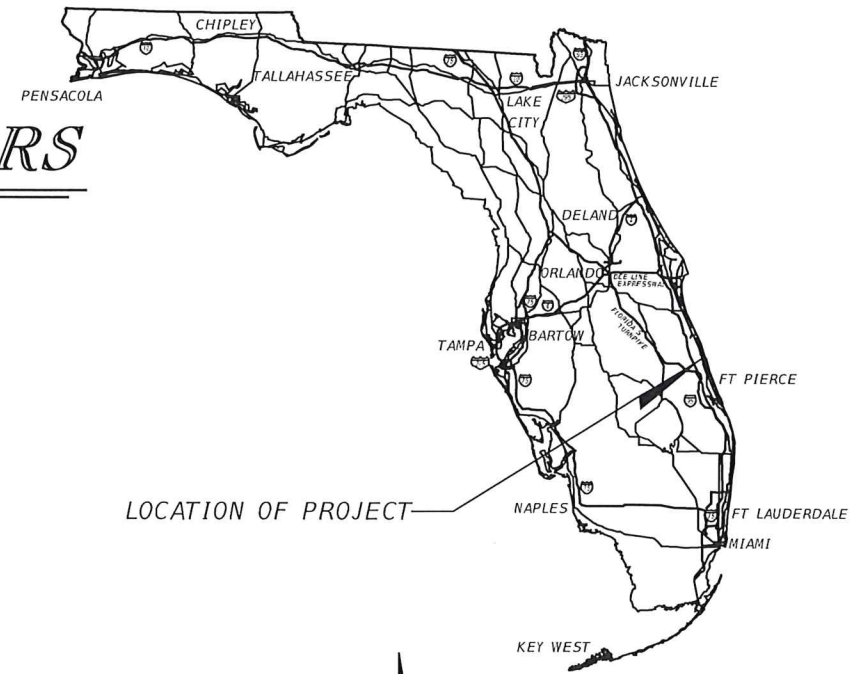


INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS

CONTRACT PLANS

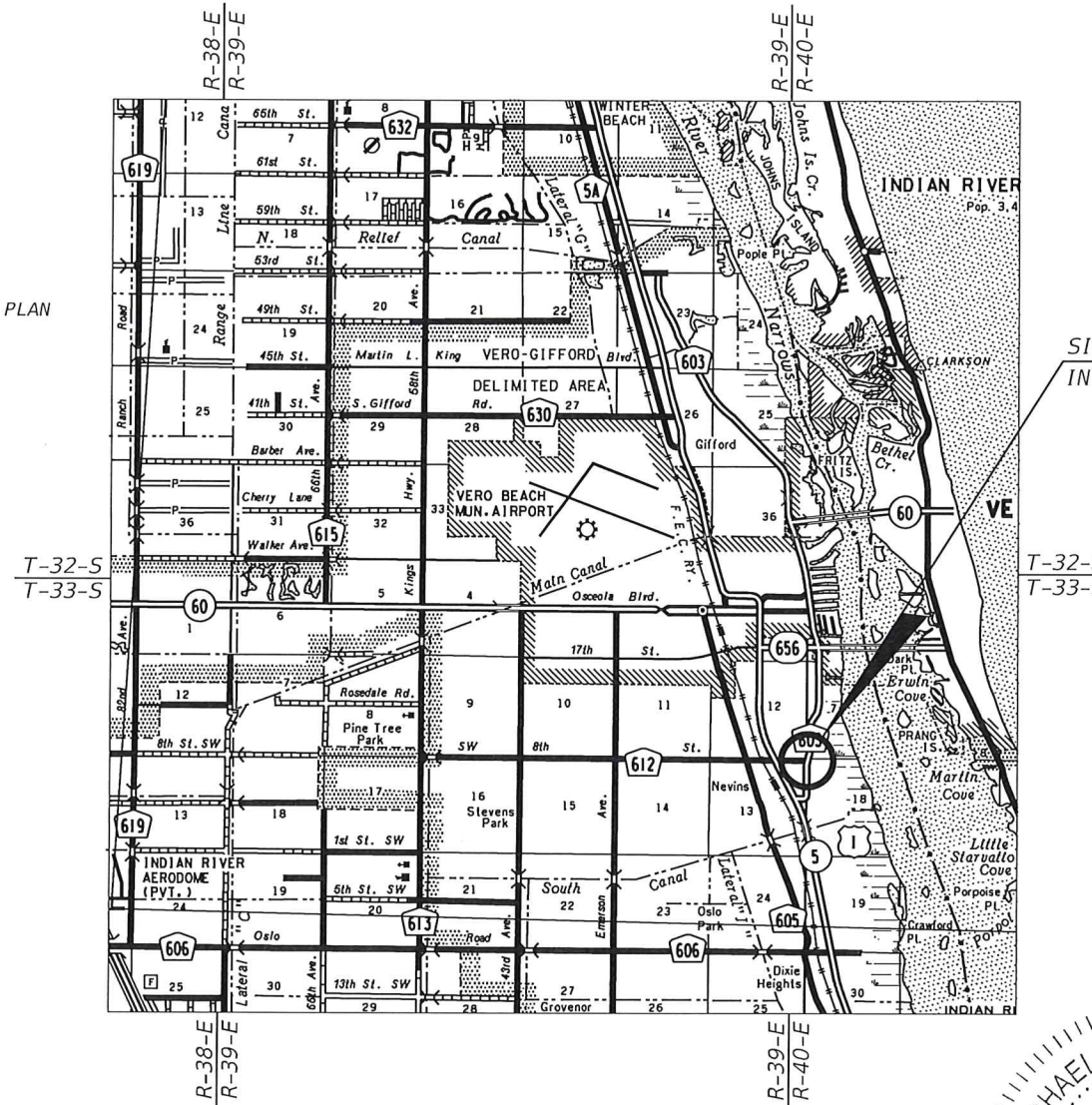
INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS IRC PROJECT No. 1909



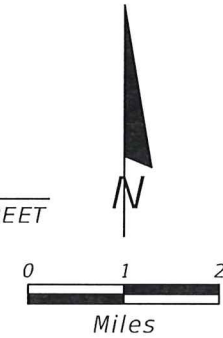
LOCATION OF PROJECT

INDEX OF ROADWAY PLANS

| SHEET NO. | SHEET DESCRIPTION |
|-----------|--|
| 1 | KEY SHEET |
| 2 - 3 | GENERAL NOTES |
| 4 | SUMMARY OF PAY ITEMS |
| 5 | PAY ITEM FOOT NOTES |
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| 7 - 8 | PLAN SHEET |
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| 11 | INDIAN RIVER COUNTY TRAFFIC SIGNAL SPECIFICATIONS |
| 12 | INDIAN RIVER BOULEVARD & 8th STREET SIGNALIZATION PLAN |
| 13 | MAST ARM TABULATION |
| 14 | STANDARD MAST ARM ASSEMBLIES DESIGN TABLE |
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SIGNAL LOCATION
INDIAN RIVER BLVD. & 8th STREET



PLANS PREPARED BY:

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
PROJECT NUMBER: 047035107
CERTIFICATE OF AUTHORIZATION: 00000696

GOVERNING STANDARDS AND SPECIFICATION
FLORIDA DEPARTMENT OF TRANSPORTATION
FY 2018-19 STANDARD PLANS
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED JANUARY 2019.
AS AMENDED BY CONTRACT DOCUMENTS.

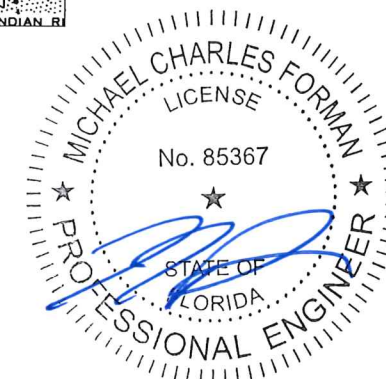
NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

100% PLAN
SUBMITTAL
MARCH 2020

PREPARED FOR



DEPARTMENT OF PUBLIC WORKS
RICHARD B. SZPYRKA P.E., DIRECTOR



ROADWAY PLANS
ENGINEER OF RECORD: MICHAEL C. FORMAN

P.E. NO.: 85367

SHEET
NO.

1

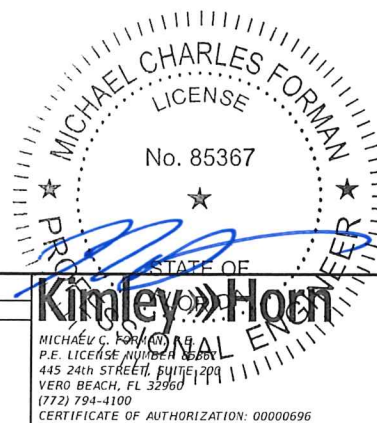
GENERAL NOTES

- 1) GOVERNING SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" DATED JANUARY 2019 AND INDIAN RIVER COUNTY STANDARD SPECIFICATIONS.
- 2) CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION FY 2018-19 STANDARD PLANS.
- 3) ALL STATIONS AND OFFSETS ARE REFERENCED TO BASELINE OF CONSTRUCTION.
- 4) THE FINISHED ROADWAY SECTION SHALL BE SMOOTH AND SET TO DRAIN.
- 5) ANY MAILBOX WITHIN THE LIMITS OF CONSTRUCTION IS TO BE TAKEN DOWN AND RESET IN ACCORDANCE WITH POSTAL REQUIREMENTS BY THE CONTRACTOR.
- 6) THE EXACT LOCATIONS OF PROPOSED SWALES, BACK SLOPE LINES AND LIMITS OF CONSTRUCTION WILL BE IN ACCORDANCE WITH THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 7) ALL EXISTING DRAINAGE STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE NOTED. ALL DRAINAGE GRATES ARE TO BE CAST IRON, UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL SUBMIT TO THE COUNTY A VIDEO RECORDING OF THE NEWLY INSTALLED CULVERTS AS PER SPECIFICATION 430-4.8 PIPE INSPECTIONS. THE CONTRACTOR SHALL DEWATER INSTALLED PIPE, REMOVE ALL SILT, DEBRI, ETC. AND SCHEDULE VISUAL INSPECTION TO BE PERFORMED BY THE COUNTY.
- 8) ALL DISTURBED R/W SHALL BE SODDED WITHIN THREE DAYS OF FINAL GRADING.
- 9) THE CONTRACTOR WILL RESTORE ALL AREAS DISTURBED BY THIS CONSTRUCTION TO A CONDITION EQUAL TO, OR BETTER THAN THAT NOW EXISTING.
- 10) ITEMS IN CONFLICT WITH CONSTRUCTION SUCH AS EXISTING CURBS AND GUTTERS, SIDEWALKS, DRAINAGE STRUCTURES, PAVEMENT AND BASE AND EXCESS EXCAVATIONS ARE TO BE REMOVED BY CONTRACTOR AND DISPOSED OF IN A LEGAL AND PROPER MANNER AWAY FROM THE JOB SITE AT THE CONTRACTOR'S EXPENSE UNLESS THE ITEMS ARE SPECIFIED TO BE REUSED ON THE PROJECT.

EXISTING TREES WITHIN THE PROJECT LIMITS ARE INTENDED TO REMAIN, UNLESS THEY ARE IN DIRECT CONFLICT WITH THE PROPOSED IMPROVEMENTS OR INDICATED TO BE REMOVED. CONTRACTOR SHALL TAKE DUE CARE AS TO PROTECT EXISTING TREES WITHIN THE PROJECT LIMITS THAT ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS. THE CONTRACTOR SHALL REMOVE ALL EXOTIC VEGETATION LOCATED WITHIN THE PROJECT LIMITS WITHIN PUBLIC RIGHT OF WAY. COST OF TREE PRESERVATION AND EXOTIC VEGETATION REMOVAL SHALL BE INCLUDED WITHIN PAY ITEM 110-1-1.
- 11) DRIVEWAYS THAT ARE DISTURBED ARE TO BE RECONSTRUCTED TO THEIR ORIGINAL OR BETTER CONDITION, UNLESS OTHERWISE STATED ON PLANS.
- 12) STAGING AND MATERIAL STORAGE SHALL NOT BE CONDUCTED ON ABUTTING PRIVATE PROPERTY WITHOUT APPROVAL FROM THE OWNER.
- 13) TURNOUTS (DRIVEWAYS) TO BE CONSTRUCTED AS PER FDOT INDEX 000-515.
- 14) SIDEWALK JOINTS TO BE INSTALLED PER DETAILS ON FDOT INDEX 522-001 FOR ALL SIDEWALKS. ALL JOINTS SHALL BE SAWCUT AS PER FDOT STANDARDS.
- 15) DETECTABLE WARNING SURFACES SHALL CONSIST OF CAST-IN-PLACE COMPOSITE TACTILE UNITS MANUFACTURED BY ADA SOLUTIONS, INC. (1-800-372-0519) OR APPROVED EQUIVALENT. DETECTABLE WARNING SURFACES SHALL EXTEND TWO FEET FROM BACK OF CURB AND SPAN THE ENTIRE RAMP RUN WIDTH. DETECTABLE WARNING SURFACE COLOR SHALL BE "FEDERAL YELLOW."
- 16) NO EXISTING BASE MATERIAL REMOVED IN EXCAVATION SHALL BE REUSED AS PROPOSED BASE MATERIAL.
- 17) VIBRATORY COMPACTION METHODS, EXCLUDING WALK-BEHIND MACHINERY, WILL NOT BE ALLOWED ON THIS PROJECT. ALL COMPACTION SHALL BE ACCOMPLISHED VIA STATIC METHODS.

ABBREVIATIONS:

| | | | |
|---------|--------------------|--------|--------------------|
| ADJ. | ADJUST | AH | AHEAD |
| BK | BACK | C&G | CURB & GUTTER |
| CONC. | CONCRETE | CONST. | CONSTRUCT |
| DIR. | DIRECTIONAL | ESMT. | EASEMENT |
| EOP | EDGE OF PAVEMENT | EXIST. | EXISTING |
| LT | LEFT | PC | POINT OF CURVATURE |
| PT | POINT OF TANGENCY | PAVT. | PAVEMENT |
| PGL | PROFILE GRADE LINE | PROP. | PROPOSED |
| RT | RIGHT | R/R | RAIL ROAD |
| R/W | RIGHT OF WAY | SHLDR. | SHOULDER |
| SWK. | SIDEWALK | TRANS. | TRANSITION |
| TYP. | TYPICAL | VAR. | VARIES |
| X-SLOPE | CROSS-SLOPE | | |



| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | GENERAL NOTES | SHEET NO. 2 |
|-----------|----|-------------|------|----|-------------|---|---------------|----------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | | |
| | | | | | | | | |

UTILITY NOTES

- 18) CONTRACTOR SHALL ADJUST ALL UTILITY LIDS AND COVERS TO FINISHED GRADE AS REQUIRED.
- 19) THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES, UNDERGROUND UTILITIES, OR NEAR CANAL BANKS.
- 20) EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
- 21) THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY; THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. RELOCATION OF UTILITIES SHALL BE COORDINATED WITH UTILITY COMPANIES AFTER IDENTIFICATION OF CONFLICT BY CONTRACTOR. CONTRACTOR SHALL NOTIFY ENGINEER IN ADVANCE BEFORE ANY RELOCATION AND ALL NON-PREDETERMINED UTILITY RELOCATIONS TO BE COORDINATED WITH UTILITY OWNERS.
- 22) THE UTILITY COMPANIES SHALL BE NOTIFIED BY THE CONTRACTOR TWO (2) BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING THEIR UTILITIES SO THAT COMPANY REPRESENTATIVE CAN BE PRESENT.
- 23) PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 556, UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY.
- 24) THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
- 25) THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL (1-800-432-4770) FOR FIELD LOCATIONS THREE (3) BUSINESS DAYS BEFORE DIGGING NEAR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTACT ANY UTILITY OWNER(S) THAT MAY NOT BE A "SUNSHINE" MEMBER.
- 26) KNOWN UTILITIES:

| <u>COMPANY</u> | <u>FACILITIES</u> | <u>CONTACT</u> | <u>TELEPHONE #</u> |
|----------------------------------|-------------------|---------------------------------|----------------------------------|
| AT&T | TELEPHONE | LUKE FOLKERTS | (407) 496-6041 |
| COMCAST CABLE | CATV & FIBER | JOHN SCOTT STRAHN | (561) 227-3417 |
| CITY GAS COMPANY OF FLORIDA | GAS | HOLLY COOMBS | (321) 638-3419 |
| FLORIDA POWER & LIGHT | ELECTRIC | ROB MORRIS TRICIA D'ANNUNZIO | (772) 223-4215 (561) 904-3560 |
| INDIAN RIVER COUNTY PUBLIC WORKS | SIGNALIZATION | JOHN ANKENY | (772) 226-1563 |
| INDIAN RIVER COUNTY UTILITIES | WATER & SEWER | ARJUNA WERAGODA JESSE ROLAND | (772) 226-1821 (772) 226-1636 |

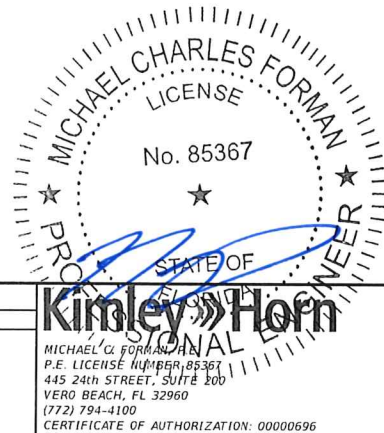
27) INDIAN RIVER COUNTY TRAFFIC ENGINEERING HAS UNDERGROUND CONDUIT FOR TRAFFIC SIGNAL INTERCONNECTIONS IN THIS AREA AS WELL AS OTHER TRAFFIC SIGNAL EQUIPMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT SUNSHINE STATE ONE CALL SYSTEM AT 1-800-432-4770 FOR LOCATIONS OF THIS EQUIPMENT AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION.

SURVEY NOTES

- 28) B.M. DATA IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD -88).
- 29) ANY GEODETIC MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, NOTIFY:
 GEODETIC INFORMATION CENTER
 ATTN: MARK MAINTENANCE SECTION N/CG-162
 6001 EXECUTIVE BLVD.
 ROCKVILLE, MARYLAND 20852
 TELEPHONE NO. (301) 443-8319
- 30) EXISTING SECTION CORNERS AND 1/4 SECTION CORNERS, AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESET AFTER CONSTRUCTION USING A REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA.

MAINTENANCE OF TRAFFIC NOTES

- 31) THE MAINTENANCE OF TRAFFIC FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE APPLICABLE FDOT INDEX NUMBERS (102-XXX SERIES) AND THESE DOCUMENTS; THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (U.S. DEPARTMENT OF TRANSPORTATION, FHWA), SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AND PROTECTED AT ALL TIMES.
- 32) ANY TEMPORARY LANE CLOSURES PROPOSED BY THE CONTRACTOR SHALL BE INITIATED NO EARLIER THAN 9:00 AM AND MUST BE REMOVED NO LATER THAN 4:00 PM.
- 33) CONTRACTOR SHALL SUBMIT SIGNED AND SEALED DETAILED MOT PLANS PREPARED BY A FLORIDA LICENSED ENGINEER TWO WEEKS PRIOR TO THE START OF CONSTRUCTION TO THE INDIAN RIVER COUNTY TRAFFIC DIVISION FOR APPROVAL.

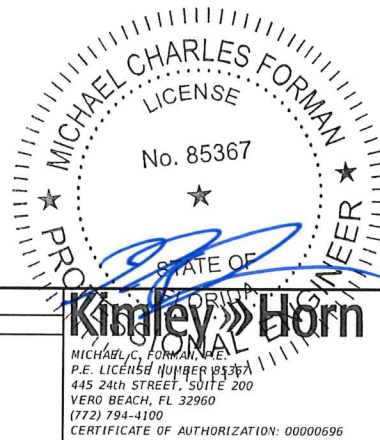


| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | GENERAL NOTES | SHEET NO. 3 |
|-----------|----|-------------|------|----|-------------|---|---------------|----------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | | |
| | | | | | | | | |

SUMMARY OF PAY ITEMS

| PAY ITEM NO. | DESCRIPTION | UNIT | PROJECT QUANTITY |
|--------------------------|---|------|------------------|
| ROADWAY PAY ITEMS | | | |
| 101-1 | MOBILIZATION/ DEMOBILIZATION | LS | 1 |
| 102-1 | MAINTENANCE OF TRAFFIC | LS | 1 |
| 104-2 | PREVENTION, CONTROL & ABATEMENT OF EROSION AND WATER POLLUTION | LS | 1 |
| 110-1-1 | CLEARING & GRUBBING | LS | 1 |
| 120-4 | SUBSOIL EXCAVATION | CY | 135 |
| 120-6 | EMBANKMENT | CY | 250 |
| 285-7-14 | CEMENTED COQUINA (LBR 100) (15") | SY | 24 |
| 327-70-6 | ASPHALT PAVEMENT MILLING (1.5") | SY | 3,525 |
| 337-7-83A | ASPHALT CONCRETE FRICTION COURSE (FC-12.5) (TR-C) (PG 76-22) (1.5") | TN | 307 |
| 337-7-83B | ASPHALT CONCRETE STRUCTURAL COURSE (SP-12.5) (TR-C) (1.5") | TN | 2 |
| 425-1-543 | DBI INLET (TYPE D) (J-BOTTOM) (< 10') | EA | 1 |
| 425-2-41 | MANHOLE (P-7) (< 10') | EA | 1 |
| 425-2-61 | MANHOLE (P-8) (< 10') | EA | 1 |
| 425-2-71 | MANHOLE (J-7) (< 10') | EA | 1 |
| 425-5 | MANHOLE (ADJUST) | EA | 1 |
| 425-6 | VALVE BOX (ADJUST) | EA | 1 |
| 430-984-125 | MITERED END SECTION (SD) (18") | EA | 1 |
| 430-984-129 | MITERED END SECTION (SD) (24") | EA | 2 |
| 430-175-112 | CONCRETE PIPE CULVERT (12") (S/CD) | LF | 16 |
| 430-175-115 | CONCRETE PIPE CULVERT (15") (S/CD) | LF | 26 |
| 430-175-124 | CONCRETE PIPE CULVERT (24") (S/CD) | LF | 148 |
| 430-175-130 | CONCRETE PIPE CULVERT (30") (S/CD) | LF | 38 |
| 430-175-218 | CONCRETE PIPE CULVERT (14"x23") (S/CD) | LF | 24 |
| 522-2 | CONCRETE SIDEWALK , 6" THICK | SY | 272 |
| 527-2 | DETECTABLE WARNINGS | SF | 30 |
| 570-1-2 | PERFORMANCE TURF (SOD) | SY | 3,104 |
| 700-1-11 | SINGLE POST SIGN (F & I) (GM) (< 12 SF) | AS | 1 |
| 700-1-60 | SINGLE POST SIGN (REMOVE) | AS | 1 |
| 706-1-1 | RETRO-REFLECTIVE PAVEMENT MARKERS | EA | 75 |
| 711-11-121 | THERMOPLASTIC, STD, WHITE, SOLID, 6" | LF | 1,338 |
| 711-11-123 | THERMOPLASTIC, STD, WHITE, SOLID, 12" | LF | 307 |
| 711-11-125 | THERMOPLASTIC, STD, WHITE, SOLID, 24" | LF | 146 |
| 711-11-131 | THERMOPLASTIC, STD, WHITE, SKIP (10'-30'), 6" | LF | 217 |
| 711-11-170 | THERMOPLASTIC, STD, WHITE, ARROW | EA | 10 |
| 711-11-221 | THERMOPLASTIC, STD, YELLOW, SOLID 6" | LF | 614 |
| 711-11-224 | THERMOPLASTIC, STD, YELLOW, SOLID 18" | LF | 4 |
| 999-1 | CONSTRUCTION LAYOUT/ RECORD DRAWINGS | LS | 1 |

| PAY ITEM NO. | DESCRIPTION | UNIT | PROJECT QUANTITY |
|--------------------------------|--|------|------------------|
| SIGNALIZATION PAY ITEMS | | | |
| 630-2-11 | CONDUIT (SIGNAL) (F & I) (OPEN TRENCH) | LF | 175 |
| 630-2-12 | CONDUIT (SIGNAL) (F & I) (DIRECTIONAL BORE) | LF | 355 |
| 632-7-1 | CABLE (SIGNAL) (F & I) | PI | 1 |
| 632-7-6 | CABLE (SIGNAL) (REMOVE INTERSECTION) | PI | 1 |
| 635-2-11 | PULL BOX (F & I) (TRAFFIC SIGNAL) | EA | 21 |
| 639-1-122 | ELECTRICAL POWER SERVICE (F & I) (UNDERGROUND) (METER PURCHASED BY CONTRACTOR) | AS | 1 |
| 639-1-620 | ELECTRICAL POWER SERVICE (REMOVE) (UNDERGROUND) | AS | 1 |
| 639-2-1 | ELECTRICAL SERVICE WIRE (F & I) | LS | 1 |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT (F & I) (POLE MOUNTED) | EA | 1 |
| 641-2-12 | PRESTRESSED CONC. POLE (F & I) (TYPE P-II SERVICE POLE) | EA | 1 |
| 641-2-80 | PRESTRESSED CONC. POLE (REMOVE COMPLETE) | EA | 4 |
| 646-1-11 | ALUMINUM SIGNALS POLE (PEDESTAL) | EA | 3 |
| 649-21-01 | STEEL MAST ARM ASSEMBLY (F & I) (30' ARM) | EA | 1 |
| 649-21-03 | STEEL MAST ARM ASSEMBLY (F & I) (40' ARM) | EA | 1 |
| 649-21-10 | STEEL MAST ARM ASSEMBLY (F & I) (60' ARM) | EA | 2 |
| 650-1-14 | TRAFFIC SIGNAL (F & I) (3-SECTION) (1-WAY) (STANDARD) (ALUMINUM) | AS | 9 |
| 650-1-16 | TRAFFIC SIGNAL (F & I) (4-SECTION) (STRAIGHT) (STANDARD) (ALUMINUM) | AS | 2 |
| 653-1-11 | PEDESTRIAN SIGNAL (F & I) (LED-COUNTDOWN) (1-WAY) | AS | 2 |
| 653-1-12 | PEDESTRIAN SIGNAL (F & I) (LED-COUNTDOWN) (2-WAY) | AS | 1 |
| 660-4-11 | VEHICLE DETECTION VIDEO (F&I) (CABINET EQUIPMENT) | EA | 1 |
| 660-4-12 | VEHICLE DETECTION VIDEO (F&I) (ABOVE GROUND EQUIPMENT) | EA | 4 |
| 665-1-11 | PEDESTRIAN DETECTOR (F & I) (POLE/PEDESTAL MOUNTED) | EA | 4 |
| 670-5-111 | TRAFFIC CONTROLLER ASSEMBLY (F & I) (NEMA) (TYPE 5) (ONE PREEMPTION PLAN) | AS | 1 |
| 670-5-600 | TRAFFIC CONTROLLER ASSEMBLY (REMOVE) (CONTROLLER WITH CABINET) (PLUS PAD) | AS | 1 |
| 682-1-133 | ITS CCTV CAMERA (F & I) (DOME ENCLOSURE, PTZ) (NON-PRESSURIZED) (IP) (HD) | EA | 1 |
| 684-1-1 | MANAGED FIELD ETHERNET SWITCH (F & I) | EA | 1 |
| 684-6-11 | WIRELESS COMMUNICATION DEVICE (FURNISH ONLY) (ETHERNET ACCESS POINT) | EA | 4 |
| 685-1-13 | UNINTERRUPTIBLE POWER SUPPLY (F & I) (LINE INTERACTIVE WITH CABINET) | EA | 1 |
| 700-5-22 | INTERNALLY ILLUMINATED STREET NAME SIGN | EA | 6 |
| 715-1-11 | LIGHTING CONDUCTORS (F & I) (INSULATED) (No. 10 OR <) | LF | 5,391 |
| 715-5-31 | LUMINAIRE & BRACKET ARM (F & I) | EA | 4 |



| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | SHEET NO. 4 |
|-----------|----|-------------|------|----|-------------|---|--------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | |
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PAY ITEM FOOT NOTES

PAY ITEM NO. 101-1

INCLUDES ALL NECESSARY EQUIPMENT INCLUDING A TWO PERSON BUCKET TRUCK FOR USE BY THE ENGINEER OR COUNTY REPRESENTATIVE DURING INSPECTION OF TRAFFIC SIGNAL.

PAY ITEM NO. 102-1

INCLUDES ALL COSTS ASSOCIATED WITH FURNISHING, INSTALLING MAINTAINING AND REMOVAL OF ALL ITEMS OF MAINTENANCE OF TRAFFIC NOT PAID FOR UNDER SEPARATE ITEMS.

PAY ITEM NO. 630-2-11

SHALL BE INSTALLED PER SECTION 630, OF FDOT'S STANDARD SPECIFICATIONS. ALL CONDUITS SHALL ENTER PULL BOXES AS REQUIRED IN FDOT STANDARD INDEX 630-001, SHEET 2 OF 2. ALL CONDUIT SHALL BE 2 INCH, SCHEDULE 40 PVC UNLESS SPECIFIED OTHERWISE IN THE PLANS OR SPECIFICATIONS.

PAY ITEM NO. 630-2-12

SHALL CONSIST OF MULTIPLE 2 INCH SCHEDULE 40 PVC SLEEVES PER BORE. SEE SPECIFIC PLAN SHEETS FOR NUMBER REQUIRED FOR THE BORE. ALL DIRECTIONAL BORING SHALL BE DONE IN CONFORMANCE WITH FDOT UTILITY ACCOMMODATIONS MANUAL REQUIREMENTS.

PAY ITEM NO. 632-7-1

SHALL BE INSTALLED PER FDOT STANDARD INDEX 635-001 AS APPLICABLE. THREE SPARE CONDUCTORS PER SIGNAL CABLE ARE REQUIRED. SPARES SHALL BE GROUNDED TO THE BUS GROUNDING FACILITY IN THE CONTROLLER CABINET. THE CONTRACTOR SHALL VERIFY COLOR CODES WITH INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION FOR THE SIGNAL CONDUCTORS PRIOR TO ORDERING.

PAY ITEM NO. 635-2-11

SHALL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD INDEX 635-001, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SIZE THE PULL BOXES SUCH THAT THEY WILL ALLOW PLACEMENT OF ALL CABLES INSIDE THE PULL BOXES WHILE MAINTAINING THE REQUIRED MINIMUM BENDING RADIUS ON THE CABLES AND NOT EXCEEDING THE MAXIMUM BENDING RADIUS OF THE CABLES. PULL BOX COVERS SHALL BE FDOT APPROVED OF NON-METALLIC CONSTRUCTION WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTIC" AS APPROPRIATE. PULL BOXES SHALL BE QUARTZITE AND PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, THE PULL BOXES SHALL BE PLACED A MINIMUM OF 7 FEET FROM THE EDGE OF PAVEMENT WITH PULL BOXES AND LIDS BEING TRAFFIC BEARING. PULL BOXES SHALL NOT BE PLACED IN PEDESTRIAN RAMPS.

PAY ITEM NO. 639-1-122

SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND PERMITS REQUIRED TO FURNISH AND INSTALL THE ASSEMBLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH ALL AGENCIES REQUIRED FOR APPROVAL OF THE COMPLETED INSTALLATION. FDOT STANDARD INDEX 639-001 (AS APPLICABLE) SHALL APPLY.

PAY ITEM NO. 639-2-1

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING THE CONDUCTORS FOR THE POWER SERVICE.

PAY ITEM NO. 642-2-80

COST TO INCLUDE, BUT NOT BE LIMITED TO, ALL MATERIAL, EQUIPMENT AND MANPOWER TO BACKFILL EXISTING POLE FOUNDATION WITH FDOT EXCAVATABLE FLOWABLE FILL AFTER POLE REMOVAL.

PAY ITEM NO. 650-1-14 AND 650-1-16

HEADS SHALL BE ALL ALUMINUM AND BLACK IN COLOR. TUNNEL VISORS SHALL BE FULL VISORS. SIGNAL DISPLAYS SHALL BE LED. THE CONTRACTOR SHALL CONTACT THE INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION PRIOR TO ORDERING. THIS IS TO ENSURE THAT THEY MEET COUNTY STANDARDS AND ARE CONSISTENT WITH LED UNITS CURRENTLY IN SERVICE WITH THE COUNTY. ALL BACKPLATES SHALL BE ALUMINUM WITH RETRO REFLECTIVE SHEETING.

PAY ITEM NO. 660-4-11 AND 660-4-12

SHALL CONSIST OF ECONOLIGHT DETECTOR CAMERA SYSTEM, LATEST TECHNOLOGY. A COMPLETE VIDEO DETECTION INSTALLATION CONSISTENT WITH INDIAN RIVER COUNTY STANDARDS FOR ALL APPROACHES OF THE INTERSECTION IS REQUIRED. THE EQUIPMENT SHALL BE VIDEO DETECTION UNITS CAPABLE OF INTERFACE WITH THE TRAFFIC SIGNAL CONTROLLER UNIT AND SHALL INCLUDE THE COST OF MOUNTING ARMS TO EXTEND CAMERA TO A POSITION OVER THE ROADWAY. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE SUPPLIER AND INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION TO ENSURE RELIABLE OPERATION. CAMERA LOCATIONS MAY REQUIRE ADJUSTMENT IN THE FIELD. CONTACT INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION BEFORE ORDERING.

PAY ITEM NO. 670-5-111

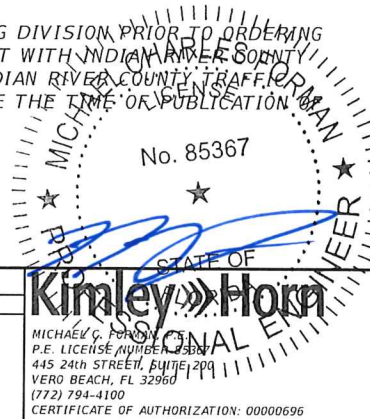
THE CONTRACTOR SHALL COORDINATE WITH THE INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION PRIOR TO ORDERING ANY CONTROLLER RELATED EQUIPMENT. ALL TRAFFIC SIGNAL EQUIPMENT MUST BE CONSISTENT WITH INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION STANDARDS. CONTRACTOR SHALL COORDINATE WITH THE INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION TO CONFIRM THAT EQUIPMENT STANDARDS HAVE NOT CHANGED SINCE THE TIME OF PUBLICATION OF THESE PLANS.

PAY ITEM NO. 670-5-600

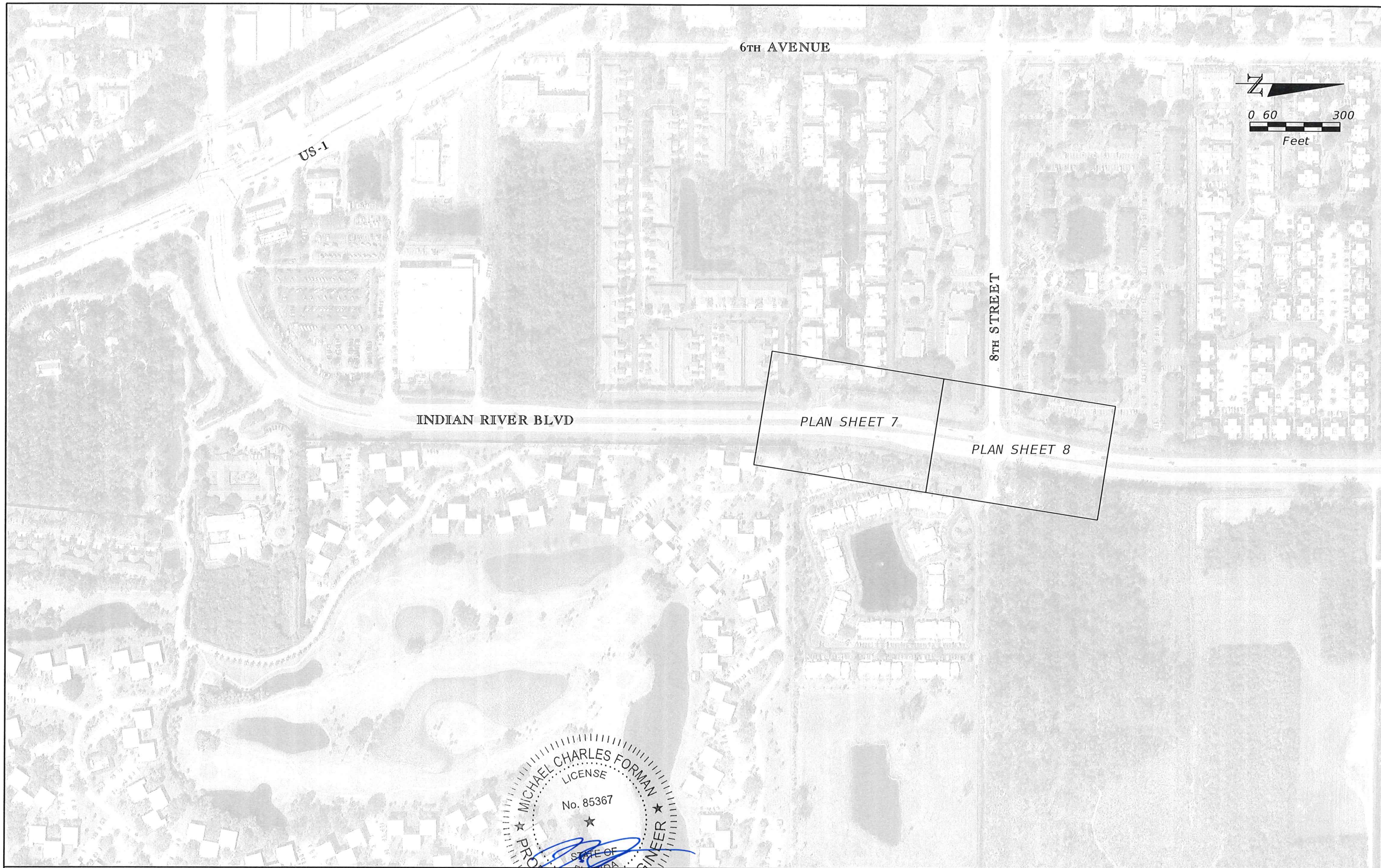
COST TO INCLUDE BUT NOT LIMITED TO REMOVAL OF EXISTING SIGNAL CONTROLLER CABINET, ELECTRONICS AND CONCRETE PAD.

PAY ITEM NO. 684-6-11

WIRELESS COMMUNICATION DEVICE SHALL BE AN INTUICOM BX5-1. COST TO INCLUDE, BUT NOT LIMITED TO, ALL MATERIALS, EQUIPMENT AND MANPOWER NEED TO FURNISH WIRELESS ETHERNET RADIO LINK AND WILL DELIVER TO INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION. COST TO INCLUDE COORDINATION WITH INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION FOR DELIVERY OF ASSEMBLY. INDIAN RIVER COUNTY TO INSTALL AND PROGRAM RADIO LINKS.



| REVISIONS | | | | | | KIMLEY-HORN MICHAEL G. FORMAN, P.E. P.E. LICENSE NUMBER 85367 445 24th STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696 | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | PAY ITEM FOOT NOTES | SHEET NO. |
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INDIAN RIVER COUNTY
 BOARD OF COUNTY COMMISSIONERS
 INDIAN RIVER BOULEVARD & 8TH STREET
 SIGNALIZATION IMPROVEMENTS

PLAN LAYOUT SHEET

SHEET NO.
 6

S-101

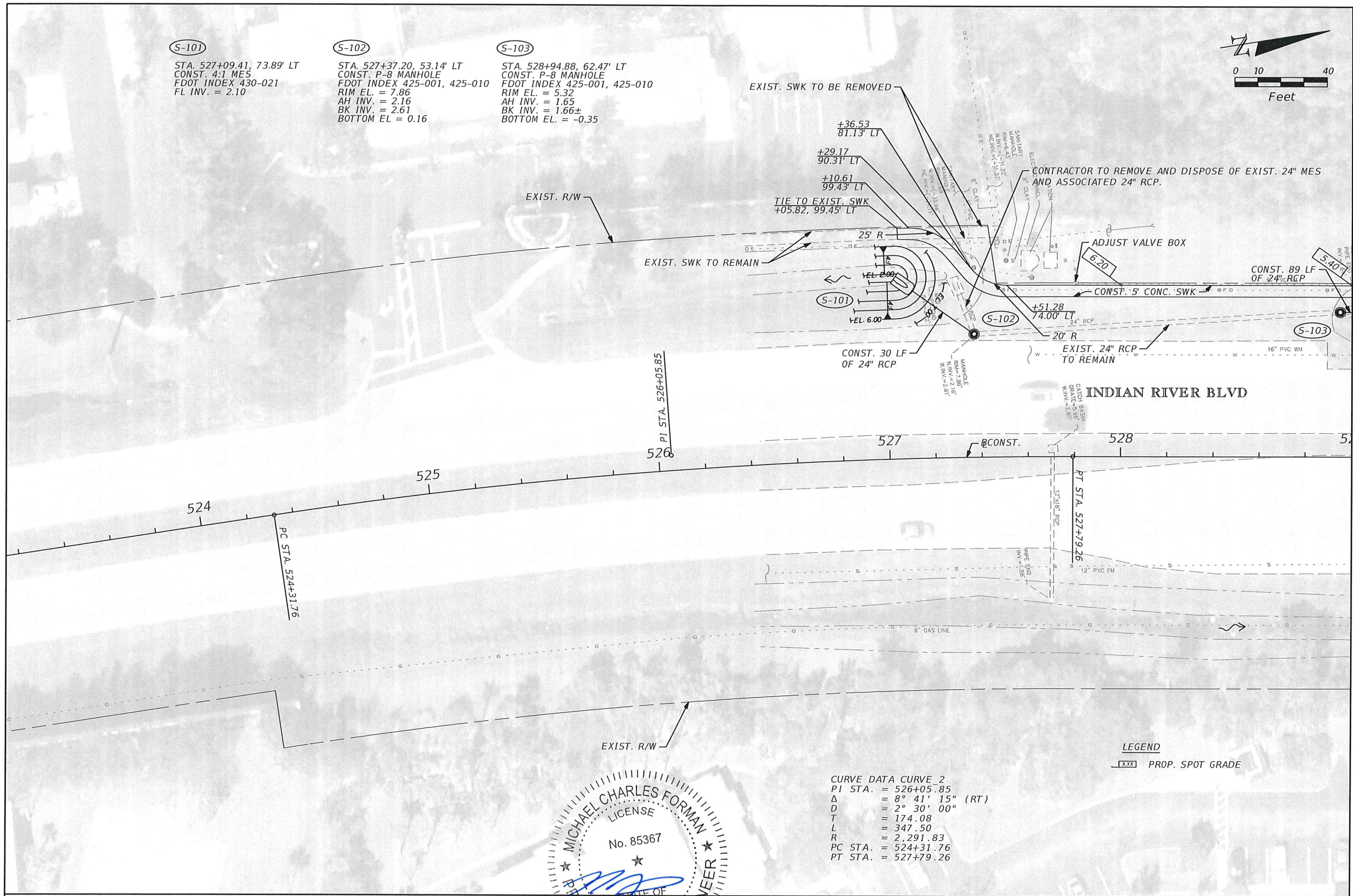
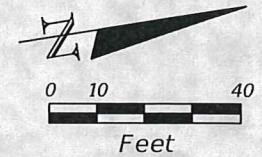
STA. 527+09.41, 73.89' LT
CONST. 4:1 MES
FDOT INDEX 430-021
FL INV. = 2.10

S-102

STA. 527+37.20, 53.14' LT
CONST. P-8 MANHOLE
FDOT INDEX 425-001, 425-010
RIM EL. = 7.86
AH INV. = 2.16
BK INV. = 2.61
BOTTOM EL. = 0.16

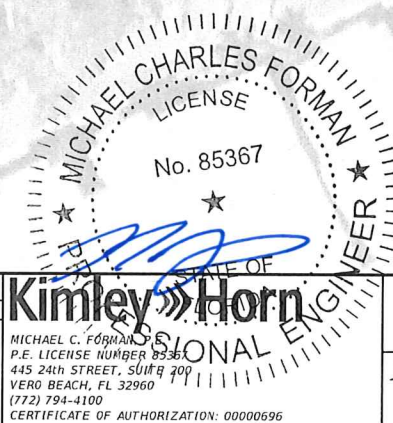
S-103

STA. 528+94.88, 62.47' LT
CONST. P-8 MANHOLE
FDOT INDEX 425-001, 425-010
RIM EL. = 5.32
AH INV. = 1.65
BK INV. = 1.66±
BOTTOM EL. = -0.35



LEGEND
[---] PROP. SPOT GRADE

CURVE DATA CURVE 2
PI STA. = 526+05.85
Δ = 8° 41' 15" (RT)
D = 2° 30' 00"
T = 174.08
L = 347.50
R = 2,291.83
PC STA. = 524+31.76
PT STA. = 527+79.26



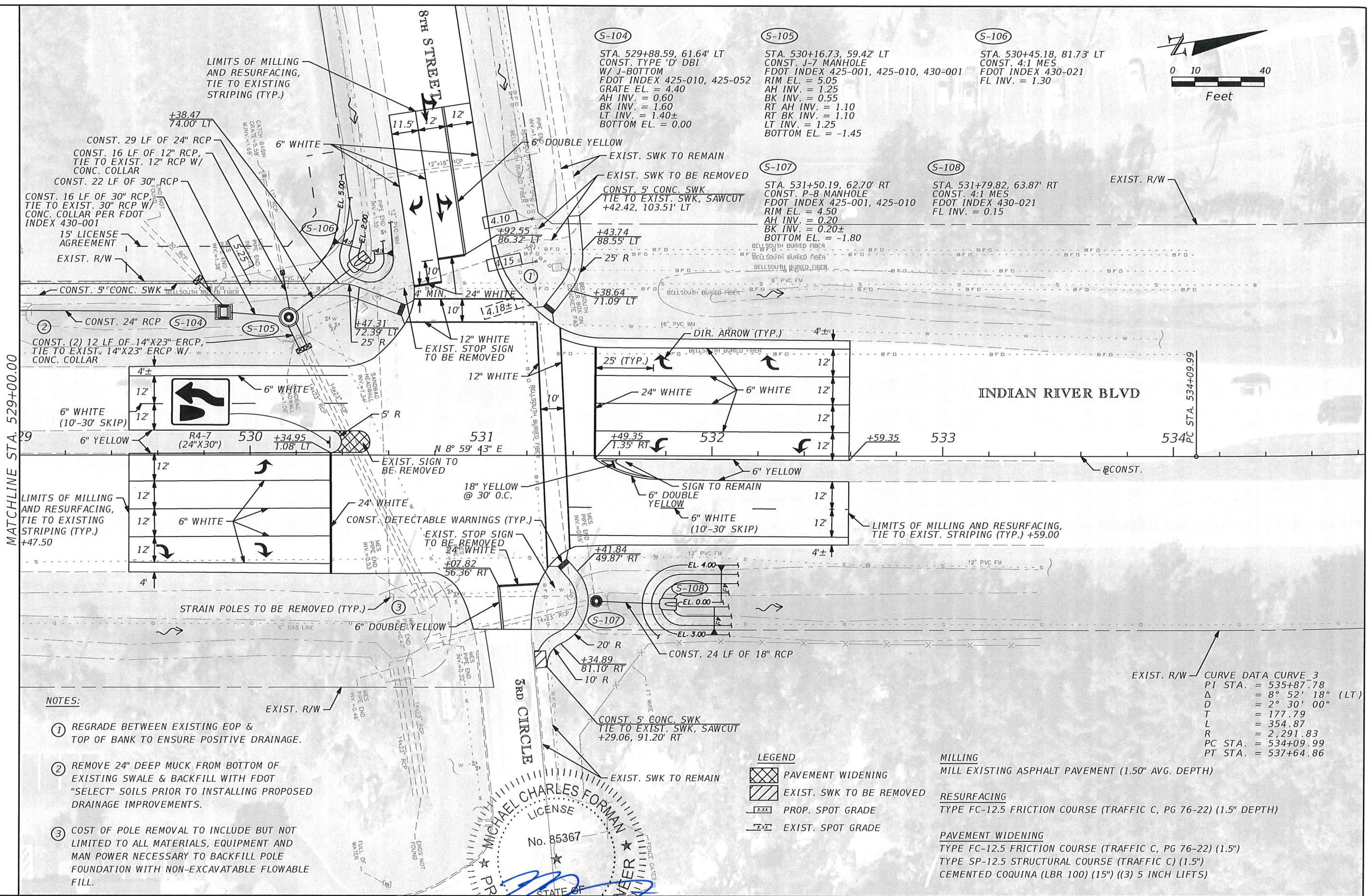
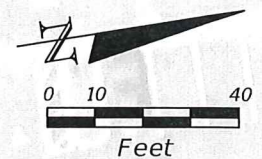
Kimley-Horn
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VERO BEACH, FL 32960
(772) 794-4100
CERTIFICATE OF AUTHORIZATION: 00000696

| REVISIONS | | | | | |
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INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS
INDIAN RIVER BOULEVARD & 8th STREET
SIGNALIZATION IMPROVEMENTS

PLAN SHEET

SHEET NO.
7



MATCHLINE STA. 529+00.00

PC STA. 534+09.99

NOTES:

- ① REGRADE BETWEEN EXISTING EOP & TOP OF BANK TO ENSURE POSITIVE DRAINAGE.
- ② REMOVE 24" DEEP MUCK FROM BOTTOM OF EXISTING SWALE & BACKFILL WITH FDOT "SELECT" SOILS PRIOR TO INSTALLING PROPOSED DRAINAGE IMPROVEMENTS.
- ③ COST OF POLE REMOVAL TO INCLUDE BUT NOT LIMITED TO ALL MATERIALS, EQUIPMENT AND MAN POWER NECESSARY TO BACKFILL POLE FOUNDATION WITH NON-EXCAVATABLE FLOWABLE FILL.

LEGEND

- PAVEMENT WIDENING
- EXIST. SWK TO BE REMOVED
- PROP. SPOT GRADE
- EXIST. SPOT GRADE

MILLING

MILL EXISTING ASPHALT PAVEMENT (1.50" AVG. DEPTH)

RESURFACING

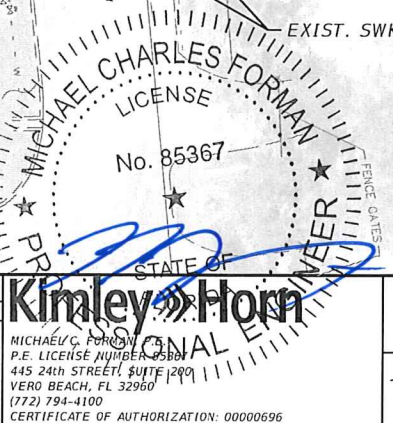
TYPE FC-12.5 FRICTION COURSE (TRAFFIC C, PG 76-22) (1.5" DEPTH)

PAVEMENT WIDENING

TYPE FC-12.5 FRICTION COURSE (TRAFFIC C, PG 76-22) (1.5")
 TYPE SP-12.5 STRUCTURAL COURSE (TRAFFIC C) (1.5")
 CEMENTED COQUINA (LBR 100) (15") ((3) 5 INCH LIFTS)

EXIST. R/W

| CURVE DATA CURVE 3 | |
|--------------------|-------------------|
| PI STA. | = 535+87.78 |
| Δ | = 8° 52' 18" (LT) |
| D | = 2° 30' 00" |
| T | = 177.79 |
| L | = 354.87 |
| R | = 2,291.83 |
| PC STA. | = 534+09.99 |
| PT STA. | = 537+64.86 |



| REVISIONS | | | | | |
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| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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Kimley-Horn
 MICHAEL C. FORMAN, P.E.
 P.E. LICENSE NUMBER 85367
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 VERO BEACH, FL 32960
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 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 BOARD OF COUNTY COMMISSIONERS
 INDIAN RIVER BOULEVARD & 8TH STREET
 SIGNALIZATION IMPROVEMENTS

PLAN SHEET
 SHEET NO. 8

INDIAN RIVER COUNTY - TRAFFIC SIGNAL GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD); FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (STANDARD SPECIFICATIONS) 2016; FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS (STANDARD INDEX(ES)) 2016, ALL SUPPLEMENTS THERETO; NATIONAL ELECTRIC CODE; INDIAN RIVER COUNTY TRAFFIC SIGNAL SPECIFICATIONS; AND ANY OR ALL INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION REQUIREMENTS.
2. THE AGENCY RESPONSIBLE FOR MAINTENANCE OF THE TRAFFIC SIGNAL AND RELATED COMMUNICATIONS EQUIPMENT IS INDIAN RIVER COUNTY TRAFFIC ENGINEERING DIVISION (IRCTED) (772) 226-1547. ALL TRAFFIC SIGNAL AND RELATED COMMUNICATIONS EQUIPMENT WHEN USING PAY ITEM SERIES: 632, 634, 635, 660, 670, 684 AND 685 FOR THIS CONTRACT SHALL BE COMPATIBLE WITH IRCTED'S CENTRAL COMPUTER NETWORK SYSTEM. PRIOR TO ANY PURCHASING OF THE ABOVE PRODUCTS, ENSURE THEY HAVE BEEN APPROVED FOR SYSTEM COMPATIBILITY BY THE MAINTAINING AGENCY.
3. IRCTED SHALL BE NOTIFIED AT (772) 226-1547 AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO ANY WORK BEING PERFORMED AT A SIGNALIZED LOCATION IN ORDER TO PROPERLY TRANSFER MAINTENANCE RESPONSIBILITIES.
4. THE CONTRACTOR SHALL DELIVER ALL REMOVED TRAFFIC SIGNAL EQUIPMENT, EXCEPT CONCRETE STRAIN POLES, TO IRCTED LOCATED AT 4548 41ST STREET, VERO BEACH, FL 32967 (772) 226-3460. THE COST OF DELIVERY TO IRCTED SHALL BE INCLUDED IN THE REMOVAL OF THE RELATED SIGNAL PAY ITEM. THE CONTRACTOR SHALL CONTACT THE IRCTED SEVEN (7) FULL BUSINESS DAYS PRIOR TO THE DELIVERY OF ANY REMOVED EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR CONCRETE STRAIN POLE DISPOSAL AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE UNDER CONSTRUCTION CONCURRENTLY WITH THIS PROJECT AND THAT COORDINATION EFFORTS MAY BE NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE CONSTRUCTION SCHEDULE AND FOR THE AMOUNT OF COORDINATION REQUIRED. THE COST SHALL BE INCLUDED IN THE BID.
6. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER RELATED WORK ACTIVITY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
7. THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE-CALL AT 1-800-432-4770 FOR LOCATIONS OF UTILITIES WITHIN THE AREA(S) OF CONSTRUCTION FOR THIS PROJECT A MINIMUM OF TWO (2) FULL BUSINESS DAYS PRIOR TO ANY DIGGING OR EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTACT ANY UTILITY OWNER(S) THAT MY NOT BE A "SUNSHINE" MEMBER.
8. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE LOCATION AND PROTECTION, REPAIR AND/OR REPLACMENT OF ALL UTILITIES THAT MAY BE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT. EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ANY REQUIRED UTILITY RELOCATIONS.
9. THE CONTRACTOR SHALL NOTIFY ALL INVOLVED UTILITIES TWO (2) FULL BUSINESS DAYS IN ADVANCE, BEFORE SETTING TRAFFIC SIGNAL POLES OR PERFORMING ANY DIGGING OR OTHER EXCAVATION WORK, SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR. KNOWN UTILITY COMPANIES INCLUDE:

| COMPANY | FACILITIES | CONTACT | TELEPHONE NUMBER |
|--------------------------------------|---------------|------------------|------------------|
| AT&T | TELEPHONE | LUKE FOLKERTS | (407) 496-6041 |
| CITY GAS COMPANY OF FLORIDA | GAS | DOROTHY HAMILTON | (321) 638-3412 |
| FLORIDA POWER & LIGHT (INDIAN RIVER) | ELECTRIC | ROB MORRIS | (772) 223-4215 |
| INDIAN RIVER COUNTY PUBLIC WORKS | SIGNALIZATION | JOHN ANKENY | (772) 226-1821 |
| INDIAN RIVER COUNTY | WATER & SEWER | ARJUNA WERAGODA | (772) 226-1821 |
| | WATER & SEWER | JESSEROLAND | (772) 226-1836 |
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. IF REQUIRED, FEE SHALL BE REFLECTED IN THE CONTRACTOR'S BID UNIT PRICE FOR ELECTRICAL POWER SERVICE ASSEMBLY.
11. THE CONTRACTOR SHALL COORDINATE AND FIELD VERIFY LOCATION(S) OF THE ELECTRIC SERVICE POINT PRIOR TO INSTALLING CONDUIT, DISCONNECT SWITCH, AND PULL BOXES.
12. (IF APPLICABLE) IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE FDOT SPECIFICATIONS.
13. THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN ACCORDANCE WITH THE APPLICABLE GUIDELINES SET FORTH IN FDOT DESIGN STANDARD INDEXES 600 THROUGH 660; THE MUTCD; AND SECTION 102 OF THE STANDARD SPECIFICATIONS.
14. THE CONTRACTOR SHALL MAKE ALL VIDEO DETECTORS INSTALLED AS PART OF THE PROJECT FULLY OPERATIONAL IN ACCORDANCE WITH THEIR ASSOCIATED ISOLATED INTERSECTION SIGNAL TIMING CHART PRIOR TO THE ACTIVATION OF THE SIGNAL.
15. THE CONTRACTOR SHALL VERIFY ALL SIGNAL POLE ELEVATIONS AND LOCATIONS INCLUDING POSSIBLE UTILITY CONFLICTS PRIOR TO PROCURMENT. THE CONTRACTOR SHALL VERIFY THAT ALL SIGNAL POLE ELEVATIONS WILL MEET MUTCD, FDOT AND INDIAN RIVER COUNTY REQUIREMENTS FOR LOW POINT OF CLEARANCE. ALL SIGNAL ASSEMBLIES SHALL HAVE A VERTICAL CLEARANCE OF 17.5 FEET MINIMUM AND 19 FEET MAXIMUM FROM THE BOTTOM OF THE ASSEMBLY TO THE ROAD.
16. UNDER NO CIRCUMSTANCES SHALL ENERGIZED SIGNAL CABLE BE PLACED IN THE SAME CONDUIT OR PULL BOX AS VIDEO DETECTION CABLE OR COMMUNICATION.
17. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT LEGIBLE, WEATHERPROOF TAGS THAT ARE SECURELY ATTACHED TO EACH CABLE. THE TAGGING SYSTEM PROPOSED SHALL BE SUBMITTED FOR APPROVAL WITH THE OTHER EQUIPMENT SUBMITTALS REQUIRED FOR THIS PROJECT.
18. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION UNLESS SPECIFIED OTHERWISE.
19. TRAFFIC SIGNAL ACCEPTANCE TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.
20. THERE WILL BE A 90 DAY WARRANTY PERIOD SUBJECT TO THE REQUIREMENTS CONTAINED IN ARTICLE (SECTIONS 611-5 THROUGH 611-7.3) "CONTRACTOR'S WARRANTY PERIOD FOR SIGNAL INSTALLATIONS" AS FOUND IN FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2016.
21. THE CONTRACTOR SHALL PROVIDE FOUR COPIES OF MARKED-UP (AS-BUILT) CONSTRUCTION PLANS, ALSO A COPY OF SHOP DRAWING AND A COPY OF MAST ARM SPECIFICATION AND ANY/ALL APPROVED SHOP DRAWINGS AT THE TIME OF SIGNAL CONDITIONAL ACCEPTANCE INSPECTION BY THE MAINTAINING AGENCY.
22. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW IN ACCORDANCE WITH SECTION 603 OF THE STANDARD SPECIFICATIONS:

MICHAEL FORMAN, P.E.
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
23. THE CONTRACTOR SHALL SUBMIT IN WRITING A REQUEST FOR SIGNAL INSPECTION TO THE MAINTAINING AGENCY. (ALLOW TWO (2) WEEKS FOR SIGNAL INSPECTION).
24. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN FOUR (4) PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGNS (PCMS) FOR A PERIOD OF TWO WEEKS. THE PCMS WILL BE LOCATED AT AN APPROPRIATE DISTANCE IN ADVANCE OF THE APPROACHES TO THE NEW SIGNALIZED INTERSECTION AS SPECIFIED BY THE MAINTAINING AGENCY'S ENGINEER. THE PCMS WILL BE PROVIDED ONE (1) WEEK PRIOR TO THE SCHEDULED ACTIVATION TO FULL COLOR OPERATION AND SHALL REMAIN IN PLACE FOR ONE (1) WEEK FOLLOWING ACTIVATION. COST OF FURNISHING PCMS TO BE INCLUDED UNDER PAY ITEM NO. 102-1 MAINTENANCE OF TRAFFIC.



| REVISIONS | | | | | | Kimley-Horn MICHAEL C. FORMAN, P.E. P.E. LICENSE NUMBER 85367 445 24TH STREET, SUITE 200 VERO BEACH, FL 32960 (772) 794-4100 CERTIFICATE OF AUTHORIZATION: 00000696 | INDIAN RIVER COUNTY | INDIAN RIVER COUNTY | SHEET NO. |
|-----------|----|-------------|------|----|-------------|--|-------------------------------|------------------------------|-----------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | BOARD OF COUNTY COMMISSIONERS | TRAFFIC SIGNAL GENERAL NOTES | |
| | | | | | | INDIAN RIVER COUNTY | INDIAN RIVER COUNTY | 9 | |
| | | | | | | INDIAN RIVER BOULEVARD & 8TH STREET | TRAFFIC SIGNAL GENERAL NOTES | | |
| | | | | | | SIGNALIZATION IMPROVEMENTS | | | |

INDIAN RIVER COUNTY - TRAFFIC SIGNAL GENERAL NOTES

25. IN ACCORDANCE WITH FDOT STANDARDS & SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE THE ASSOCIATED TRAFFIC SIGNAL MANUFACTURER WARRANTIES FOR THE ASSOCIATED MATERIALS AND/OR EQUIPMENT PRIOR TO THE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL.

26. PRIOR TO ACTIVATION THE PCMS SIGN SHALL BE:
 (PANEL ONE LINE 1) "TRAFFIC"
 (PANEL ONE LINE 2) "SIGNAL"
 (PANEL ONE LINE 3) "WILL BE"
 (PANEL TWO LINE 1) "ACTIVE"
 (PANEL TWO LINE 2) "ON DAY"
 (PANEL TWO LINE 3) "MONTH XX"

SUBSTITUTION FOR THE WORD "DAY" SHALL BE AS FOLLOWS:

SUNDAY AS "SUN"
 MONDAY AS "MON"
 TUESDAY AS "TUES"
 WEDNESDAY AS "WED"
 THURSDAY AS "THUR"
 FRIDAY AS "FRI"
 SATURDAY AS "SAT"

SUBSTITUTION FOR THE WORD "MONTH" SHALL BE AS FOLLOWS:

JANUARY AS "JAN"
 FEBRUARY AS "FEB"
 MARCH AS "MAR"
 APRIL AS "APR"
 MAY AS "MAY"
 JUNE AS "JUN"
 JULY AS "JUL"
 AUGUST AS "AUG"
 SEPTEMBER AS "SEP"
 OCTOBER AS "OCT"
 NOVEMBER AS "NOV"
 DECEMBER AS "DEC"

SUBSTITUTION FOR THE WORD "XX" SHALL BE AS FOLLOWS:

THE NUMERICAL DAY OF THE MONTH, FROM ONE (1) TO THIRTY-ONE (31). THE DATES LESS THAN TEN (10) SHALL BE PRECEDED BY A ZERO (0); EXAMPLE: "JAN 03"FOR JANUARY 3RD.

27. AFTER THE TURN-ON, THE PCMS SHALL BE CHANGED TO:
 (PANEL ONE LINE 1) "TRAFFIC"
 (PANEL ONE LINE 2) "SIGNAL"
 (PANEL TWO LINE 1) "NOW"
 (PANEL TWO LINE 2) "ACTIVE"

PANEL TWO, LINE AND LINE 2, SHALL FLASH THREE (3) TIMES BEFORE REVERTING BACK TO PANEL ONE.

PRIOR TO SIGNAL ACTIVATION

PANEL 1

| | | | | | | | |
|---|---|---|---|---|---|---|--|
| T | R | A | F | F | I | C | |
| | S | I | G | N | A | L | |
| W | I | L | L | | B | E | |

PANEL 2 (FLASH)

| | | | | | | | | |
|--|---|---|---|---|---|---|---|---|
| | A | C | T | I | V | E | | |
| | O | N | | D | A | Y | | |
| | M | O | N | T | H | | X | X |

AFTER SIGNAL ACTIVATION

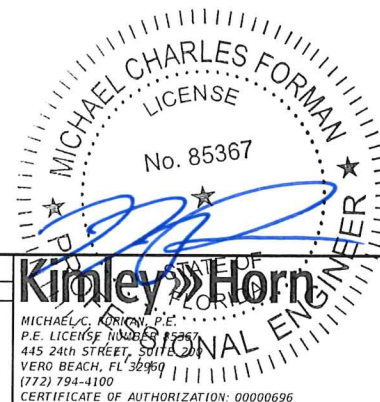
PANEL 1

| | | | | | | | |
|---|---|---|---|---|---|---|--|
| T | R | A | F | F | I | C | |
| | S | I | G | N | A | L | |
| | | | | | | | |

PANEL 2 (FLASH)

| | | | | | | | |
|--|--|---|---|---|---|---|---|
| | | N | O | W | | | |
| | | A | C | T | I | V | E |
| | | | | | | | |

28. THE ENGINEER OR CONTRACTOR SHALL SUBMIT IN WRITING A REQUEST FOR SIGNAL ACTIVATION (TURN-ON) TO THE MAINTAINING AGENCY. THE MAINTAINING AGENCY WILL SCHEDULE THE SIGNAL ACTIVATION A MINIMUM OF SEVEN (7) DAYS AFTER NOTIFICATION THAT THE SIGNAL HAS BEEN PLACED FLASHING MODE AND INSPECTIONS BY MAINTAINING AGENCY FORCES HAVE BEEN COMPLETED.
29. THE CONTRACTOR SHALL BE PRESENT AND SHALL CONDUCT THE TURN-ON TO FULL COLOR OPERATION IN THE PRESENCE OF THE MAINTAINING AGENCY'S ENGINEER. NO ACTIVATIONS SHALL BE SCHEDULED ON MONDAYS, FRIDAYS OR WEEKENDS UNLESS OTHERWISE APPROVED BY THE MAINTAINING AGENCY'S ENGINEER. ANY PROPOSED OR NECESSARY SCHEDULE CHANGE DURING THE SEVEN (7) DAYS PRIOR TO SCHEDULED TURN-ON WILL BE AT THE DETERMINATION AND DISCRETION OF THE MAINTAINING AGENCY'S ENGINEER.
30. UPON COMPLETION AND FINAL ACCEPTANCE OF THE PERMANENT TRAFFIC SIGNAL INSTALLATION BY INDIAN RIVER COUNTY, THE SIGNALS AND EQUIPMENT SHALL BE MAINTAINED BY IRCTED.
31. WHEN IRCTED DETERMINES THAT THE NEED FOR A TRAFFIC SIGNAL IS CRITICAL TO THE PUBLIC WELFARE, EARLY TURN-ON OF THE SIGNAL MAY BE REQUIRED BEFORE THE COMPLETION OF THE CONTRACT. IF THIS NEED ARISES, IRCTED MAY ASSUME THE RESPONSIBILITY FOR MAINTENANCE AND LIABILITY, OR NEGOTIATE WITH THE CONTRACTOR FOR MAINTENANCE AND LIABILITY, FOR SUCH A SIGNAL. NEW SIGNALS SHALL NOT BE PLACED ON FULL COLOR OPERATION UNTIL THE DATE OF INSPECTION EXCEPT AS STATED ABOVE. NEW SIGNALS SHALL BE FLASHED NO LESS THAN A WEEK OR MORE THAN TWO WEEKS PRIOR TO THE INSPECTION. SIGNAL HEADS MUST BE BAGGED WITH BURLAP OR TURNED BACK UNTIL THIS TIME.



| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | INDIAN RIVER COUNTY TRAFFIC SIGNAL GENERAL NOTES | SHEET NO. 10 |
|-----------|----|-------------|------|----|-------------|---|--|------------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | | |
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INDIAN RIVER COUNTY - TRAFFIC SIGNAL SPECIFICATIONS

A. POWER SERVICE

1. POWER SERVICES SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARD INDEX NO. 17504, 17736
2. SERVICE BREAKER BOX SHALL BE SQUARE-D MODEL #Q024L70RB, OR APPROVED EQUIVALENT.
3. POWER SERVICES ARE TO BE 120/240 VAC WITH TRIPLEX SERVICE DROP WIRE WITH TWO BLACK AND ONE WHITE CABLE FROM SERVICE DISCONNECT TO PAOWER SERVICE CONNECTION POINT.
4. ALL ABOVE GROUND CONDUIT SHALL BE HD GAVINIZED OR ALUMINUM.
5. MAST ARM POWER SERVICES SHALL BE MOUNTED ON A STUB POLE.
6. UNDERGROUND POWER SERVICE SHOULD HAVE AN FPL PULL BOX FOR THE LINE SIDE NEAR SERVICE DISCONNECT.
7. CONCRETE STRAIN POLE INSTALLATIONS SHALL HAVE THE POWER SERVICE MOUNTED ON THE STRAIN POLE.

B. TRAFFIC SIGNAL CONTROLLER

1. SHALL BE COMPATIBLE WITH ECONOLITE SYSTEM SOFTWARE.
2. SHALL HAVE INTERNAL TIME-BASED CAPABILITIES
3. SHALL HAVE INTERNAL RAILROAD PREEMPTION WITH IMMEDIATE RETURN TO COORDINATION.

C. TRAFFIC SIGNAL COMMUNICATIONS INTERCONNECT

NOTE: VARIANCE TO COMMUNICATION INTERCONNECT DUE TO DESIGN CRITERIA WOULD REQUIRE PRIOR APPROVAL FROM INDIAN RIVER COUNTY.

1. TWO 2" CONDUITS SHALL BE INSTALLED WITH ALL INTERCONNECT RUNS.
2. PULL BOXES CONTAINING INTERCONNECT ARE TO BE INSTALLED AT NO MORE THAN 1000 FOOT INTERVALS MARKED "TRAFFIC SIGNAL"(FDOT DESIGN STANDARD INDEX 17700).
3. FIBER OPTIC INTERCONNECT RUNS SHALL HAVE A SLACK/SPLICE BOX AT ALL SIGNALIZED INTERSECTIONS MARKED "FIBER OPTICS". SLACK/SPLICE BOXES SHALL CONTAIN A MINIMUM OF 100 FEET OF FIBER OPTIC CABLE SLACK (FDOT DESIGN STANDARD 635-001) AND SHALL BE LOCATED AT NO MORE THAN 1/2-MILE INTERVALS.
4. FIBER OPTIC CABLE SHALL BE 96-FIBER SINGLE MODE. A #14 AWG (OR IRC-APPROVED ALTERNATIVE) TRACE WIRE SHALL BE INSTALLED WITH THE FIBER RUN.
5. THE CONNECTION FROM THE SLACK/SPLICE BOX TO THE SIGNAL CABINET (PIG TAIL) SHALL BE A 12-FIBER SINGLE MODE CABLE. FIBER IN THE CABINET SHALL BE TERMINATED IN A FIBER OPTIC TERMINAL PANEL. THE FIBER CABLE SHALL NOT BE RUN BEHIND SHELVEING.
6. IN THE CABINET, DATA CONVERSION WILL BE ACCOMPLISHED WITH RUGGEDCOM GIGABIT ETHERNET SWITCH OR IRC-APPROVED EQUIVALENT.

D. TRAFFIC SIGNAL MAST ARM

1. MAST ARMS SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS INDEX NO. 649-030, 649-031.
2. ALL MAST ARM POLES SHALL HAVE L.E.D., COBRA HEAD STYLE LUMINAIRES, BARRING OBSTRUCTIONS OR DESIGN CRITERIA. EACH LUMINAIRE SHALL BE PHOTO CELL CONTROLLER AND NOT POWERED THROUGH SIGNAL CABINET. WIRING SHALL BE #10 AWG OR LARGER SIZE AWG.
3. MAST ARM POLES ARE TO HAVE A TERMINAL COMPARTMENT IN PLACE OF A HAND HOLE, PER FDOT INDEX NO. 649-031.
4. MAST ARM MOUNTING HEIGHT (MEASUREMENT UB INDEX NO. 17743) SHALL BE 19-FEET FOR HORIZONTAL AND 20-FEET FOR VERTICAL MOUNTED SIGNALS, IN THE ABSENCES OF GEOMETRIC ABNORMALTIES.
5. ALL MAST ARMS SHALL BE GALVANIZED STEEL WITH FACTORY FINISHED U.S. GOVERNMENT FEDERAL STANDARD 595C #14066 (HIGHWAY GREEN) IN ACCORDANCE WITH FDOT.
6. EACH TERMINAL COMPARTMENT SHALL HAVE A 20 CIRCUIT AWG#14 TERMINAL BLOCK.
7. MAST ARMS ARE TO HAVE L.E.D. INTERNALLY-ILLUMINATED SINGLE-SIDED STREET NAME SIGNS WITH LOCAL STREET NAMES AND 1" WHITE BORDER. THE SIGNS SHALL BE CONTROLLED FROM A PHOTO CELL WITH IN THE SIGNAL CABINET THE SIGNS ARE NOT TO HAVE INDIVIDUALL PHOTO CELL. THE STREET NAME SIGNS ARE TO BE MOUNTED WITH FIXED BRACKETS ON THE ARM BETWEEN THE POLE AND THE FIRST TRAFFIC SIGNAL.

E. TRAFFIC SIGNAL POLES & SPAN WIRE

1. POLES SHALL FOLLOW THE LATEST STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARD INDEX NO. 17725.
2. STRAIN POLES SHALL HAVE L.E.D., COBRA HEAD STYLE LUMINAIRES, BARRING OBSTRUCTIONS OR DESIGN CRITERIA. EACH LUMINAIRE SHALL BE PHOTO CELL CONTROLLER AND NOT POWERED THROUGH SIGNAL CABINET.
3. ALL ABOVE GROUND CONDUIT SHALL BE HD GAVINIZED.
4. BOTH UPPER AND LOWER SPAN SHALL BE NO LESS THAN 3/8 INCH CABLE WIRE.
5. THE SIGNAL CABLE SHALL BE ATTACHED TO THE MESSENGER WIRE BY LASHING RODS.

F. TRAFFIC SIGNAL HEADS

1. TRAFFIC SIGNALS MOUNTED ON SPAN CABLE ARE TO BE LIGHTWEIGHT MCCAIN SIGNAL, (RED SECTION TO BE ALUMINUM AND ALL OTHER SECTIONS TO BE POLY PLASTIC), 12 INCH INDICATIONS.
2. TRAFFIC SIGNALS MOUNTED ON MAST SUPPORTS ARE TO BE ALL AUMIMUM MCCAIN SIGNAL 12-INCH INDICATIONS. THE MOUNTING SHALL BE HORIZONTAL USING PELCO ASTRO BRAC OR IRC-APPROVED EQUIVALENT. SPAN MOUNT SIGNALS ARE TO BE MOUNTED VERTICAL. ALL VEHICLE SIGNAL HEADS ARE TO HAVE RETRO-RELFECTIVE BACK PLATES.
3. TRAFFIC SIGNALS ARE TO BE SUPPLIED WITH ALL L.E.D. INDICATIONS, INCLUDING ALL ARROWS AND YELLOWS.
4. TRAFFIC SIGNALS ARE TO BE SUPPLIED WITH TUNNEL VISORS.
5. TRAFFIC SIGNALS AND ASSOCIATED ACCESSORIES, INCLUDING BUT NOT LIMITED TO BACKPLATES SHALL BE MCCAIN.
6. PEDESTRIAN SIGNALS ARE TO BE COUNT DOWN PEDESTRIAN SIGNALS WITH INTERNATIONAL-STYLE HAND/MAN (SYMBOLS) WITH FULL (NOT OUTLINE) L.E.D. INDICATIONS. EACH CORNER WILL BE FED WITH ONE SEVEN CONDUCTOR CABLE FOR PEDESTRIAN SIGNAL HEAD AND ONE FOUR CONDUCTOR CABLE FOR PEDESTRIAN DETECTOR.THESE CABLES WILL RUN FROM PEDESTRIAN SIGNAL AND DETECTOR DIRECTLY TO CONTROLLER BOX. (NO SPLICES)

F. VIDEO DETECTORS

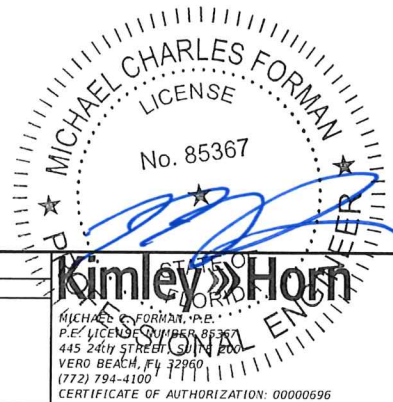
1. VIDEO DETECTION SYSTEM SHALL BE ECONOLITE LATEST TECHNOLOGY OR IRC-APPROVED EQUIVALENT.

G. VIDEO SURVEILLANCE

1. VIDEO CAMERAS SHALL BE AXIS Q6055-E PTZ DOME NETWORK CAMERA, LATEST TECHNOLOGY OR IRC-APPROVED EQUIVALENT.

H. BATTERY BACK-UP

1. BATTERY BACKUP SYSTEM IS TO BE USED ON ALL INSTALLATIONS UNLESS OTHERWISE STATED.
2. BATTERY BACKUP SHALL BE MYERS UPS SYSTEM MP2000E-TB WITH STANDING CABINET..

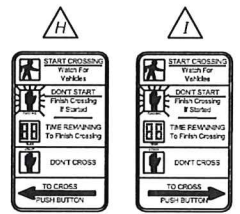
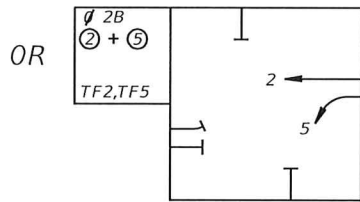
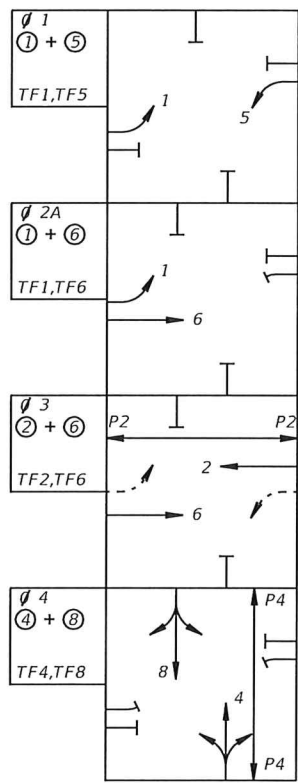


| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | INDIAN RIVER COUNTY TRAFFIC SIGNAL SPECIFICATIONS | SHEET NO. 11 |
|-----------|-------------|-------------|------|----|-------------|---|---|------------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | | |
| 3/25/2020 | Mike Forman | | | | | | | |

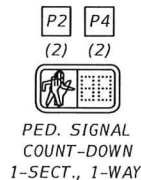
| DETECTION CAMERA ASSIGNMENTS | | | | |
|------------------------------|----------|--------------------|-----------------|------------------|
| CAMERA NO. | ZONE NO. | DETECTOR OPERATION | TIMING FUNCTION | DELAY TIME (SEC) |
| V1 | 1 | NORMAL | 1 | 3 |
| | 6 | NORMAL | 6 | - |
| V2 | 8R | NORMAL | 8R | 3 |
| | 8 | NORMAL | 8 | - |
| V3 | 5 | NORMAL | 5 | 3 |
| | 2 | NORMAL | 2 | - |
| V4 | 4 | NORMAL | 4 | 3 |

DETECTION CAMERA ASSIGNMENTS AND DETECTION ZONE AREAS ARE PRELIMINARY AND MAY REQUIRE FIELD ADJUSTMENT BY THE CONTRACTOR DURING INSTALLATION. DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

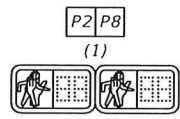
ASSOCIATED PHASE MOVEMENTS



R10-3E (3 REQ'D) R10-3E (1 REQ'D)
PEDESTRIAN PUSH BUTTON SIGNS R10-3E INCLUDED IN THE COST OF PAY ITEM 665-1-11.



653-1-11 (2 AS)

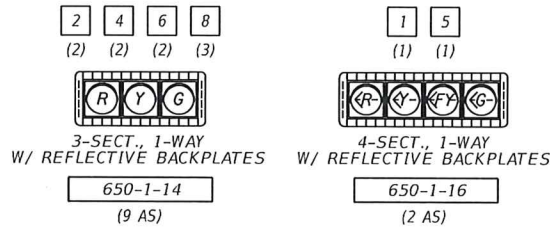


653-1-12 (1 AS)

CONTROLLER OPERATIONS

1. MAJOR STREET: INDIAN RIVER BOULEVARD (MOVEMENTS 2 AND 6)
MINOR STREET: 8TH STREET (MOVEMENTS 4 AND 8)
2. SPEED LIMITS: INDIAN RIVER BOULEVARD 45 MPH
8TH STREET 30 MPH
3. FLASHING OPERATION: MOVEMENTS 2 & 6 - RED
MOVEMENTS 4 & 8 - RED
4. ALL SIGNAL TIMING SHALL BE PROVIDED BY INDIAN RIVER COUNTY TRAFFIC ENGINEERING, PHONE (772) 226-1824.
5. CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION.
6. ALL CONDUIT RUNS SHALL CONSIST OF 4 RUNS (SIGNAL, VIDEO, LIGHTING AND 1 SPARE)

SIGNAL DISPLAY DETAILS



EL 5.00 (4)
POLE LOCATION= STA. 530+37.37 63.27' LT

| | |
|--------|-----------|
| 15 LF | 630-2-11 |
| 4 EA | 635-2-11 |
| 1 EA | 649-21-10 |
| 1 EA | 660-4-12 |
| 1 EA | 682-1-133 |
| 1 EA | 715-5-31 |
| 150 LF | 715-1-11 |

(3 CONDUCTORS)

EL 5.65 (1)
POLE LOCATION= STA. 531+27.53 97.87' LT

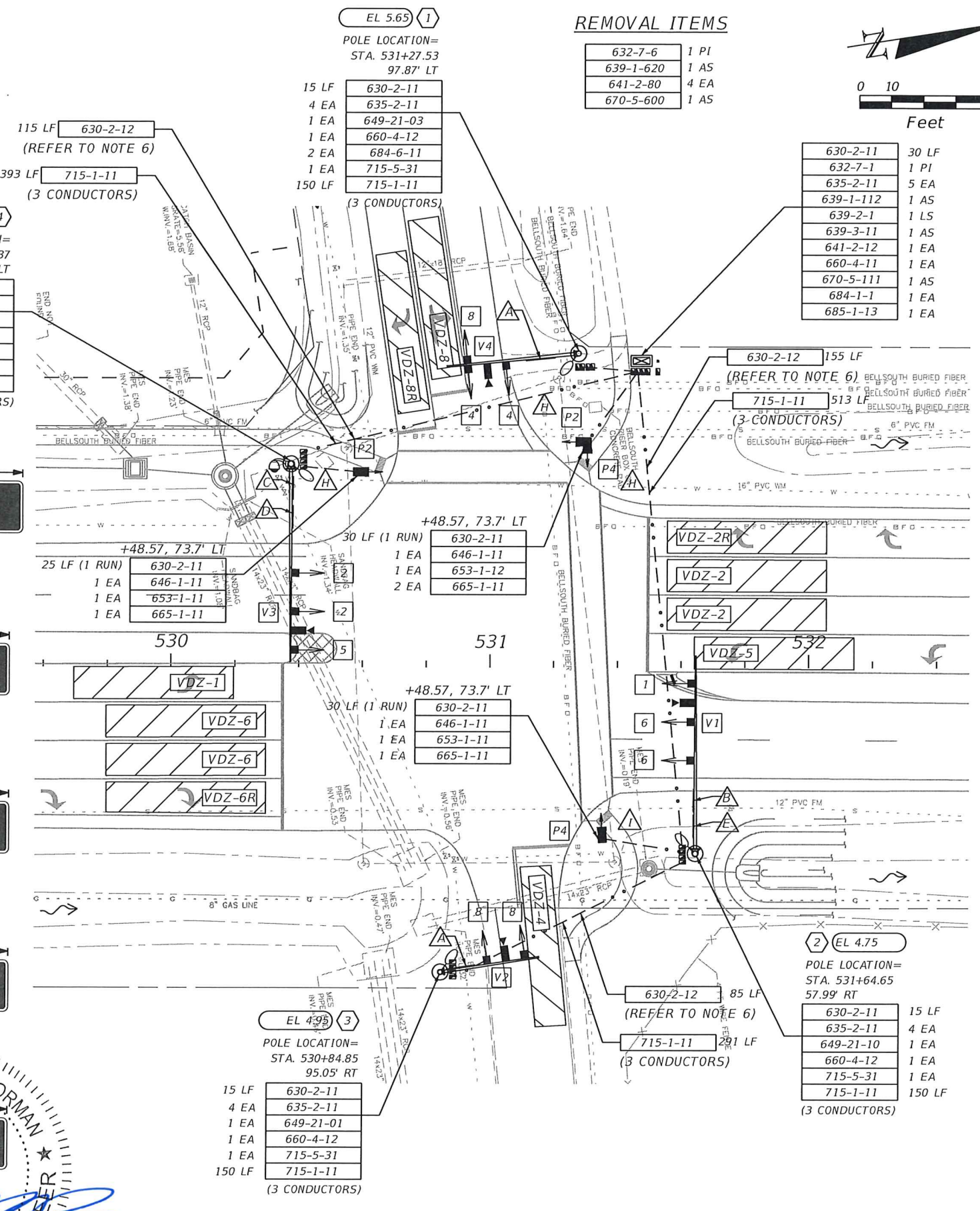
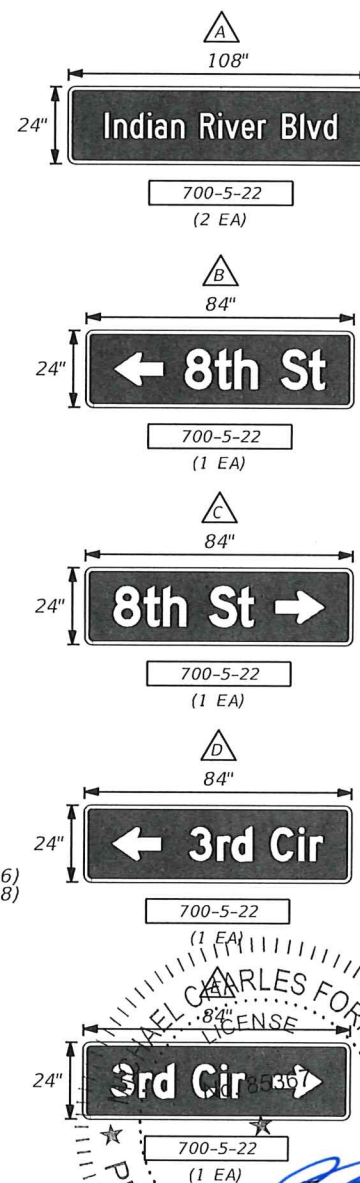
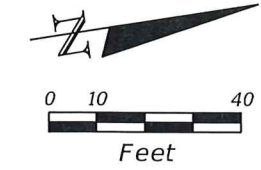
| | |
|--------|-----------|
| 15 LF | 630-2-11 |
| 4 EA | 635-2-11 |
| 1 EA | 649-21-03 |
| 1 EA | 660-4-12 |
| 2 EA | 684-6-11 |
| 1 EA | 715-5-31 |
| 150 LF | 715-1-11 |

(3 CONDUCTORS)

REMOVAL ITEMS

| | |
|-----------|------|
| 632-7-6 | 1 PI |
| 639-1-620 | 1 AS |
| 641-2-80 | 4 EA |
| 670-5-600 | 1 AS |

| | |
|-----------|-------|
| 630-2-11 | 30 LF |
| 632-7-1 | 1 PI |
| 635-2-11 | 5 EA |
| 639-1-112 | 1 AS |
| 639-2-1 | 1 LS |
| 639-3-11 | 1 AS |
| 641-2-12 | 1 EA |
| 660-4-11 | 1 EA |
| 670-5-111 | 1 AS |
| 684-1-1 | 1 EA |
| 685-1-13 | 1 EA |



Kimley-Horn
MICHAEL C. FORMAN
P.E. LICENSE NUMBER 85367
445 24th STREET, SUITE 1200
VERO BEACH, FL 32960
(772) 794-4100
CERTIFICATE OF AUTHORIZATION: 00000696

| REVISIONS | | | | | |
|-----------|----|-------------|------|----|-------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
| | | | | | |

INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS
INDIAN RIVER BOULEVARD & 8TH STREET
SIGNALIZATION IMPROVEMENTS

INDIAN RIVER BOULEVARD
& 8TH STREET
SIGNALIZATION PLAN

SHEET NO. 12

| STANDARD MAST ARM ASSEMBLIES DATA TABLE | | | | | | | | | | | Table Date 01-20-20 |
|---|------------------------|-----------|-----------|------------|-----------|----------|----------|---------|-----------|----------|---------------------|
| STRUCTURE ID NUMBERS | DESIGNATION | FIRST ARM | | SECOND ARM | | UF (deg) | LL (deg) | POLE | | | DRILLED SHAFT ID |
| | | ARM ID | FAA (ft.) | ARM ID | SAA (ft.) | | | POLE ID | UAA (ft.) | UB (ft.) | |
| Pole 1 | A40/S-P2/S/L-DS/16/4.5 | A40/S | - | - | - | - | 45 | P2/S/L | - | 18.5 | DS/16/4.5 |
| Pole 2 | A60/S-P4/S/L-DS/18/5.0 | A60/S | - | - | - | - | 45 | P4/S/L | - | 20.25 | DS/18/5.0 |
| Pole 3 | A30/S-P1/S/L-DS/12/4.0 | A30/S | - | - | - | - | 45 | P1/S/L | - | 19.0 | DS/12/4.0 |
| Pole 4 | A60/S-P4/S/L-DS/18/5.0 | A60/S | - | - | - | - | 45 | P4/S/L | - | 20.5 | DS/18/5.0 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

NOTES [NOTES DATE 11-01-16]:

- IF AN ENTRY APPEARS IN COLUMN FAA, A SHORTER ARM IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE ARM TIP AND THE ARM LENGTH SHORTENED FROM FA TO FAA. SAA SIMILAR.
- IF AN ENTRY APPEARS IN COLUMN UAA, A SHORTER POLE IS REQUIRED. THIS IS OBTAINED BY REMOVING LENGTH FROM THE POLE TIP AND THE POLE HEIGHT SHORTENED FROM UA TO UAA.
- ARM MOUNTING HEIGHT UB MUST BE BETWEEN 18-22 FEET.
- POLE TYPES P2 AND LARGER REQUIRE A MINIMUM 4.5 FOOT DIAMETER DRILLED SHAFT. POLE TYPES P5 AND LARGER REQUIRE A MINIMUM 5.0 FOOT DIAMETER DRILLED SHAFT.
- 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.
- WORK WITH INDEX 649-030 AND 649-031.

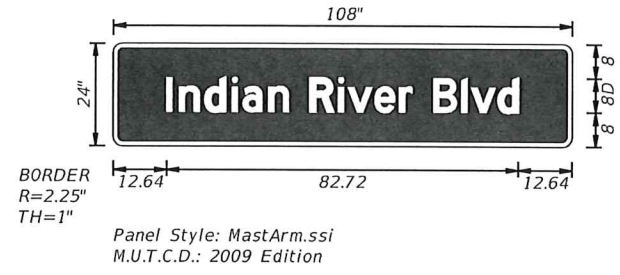
FOUNDATION NOTES:

- FOUNDATION DESIGN IS BASED ON SUBSURFACE SOIL EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION REPORT PROVIDED BY ARDAMAN & ASSOCIATES, INC., DATED DECEMBER 16, 2019 (ARDAMAN FILE NO. 19-5523).
- VALUES USED IN DESIGN:
 - MAST ARMS 1-4
 - SOIL FRICTION ANGLE = 30°
 - SOIL WEIGHT = 50 PCF (SUBMERGED)
 - SPT "N" VALUE = 9
- GEOTECHNICAL RECOMMENDATIONS
 - THE CONTRACTOR IS ADVISED THAT SUBSURFACE MATERIALS MAY BECOME UNSTABLE AND CAVE DURING EXCAVATION OF DRILLED SHAFTS.
 - BASED ON THE ENCOUNTERED SOIL AND GROUNDWATER CONDITIONS AT THE SITE, IT IS ANTICIPATED THAT THE SHAFTS WILL BE INSTALLED BY THE "WET CONSTRUCTION METHOD" AS DESCRIBED IN FDOT SPECIFICATION 455.
 - IT IS ANTICIPATED THAT A TEMPORARY CASING WILL BE NECESSARY TO STABILIZE THE NEAR SURFACE SOILS.



| REVISIONS | | | | | | INDIAN RIVER COUNTY BOARD OF COUNTY COMMISSIONERS INDIAN RIVER BOULEVARD & 8TH STREET SIGNALIZATION IMPROVEMENTS | STANDARD MAST ARM ASSEMBLIES DATA TABLE | SHEET NO. |
|-----------|----|-------------|------|----|-------------|---|--|-----------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | | 14 |
| | | | | | | | | |

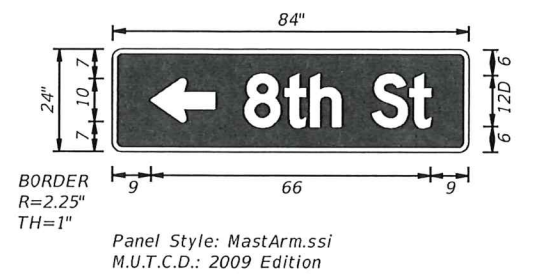
| | | | | | | | |
|-----------|--------------|------------------------|-------------|----------------|----|------------|--|
| SIGN NAME | A | QTY | 2 | SIGN NO. | | STATION(S) | |
| PANEL | | BORDER | | | | | |
| WIDTH | 108" | WIDTH | 1" | | | | |
| HEIGHT | 24" | RADII | 2.25" | | | | |
| LEGEND | White | COLOR | White | | | | |
| COLOR | Green | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| | | | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | | | |
| | | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|
| COPY | 1 | n | d | i | a | n | R | i | v | e | r | B | l | v | d | L | | |
| SPACE | 12.64 | 15.68 | 21.6 | 28 | 30.48 | 36.56 | 41.28 | 46.28 | 52.92 | 55.16 | 61.48 | 67.32 | 70.36 | 75.36 | 82 | 84.24 | 90.56 | 82.72 |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |
| COPY | | | | | | | | | | | | | | | | | | |
| SPACE | | | | | | | | | | | | | | | | | | |

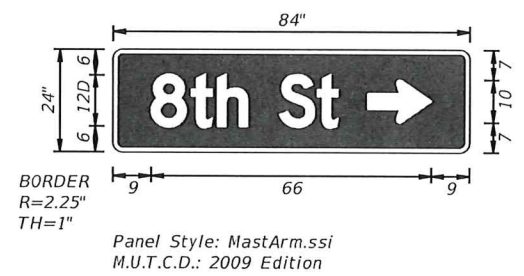
| | | | | | | | |
|-----------|--------------|------------------------|-------------|----------------|----|------------|--|
| SIGN NAME | B | QTY | 1 | SIGN NO. | | STATION(S) | |
| PANEL | | BORDER | | none | | | |
| WIDTH | 84" | WIDTH | 1" | | | | |
| HEIGHT | 24" | RADII | 2.25" | | | | |
| LEGEND | White | COLOR | White | | | | |
| COLOR | Green | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| AR_Type D | 90 | 9 | 7 | 10 | 15 | | |
| | | | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | | | |
| | | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|------|-------|
| COPY | 8 | t | h | S | t | L | |
| SPACE | 31.14 | 40.62 | 46.74 | 53.82 | 61.32 | 70.2 | 43.86 |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
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| SPACE | | | | | | | |

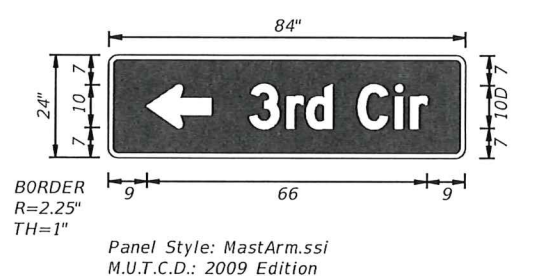
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|-----------|--------------|------------------------|-------------|----------------|----|------------|--|
| SIGN NAME | C | QTY | 1 | SIGN NO. | | STATION(S) | |
| PANEL | | BORDER | | | | | |
| WIDTH | 84" | WIDTH | 1" | | | | |
| HEIGHT | 24" | RADII | 2.25" | | | | |
| LEGEND | White | COLOR | White | | | | |
| COLOR | Green | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| AR_Type D | 270 | 60 | 7 | 10 | 15 | | |
| | | | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | | | |
| | | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | |
|-------|---|-------|------|-------|-------|-------|-------|
| COPY | 8 | t | h | S | t | L | |
| SPACE | 9 | 18.48 | 24.6 | 31.68 | 39.18 | 48.06 | 43.86 |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
| SPACE | | | | | | | |
| COPY | | | | | | | |
| SPACE | | | | | | | |

| | | | | | | | |
|-----------|--------------|------------------------|-------------|----------------|----|------------|--|
| SIGN NAME | D | QTY | 1 | SIGN NO. | | STATION(S) | |
| PANEL | | BORDER | | none | | | |
| WIDTH | 84" | WIDTH | 1" | | | | |
| HEIGHT | 24" | RADII | 2.25" | | | | |
| LEGEND | White | COLOR | White | | | | |
| COLOR | Green | | | | | | |
| SYMBOL(S) | ANGLE | X | Y | WID | HT | | |
| AR_Type D | 90 | 9 | 7 | 10 | 15 | | |
| | | | | | | | |
| SIGN NO. | NO. OF POSTS | EDGE OF LANE CLEARANCE | COLUMN SIZE | AVERAGE LENGTH | | | |
| | | | | | | | |



| | | | | |
|-----------------------|-----------------|-------------------|------|---------|
| NO. OF LIGHT FIXTURES | FIXTURE SPACING | PHOTOMETRIC CURVE | WATT | VOLTAGE |
| | | | | |

| | | | | | | | | |
|-------|-------|-------|-------|-------|------|------|------|-------|
| COPY | 3 | r | d | C | i | r | L | |
| SPACE | 33.15 | 41.95 | 46.55 | 52.55 | 58.8 | 67.6 | 71.2 | 41.85 |
| COPY | | | | | | | | |
| SPACE | | | | | | | | |
| COPY | | | | | | | | |
| SPACE | | | | | | | | |
| COPY | | | | | | | | |
| SPACE | | | | | | | | |
| COPY | | | | | | | | |
| SPACE | | | | | | | | |

| REVISIONS | | | | | |
|-----------|----|-------------|------|----|-------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
| | | | | | |

Kimley-Horn
 MICHAEL C. FORMAN, P.E.
 P.E. LICENSE NUMBER 88367
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 BOARD OF COUNTY COMMISSIONERS
 INDIAN RIVER BOULEVARD & 8th STREET
 SIGNALIZATION IMPROVEMENTS

GUIDE SIGN
 WORK SHEET

SHEET NO.
 15

