

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

INTELLIGENT TRANSPORTATION SYSTEMS PLANS

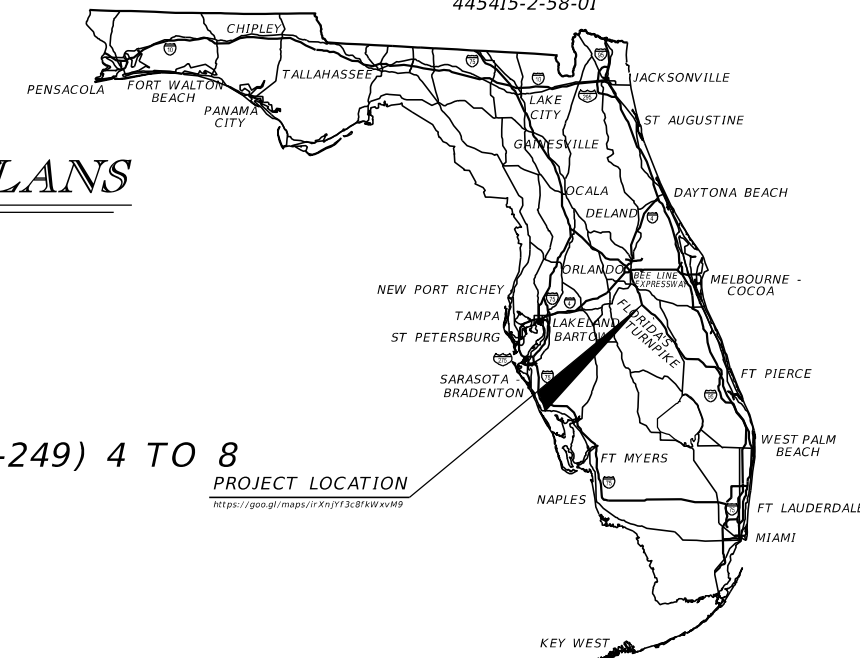
FINANCIAL PROJECT ID 436194-1-58-01

OSCEOLA COUNTY (92550)

COUNTY ROAD 525 (NEPTUNE ROAD)

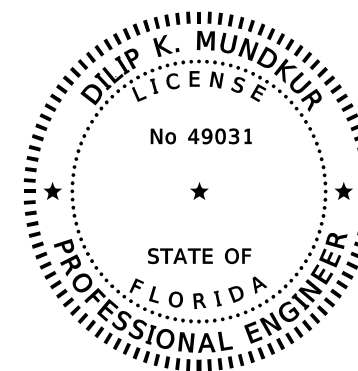
WIDEN TPK (SR91), PARTIN SETTLEMENT RD TO OSCEOLA PKWY (MP243.5-249) 4 TO 8

THIS PROJECT TO BE LET TO CONTRACT
WITH COUNTY PROJECT ID:
445415-2-58-01



INDEX OF ITS PLANS

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THIS ITEM HAS BEEN DIGITALLY
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ON THE DATE ADJACENT TO THE SEAL

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INTELLIGENT TRANSPORTATION
SYSTEMS PLANS
ENGINEER OF RECORD:

DILIP K. MUNDKUR, P.E. NO.: 49031
BES, INC.
225 AVENUE D NW
WINTER HAVEN, FLORIDA 33881
(813) 985-7800
CONTRACT NO.: TBD
VENDOR NO.: 20-0242028

FDOT PROJECT MANAGER:

MO HASSAN, P.E.

GEC PROJECT MANAGER:

SUMAN JULURU, P.E.

| CONSTRUCTION CONTRACT NO. | FISCAL YEAR | SHEET NO. |
|------------------------------|----------------|--------------|
| | 23 | IT-1 |

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | TOTAL THIS SHEET | | GRAND TOTAL | |
|--------------|--|------|---------------|-------|------|-------|------------------|-------|-------------|-------|
| | | | IT-5 | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL |
| | | | PLAN | FINAL | | | | | | |
| 611-1-1 | ITSFM SUBSURFACE DOCUMENTATION- PROJECT LENGTH | LF | 847.00 | | | | 847.00 | | 847.00 | |
| 611-2-2 | ITSFM LOCATION DOCUMENTATION- ITS SITE | EA | 1.00 | | | | 1.00 | | 1.00 | |
| 630-2-12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 964.00 | | | | 964.00 | | 964.00 | |
| 633-1-123 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS | LF | 1564.00 | | | | 1564.00 | | 1564.00 | |
| 633-2-31 | FIBER OPTIC CONNECTION, INSTALL, SPLICE | EA | 192.00 | | | | 192.00 | | 192.00 | |
| 633-3-11 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE | EA | 2.00 | | | | 2.00 | | 2.00 | |
| 633-3-12 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY | EA | 12.00 | | | | 12.00 | | 12.00 | |
| 633-6 | FIBER OPTIC CABLE LOCATOR | DA | 820.00 | | | | 820.00 | | 820.00 | |
| 635-2-118 | PULL & SPLICE BOX, F&I, HS-20 FOR TPE, 54" X 54" | EA | 1.00 | | | | 1.00 | | 1.00 | |
| 635-2-12 | PULL BOX, F&I, 24" X 36" COVER SIZE | EA | 2.00 | | | | 2.00 | | 2.00 | |
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THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

| | | | | | | | | | | | |
|-----------|-------------|------|-------------|---|--|--|--|---------|----------------------|-----------------------------|-----------|
| REVISIONS | | | | ENGINEER OF RECORD | | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SUMMARY OF PAY ITEMS | SHEET NO. |
| DATE | DESCRIPTION | DATE | DESCRIPTION | DILIP K. MUNDKUR LICENSE NUMBER: 49031 BES, INC. 225 AVENUE D NW WINTER HAVEN, FL 33881 | | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | IT-2 |
| | | | | | | | NEPTUNE | OSCEOLA | 436194-1-58-01 | | |

GENERAL:

1. PRIOR TO SPLICING, COORDINATE WITH FTE NETWORK DEPARTMENT FOR SPLICING DETAIL CONFIRMATION.
2. PRIOR TO BEGINNING ANY SPLICING WORK OF THE EXISTING 96-STRAND FIBER BACKBONE, PROVIDE 14-DAY ADVANCE NOTIFICATION TO THE FOLLOWING FTE AGENCIES AT A MINIMUM .
 - SUNWATCH OPERATIONS AT 877-786-3375 AND EMAIL AT TPKOUTAGE@DOT.STATE.FLUS
 - FTE ITS: (954) 934-1400
3. SPLICE PROPOSED 96 SM FIBER OPTIC CABLE TO EXISTING 96 SM FIBER OPTIC CABLE BUFFER TO BUFFER.
4. CONTRACTOR SHALL SCHEDULE OPERATIONS SO THAT COMMUNICATIONS DOWNTIME IS LIMITED TO FOUR HOURS.
5. DIRECTIONAL BORE LOGS MUST BE SUBMITTED WITH ASBUILTS AT THE END OF PROJECT.

CONDUIT:

1. THE FIBER OPTIC CONDUIT SYSTEM MUST CONSIST OF A MINIMUM OF FOUR (4) 1-1/4" CONDUITS FOR THE BACKBONE DUCT BANK. ONE (1) OF THE CONDUITS MUST CONTAIN THE FIBER OPTIC CABLE (FOC) BACKBONE. ONE (1) OF THE CONDUITS MUST CONTAIN TONE WIRE AND THE OTHER TWO (2) REMAINING CONDUITS ARE SPARES. THE CONDUITS MUST UTILIZE THE COLORS AS DESCRIBED BELOW. IN ADDITION, FOR CONDUITS THAT REQUIRE STRIPES, INCLUDE THREE (3) EQUALLY SPACED LONGITUDINAL STRIPES OF SUFFICIENT WIDTH AND COLOR INTENSITY TO BE EASILY DISTINGUISHED.
 - ORANGE WITHOUT STRIPES (FIBER OPTIC CABLE BACKBONE)
 - ORANGE WITH WHITE STRIPES (TONE WIRE)
 - ORANGE WITH GREEN STRIPES (SPARE)
 - ORANGE WITH BLACK STRIPES (SPARE)

ELECTRICAL CONDUIT SYSTEM:

 - RED WITHOUT STRIPES (2" MINIMUM FOR UNDERGROUND CIRCUITS)
2. WARNING TAPE SHALL READ "CAUTION: TURNPIKE FIBER OPTIC BURIED BELOW".

ITS CONSTRUCTION PHASING:

1. FOLLOWING INSTALLATION, THE PROPOSED FIBER OPTIC CABLE MUST HAVE OTDR TESTING COMPLETED AND ACCEPTED ON ALL FIBERS PRIOR TO THE CONTRACTOR CUTTING THE EXISTING FIBER SYSTEM AND INTEGRATING THE PROPOSED EQUIPMENT.
2. UPON COMPLETION OF THE INSTALLATION OF THE PROPOSED FIBER OPTIC CABLE SHOWN HEREIN, THE CONTRACTOR SHALL SCHEDULE A PRE-SPLICE MEETING. ATTENDANCE FOR THIS PRE-SPLICE MEETING SHALL INCLUDE THE TURNPIKE ENTERPRISE AND THE ENGINEER.
3. MAINTENANCE OF COMMUNICATION WORK FOR THE EXISTING ITS SHALL BE PERFORMED DURING THE TRAFFIC CONTROL PHASE NOTED IN THE PLANS AND PRIOR TO DISRUPTION TO THE EXISTING SYSTEM.





UTILITIES RELATED NOTES:

1. THE UTILITIES SHOWN IN THESE PLANS REPRESENT APPROXIMATE LOCATIONS OF THE UTILITIES AND ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT REPRESENT THE EXTENT OF UTILITIES ON THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGNATE, LOCATE, AND PROTECT ALL EXISTING ABOVEGROUND AND UNDERGROUND STRUCTURES AND FACILITIES LOCATED WITHIN THE PROJECT LIMITS DURING FIBER AND EQUIPMENT INSTALLATIONS. A LISTING OF KNOWN UTILITIES WITHIN THE PROJECT LIMITS CAN BE FOUND IN THE ROADWAY PLANS ON THE UTILITY ADJUSTMENT GENERAL NOTES SHEET.

FTE ITS POINTS OF CONTACT:

GENERAL ITS COORDINATION, TURNPIKE ITS HELP DESK 954-934-1400

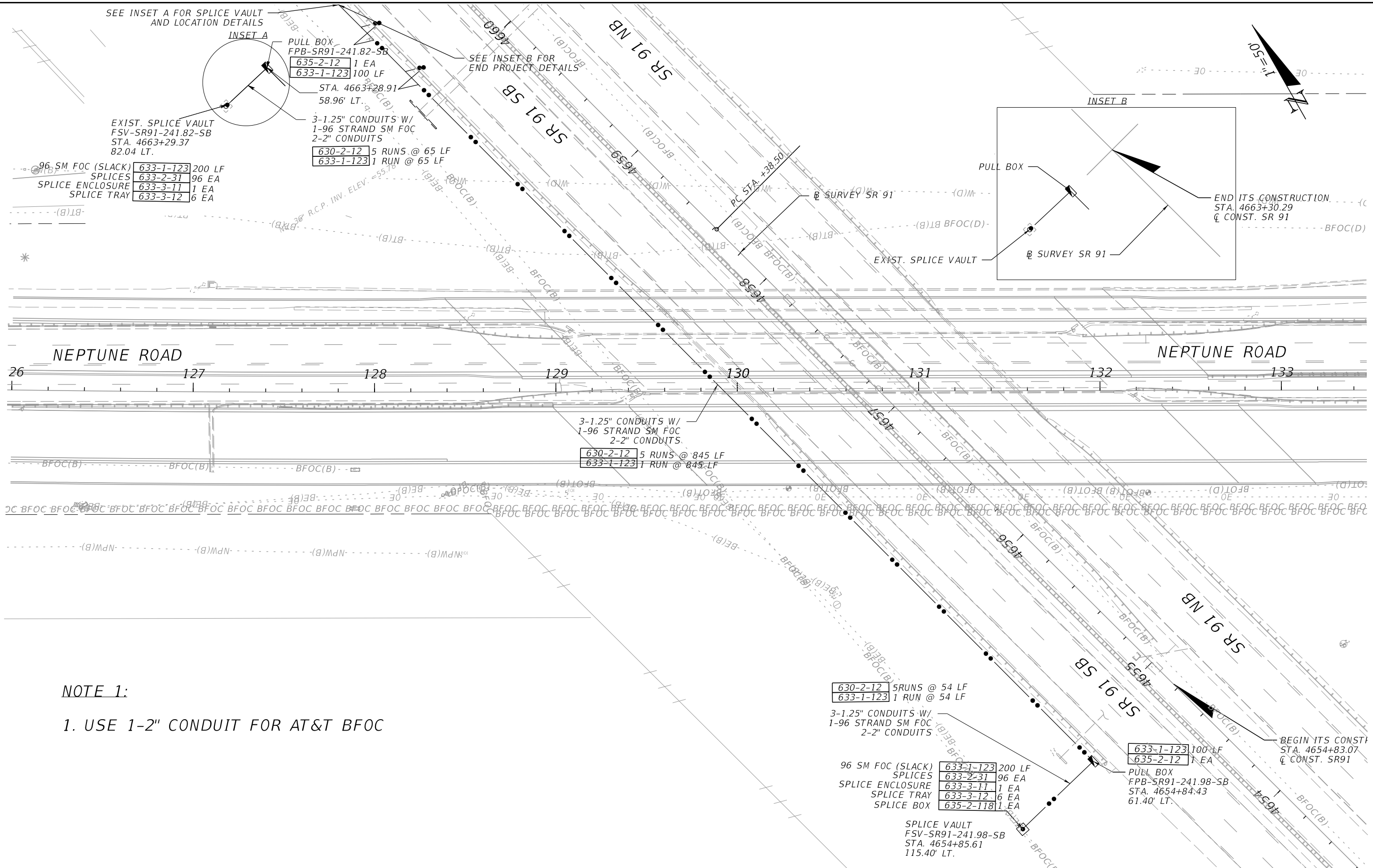
LEGEND:

-  PROPOSED CONDUIT DIRECTIONAL BORE FOR FIBER OPTIC CABLING AND ELECTRICAL SERVICE WIRES. (SEE PLAN SHEETS FOR FURTHER INFORMATION)
-  PROPOSED SPLICE VAULT
-  EXISTING SPLICE VAULT
-  PROPOSED PULL BOX

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| REVISIONS | | | | ENGINEER OF RECORD | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | GENERAL NOTES | SHEET NO. |
|-----------|-------------|------|-------------|---|--|--|---------|----------------------|---------------|-----------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | DILIP K. MUNDKUR LICENSE NUMBER: 49031 BES, INC. 225 AVENUE D NW WINTER HAVEN, FL 33881 | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | IT-3 |
| | | | | | | NEPTUNE | OSCEOLA | 436194-1-58-01 | | |

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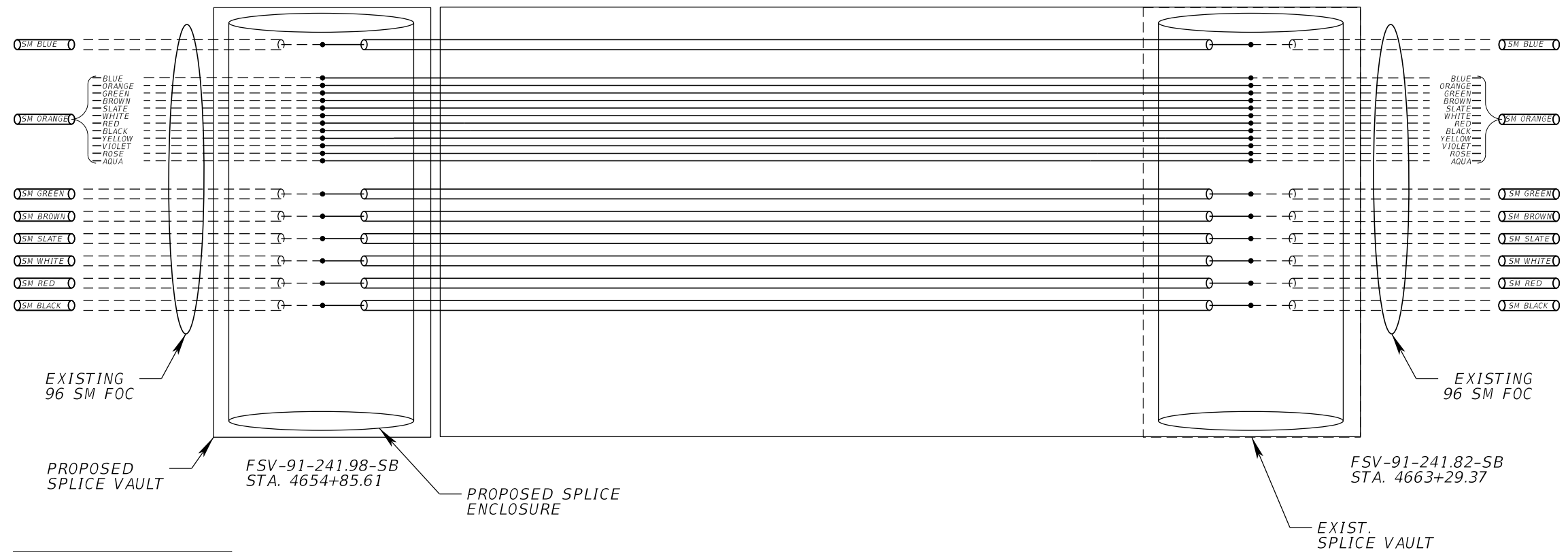
NOTE 1:
 1. USE 1-2" CONDUIT FOR AT&T BFOC

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| REVISIONS | | | | ENGINEER OF RECORD | | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. |
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| | | | | | | | NEPTUNE | OSCEOLA | 436194-1-58-01 | IT-4 |

PLAN SHEET

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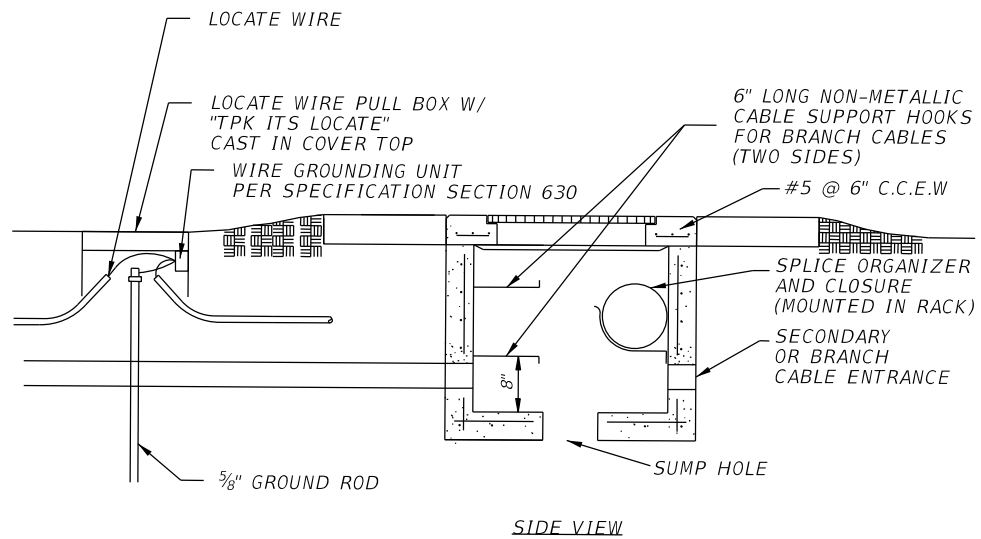
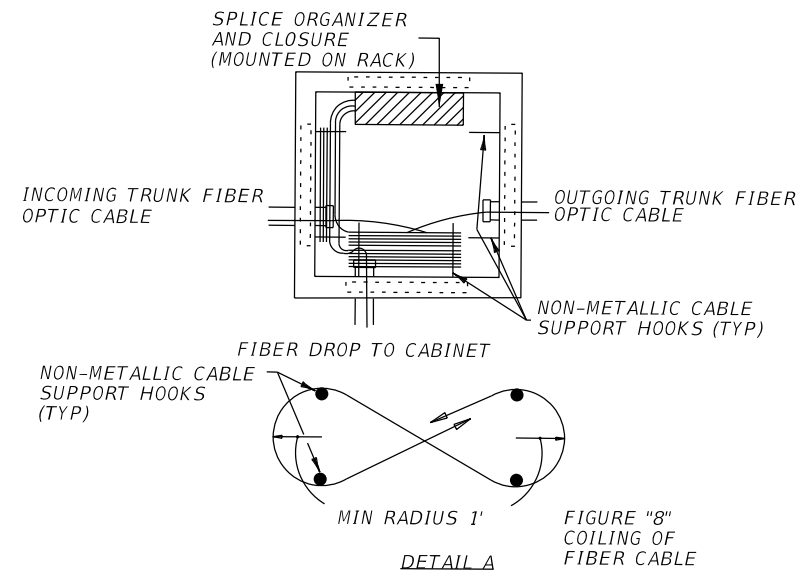
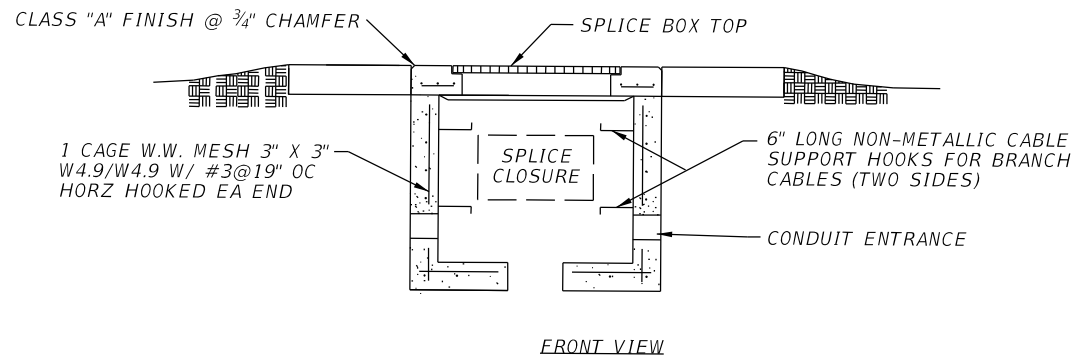
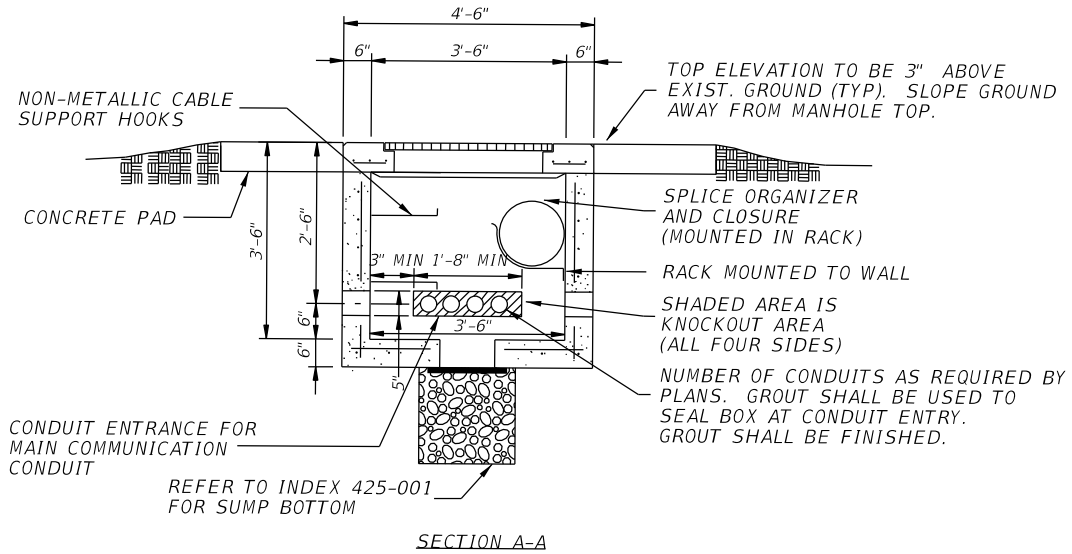
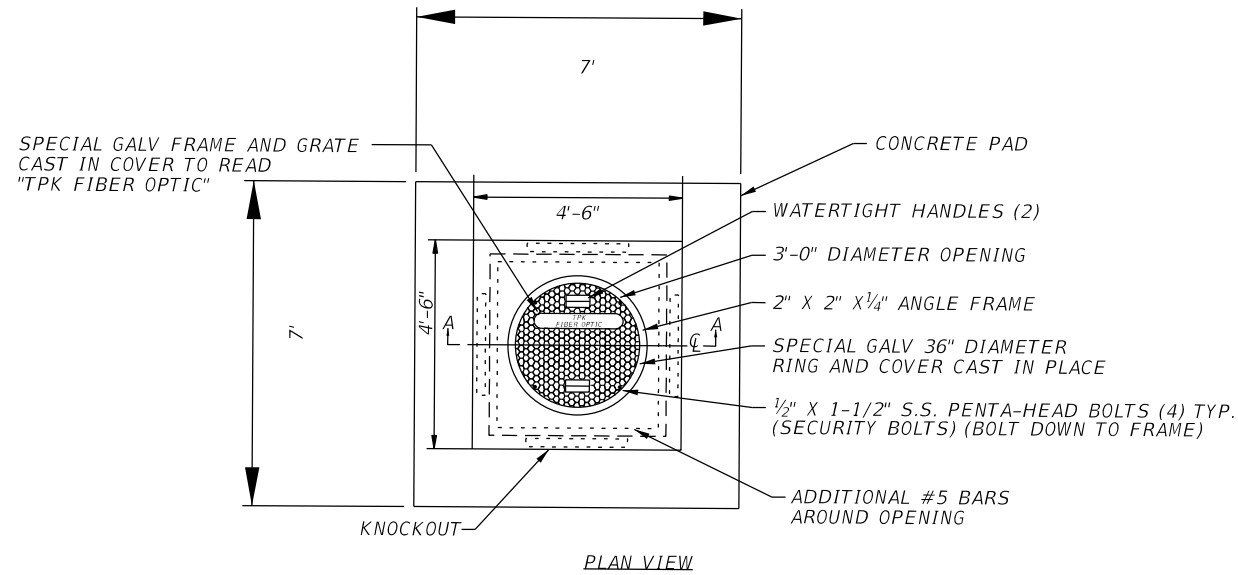
ENGINEER OF RECORD
 DILIP K. MUNDKUR
 LICENSE NUMBER: 49031
 BES, INC.
 225 AVENUE D NW
 WINTER HAVEN, FL 33881

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|---------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| NEPTUNE | OSCEOLA | 436194-1-58-01 |

ITS SPLICING DIAGRAMS

SHEET NO.
IT-5

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NOTES

1. CONDUITS ENTER THROUGH KNOCKOUTS.
2. REFER TO INDEX No. 425-001 AND 425-010 FOR SPLICE BOX STRUCTURE DETAILS. STRUCTURE BOTTOM TYPE P WITH 3'-6" SQUARE STRUCTURE (ALTERNATE B 2 PIECE COVER * 3'-0" OPENING)
3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL HOOKS, RACKS, FASTENERS, ANCHORS, AND STRAPS FOR USE INSIDE SPLICE BOXES TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
4. ALL FIBER OPTIC SPLICE BOXES MUST MEET H-20 OR HS-20 LOADING.
5. FIBER OPTIC SPLICE BOXES SHALL NOT CONTAIN ELECTRICAL CONDUIT OR CONDUCTORS. ELECTRICAL CONDUIT AND CONDUCTORS SHALL BE INSTALLED IN SEPARATE PULL BOXES.
6. SPLICE BOXES SHALL INCLUDE A SUMP AND ALL FOUR SIDES SHALL HAVE A MINIMUM OF FOUR (4) CONDUIT KNOCKOUTS AS REQUIRED BY PLANS.
7. REFER TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 425 FOR SPLICE BOX (VAULT/MANHOLE) REQUIREMENTS.
8. CABLE HOOKS SHALL PROVIDE A MINIMUM OF 3" SEPARATION BETWEEN CABLE AND BOTTOM OF SPLICE BOX.
9. WIRE GROUNDING UNIT REQUIRED TO BE INSTALLED WITHIN THE LOCATE WIRE PULL BOX ADJACENT TO EACH SPLICE BOX FOR BACKBONE AND LATERAL/DROP LOCATE WIRES.

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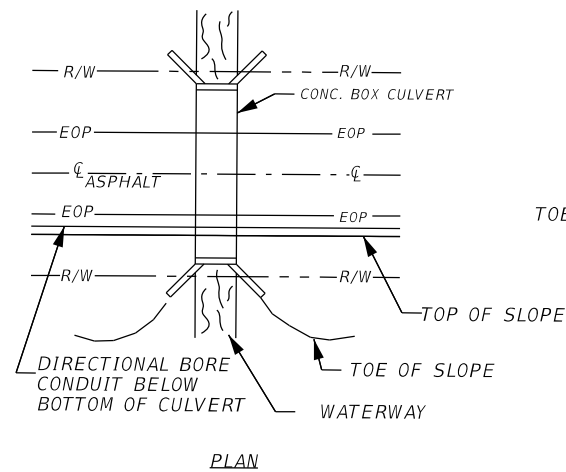
DILIP K. MUNDKUR
 LICENSE NUMBER: 49031
 BES, INC.
 225 AVENUE D NW
 WINTER HAVEN, FL 33881

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|---------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| NEPTUNE | OSCEOLA | 436194-1-58-01 |

TYPICAL SPLICE BOX DETAILS

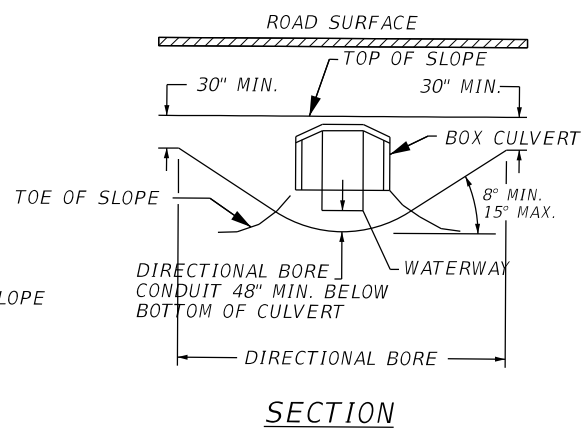
SHEET NO.
IT-6

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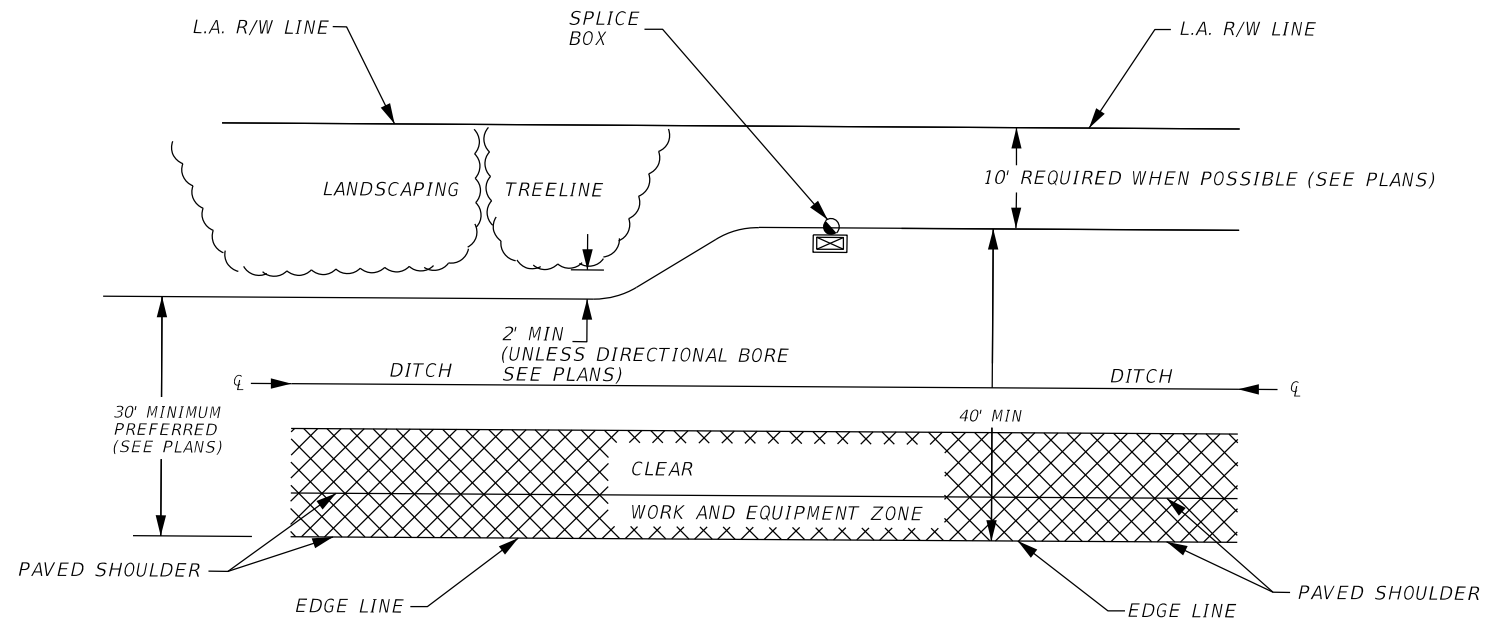


CONDUIT PLACEMENT UNDER CULVERT

N.T.S.



SECTION



TYPICAL CONDUIT INSTALLATION IN LIMITED ACCESS RIGHT-OF-WAY

N.T.S.

NOTES:

1. OBSERVE ALL REQUIREMENTS OF THE SPECIFICATION AND PERMITTING AUTHORITIES IN EXCAVATION AND RESTORATION.
2. CONTRACTOR WILL BE RESPONSIBLE FOR EXISTING UTILITY LOCATES PRIOR TO CONSTRUCTION.
3. BACKFILL AND COMPACTION REQUIREMENTS PER FDOT STANDARD SPECIFICATIONS.
4. MOT DURING INSTALLATION OF ALL EQUIPMENT WILL BE PROVIDED IN ACCORDANCE WITH THE STANDARD PLANS, SERIES 102-600.
5. BACKBONE CONDUIT WILL BE PLACED AT 10' FROM L.A. R/W LINE IF PRACTICAL, UNLESS SHOWN OTHERWISE IN PLANS, AND THERE ARE NO OBSTRUCTIONS OR MAINTENANCE ACCESS ISSUES.

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**TYPICAL CONDUIT
INSTALLATION DETAIL**

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