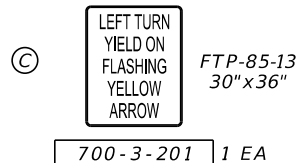
DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

CONTROLLER PHASE	1	2	4	6	8
DIRECTION	EBLT	WB	-	EB	SB
MINIMUM GREEN	5	15		15	7
EXTENSION	3.0	3.0		3.0	3.0
MAXIMUM GREEN 1	15	25		25	20
MAXIMUM GREEN 2	20	45		45	25
YELLOW CLEARANCE	4.0	4.0		4.0	4.0
ALL RED	2.2	2.0		2.0	2.0
PEDESTRIAN WALK		7	7		7
PED. CLEARANCE		18	15		15
RECALL		MIN		MIN	

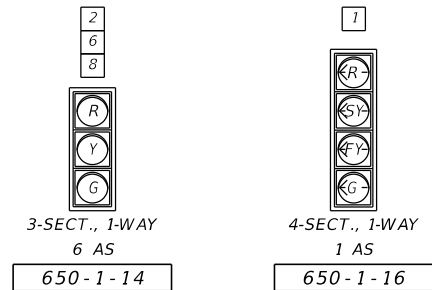
INTERNALLY ILLUMINATED STREET NAME SIGNS



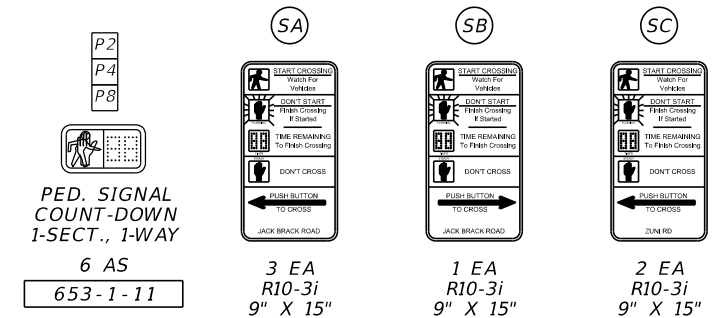
MAST ARM MOUNTED SIGNS



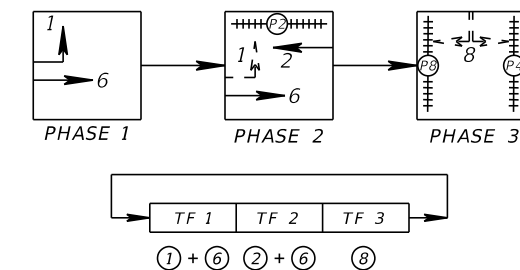
TRAFFIC SIGNAL HEAD DETAILS



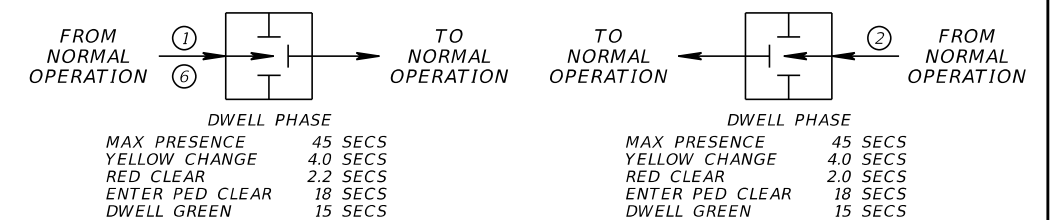
PEDESTRIAN SIGNAL HEAD AND SIGN DETAILS



S.O.P. 12



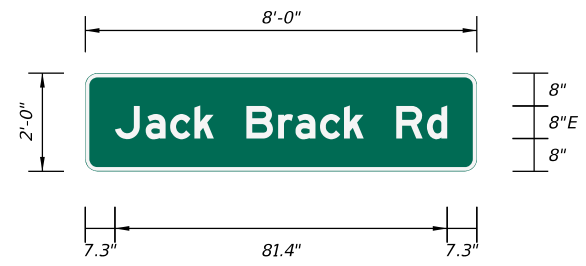
EMERGENCY PREEMPTION PLAN



JACK BRACK ROAD AT ZUNI RD.
OSCEOLA COUNTY SIGNAL ID: TBD

REVISIONS			DATE	BY	DESCRIPTION	ENGINEER OF RECORD	OSCEOLA COUNTY ENGINEERING DEPARTMENT	SHEET NO.	
JACK BRACK ROAD WIDENING						ALEX W. HINKLE, P.E. LICENSE NUMBER: 82354 PROTEAN DESIGN GROUP 100 EAST PINE STREET, SUITE 600 ORLANDO, FL 32801	OSCEOLA COUNTY ENGINEERING DEPARTMENT 1 Courthouse Square, Suite 1100 Kissimmee, Florida 34741-5488 Voice: (407) 343-2600 Fax (407) 343-2623	SIGNALIZATION PLAN (3)	T-8

SIGN NAME	OH-1	QTY	1	SIGN NUMBER		STATION(S)	
PANEL	BORDER					none	
WIDTH	8'-0"	WIDTH	1"				
HEIGHT	2'-0"	RADII	3"				
LEGEND	White	COLOR	White				
COLOR	Green						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH			



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY		J	a	c	k	B	r	a	c	k	R	d	L							
SPACE	7.3	7.5	6	5.9	4.8	8	7.8	4.2	6	5.9	4.8	8	7.5	5	7.3	81.4				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME	OH-2	QTY	2	SIGN NUMBER		STATION(S)	
PANEL	BORDER					none	
WIDTH	6'-0"	WIDTH	1"				
HEIGHT	2'-0"	RADII	3"				
LEGEND	White	COLOR	White				
COLOR	Green						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH			



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY		Z	u	n	i	R	d	L												
SPACE	9.6	9.6	8	7.9	1.8	10	9.4	6.2	9.5	52.9										
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME		QTY		SIGN NUMBER		STATION(S)	
PANEL	BORDER						
WIDTH	WIDTH						
HEIGHT	RADII						
LEGEND	COLOR						
COLOR							
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH			

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME		QTY		SIGN NUMBER		STATION(S)	
PANEL	BORDER						
WIDTH	WIDTH						
HEIGHT	RADII						
LEGEND	COLOR						
COLOR							
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Land	COLUMN SIZE	AVERAGE LENGTH			

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

REVISIONS		
DATE	BY	DESCRIPTION

**JACK BRACK ROAD
WIDENING**

ENGINEER OF RECORD
ALEX W. HINKLE, P.E.
LICENSE NUMBER: 82354
PROTEAN DESIGN GROUP
100 EAST PINE STREET, SUITE 600
ORLANDO, FL 32801



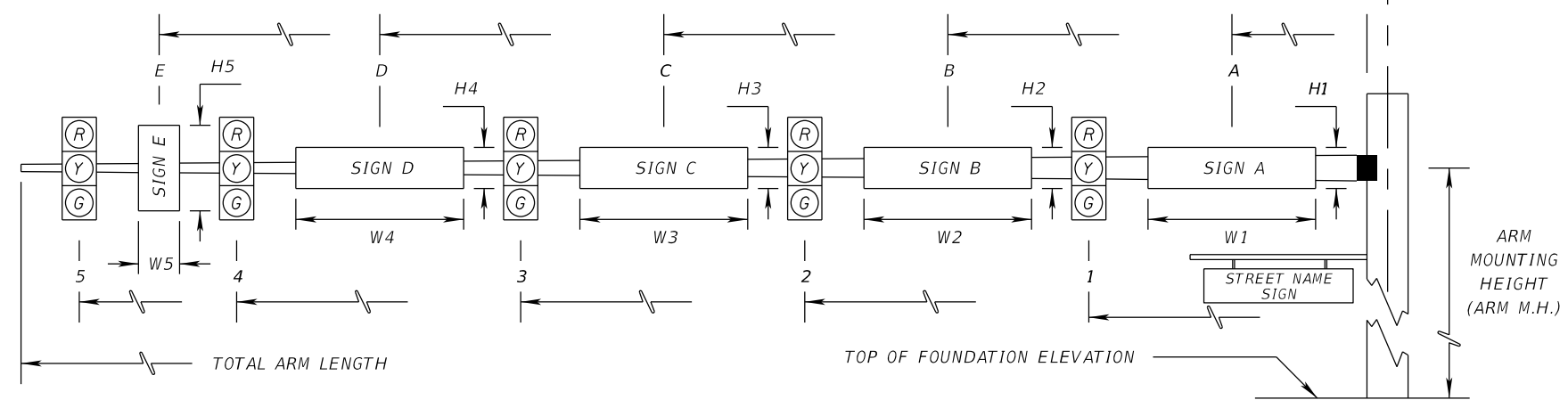
GUIDE SIGN WORKSHEET

SHEET NO.
T-9

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

ARM NO. 2 - DOUBLE ARM POLE ORIENTATION TO BE MEASURED IN A COUNTER CLOCKWISE DIRECTION FROM ARM NO. 1.

ARM NO. 1 - SINGLE ARM POLE OR LONGEST ARM FOR DOUBLE ARM POLE.



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY
 'VD' DENOTES VIDEO DETECTOR
 'C' DENOTES CCTV CAMERA

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	LUMI-NAIRE Y/N	TERM. COMP. Y/N	SIGNAL DATA										TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	SIGN DATA					PAINT COLOR				
								SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE										DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN									
											1	*	2	*	3	*	4				*	5	*	A	H1		W1	B	H2	W2
1	T-6	STA. 150+64.51, 42.50' LT.	79.40	1	78.65	N	N	V	Y	N	15.8	C	24.0	3	28.0	VD	32.0	3												MIDNIGHT NEUTRAL
---	---	-----	-----	2																										
2	T-6	STA. 150+97.04, 39.50' RT.	79.21	1	78.59	N	N	V	Y	N	21.5	VD	29.5	3	37.5	3														MIDNIGHT NEUTRAL
---	---	-----	-----	2																										
3	T-6	STA. 151+79.13, 46.44' RT.	79.01	1	78.36	N	N	V	Y	N	28.1	3	32.1	VD	36.1	3	44.1	4												MIDNIGHT NEUTRAL
---	---	-----	-----	2																										

FUTURE LOADS
 (FOR DESIGN AND REFERENCE PURPOSES ONLY - CONSTRUCT PER TABLE ABOVE)

ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	LUMI-NAIRE Y/N	TERM. COMP. Y/N	SIGNAL DATA										TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	SIGN DATA					PAINT COLOR					
								SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE										DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN										
											1	*	2	*	3	*	4				*	5	*	A	H1		W1	B	H2	W2	C
1	T-6	STA. 150+64.51, 42.50' LT.	79.40	1	78.65	N	N	V	Y	N	15.8	C	24.0	3	28.0	VD	32.0	3	40.0	4										MIDNIGHT NEUTRAL	
---	---	-----	-----	2																											
2	T-6	STA. 150+97.04, 39.50' RT.	79.21	1	78.59	N	N	V	Y	N	21.5	VD	29.5	3	37.5	3	45.5	4													MIDNIGHT NEUTRAL
---	---	-----	-----	2																											

REVISIONS		
DATE	BY	DESCRIPTION

**JACK BRACK ROAD
WIDENING**

ENGINEER OF RECORD
 ALEX W. HINKLE, P.E.
 LICENSE NUMBER: 82354
 PROTEAN DESIGN GROUP
 100 EAST PINE STREET, SUITE 600
 ORLANDO, FL 32801

**OSCEOLA COUNTY
ENGINEERING DEPARTMENT**
 1 Courthouse Square, Suite 1100
 Kissimmee, Florida 34741-5488
 Voice: (407) 343-2600 Fax (407) 343-2623

MAST ARM TABULATION

SHEET NO.
T-10

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