CONTRACT DRAWINGS

CORTEZ ROAD WEST (SR 684) AT 86TH STREET WEST
INTERSECTION IMPROVEMENTS

FOR

MANATEE COUNTY, FLORIDA

COUNTY PROJECT NUMBER: 6082160

FINANCIAL PROJECT ID: 429867-1-58-01

(FEDERAL FUNDS)

SIGNALIZATION PLANS

GOVERNING STANDARDS AND SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS, DATED 2013 AND APPLICABLE SECTIONS, ARTICLES AND SUBARTICLES OF DIVISION I AND ALL DIVISION II & III OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2013, AS AMENDED BY CONTRACT DOCUMENTS.

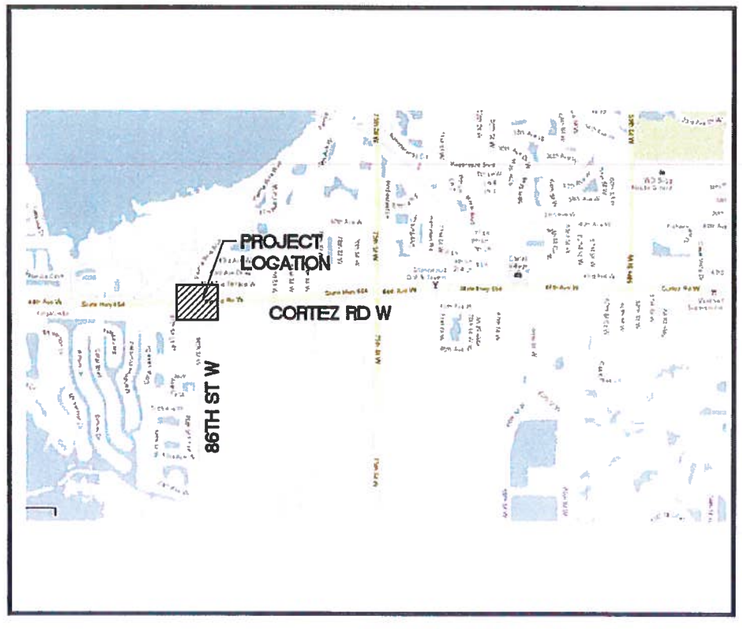
APPLICABLE DESIGN STANDARDS MODIFICATIONS: 1-1-13. FOR DESIGN STANDARDS MODIFICATIONS CLICK ON "DESIGN STANDARDS" AT THE FOLLOWING WEB SITE: HTTP://WWW.DOT.STATE.FL.US/RDDESIGN/.

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

UTILITY WARNING NOTE

ABOVE GROUND AND / OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT – PROCEED WITH CAUTION – THE CONTRACTOR SHALL CALL SUNSHINE STATE "ONE CALL" AT 1-800-432-4770 AND THE UTILITY OWNERS IN ADVANCE OF BEGINNING WORK, IN ACCORDANCE WITH CHAPTER 556, FLORIDA STATUTES.

SUMMARY OF REVISIONS	
DATE	DESCRIPTION



NTS

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SHOP DRAWINGS TO BE SUBMITTED TO:

EYRA CASH, P.E.
PROJECT MANAGER
MANATEE COUNTY PUBLIC WORKS
1022 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
(941) 708-7450 EXT. 7344

48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770

PLANS PREPARED BY:

Cardno TBE
12481 Telecom Drive, Tampa, Florida 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

ENGINEER OF RECORD

UPIK Y. SUWARNO, PE — FL. LICENSE NO. 62995

9-13-13
DATE

UPIK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER

FINAL

DATE: 09-13-13
SCALE: HORIZ: N/A VERT: N/A
SHEET: T-1

DATE: 10/12/12 TIME: SCALE: 40 FILENAME: O:\08\0193\193-008-15\ACAD\KEY_SHEET

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-6		T-7		T-11		T-12		T-13																
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
101-1	MOBILIZATION	LS																					1		1		
102-1	MAINTENANCE OF TRAFFIC	LS																					1		1		
102-14	TRAFFIC CONTROL OFFICER	HR																					40		40		
102-60	WORK ZONE SIGN	ED																					3240		3240		
102-76	ARROW BOARD/ADVANCE WARNING ARROW PANEL	ED																					360		360		
102-104	TEMPORARY SIGNALIZATION & MAINTENANCE OF INTER.	ED																					180		180		
102-107-1	TEMPORARY DETECTION AND MAINTENANCE	ED																					180		180		
110-1-1	CLEARING AND GRUBBING	LS																					1		1		
110-4	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY			17						101												118		118		
425-6	VALVE BOX (ADJUST)	EA	1																				1		1		
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF									211												211		211		
522-1	CONCRETE SIDEWALK, 4" THICK	SY			17						12.5												29.5		29.5		
522-2	CONCRETE SIDEWALK, 6" THICK	SY									212												212		212		
550-10-210	FENCING, TYPE B, STANDARD	LF	40																				40		40		
630-2-11	CONDUIT (F&I) (UNDERGROUND)	LF	150																				150		150		
630-2-12	DIRECTIONAL BORE (<6") (2" HDPE)	LF			520																		520		520		
630-2-12	DIRECTIONAL BORE (6" TO <12") (2" HDPE)	LF	300																				300		300		
630-2-12	CONDUIT (F&I) (UNDERPAVEMENT) (2")	LF	100		20																		120		120		
630-2-14	CONDUIT (F&I) (ABOVEGROUND) (2")	LF	20																				20		20		
632-7-1	CABLE (SIGNAL) (F&I)	PI	1																				1		1		
633-1-121	ITS FIBER OPTIC CABLE (F&I)	LF	30																				30		30		
633-2-1	ITS FIBER OPTIC (INSTALL) (SPLICE)	EA	4																				4		4		
633-3-15	ITS FO CONNECTION HARDWARE (F&I)(PATCH PANEL)	EA	1																				1		1		
635-2-12	PULL & JUNCTION BOXES (F&I) (PULL BOX)	EA	16		4																		20		20		
639-1-122	ELECTRICAL POWER SERVICE (UNDERGROUND) (PURCHASED BY CONTRACTOR FROM POWER CO)	AS	1																				1		1		
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	180																				180		180		
641-2-12	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-II SERVICE POLE) (12FT)	EA	1																				1		1		
646-1-11	ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)	EA	7																				7		7		
649-31-201	STEEL MAST ARM ASSEMBLY(F&I)(130 MPH)(38')	EA	2																				2		2		
649-31-203	STEEL MAST ARM ASSEMBLY(F&I)(130 MPH)(60')	EA	1																				1		1		
649-31-205		EA	1																				1		1		
650-1-311	TRAFFIC SIGNAL (F&I) (3-SECT.) (1-WAY) (LED)	AS	6																				6		6		
650-1-511	TRAFFIC SIGNAL (F&I) (5-SECT.) (1-WAY) (LED)	AS	4																				4		4		
653-191	PEDESTRIAN SIGNAL (F&I) (LED COUNTDOWN) (1 WAY)	AS	6																				6		6		
653-192	PEDESTRIAN SIGNAL (F&I) (LED COUNTDOWN) (2 WAY)	AS	1																				1		1		
660-1-110	LOOP DETECTOR, INDUCTIVE (TYPE 10,2 CH,SS,RM)	EA			8																		8		8		
660-2-102	LOOP ASSEMBLY, TYPE B	AS			8																		8		8		
660-4-11	VEHICLE DETECTOR ASSEMBLIES (F&I) (CABINET EQUIPMENT)	EA	1																				1		1		
660-4-12	VEHICLE DETECTOR ASSEMBLIES(F&I)(VIDEO)(ABOVE EQUIP.)	EA	4																				4		4		
665-13	PEDESTRIAN DETECTOR (F&I) (WITH SIGN ONLY)	EA	8																				8		8		
670-5-110	TRAFFIC CONTROLLER ASSEMBLY (F&I) (NEMA)	AS	1																				1		1		
685-106	UNINTERRUPTIBLE POWER SOURCE (UPS)	EA	1																				1		1		
690-10	REMOVE SIGNAL HEAD ASSEMBLY	EA	8																				8		8		
690-20	REMOVE SIGNAL PEDESTRIAN ASSEMBLY	EA	8																				8		8		
690-34-2	REMOVE COMPLETE POLE (DEEP)(BOLT ON ATTACHMENT)	EA	4																				4		4		
690-50	REMOVE CONTROLLER ASSEMBLY	EA	1																				1		1		
690-60	REMOVE VEHICLE DETECTOR ASSEMBLY	EA	10																				10		10		
690-70	REMOVE PEDESTRIAN DETECTOR ASSEMBLY	EA	8																				8		8		
690-80	REMOVE SPAN WIRE ASSEMBLY	EA	4																				4		4		
690-90	REMOVE CONDUIT & CABLING	PI	1																				1		1		
690-91	REMOVE SIGNAL INTERCONNECT CABLE	LF	25																				25		25		
690-100	REMOVE MISCELLANEOUS SIGNAL EQUIPMENT	PI	1																				1		1		
699-1-1	INTERNALLY ILLUMINATED SIGN (F&I)	EA	4																				4		4		
700-48-60	SIGN PANEL (REMOVE)	AS	3																				3		3		
711-11-111	THERMOPLASTIC PAVEMENT MARKING (6" WHITE,SOLID)	NM							0.25														0.25		0.25		
711-11-112	THERMOPLASTIC PAVEMENT MARKING (8" WHITE,SOLID)	NM							0.04														0.04		0.04		
711-11-123	THERMOPLASTIC PAVEMENT MARKING (12" WHITE)	LF					520																520		520		
711-11-124	THERMOPLASTIC PAVEMENT MARKING(18" WHITE,SOLID)	LF							125														125		125		
711-11-125	THERMOPLASTIC PAVEMENT MARKING (24" WHITE)	LF					128																128		128		
711-11-131	THERMOPLASTIC PAVEMENT MARKING(WHITE,SKIP,10-30)	GM							0.05														0.05		0.05		
711-11-170	THERMOPLASTIC STANDARD, WHITE, MESSAGE	EA					4																4		4		
711-11-211	THERMOPLASTIC PAVEMENT MARKING (6" YELLOW,SOLID)	NM							0.2														0.2		0.2		
711-11-224	THERMOPLASTIC PAVEMENT MARKING(18" YELLOW,SOLID)	LF							50														50		50		
711-17	THERMOPLASTIC (REMOVE)	SF					1356																1356		1356		
784-1-1	ITS FIELD ETHERNET SWITCH	EA	1																				1		1		

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12461 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3643

UPK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER
UPK Y. SUWARNO, P.E.
LICENSE NUMBER
9-13-13
DATE

DESIGNED	UYS
DRAWN	UYS
Q.C.	DJA
APPROVED	

SIGNALIZATION TABULATION OF QUANTITIES

PROJECT NO: 00193-008-15
DATE: 09-13-2013
SHEET NO: T-2

FILE: O:\JOB\0193\00193-008-15\ACADIS1_TABQSG01.dwg LAST SAVED: Fri, 09/13/13-1:07p PLOTTED: Fri, 09/13/13-1:08p BY: Upk.Suwarno

GENERAL NOTES:

1. AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE TRAFFIC SIGNAL INSPECTOR/LIAISON:

   MR. CARLOS CABRERA PH: 941-359-7317
   FLORIDA DEPARTMENT OF TRANSPORTATION
   SARASOTA OPERATIONS CENTER
   1840 61ST STREET
   SARASOTA, FLORIDA 34243

2. AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MANATEE COUNTY TRAFFIC OPERATIONS DIVISION, MR. AARON BURKETT (941) 708-7509 AND TRAFFIC ENGINEERING DIVISION, MR. VISHAL S. KAKKAD (941) 749-3502 TO INFORM THEM OF CONSTRUCTION OPERATIONS.

3. THE CONTRACTOR MUST NOTIFY THE TRAFFIC ENGINEERING DIVISION (MR. VISHAL S. KAKKAD, (941) 749-3502 AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO SCHEDULE THE FINAL INSPECTION.

   WHEN CONSTRUCTION IS COMPLETE, PROVIDE THREE (3) SETS OF "AS BUILT" PLANS AND ONE COMPACT DISK (PDF FILES) TO:

   MANATEE COUNTY
   TRAFFIC ENGINEERING DIVISION
   2101 47TH TERRACE EAST
   BRADENTON, FL 34203
   (ATTN: MR. VISHAL S. KAKKAD, P.E., PTOE)

   FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DISTRICT 1
   P.O. BOX 1249
   801 N. BROADWAY AVE.
   BARTOW, FLORIDA 33831
   ATTENTION: TRAFFIC OPERATIONS - OPERATIONS SECTION

   THE RECORD DRAWINGS MUST BE RECEIVED 48 HOURS PRIOR TO SCHEDULING THE FINAL INSPECTION.

4. ONE WEEK PRIOR TO THE BEGINNING OF THE TRAFFIC SIGNAL INSTALLATION, LOOP CUTTING, OR TURN ON OF A NEW SIGNAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN CONJUNCTION WITH:

   MANATEE COUNTY
   PUBLIC WORKS DEPARTMENT
   PROJECT MANAGEMENT DIVISION
   EYRA CASH, PHONE: 941-708-7450
   1022 26TH AVENUE EAST
   BRADENTON, FLORIDA 34208
   PHONE: 941-708-7510

   MANATEE COUNTY
   PUBLIC WORKS DEPARTMENT
   TRAFFIC ENGINEERING DIVISION
   2101 47TH TERRACE EAST
   BRADENTON, FLORIDA 34203
   PHONE: 941-749-3502

5. MAINTAINING AGENCY:

   MANATEE COUNTY
   TRAFFIC OPERATIONS DIVISION
   2904 12TH STREET COURT EAST
   BRADENTON, FLORIDA 34208

6. TRAFFIC SIGNAL ACCEPTANCE INSPECTIONS SHALL BE COORDINATED WITH THE ENGINEER, IN CONJUNCTION WITH THE F.D.O.T. TRAFFIC SIGNAL INSPECTOR/LIAISON A MINIMUM OF TWO FULL BUSINESS DAYS NOTICE.

   RESULTS OF FIELD TESTS SHALL BE MADE AVAILABLE TO THE COUNTY TRAFFIC ENGINEER AND PROJECT INSPECTOR IN WRITTEN FORM. A QUALIFIED CONTRACTOR'S REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:

   A) COMPLETE FAMILIARITY WITH ALL SYSTEMS ELEMENTS INCLUDING CONTROLLERS, COORDINATING UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

7. WHEN CONSTRUCTION DEVIATES FROM APPROVED PERMIT PLANS INCLUDING POSSIBLE EASEMENT, CONTRACTOR TO FURNISH THE ENGINEER, IN CONJUNCTION WITH THE DEPARTMENT OF TRANSPORTATION ONE SET OF "AS BUILT" PLANS FOR FDOT RECORDS:

   DEPARTMENT OF TRANSPORTATION
   P.O. BOX 1249
   (STREET ADDRESS: 801 N. BROADWAY AVE)
   BARTOW, FLORIDA 33831
   ATTENTION: TRAFFIC OPERATIONS - SIGNAL DESIGN

   MANATEE COUNTY
   TRAFFIC DIVISION MANAGER
   P.O. BOX 1000
   BRADENTON, FL 34206-1000

8. THE CONTRACTOR IS TO COORDINATE WITH THE POWER COMPANY PERFORMING ALL NECESSARY WORK UNDER THEIR POWER LINES, SUCH AS THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS AND SIGNAL POLES. CONTRACTOR SHALL NOTIFY THE POWER COMPANY AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO INSTALLATION OF THIS EQUIPMENT.

9. THE CONTRACTOR IS RESPONSIBLE TO CONTACT MANATEE COUNTY AT 941-749-3502, FOR THE ASSIGNMENT OF THE PHYSICAL ADDRESS ONCE THE SERVICE DROP LOCATION HAS BEEN ESTABLISHED.

10. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT ALL SIGNAL EQUIPMENT IS INSTALLED AS SHOWN IN THE PLANS WITHIN EXISTING RIGHT-OF-WAY.

11. THE CONTRACTOR IN CONJUNCTION WITH THE ENGINEER TO COORDINATE UTILITY RELOCATION IF NECESSARY.

12. IN THE EVENT R/W OR IRRESOLVABLE UTILITY CONFLICTS PROHIBIT POLE PLACEMENT ACCORDING TO THE PLANS, THE CONTRACTOR SHALL CONTACT TRAFFIC OPERATIONS ENGINEER AND/OR ENGINEER OF RECORD (EOR) TO OBTAIN A DESIGN VARIATION.

13. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT SHALL BE DELIVERED TO MANATEE COUNTY SIGNAL SHOP IN EXISTING CONDITION, EXCEPT FOR POLES AND SPAN WIRES WHICH SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR. COST OF DELIVERY SHALL BE INCLUDED IN THE REMOVAL PAY ITEM FOR THE EQUIPMENT TYPE TO BE REMOVED.

    FOR REMOVED SIGNAL EQUIPMENT CLAIMED BY MAINTAINING AGENCY CONTACT:
    MANATEE COUNTY
    TRAFFIC OPERATIONS DIVISION
    2904 12TH STREET COURT EAST
    BRADENTON, FLORIDA 34208

14. WORK ZONE TRAFFIC CONTROL

    A. THE CRITERIA AS OUTLINED IN THE "MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNALS AND DEVICES", SHALL BE ADHERED TO FOR SIGNAL WORK. MAINTAIN TRAFFIC CONTROL INDEXES IN THE F.D.O.T. ROADWAY TRAFFIC DESIGN STANDARDS BOOKLET DATED JANUARY 2012/2013. NO LANE CLOSURES WILL BE ALLOWED BETWEEN 6:00 A.M. AND 9:00 P.M.

    B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFE AND EFFICIENT OPERATION DURING SIGNAL INSTALLATION.

15. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES.

16. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

17. THE CONTRACTOR TO NOTIFY UTILITY OWNERS OF ANY EXCAVATION OR DEMOLITION ACTIVITY THROUGH SUNSHINE ONE CALL OF FLORIDA INC. (1-800-432-4770) AND SHALL ALSO NOTIFY THOSE UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION ON THE JOB SITE.

18. THE CONTRACTOR SHALL HAND DIG THE FIRST 48 INCHES (4 FEET) OF THE HOLE FOR THE POLE FOUNDATION OR CONDUIT RUN WHERE UTILITIES ARE IN CLOSE PROXIMITY.

19. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING AND BORING.

20. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, AND SIGNS/FOUNDATIONS, SHALL MEET THE FOLLOWING REQUIREMENTS:
    1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.

21. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IN CONJUNCTION WITH MANATEE COUNTY TRAFFIC ENGINEERING DIVISION ABOUT THE EXISTING MANATEE ATMS THAT INCLUDES THIS INTERSECTION PRIOR TO START OF CONSTRUCTION AND ORDERING OF MATERIAL.

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

23. DETECTION MUST BE MAINTAINED FOR VEHICLE AND PEDESTRIAN MOVEMENTS FOR THE LIFE OF THE PROJECT.

24. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR THE ACCEPTABLE VIDEO DETECTION SYSTEM TO INSTALL PRIOR TO SHOP DRAWING SUBMITTAL. INSTALL THE ITERIS VANTAGE R24 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA MOUNTED ON PELCO MAST ARM CAMERA BRACKET. INSTALL THE DETECTION SYSTEM IN STRICT ACCORDANCE WITH THE VIDEO DETECTION SYSTEM'S INSTALLATION MANUALS. THE CONTRACTOR SHALL ONLY USE MANUFACTURER APPROVED CABLING CONNECTORS AND COMPONENTS FOR THE VIDEO DETECTION SYSTEM. THE SIGNAL CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER'S TECHNICAL REPRESENTATIVES PRIOR TO INSTALLATION. THE CONTRACTOR SHALL REQUEST A SYSTEM CRITIQUE FROM THE VIDEO DETECTION EQUIPMENT SUPPLY MANUFACTURER WHEN INSTALLATION IS COMPLETE. THE RESULTS OF THE SYSTEM CRITIQUE SHALL BE PROVIDED IN WRITING TO MANATEE COUNTY TRAFFIC ENGINEERING DIVISION PRIOR TO SCHEDULING THE FINAL INSPECTION.

25. SUBMIT STRUCTURAL AND SHOP DRAWINGS OF ALL EQUIPMENT TO MANATEE COUNTY TRAFFIC ENGINEERING DIVISION (ATTN: MS. EYRA CASH, P.E. PROJECT MANAGER AND MR. VISHAL S. KAKKAD, P.E., PTOE) FOR REVIEW AND APPROVAL PRIOR TO ORDERING THE EQUIPMENT.

26. UPON PASSING THE FINAL INSPECTION, THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION, 2904 12TH STREET COURT EAST, BRADENTON, FLORIDA 34208 (ATTN: MR. AARON BURKETT) REQUESTING TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.

27. WHEN A CONTRACTOR IS WORKING ON A SIGNAL IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING SIGNAL EQUIPMENT, LOOPS, HOMERUNS OR TURNING ON OF NEW SIGNAL) WHERE A LANE IS CLOSED, THE 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 LOCAL LAW ENFORCEMENT OFFICE. THE COST OF THE OFFICER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

28. EXISTING PULL BOXES AND VALVE BOXES WITHIN THE PROPOSED SIDEWALK ARE TO REMAIN AND BE ADJUSTED TO BE FLUSH WITH THE SIDEWALK CONCRETE SURFACE. CONTRACTOR SHALL PERFORM DUE DILIGENCE WHEN REMOVING EXISTING SIDEWALK NEAR ANY UTILITY VALVES, METERS, OR PULL BOXES. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER PRIOR TO ANY REMOVAL OF CONCRETE NEAR UTILITY VALVES OR METERS.

CONDUIT LEGEND
LV = SIGNAL LOW VOLTAGE CONDUIT (INCLUDES VID CABLE)
HV = SIGNAL HIGH VOLTAGE CONDUIT
SP = SPARE CONDUIT

UPIK J. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

UPIK J. SUWARNO, PE
LIC. NO.: 62995
DATE: 2/27/13

DESIGNED	UYS
DRAWN	UYS
CHECKED	DJA
APPROVED	

SIGNALIZATION GENERAL NOTES

PROJECT NO:	00193-008-15
DATE:	02-27-2013
SHEET NO:	T-3

FILE: C:\JOB\0193\00193-008-15\ACAD\S2_GN193000811_ISIG.dwg LAST SAVED: Tue, 02/26/13-5:51p PLOTTED: Wed, 02/27/13-8:51a BY: Upik.Suwarno

PAY ITEM FOOTNOTES :

1. 102-104, 102-107-1:
THE CONTRACTOR SHALL MAINTAIN VEHICLE DETECTION ON ALL APPROACHES THROUGHOUT CONSTRUCTION. UPON PROJECT COMMENCEMENT THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO ALL SIGNAL RELATED MALFUNCTIONS AND POWER OUTAGES. THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE REPAIR EQUIPMENT INVENTORY TO CORRECT MALFUNCTIONS AND TIMING ISSUES FOR THE PROJECT DURATION. THE CONTRACTOR SHALL PROVIDE A QUALIFIED SIGNAL TECHNICIAN WHO CAN RESPOND WITHIN A MAXIMUM OF TWO HOURS, WITH AVAILABILITY 24 HOURS PER DAY, 7 DAYS PER WEEK. FAILURE TO MEET THE TIME REQUIREMENTS SHALL GIVE THE COUNTY, AT ITS DISCRETION, THE RIGHT TO REQUEST ASSISTANCE FROM THE MANATEE COUNTY SHERIFF'S DEPARTMENT TO CONTROL TRAFFIC UNTIL THE CONTRACTOR RESPONDS AND MAKES THE NEEDED REPAIRS. THE COST FOR THE MANATEE COUNTY SHERIFF'S DEPARTMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

2. 550-10-210:
THE CONTRACTOR SHALL MATCH THE NEW FENCE WITH THE EXISTING FENCE MATERIAL AND HEIGHT

3. 630-2-11:
USE 2" HDPE SDR 11 CONDUIT FOR FIBER OPTIC INTERCONNECT CABLE.
USE A MINIMUM 2" DIAMETER SCHEDULE 40 PVC CONDUIT FOR ALL SIGNAL, PEDESTRIAN, AND DETECTION FUNCTIONS. INSTALL CONDUIT UNDER PROPOSED ROADWAY AND/OR SIDEWALK PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE OR CONCRETE. MEASUREMENT IS FOR STRAIGHT LINE HORIZONTAL DISTANCE. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE RUNS OF CONDUIT WITHIN BORE. MULTIPLE RUNS ARE LABELED ON THE PLANS.

4. 630-2-12:
USE A MINIMUM OF 3" DIAMETER HDPE CONDUIT FOR FIBER OPTIC INTERCONNECT CABLE.
USE A MINIMUM 2" DIAMETER HDPE CONDUIT FOR ALL SIGNAL, PEDESTRIAN, AND DETECTION FUNCTIONS. USE HDPE SDR 11 CONDUIT. MEASUREMENT IS FOR STRAIGHT LINE HORIZONTAL DISTANCE. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE RUNS OF CONDUIT WITHIN TRENCH. MULTIPLE RUNS ARE LABELED ON THE PLANS.

5. 630-2-14: INCLUDES THE COST OF WEATHERHEAD.

6. 632-7-1:
THE CONTRACTOR SHALL VERIFY THE SIGNAL CABLE COLOR CODE WITH MANATEE COUNTY PRIOR TO ORDERING. ALL WIRING SHALL ADHERE TO MANATEE COUNTY SPECIFICATIONS. USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLE FOR SIGNAL HEADS AND PEDESTRIAN HEADS.

CONTACT MAINTAINING AGENCY FOR CABLING DESIGN AND CABLING CONSTRUCTION OPTIONS PRIOR TO DESIGNING AND CONSTRUCTING YOUR CABLING PLAN.

7. 635-2-12:
USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVER.

PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7 FEET FROM EDGE OF THE PAVEMENT. THE TOP OF THE LID SHALL HAVE THE FOLLOWING IDENTIFICATION PERMANENTLY CAST INTO THEIR TOP SURFACE IN STAMPED RAISED LETTERS, ACCORDING TO THE APPLICATION FOR WHICH IT IS TO BE USED: "MANATEE COUNTY TRAFFIC SIGNAL" FOR SIGNALIZED INTERSECTION APPLICATIONS; "MANATEE COUNTY FIBEROPTIC SYSTEM" FOR FIBER OPTIC CABLE ITS APPLICATIONS; "ELECTRICAL" FOR OTHER ELECTRICAL APPLICATIONS; "LIGHTING" FOR LIGHTING APPLICATIONS; "TRAFFIC MONITORING" FOR TRAFFIC MONITORING APPLICATIONS.

APPROPRIATELY SIZE EACH PULL BOX SO THE FIBER COMMUNICATION AND/OR INTERCONNECT CABLE DOES NOT EXCEED MANUFACTURER'S RECOMMENDED BENDING RADIUS. STANDARD PULL BOX DIMENSION SHALL BE 17"X30"X12". FIBER OPTIC PULL BOX DIMENSION SHALL BE 24"X36"X36".

8. 639-1-122:
THE BREAKERS SHALL BE CLEARLY LABELED. THE ELECTRICAL SERVICE DISCONNECT IS 100 AMP, COMPRISING OF A SIX (6) CIRCUIT DISCONNECT BOX WITH THREE CIRCUIT BREAKERS – ONE 40 AMP/120 VOLT FOR CONTROLLER CABINET, ONE 15 AMP/120 V FOR INTERNALLY ILLUMINATED STREET NAME SIGNS, AND ONE 15 AMP/120 VOLT FOR FOR FUTURE USE.

USE ALUMINUM RIGID ABOVE GROUND CONDUIT FOR ELECTRICAL POWER SERVICE.

THIS PAY ITEM INCLUDES PHOTO CELL FOR THE INTERNALLY ILLUMINATED SIGNS. INSTALL A PHOTOELECTRIC CELL FOR ILLUMINATED STREET NAME SIGNS ON THE TRAFFIC SIGNAL ELECTRIC SERVICE DISCONNECT. PROVIDE A SEPARATE CIRCUIT FROM THE MAIN DISCONNECT TO SUPPLY POWER TO THE LIGHTING AND LIGHTING CONTROL EQUIPMENT IN THE SIGNAL CABINET. LIGHTING LOAD SHALL BE WIRED SEPARATELY FROM ANY EMERGENCY POWER BACK-UP SYSTEMS.

9. 639-2-1:
PAYMENT SHALL BE BASED ON THE LINEAR FOOT OF A SINGLE CONDUCTOR. USE A BONDING WIRE FROM ELECTRICAL SERVICE POINT TO CONTROLLER.

10. 648-1-11:
USE LOCKING COLLARS WHEN MOUNTING PEDESTRIAN SIGNAL HEADS TO PEDESTRIAN PEDESTALS. USE LOCKING COLLARS WHEN MOUNTING ALUMINUM PEDESTRIAN POLES TO PEDESTRIAN PEDESTAL BASES. USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").

11. 649-31-201, 649-31-203 AND 649-31-205:
USE THREE 2" AND ONE 3/4" CONDUITS STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEAL.

12. 650-1-311 & 650-1-511:
USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET. DO NOT USE PLASTIC GARBAGE BAGS AS A COVERING FOR CONCEALING SIGNAL HEADS. INCLUDES THE COST OF TUNNEL VISORS AND BACK PLATES. USE LOUVERED ALUMINUM SIGNAL HEAD BACK PLATES WITH A 2 INCH (2") YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER.

13. 653-191, 653-192:
PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, FDOT APPROVED LED COUNTDOWN TYPE.

14. 660-2-102
PERMANENTLY MARK EACH LOOP PER PHASE AND PER VEHICLE MOVEMENT AT EACH SPLICE POINT AND AT THE CABINET TERMINATION POINT. FOR INCREASED SENSITIVITY, INDUCTANCE LOOPS TO HAVE A MINIMUM OF THREE TURNS OF WIRE.

15. 660-4-11:
SHALL INCLUDE ALL CABINET EQUIPMENT INCLUDING, BUT NOT LIMITED TO VIDEO PROCESSORS, SUPPLEMENTAL INTERFACE HARDWARE, CABLING AND OTHER COMPONENTS TO THE VIDEO PROCESSORS FOR A COMPLETE ASSEMBLY FOR THE VIDEO DETECTION SYSTEM FOR THE INTERSECTION.

16. 660-4-12:
INSTALL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

USE A 72" LONG GUSSET TUBE FOR VIDEO DETECTION CAMERA ATTACHMENT BRACKET. VIDEO DETECTION TO BE COMPATIBLE WITH MAINTAINING AGENCY'S EXISTING VIDEO DETECTION SYSTEM. THE CAMERA SHALL BE ITERIS VANTAGE RZ4 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA OR EQUIPMENT.

IN ADDITION TO THE CAMERAS AND OTHER RELATED EQUIPMENT, THE VIDEO DETECTION SYSTEM MUST INCLUDE THE FOLLOWING: ITERIS VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, ITERIS VANTAGE EDGE 2 TS2 I/O MODULE. THIS PAY ITEM SHALL INCLUDE THE LABOR AND MATERIALS TO INSTALL THE CAMERAS ON THE MAST ARMS, MOUNTING HARDWARE AND CABLING IS CONSIDERED INCIDENTAL TO CAMERAS.

SEE PLAN SHEET T-6 FOR NUMBER OF VIDEO CAMERAS INCLUDED IN THE VIDEO DETECTION ASSEMBLY.

17. 665-13:
USE PEDESTRIAN BUTTON SIGN FTP-68B-06. STREET NAME SHALL BE IN ACCORDANCE WITH THE STREET NAMES SHOWN ON THE SIGNALIZATION PLAN SHEETS.

18. 670-5-110:
TOP OF CONTROLLER CABINET BASE TO BE SAME ELEVATION AS CROWN OF ROADWAY OR GREATER.

USE NEMA TS2 TYPE I CONTROLLER IN A TYPE 5 ENCLOSURE – COMPATIBLE WITH THE EXISTING SIGNAL SYSTEM. CONTROLLER SHALL BE EQUIPPED WITH ALL COMPONENTS NECESSARY TO RECONNECT ALL SYSTEM COMPONENTS. ALL CONTROLLER EQUIPMENT TO BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING SYSTEM (NAZTEC'S ATMS.NOW). THE CONTROLLER SUPPLIED WITH THE CABINET SHALL BE A NAZTEC 980 TS2 TYPE I. THE NAZTEC 980 CONTROLLER SHALL COME EQUIPPED WITH 4 SERIAL PORTS AND ONE ETHERNET PORT. THE CONTROLLER SHALL COME EQUIPPED WITH AN ETHERNET SWITCH AND ALL THE NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO AN ETHERNET-BASED FIBER OPTIC NETWORK. CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.

THIS ITEM SHALL INCLUDE THE INSTALLATION OF CONCRETE BASES FOR THE CONTROLLER ASSEMBLY AND FOR MOUNTING OF AN EMERGENCY GENERATOR CABINET. THE CONTROLLER ASSEMBLY FOUNDATION SHALL HAVE A MINIMUM OF (4) – 2" CONDUIT SPARES. TWO OF THE SPARES SHALL BE TERMINATED IN THE NEAREST FIBER OPTIC PULL BOX AND FITTED WITH A WEATHERPROOF CAP. THE OTHER TWO SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES.

THE EMERGENCY GENERATOR CABINET (EGC) FOUNDATION SHALL HAVE DIMENSIONS OF 48" X 36" FOR CABINET MOUNTING WITH A FDOT STANDARD TECHNICIAN PAD OR STEPS. IT SHALL BE LOCATED ADJACENT TO THE CONTROLLER BASE WITH (2) – 2" CONDUITS AND (1) – 1/4" CONDUITS INSTALLED DIRECTLY TO THE CONTROLLER BASE. MANATEE COUNTY WILL FURNISH THE GENERATOR CABINET TO THE CONTRACTOR.

THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY TO PICK UP AND INSTALL THE GENERATOR CABINET ON THE NEW FOUNDATION.

ALL COSTS OF LABOR, CONCRETE AND OTHER MATERIALS FOR THE CONTROLLER ASSEMBLY AND EGC BASES, TECHNICIAN PADS, STEPS AS REQUIRED, AND INSTALLATION OF THE GENERATOR CABINET ARE INCLUDED IN THIS ITEM. THE CONTROLLER AND EGC BASE SHALL AT LEAST 2' HIGH OR THE SAME ELEVATION AS THE CROWN OF THE ROADWAY, WHICHEVER IS GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24". THE CABINET DOORS SHALL OPEN TOWARDS OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.

19. 685-106:
INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) WITH AN 8 HOUR RUN TIME AT 450 WATTS. THE UPS SHALL HAVE A NOMINAL OPERATING RANGE OF 850W TO 110W WITH A STANDARD RS232 ETHERNET PORT. THE UPS SHALL BE EQUIPPED WITH ETHERNET CONNECTION AND SNMP (PROTOCOL). THE UPS SHALL BE SIZED TO ACCOMMODATE THE MAXIMUM CONNECTED LOAD. ATTACH UPS UNIT TO THE OUTSIDE OF THE CONTROLLER CABINET. INSTALL UPS UNIT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

20. 699-1-1:
USE LED INTERNALLY ILLUMINATED STREET NAME SIGNS. ALL INTERNALLY ILLUMINATED STREET NAME SIGNS TO BE MOUNTED RIGIDLY ON MAST ARM UNLESS OTHERWISE SPECIFIED ON PLANS. (USE ONE SIGN PER APPROACH).

CONDUIT LEGEND
LV = SIGNAL LOW VOLTAGE CONDUIT (INCLUDES VID CABLE)
HV = SIGNAL HIGH VOLTAGE CONDUIT
SP = SPARE CONDUIT

UPIK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER 09-13-13

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

DESIGNED	UYS
DRAWN	UYS
CHECKED	DJA
APPROVED	

SIGNALIZATION PAY ITEM NOTES

PROJECT NO: 00193-008-15
DATE: 09-13-2013
SHEET NO: T-4

FILE: D:\JOB\0193\00193-008-15\ACADS2_GN\183000811_ISIG.dwg LAST SAVED: Thu, 09/12/13-5:45p PLOTTED: Fri, 09/13/13-12:51p BY: Upik.Suwarno

TRAFFIC CONTROL GENERAL NOTES:

1. CONFLICTING EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY WATERBLASTING. ALL EXISTING PAVEMENT MARKINGS WHICH ARE ALTERED SHALL BE REPLACED UPON COMPLETION OF THE PROJECT. THE REPLACEMENT OF MARKINGS SHALL BE PAID UNDER THE APPROPRIATE BID ITEM.

2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE OF ANY REQUESTED LANE CLOSURE. UPON APPROVAL OF THE LANE CLOSURE, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE LOCAL LAW ENFORCEMENT, EMERGENCY MEDICAL SERVICE, AND FIRE DEPARTMENT OF THE LANE CLOSURE.

3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT A SAFE AND UNOBSTRUCTED ROUTE EXISTS FOR PEDESTRIANS. REFER TO STANDARD INDEX 660.

4. IF APPLICABLE, TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED WITH TEMPORARY LANE LINES IN ACCORDANCE WITH INDEX NO. 600. THE COST OF INSTALLATION AND REMOVAL OF TEMPORARY RAISED REFLECTIVE MARKERS SHALL BE INCLUDED IN PAY ITEM NO. 711-11. (THE CONTRACTOR SHALL NOT USE LOW PROFILE RAISED PAVEMENT MARKER.

5. DURING PAVEMENT MARKING OPERATIONS FOR THE PROJECT, THE CONTRACTOR SHALL UTILIZE STANDARD INDEX NO. 619, AS APPLICABLE.

6. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHOLES THAT DEVELOP WITHIN THE PROJECT LIMITS.

7. THE CONTRACTOR SHALL NOT EXCAVATE ANY AREAS THAT CANNOT BE SAFELY REOPENED TO TRAFFIC WITHIN THE SAME WORK PERIOD.

8. ALL TRAFFIC CONTROL DEVICES WILL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION AND PROPERLY MAINTAINED AND OPERATED THROUGHOUT THE PERIOD OF EACH PHASE / STAGE CONSTRUCTION. ALL TEMPORARY SIGNS, PAVEMENT MARKINGS, WARNING DEVICES, WARNING LIGHTS, ETC. NECESSARY FOR THE MAINTENANCE OF TRAFFIC SHALL CONFORM TO INDEX 600 AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).

9. THE REGULATORY SPEED LIMIT FOR CORTEZ ROAD SHALL BE THE EXISTING POSTED SPEED LIMIT OF 45 MPH.

10. ALL LANE CLOSURES SHALL CONFORM TO THE REQUIREMENTS OF THE PLANS AND STANDARD INDICES 600, 611, 612, 613, 615, 616, AND 618, AS APPLICABLE.

11. PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC, LUMP SUM INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING ITEMS: MAINTAINING/RELOCATION OF EXISTING SIGNS, PROJECT INFORMATION SIGNS, SHOULDER TREATMENT, AND TEMPORARY ASPHALT WEDGES AT MANHOLES TOPS AS NECESSARY FOR THE MAINTENANCE OF TRAFFIC.

12. CHANGEABLE (VARIABLE) MESSAGE SIGNS SHALL BE UTILIZED FOR NIGHTTIME WORK THAT TAKES PLACE WITHIN 4' OF THE TRAVELED WAY.

13. THE CONTRACTOR SHALL MAINTAIN VEHICLE ACTUATION FOR ALL MOVEMENTS AT ALL SIGNALIZED INTERSECTIONS UNTIL THE FINAL ACCEPTANCE OF CONSTRUCTION.

14. THE CONTRACTOR SHALL UTILIZE INDEX 613, 614, 615 AND 616 FOR LANE CLOSURES IN ORDER TO COMPLETE THE CONSTRUCTION OF ANY SIDE STREET OR DRAINAGE CROSSING UNDER TRAFFIC.

15. THE CONTRACTOR SHALL PROVIDE A DEDICATED CREW FOR THE INSTALLATION, MAINTENANCE, AND REMOVAL OF TRAFFIC CONTROL DEVICES (I.E., WARNING DEVICES, SIGNS, ARROW PANELS, ETC.). THIS CREW SHALL CONSIST OF THE CONTRACTOR'S WORK FORCE WHOSE SOLE RESPONSIBILITY WILL BE THE MAINTENANCE OF TRAFFIC CONTROL. THE CONTRACTOR SHALL FURNISH A WORK VEHICLE TO AID IN MAINTAINING THE CONTROL DEVICES.

16. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE FOR ALL PHASES OF CONSTRUCTION.

17. NO LANE CLOSURES WILL BE ALLOWED BETWEEN 6:00 A.M. AND 9:00 P.M.

18. LANE CLOSURES OR DETOURS WILL NOT BE PERFORMED DURING HOLIDAY PERIOD INCLUDING THE WEDNESDAY PRIOR TO THANKSGIVING DAY. IN ADDITION TO THESE AND PREVIOUSLY SPECIFIED LIMITATIONS ON LANE CLOSURES AND DETOUR THE FDOT AND/OR MANATEE COUNTY MAY DIRECT DAYS WHEN NO LANE CLOSURES OR DETOURS WILL BE PERMITTED. THE CONTRACTOR WILL BE PROVIDED NO LESS THAN 14 DAYS NOTICE OF THESE EVENTS AND THEY SHALL BE AT NO ADDITION COSTS OR TIME TO THE DEPARTMENT.

19. THE CONTRACTOR SHALL, AT THE DISCRETION OF THE ENGINEER, OPEN ANY TEMPORARY LANE CLOSURE CAUSING EXTENDED TRAFFIC CONGESTION (5 MINUTE DELAY) UNTIL TRAFFIC HAS RETURNED TO AN ACCEPTABLE FLOW AS DETERMINED BY THE ENGINEER.

20. THE CONTRACTOR SHALL NOT CLOSE ANY TWO CONSECUTIVE SIDE STREETS OR MEDIAN OPENINGS IN ANY GIVEN PHASE.

21. THE CONTRACTOR IS TO MAINTAIN AND KEEP STREET NAME SIGNS VISIBLE DURING CONSTRUCTION OPERATIONS, IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.

22. IF NECESSARY, NON-INTRUSIVE DETECTORS SUCH AS RADAR OR VIDEO USED FOR VEHICULAR ACTUATION SHALL BE FIXED MOUNTED ON A RIGID SUPPORT STRUCTURE SUCH AS A STEEL, CONCRETE OR WOODEN POLE THAT IS FOUNDED DIRECTLY IN THE NATURAL GROUND. THESE DEVICES MUST NOT BE MOUNTED ON SPAN WIRE (CATENARY OR MESSENGER CABLES) OR ANY OTHER PHYSICAL ATTACHMENTS THERETO. THE PLACEMENT LOCATION OF SUCH POLE(S) SHALL BE IN ACCORDANCE WITH THE FDOT DESIGN STANDARDS, INDEX NO. 700. THE COST OF SUCH MOUNTING IS TO BE INCLUDED IN THE COST OF MOT, PAY ITEM NO. 102-107-1.

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

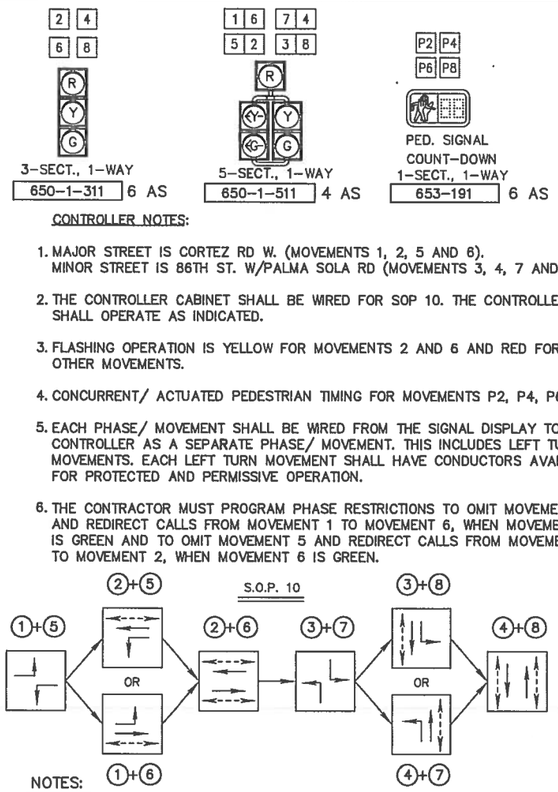
UPIKY SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER
2/27/13
UPIKY SUWARNO, PE
LIC. NO. 62995

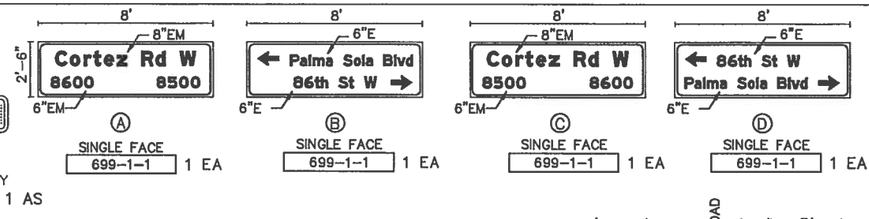
DESIGNED	LJM
DRAWN	JWS
CHECKED	DJA
APPROVED	

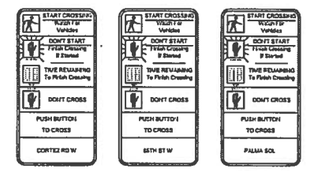
TEMPORARY TRAFFIC CONTROL PLANS

PROJECT NO:	00193-008-15
DATE:	02-27-2013
SHEET NO:	T-5

FILE: O:\JOB\0193\00193-008-15\ACAD\S5_TCGN.dwg LAST SAVED: Fri, 01/25/13-2:18p PLOTTED: Wed, 02/27/13-8:53a BY: Upik.Suwarno







FTP-68B-06
9" X 18"

REMOVAL ITEMS:

690-10	8 EA
690-20	8 EA
690-34-2	(SEE PLAN SHEET FOR
690-50	1 EA LOCATIONS)
690-60	10 EA
690-70	8 EA
690-80	4 EA
690-90	1 PI
690-91	25 LF
690-100	1 PI
700-48-60	3 AS

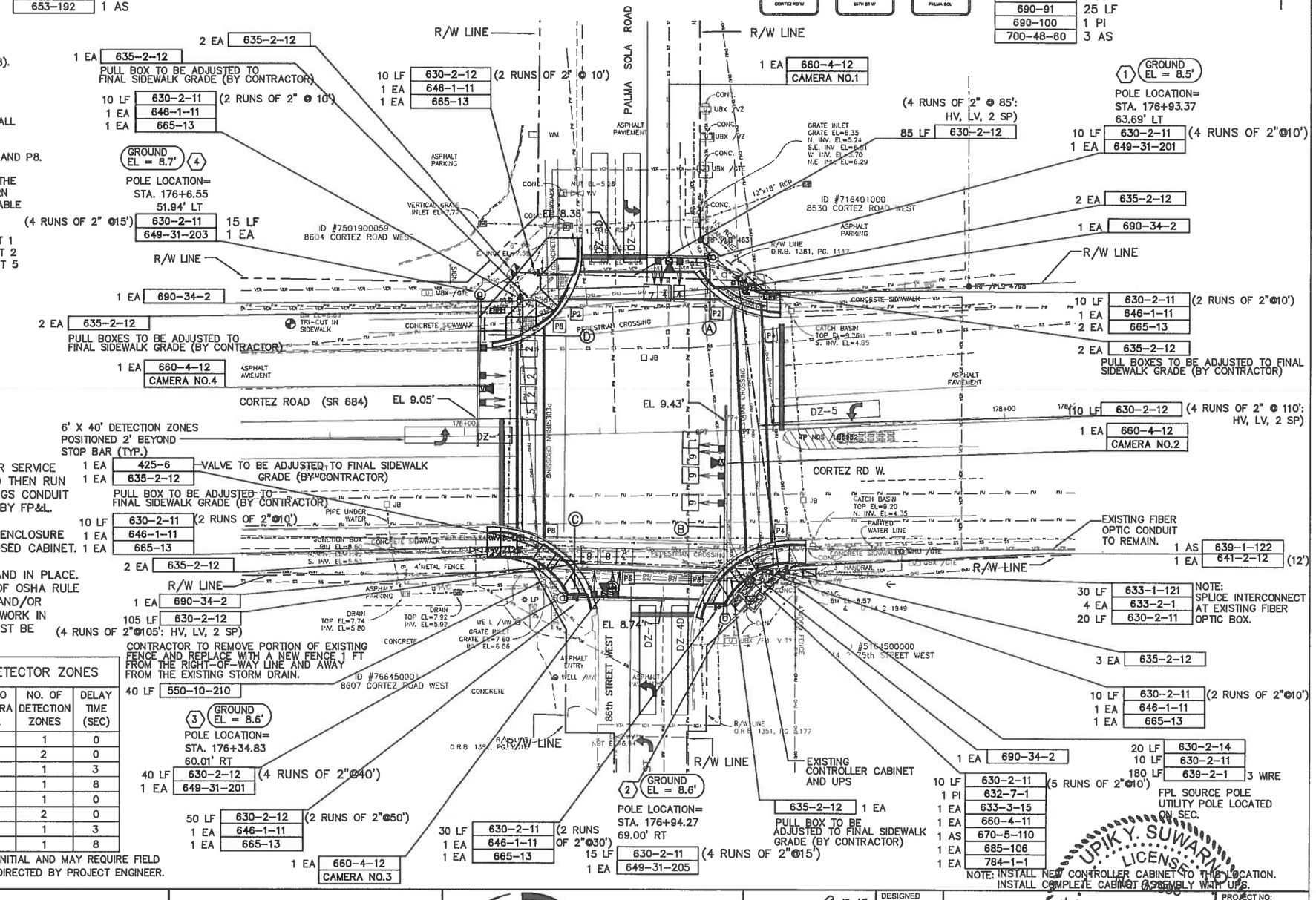
20'

CONTROLLER NOTES:

1. MAJOR STREET IS CORTEZ RD W. (MOVEMENTS 1, 2, 5 AND 6). MINOR STREET IS 86TH ST. W/PALMA SOLA RD (MOVEMENTS 3, 4, 7 AND 8).
2. THE CONTROLLER CABINET SHALL BE WIRED FOR SOP 10. THE CONTROLLER SHALL OPERATE AS INDICATED.
3. FLASHING OPERATION IS YELLOW FOR MOVEMENTS 2 AND 6 AND RED FOR ALL OTHER MOVEMENTS.
4. CONCURRENT/ ACTUATED PEDESTRIAN TIMING FOR MOVEMENTS P2, P4, P6 AND P8.
5. 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.
6. THE CONTRACTOR MUST PROGRAM PHASE RESTRICTIONS TO OMIT MOVEMENT 1 AND REDIRECT CALLS FROM MOVEMENT 1 TO MOVEMENT 6, WHEN MOVEMENT 2 IS GREEN AND TO OMIT MOVEMENT 5 AND REDIRECT CALLS FROM MOVEMENT 5 TO MOVEMENT 2, WHEN MOVEMENT 6 IS GREEN.

NOTES:

1. CONTRACTOR SHALL RUN CONDUCTORS FROM THE PROPOSED POWER SERVICE PEDESTAL UNDERGROUND TO THE FPL SOURCE POLE ON THE SEC AND THEN RUN THE CONDUCTORS UP THE FP&L SOURCE POLE WITH A 20 FT RISER RGS CONDUIT WITH WEATHERHEAD AND COIL 20 FT AT THE TOP TO BE CONNECTED BY FP&L.
2. CONTRACTOR SHALL USE THE EXISTING FIBER OPTIC SPLICE VAULT ENCLOSURE TO REROUTE AND CONNECT THE 12-COUNT DROP LINE TO THE PROPOSED CABINET.
3. ALL FPL OVERHEAD ELECTRICAL FACILITIES TO REMAIN ENERGIZED AND IN PLACE. TABLE A MINIMUM CLEARANCE DISTANCES SPEDIFIED IN SUBPART CC OF OSHA RULE 29 PART 1926 (AS THEY PERTAIN TO CRANE/DERRICK OPERATIONS), AND/OR THOSE MINIMUM DISTANCES SPECIFIED IN 29 CFR 1910.333(C)(3) FOR WORK IN PROXIMINTY TO POWER LINES NOT COVERED BY THIS SUBPART CC, MUST BE MAINTAINED.



CONTROLLER TIMINGS

TIMING FUNCTION	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	7	20	7	7	7	20	7	7
	EXTENSION	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MAXIMUM GREEN 1	12	50	12	18	12	50	12	18
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	4.5	4.5	3.0	3.5	4.5	4.5	3.5	3.5
	ALL RED	2.0	1.5	3.0	3.0	2.0	1.5	3.0	3.0
	PEDESTRIAN WALK		7		7		7		7
	PED. CLEARANCE		14		25		14		25
	RECALL		MIN				MIN		

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

VIDEO DETECTOR ZONES

ZONE LOCATION NO.	VIDEO CAMERA NO.	NO. OF DETECTION ZONES	DELAY TIME (SEC)
DZ-1	2	1	0
DZ-2	4	2	0
DZ-3	3	1	3
DZ-4D	1	1	8
DZ-5	4	1	0
DZ-6	2	2	0
DZ-7	1	1	3
DZ-8D	3	1	8

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

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS FP ID: 429867-1-58-01

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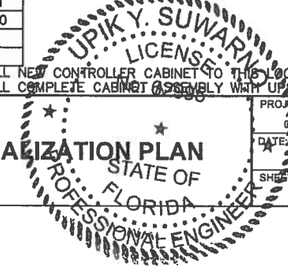
Certificate of Authorization No. 3843

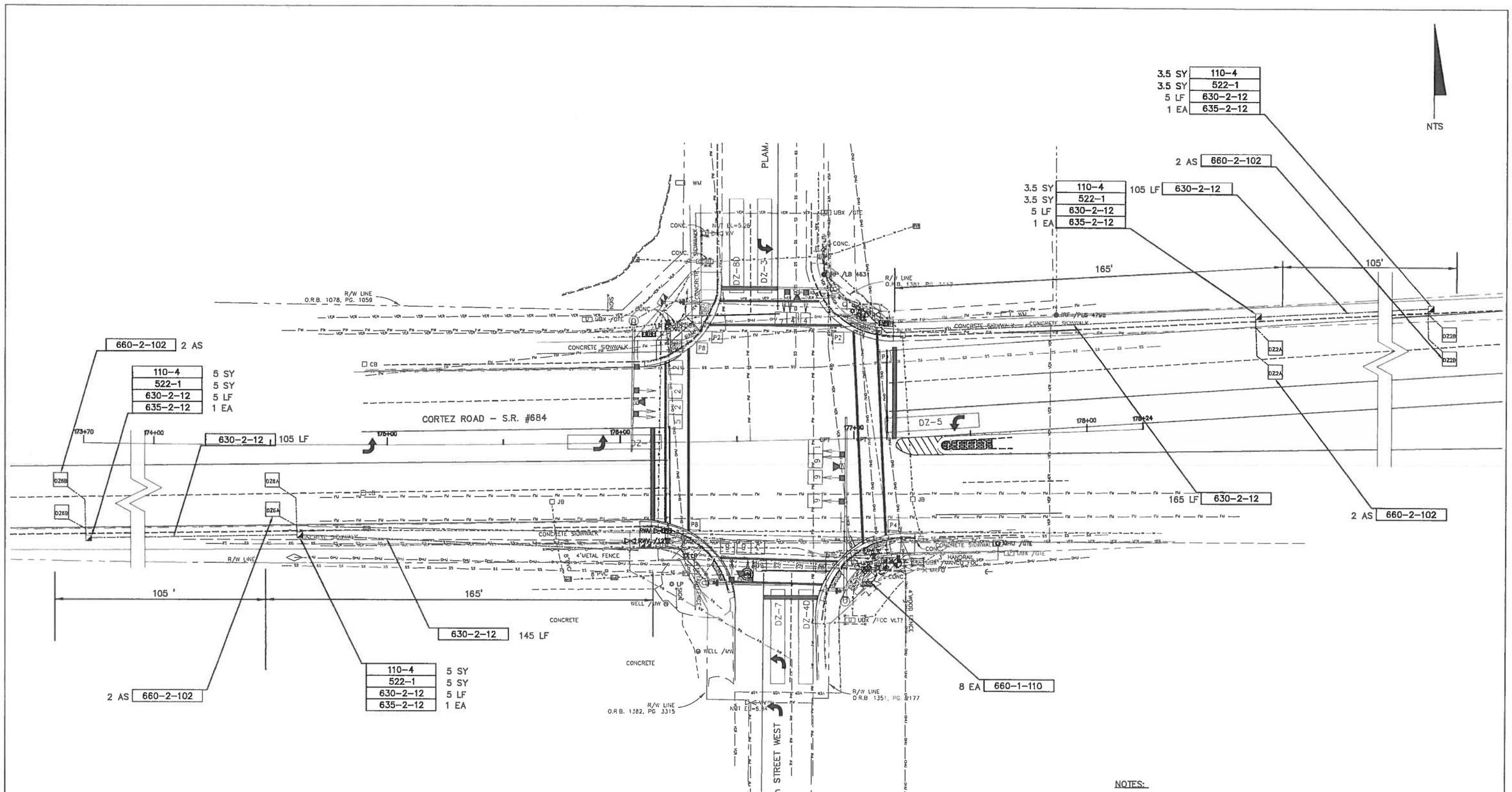
9-13-13
UPIKY SUWARNO, PE
LIC. NO.: 62995 DATE

DESIGNED UYS
DRAWN UYS
D.C. DJA
APPROVED

SIGNALIZATION PLAN

PROJECT NO: 60193-008-15
DATE: 09-13-2013
SHEET NO: T-6





NOTES:

1. DZ2A LOOPS SHALL BE 165 FT UPSTREAM FROM THE PROPOSED CORTEZ ROAD WESTBOUND STOP BAR. DZ2B LOOPS SHALL BE 270 FT UPSTREAM FROM THE PROPOSED CORTEZ ROAD WESTBOUND STOP BAR.
2. DZ6A LOOPS SHALL BE 165 FT UPSTREAM FROM THE PROPOSED CORTEZ ROAD EASTBOUND STOP BAR. DZ6B LOOPS SHALL BE 270 FT UPSTREAM FROM THE PROPOSED CORTEZ ROAD EASTBOUND STOP BAR.

UPIK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE

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UPIK Y. SUWARNO, PE — LIC. NO. 62995 — DATE 9-13-13

DESIGNED	UYS
DRAWN	UYS
Q.C.	DJA
APPROVED	

DILEMMA ZONE LOOP SYSTEM PLAN

PROJECT NO:	00193-008-15
DATE:	09-13-2013
SHEET NO:	T-7

SPECIAL NOTES:

A. EACH POLE AND MAST ARM SHALL BE IDENTIFIED WITH A PERMANENT ONE INCH (1") HIGH ENGRAVED OR IMPRESSED MARK WHICH BEARS THE POLE IDENTIFICATION NUMBER SHOWN ON THE PLANS.

B. ANCHOR BOLT COVERS (ORNAMENTAL, NON-ORNAMENTAL, AND/OR PAINTED) SHALL BE GALVANIZED STEEL OR CAST ALUMINUM AND SHALL BE SECURED BY A MINIMUM OF TWO (2) THREADED FASTENERS. THE BOLT COVERS SHALL BE OF SUFFICIENT SIZE SO THAT THERE IS NO GAP BETWEEN ITSELF AND THE POLE SHAFT.

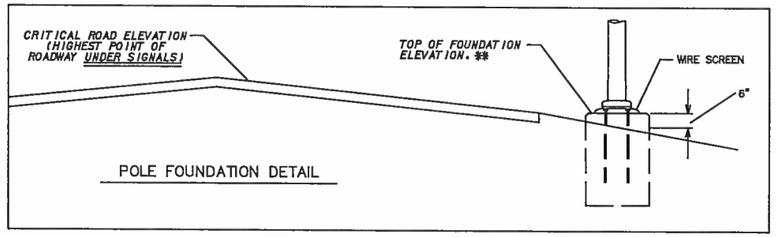
C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.

D. INFORMATION BELOW IS FOR DESIGN PURPOSES ONLY. FIELD ADJUSTMENTS MAY BE REQUIRED.

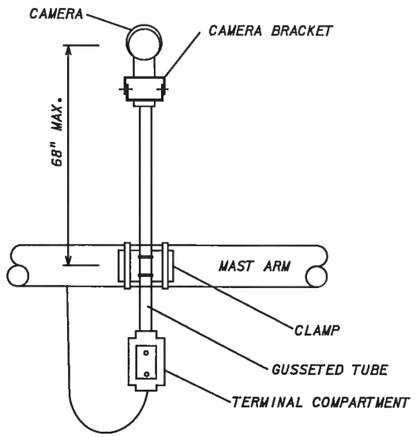
E. SEE APPROPRIATE PLAN SHEET FOR PROPOSED SIGNAL HEAD ALIGNMENTS AND SIGN CONFIGURATION/LOCATION.

F. BACKPLATES REQUIRED FOR ALL SIGNALS HEADS.

G. CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR THE ACCEPTABLE AND COMPATIBLE VIDEO DETECTION BRACKET TO USE.

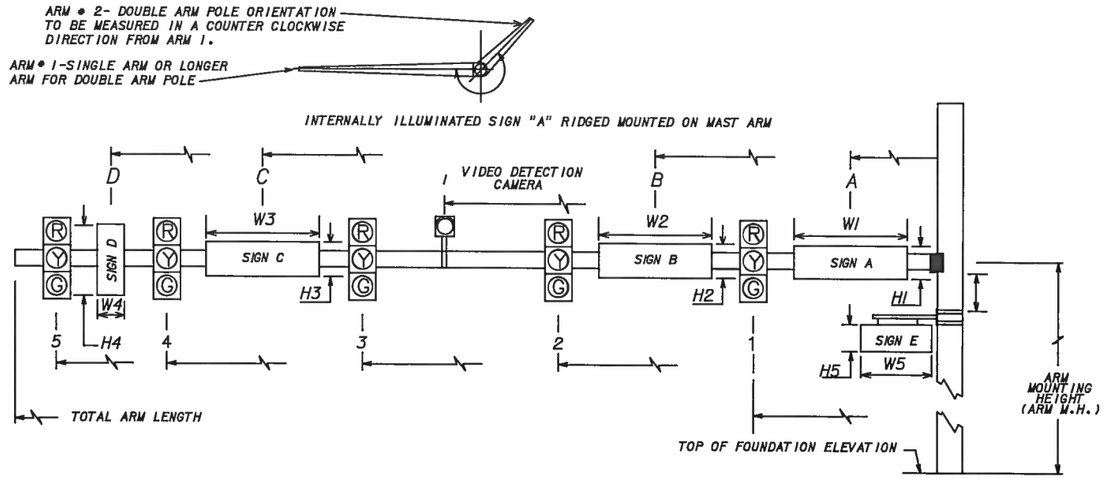


POLE FOUNDATION DETAIL



CAMERA MOUNTING DETAIL
(CONTACT MAINTAINING AGENCY FOR MOUNTING PREFERENCES.)

SPECIAL INSTRUCTIONS					
ID NO.	PED. BUTTON		PED. SIGNALS		HANDHOLE LOCATION



* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

STRUCT. ID. NO.	POLE ID. NO.	SHEET NO.	LOCATION BY STA.	CRITICAL ROAD EL.	# FOUNDATION OUT OF GROUND	** TOP OF FOUNDATION ELEVATION	RDWY ARM NO.	SIGNAL DATA: SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE: 1	*	2	*	3	*	4	*	5	*	6	*	7	*	8	*	TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	SIGN DATA: DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN: A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	VIDEO DISTANCE FROM POLE: 1	2	LUM Y/N	LUM ROTATION (DEG)	LUM WATTS
-	1	T-6	176+93.37, 63.69' LT	8.36'	0.5	9.0'	A	V	Y	N	10.5	3	18.5	5													36	20.0		4.5	2.5	8.0													14.5		N		
							B	V	Y	N																																							
-	2	T-6	176+94.27, 69.00' RT	9.43'	0.5	9.1'	A	V	Y	N	40.5	3	50.5	3	60.5	5											76	20.5		32.0	2.5	8.0													55.5		N		
							B	V	Y	N																																						
-	3	T-6	176+34.83, 60.01' RT	8.74'	0.0	8.6'	A	V	Y	N	10.5	3	18.5	5													36	20.5		4.0	2.5	8.0													14.0		N		
							B	V	Y	N																																						
-	4	T-6	176+6.55, 51.94' LT	9.05'	0.5	9.2'	A	V	Y	N	18.0	3	28.0	3	38.0	5											54	20.5		11.0	2.5	8.0													33.0		N		
							B	-	-	-																																						
-							A	V	Y	N																																							
							B	V	Y	N																																								
-							A	V	Y	N																																							
							B	-	-	-																																							
-					-	-	A	V	Y	N																																							
							B	V	Y	N																																								
					-	-	A	V	Y	N																																							
							B	V	Y	N																																								

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

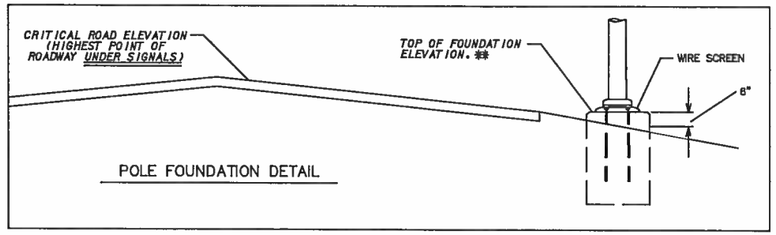
UPIK Y. SUWARNO
LIC. NO.: 62995
DATE

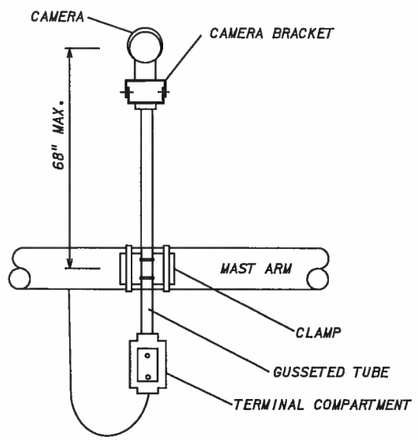
DESIGNED: DJA
DRAWN: JWS
CHECKED: DJA
APPROVED

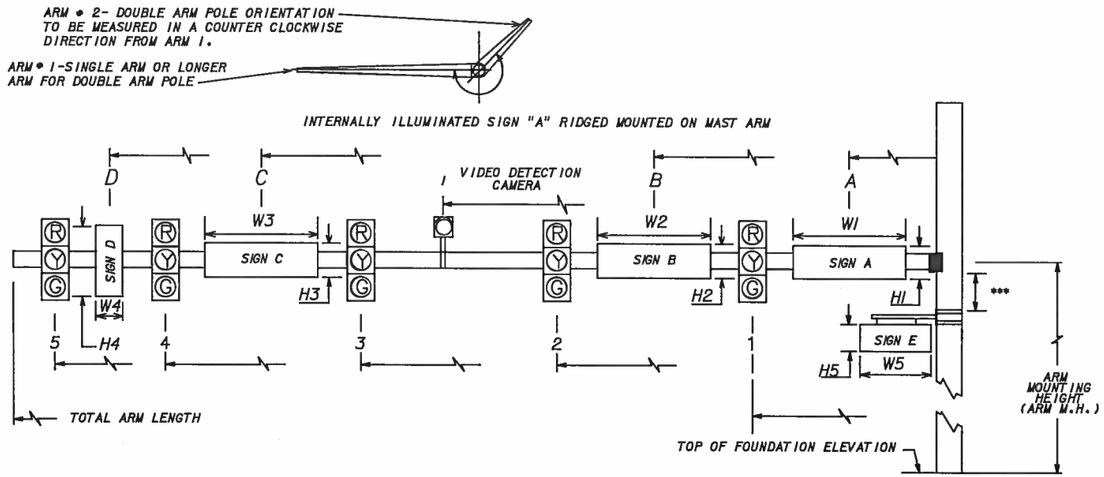
MAST ARM TABULATION

PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-8

FILE: O:\JOB\0193\00193-008-15\ACAD\S6_MastTab.dwg LAST SAVED: Fri, 01/25/13-2:08p PLOTTED: Wed, 02/27/13-9:56a BY: Upik.Suwarno







SPECIAL NOTES:

A. EACH POLE AND MAST ARM SHALL BE IDENTIFIED WITH A PERMANENT ONE INCH (1") HIGH ENGRAVED OR IMPRESSED MARK WHICH BEARS THE POLE IDENTIFICATION NUMBER SHOWN ON THE PLANS.

B. ANCHOR BOLT COVERS (ORNAMENTAL, NON-ORNAMENTAL, AND/OR PAINTED) SHALL BE GALVANIZED STEEL OR CAST ALUMINUM AND SHALL BE SECURED BY A MINIMUM OF TWO (2) THREADED FASTENERS. THE BOLT COVERS SHALL BE OF SUFFICIENT SIZE SO THAT THERE IS NO GAP BETWEEN ITSELF AND THE POLE SHAFT.

C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL ELEVATIONS LISTED HEREIN.

D. INFORMATION BELOW IS FOR DESIGN PURPOSES ONLY. FIELD ADJUSTMENTS MAY BE REQUIRED.

E. SEE APPROPRIATE PLAN SHEET FOR PROPOSED SIGNAL HEAD ALIGNMENTS AND SIGN CONFIGURATION/LOCATION.

F. BACKPLATES REQUIRED FOR ALL SIGNALS HEADS.

G. CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR THE ACCEPTABLE AND COMPATIBLE VIDEO DETECTION BRACKET TO USE.

POLE FOUNDATION DETAIL

CAMERA MOUNTING DETAIL
(CONTACT MAINTAINING AGENCY
FOR MOUNTING PREFERENCES.)

SPECIAL INSTRUCTIONS					
ID NO.	PED. BUTTON		PED. SIGNALS		HANDHOLE LOCATION
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	
___	___	___	___	___	

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

STRUCT. ID. NO.	POLE ID. NO.	SHEET NO.	LOCATION BY STA.	CRITICAL ROAD EL.	# FOUNDATION OUT OF GROUND	** TOP OF FOUNDATION ELEVATION	RDWY ARM NO.	SIGNAL DATA																			TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270	SIGN DATA															VIDEO DISTANCE FROM POLE		LUM	LUM ROTATION	LUM
								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	*	6	*	7	*	8	*				A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	1	2	Y/N	(DEG)	WATTS
	1	T-6	176+93.37, 63.69' LT	8.36'	0.5	9.0'	A	V	Y	N	10.5	3	18.5	3	26.5	4											36	20.0		4.5	2.5	8.0							31.0	3.0	3.0				17.0		N		
							B	V	Y	N																																							
	2	T-6	176+94.27, 69.00' RT	9.43'	0.5	9.1'	A	V	Y	N	40.5	3	52.5	3	66.5	4											76	20.5		32.0	2.5	8.0							71.5	3.0	3.0				60.5		N		
							B	V	Y	N																																							
	3	T-6	176+34.83, 60.01' RT	8.74'	0.0	8.6'	A	V	Y	N	10.5	3	18.5	3	26.5	4											36	20.5		4.5	2.5	8.0							31.0	3.0	3.0				22.0		N		
							B	V	Y	N																																							
	4	T-6	176+6.55, 51.94' LT	9.05'	0.5	9.2'	A	V	Y	N	18.0	3	32.0	3	44.0	4											54	20.5		11.0	2.5	8.0							49.0	3.0	3.0				38.0		N		
							B	V	Y	N																																							
-					-	-	A	V	Y	N																																							
							B	V	Y	N																																							
-					-	-	A	V	Y	N																																							
							B	V	Y	N																																							
-					-	-	A	V	Y	N																																							
							B	V	Y	N																																							
-					-	-	A	V	Y	N																																							
							B	V	Y	N																																							

*** THIS SHEET IS FOR DESIGN PURPOSES ONLY! THE CONTRACTOR SHALL NOT USE THIS SHEET IN PLACEMENT OF THE SIGNALS AND/OR SIGNS. SEE THE "MAST ARM TABULATION" SHEET FOR ACTUAL SIGNAL INSTALLATION.

UPIK Y. SUWARNO
LICENSE
No. 62995
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET
IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

2/27/13
UPIK Y. SUWARNO, PE
LIC. NO.: 62995 DATE

DESIGNED UYS
DRAWN UYS
Q.C.
APPROVED

MAST ARM TABULATION (CALCULATION CONFIGURATION)

PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-9

FILE: O:\JOB\0193\00193-008-15\ACAD\S6_MastTab.dwg LAST SAVED: Fri, 01/25/13-2:08p PLOTTED: Wed, 02/27/13-9:57a BY: Upik.Suwarno

STANDARD MAST ARM ASSEMBLIES DATA TABLE

Table Date 01-01-12

STRUCTURE ID NUMBERS	ASSEMBLY NUMBERS (1)	FIRST ARM			SECOND ARM			UF (deg)	LL (deg)	POLE				SPECIAL DRILLED SHAFT (4)					
		ARM TYPE	FAA (2) (ft.)	FBA (2) (in.)	ARM TYPE	FAA (2) (ft.)	FBA (2) (in.)			POLE TYPE	UAA (3) (ft.)	UB (ft.)	UCA (3) (in.)	DA (ft.)	DB (ft.)	RA	RB	RC	RD (in.)
1-1	E1-T1	E1	–	–	–	–	–	–	–	T1	21.5	20.0	10.99	13.0	4.0	11	12	7	12
1-2	E7-T6	E7	38	7.72	–	–	–	–	–	T6	22.0	20.5	18.92	19.0	4.5	11	15	20	8
1-3	E1-T1	E1	–	–	–	–	–	–	–	T1	22.0	20.5	10.92	13.0	4.0	11	12	7	12
1-4	E5-T3	E5	30	6.94	–	–	–	–	–	T3	22.0	20.5	15.92	15.0	4.5	11	15	12	9

TABLE NOTES:

1. Assembly Number Legend

   Single Arm:
   Arm Type – Pole Type = D# – S#
   = E# – T#

   Double Arm:
   First Arm Type – Second Arm Type – Pole Type = D# – D# – S#
   = E# – E# – T#

2. If an entry appears in columns "FAA" and "FBA", a shorter arm is required. This is obtained by removing length from the arm tip. For these cases the mast arm length shall be shortened from "FA" to "FAA" and the tip diameter shall be increased from "FB" to "FBA".

3. If an entry appears in columns "UAA" and "UCA", a shorter pole is required. This is obtained by removing length from the pole tip. For these cases the pole height shall be shortened from "UA" to "UAA" and the pole tip diameter shall be increased from "UC" to "UCA".

4. The foundations for Standard Mast Arm Assemblies have been designed based on geotechnical information provided by Dunkelberger Engineering and Testing, Inc. Values used in design:

   Soil Classification = Cohesionless (Fine Sand)
   Friction Angle = 28 Degrees (26 Degrees Minimum)
   Unit Weight = 37.6 lbs. / cu. ft. (assumed submerged)(Minimum)

GENERAL NOTES:

1. Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.

2. Work with Interim Standard Index No. 17743 and 17745.

3. Design Wind Speed = 130 mph.

MIGUEL A. VILLEGAS LICENSE No. 68768 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

MIGUEL A. VILLEGAS, PE
LIC. NO.: 68768 DATE 2/27/14

DESIGNED MAV
DRAWN JJH
Q.C.
APPROVED

TABLE OF VARIABLES FOR STANDARD MAST ARM ASSEMBLIES

PROJECT NO: 00193-008-015
DATE: 02-27-2013
SHEET NO: T-10

FILE: C:\JOB\0193\00193-008-15\ACAD\S8_TAB_VAR.dwg LAST SAVED: Fri 01/25/13-2:05p PLOTTED: Wed. 02/27/13-9:59a BY: Upik Suwarno

NOTES:

1. THE EXISTING CROSSWALK AND STOP BAR MARKINGS THAT SHALL BE REMOVED SHALL USE THE WATER BLASTING METHOD. THE COST FOR REMOVAL OF THE CROSSWALK STRIPING SHALL BE UNDER PAY ITEM 711-17.

2. THE CONTRACTOR SHALL REMOVE ALL THE EXISTING MARKINGS BEING REPLACED OR IN CONFLICT WITH PROPOSED MARKINGS AS SHOWN ON THIS SHEET.

3. THE NEW CROSSWALKS SHALL BE 10' IN WIDTH.

4. THE NEW STOP BARS SHALL BE AT LEAST 4' IN ADVANCE OF THE CROSSWALK.

5. THE CONTRACTOR SHALL USE THE EXISTING DIRECTIONAL ARROW LOCATION AS A TEMPLATE TO APPLY THE NEW DIRECTIONAL ARROW MARKING. THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS WHEN INSTALLING THE NEW THERMOPLASTIC OVER THE EXISTING ARROW.

(THIS SHEET)

711-11-123	520 LF
711-11-125	128 LF

24" WHITE

12" WHITE

R/W LINE

REMOVE EXISTING CROSSWALK.
711-17 210 SF

REMOVE EXISTING CROSSWALK.
711-17 270 SF

REMOVE EXISTING STOP BAR, LANE LINES AND RPMS THAT WILL BE IN CONFLICT WITH THE NEW CROSSWALK AND STOP BAR.
711-17 100 SF

711-11-170 1 EA
(SEE NOTE 5)

REMOVE EXISTING STOP BAR, LANE LINES AND RPMS THAT WILL BE IN CONFLICT WITH THE NEW CROSSWALK AND STOP BAR.
711-17 68 SF

CONCRETE SIDWWALK

PALMA SOLA ROAD

CORTEZ ROAD (SR 684)

#684

PEDESTRIAN CROSSING

CONCRETE SIDWWALK

4'METAL FENCE

R/W LINE
O.R.B. 1381, PG. 1117

711-11-170 1 EA
(SEE NOTE 5)

711-17 68 SF
REMOVE EXISTING STOP BAR, LANE LINES AND RPMS THAT WILL BE IN CONFLICT WITH THE NEW CROSSWALK AND STOP BAR.

12" WHITE

24" WHITE

CORTEZ RD W.

711-11-170 1 EA
(SEE NOTE 5)

711-17 90 SF
REMOVE EXISTING STOP BAR, LANE LINES AND RPMS THAT WILL BE IN CONFLICT WITH THE NEW CROSSWALK AND STOP BAR.

REMOVE EXISTING CROSSWALK.
711-17 300 SF

REMOVE EXISTING CROSSWALK.
711-17 250 SF

12" WHITE

24" WHITE

711-11-170 1 EA

86th STREET WEST

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

UPIKY SUWARNO
LIC. NO.: 62995
DATE 2/27/13

STATE OF FLORIDA PROFESSIONAL ENGINEER
UPIKY SUWARNO LICENSE No. 62995

DESIGNED UY
DRAWN
CHECKED
APPROVED

SIGNING AND PAVEMENT MARKING PLAN (1)

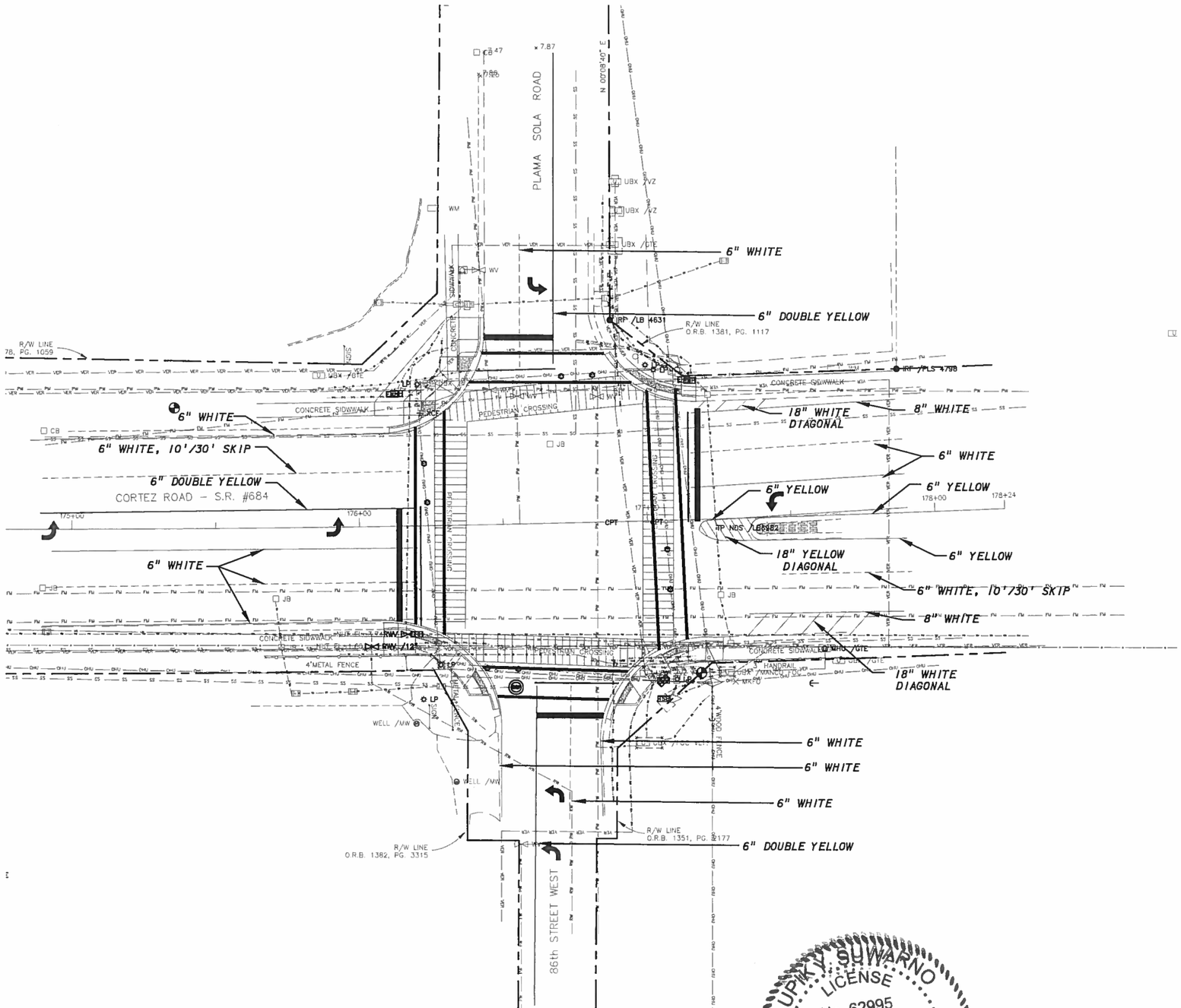
PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-11

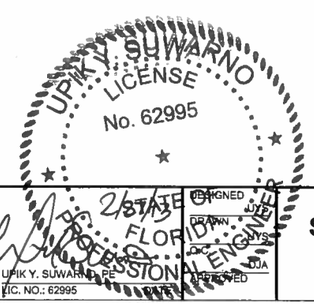
NOTES:

1. THE CONTRACTOR SHALL REFRESH 125 FEET OF EXISTING STRIPING ON ALL APPROACHES. THE CONTRACTOR SHALL USE THE EXISTING STRIPING AS A TEMPLATE TO APPLY THE NEW THERMOPLASTIC. THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS WHEN INSTALLING THE NEW THERMOPLASTIC OVER THE EXISTING STRIPING.

(THIS SHEET)

711-11-111	0.25 NM
711-11-112	0.04 NM
711-11-124	125 LF
711-11-131	0.05 GM
711-11-211	0.20 NM
711-11-224	50 LF





NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

UPIK Y. SUWARNO, PE
LIC. NO.: 62995
DATE: 2/15/13

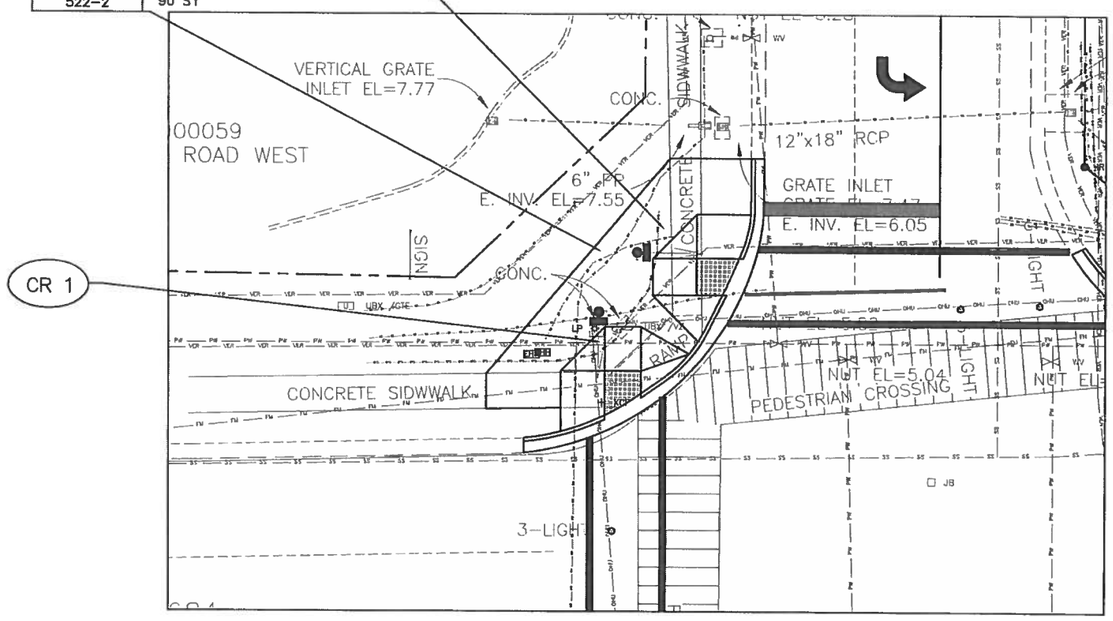
DESIGNED JVP
DRAWN JVP
CHK'D UYS
APPROVED UYS

SIGNING AND PAVEMENT MARKING PLAN (2)

PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-12

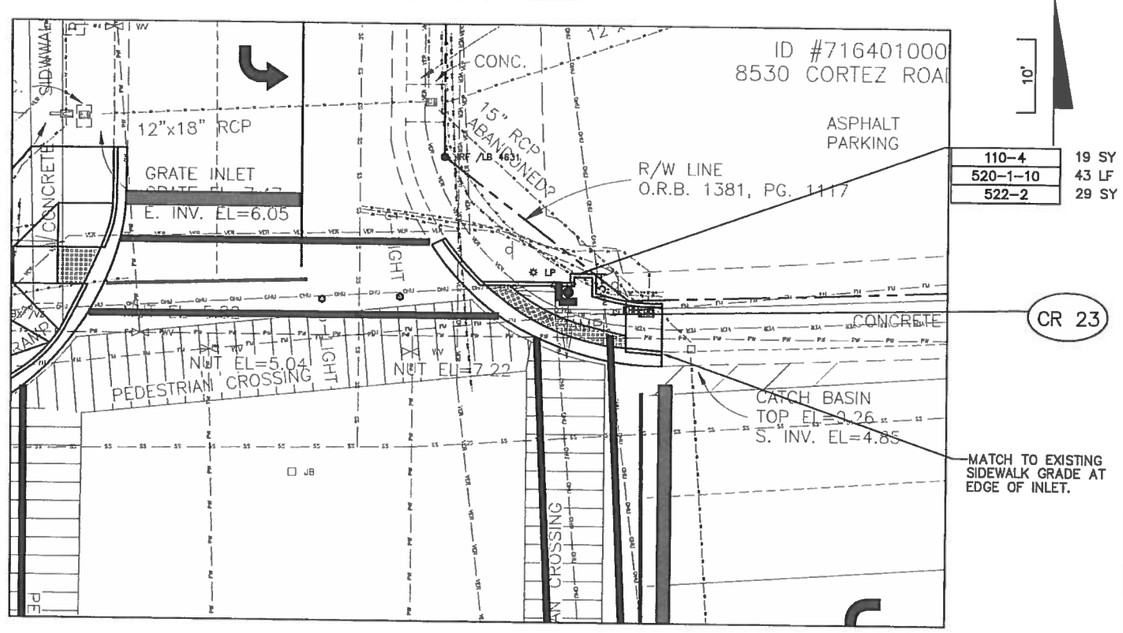
NORTHWEST CORNER

110-4	32 SY
520-1-10	58 LF
522-2	90 SY



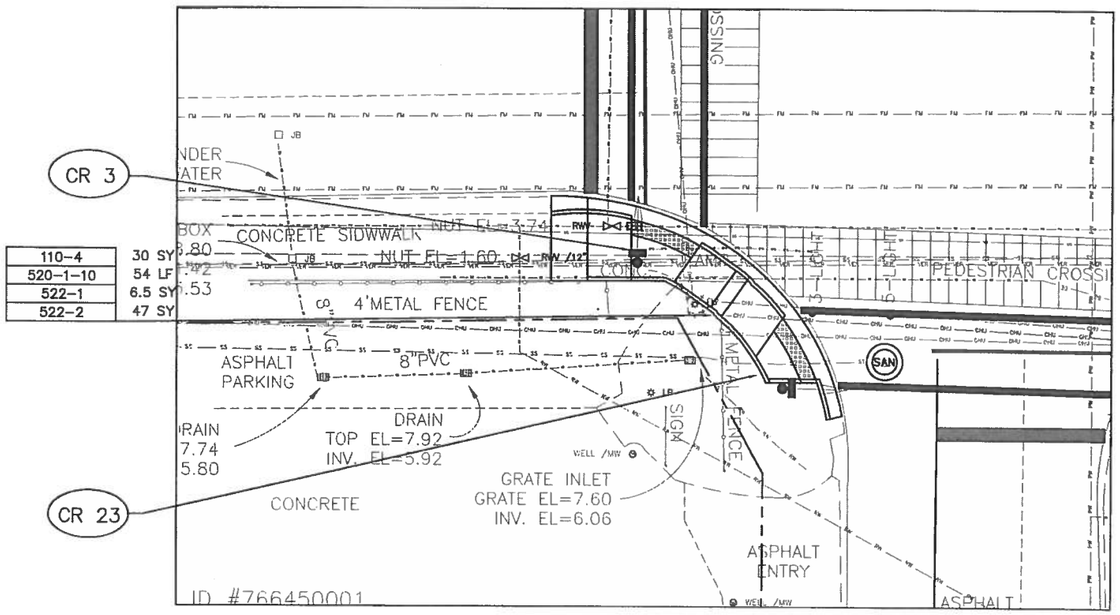
NORTHEAST CORNER

110-4	19 SY
520-1-10	43 LF
522-2	29 SY



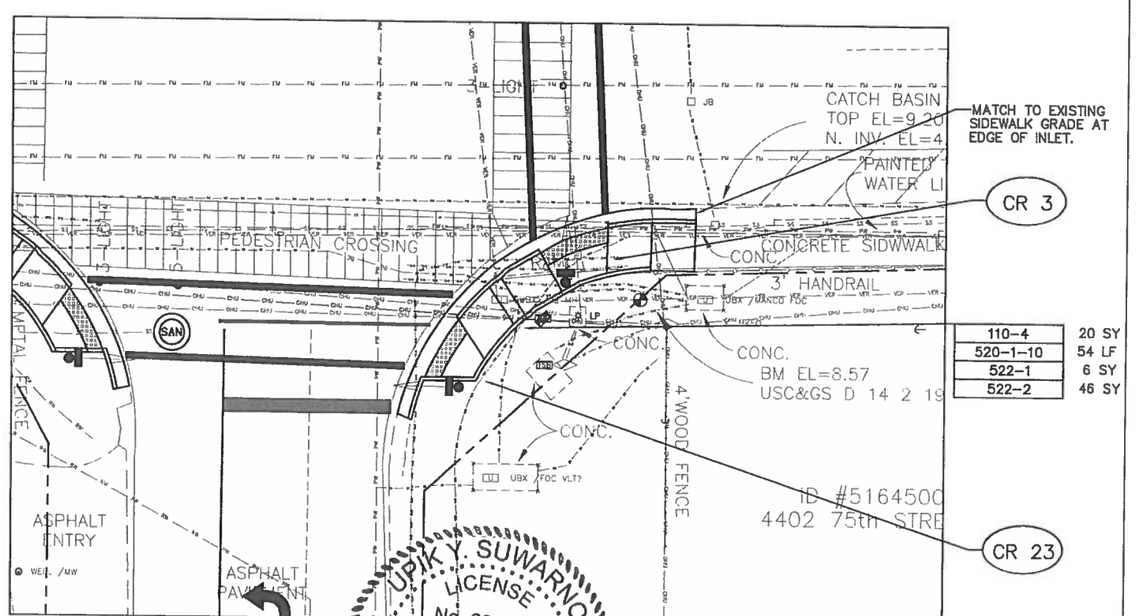
SOUTHWEST CORNER

110-4	30 SY
520-1-10	54 LF
522-1	6.5 SY
522-2	47 SY



SOUTHEAST CORNER

110-4	20 SY
520-1-10	54 LF
522-1	6 SY
522-2	46 SY



NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

UPIK Y. SUWARNO LICENSE No. 62995
STATE OF FLORIDA PROFESSIONAL ENGINEER
9-13-13

DESIGNED	KYS
DRAWN	KYS
CHECKED	DJA
APPROVED	

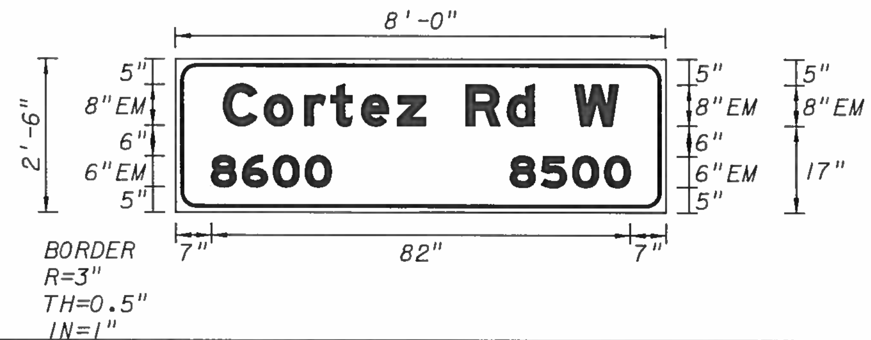
UPIK Y. SUWARNO, PE
LIC. NO. 62995

ROADWAY CONSTRUCTION DETAILS

PROJECT NO:	00193-008-15
DATE:	09-13-2013
SHEET NO:	T-13

SIGN NAME	A	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				
SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

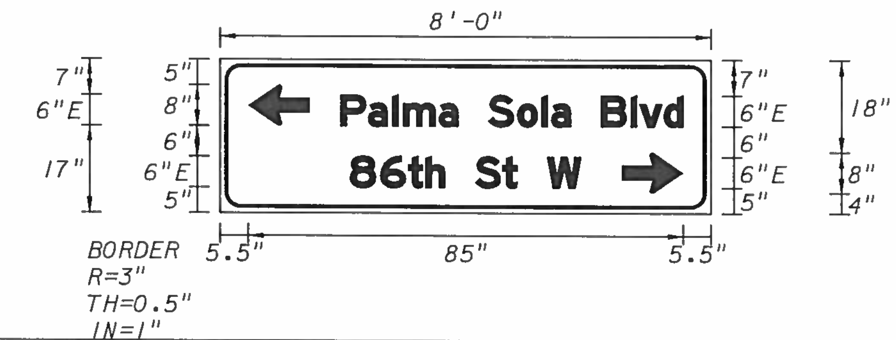


NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY		C	o	r	t	e	z		R	d		W		L									
SPACE	9.4	8	7.9	5.1	6	7.1	5.4	8	7.9	5.3	8	8.5	9.4	77.3									
COPY		8	6	0	0		8	5	0	0		L											
SPACE	7	6.1	6.1	6.2	5	35.1	6.1	6.1	6.2	5	7	82											
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	B	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				
SYMBOL(S)	ANGLE	X	Y	WID	HT
ARUP_J	90	5.5	17	8	12
ARUP_J	270	78.5	4	8	12

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

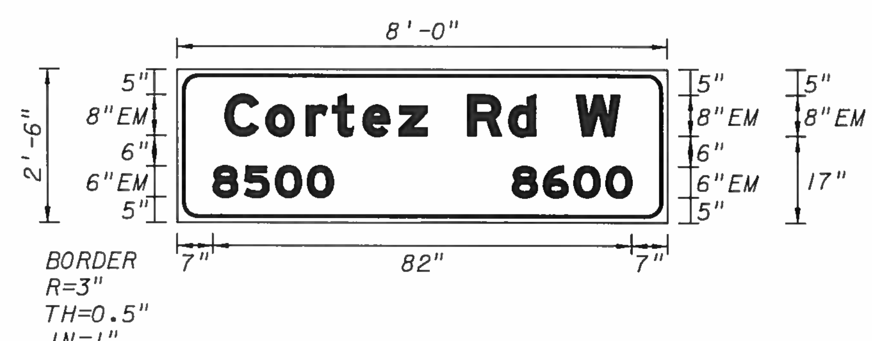


NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY		P	a	l	m	a		S	o	l	a		B	l	v	d		L					
SPACE	23.6	5.4	4.7	2.2	7	3.7	6	5.6	4.7	1.9	3.7	6	5.8	1.7	4.7	3.7	5.5	66.9					
COPY		8	6	t	h		S	t		W		L											
SPACE	25.5	5.9	5.5	3.4	3.7	6	5.3	2.8	6	6.4	25.6	44.9											
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	C	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				
SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH

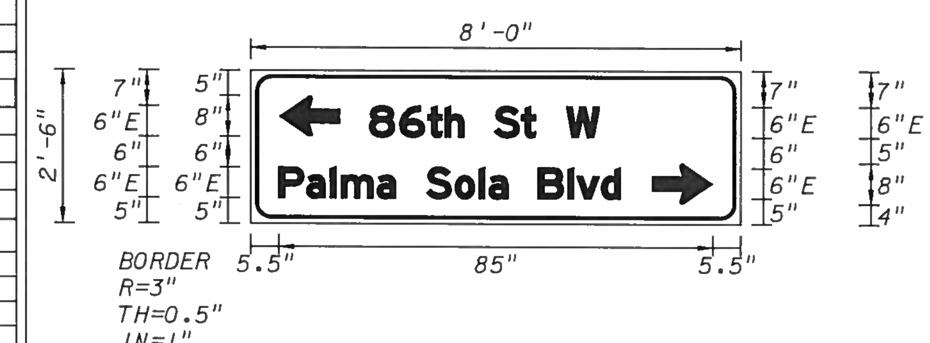


NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY		C	o	r	t	e	z		R	d		W		L									
SPACE	9.4	8	7.9	5.1	6	7.1	5.4	8	7.9	5.3	8	8.5	9.4	77.3									
COPY		8	5	0	0		8	6	0	0		L											
SPACE	7	6.1	6.1	6.2	5	35.1	6.1	6.1	6.2	5	7	82											
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

SIGN NAME	D	QTY	1	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-6"	RADII	3"		
LEGEND	White	COLOR	White		
COLOR	Green				
SYMBOL(S)	ANGLE	X	Y	WID	HT
ARUP_J	90	5.5	17	8	12
ARUP_J	270	78.5	4	8	12

SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

COPY		8	6	t	h		S	t		W		L											
SPACE	23.3	5.9	5.5	3.4	3.7	6	5.3	2.8	6	6.4	27.8	44.9											
COPY		P	a	l	m	a		S	a	l	a		B	l	v	d		L					
SPACE	5.5	5.4	4.7	2.2	7	3.7	6	5.6	4.7	1.9	3.7	6	5.8	1.7	4.7	3.7	23.6	66.9					
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							
COPY																							
SPACE																							

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12481 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

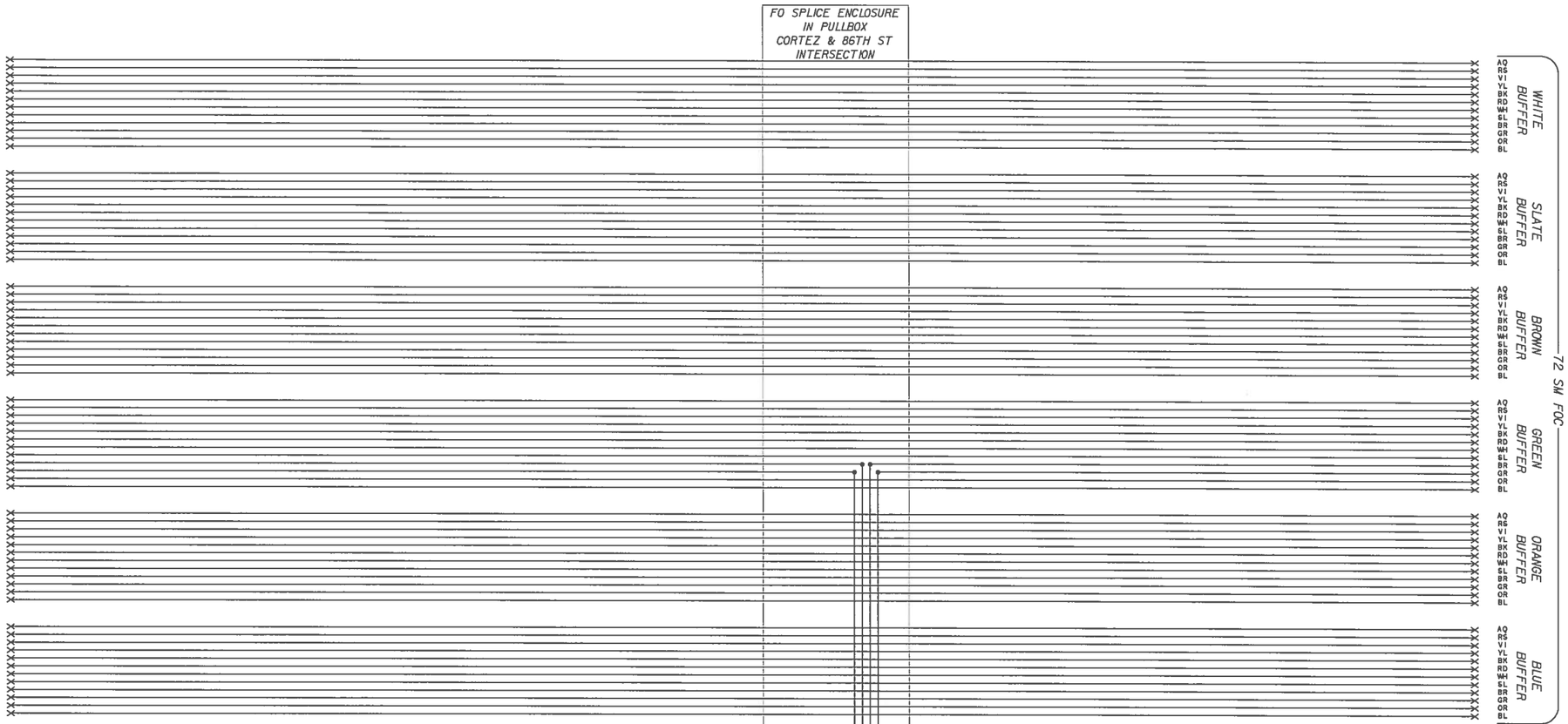
UPIK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER
2/27/13
UPIK Y. SUWARNO, P.E.
LIC. NO.: 62995
DATE

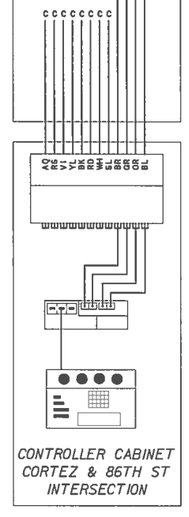
DESIGNED	UYS
DRAWN	UYS
APPROVED	DJA

SIGNALIZATION GUIDE SIGN WORKSHEET

PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-14

FILE: O:\JOB\0193\00193-008-15\ACAD\S11_GSWKSG.dwg LAST SAVED: Fri, 01/25/13-2:30p PLOTTED: Wed, 02/27/13-10:04a BY: Upik.Suwarno





COLOR CODE

AQ = AQUA
RS = ROSE
VI = VIOLET
YL = YELLOW
BK = BLACK
RD = RED
WH = WHITE
SL = SLATE
BR = BROWN
GR = GREEN
OR = ORANGE
BL = BLUE

LEGEND

● = SPLICE
C = CAPPED
X = EXISTING

NOTES:

1. UNUSED FIBERS LEFT CAPPED, COILED AND STORED IN SPLICE ENCLOSURE.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE.

UPIK Y. SUWARNO LICENSE No. 62995 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

CORTEZ RD. W. AT 86TH STREET IMPROVEMENTS
FP ID: 429867-1-58-01

Cardno TBE
12461 Telecom Drive, Tampa, FL 33637
www.cardnotbe.com - 813.221.0048
Certificate of Authorization No. 3843

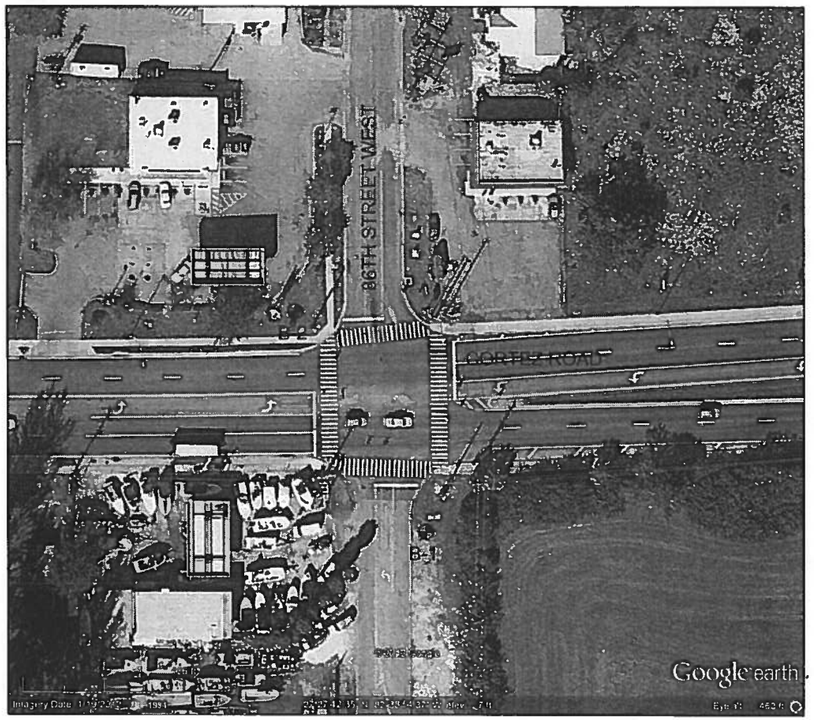
UPIK Y. SUWARNO
LIC. NO.: 62995
DATE

DESIGNED UYS
DRAWN UYS
CHECKED DJA
APPROVED

FIBER OPTIC SPLICE DETAILS

PROJECT NO: 00193-008-15
DATE: 02-27-2013
SHEET NO: T-15

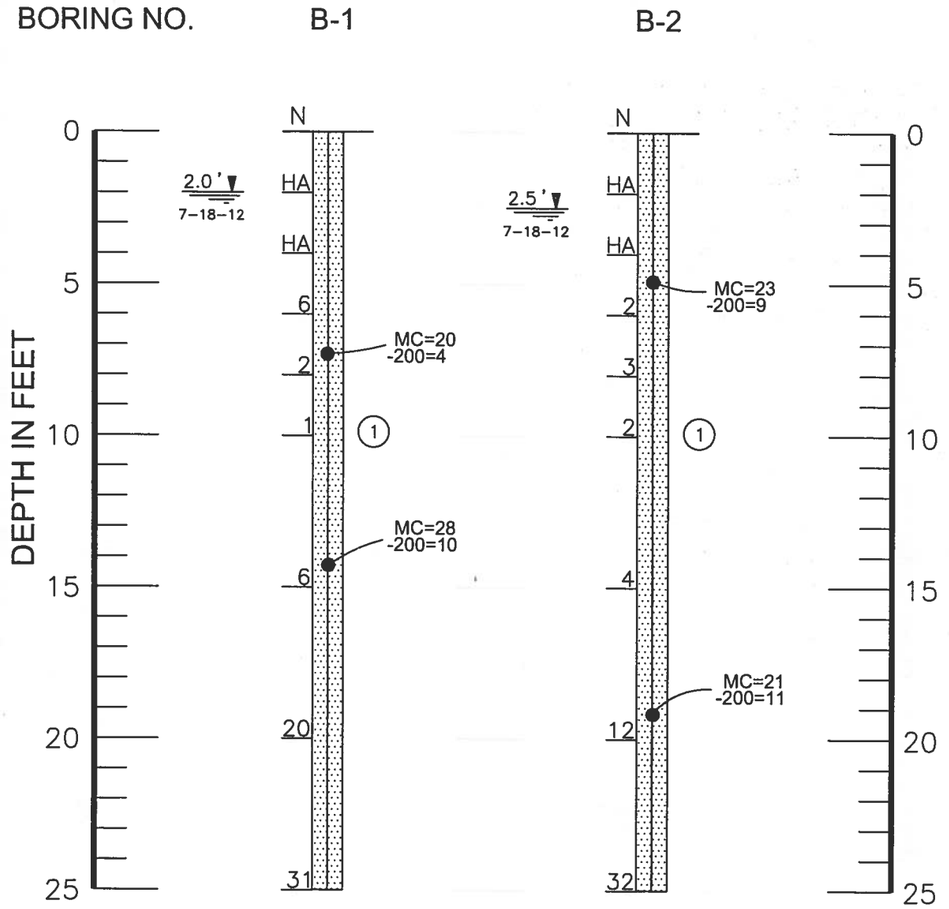
FILE: D:\JOB\0193\00193-008-15\ACAD\S12_SPLICING.dwg LAST SAVED: Fri, 01/25/13-2:32p PLOTTED: Wed, 02/27/13-10:06a BY: Upik.Suwarno



SOURCE: GOOGLE EARTH.COM

0' 25' 50' 100'

B-1 - STANDARD PENETRATION TEST BORING LOCATION AND NUMBER



GENERAL LEGEND

(1) Gray to dark brown fine SAND with trace silt to slightly silty and some shell (SP, SP-SM)

N – Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)

-200 – Amount Passing U.S. Standard No. 200 Sieve (%)

MC – Moisture Content (%)

HA – Hand auger 4 feet in order to avoid possible conflict with underground utilities

B-1 – Standard Penetration Test (SPT) Boring and number

SP – Unified Soil Classification System Group Symbol (ASTM D 2487)

2.0 / 7-18-12 – Depth of groundwater (feet) & date measured

NOTES

(1) Borings were drilled on July 18, 2012 using a Central Mine Equipment Model 55 (CME 55) drill rig.

(2) Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.

(3) Groundwater depths shown on the subsurface profiles represent groundwater surfaces on the dates shown. Groundwater level fluctuations should be anticipated throughout the year.

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1.375 inch
SPOON OUTSIDE DIA.	2.00 inches
AVG. HAMMER DROP	30 inches
HAMMER WEIGHT	140 pounds

SUMMARY OF FOUNDATION DESIGN PARAMETERS

Boring No.	Depth (feet)	Range of SPT - N	Unit Weights (PCF) Moist	Submerged	Angle of Interval Friction (degrees)	Effective Cohesion (PSF)	Earth Pressure Coefficients Ka	Kp
TB-1 & TB-2	0-17	1-6	100	40	28	0	0.361	2.77
	17-25	12-32	110	50	30	0	0.333	3.00

SPT DENSITY CHART

GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 4
LOOSE	4 - 10
MEDIUM	10 - 30
DENSE	30 - 50
VERY DENSE	GREATER THAN 50

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		NAME	DATE
3-4-13	JJ	Change sheet number to "T-16"				DRAWN BY	JJ	7-23-12
						CHECKED BY	SNP	7-23-12
						APPROVED BY	SCOTT N. PARRISH, P.E.	

Scott Parrish 3/4/13

SCOTT N. PARRISH, P.E. FLORIDA LICENSE NO. 69091

FLORIDA ENGINEERING CERTIFICATE OF AUTHORIZATION NO. 6870

DUNKELBERGER engineering & testing, inc.

ROAD NO.	COUNTY	PROJECT No.
-	MANATEE	

REPORT OF CORE BORINGS FOR SIGNAL POLES

PROJECT NAME: CORTEZ ROAD AND 86TH ST. WEST - MAST ARM MANATEE COUNTY, FLORIDA

SHEET No. T-16

DET Project No. SAR-12-1419
Sheet 1