

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

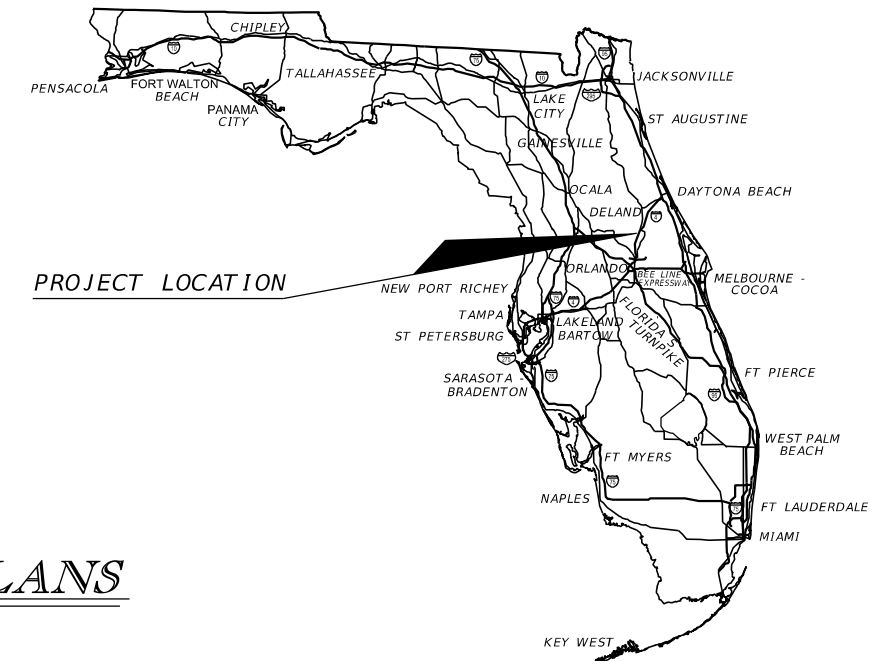
CONTRACT PLANS

FINANCIAL PROJECT ID 240200-2-52-01

(FEDERAL FUNDS)

SEMINOLE COUNTY (77320)

STATE ROAD NO. 429 (WEKIVA PARKWAY SECTION 7A)



INDEX OF ITS PLANS

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INTELLIGENT TRANSPORTATION SYSTEM PLANS

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
SHOP DRAWINGS TO BE SUBMITTED TO:

ALEXANDER TEAL MIMS, P.E. PE No. 77095
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713

PLANS PREPARED BY:

TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
Phone 386.753.0558
Fax 386.753.0778

CONTRACT NO. C9B55
VENDOR NO. F-208375642001
CERTIFICATION OF AUTHORIZATION NO. 27392

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

**100% SUBMITTAL
OCTOBER 2015**

| KEY SHEET REVISIONS | |
|---------------------|-------------|
| DATE | DESCRIPTION |
| | |

INTELLIGENT TRANSPORTATION SYSTEMS PLANS
ENGINEER OF RECORD: ALEXANDER TEAL MIMS

P.E. NO.: 77095

| FISCAL YEAR | SHEET NO. |
|----------------|--------------|
| 18 | IT-1 |

FDOT PROJECT MANAGER: KEVIN MOSS, P.E.

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | | | | | TOTAL THIS SHEET | | REF. SHEET | | |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|------------|------|-------|
| | | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | | PLAN | FINAL |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | |
| 630-2-11 | CONDUIT, F&I, OPEN TRENCH | LF | 858 | | 784 | | 1290 | | 1496 | | 1188 | | 1021 | | 1079 | | 1212 | | 1502 | | 1255 | | 11685 | | |
| 630-2-12 | CONDUIT, F&I, DIRECTIONAL BORE | LF | | | 716 | | 210 | | 92 | | 402 | | 478 | | 419 | | 288 | | | | 298 | | 2903 | | |
| 630-2-14 | CONDUIT, F&I, ABOVEGROUND | LF | | | | | | | | | | | | | | | | | | | | | | | |
| 633-1-121 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS | LF | | | 788 | | 800 | | 897 | | 1056 | | | | | | | | 434 | | 909 | | 4884 | | |
| 633-1-122 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS | LF | | | | | | | | | | | | | | | | | | | | | | | |
| 633-1-123 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS | LF | 1258 | | 1650 | | 1600 | | 1788 | | 1749 | | 1599 | | 1598 | | 1600 | | 1552 | | 1753 | | 16147 | | |
| 633-2-31 | FIBER OPTIC CONNECTION, SPLICE | EA | | | 6 | | | | | | 30 | | | | | | | | 6 | | | | 42 | | |
| 633-2-32 | FIBER OPTIC CONNECTION, TERMINATION | EA | | | | | | | | | | | | | | | | | | | | | | | |
| 633-3-11 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE | EA | 2 | | | | | | | | 1 | | | | | | | | | | | | 3 | | |
| 633-3-12 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY | EA | | | 1 | | | | | | 4 | | | | | | | | 1 | | | | 6 | | |
| 633-3-13 | FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY | EA | | | 6 | | | | | | 18 | | | | | | | | 6 | | | | 30 | | |
| 633-3-16 | FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | | 3 | | |
| 633-3-17 | FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL | EA | | | 1 | | | | | | 2 | | | | | | | | 1 | | | | 4 | | |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE | EA | 2 | | 4 | | 4 | | 4 | | 5 | | 4 | | 2 | | 4 | | 3 | | 4 | | 36 | | |
| 635-2-12 | PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE | EA | | | 3 | | 2 | | 4 | | 1 | | 2 | | 2 | | 2 | | 1 | | 4 | | 21 | | |
| 635-2-13 | PULL & SPLICE BOX, F&I, 30" X 36" RECTANGULAR OR 36" ROUND COVER SIZE | EA | 2 | | | | | | | | 1 | | | | | | | | | | | | 3 | | |
| 635-3-11 | JUNCTION BOX, F&I, AERIAL | EA | | | | | | | | | | | | | | | | | | | | | | | |
| 635-3-12 | JUNCTION BOX, F&I, MOUNTED | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | | 3 | | |
| 639-1-122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY | AS | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 639-2-1 | ELECTRIC SERVICE WIRE | LF | | | 673 | | 750 | | 797 | | 717 | | | | | | | | 369 | | 809 | | 4115 | | |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT, POLE MOUNT | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 639-6-1 | ELECTRICAL POWER SERVICE - TRANSFORMER, F&I | EA | | | | | | | | | | | | | | | | | | | | | | | |
| 641-2-12 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 | EA | | | | | | | | | 2 | | | | | | | | | | | | 2 | | |
| 641-2-15 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-V | EA | | | 1 | | | | | | | | | | | | | | 1 | | | | 2 | | |
| 641-3-186 | CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86' | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 641-3-263 | CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63' | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 660-3-11 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | | 3 | | |
| 660-3-12 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | | 3 | | |
| 676-2-122 | ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 676-2-143 | ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 682-1-133 | ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, IP, HIGH DEFINITION | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 684-1-1 | MANAGED FIELD ETHERNET SWITCH, F&I | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 684-2-1 | DEVICE SERVER, F&I | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | | 3 | | |
| 684-5-1 | MEDIA CONVERTER, F&I | EA | | | 1 | | | | | | | | | | | | | | 1 | | | | 2 | | |
| 685-1-11 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | |
| 700-9-137 | WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF | EA | | | | | | | | | | | | | | | | | | | | | | | |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | | | | | | | | | | | | | | | | | | | | | | | |

| <table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | | | | REVISIONS | | | | DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | TABULATION OF QUANTITIES | | | SHEET NO. IT-2 |
|---|-------------|--------|-------------|----------------------|--|--------|--|----------|-------------|----------------|-------------|--|--|--|--|---|--|--|--|--|--------------------------|--|--|-------------------|
| REVISIONS | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| ROAD NO. | | COUNTY | | FINANCIAL PROJECT ID | | SR 429 | | SEMINOLE | | 240200-2-52-01 | | | | | | | | | | | | | | |

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

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | | | | | TOTAL THIS SHEET | | REF. SHEET | | | | | |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|------------|------|-------|--|-------|--|
| | | | 18 | | 19 | | 20 | | 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | | | | | | |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | PLAN | FINAL | | | |
| 630-2-11 | CONDUIT, F&I, OPEN TRENCH | LF | 1516 | | 1544 | | 787 | | 710 | | 1500 | | 1496 | | 1500 | | 1550 | | 953 | | 1492 | | 1548 | | 13886 | | | |
| 630-2-12 | CONDUIT, F&I, DIRECTIONAL BORE | LF | | | 70 | | | | | | | | | | | | 59 | | 798 | | 72 | | | | 53 | | 1762 | |
| 630-2-14 | CONDUIT, F&I, ABOVEGROUND | LF | | | | | | | | | | | | | | | 375 | | | | | | | | | | 375 | |
| 633-1-121 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS | LF | 761 | | 752 | | 785 | | | | | | | 705 | | 1040 | | 210 | | | | | | | | | 4253 | |
| 633-1-122 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS | LF | | | | | | | | | | | | | | | | | | | | | | | 1212 | | 1212 | |
| 633-1-123 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS | LF | 1516 | | 1499 | | 1847 | | 1500 | | 1496 | | 1550 | | 1704 | | 2041 | | 1664 | | 1851 | | | | 16668 | | 16668 | |
| 633-2-31 | FIBER OPTIC CONNECTION, SPLICE | EA | | | | | 30 | | | | | | 6 | | 42 | | 24 | | | | | | | | 56 | | 158 | |
| 633-2-32 | FIBER OPTIC CONNECTION, TERMINATION | EA | | | | | | | | | | | | | 12 | | | | | | | | | | | | 12 | |
| 633-3-11 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE | EA | | | | | 1 | | | | | | | | 1 | | 1 | | | | | | | | 1 | | 4 | |
| 633-3-12 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY | EA | | | | | 4 | | | | | | 1 | | 6 | | 3 | | | | | | | | 6 | | 20 | |
| 633-3-13 | FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY | EA | | | | | 18 | | | | | | 6 | | 30 | | 12 | | | | | | | | 48 | | 114 | |
| 633-3-16 | FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED | EA | | | | | 1 | | | | | | 1 | | 1 | | 1 | | | | | | | | 2 | | 6 | |
| 633-3-17 | FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL | EA | | | | | 2 | | | | | | 1 | | 4 | | 1 | | | | | | | | 4 | | 12 | |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE | EA | 3 | | 5 | | 4 | | 2 | | 3 | | 3 | | 5 | | 6 | | 4 | | 4 | | | | 4 | | 39 | |
| 635-2-12 | PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE | EA | | | | | 3 | | | | | | 1 | | | | 4 | | 2 | | | | | | 3 | | 13 | |
| 635-2-13 | PULL & SPLICE BOX, F&I, 30" X 36" RECTANGULAR OR 36" ROUND COVER SIZE | EA | | | | | 1 | | | | | | | | 1 | | 1 | | | | | | | | 1 | | 4 | |
| 635-3-11 | JUNCTION BOX, F&I, AERIAL | EA | | | | | | | | | | | | | 2 | | | | | | | | | | | | 2 | |
| 635-3-12 | JUNCTION BOX, F&I, MOUNTED | EA | | | | | 1 | | | | | | 1 | | | | 1 | | | | | | | | | | 3 | |
| 639-1-122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY | AS | | | 1 | | | | | | | | | | | | 1 | | 1 | | | | | | | | 3 | |
| 639-2-1 | ELECTRIC SERVICE WIRE | LF | 761 | | 867 | | 355 | | | | | | 640 | | 658 | | 251 | | 759 | | 808 | | | | | | 5099 | |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT, POLE MOUNT | EA | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | 2 | |
| 639-6-1 | ELECTRICAL POWER SERVICE - TRANSFORMER, F&I | EA | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | |
| 641-2-12 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-II | EA | | | 2 | | | | | | | | | | 2 | | 1 | | | | | | | | | | 5 | |
| 641-2-15 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-V | EA | | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | |
| 641-3-186 | CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86' | EA | | | | | 1 | | | | | | | | | | | | | | | | | | | | 2 | |
| 641-3-263 | CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63' | EA | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 660-3-11 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT | EA | | | | | 1 | | | | | | 1 | | | | 1 | | | | | | | | | | 3 | |
| 660-3-12 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT | EA | | | | | 1 | | | | | | 1 | | | | 1 | | | | | | | | | | 3 | |
| 676-2-122 | ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D | EA | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | 2 | |
| 676-2-143 | ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D | EA | | | | | | | | | | | | | | | 1 | | | | | | | | | | 1 | |
| 682-1-133 | ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, 1P, HIGH DEFINITION | EA | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | 2 | |
| 684-1-1 | MANAGED FIELD ETHERNET SWITCH, F&I | EA | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | 3 | |
| 684-2-1 | DEVICE SERVER, F&I | EA | | | | | 1 | | | | | | 1 | | | | 1 | | | | | | | | | | 3 | |
| 684-5-1 | MEDIA CONVERTER, F&I | EA | | | | | | | | | | | 1 | | | | | | | | | | | | | | 1 | |
| 685-1-11 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE | EA | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | 2 | |
| 700-9-137 | WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF | EA | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | | | | | | | | | | | | | | | 1 | | | | | | | | | | 2 | |

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|-----------|-------------|------|-------------|
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

| | | |
|--|----------|----------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

TABULATION OF QUANTITIES

SHEET NO.
IT-3

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TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | | REF. SHEET |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------------------|-------|-------------|---|------------|
| | | | 28 | | 29 | | 30 | | 31 | | 32 | | PLAN | | FINAL | | PLAN | | FINAL | | PLAN | | FINAL | | | | |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | |
| 630-2-11 | CONDUIT, F&I, OPEN TRENCH | LF | 1675 | | 1500 | | 1500 | | 1164 | | 937 | | | | | | | | | | | | 6776 | | 32347 | | |
| 630-2-12 | CONDUIT, F&I, DIRECTIONAL BORE | LF | 291 | | | | | 335 | | 346 | | | | | | | | | | | | | 972 | | 5637 | | |
| 630-2-14 | CONDUIT, F&I, ABOVEGROUND | LF | | | | | | | | | | | | | | | | | | | | | | | 375 | | |
| 633-1-121 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 1-12 FIBERS | LF | 527 | | 758 | | 758 | | 906 | | 210 | | | | | | | | | | | | 3159 | | 12296 | | |
| 633-1-122 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 13-48 FIBERS | LF | 1141 | | | | | | | | | | | | | | | | | | | | 1141 | | 2353 | | |
| 633-1-123 | FIBER OPTIC CABLE, F&I, UNDERGROUND, 49-96 FIBERS | LF | 1996 | | 1500 | | 1500 | | 1749 | | 1833 | | | | | | | | | | | | 8578 | | 41393 | | |
| 633-2-31 | FIBER OPTIC CONNECTION, SPLICE | EA | 54 | | | | | | | | 6 | | | | | | | | | | | | 60 | | 260 | | |
| 633-2-32 | FIBER OPTIC CONNECTION, TERMINATION | EA | | | | | | | | | | | | | | | | | | | | | | | 12 | | |
| 633-3-11 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE | EA | 1 | | | | | | | | 2 | | | | | | | | | | | | 3 | | 10 | | |
| 633-3-12 | FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY | EA | 6 | | | | | | | | 1 | | | | | | | | | | | | 7 | | 33 | | |
| 633-3-13 | FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY | EA | 42 | | | | | | | | 6 | | | | | | | | | | | | 48 | | 192 | | |
| 633-3-16 | FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL - FIELD TERMINATED | EA | 2 | | | | | | | | 1 | | | | | | | | | | | | 3 | | 12 | | |
| 633-3-17 | FIBER OPTIC CONNECTION HARDWARE, F&I, CONNECTOR PANEL | EA | 4 | | | | | | | | 1 | | | | | | | | | | | | 5 | | 21 | | |
| 635-2-11 | PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE | EA | 4 | | 2 | | 4 | | 5 | | 5 | | | | | | | | | | | | 20 | | 95 | | |
| 635-2-12 | PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE | EA | 4 | | | | | | 5 | | 3 | | | | | | | | | | | | 12 | | 46 | | |
| 635-2-13 | PULL & SPLICE BOX, F&I, 30" X 36" RECTANGULAR OR 36" ROUND COVER SIZE | EA | 2 | | | | | | | | 2 | | | | | | | | | | | | 4 | | 11 | | |
| 635-3-11 | JUNCTION BOX, F&I, AERIAL | EA | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| 635-3-12 | JUNCTION BOX, F&I, MOUNTED | EA | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 | | 8 | | |
| 639-1-122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR FROM POWER COMPANY | AS | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| 639-2-1 | ELECTRIC SERVICE WIRE | LF | 754 | | 758 | | 758 | | 756 | | 145 | | | | | | | | | | | | 3171 | | 12385 | | |
| 639-3-11 | ELECTRICAL SERVICE DISCONNECT, POLE MOUNT | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 4 | | |
| 639-6-1 | ELECTRICAL POWER SERVICE - TRANSFORMER, F&I | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 2 | | |
| 641-2-12 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-II | EA | | | | | | | | | | | | | | | | | | | | | | | 7 | | |
| 641-2-15 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-V | EA | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| 641-3-186 | CONCRETE CCTV POLE, F&I, WITH LOWERING DEVICE, 86' | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 4 | | |
| 641-3-263 | CONCRETE CCTV POLE, F&I, WITHOUT LOWERING DEVICE, 63' | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | 1 | | |
| 660-3-11 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, CABINET EQUIPMENT | EA | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 | | 8 | | |
| 660-3-12 | VEHICLE DETECTION SYSTEM-MICROWAVE, F&I, ABOVE GROUND EQUIPMENT | EA | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 | | 8 | | |
| 676-2-122 | ITS FIELD CABINET, F&I, POLE MOUNT W/ SUNSHIELDS, 336S, 24" W X 46" H X 22" D | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 4 | | |
| 676-2-143 | ITS FIELD CABINET, F&I, BASE MOUNT W/ SUNSHIELDS, 334, 24" W X 66" H X 30" D | EA | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 682-1-133 | ITS CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, 1P, HIGH DEFINITION | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 4 | | |
| 684-1-1 | MANAGED FIELD ETHERNET SWITCH, F&I | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 5 | | |
| 684-2-1 | DEVICE SERVER, F&I | EA | 1 | | | | | | | | 1 | | | | | | | | | | | | 2 | | 8 | | |
| 684-5-1 | MEDIA CONVERTER, F&I | EA | | | | | | | | | 1 | | | | | | | | | | | | 1 | | 4 | | |
| 685-1-11 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE | EA | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 4 | | |
| 700-9-137 | WALK-IN DYNAMIC MESSAGE SIGN, F&I, WITH UPS FULL COLOR, 201-300 SF | EA | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 715-7-11 | LOAD CENTER, F&I, SECONDARY VOLTAGE | EA | | | | | | | | | | | | | | | | | | | | | | | | 2 | |

| <table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | | | | REVISIONS | | | | DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | ROAD NO. COUNTY FINANCIAL PROJECT ID SR 429 SEMINOLE 240200-2-52-01 | | | SHEET NO. IT-4 | | | |
|---|-------------|------|-------------|-----------|--|--|--|------|-------------|------|-------------|--|--|--|--|---|--|--|--|--|--|--|--|--|-------------------|--|--|--|
| REVISIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABULATION OF QUANTITIES

GENERAL:

1. THESE PLANS AND ASSOCIATED MINIMUM TECHNICAL REQUIREMENTS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR SHALL OBTAIN DESIGN ENGINEER AND FDOT APPROVAL FOR NEEDED CHANGES DUE TO SITE CONDITIONS.
2. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED AT THE TIME OF INSTALLATION WITH PERMANENT, LEGIBLE, WEATHER PROOF TAGS THAT ARE SECURELY ATTACHED IN ACCORDANCE WITH FDOT SPECIFICATIONS. ALL SERVICE EQUIPMENT SHALL BE LABELED PER NEC REQUIREMENTS.
3. THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE EQUIPMENT, DESIGN AND SHOP DRAWINGS FOR ALL MATERIALS PROPOSED FOR THIS PROJECT. EQUIPMENT MUST BE APPROVED BEFORE PROCUREMENT ORDER IS FILLED.
4. NOT ALL EXISTING DRAINAGE AND UTILITIES HAVE BEEN DEPICTED IN THE PLANS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND AVOID IMPACTS WITH ALL EXISTING DRAINAGE AND UTILITIES. THE CONTRACTOR SHALL REPAIR ANY DAMAGED DRAINAGE OR UTILITIES AT THEIR OWN EXPENSE.
5. ANY SIGNIFICANT VARIATION FROM THE PROPOSED ROUTING OF THE CONDUIT AND PLACEMENT OF THE PROJECT ELEMENTS SHALL BE VERIFIED WITH AND APPROVED BY THE ENGINEER AND THE FDOT AND SHALL BE INCORPORATED IN THE "AS-BUILT" PLANS.
6. CONTRACTOR IS TO ENSURE THAT ANY EXISTING WALLS, EARTHEN EMBANKMENTS, AND STRUCTURES ARE NOT UNDERMINED DURING FOUNDATION EXCAVATION AND INSTALLATION. METHODS TO SHORE UP WALLS AND EMBANKMENTS SHALL BE APPROVED BY THE FDOT.
7. IF DEWATERING IS REQUIRED DURING CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL NECESSARY AGENCIES AND OBTAIN ALL PERMITS REQUIRED TO LEGALLY PERFORM THE DEWATERING ACTIVITIES.
8. THE CONTRACTOR SHALL COORDINATE HIS/HER ACTIVITIES WITH ALL OTHER CONTRACTORS OPERATING IN THE PROJECT AREA.
9. THE CONTRACTOR SHALL EXERCISE ALL APPROPRIATE SAFETY MEASURES WHEN WORKING IN OR AROUND AREA OF OVERHEAD ELECTRICAL/TRANSMISSION LINES OR UNDERGROUND UTILITIES. HAND DIGGING SHALL BE USED AROUND ALL KNOWN AND LOCATED UTILITIES.
10. CONTRACTOR SHALL HAND DIG THE FIRST 4' AT EACH POLE INSTALLATION LOCATION TO VERIFY POTENTIAL UTILITY CONFLICTS.

CONDUIT:

1. WHEN TRENCHING FOR INSTALLATION, THE CONTRACTOR MAY RUN SEPARATE CONDUITS FOR COMMUNICATIONS AND POWER CABLES IN THE SAME TRENCH.
2. THE CONTRACTOR SHALL PLACE ALL CONDUITS IN A MANNER THAT MINIMIZES DEFLECTION BOTH HORIZONTALLY AND VERTICALLY, THUS MINIMIZING STRESS ON CABLES DURING CABLE INSTALLATION.
3. WHEN INSTALLING FIBER OPTIC CABLE IN CONDUIT WHERE PULL BOX SPACING EXCEEDS OF 1000' FIBER SHOULD BE INSTALLED USING CABLE BLOWING METHODS IDENTIFIED IN FDOT SPECIFICATIONS.
4. CONDUIT LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONDUIT SHALL BE PLACED WITHIN THE RIGHT-OF-WAY BUT CAN BE ADJUSTED TO FIT FIELD CONDITIONS. ANY SIGNIFICANT DEVIATION FROM THE PLANS SHALL BE APPROVED BY THE ENGINEER. MINIMUM REQUIRED CONDUIT BURIAL DEPTHS SHALL BE MAINTAINED.
5. ALL NEW UNDERGROUND CONDUIT SHALL BE SEALED AT BOTH ENDS TO PREVENT THE ENTRY OF DUST, DIRT OR MOISTURE.
6. COMPLY WITH THE REQUIREMENTS OF FDOT'S UTILITY ACCOMMODATION GUIDE (LATEST EDITION).
7. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY BORING OR TRENCHING. THE CONTRACTOR SHOULD HAND DIG THE FIRST 4' TO VERIFY POSSIBLE UTILITY CONFLICT.
















PULL BOXES:

1. UNLESS SPECIFIED OTHERWISE IN THE PLANS, ALL PULL BOX COVERS TO BE FURNISHED AND INSTALLED SHALL BE NON-METALLIC.
2. CABLING WHICH SHARES THE SAME PULL BOXES MUST COMPLY WITH FDOT AND NEC REQUIREMENTS.
3. DO NOT PLACE PULL BOXES IN THE BOTTOM OF DITCHES, SWALES, OR STORMWATER RETENTION/DETENTION AREAS.
4. MAXIMUM PULL BOX SPACING FOR POWER CONDUITS RUNS SHALL BE 600', UNLESS OTHERWISE INDICATED IN THESE PLANS.
5. PULL AND SPLICE BOX LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. PULL AND SPLICE BOXES SHALL BE PLACED WITHIN THE RIGHT-OF-WAY BUT CAN BE ADJUSTED TO FIT FIELD CONDITIONS. ANY SIGNIFICANT DEVIATION FROM THE PLANS SHALL BE APPROVED BY THE ENGINEER.

ITS EQUIPMENT INSTALLATION:

1. ELECTRICAL WIRING AND EQUIPMENT INSTALLATION SHALL CONFORM TO THE MOST RECENT VERSIONS OF THE NEC OR THE NESC WHERE APPLICABLE.
2. PROVIDE DRIP LOOPS, FOR EXPOSED CABLING, AS NECESSARY TO PREVENT WATER FROM RUNNING DOWN THE CABLE AND ENTERING EQUIPMENT, POLES, CONDUITS, OR EQUIPMENT CABINETS/ENCLOSURES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE POWER COMPANIES TO PROVIDE POWER TO PROPOSED DEVICES PER PROJECT REQUIREMENTS. POWER SERVICE DETAILS DEPICTED IN THESE PLANS ARE TO BE CONSIDERED AS MINIMUM REQUIREMENTS AND DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLETING A FULLY FUNCTIONAL INSTALLATION, INCLUDING ANY ADDITIONAL WORK REQUIRED THAT IS NOT DETAILED IN THESE PLANS.
4. BARE SOLID COPPER GROUNDING AND BONDING CONDUCTORS SHALL BE TIN PLATED. ALL CONNECTIONS OF GROUNDING ELECTRODE CONDUCTORS TO GROUNDING ELECTRODES SHALL BE EXOTHERMICALLY WELDED.
5. ALL BATTERIES USED FOR UPS SYSTEMS LOCATED WITHIN LOCAL HUBS SHALL BE GEL CELL BATTERIES WITH SILVER ALLOY GRIDS.
6. FIBER OPTIC CABLE RUNS SHOULD BE INSTALLED USING A SINGLE LENGTH OF CABLE BETWEEN THE CABLE TERMINI; BUTT SPLICING TO EXTEND THE LENGTH OF FIBER OPTIC CABLE SHOULD BE AVOIDED WITHIN THE PROJECT LIMITS.
7. TC TRAY CABLE SHALL BE: 600V RATED WITH STRANDED COPPER CONDUCTORS; INCLUDE XHHW OR THHN/THWN INSULATION ON EACH INDIVIDUAL CONDUCTOR WITH AN OVERALL PVC JACKET; AND MEET UL 1277 REQUIREMENTS FOR TYPE TC POWER AND CONTROL CABLES. TRAY CABLE SHALL INCLUDE THE SIZE AND NUMBER OF CONDUCTORS INDICATED IN THESE PLANS AND ALSO INCLUDE A FOIL OR BRAIDED SHIELD WITH A BARE TINNED COPPER DRAIN WIRE THAT IS A MINIMUM OF 14 AWG. SHIELD AND DRAIN WIRE SHALL BE INCLUDED WITHIN THE OVERALL PVC JACKET.
8. FOR MISCELLANEOUS STRUCTURES THAT HAVE BEEN COMPLETED AND SCHEDULED FOR ACCEPTANCE, THE CONTRACTOR SHALL CONTACT DISTRICT FIVE STRUCTURES MAINTENANCE OFFICE AT (386) 740 3463 ONE MONTH PRIOR TO COMPLETION OF THE PROJECT TO SCHEDULE AN INSPECTION OF ITS STRUCTURES.

ITS PLAN SHEET LEGEND:

-  PROPOSED ELECTRICAL PULL BOX
-  PROPOSED FIBER OPTIC PULL BOX
-  PROPOSED FIBER OPTIC SPLICE BOX
-  PROPOSED ITS POLE
-  PROPOSED 12' TYPE II SERVICE POLE
-  PROPOSED POWER SERVICE H-FRAME
-  UTILITY POLE WITH SERVICE TRANSFORMER BY POWER COMPANY (FINAL LOCATION TBD)
-  UTILITY COMPANY HANDHOLE (POINT OF SERVICE CONNECTION)
-  PROPOSED GROUND MOUNTED CABINET
-  PROPOSED POLE MOUNTED CABINET
-  PROPOSED MICROWAVE VEHICLE DETECTOR
-  PROPOSED CCTV CAMERA
-  PROPOSED UNDERGROUND CONDUIT
-  PROPOSED DIRECTIONALLY BORED CONDUIT
-  MVDS DETECTION ZONE

PAY ITEM DESCRIPTION:

1. 633-3-16 SHALL INCLUDE: FACTORY TERMINATED FIBER OPTIC JUMPERS AS REQUIRED TO PROVIDE THE CONNECTIONS INDICATED IN THE PLANS.
2. 660-3-11 & 660-3-12: MVDS DEVICES UTILIZED SHALL BE CAPABLE OF NEGATIVE (WRONG WAY) SPEED DETECTION.
3. 676-2-122, 676-2-143 & 635-3-12 SHALL INCLUDE A CYBERLOCK CYLINDER AS PART OF THE CABINET LOCKING MECHANISM THAT IS COMPATIBLE FDOT DISTRICT FIVE'S ELECTRONIC KEY SYSTEM. THE CONTRACTOR MAY INSTALL #2 KEY LOCKS TEMPORARILY DURING CONSTRUCTION IF MEANS OF ACCESSING CABINETS USING THE CYBERLOCK KEYS BY THE CONTRACTOR IS A CONCERN.
4. 685-1-11 SHALL INCLUDE: A RACK MOUNTED UNINTERRUPTIBLE POWER SOURCE (UPS) AND A REMOTE POWER MANAGEMENT STRIP (RPM) THAT ALLOW MONITORING AND CONTROL OVER IP NETWORKS. THE UPS SHALL: UTILIZE 120VAC NOMINAL INPUT POWER; PROVIDE MINIMUM OUTPUT POWER AT 120VAC (PURE SINE WAVE) AS INDICATED WITHIN THESE PLANS; INCLUDE A BATTERY BANK SIZED AS INDICATED WITHIN THESE PLANS; BE ENVIRONMENTALLY HARDENED AND SUITABLE FOR USE IN UNCONDITIONED OUTDOOR ENCLOSURES BY MEETING OR EXCEEDING NEMA TS2 ENVIRONMENTAL STANDARDS FOR OPERATIONAL TEMPERATURE AND HUMIDITY RANGE; INCLUDE A BATTERY TEMPERATURE PROBE USED TO MODIFY CHARGING PARAMETERS; AND INCLUDE CONTACT CLOSURE INPUTS CONFIGURED TO MONITOR CABINET ACCESS FOR BOTH FRONT AND REAR DOORS. THE RPM SHALL: UTILIZE 120VAC NOMINAL INPUT POWER; HAVE A 15AMP MAIN BREAKER; PROVIDE A MINIMUM OF 8 OUTLETS EACH CAPABLE OF REMOTE ON/OFF CONTROL; AND BE ENVIRONMENTALLY HARDENED AND SUITABLE FOR USE IN UNCONDITIONED OUTDOOR ENCLOSURES BY MEETING OR EXCEEDING NEMA TS2 ENVIRONMENTAL STANDARDS FOR OPERATIONAL TEMPERATURE RANGE.
5. 700-9-137 WALK-IN DYNAMIC MESSAGE SIGN SHALL: INCLUDE A NEMA 3R WALK-IN CABINET ENCLOSURE; PROVIDE A FULL-COLOR DISPLAY WITH 20 MM PIXEL SPACING AND 30 DEGREE VIEWING ANGLE; INCLUDE AN UNINTERRUPTIBLE POWER SUPPLY SYSTEM CAPABLE OF OPERATING THE PANEL FOR A MINIMUM OF TWO HOURS IN THE EVENT OF A UTILITY POWER OUTAGE.

UTILITY:

1. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE Vv, Vh, Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
2. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA, INC. AS REQUIRED BY CHAPTER 556 OF THE FLORIDA STATUTES.

| UTILITY OWNERS: | NUMBERS: |
|------------------------------|--------------|
| AT&T CORP. | 407-578-8000 |
| AT&T FLORIDA | 407-273-5084 |
| BRIGHT HOUSE NETWORKS, LLC | 407-532-8509 |
| FLORIDA GAS TRANSMISSION | 407-838-7171 |
| FLORIDA POWER & LIGHT (D) | 386-586-6432 |
| FLORIDA PUBLIC UTILITIES | 407-668-9842 |
| SEMINOLE COUNTY (W, NPW, SS) | 407-665-2267 |

| | | | | | | | | |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---|
| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. GENERAL NOTES IT-5 |
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | |

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CLOSED CIRCUIT TELEVISION (CCTV) TABLE

| CCTV # | STATION | MILE POST | ITS POLE | PLAN SHEET |
|--------|---------|-----------|----------|------------|
| 1 | 964+26 | 0.834 | 2 | IT-12 |
| 2 | 1021+58 | 1.920 | 4 | IT-20 |
| 3 | 1061+64 | 2.678 | 6 | IT-25 |
| 4 | 1084+60 | 3.113 | 7 | IT-28 |

DYNAMIC MESSAGE SIGNS (DMS) TABLE

| DMS # | STATION | MILE POST | PLAN SHEET |
|-------|---------|-----------|------------|
| 1 | 1052+00 | 2.496 | IT-24 |
| 2 | 1052+00 | 2.496 | IT-24 |

MICROWAVE VEHICLE DETECTOR (MVDS) TABLE

| MVDS # | STATION | MILE POST | ITS POLE | PLAN SHEET | LANES | RAMPS | APPROXIMATE DISTANCE TO FIRST TRAVEL LANE | APPROXIMATE DISTANCE TO LAST TRAVEL LANE | MVDS MOUNTING HEIGHT | MOUNTING STRUCTURE | NOTES |
|--------|---------|-----------|----------|------------|-------|-------|---|--|----------------------|-----------------------------|--|
| 1 | 936+24 | 0.303 | 1 | IT-9 | 4 | - | 23.5' | 121.5' | 39.0' | SQUARE CONCRETE STRAIN POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 2 | 964+26 | 0.834 | 2 | IT-12 | 4 | - | 21.5' | 119.5' | 45.0' | ROUND SPUN CONCRETE POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 3 | 991+85 | 1.357 | 3 | IT-16 | 4 | - | 23.5' | 121.5' | 29.0' | SQUARE CONCRETE STRAIN POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 4 | 1021+58 | 1.920 | 4 | IT-20 | 4 | - | 21.5' | 119.5' | 46.0' | ROUND SPUN CONCRETE POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 5 | 1041+61 | 2.299 | 5 | IT-23 | 4 | - | 21.5' | 119.5' | 30.0' | SQUARE CONCRETE STRAIN POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 6 | 1061+64 | 2.678 | 6 | IT-25 | 4 | 1 | 21.5' | 133.5' | 50.0' | ROUND SPUN CONCRETE POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES AND 1 WB OFF-RAMP) |
| 7 | 1084+60 | 3.113 | 7 | IT-28 | 4 | - | 21.5' | 119.5' | 45.0' | ROUND SPUN CONCRETE POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |
| 8 | 1109+49 | 3.585 | 8 | IT-32 | 4 | - | 21.5' | 119.5' | 48.0' | ROUND SPUN CONCRETE POLE | DETECTING SR 429 (2 EB LANES / 2 WB LANES) |

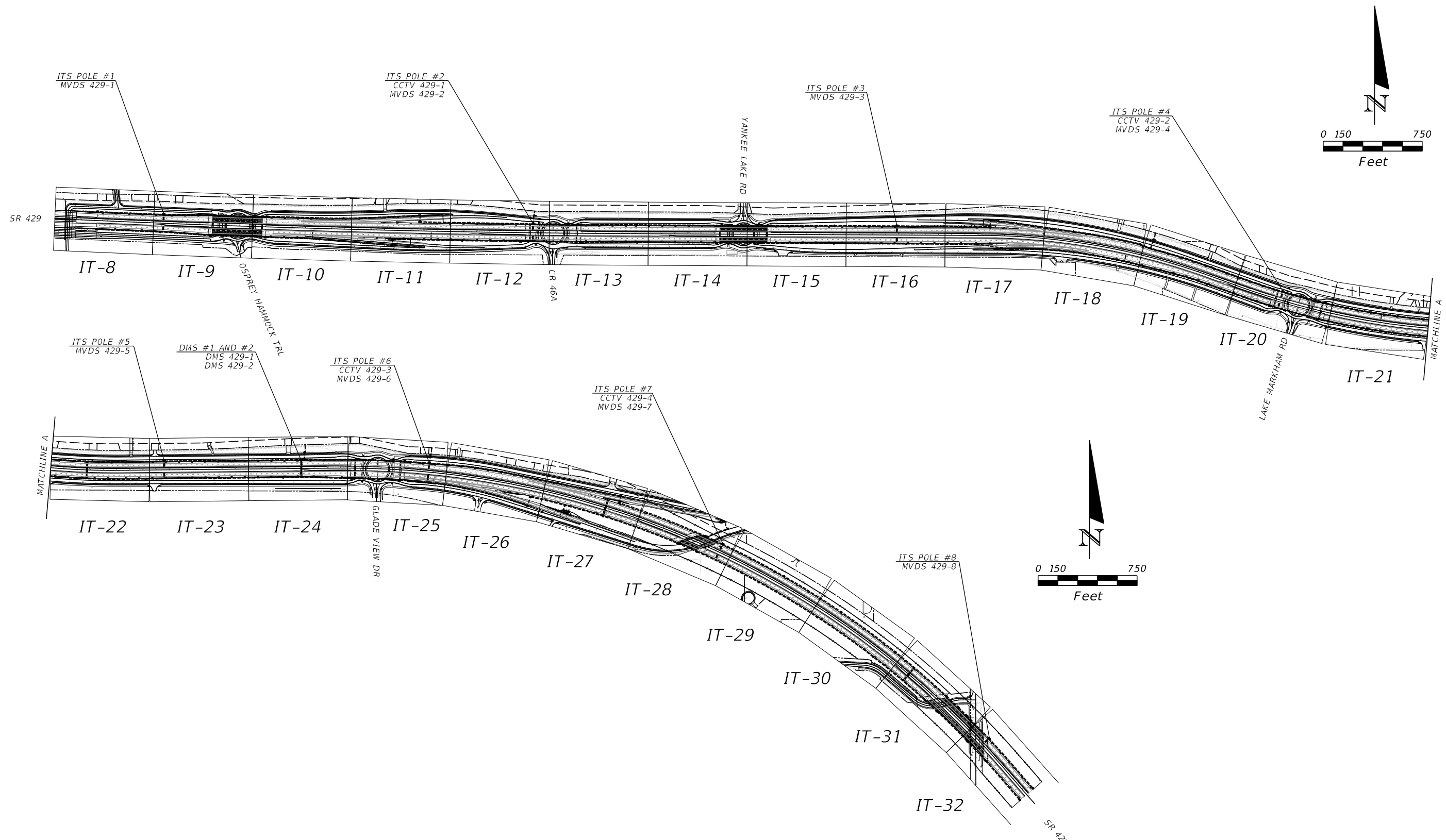
NOTES:

1. THE MVDS DETECTOR UNIT SHOULD BE TILTED FROM VERTICAL SO THAT THE UNIT IS AIMED AT THE CENTER OF THE LANES TO BE MONITORED; TYPICALLY THIS IS LOCATED IN THE CENTER OF THE MEDIAN AREA FOR THE DIVIDED HIGHWAY SECTIONS.
2. THE MVDS UNIT SHOULD BE ALIGNED SO THAT THE HORIZONTAL ANGLE OF THE UNIT IS WITHIN APPROXIMATELY TWO DEGREES OF PERPENDICULAR TO THE FLOW OF TRAFFIC. AN ALIGNMENT TOOL SHALL BE USED TO VERIFY THE ALIGNMENT ACCURACY.
3. MVDS DEVICES THAT ARE MOUNTED WITHIN 20 FEET OF EACH OTHER SHALL BE CONFIGURED TO OPERATE ON SEPARATE OPERATING FREQUENCIES, REGARDLESS OF THE POINTING DIRECTION OF THE UNITS.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. IT-6 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|-----------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | |

DEVICE SCHEDULE

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|-----------|-------------|------|-------------|---|--|----------|----------------------|-----------------------|-----------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 429 LF |
| 96 SM | 633-1-123 | 429 LF |

ELECTRICAL & FIBER OPTIC
 PULL BOX & SPLICE BOX WITH CONCRETE APRON

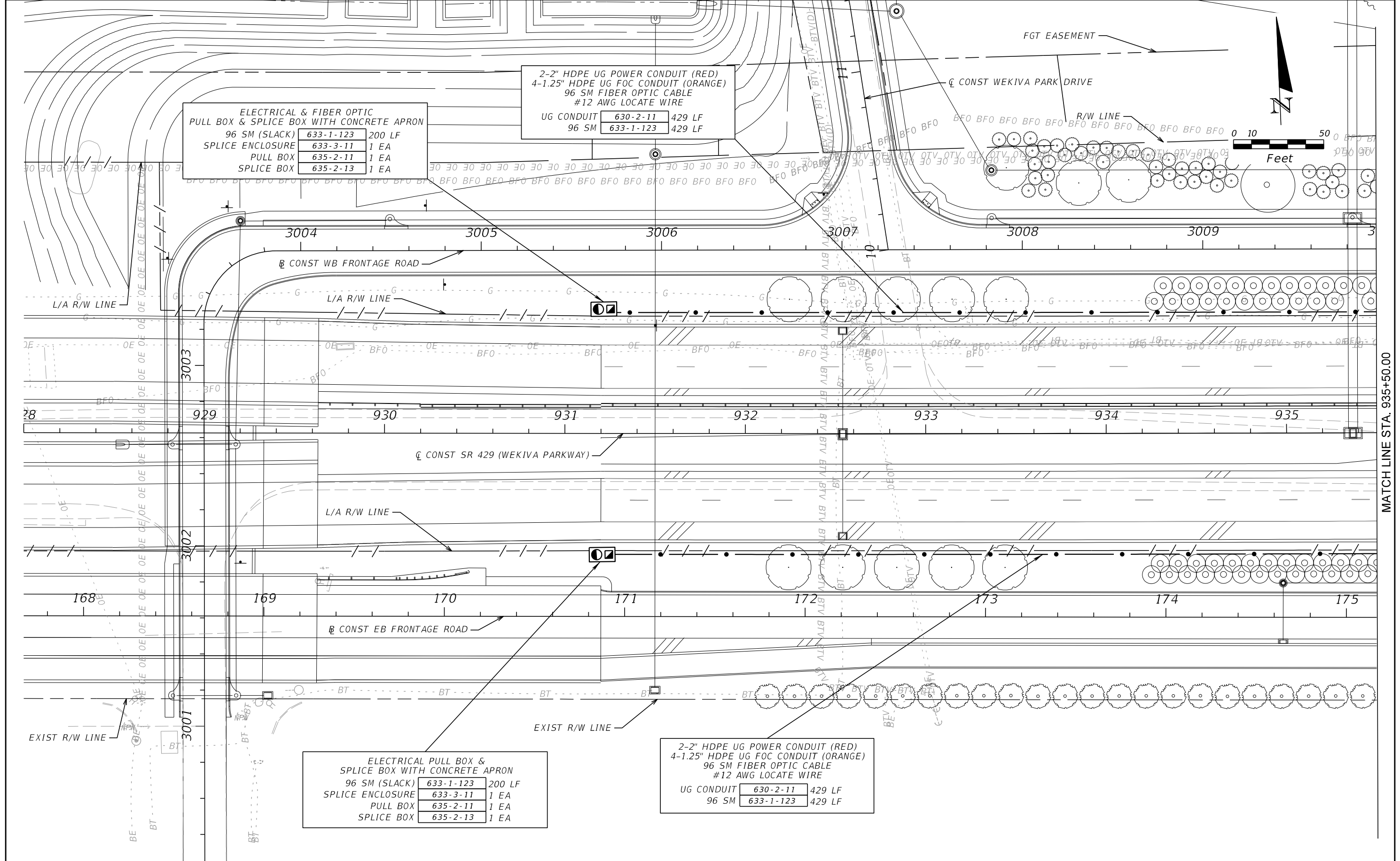
| | | |
|------------------|-----------|--------|
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

ELECTRICAL PULL BOX &
 SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|--------|
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 429 LF |
| 96 SM | 633-1-123 | 429 LF |



MATCH LINE STA. 935+50.00
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| REVISIONS | | | |
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

| | | |
|--|----------|----------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-8

ITS POLE #1, AUX. CABINET #1
STA. 936+24, MP 0.303, OFF. 72.56' LT

| | | |
|---------------------------|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 6 EA |
| SPLICE TRAY | 633-3-12 | 1 EA |
| PIGTAILS (6 SM) | 633-3-13 | 6 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 1 EA |
| AUX. CABINET | 635-3-12 | 1 EA |
| CONCRETE POLE (54') | 641-2-15 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| MEDIA CONVERTER | 684-5-1 | 1 EA |

ELECTRICAL & FIBER OPTIC
PULL BOXES WITH CONCRETE APRON

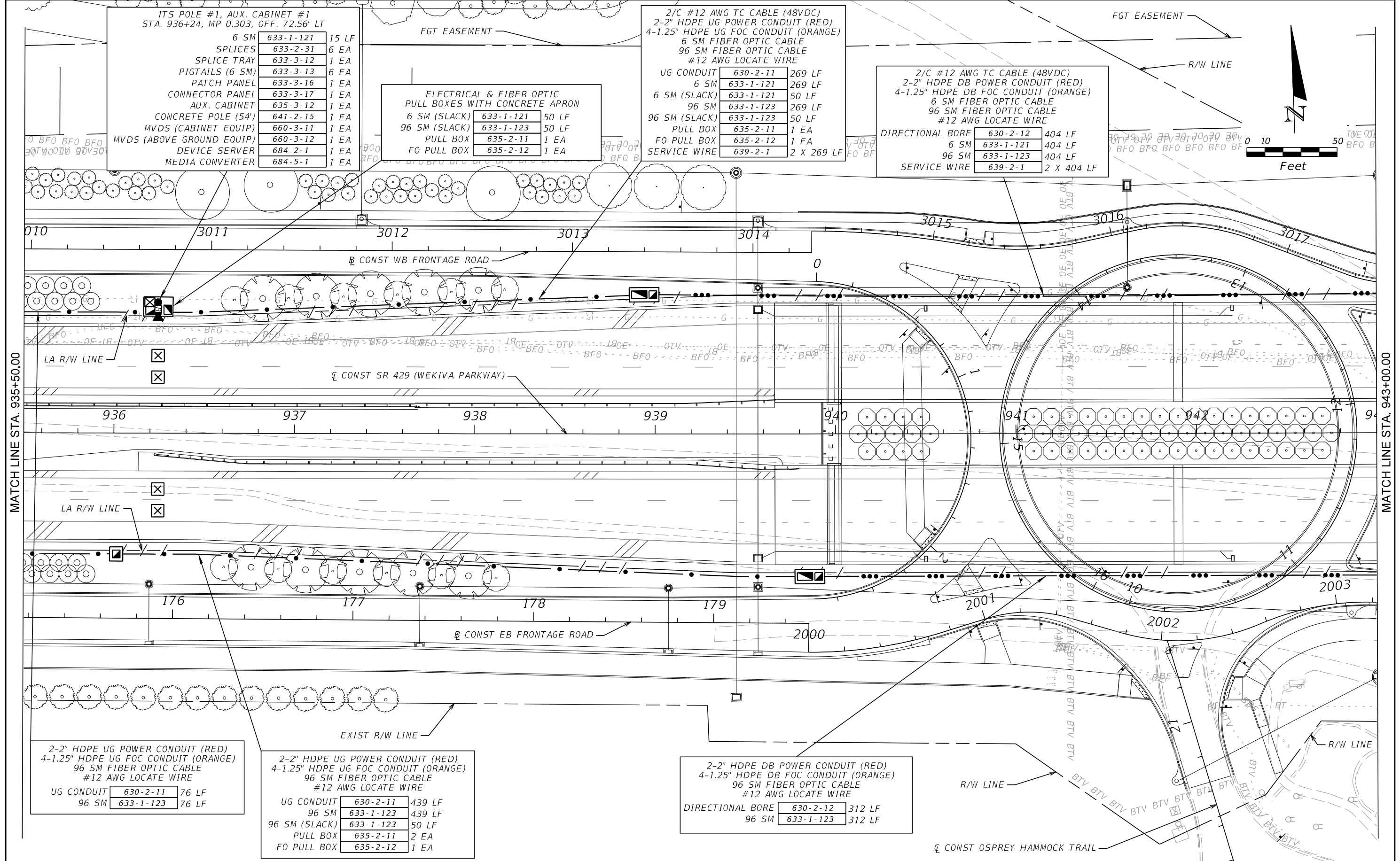
| | | |
|---------------|-----------|-------|
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 269 LF |
| 6 SM | 633-1-121 | 269 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 269 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 269 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|------------|
| DIRECTIONAL BORE | 630-2-12 | 404 LF |
| 6 SM | 633-1-121 | 404 LF |
| 96 SM | 633-1-123 | 404 LF |
| SERVICE WIRE | 639-2-1 | 2 X 404 LF |



2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 76 LF |
| 96 SM | 633-1-123 | 76 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 439 LF |
| 96 SM | 633-1-123 | 439 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 312 LF |
| 96 SM | 633-1-123 | 312 LF |

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

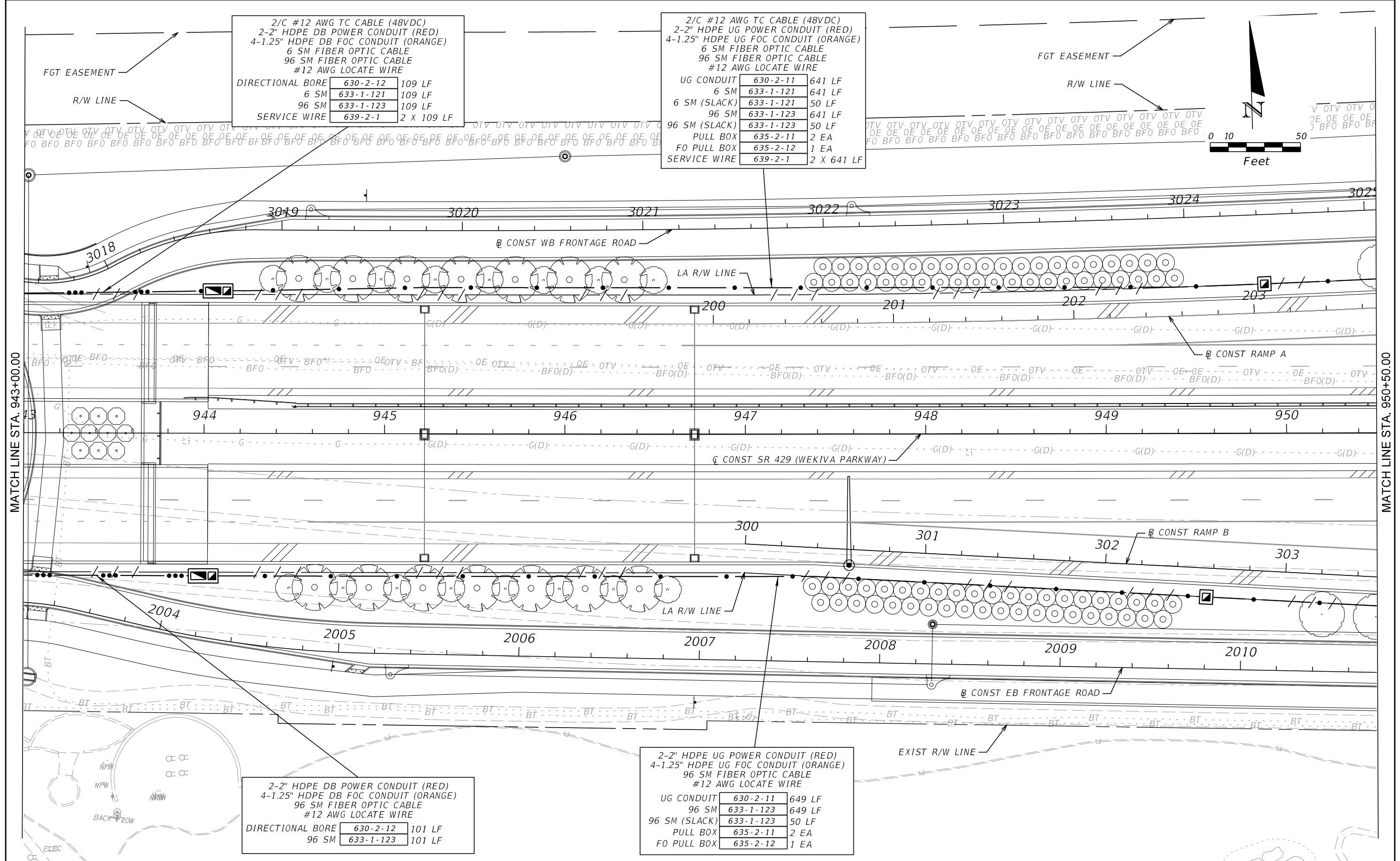
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|----------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-9

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



2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE DB POWER CONDUIT (RED)
 4-1.25" HDPE DB FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------------|-----------|------------|
| DIRECTIONAL BORE | 630-2-12 | 109 LF |
| 6 SM | 633-1-121 | 109 LF |
| 96 SM | 633-1-123 | 109 LF |
| SERVICE WIRE | 639-2-1 | 2 X 109 LF |

2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

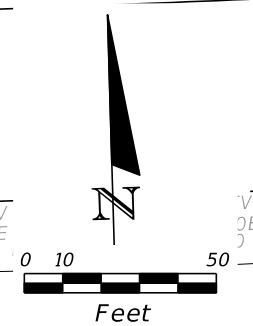
| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 641 LF |
| 6 SM | 633-1-121 | 641 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 641 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 641 LF |

2-2" HDPE DB POWER CONDUIT (RED)
 4-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 101 LF |
| 96 SM | 633-1-123 | 101 LF |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 649 LF |
| 96 SM | 633-1-123 | 649 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |



MATCH LINE STA. 943+00.00

MATCH LINE STA. 950+50.00

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| REVISIONS | | | |
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| | | | |

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-10

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 517 LF |
| 6 SM | 633-1-121 | 517 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 517 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 517 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 50 LF |
| 6 SM | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 50 LF |
| SERVICE WIRE | 639-2-1 | 2 X 50 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 230 LF |
| 6 SM | 633-1-121 | 230 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 230 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 230 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

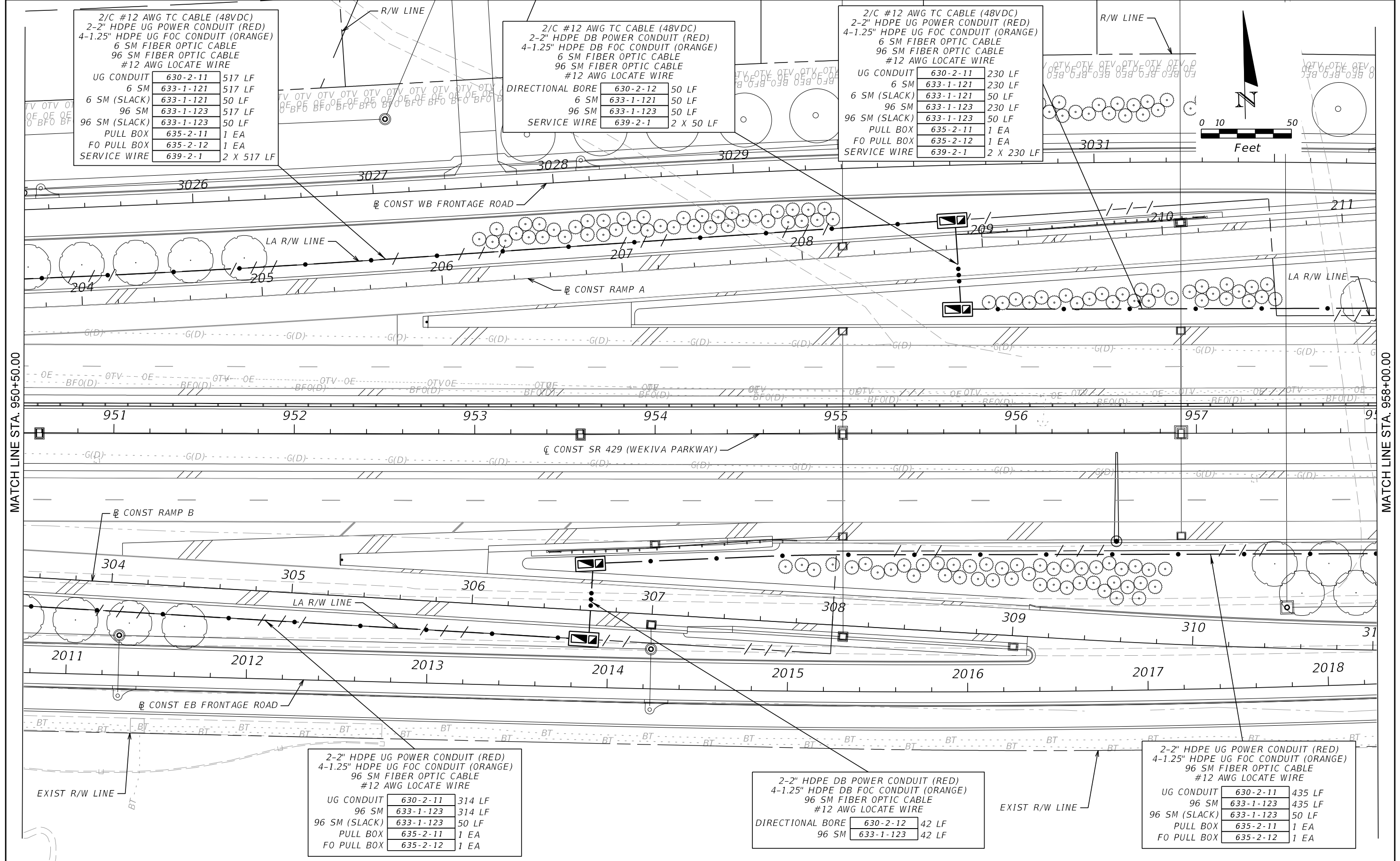
| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 314 LF |
| 96 SM | 633-1-123 | 314 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-------|
| DIRECTIONAL BORE | 630-2-12 | 42 LF |
| 96 SM | 633-1-123 | 42 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 435 LF |
| 96 SM | 633-1-123 | 435 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |



MATCH LINE STA. 950+50.00

MATCH LINE STA. 958+00.00

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| REVISIONS | | | |
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

| | | |
|--|----------|----------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-11

ITS POLE #2, LOCAL HUB #1
STA. 964+26, MP 0.834, OFF. 70.48' LT

| | | |
|--|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| 12 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 18 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PIGTAILS (6 SM & 12 SM) | 633-3-13 | 18 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 2 EA |
| BATTERY ENCLOSURE | 635-3-12 | 1 EA |
| SERVICE DISCONNECT | 639-3-11 | 1 EA |
| CONCRETE POLE W/ LOWERING DEVICE (86') | 641-3-186 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| TYPE 336S CABINET | 676-2-122 | 1 EA |
| CCTV | 682-1-133 | 1 EA |
| ETHERNET SWITCH | 684-1-1 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| UPS | 685-1-11 | 1 EA |

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|--------|
| 6 SM (SLACK) | 633-1-121 | 200 LF |
| 12 SM (SLACK) | 633-1-121 | 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

FGT EASEMENT

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE H-FRAME

| | | |
|--------------------|-----------|------|
| PULL BOX | 635-2-11 | 1 EA |
| POWER SERVICE (UG) | 639-1-122 | 1 AS |
| 12' TYPE II POLE | 641-2-12 | 2 EA |

2-#6 AWG & 1-#6 AWG GND. (120VAC)
1-2" HDPE DB POWER CONDUIT (RED)

| | | |
|------------------|----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 64 LF |
| SERVICE WIRE | 639-2-1 | 3 X 64 LF |

POWER SERVICE #1
120/240VAC, 1PH, 3 WIRE
(SHARE WITH LIGHTING LOAD CENTER B)

3-#1 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)

| | | |
|--------------|----------|-----------|
| UG CONDUIT | 630-2-11 | 27 LF |
| SERVICE WIRE | 639-2-1 | 3 X 27 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 626 LF |
| 6 SM | 633-1-121 | 626 LF |
| 96 SM | 633-1-123 | 626 LF |
| PULL BOX | 635-2-11 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 626 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 535 LF |
| 96 SM | 633-1-123 | 535 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 215 LF |
| 96 SM | 633-1-123 | 215 LF |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 123 LF |
| 96 SM | 633-1-123 | 123 LF |

MATCH LINE STA. 958+00.00

MATCH LINE STA. 965+50.00

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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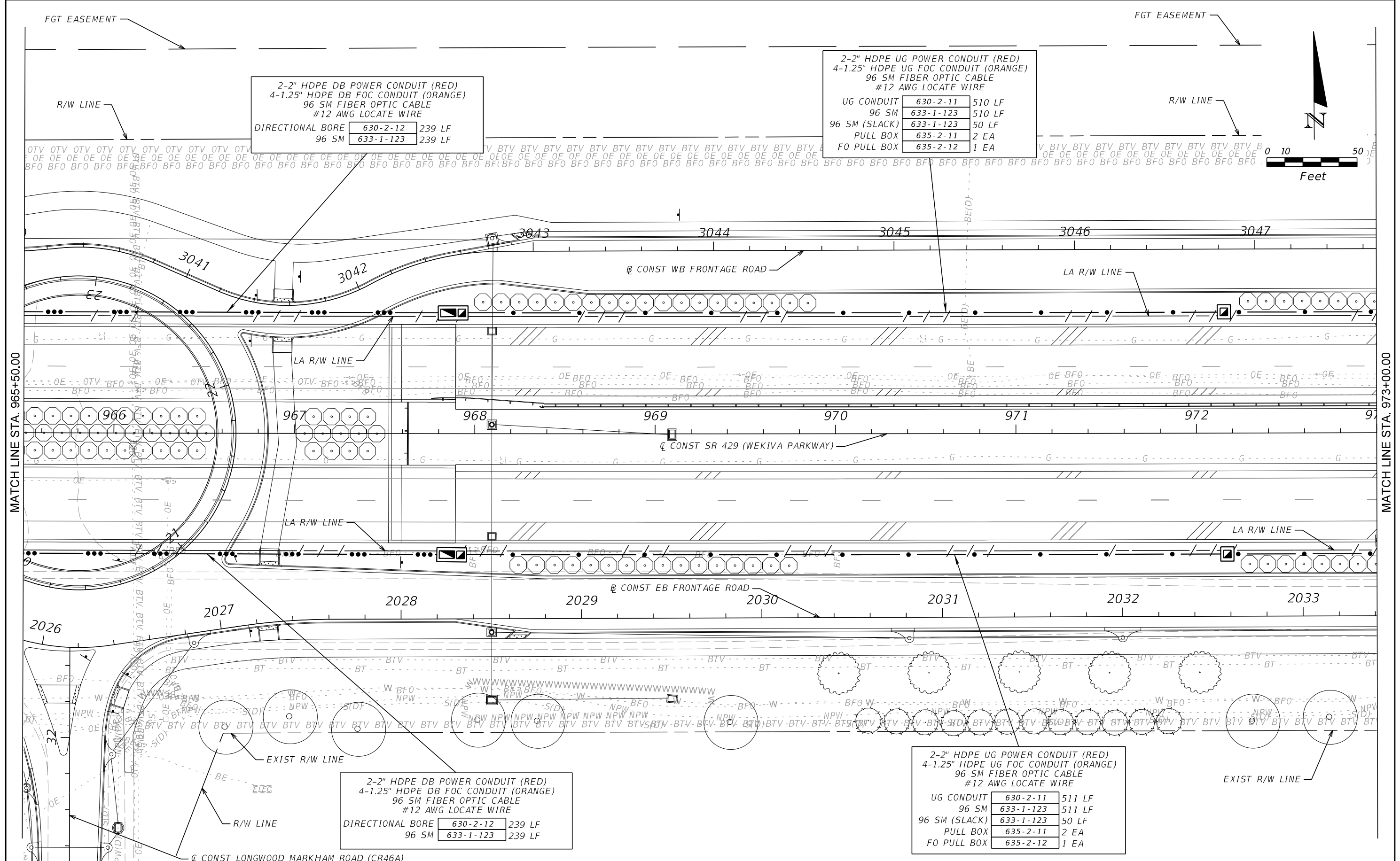
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
|----------|----------|----------------------|
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-12

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



2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 239 LF |
| | 96 SM | 633-1-123 |
| | | 239 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 510 LF |
| 96 SM | 633-1-123 | 510 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 239 LF |
| | 96 SM | 633-1-123 |
| | | 239 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 511 LF |
| 96 SM | 633-1-123 | 511 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

MATCH LINE STA. 965+50.00

MATCH LINE STA. 973+00.00

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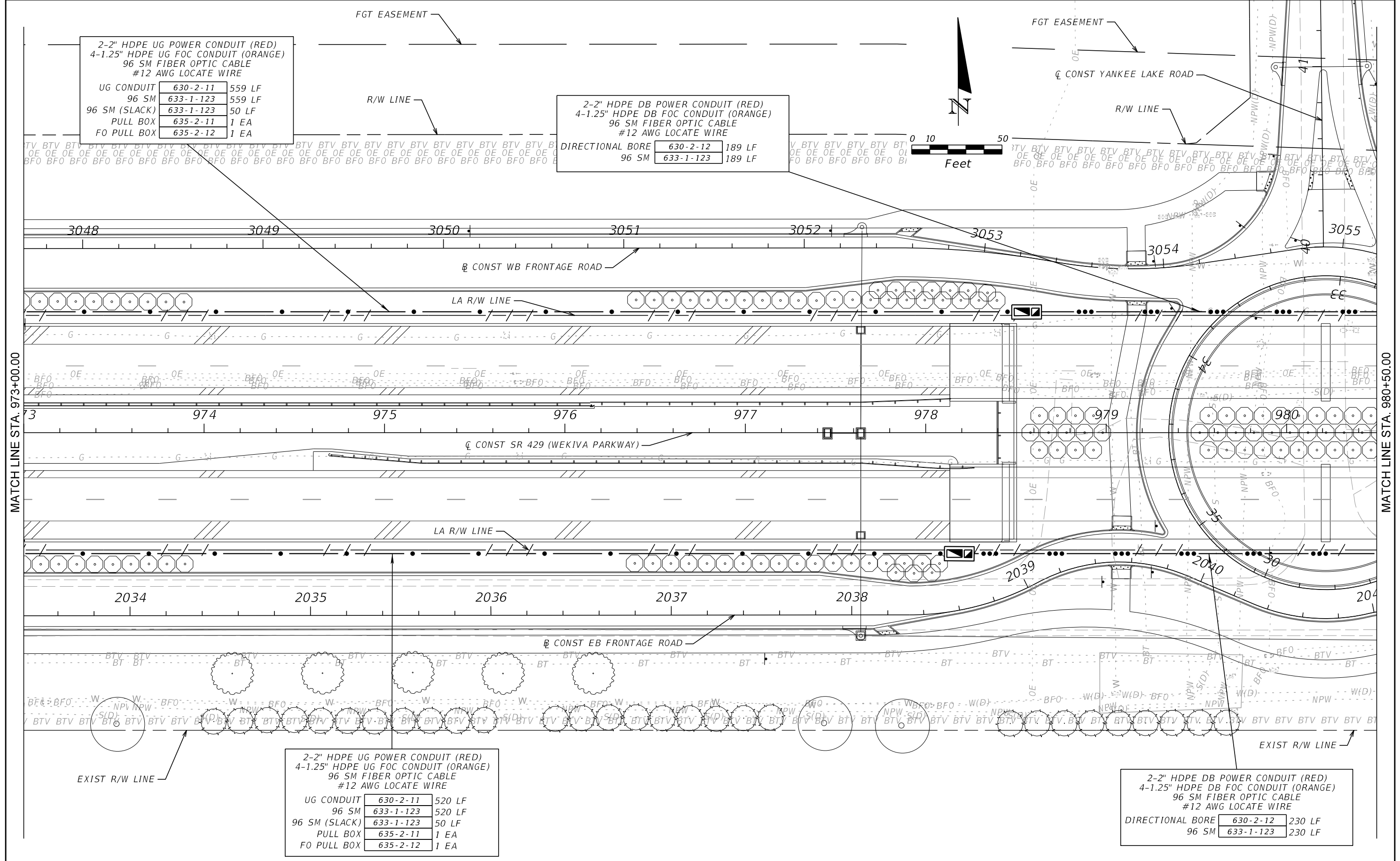
| REVISIONS | | | |
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-13



2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 559 LF |
| 96 SM | 633-1-123 | 559 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 189 LF |
| 96 SM | 633-1-123 | 189 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 520 LF |
| 96 SM | 633-1-123 | 520 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 230 LF |
| 96 SM | 633-1-123 | 230 LF |

MATCH LINE STA. 973+00.00

MATCH LINE STA. 980+50.00

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

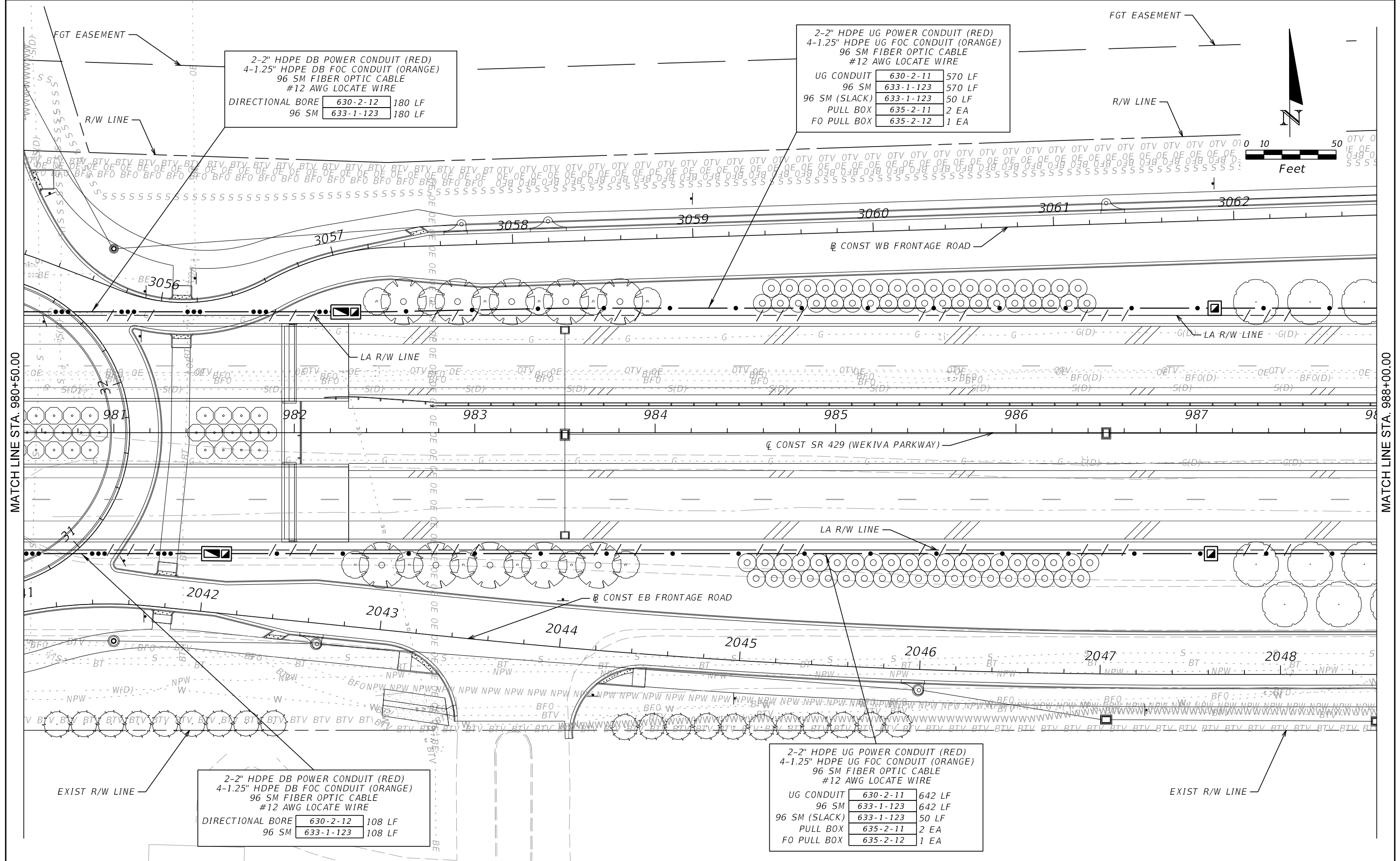
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-14

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



2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 180 LF |
| 96 SM | 633-1-123 | 180 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 570 LF |
| 96 SM | 633-1-123 | 570 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

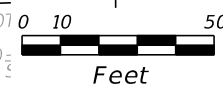
| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 108 LF |
| 96 SM | 633-1-123 | 108 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 642 LF |
| 96 SM | 633-1-123 | 642 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

FGT EASEMENT

R/W LINE



MATCH LINE STA. 980+50.00

MATCH LINE STA. 988+00.00

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

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

ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

| | | |
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-15

ITS POLE #3, AUX. CABINET #2
STA. 991+85, MP 1.357, OFF. 72.54' LT

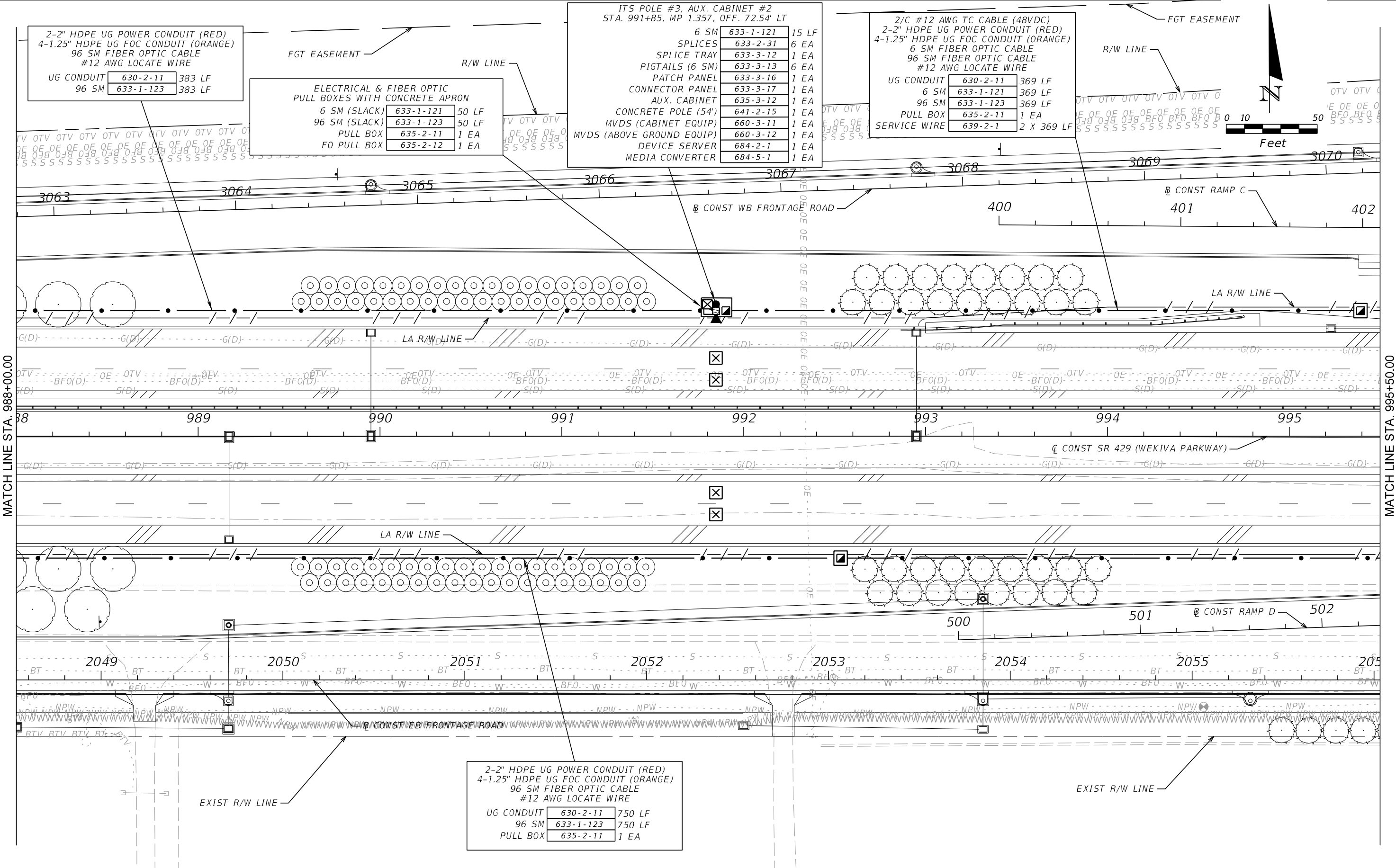
| | | |
|---------------------------|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 6 EA |
| SPLICE TRAY | 633-3-12 | 1 EA |
| PIGTAILS (6 SM) | 633-3-13 | 6 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 1 EA |
| AUX. CABINET | 635-3-12 | 1 EA |
| CONCRETE POLE (54') | 641-2-15 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| MEDIA CONVERTER | 684-5-1 | 1 EA |

| | | |
|--------------------------------------|-----------|------------|
| 2/C #12 AWG TC CABLE (48VDC) | | |
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 6 SM FIBER OPTIC CABLE | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 369 LF |
| 6 SM | 633-1-121 | 369 LF |
| 96 SM | 633-1-123 | 369 LF |
| PULL BOX | 635-2-11 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 369 LF |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 383 LF |
| 96 SM | 633-1-123 | 383 LF |

ELECTRICAL & FIBER OPTIC
PULL BOXES WITH CONCRETE APRON

| | | |
|---------------|-----------|-------|
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |



| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 750 LF |
| 96 SM | 633-1-123 | 750 LF |
| PULL BOX | 635-2-11 | 1 EA |

| REVISIONS | | | |
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-16

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

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 338 LF |
| 6 SM | 633-1-121 | 338 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 338 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 338 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 48 LF |
| 6 SM | 633-1-121 | 48 LF |
| 96 SM | 633-1-123 | 48 LF |
| SERVICE WIRE | 639-2-1 | 2 X 48 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 423 LF |
| 6 SM | 633-1-121 | 423 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 423 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 423 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

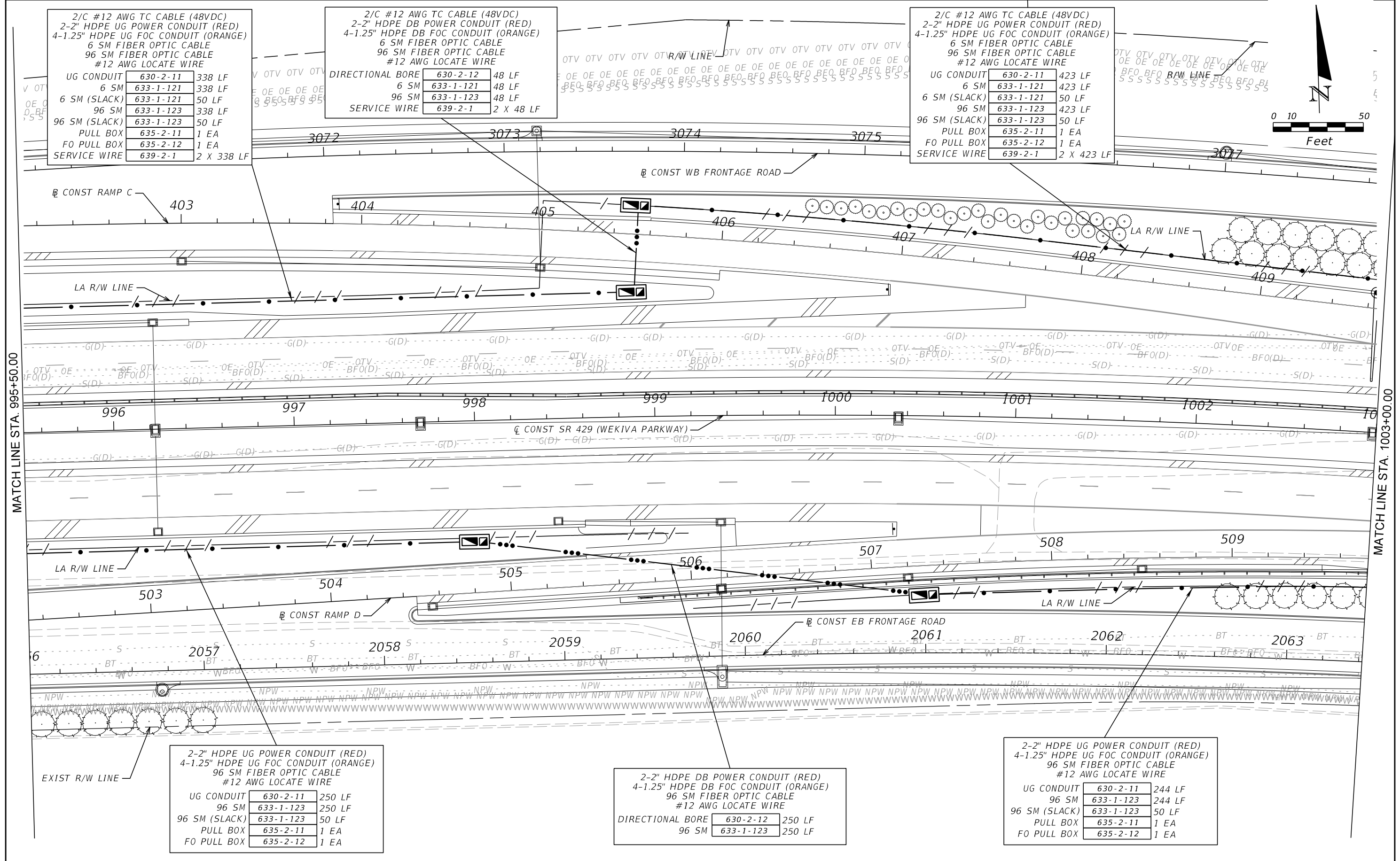
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|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 250 LF |
| 96 SM | 633-1-123 | 250 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 250 LF |
| 96 SM | 633-1-123 | 250 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 244 LF |
| 96 SM | 633-1-123 | 244 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |



MATCH LINE STA. 995+50.00

MATCH LINE STA. 1003+00.00

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Traffic Engineering Data Solutions, Inc.
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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

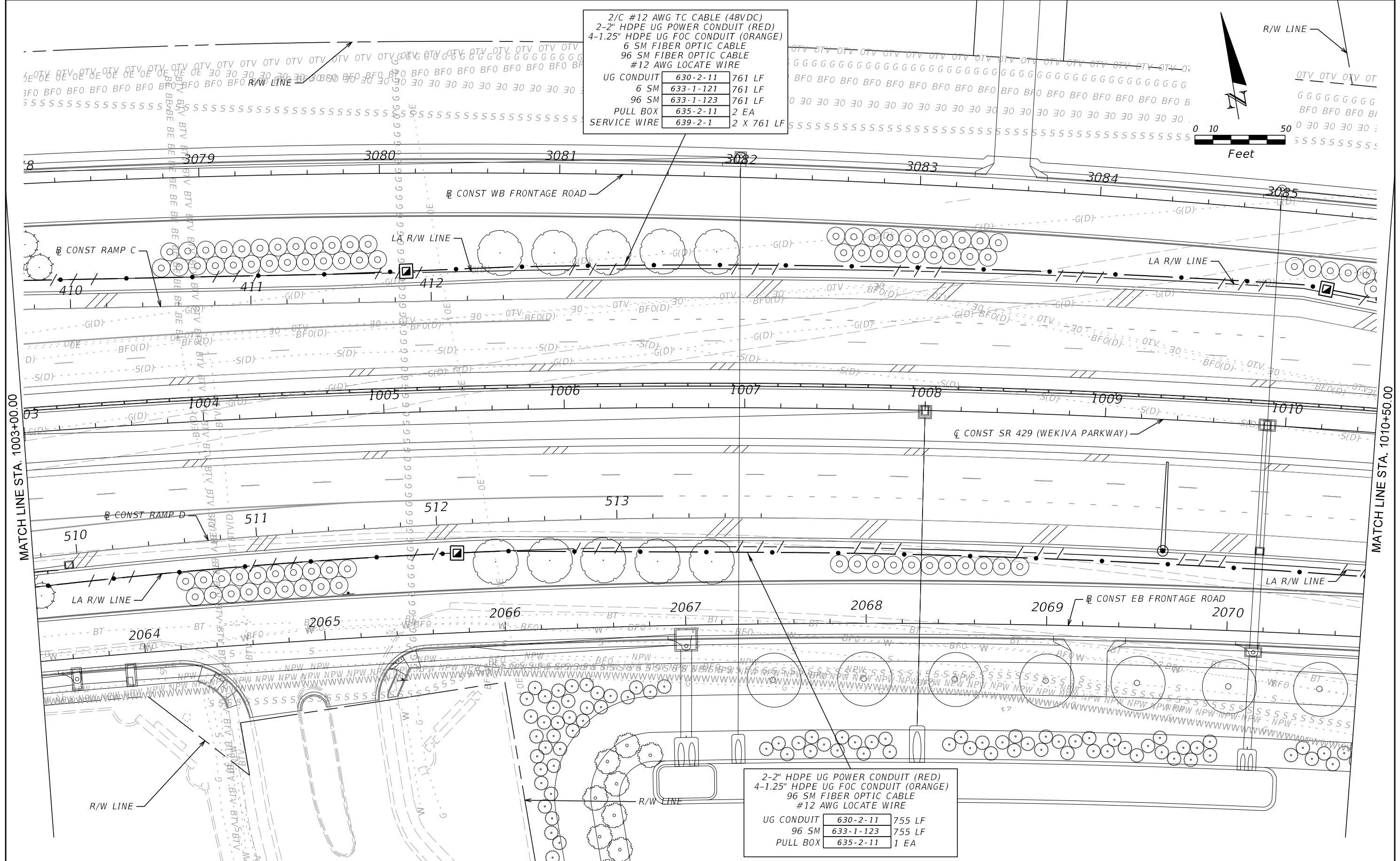
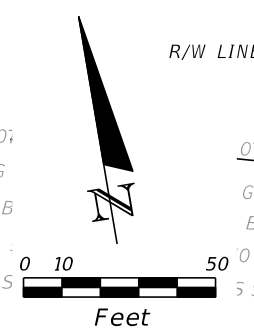
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-17

2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 761 LF |
| 6 SM | 633-1-121 | 761 LF |
| 96 SM | 633-1-123 | 761 LF |
| PULL BOX | 635-2-11 | 2 EA |
| SERVICE WIRE | 639-2-1 | 2 X 761 LF |



2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 755 LF |
| 96 SM | 633-1-123 | 755 LF |
| PULL BOX | 635-2-11 | 1 EA |

MATCH LINE STA. 1003+00.00

MATCH LINE STA. 1010+50.00

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

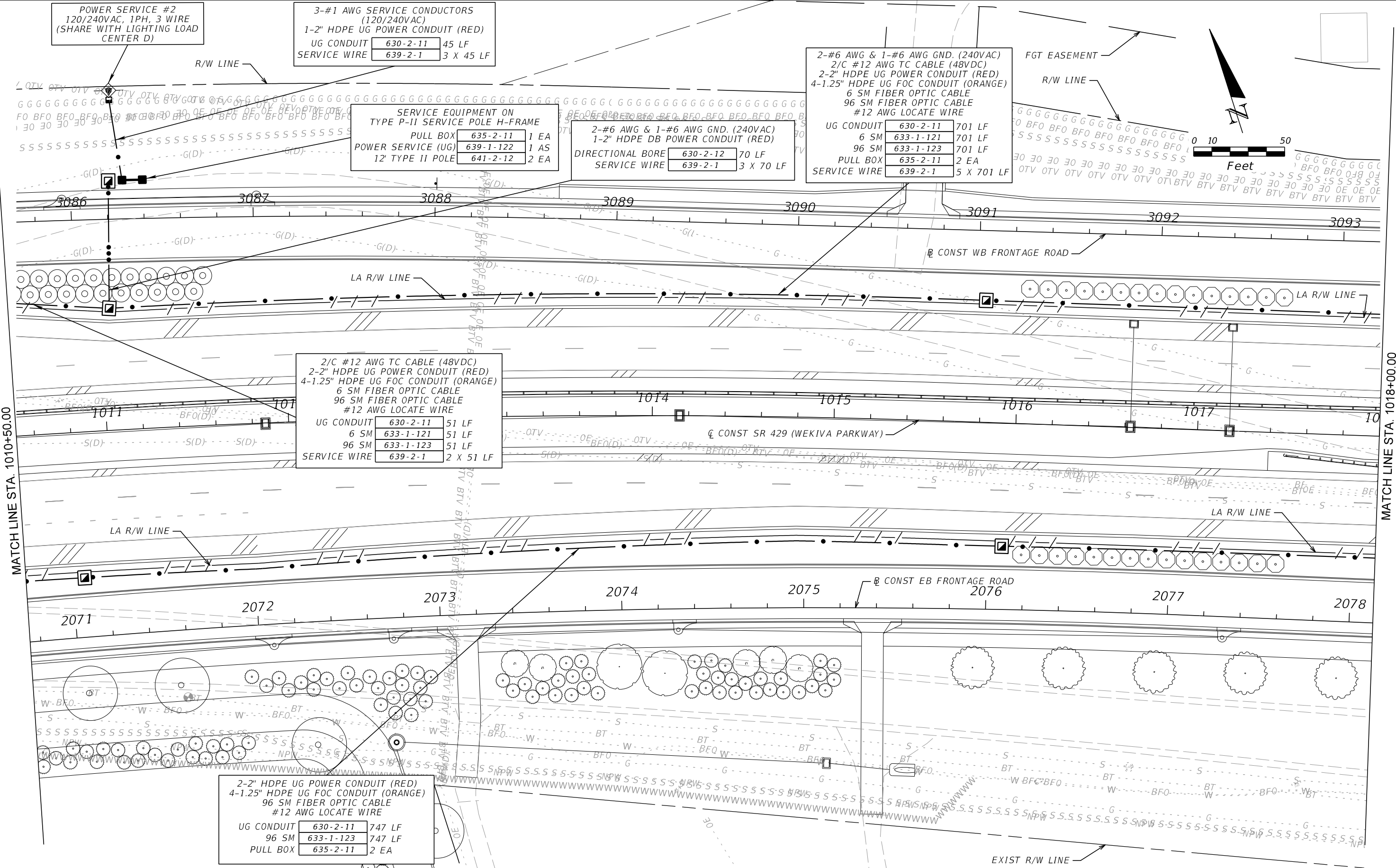
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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ITS PLAN SHEET

SHEET NO.
IT-18

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



POWER SERVICE #2
120/240VAC, 1PH, 3 WIRE
(SHARE WITH LIGHTING LOAD
CENTER D)

3-#1 AWG SERVICE CONDUCTORS
(120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)
UG CONDUIT 630-2-11 45 LF
SERVICE WIRE 639-2-1 3 X 45 LF

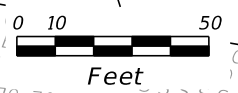
SERVICE EQUIPMENT ON
TYPE P-II SERVICE POLE H-FRAME
PULL BOX 635-2-11 1 EA
POWER SERVICE (UG) 639-1-122 1 AS
12' TYPE II POLE 641-2-12 2 EA

2-#6 AWG & 1-#6 AWG GND. (240VAC)
1-2" HDPE DB POWER CONDUIT (RED)
DIRECTIONAL BORE 630-2-12 70 LF
SERVICE WIRE 639-2-1 3 X 70 LF

2-#6 AWG & 1-#6 AWG GND. (240VAC)
2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 701 LF
6 SM 633-1-121 701 LF
96 SM 633-1-123 701 LF
PULL BOX 635-2-11 2 EA
SERVICE WIRE 639-2-1 5 X 701 LF

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 51 LF
6 SM 633-1-121 51 LF
96 SM 633-1-123 51 LF
SERVICE WIRE 639-2-1 2 X 51 LF

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE
UG CONDUIT 630-2-11 747 LF
96 SM 633-1-123 747 LF
PULL BOX 635-2-11 2 EA



MATCH LINE STA. 1010+50.00

MATCH LINE STA. 1018+00.00

| REVISIONS | | | |
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET
NO.

IT-19

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

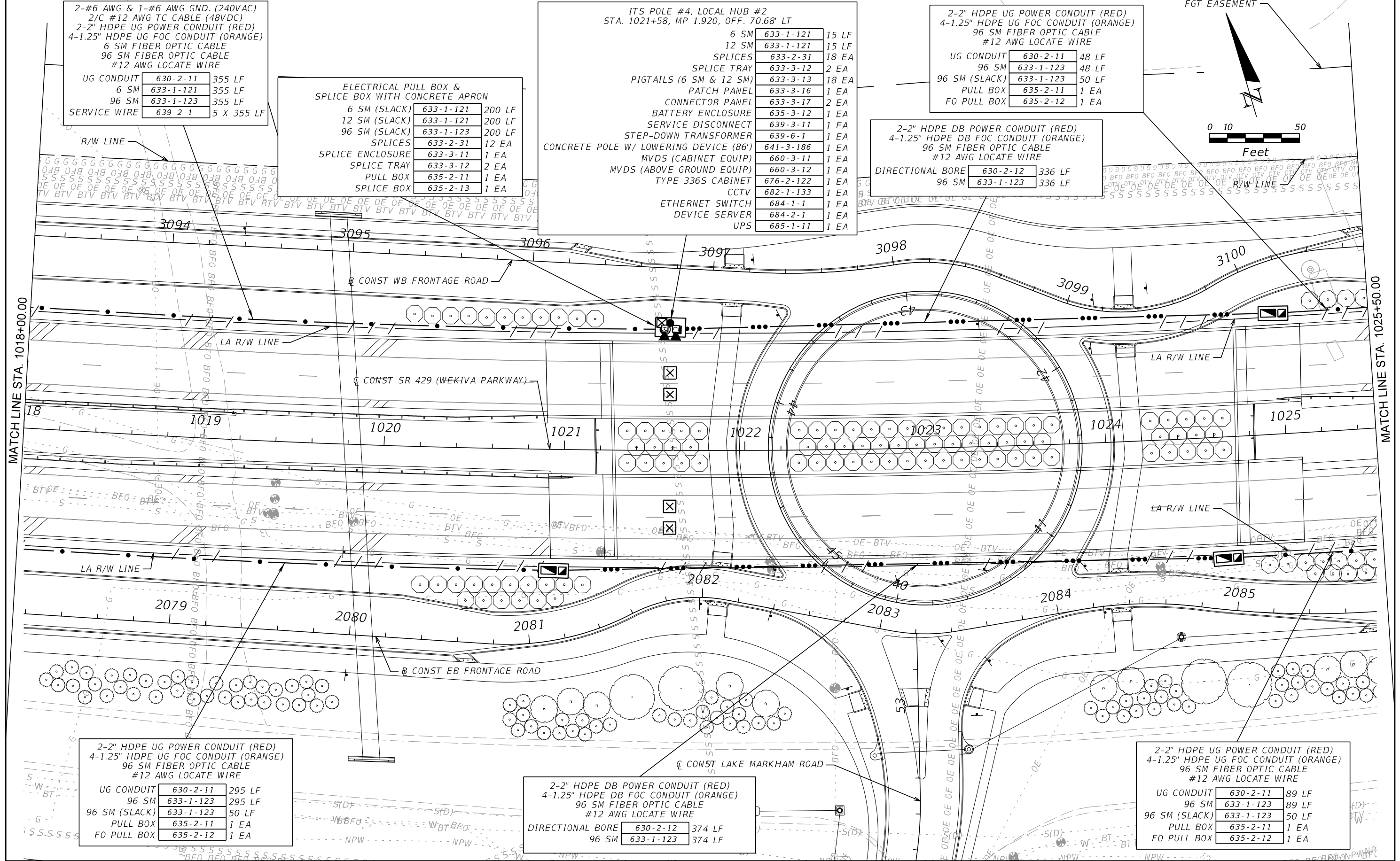
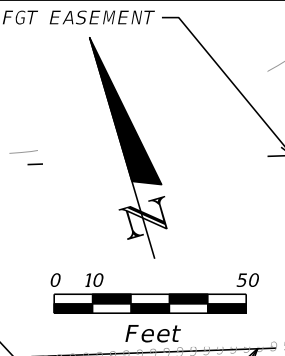
| | | |
|--------------------------------------|-----------|------------|
| 2-#6 AWG & 1-#6 AWG GND. (240VAC) | | |
| 2/C #12 AWG TC CABLE (48VDC) | | |
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 6 SM FIBER OPTIC CABLE | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 355 LF |
| 6 SM | 633-1-121 | 355 LF |
| 96 SM | 633-1-123 | 355 LF |
| SERVICE WIRE | 639-2-1 | 5 X 355 LF |

| | | |
|--|-----------|--------|
| ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON | | |
| 6 SM (SLACK) | 633-1-121 | 200 LF |
| 12 SM (SLACK) | 633-1-121 | 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

| | | |
|--|-----------|-------|
| ITS POLE #4, LOCAL HUB #2 | | |
| STA. 1021+58, MP 1.920, OFF. 70.68' LT | | |
| 6 SM | 633-1-121 | 15 LF |
| 12 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 18 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PIGTAILS (6 SM & 12 SM) | 633-3-13 | 18 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 2 EA |
| BATTERY ENCLOSURE | 635-3-12 | 1 EA |
| SERVICE DISCONNECT | 639-3-11 | 1 EA |
| STEP-DOWN TRANSFORMER | 639-6-1 | 1 EA |
| CONCRETE POLE W/ LOWERING DEVICE (86') | 641-3-186 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| TYPE 336S CABINET | 676-2-122 | 1 EA |
| CCTV | 682-1-133 | 1 EA |
| ETHERNET SWITCH | 684-1-1 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| UPS | 685-1-11 | 1 EA |

| | | |
|--------------------------------------|-----------|-------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 48 LF |
| 96 SM | 633-1-123 | 48 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE DB POWER CONDUIT (RED) | | |
| 4-1.25" HDPE DB FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| DIRECTIONAL BORE | 630-2-12 | 336 LF |
| 96 SM | 633-1-123 | 336 LF |



| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 295 LF |
| 96 SM | 633-1-123 | 295 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE DB POWER CONDUIT (RED) | | |
| 4-1.25" HDPE DB FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| DIRECTIONAL BORE | 630-2-12 | 374 LF |
| 96 SM | 633-1-123 | 374 LF |

| | | |
|--------------------------------------|-----------|-------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 89 LF |
| 96 SM | 633-1-123 | 89 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

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

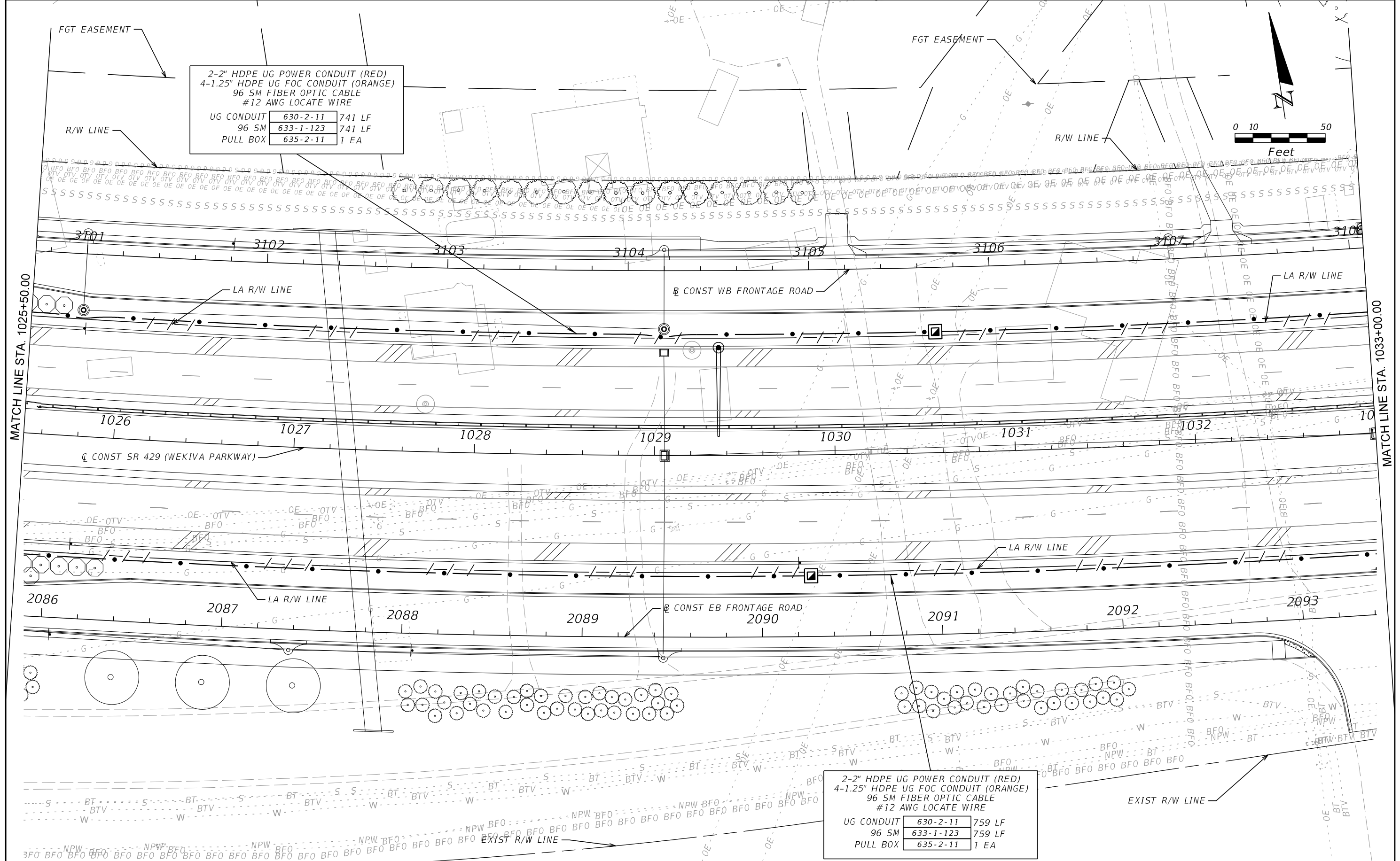
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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ITS PLAN SHEET

SHEET NO.
IT-20

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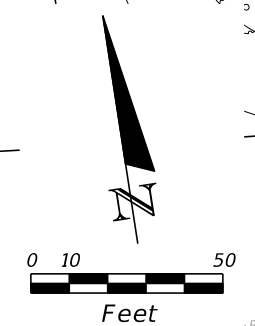


2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 741 LF |
| 96 SM | 633-1-123 | 741 LF |
| PULL BOX | 635-2-11 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 759 LF |
| 96 SM | 633-1-123 | 759 LF |
| PULL BOX | 635-2-11 | 1 EA |



MATCH LINE STA. 1025+50.00

MATCH LINE STA. 1033+00.00

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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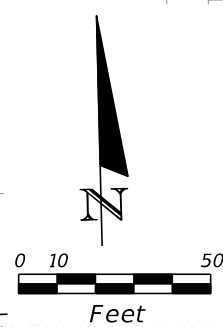
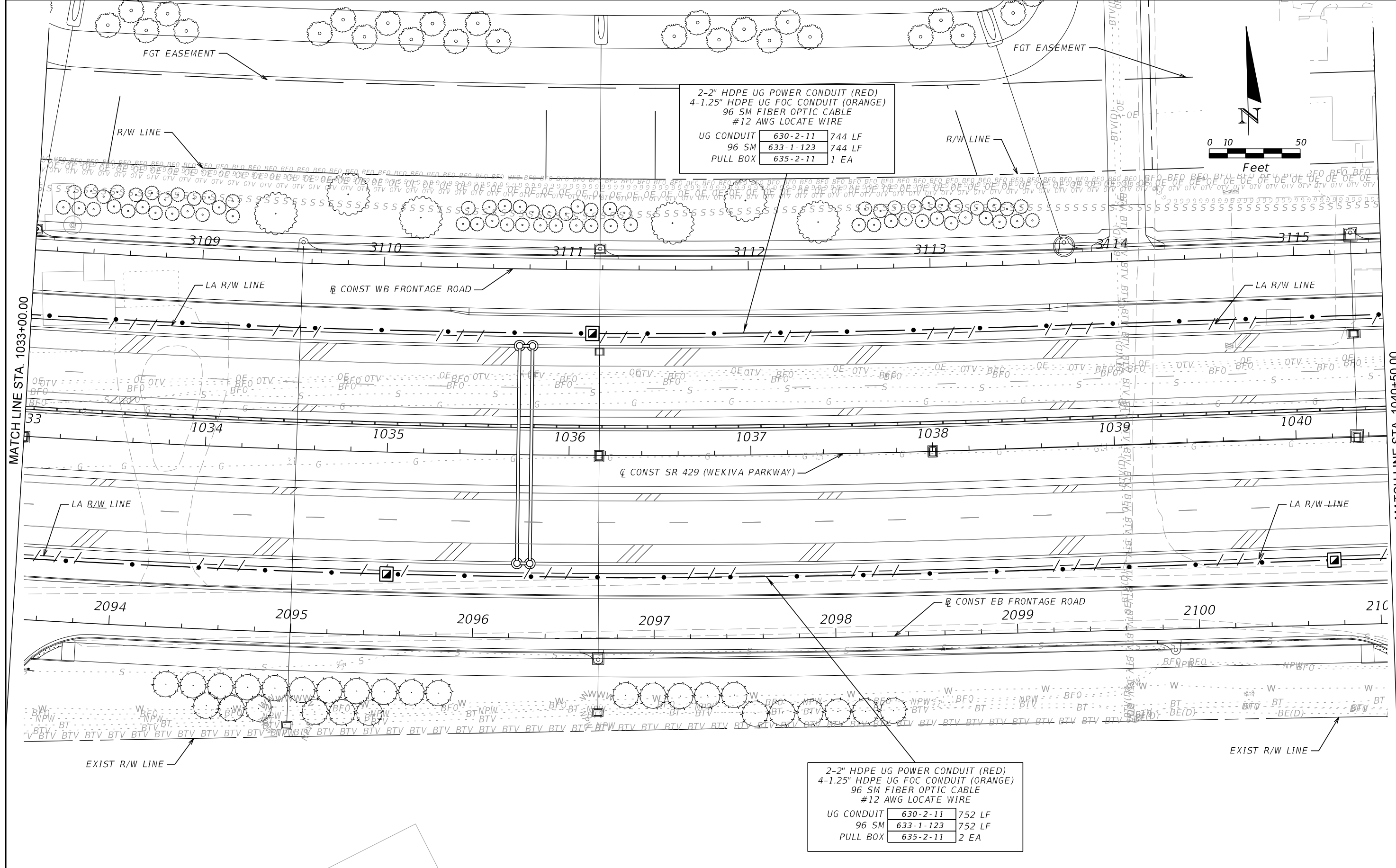
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ITS PLAN SHEET

SHEET NO.
IT-21

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MATCH LINE STA. 1033+00.00

MATCH LINE STA. 1040+50.00

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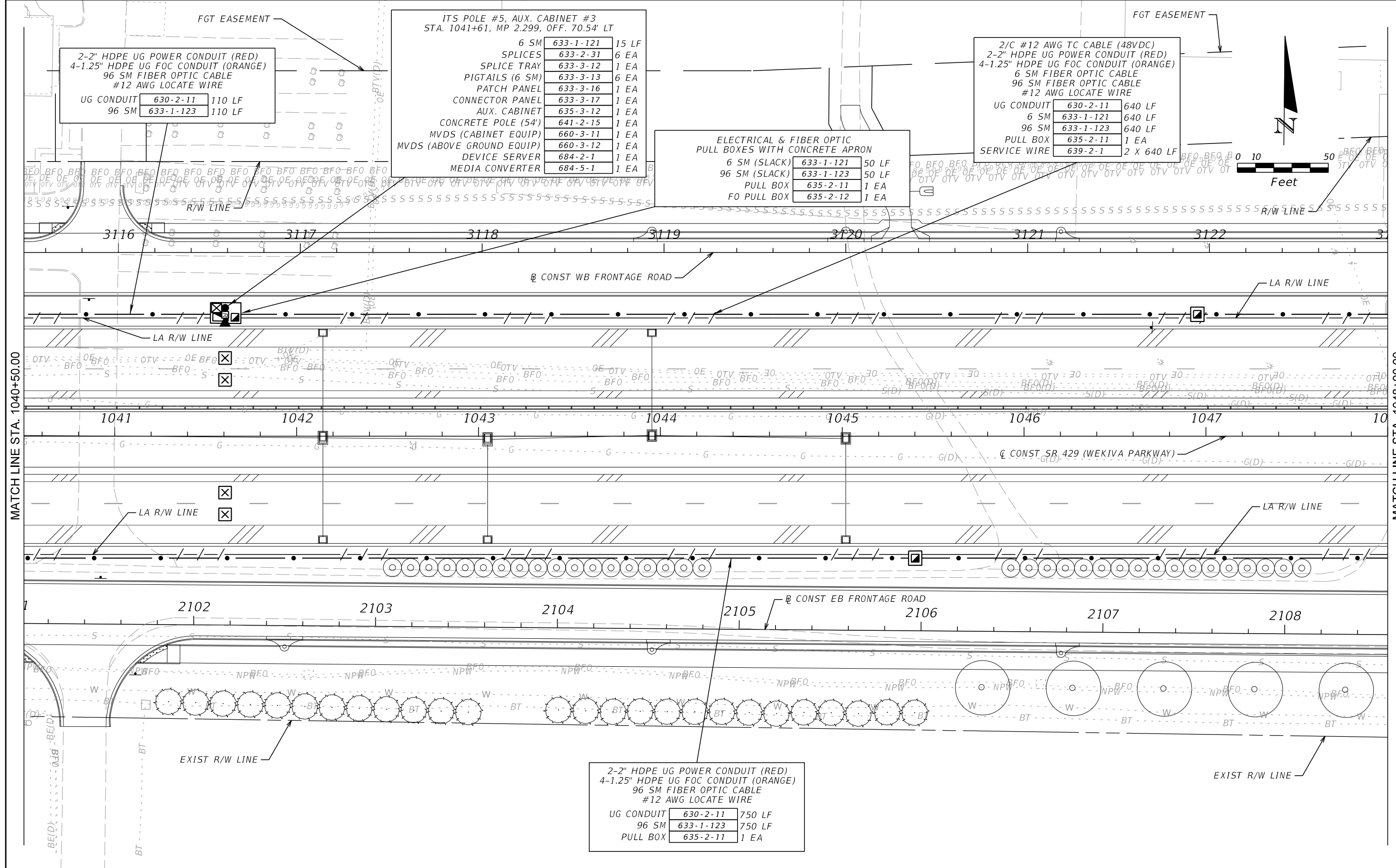
| REVISIONS | | | |
|-----------|-------------|------|-------------|
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ITS PLAN SHEET

SHEET NO.
IT-22



2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE
 UG CONDUIT 630-2-11 110 LF
 96 SM 633-1-123 110 LF

ITS POLE #5, AUX. CABINET #3
 STA. 1041+61, MP 2.299, OFF. 70.54' LT

| | | |
|---------------------------|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 6 EA |
| SPLICE TRAY | 633-3-12 | 1 EA |
| PIGTAILS (6 SM) | 633-3-13 | 6 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 1 EA |
| AUX. CABINET | 635-3-12 | 1 EA |
| CONCRETE POLE (54') | 641-2-15 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| MEDIA CONVERTER | 684-5-1 | 1 EA |

ELECTRICAL & FIBER OPTIC
 PULL BOXES WITH CONCRETE APRON

| | | |
|---------------|-----------|-------|
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE
 UG CONDUIT 630-2-11 640 LF
 6 SM 633-1-121 640 LF
 96 SM 633-1-123 640 LF
 PULL BOX 635-2-11 1 EA
 SERVICE WIRE 639-2-1 2 X 640 LF

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE
 UG CONDUIT 630-2-11 750 LF
 96 SM 633-1-123 750 LF
 PULL BOX 635-2-11 1 EA

MATCH LINE STA. 1040+50.00

MATCH LINE STA. 1048+00.00

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

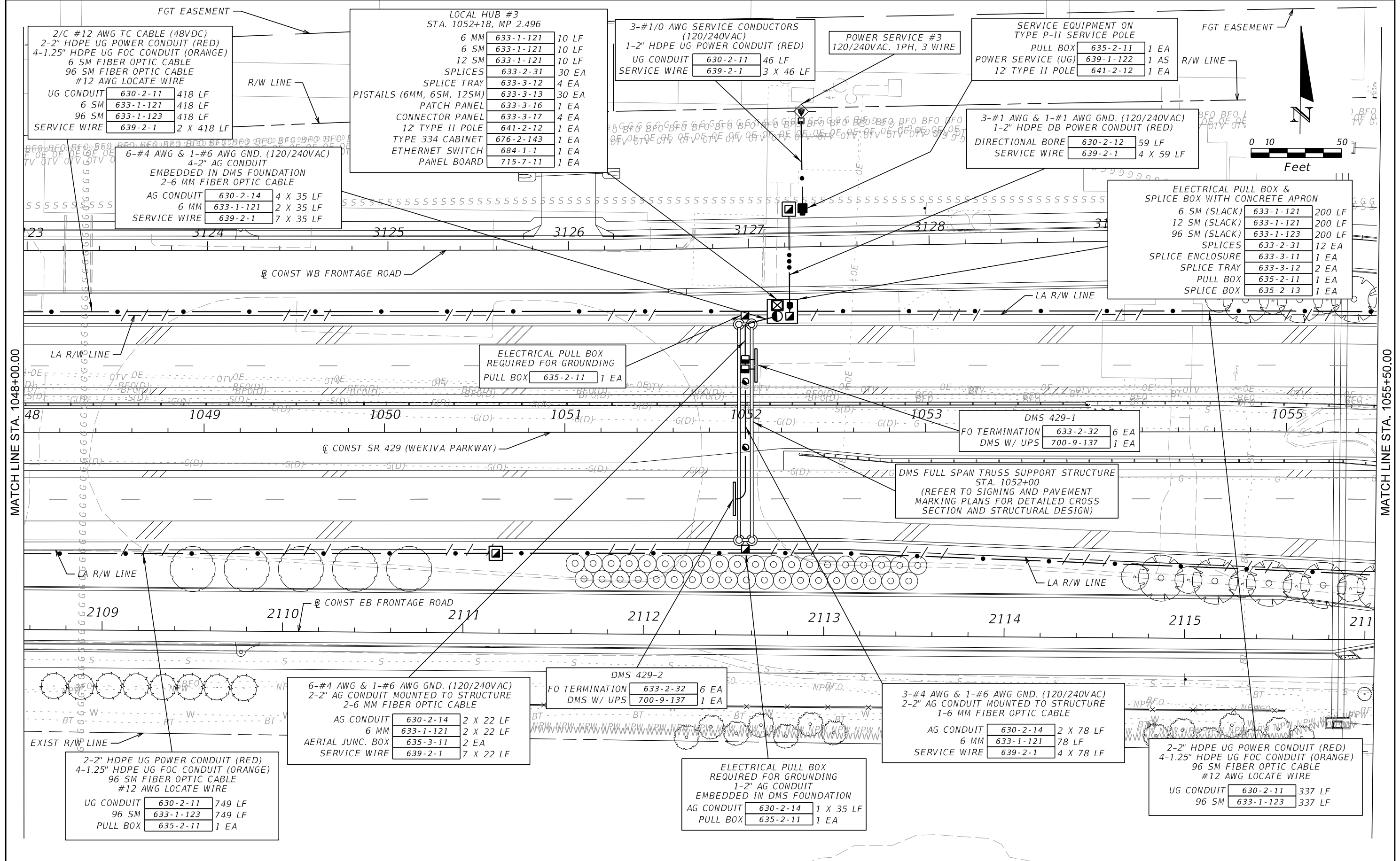
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

| | | |
|--|----------|----------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-23

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



2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 418 LF |
| 6 SM | 633-1-121 | 418 LF |
| 96 SM | 633-1-123 | 418 LF |
| SERVICE WIRE | 639-2-1 | 2 X 418 LF |

LOCAL HUB #3
STA. 1052+18, MP 2.496

| | | |
|---------------------------|-----------|-------|
| 6 MM | 633-1-121 | 10 LF |
| 6 SM | 633-1-121 | 10 LF |
| 12 SM | 633-1-121 | 10 LF |
| SPLICES | 633-2-31 | 30 EA |
| SPLICE TRAY | 633-3-12 | 4 EA |
| PIGTAILS (6MM, 6SM, 12SM) | 633-3-13 | 30 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 4 EA |
| 12' TYPE II POLE | 641-2-12 | 1 EA |
| TYPE 334 CABINET | 676-2-143 | 1 EA |
| ETHERNET SWITCH | 684-1-1 | 1 EA |
| PANEL BOARD | 715-7-11 | 1 EA |

3-#1/0 AWG SERVICE CONDUCTORS (120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)
UG CONDUIT
SERVICE WIRE

| | |
|----------|-----------|
| 630-2-11 | 46 LF |
| 639-2-1 | 3 X 46 LF |

POWER SERVICE #3
120/240VAC, 1PH, 3 WIRE

SERVICE EQUIPMENT ON TYPE P-II SERVICE POLE

| | | |
|--------------------|-----------|------|
| PULL BOX | 635-2-11 | 1 EA |
| POWER SERVICE (UG) | 639-1-122 | 1 AS |
| 12' TYPE II POLE | 641-2-12 | 1 EA |

6-#4 AWG & 1-#6 AWG GND. (120/240VAC)
4-2" AG CONDUIT
EMBEDDED IN DMS FOUNDATION
2-6 MM FIBER OPTIC CABLE

| | | |
|--------------|-----------|-----------|
| AG CONDUIT | 630-2-14 | 4 X 35 LF |
| 6 MM | 633-1-121 | 2 X 35 LF |
| SERVICE WIRE | 639-2-1 | 7 X 35 LF |

3-#1 AWG & 1-#1 AWG GND. (120/240VAC)
1-2" HDPE DB POWER CONDUIT (RED)

| | | |
|------------------|----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 59 LF |
| SERVICE WIRE | 639-2-1 | 4 X 59 LF |

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|--------|
| 6 SM (SLACK) | 633-1-121 | 200 LF |
| 12 SM (SLACK) | 633-1-121 | 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

ELECTRICAL PULL BOX REQUIRED FOR GROUNDING

| | | |
|----------|----------|------|
| PULL BOX | 635-2-11 | 1 EA |
|----------|----------|------|

DMS 429-1
FO TERMINATION
DMS W/ UPS

| | |
|-----------|------|
| 633-2-32 | 6 EA |
| 700-9-137 | 1 EA |

DMS FULL SPAN TRUSS SUPPORT STRUCTURE
STA. 1052+00
(REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR DETAILED CROSS SECTION AND STRUCTURAL DESIGN)

6-#4 AWG & 1-#6 AWG GND. (120/240VAC)
2-2" AG CONDUIT MOUNTED TO STRUCTURE
2-6 MM FIBER OPTIC CABLE

| | | |
|------------------|-----------|-----------|
| AG CONDUIT | 630-2-14 | 2 X 22 LF |
| 6 MM | 633-1-121 | 2 X 22 LF |
| AERIAL JUNC. BOX | 635-3-11 | 2 EA |
| SERVICE WIRE | 639-2-1 | 7 X 22 LF |

DMS 429-2
FO TERMINATION
DMS W/ UPS

| | |
|-----------|------|
| 633-2-32 | 6 EA |
| 700-9-137 | 1 EA |

3-#4 AWG & 1-#6 AWG GND. (120/240VAC)
2-2" AG CONDUIT MOUNTED TO STRUCTURE
1-6 MM FIBER OPTIC CABLE

| | | |
|--------------|-----------|-----------|
| AG CONDUIT | 630-2-14 | 2 X 78 LF |
| 6 MM | 633-1-121 | 78 LF |
| SERVICE WIRE | 639-2-1 | 4 X 78 LF |

ELECTRICAL PULL BOX REQUIRED FOR GROUNDING
1-2" AG CONDUIT
EMBEDDED IN DMS FOUNDATION

| | | |
|------------|----------|-----------|
| AG CONDUIT | 630-2-14 | 1 X 35 LF |
| PULL BOX | 635-2-11 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 337 LF |
| 96 SM | 633-1-123 | 337 LF |

MATCH LINE STA. 1048+00.00

MATCH LINE STA. 1055+00.00

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-24

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

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 61 LF |
| 96 SM | 633-1-123 | 61 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

ELECTRICAL PULL BOX &
SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|--------|
| 12 SM (SLACK) | 633-1-121 | 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

ITS POLE #6, LOCAL HUB #4
STA. 1061+64, MP 2.678, OFF. 70.54' LT

| | | |
|--|-----------|-------|
| 12 SM | 633-1-121 | 10 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE TRAY | 633-3-12 | 1 EA |
| PIGTAILS (12 SM) | 633-3-13 | 12 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 1 EA |
| BATTERY ENCLOSURE | 635-3-12 | 1 EA |
| SERVICE DISCONNECT | 639-3-11 | 1 EA |
| CONCRETE POLE W/ LOWERING DEVICE (86') | 641-3-186 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| TYPE 336S CABINET | 676-2-122 | 1 EA |
| CCTV | 682-1-133 | 1 EA |
| ETHERNET SWITCH | 684-1-1 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| UPS | 685-1-11 | 1 EA |

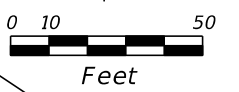
SERVICE EQUIPMENT ON
TYPE P-II SERVICE POLE

| | | |
|--------------------|-----------|------|
| PULL BOX | 635-2-11 | 1 EA |
| POWER SERVICE (UG) | 639-1-122 | 1 AS |
| 12' TYPE II POLE | 641-2-12 | 1 EA |
| PANEL BOARD | 715-7-11 | 1 EA |

2-#6 AWG & 1-#6 AWG GND. (120VAC)
2-#4 AWG & 1-#4 AWG GND. (240VAC)
1-2" HDPE DB POWER CONDUIT (RED)

| | | |
|------------------|----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 65 LF |
| SERVICE WIRE | 639-2-1 | 6 X 65 LF |

POWER SERVICE #4
120/240VAC, 1PH, 3 WIRE



2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 326 LF |
| 96 SM | 633-1-123 | 326 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

3-#1 AWG SERVICE CONDUCTORS
(120/240VAC)
1-2" HDPE UG POWER CONDUIT (RED)

| | | |
|--------------|----------|-----------|
| UG CONDUIT | 630-2-11 | 45 LF |
| SERVICE WIRE | 639-2-1 | 3 X 45 LF |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 372 LF |
| 96 SM | 633-1-123 | 372 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 346 LF |
| 96 SM | 633-1-123 | 346 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-#4 AWG & 1-#4 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 141 LF |
| 96 SM | 633-1-123 | 141 LF |
| SERVICE WIRE | 639-2-1 | 3 X 141 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 34 LF |
| 96 SM | 633-1-123 | 34 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 361 LF |
| 96 SM | 633-1-123 | 361 LF |

MATCH LINE STA. 1055+50.00

MATCH LINE STA. 1063+00.00

| REVISIONS | |
|-----------|-------------|
| DATE | DESCRIPTION |
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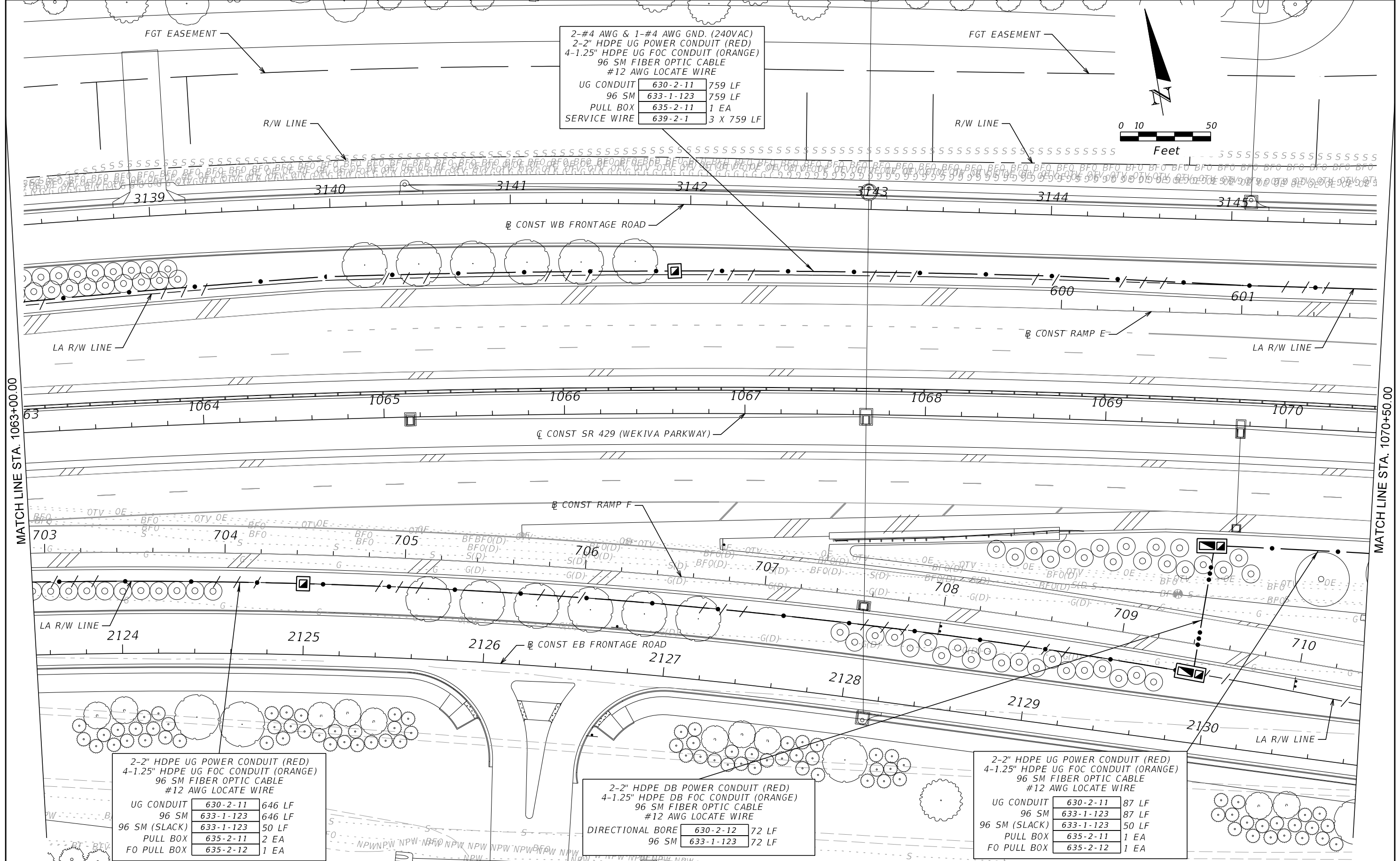
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

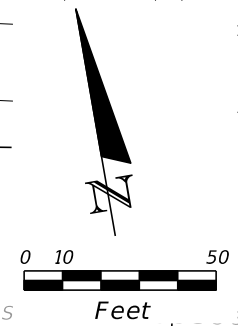
SHEET NO.
IT-25

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



2-#4 AWG & 1-#4 AWG GND. (240VAC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 759 LF |
| 96 SM | 633-1-123 | 759 LF |
| PULL BOX | 635-2-11 | 1 EA |
| SERVICE WIRE | 639-2-1 | 3 X 759 LF |



2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 646 LF |
| 96 SM | 633-1-123 | 646 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE DB POWER CONDUIT (RED)
 4-1.25" HDPE DB FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-------|
| DIRECTIONAL BORE | 630-2-12 | 72 LF |
| 96 SM | 633-1-123 | 72 LF |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|---------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 87 LF |
| 96 SM | 633-1-123 | 87 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

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

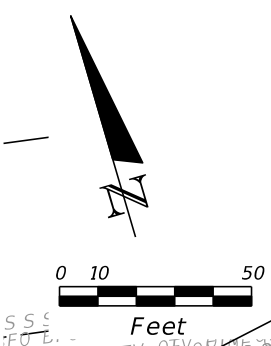
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-26

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



2-#4 AWG & 1-#4 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 574 LF |
| 96 SM | 633-1-123 | 574 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 3 X 574 LF |

2-#4 AWG & 1-#4 AWG GND. (240VAC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 53 LF |
| 96 SM | 633-1-123 | 53 LF |
| SERVICE WIRE | 639-2-1 | 3 X 53 LF |

2-#4 AWG & 1-#4 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 181 LF |
| 96 SM | 633-1-123 | 181 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 3 X 181 LF |

FIBER OPTIC SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|------------|
| 24 SM (SLACK) | 633-1-122 | 2 X 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 8 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

2-2" HDPE UG FOC CONDUIT (ORANGE)
2-24 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|-----------|
| UG CONDUIT | 630-2-11 | 35 LF |
| 24 SM | 633-1-122 | 2 X 35 LF |
| 24 SM (SLACK) | 633-1-122 | 2 X 50 LF |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
2-2" HDPE UG FOC TOLLS CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 562 LF |
| 24 SM | 633-1-122 | 562 LF |
| 96 SM | 633-1-123 | 562 LF |
| PULL BOX | 635-2-11 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 181 LF |
| 96 SM | 633-1-123 | 181 LF |

TERMINATE FIBER AT COMMUNICATIONS CABINET IN TOLL BUILDING

| | | |
|------------------|-----------|-----------|
| 24 SM (SLACK) | 633-1-122 | 2 X 25 LF |
| SPLICES | 633-2-31 | 48 EA |
| SPLICE TRAY | 633-3-12 | 4 EA |
| PIGTAILS (12 SM) | 633-3-13 | 48 EA |
| PATCH PANEL | 633-3-16 | 2 EA |
| CONNECTOR PANEL | 633-3-17 | 4 EA |

2-2" HDPE UG FOC CONDUIT (ORANGE)
FOR COMMUNICATIONS CABINET STUB-UP
2-24 SM FIBER OPTIC CABLE

| | | |
|------------|-----------|-----------|
| UG CONDUIT | 630-2-11 | 15 LF |
| 24 SM | 633-1-122 | 2 X 15 LF |

MATCH LINE STA. 1070+50.00

MATCH LINE STA. 1078+00.00

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

| REVISIONS | |
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| DATE | DESCRIPTION |
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-27

2-#4 AWG & 1-#4 AWG GND. (240VAC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 520 LF |
| 96 SM | 633-1-123 | 520 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 3 X 520 LF |

ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON

| | | |
|------------------|-----------|--------|
| 6 SM (SLACK) | 633-1-121 | 200 LF |
| 12 SM (SLACK) | 633-1-121 | 200 LF |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICES | 633-2-31 | 12 EA |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

ITS POLE #7, LOCAL HUB #5
STA. 1084+60, MP 3.113, OFF. 70.53' LT

| | | |
|-------------------------------------|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| 12 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 18 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PIGTAILS (6 SM, 12 SM) | 633-3-13 | 18 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 2 EA |
| BATTERY ENCLOSURE | 635-3-12 | 1 EA |
| SERVICE DISCONNECT | 639-3-11 | 1 EA |
| STEP-DOWN TRANSFORMER | 639-6-1 | 1 EA |
| CONC. POLE W/ LOWERING DEVICE (86') | 641-3-186 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| TYPE 336S CABINET | 676-2-122 | 1 EA |
| CCTV | 682-1-133 | 1 EA |
| ETHERNET SWITCH | 684-1-1 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| UPS | 685-1-11 | 1 EA |

TERMINATE FIBER AT COMMUNICATIONS CABINET IN TOLL BUILDING

| | | |
|------------------|-----------|-------|
| 24 SM (SLACK) | 633-1-122 | 25 LF |
| SPLICES | 633-2-31 | 24 EA |
| SPLICE TRAY | 633-3-12 | 2 EA |
| PIGTAILS (12 SM) | 633-3-13 | 24 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 2 EA |

2-2" HDPE UG FOC CONDUIT (ORANGE)
FOR COMMUNICATIONS CABINET STUB-UP
24 SM FIBER OPTIC CABLE

| | | |
|------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 15 LF |
| 24 SM | 633-1-122 | 15 LF |

2-2" HDPE UG FOC CONDUIT (ORANGE)
24 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

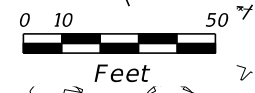
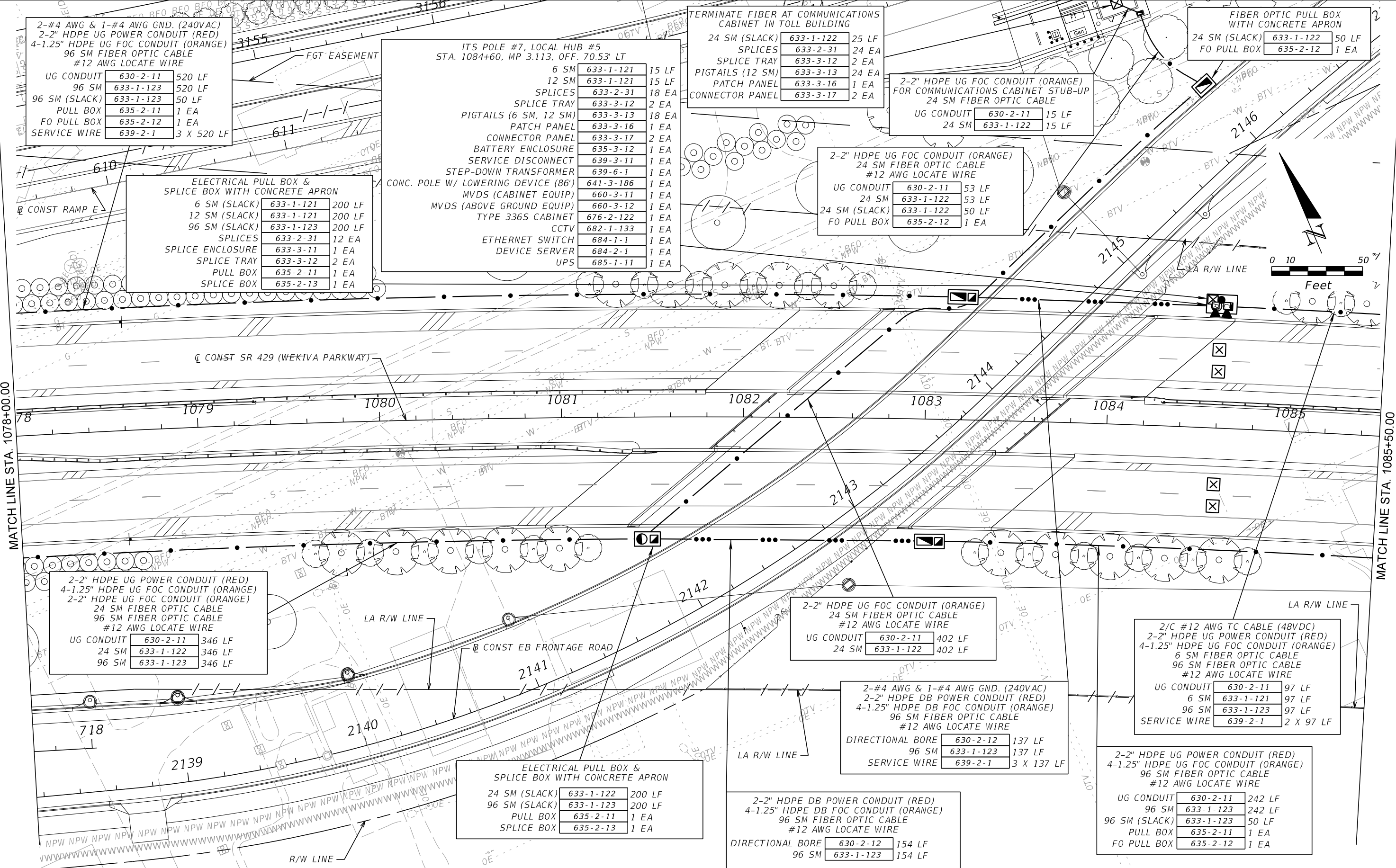
| | | |
|---------------|-----------|-------|
| UG CONDUIT | 630-2-11 | 53 LF |
| 24 SM | 633-1-122 | 53 LF |
| 24 SM (SLACK) | 633-1-122 | 50 LF |
| FO PULL BOX | 635-2-12 | 1 EA |

FIBER OPTIC PULL BOX WITH CONCRETE APRON

| | | |
|---------------|-----------|-------|
| 24 SM (SLACK) | 633-1-122 | 50 LF |
| FO PULL BOX | 635-2-12 | 1 EA |

MATCH LINE STA. 1078+00.00

MATCH LINE STA. 1085+50.00



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

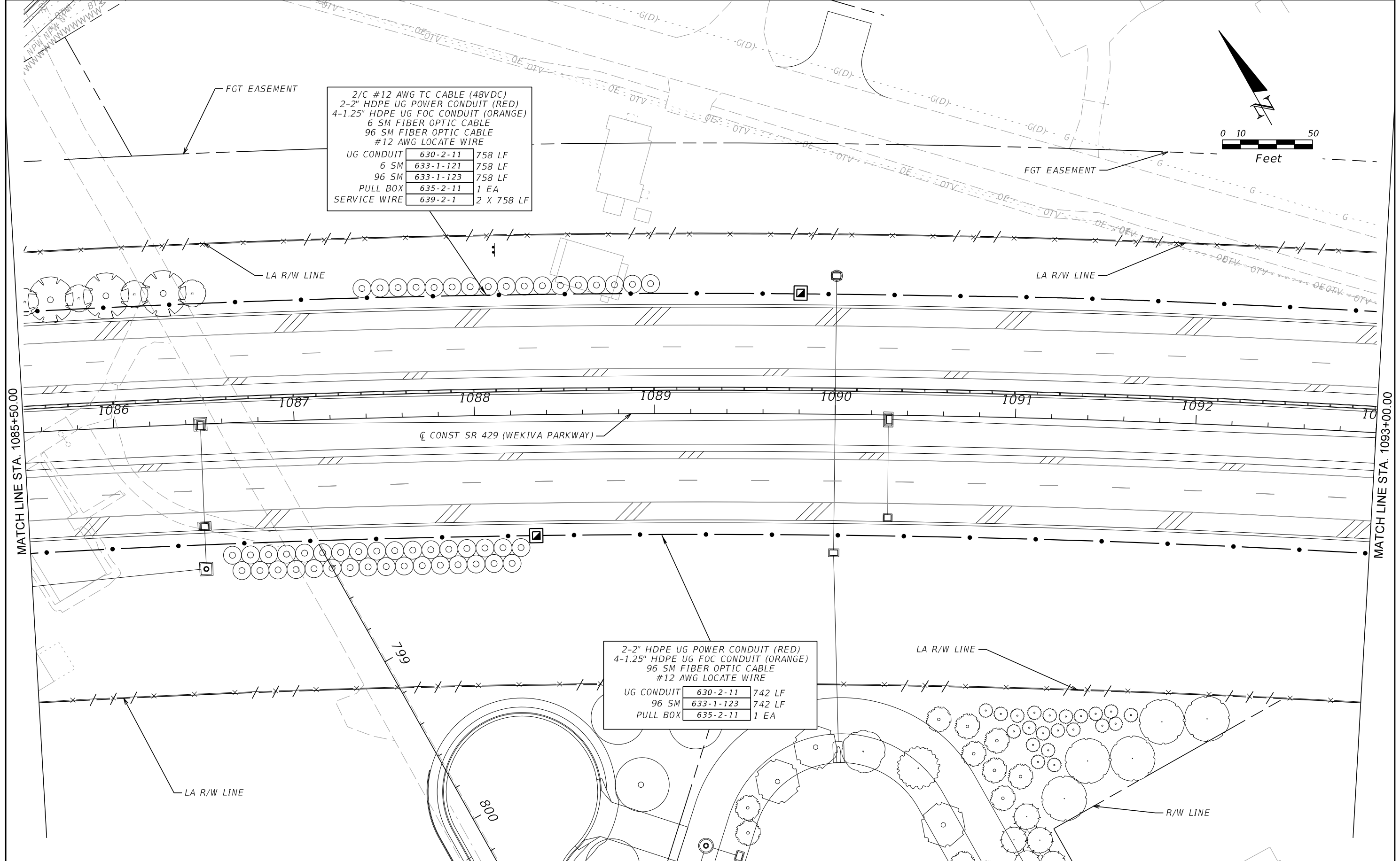
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-28

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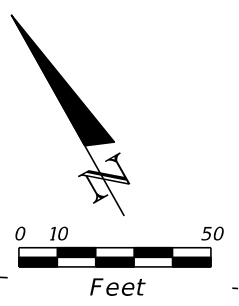


2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 758 LF |
| 6 SM | 633-1-121 | 758 LF |
| 96 SM | 633-1-123 | 758 LF |
| PULL BOX | 635-2-11 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 758 LF |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 742 LF |
| 96 SM | 633-1-123 | 742 LF |
| PULL BOX | 635-2-11 | 1 EA |



MATCH LINE STA. 1085+50.00

MATCH LINE STA. 1093+00.00

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

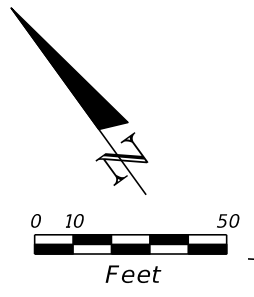
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ITS PLAN SHEET

SHEET NO.
IT-29

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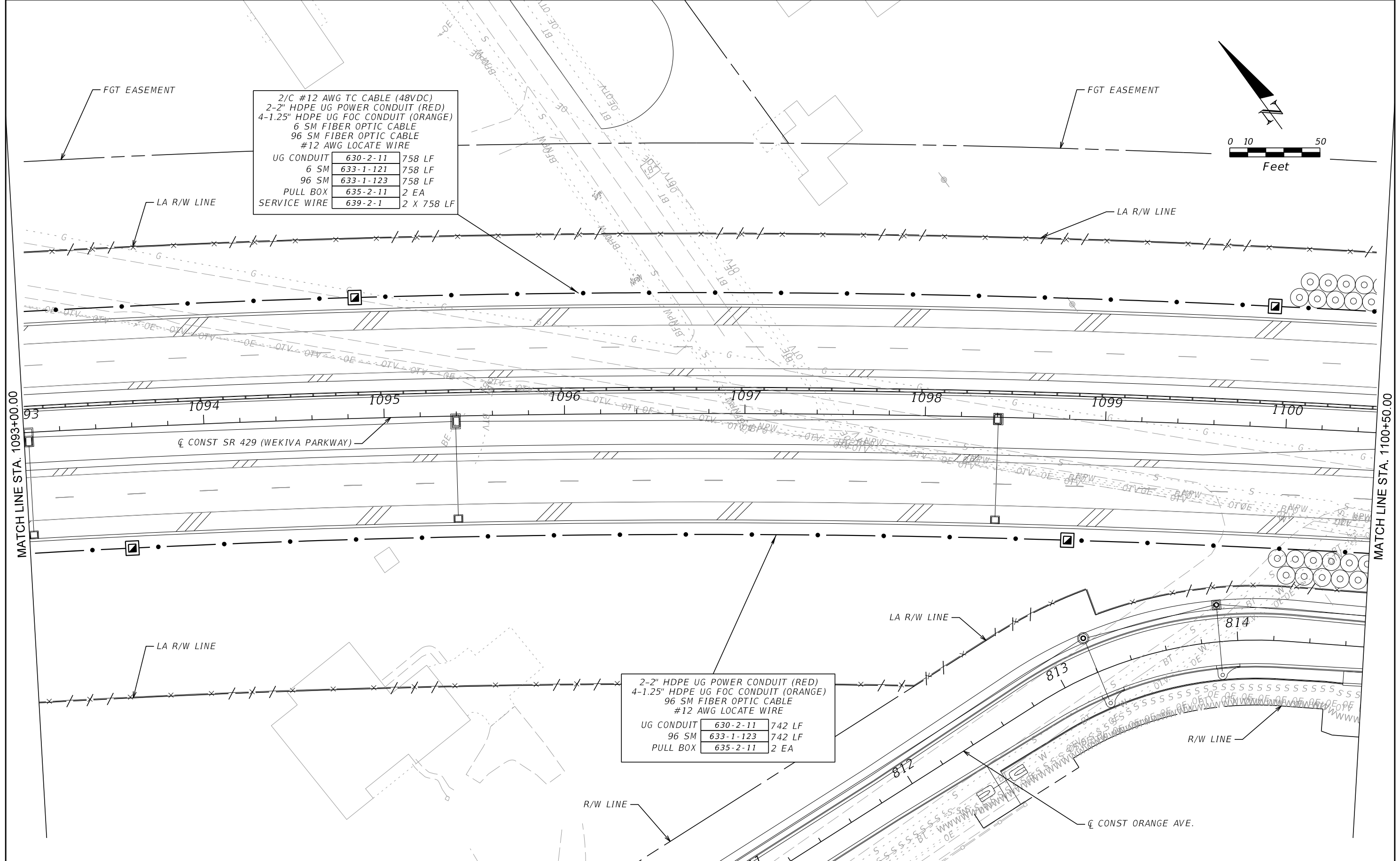


2/C #12 AWG TC CABLE (48VDC)
 2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 6 SM FIBER OPTIC CABLE
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|--------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 758 LF |
| 6 SM | 633-1-121 | 758 LF |
| 96 SM | 633-1-123 | 758 LF |
| PULL BOX | 635-2-11 | 2 EA |
| SERVICE WIRE | 639-2-1 | 2 X 758 LF |

2-2" HDPE UG POWER CONDUIT (RED)
 4-1.25" HDPE UG FOC CONDUIT (ORANGE)
 96 SM FIBER OPTIC CABLE
 #12 AWG LOCATE WIRE

| | | |
|------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 742 LF |
| 96 SM | 633-1-123 | 742 LF |
| PULL BOX | 635-2-11 | 2 EA |



MATCH LINE STA. 1093+00.00

MATCH LINE STA. 1100+50.00

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

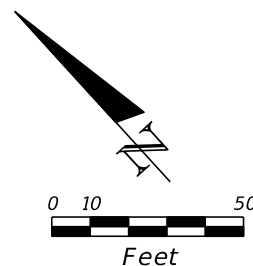
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-30

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



2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|------------|
| UG CONDUIT | 630-2-11 | 448 LF |
| 6 SM | 633-1-121 | 448 LF |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM | 633-1-123 | 448 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |
| SERVICE WIRE | 639-2-1 | 2 X 448 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|-----------|
| UG CONDUIT | 630-2-11 | 91 LF |
| 6 SM | 633-1-121 | 91 LF |
| 6 SM (SLACK) | 633-1-121 | 100 LF |
| 96 SM | 633-1-123 | 91 LF |
| 96 SM (SLACK) | 633-1-123 | 100 LF |
| PULL BOX | 635-2-11 | 2 EA |
| FO PULL BOX | 635-2-12 | 2 EA |
| SERVICE WIRE | 639-2-1 | 2 X 91 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|-----------|
| DIRECTIONAL BORE | 630-2-12 | 93 LF |
| 6 SM | 633-1-121 | 93 LF |
| 96 SM | 633-1-123 | 93 LF |
| SERVICE WIRE | 639-2-1 | 2 X 93 LF |

2/C #12 AWG TC CABLE (48VDC)
2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
6 SM FIBER OPTIC CABLE
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|------------------|-----------|------------|
| DIRECTIONAL BORE | 630-2-12 | 124 LF |
| 6 SM | 633-1-121 | 124 LF |
| 96 SM | 633-1-123 | 124 LF |
| SERVICE WIRE | 639-2-1 | 2 X 124 LF |

2-2" HDPE DB POWER CONDUIT (RED)
4-1.25" HDPE DB FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

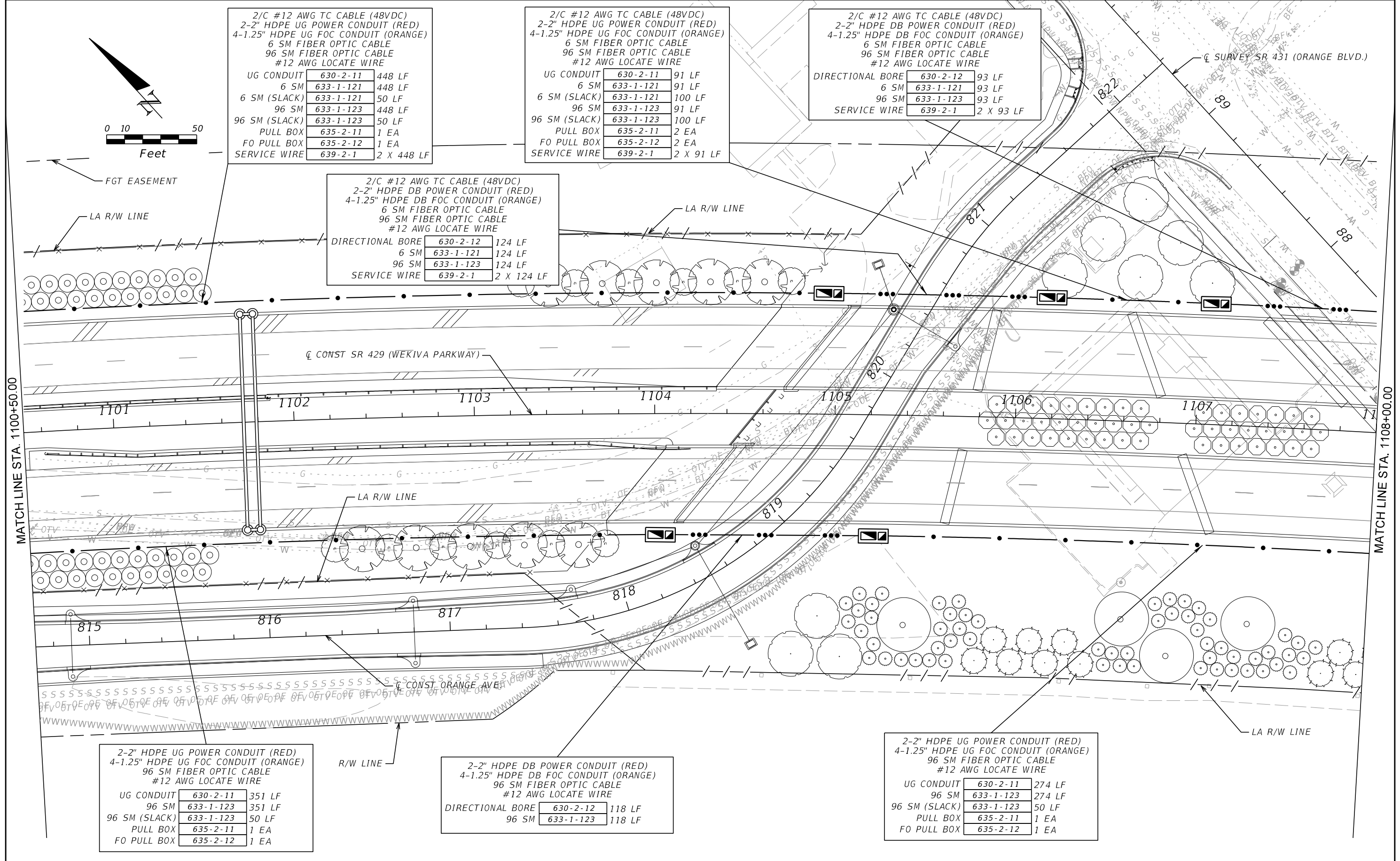
| | | |
|------------------|-----------|--------|
| DIRECTIONAL BORE | 630-2-12 | 118 LF |
| 96 SM | 633-1-123 | 118 LF |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 274 LF |
| 96 SM | 633-1-123 | 274 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

2-2" HDPE UG POWER CONDUIT (RED)
4-1.25" HDPE UG FOC CONDUIT (ORANGE)
96 SM FIBER OPTIC CABLE
#12 AWG LOCATE WIRE

| | | |
|---------------|-----------|--------|
| UG CONDUIT | 630-2-11 | 351 LF |
| 96 SM | 633-1-123 | 351 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |



MATCH LINE STA. 1100+50.00

MATCH LINE STA. 1108+00.00

| REVISIONS | | | |
|-----------|-------------|------|-------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-31

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

ITS POLE #8, AUX. CABINET #4
STA. 1109+49, MP 3.585, OFF. 70.53' LT

| | | |
|---|-----------|-------|
| 6 SM | 633-1-121 | 15 LF |
| SPLICES | 633-2-31 | 6 EA |
| SPLICE TRAY | 633-3-12 | 1 EA |
| PIGTAILS (6 SM) | 633-3-13 | 6 EA |
| PATCH PANEL | 633-3-16 | 1 EA |
| CONNECTOR PANEL | 633-3-17 | 1 EA |
| AUX. CABINET | 635-3-12 | 1 EA |
| CONCRETE POLE W/O LOWERING DEVICE (63') | 641-3-263 | 1 EA |
| MVDS (CABINET EQUIP) | 660-3-11 | 1 EA |
| MVDS (ABOVE GROUND EQUIP) | 660-3-12 | 1 EA |
| DEVICE SERVER | 684-2-1 | 1 EA |
| MEDIA CONVERTER | 684-5-1 | 1 EA |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 497 LF |
| 96 SM | 633-1-123 | 497 LF |

| | | |
|--------------------------------------|-----------|------------|
| 2/C #12 AWG TC CABLE (48VDC) | | |
| 2-2" HDPE DB POWER CONDUIT (RED) | | |
| 4-1.25" HDPE DB FOC CONDUIT (ORANGE) | | |
| 6 SM FIBER OPTIC CABLE | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| DIRECTIONAL BORE | 630-2-12 | 145 LF |
| 6 SM | 633-1-121 | 145 LF |
| 96 SM | 633-1-123 | 145 LF |
| SERVICE WIRE | 639-2-1 | 2 X 145 LF |

| | | |
|---|-----------|-------|
| ELECTRICAL & FIBER OPTIC PULL BOXES WITH CONCRETE APRON | | |
| 6 SM (SLACK) | 633-1-121 | 50 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

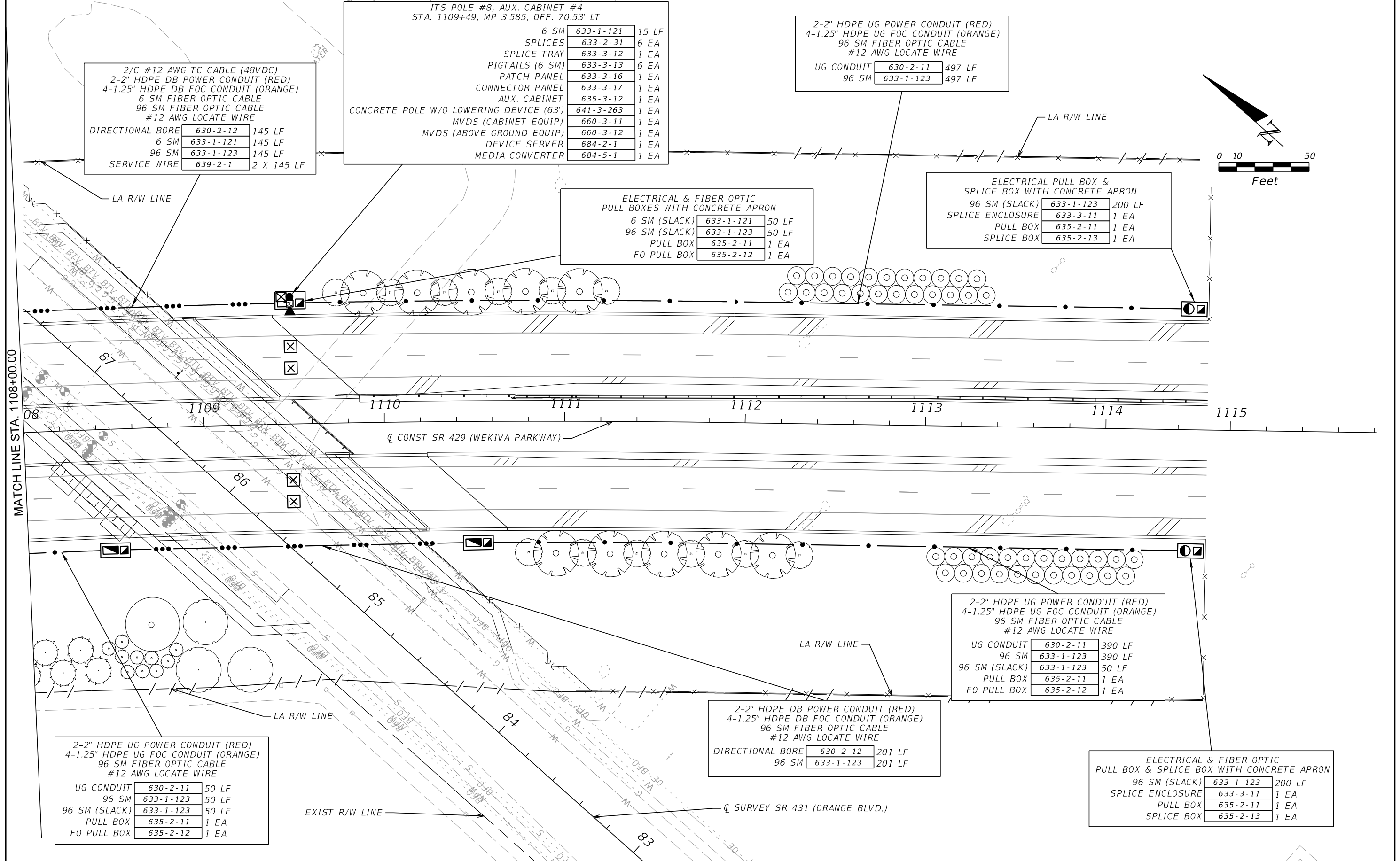
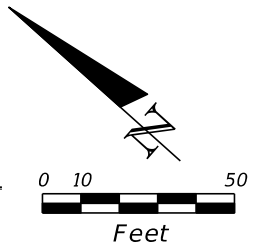
| | | |
|--|-----------|--------|
| ELECTRICAL PULL BOX & SPLICE BOX WITH CONCRETE APRON | | |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 390 LF |
| 96 SM | 633-1-123 | 390 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

| | | |
|--------------------------------------|-----------|--------|
| 2-2" HDPE DB POWER CONDUIT (RED) | | |
| 4-1.25" HDPE DB FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| DIRECTIONAL BORE | 630-2-12 | 201 LF |
| 96 SM | 633-1-123 | 201 LF |

| | | |
|--------------------------------------|-----------|-------|
| 2-2" HDPE UG POWER CONDUIT (RED) | | |
| 4-1.25" HDPE UG FOC CONDUIT (ORANGE) | | |
| 96 SM FIBER OPTIC CABLE | | |
| #12 AWG LOCATE WIRE | | |
| UG CONDUIT | 630-2-11 | 50 LF |
| 96 SM | 633-1-123 | 50 LF |
| 96 SM (SLACK) | 633-1-123 | 50 LF |
| PULL BOX | 635-2-11 | 1 EA |
| FO PULL BOX | 635-2-12 | 1 EA |

| | | |
|--|-----------|--------|
| ELECTRICAL & FIBER OPTIC PULL BOX & SPLICE BOX WITH CONCRETE APRON | | |
| 96 SM (SLACK) | 633-1-123 | 200 LF |
| SPLICE ENCLOSURE | 633-3-11 | 1 EA |
| PULL BOX | 635-2-11 | 1 EA |
| SPLICE BOX | 635-2-13 | 1 EA |



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

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Traffic Engineering Data Solutions, Inc.
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CERTIFICATION OF AUTHORIZATION # 27392

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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

ITS PLAN SHEET

SHEET NO.
IT-32

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

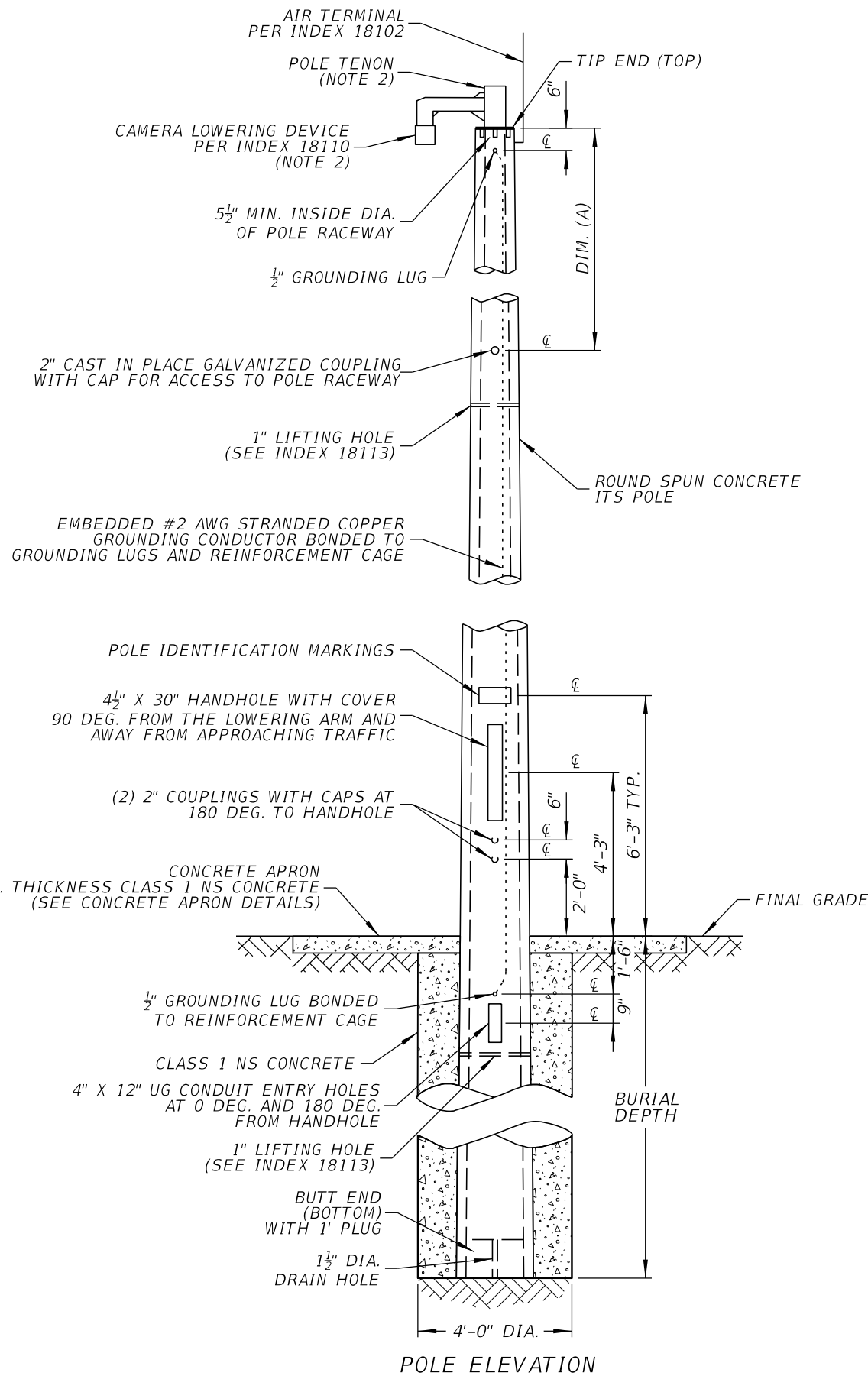
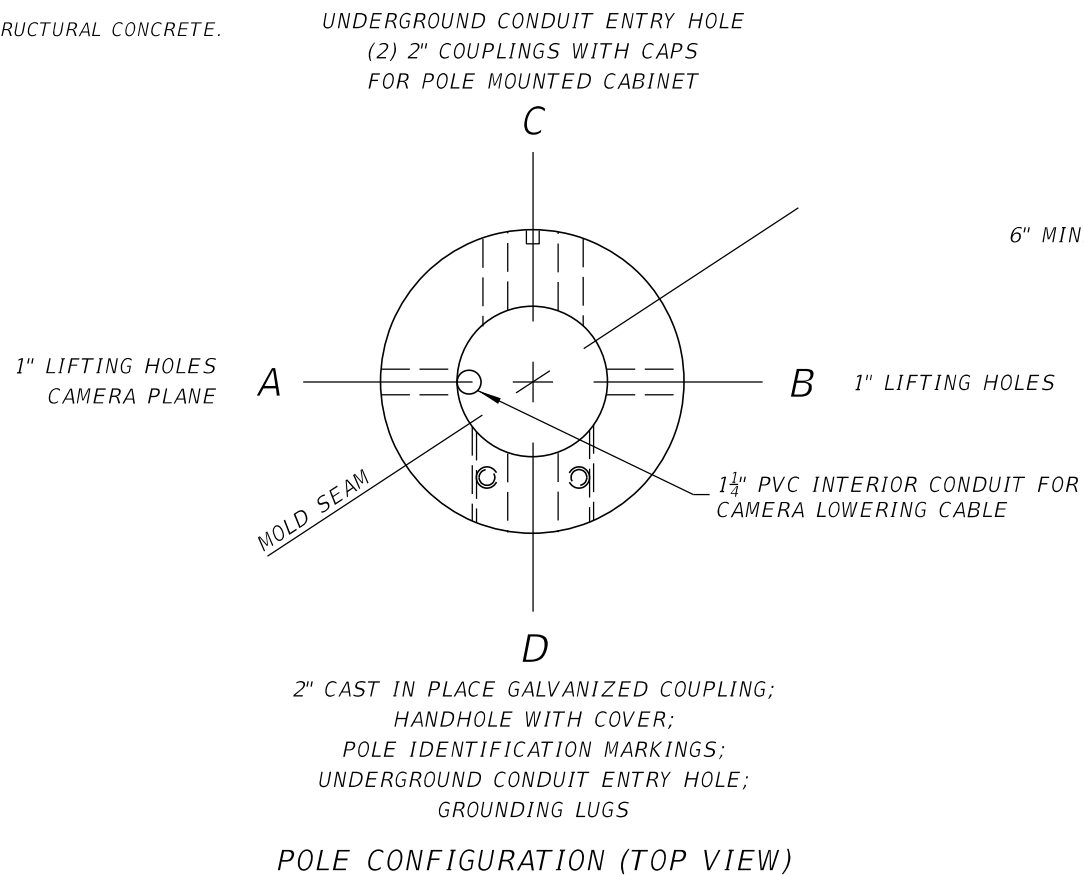
ROUND SPUN CONCRETE POLE DATA SUMMARY TABLE

| ITS POLE | STATION | OFFSET | DEVICES ON POLE | POLE MATERIAL | POLE LENGTH* | POLE HEIGHT** | DIM. A | BURIAL DEPTH | LOWERING DEVICE | MIN. REQUIRED ULTIMATE MOMENT CAPACITY AT GRADE (KIP-FT) |
|----------|---------|-----------|-----------------|---------------|--------------|---------------|--------|--------------|-----------------|--|
| 2 | 964+26 | 70.48' LT | CCTV / MVDS | CONCRETE | 86' | 70' | 21' | 16' | YES | 233 |
| 4 | 1021+58 | 70.68' LT | CCTV / MVDS | CONCRETE | 86' | 70' | 21' | 16' | YES | 233 |
| 6 | 1061+64 | 70.54' LT | CCTV / MVDS | CONCRETE | 86' | 70' | 21' | 16' | YES | 233 |
| 7 | 1084+60 | 70.53' LT | CCTV / MVDS | CONCRETE | 86' | 70' | 21' | 16' | YES | 233 |
| 8 | 1109+49 | 70.53' LT | MVDS | CONCRETE | 63' | 50' | 2' | 13' | NO | 87 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

* MEASURED FROM TOP END (TOP) TO BUTT END (BOTTOM) OF POLE.
 ** MEASURED FROM FINAL GRADE TO TIP END (TOP) OF POLE.

NOTES:

- UNLESS OTHERWISE INDICATED ON THIS SHEET, CONCRETE POLES LISTED IN THE TABLE ABOVE SHALL BE CONSTRUCTED AND INSTALLED PER FDOT INDEX 18113.
- IF THE PROPOSED DEVICES ON THE POLE DO NOT INCLUDE A CCTV CAMERA, THEN NO LOWERING DEVICE OR POLE TENON SHALL BE PROVIDED, AND A REMOVABLE CAP PLATE SHALL BE INSTALLED ON THE TIP END (TOP) OF THE POLE.
- POLES SHALL BE INSTALLED PLUMB, AND IN THE CENTER OF THE FOUNDATION SHAFT SUCH THAT THE DISTANCE FROM THE FACE OF THE POLE TO THE EDGE OF THE FOUNDATION SHAFT IS EQUAL ON ALL SIDES.
- ALL ITS POLES SHALL BE FULLY EMBEDDED IN CLASS I NON-STRUCTURAL CONCRETE.



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

ALEXANDER TEAL MIMS, P.E. PE No. 77095
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STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
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| SR 429 | SEMINOLE | 240200-2-52-01 |

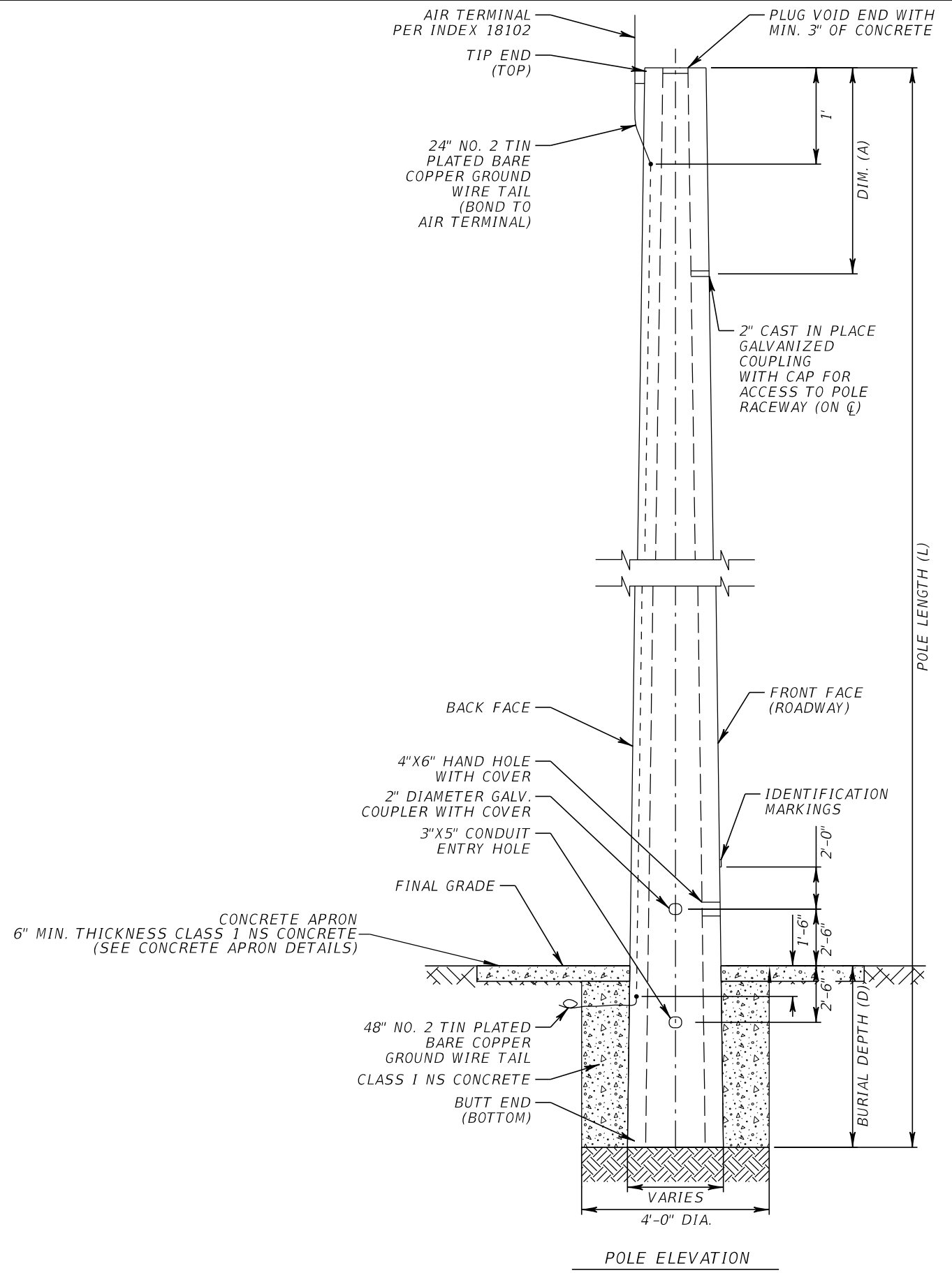
POLE DATA SHEET

SHEET NO.
 IT-33

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

| SQUARE CONCRETE STRAIN POLE DATA SUMMARY TABLE | | | | | | | | |
|--|---------|-----------|-----------------|-------|-------|-------|-----------|--|
| ITS POLE | STATION | OFFSET | DEVICES ON POLE | DIM L | DIM D | DIM A | POLE TYPE | MIN. REQUIRED ULTIMATE MOMENT CAPACITY AT GRADE (KIP-FT) |
| 1 | 936+24 | 72.56' LT | MVDS | 54' | 14' | 5' | P-V | 157 |
| 3 | 991+85 | 72.54' LT | MVDS | 54' | 14' | 5' | P-V | 157 |
| 5 | 1041+61 | 70.54' LT | MVDS | 54' | 14' | 5' | P-V | 157 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

- NOTES:**
- UNLESS OTHERWISE INDICATED ON THIS SHEET, CONCRETE POLES LISTED IN THE TABLE ABOVE SHALL BE CONSTRUCTED AND INSTALLED PER FDOT INDEX 17725.
 - POLES SHALL BE INSTALLED PLUMB, AND IN THE CENTER OF THE FOUNDATION SHAFT SUCH THAT THE DISTANCE FROM THE FACE OF THE POLE TO THE EDGE OF THE FOUNDATION SHAFT IS EQUAL ON ALL SIDES.
 - ALL ITS POLES SHALL BE FULLY EMBEDDED IN CLASS I NON-STRUCTURAL CONCRETE.



| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

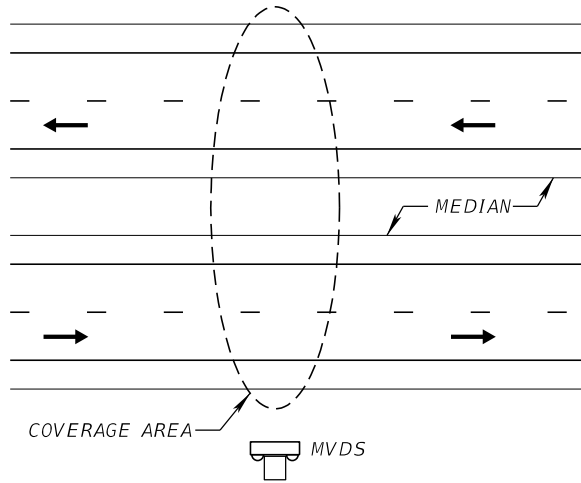
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|----------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

POLE DATA SHEET

SHEET NO.
IT-34

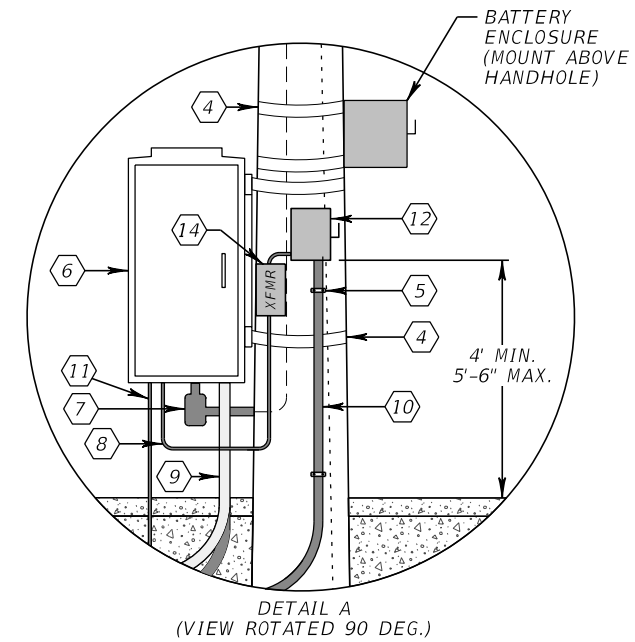
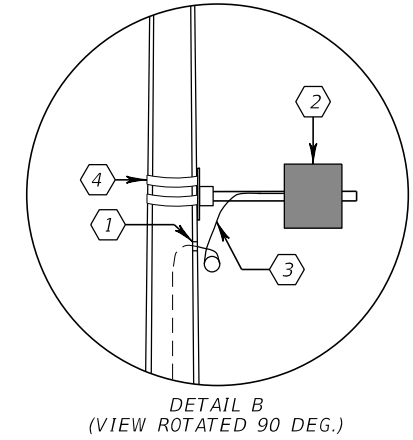
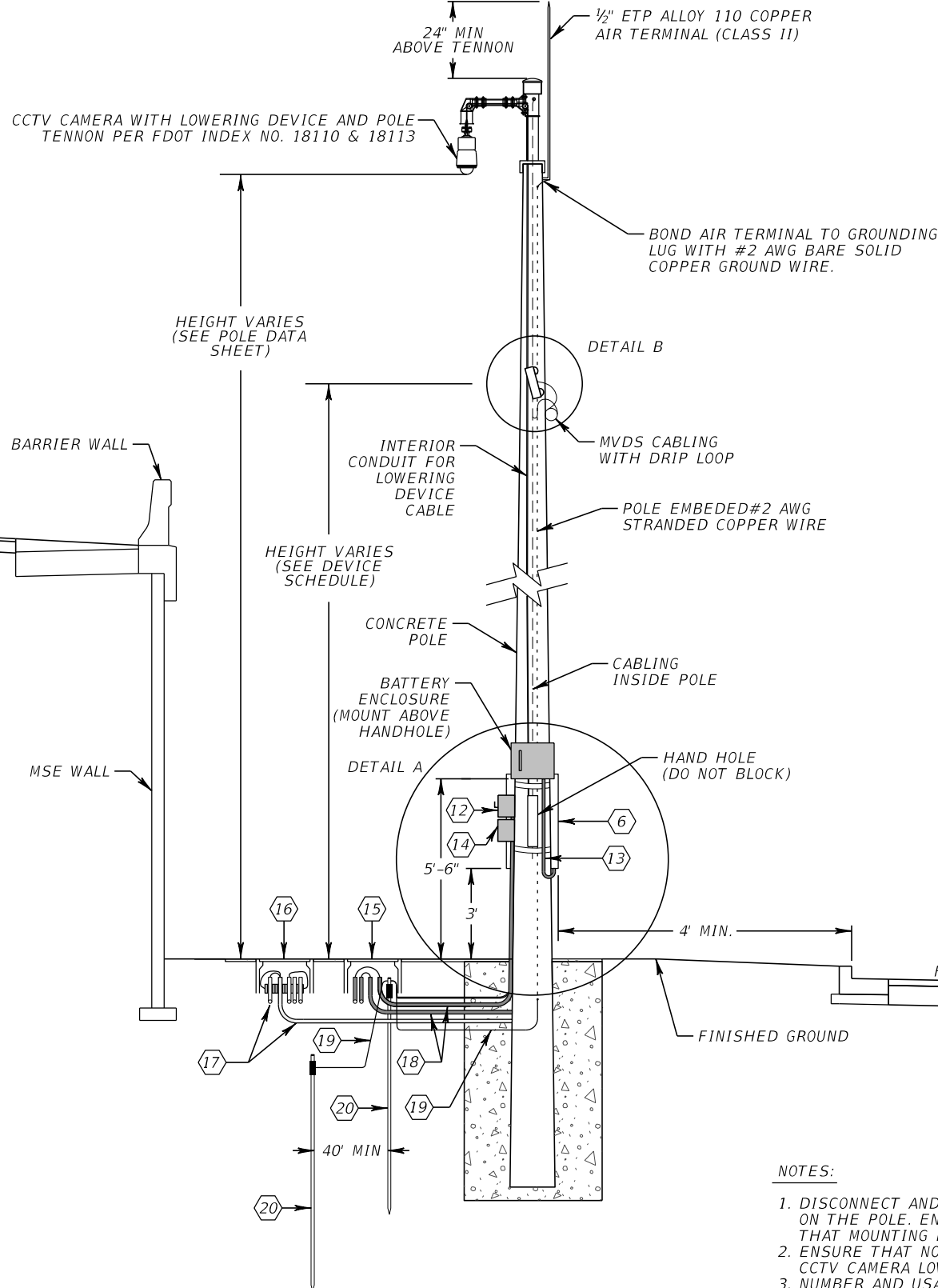
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TYPICAL MVDS COVERAGE AREA
(FOUR LANE DIVIDED HIGHWAY)



TYPICAL CCTV INSTALLATION DETAIL

N.T.S.



LEGEND

- ① CAST IN PLACE 2" GALVANIZED COUPLING WITH RUBBER GROMMET FOR ACCESS TO POLE RACEWAY
- ② PROPOSED MVDS ON HORIZONTAL EXTENSION ARM TO CLEAR CCTV LOWERING OPERATION
- ③ COMMUNICATION AND POWER CABLING TO MVDS
- ④ STAINLESS STEEL STRAPS
- ⑤ CONDUIT STRAPS (3' O.C. TYPICAL)
- ⑥ TYPE 336S POLE MOUNTED CABINET (DOOR TO OPEN AWAY FROM POLE)
- ⑦ TYPE LB 2" CONDUIT TO FACTORY INSTALLED POLE OPENING FOR CABLING TO CCTV CAMERA AND MVDS
- ⑧ 1" LIQUIDTIGHT FLEXIBLE CONDUIT FOR POWER
- ⑨ 1½" RGS CONDUIT FOR FIBER AND 1½" RGS CONDUIT FOR POWER
- ⑩ 1½" RGS CONDUIT FOR POWER
- ⑪ ½" RGS CONDUIT FOR CABINET GROUNDING ELECTRODE CONDUCTOR
- ⑫ ELECTRICAL DISCONNECT
- ⑬ 1" LIQUIDTIGHT FLEXIBLE CONDUIT FOR BATTERY CABLES (COUPLE TO BATTERY ENCLOSURE AND POLE MOUNTED CABINET)
- ⑭ AC TRANSFORMER (WHEN REQUIRED)
- ⑮ ELECTRICAL PULL BOX
- ⑯ FIBER OPTIC SPLICE BOX
- ⑰ HDPE CONDUIT FOR FIBER
- ⑱ HDPE CONDUIT FOR POWER
- ⑲ #2 BARE SOLID COPPER GROUNDING ELECTRODE CONDUCTOR (BOND TO GROUND RODS AND GROUNDING LUG)
- ⑳ 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL GROUND RODS BONDED WITH #2 AWG BARE COPPER TO ACHIEVE 5 OHM MIN. RESISTANCE TO GROUND) ROD PLACEMENT PER FDOT INDEX 18102

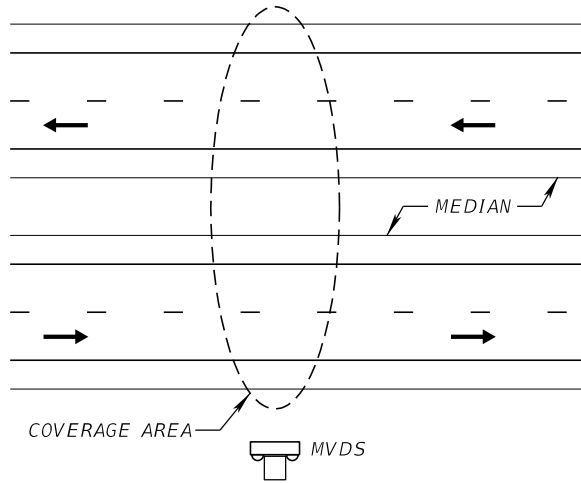
NOTES:

1. DISCONNECT AND TRANSFORMER MOUNTING MAY BE ADJUSTED AS NEEDED TO FIT ON THE POLE. ENSURE ACCESS TO THE POLE HANDHOLE IS NOT COMPROMISED, AND THAT MOUNTING HEIGHTS FACILITATE MAINTENANCE ACCESS.
2. ENSURE THAT NO EQUIPMENT IS MOUNTED IN A MANNER THAT WILL IMPEDE THE CCTV CAMERA LOWERING OPERATION.
3. NUMBER AND USAGE OF PROPOSED UNDERGROUND CONDUITS VARY; SEE PLAN SHEETS FOR FURTHER DETAIL.
4. REFER TO THE DEVICE SCHEDULE SHEET FOR MVDS MOUNTING HEIGHTS AND INSTALLATION NOTES.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | TYPICAL INSTALLATION DETAILS | SHEET NO. IT-35 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---------------------------------|---------------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | |

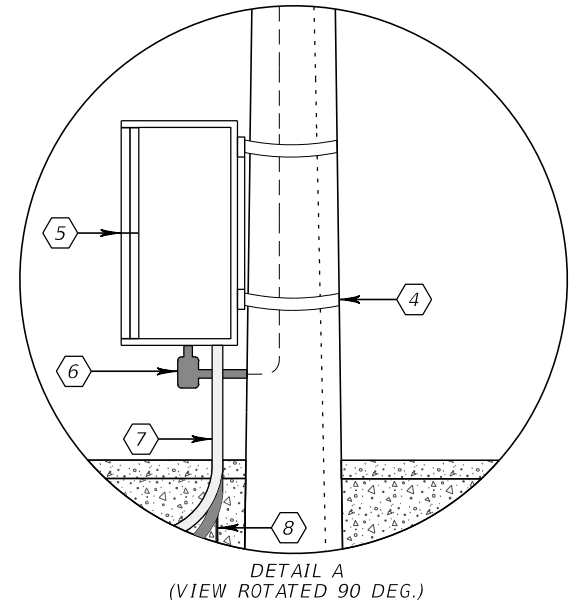
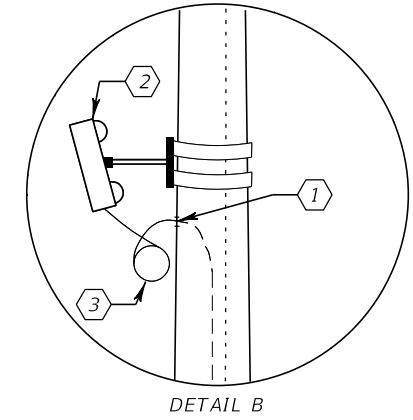
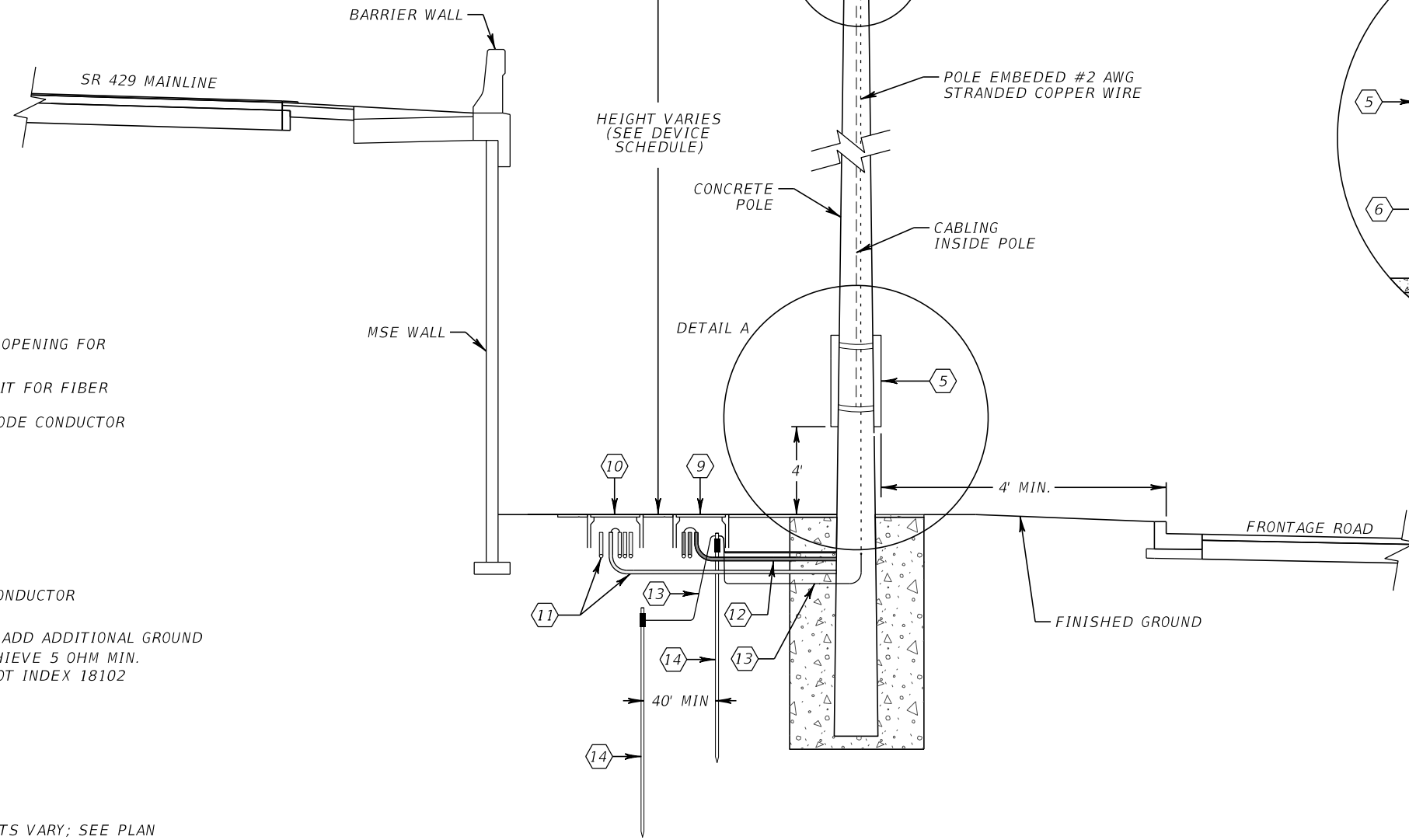
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TYPICAL MVDS COVERAGE AREA
(FOUR LANE DIVIDED HIGHWAY)



TYPICAL MVDS INSTALLATION DETAIL

N.T.S.



LEGEND

- 1 CAST IN PLACE 2" GALVANIZED COUPLING WITH RUBBER GROMMET FOR ACCESS TO POLE RACEWAY
- 2 MVDS WITH APPROVED MOUNTING HARDWARE
- 3 COMMUNICATION AND POWER CABLING TO MVDS
- 4 STAINLESS STEEL STRAPS
- 5 MVDS AUXILIARY CABINET
- 6 TYPE LB 2" CONDUIT TO FACTORY INSTALLED POLE OPENING FOR CABLING TO MVDS
- 7 1 1/2" RGS CONDUIT FOR POWER AND 1 1/2" RGS CONDUIT FOR FIBER
- 8 1/2" RGS CONDUIT FOR CABINET GROUNDING ELECTRODE CONDUCTOR
- 9 ELECTRICAL PULL BOX
- 10 FIBER OPTIC PULL BOX
- 11 HDPE CONDUIT FOR FIBER
- 12 HDPE CONDUIT FOR POWER
- 13 #2 BARE SOLID COPPER GROUNDING ELECTRODE CONDUCTOR (BOND TO GROUND RODS AND GROUNDING LUG)
- 14 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL GROUND RODS BONDED WITH #2 AWG BARE COPPER TO ACHIEVE 5 OHM MIN. RESISTANCE TO GROUND) ROD PLACEMENT PER FDOT INDEX 18102

NOTES:

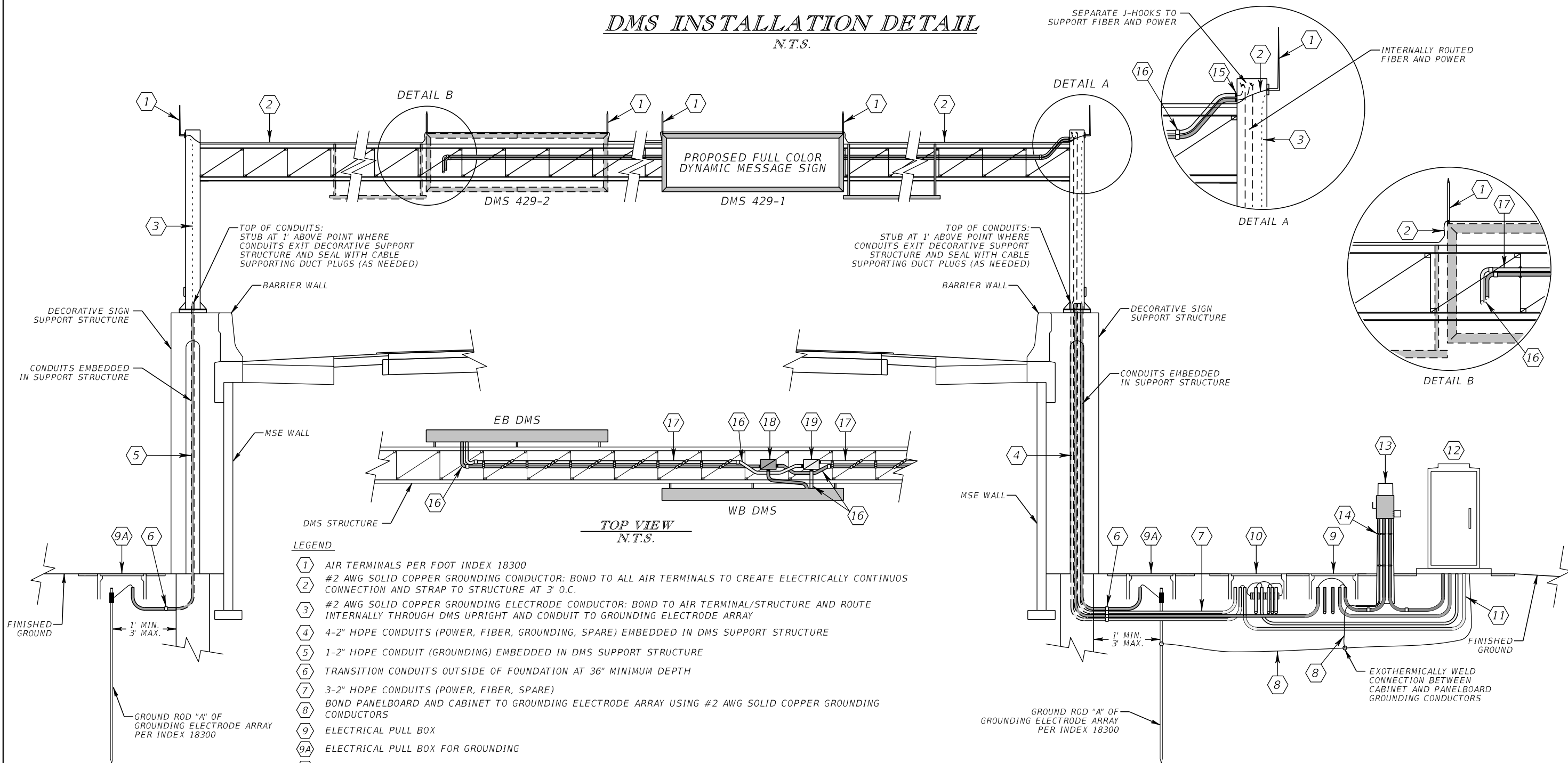
1. NUMBER AND USAGE OF PROPOSED UNDERGROUND CONDUITS VARY; SEE PLAN SHEETS FOR FURTHER DETAIL.
2. REFER TO THE DEVICE SCHEDULE SHEET FOR MVDS MOUNTING HEIGHTS AND INSTALLATION NOTES.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | TYPICAL INSTALLATION DETAILS | SHEET NO. |
|-----------|-------------|------|-------------|---|--|--------|----------------------|---------------------------------|----------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | | SR 429 | SEMINOLE | | 240200-2-52-01 |

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DMS INSTALLATION DETAIL

N.T.S.



LEGEND

- ① AIR TERMINALS PER FDOT INDEX 18300
- ② #2 AWG SOLID COPPER GROUNDING CONDUCTOR: BOND TO ALL AIR TERMINALS TO CREATE ELECTRICALLY CONTINUOUS CONNECTION AND STRAP TO STRUCTURE AT 3' O.C.
- ③ #2 AWG SOLID COPPER GROUNDING ELECTRODE CONDUCTOR: BOND TO AIR TERMINAL/STRUCTURE AND ROUTE INTERNALLY THROUGH DMS UPRIGHT AND CONDUIT TO GROUNDING ELECTRODE ARRAY
- ④ 4-2" HDPE CONDUITS (POWER, FIBER, GROUNDING, SPARE) EMBEDDED IN DMS SUPPORT STRUCTURE
- ⑤ 1-2" HDPE CONDUIT (GROUNDING) EMBEDDED IN DMS SUPPORT STRUCTURE
- ⑥ TRANSITION CONDUITS OUTSIDE OF FOUNDATION AT 36" MINIMUM DEPTH
- ⑦ 3-2" HDPE CONDUITS (POWER, FIBER, SPARE)
- ⑧ BOND PANELBOARD AND CABINET TO GROUNDING ELECTRODE ARRAY USING #2 AWG SOLID COPPER GROUNDING CONDUCTORS
- ⑨ ELECTRICAL PULL BOX
- ⑨A ELECTRICAL PULL BOX FOR GROUNDING
- ⑩ FIBER OPTIC SPLICE BOX
- ⑪ 4-2" HDPE CONDUITS (2-POWER & 2-FIBER) THROUGH GROUND MOUNTED CABINET BASE
- ⑫ TYPE 334 GROUND MOUNTED CABINET
- ⑬ NEMA 3R PANELBOARD MOUNTED ON 12' TYPE P-II SERVICE POLE
- ⑭ 2-2" RGS CONDUITS (POWER) AND 1-1/2" RGS CONDUIT (GROUNDING) STRAPPED TO SERVICE POLE AT 3' O.C.
- ⑮ 2-2" LIQUIDTIGHT FLEXIBLE CONDUITS (POWER & FIBER) CONNECTED TO DMS UPRIGHT POLE WITH TREADED COUPLINGS
- ⑯ 2-2" LIQUIDTIGHT FLEXIBLE CONDUITS (POWER & FIBER) CONNECTED TO DMS PANELS, JUNCTION BOXES, AND RGS CONDUITS WITH LIQUIDTIGHT CONDUIT CONNECTORS. INSTALL REDUCER FITTINGS AS NECESSARY FOR CONNECTION TO DMS PANEL.
- ⑰ 2-2" RGS CONDUITS (POWER & FIBER) STRAPPED TO TRUSS MEMBERS WITH STAINLESS STEEL STRAPS
- ⑱ SURFACE MOUNT JUNCTION BOX MOUNTED TO TRUSS MEMBER FOR POWER (12"x12"x3" NOMINAL SIZE)
- ⑲ SURFACE MOUNT JUNCTION BOX MOUNTED TO TRUSS MEMBER FOR FIBER (12"x12"x3" NOMINAL SIZE)

NOTES:

1. DMS STRUCTURE DEPICTED ON THIS SHEET IS FOR ILLUSTRATIVE PURPOSES ONLY; REFER TO SIGNING AND STRUCTURAL PLANS FOR FURTHER INFORMATION REGARDING THE DMS SUPPORT STRUCTURE AND DMS PANEL ALIGNMENT.
2. ENSURE THAT MINIMUM BEND RADIUS FOR FIBER OPTIC CABLE IS MAINTAINED IN CONFORMANCE WITH THE CABLE MANUFACTURERS RECOMMENDED VALUES DURING INSTALLATION (SHORT TERM/DYNAMIC) AND AFTER INSTALLATION (LONG TERM/STATIC). INSTALL CONDUIT CONTAINING FIBER OPTIC CABLE IN A MANNER THAT SUPPORTS THIS REQUIREMENT.

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
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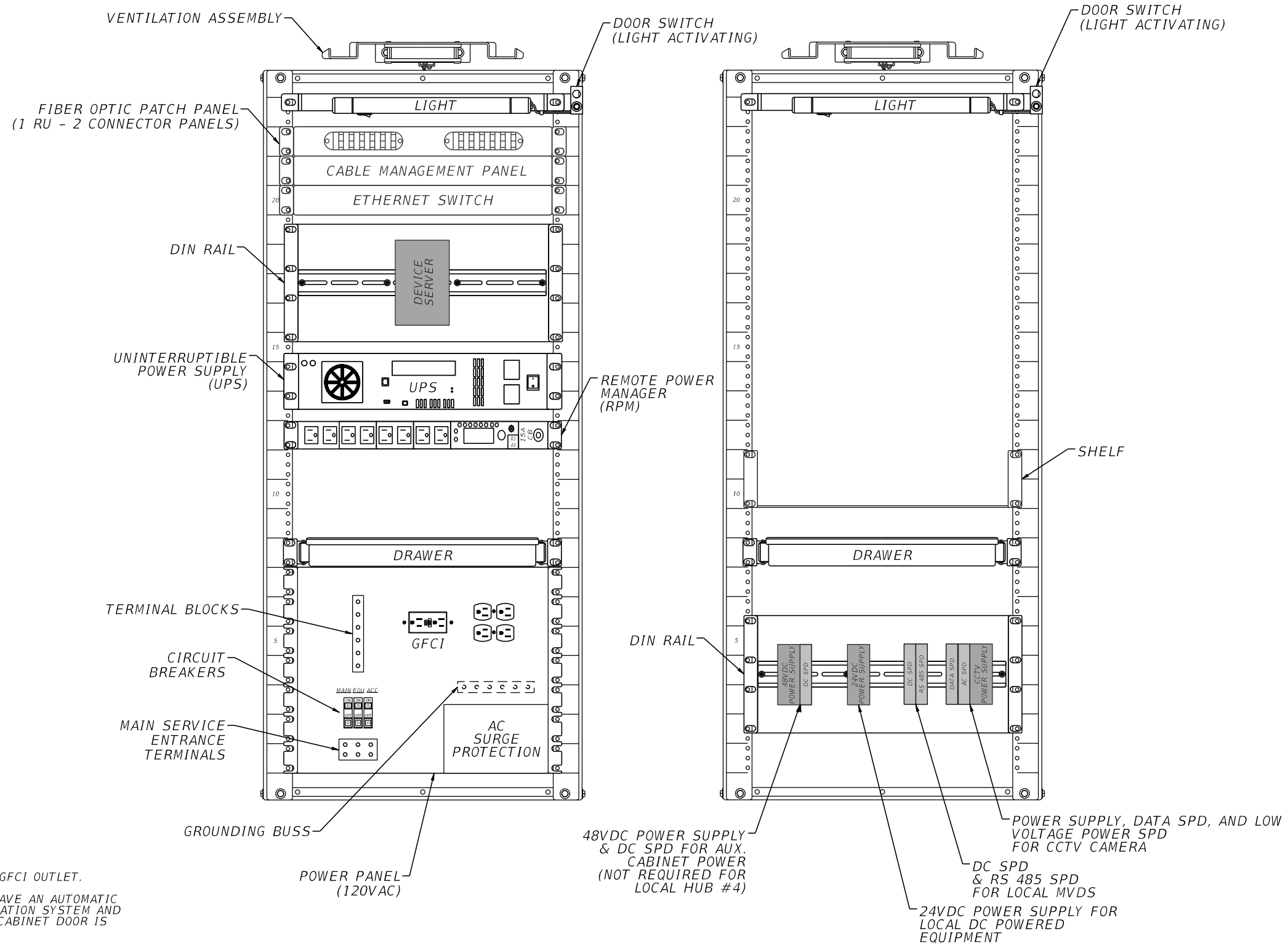
**TYPICAL INSTALLATION
DETAILS**

SHEET
NO.
IT-37

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FRONT VIEW

BACK VIEW



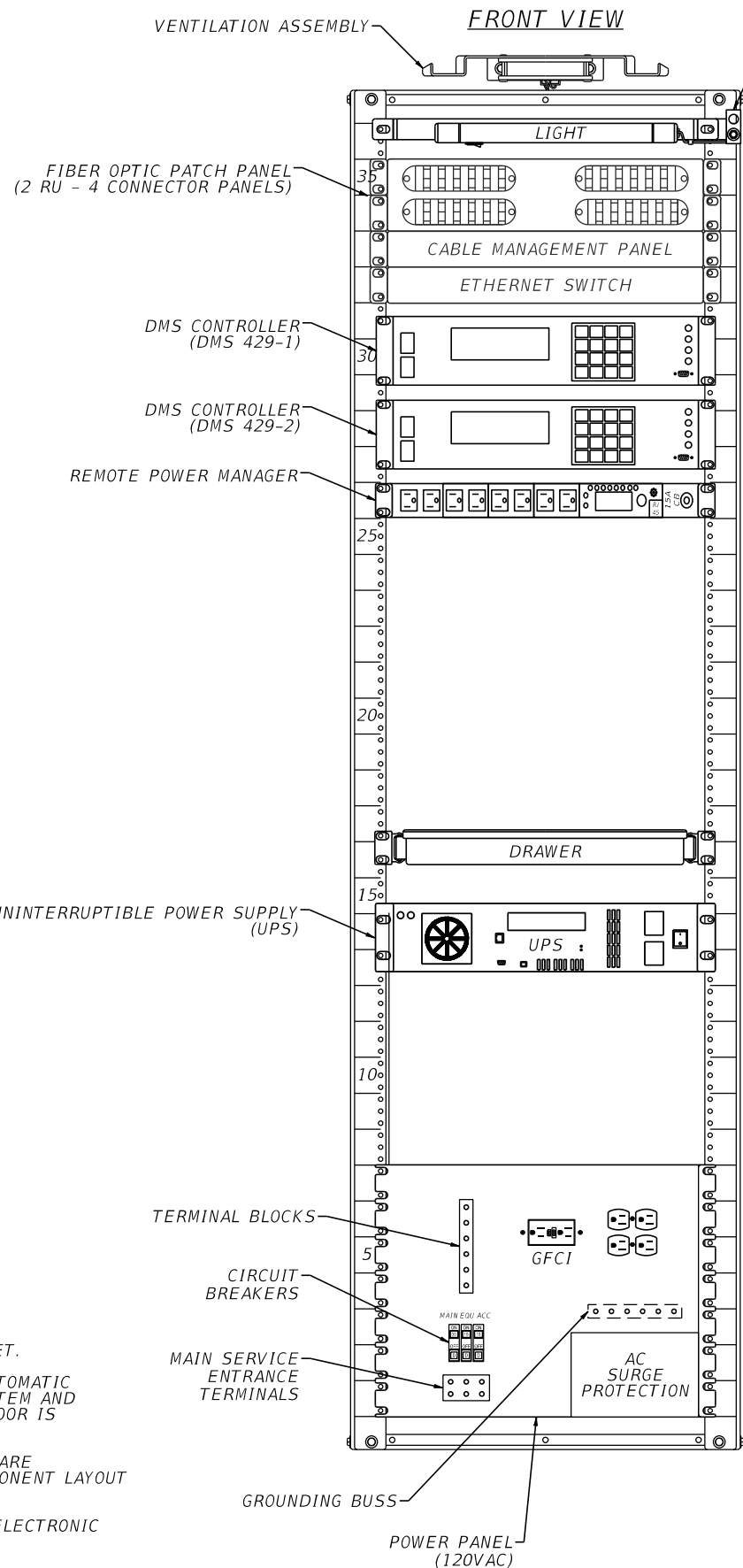
NOTES:

1. UPS SHALL NOT BE PLUGGED INTO GFCI OUTLET.
2. ALL LOCAL HUB CABINETS SHALL HAVE AN AUTOMATIC TEMPERATURE CONTROLLED VENTILATION SYSTEM AND LIGHTS WHICH ACTIVATE WHEN A CABINET DOOR IS OPENED.
3. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE, POWER PANEL ASSEMBLY COMPONENT LAYOUT AND ORIENTATION MAY VARY.
4. CABINET DOORS SHALL INCLUDE CYBERLOCK ELECTRONIC CYLINDERS TO CONTROL CABINET ACCESS.

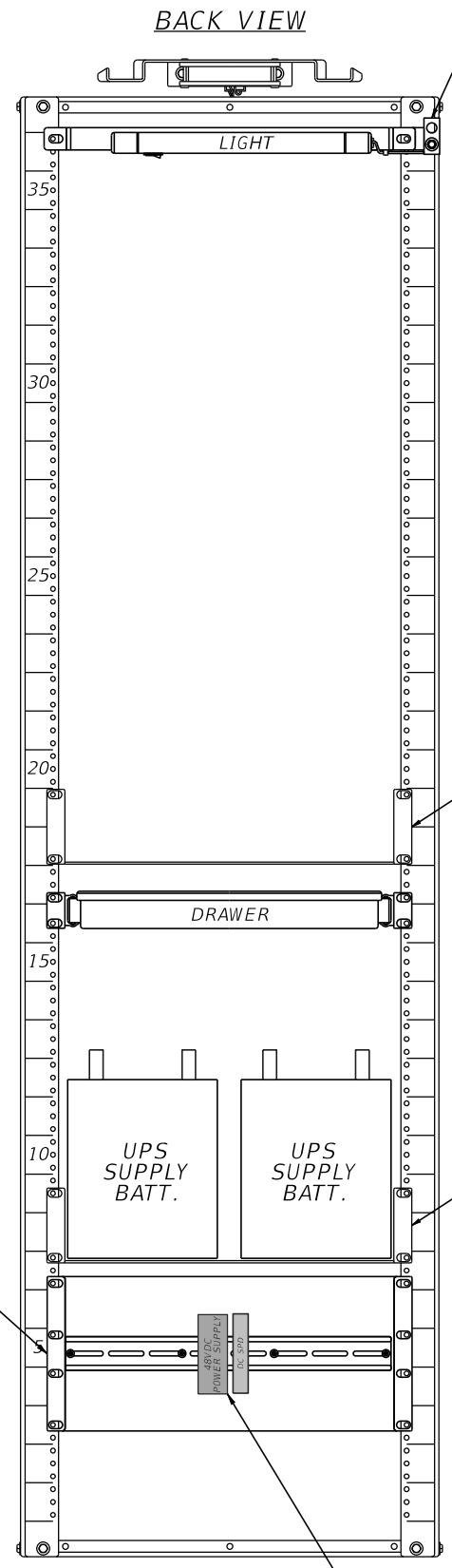
LOCAL HUB CABINET
TYPE 336S POLE MOUNTED
LOCAL HUBS #1, #2, #4, & #5

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. IT-38 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---------------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
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DOOR SWITCH (LIGHT/ALARM)



LOCAL HUB CABINET
TYPE 334 GROUND MOUNTED CABINET
LOCAL HUB #3

NOTES:

1. UPS SHALL NOT BE PLUGGED INTO GFCI.
2. ALL LOCAL HUB CABINETS SHALL HAVE AN AUTOMATIC TEMPERATURE CONTROLLED VENTILATION SYSTEM AND LIGHTS WHICH ACTIVATE WHEN A CABINET DOOR IS OPENED.
3. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE, POWER PANEL ASSEMBLY COMPONENT LAYOUT AND ORIENTATION MAY VARY.
4. CABINET DOORS SHALL INCLUDE CYBERLOCK ELECTRONIC CYLINDERS TO CONTROL CABINET ACCESS.

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

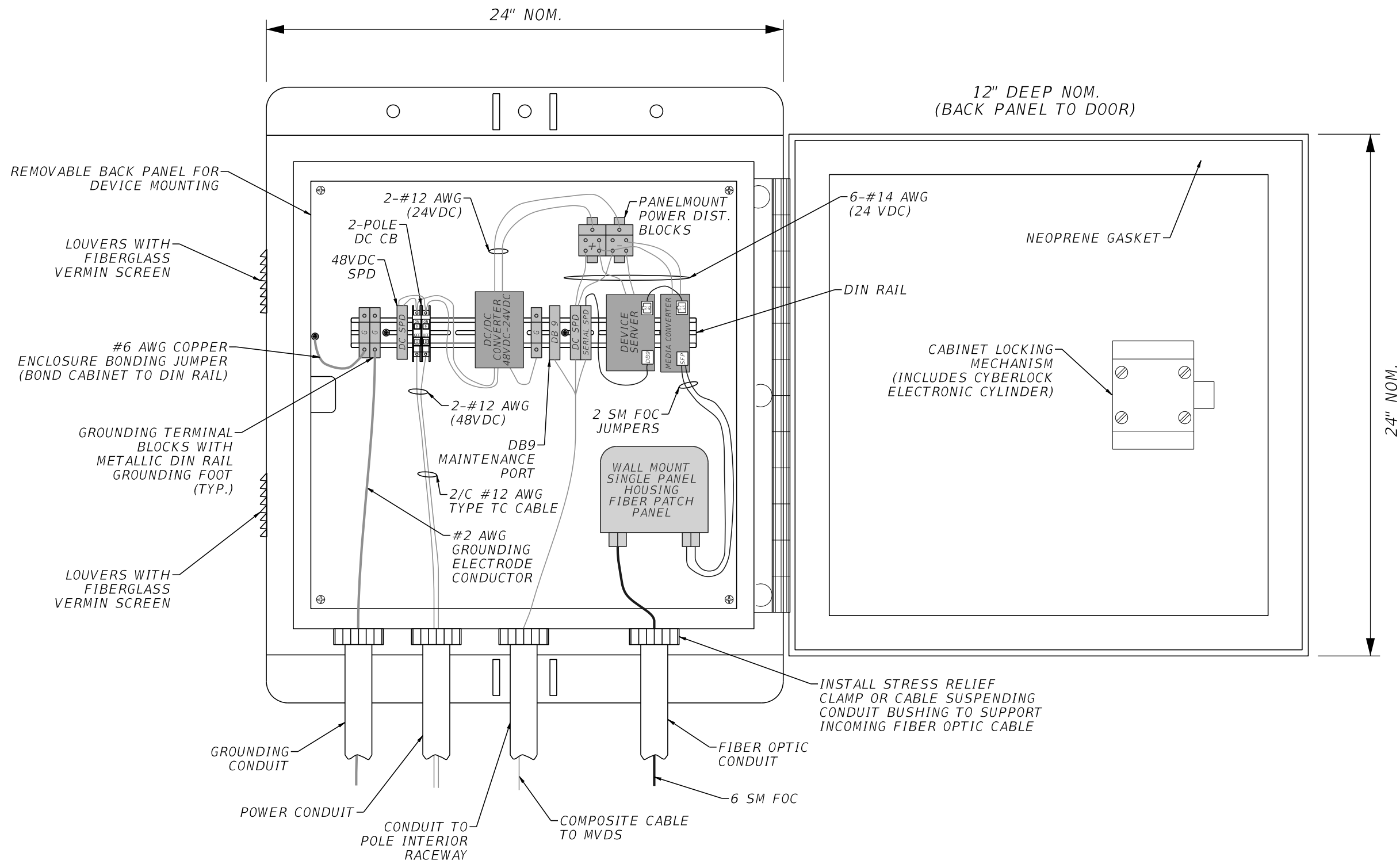
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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CABINET DETAILS

SHEET NO.
IT-39

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NOTES:

1. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ADJUST AS NEEDED TO FIT WITHIN THE CABINET. CONNECTIVITY OF SPD DEVICES MAY VARY; INSTALL EQUIPMENT ACCORDING TO MANUFACTURERS INSTRUCTIONS.
2. CABINET SHALL BE 1/8" THICK 5052 ALUMINUM.
3. CABINET SHALL BE MANUFACTURED TO NEMA 3R SPECIFICATIONS.
4. WALL MOUNT SINGLE PANEL HOUSING FIBER PATCH PANEL SHALL BE CAPABLE OF HOUSING A MINIMUM OF ONE SPLICE TRAY FOR UP TO SIX SINGLE FIBER FUSION SPLICES AND ONE CONNECTOR PANEL FOR TERMINATION OF THE 6 SM FOC FROM LOCAL HUB CABINETS.

**TYPICAL MVDS AUXILIARY CABINET
POLE MOUNTED NEMA 3R ENCLOSURE
AUXILIARY CABINETS 1-4
(N.T.S.)**

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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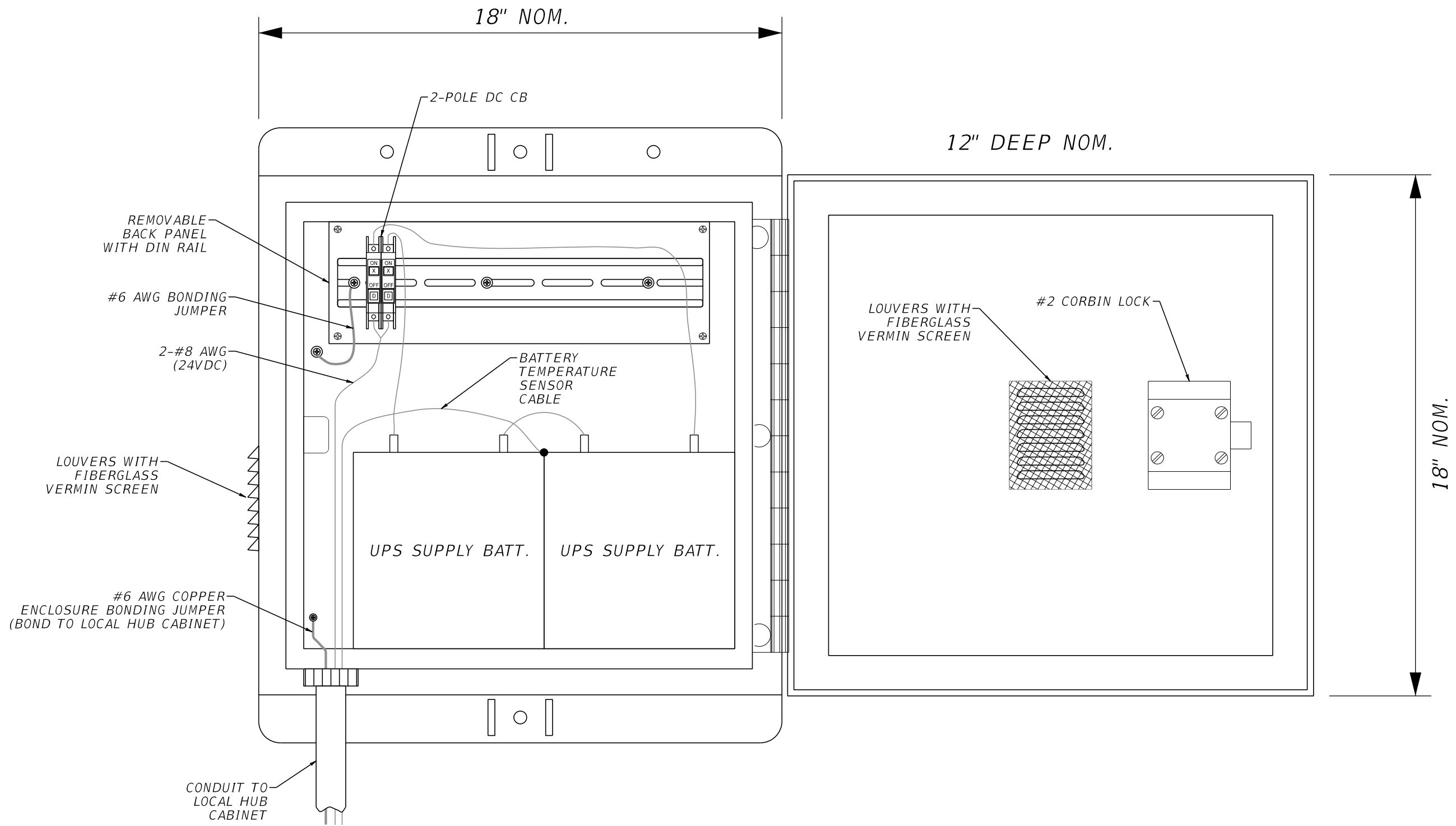
ALEXANDER TEAL MIMS, P.E. PE No. 77095
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 80 Spring Vista Drive Phone: 386.753.0558
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

CABINET DETAILS

SHEET NO.
IT-40

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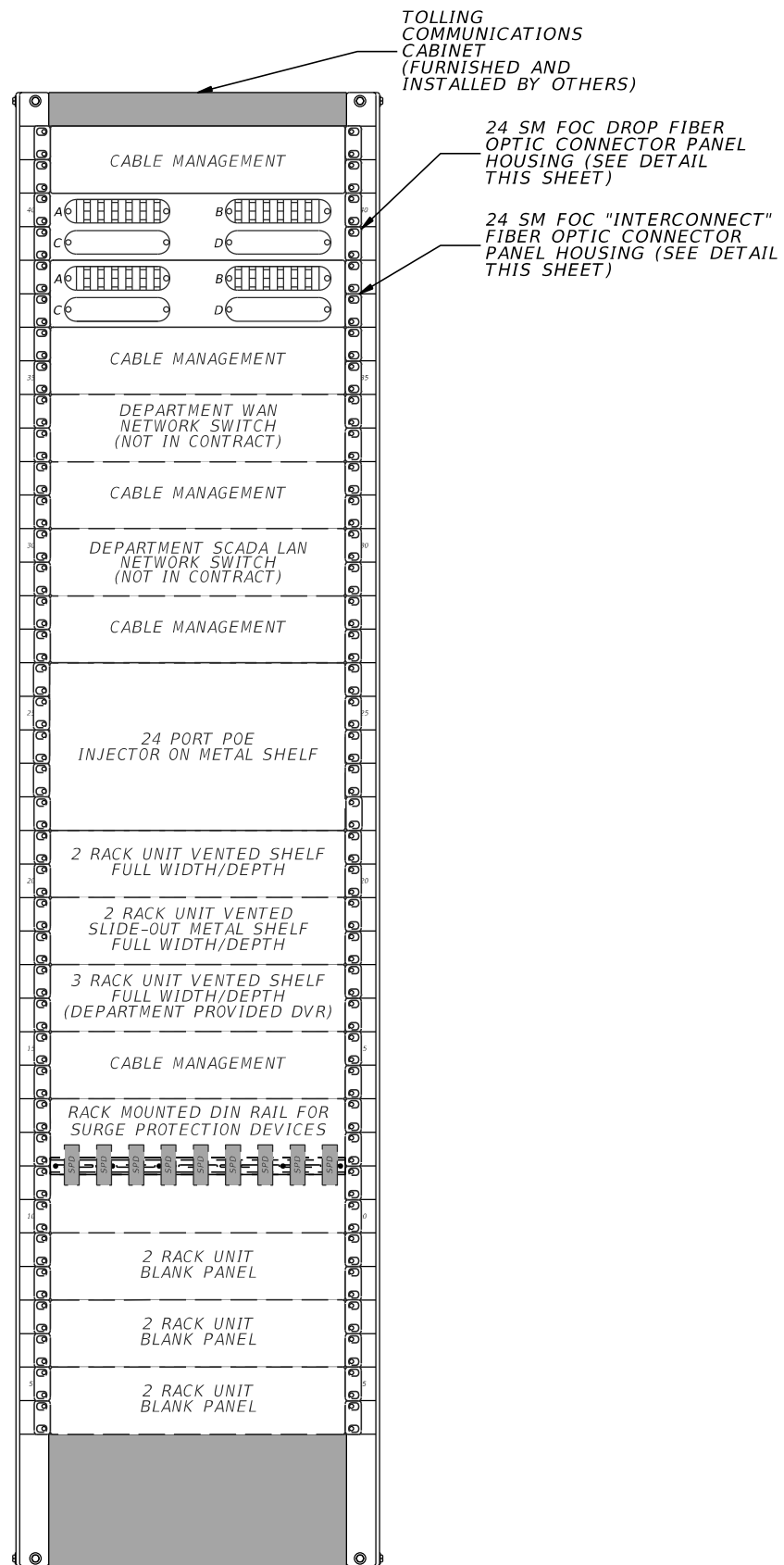
TYPICAL BATTERY ENCLOSURE
POLE MOUNTED NEMA 3R ENCLOSURE
(N.T.S.)

NOTES:

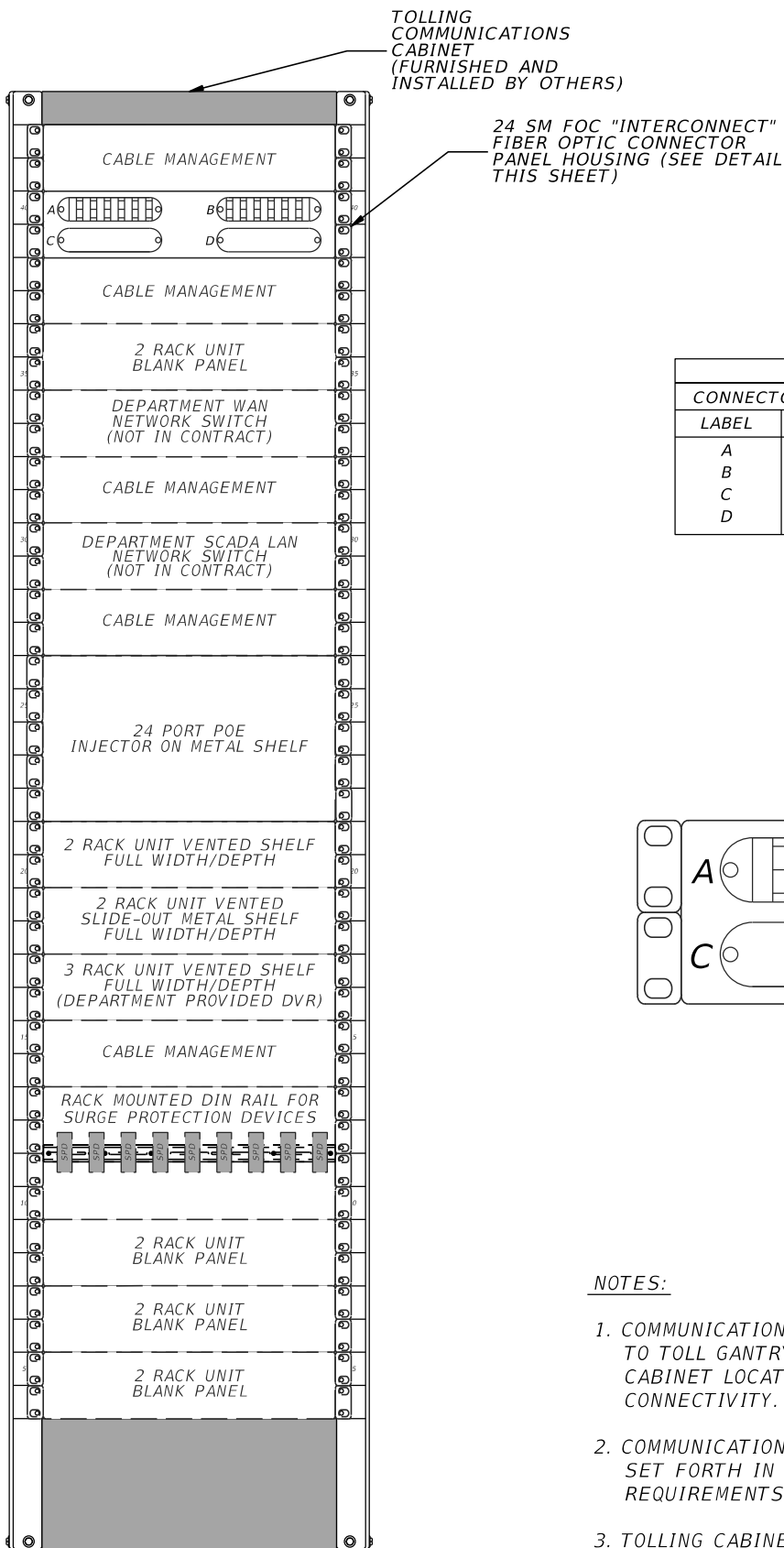
1. ALL EQUIPMENT DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ADJUST AS NEEDED TO FIT.
2. CABINET SHALL BE 1/8" THICK 5052 ALUMINUM.
3. CABINET SHALL BE MANUFACTURED TO NEMA 3R SPECIFICATIONS.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. CABINET DETAILS IT-41 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
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COMMUNICATION CABINET RACK DETAIL
TOLL BUILDING - RAMP F
"MASTER"



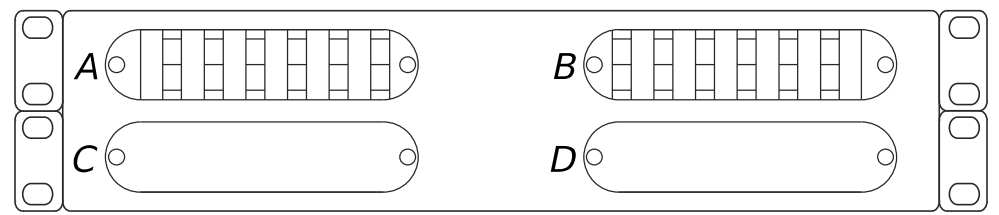
COMMUNICATION CABINET RACK DETAIL
TOLL BUILDING - RAMP E
"SLAVE"

LEGEND

| CONNECTOR PANEL | | PANEL FIBER PORT | |
|-----------------|--------|------------------|--------|
| LABEL | BUFFER | LABEL | FIBER |
| A | BLUE | 1 | BLUE |
| B | ORANGE | 2 | ORANGE |
| C | BLANK | 3 | GREEN |
| D | BLANK | 4 | BROWN |
| | | 5 | SLATE |
| | | 6 | WHITE |
| | | 7 | RED |
| | | 8 | BLACK |
| | | 9 | YELLOW |
| | | 10 | VIOLET |
| | | 11 | ROSE |
| | | 12 | AQUA |



CONNECTOR PANEL DETAIL



CONNECTOR PANEL HOUSING DETAIL

NOTES:

1. COMMUNICATION CABINET RACK DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. REFER TO TOLL GANTRY BUILDING PLANS FOR FURTHER INFORMATION REGARDING THE COMMUNICATIONS CABINET LOCATION, INCLUDED EQUIPMENT, ELECTRICAL COMPONENT SPECIFICATIONS, AND DEVICE CONNECTIVITY.
2. COMMUNICATIONS CABINET AND ASSOCIATED EQUIPMENT MUST COMPLY WITH THE REQUIREMENTS SET FORTH IN THE MOST RECENT VERSION OF THE "FLORIDA'S TURNPIKE GENERAL TOLLING REQUIREMENTS."
3. TOLLING CABINET AND EQUIPMENT, WITH THE EXCEPTION OF OUTSIDE PLANT FIBER TERMINATION EQUIPMENT, IS TO BE PROVIDED BY THE TOLLING CONTRACTOR. ITS CONTRACTOR SHALL TERMINATE OUTSIDE PLANT FIBER OPTIC CABLES IN RACKMOUNTED FIBER OPTIC CONNECTOR PANEL HOUSINGS (PATCH PANELS) MOUNTED IN THE PROPOSED COMMUNICATION CABINETS AS INDICATED ON THIS SHEET.

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| | | | |

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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

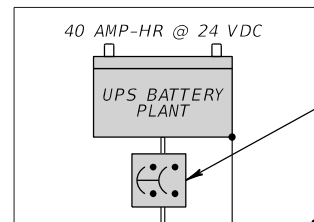
**TOLLING COMMUNICATIONS
CABINET DETAILS**

SHEET NO.
IT-42

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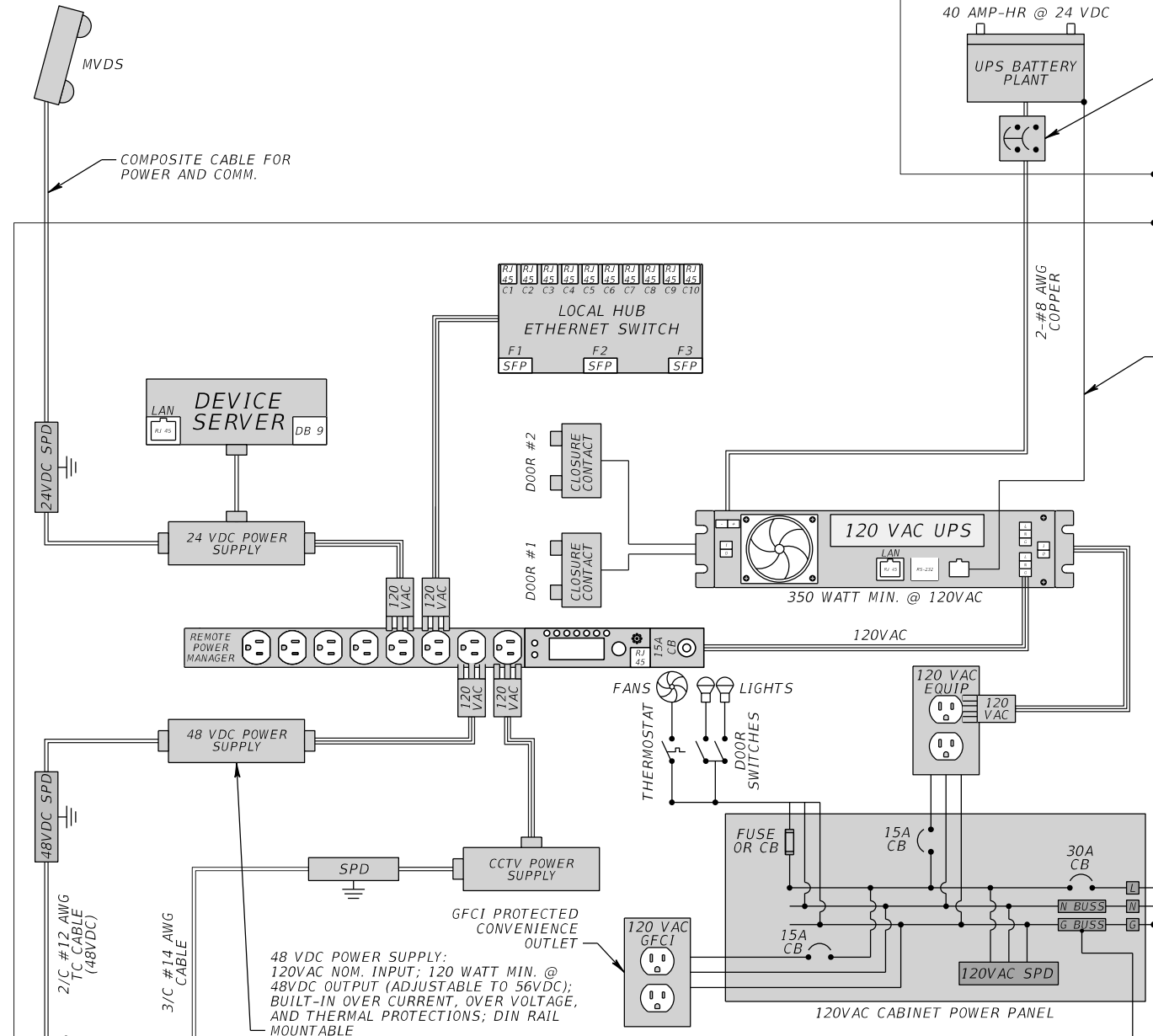
WIRING DIAGRAMS: LOCAL HUB #1

POLE MOUNTED BATTERY ENCLOSURE



2-POLE NON-POLARIZED DC CIRCUIT BREAKER: 250VDC 10,000 AIC RATED; CURRENT RATING PER UPS MANUFACTURE RECOMMENDATIONS BASED ON UPS CHARGE/DISCHARGE CURRENT

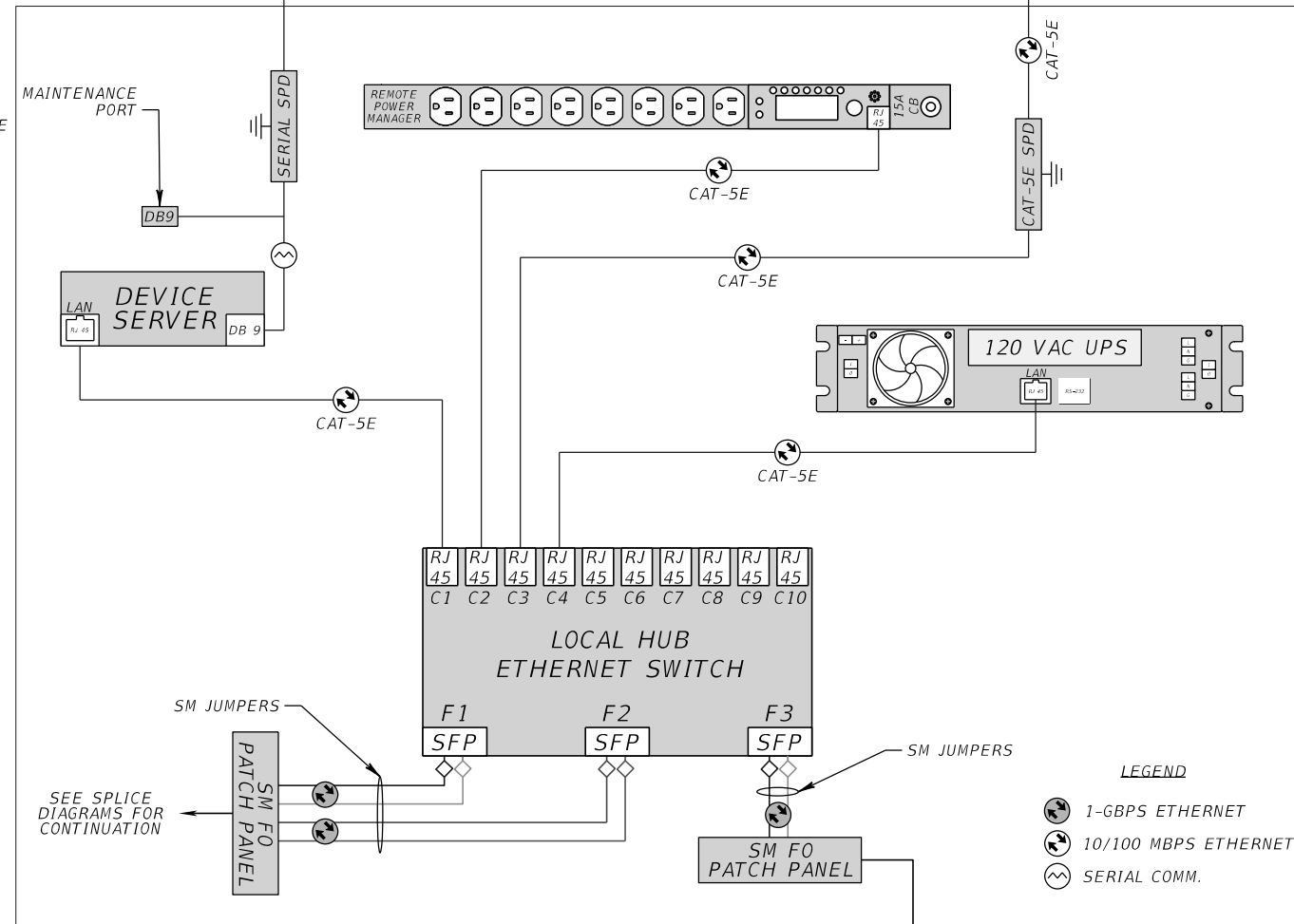
BOND BATTERY ENCLOSURE TO 336S CABINET GROUNDING BUSS WITH #6 AWG COPPER GROUND WIRE



POWER SYSTEM DIAGRAM

TYPE 336S POLE MOUNTED CABINET

#2 AWG GROUNDING ELECTRODE CONDUCTOR



COMMUNICATION SYSTEM DIAGRAM

LEGEND

- 1-GBPS ETHERNET
- 10/100 MBPS ETHERNET
- SERIAL COMM.

MVDS AUX. CABINET
 BOND SHIELD DRAIN/GROUND WIRE TO CABINET GROUNDING SYSTEM
 REFER TO MVDS AUX. CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

MVDS AUX. CABINET
 REFER TO MVDS AUX. CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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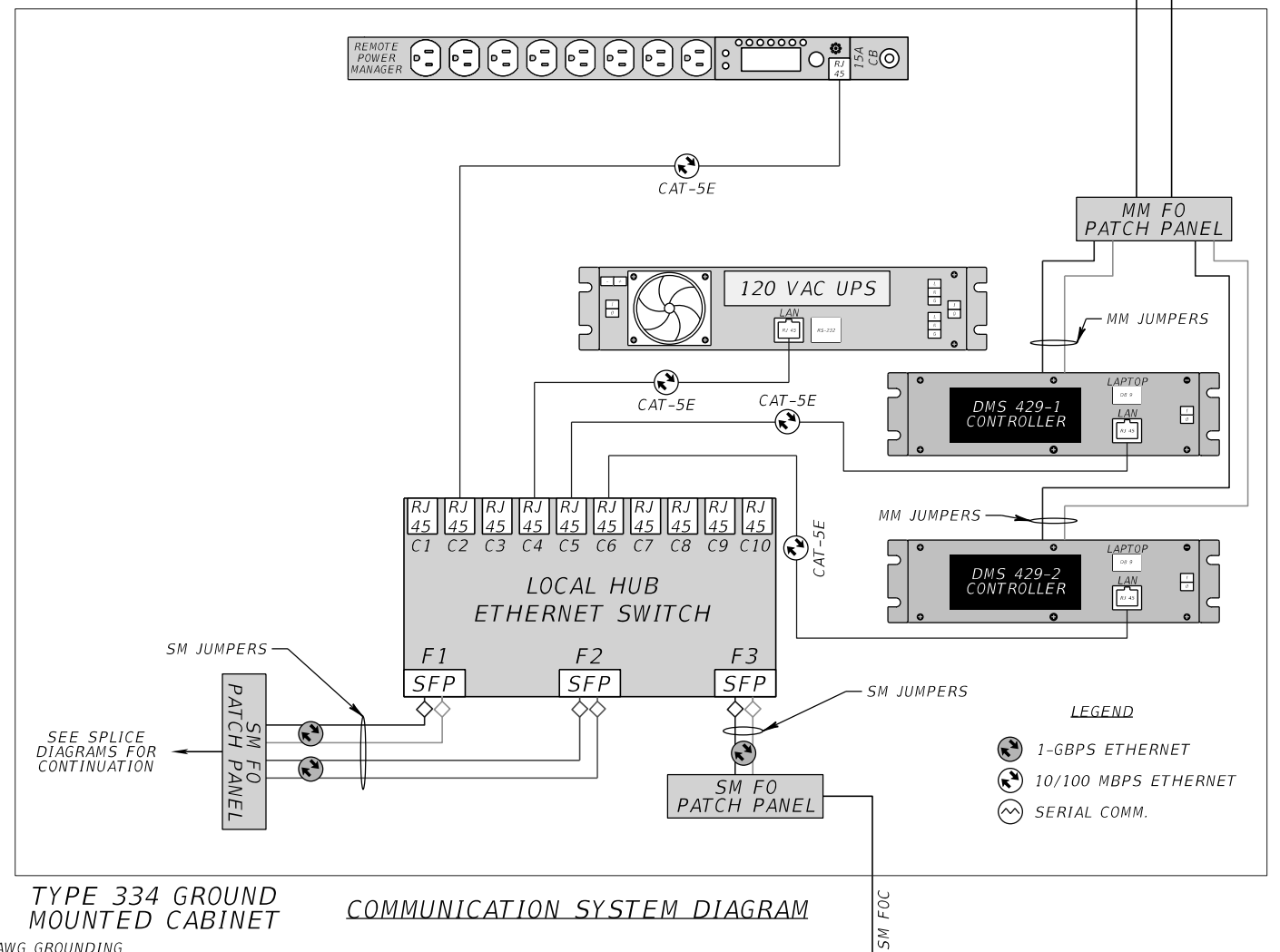
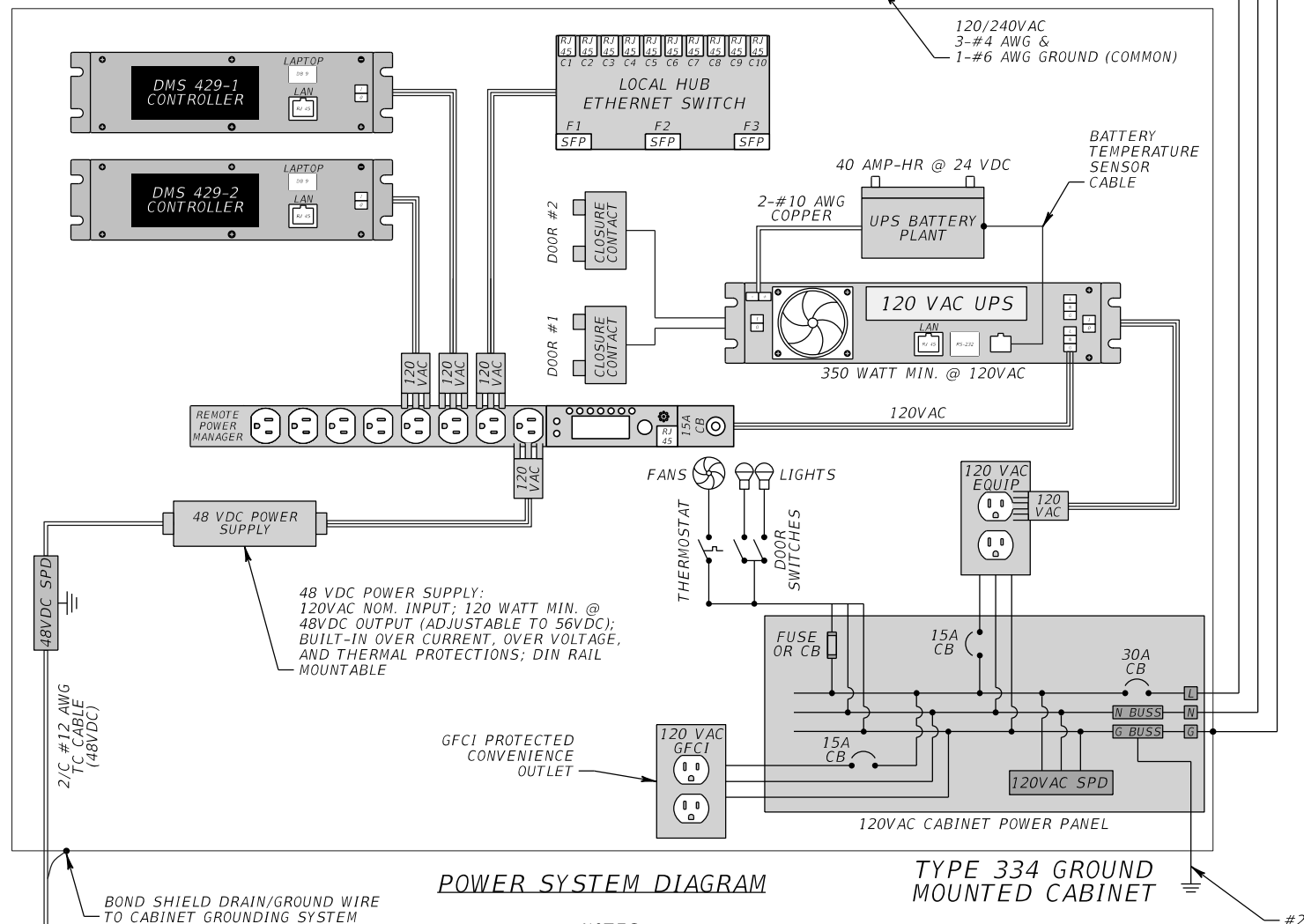
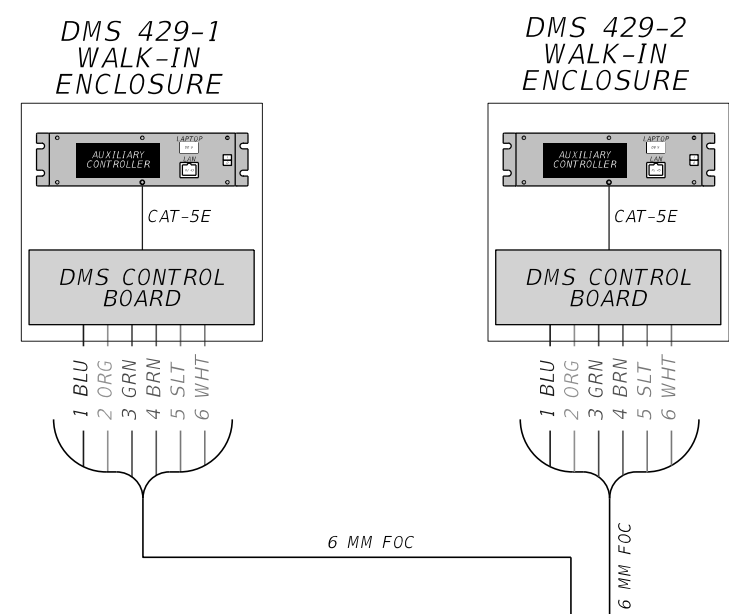
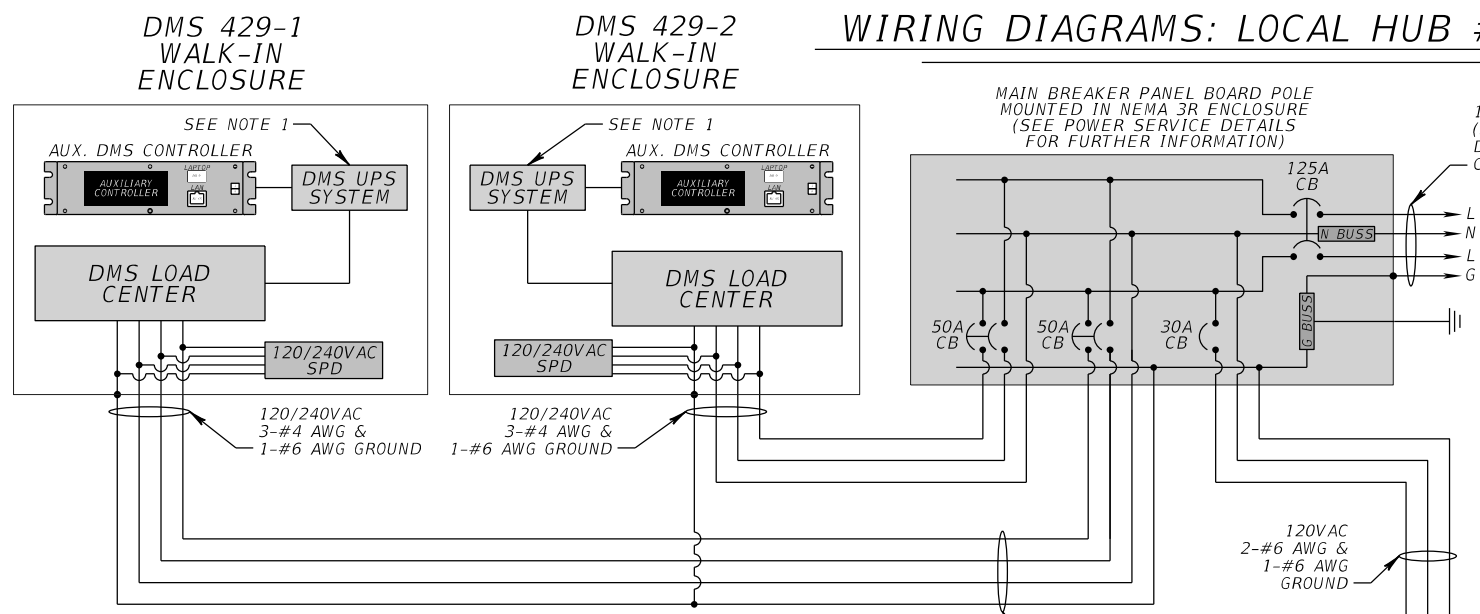
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|----------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

WIRING DIAGRAMS

SHEET NO. IT-43

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WIRING DIAGRAMS: LOCAL HUB #3, DMS 429-1, DMS 429-2



POWER SYSTEM DIAGRAM

TYPE 334 GROUND MOUNTED CABINET

COMMUNICATION SYSTEM DIAGRAM

- NOTES:**
1. UPS SYSTEM PROVIDED BY DMS PANEL MANUFACTURER, INCLUDED WITHIN DMS PANEL ENCLOSURE, AND SIZED TO PROVIDE 2-HR PANEL RUNTIME IN THE EVENT OF A UTILITY POWER OUTAGE.
 2. CONTRACTOR SHALL COORDINATE CLOSELY WITH DMS PANEL MANUFACTURER FOR INSTALLATION AND WIRING INSTRUCTIONS; CONNECTIVITY MAY VARY.

MVDS AUX. CABINET
REFER TO MVDS AUX. CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

MVDS AUX. CABINET
REFER TO MVDS AUX. CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

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

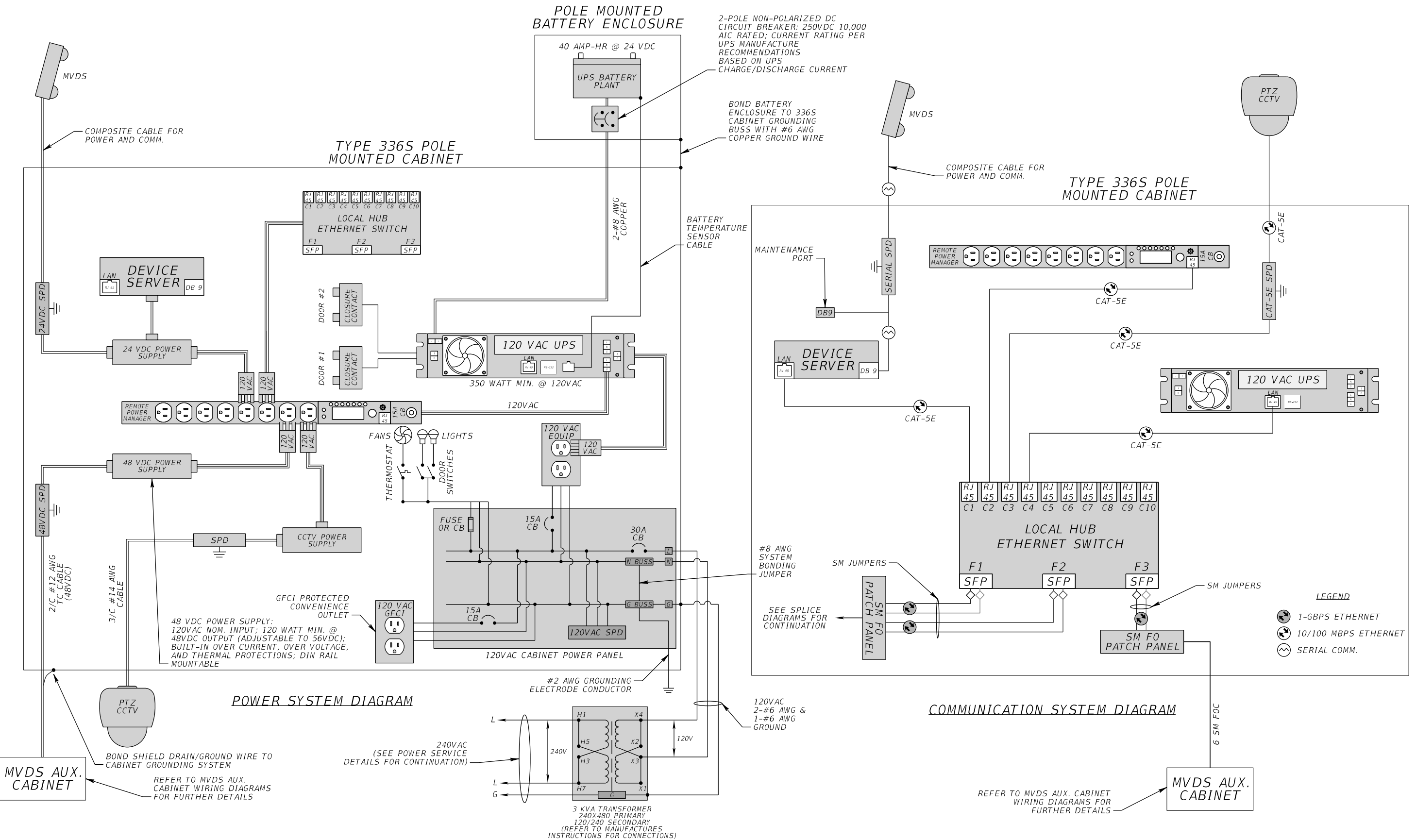
ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

| | |
|------------------------|---------------------------|
| WIRING DIAGRAMS | SHEET NO. IT-44 |
|------------------------|---------------------------|

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WIRING DIAGRAMS: LOCAL HUBS #2 & #5



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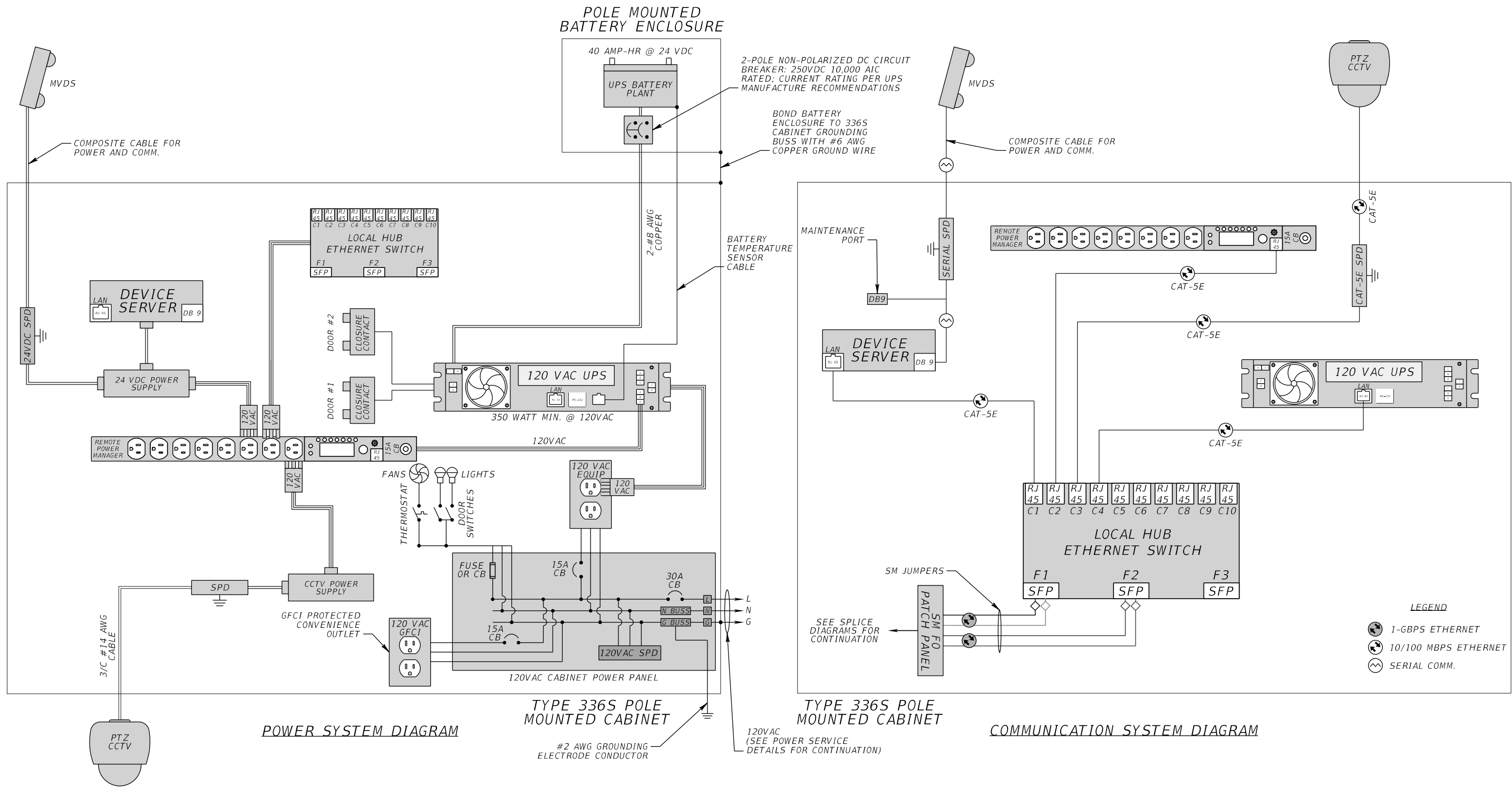
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|----------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

WIRING DIAGRAMS

SHEET NO.
IT-45

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WIRING DIAGRAMS: LOCAL HUB #4



| REVISIONS | | | |
|-----------|-------------|------|-------------|
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| | | | |

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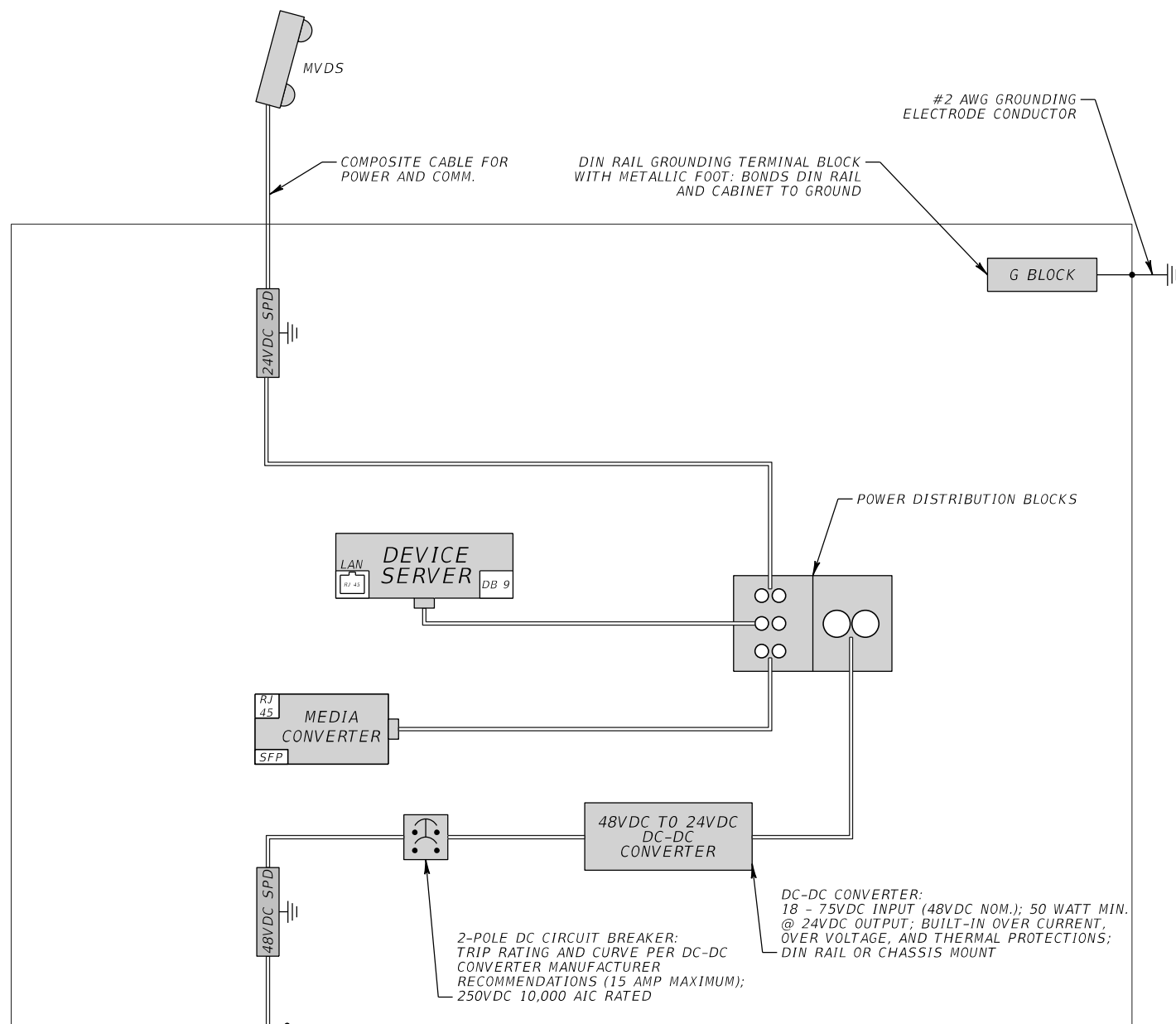
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
|--|----------|----------------------|
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

WIRING DIAGRAMS

SHEET NO.
IT-46

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WIRING DIAGRAMS: AUXILIARY CABINETS #1 - #4



MVDS AUXILIARY CABINET

POWER SYSTEM DIAGRAM

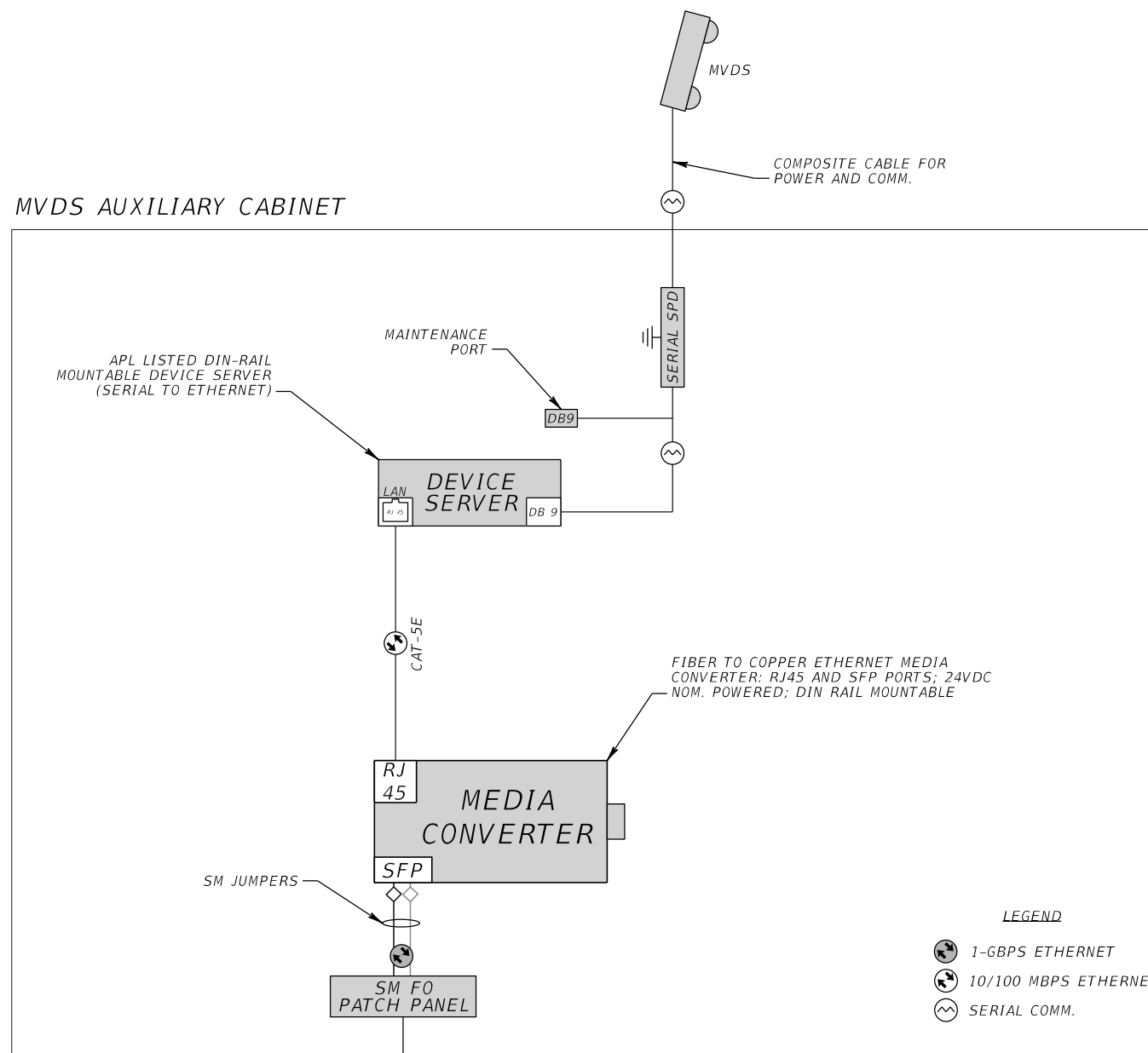
REFER TO LOCAL HUB CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

LOCAL HUB CABINET

2/C #12 AWG TC CABLE (48VDC)

BOND SHIELD DRAIN/GROUND WIRE TO CABINET GROUNDING SYSTEM

MVDS AUXILIARY CABINET



COMMUNICATION SYSTEM DIAGRAM

REFER TO LOCAL HUB CABINET WIRING DIAGRAMS FOR FURTHER DETAILS

LOCAL HUB CABINET

6 SM FOC

LEGEND

- 1-Gbps ETHERNET
- 10/100 MBPS ETHERNET
- SERIAL COMM.

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

WIRING DIAGRAMS

SHEET NO.
IT-47

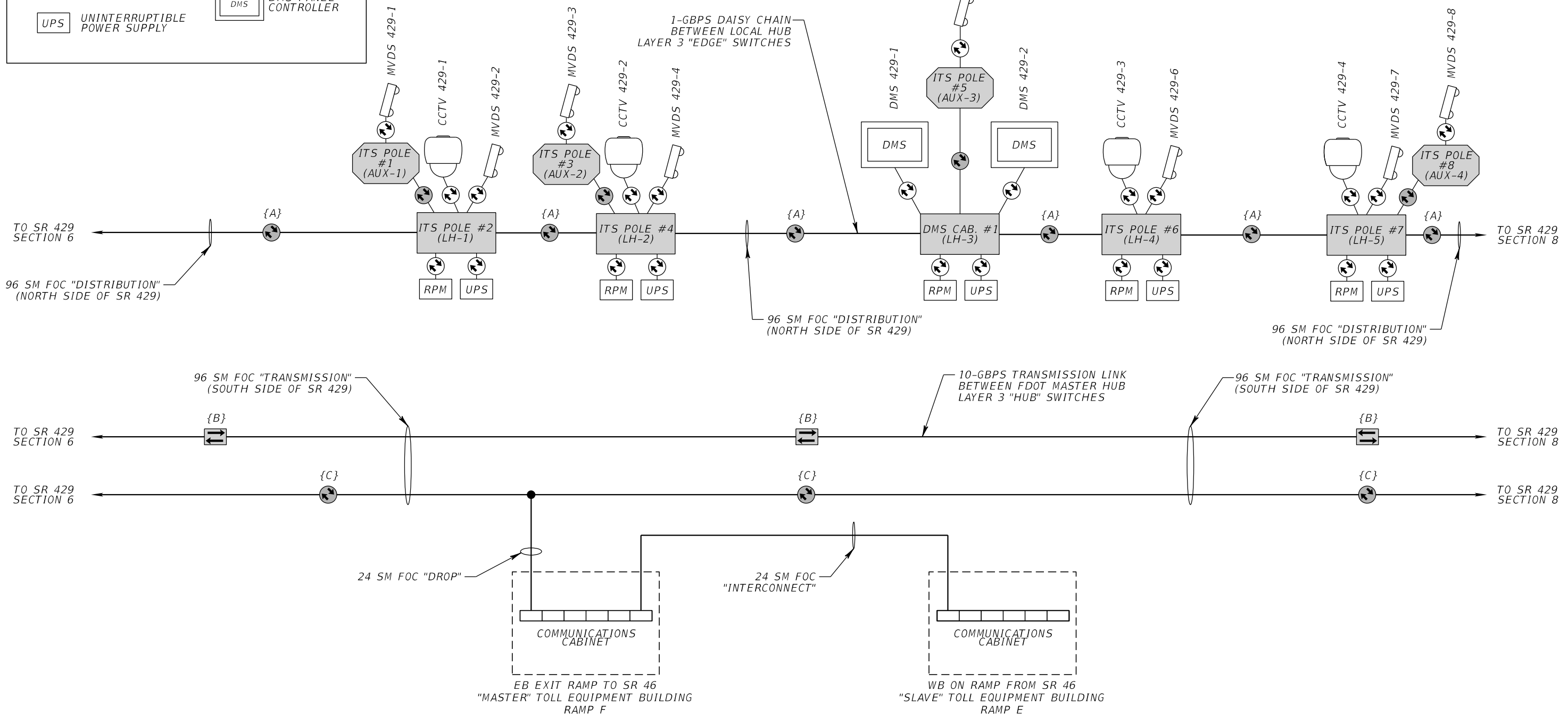
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LEGEND

-  10-GBPS (FULL DUPLEX) ETHERNET
-  1-GBPS (FULL DUPLEX) ETHERNET
-  10/100 MBPS (FULL DUPLEX) ETHERNET
-  MEDIA CONVERTER IN CABINET
-  LOCAL HUB ETHERNET SWITCH (LAYER 3)
-  IP CCTV CAMERA
-  MVDS ASSEMBLY (WITH DEVICE SERVER)
-  REMOTE POWER MANAGER
-  DMS PANEL CONTROLLER
-  UNINTERRUPTIBLE POWER SUPPLY

FIBER ALLOCATION LEGEND:

- BACKBONE = 96 SM FOC "DISTRIBUTION" (NORTH SIDE OF SR 429)**
- {A} BROWN BUFFER
 - FIBERS 1-2: 1-GBPS DAISY CHAIN BETWEEN LOCAL HUBS
 - FIBERS 3-6: SPARES TO EACH LOCAL HUB
 - FIBERS 7-12: UNUSED
- BACKBONE = 96 SM FOC "TRANSMISSION" (SOUTH SIDE OF SR 429)**
- {B} GREEN BUFFER
 - FIBERS 1-12: RESERVED FOR 10-GBPS CONNECTION BETWEEN MASTER HUBS
- {C} RED & BLACK BUFFERS:
 - ALL 24 FIBERS RESERVED FOR TOLLS



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

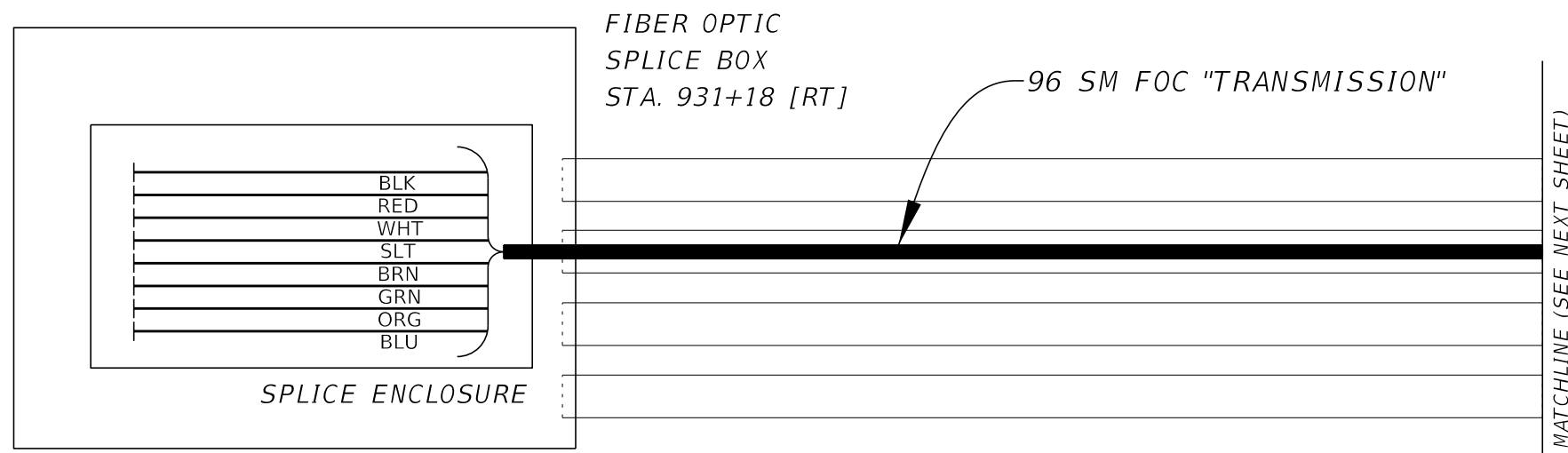
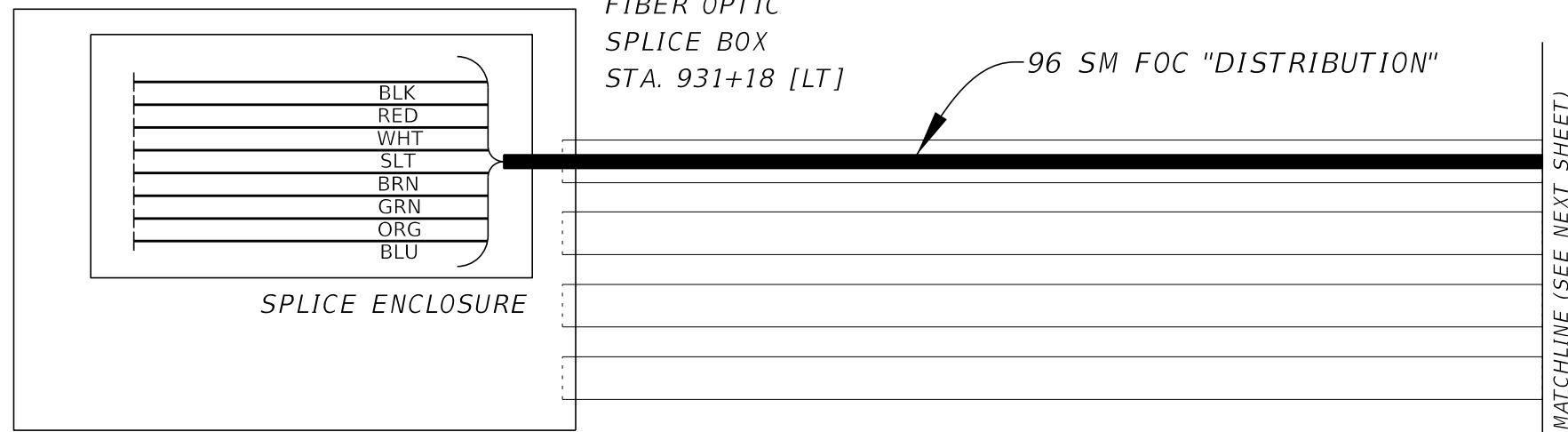
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
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**NETWORK LOGICAL
DIAGRAM**

SHEET NO.
IT-48

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| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ┌ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-49

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FIBER OPTIC
SPLICE BOX
STA. 931+18 [LT]

96 SM FOC "DISTRIBUTION"

SPLICE ENCLOSURE

MATCHLINE (SEE NEXT SHEET)

FIBER OPTIC
SPLICE BOX
STA. 931+18 [RT]

96 SM FOC "TRANSMISSION"

SPLICE ENCLOSURE

MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

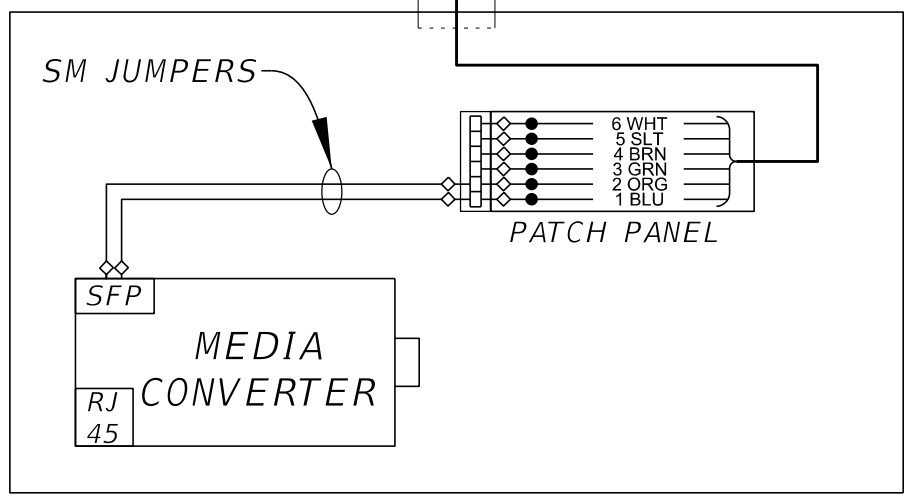
FIBER OPTIC
PULL BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

SM JUMPERS



ITS POLE #1
AUXILIARY CABINET #1
STA. 936+24 [LT]

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ├ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |

MATCHLINE (SEE PREVIOUS SHEET)

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE NEXT SHEET)

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|-----------|-------------|------|-------------|---|--|----------|----------------------|---|---------------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | |

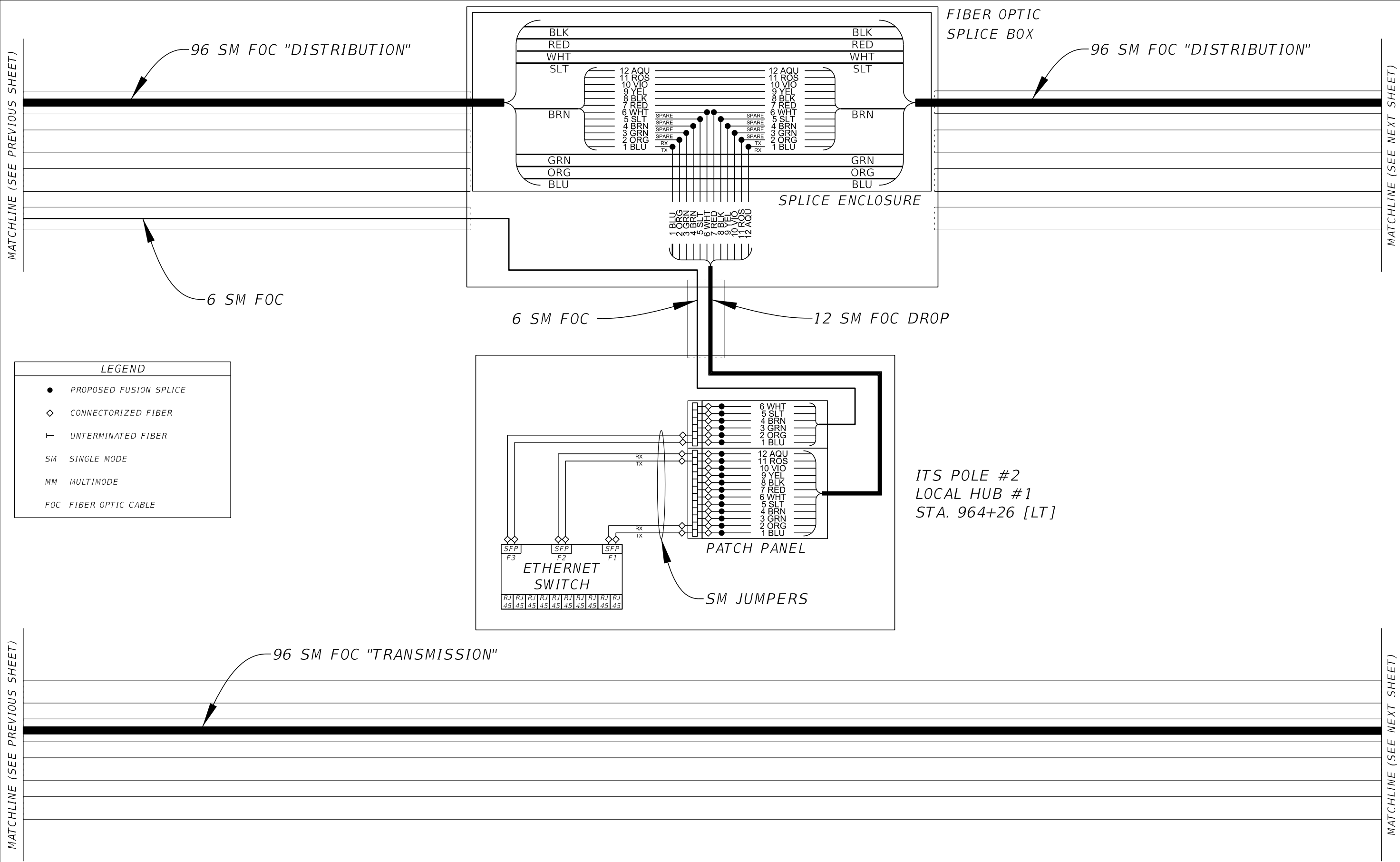
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



LEGEND

- PROPOSED FUSION SPLICE
- ◇ CONNECTORIZED FIBER
- ├ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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| | | | |

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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-51

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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

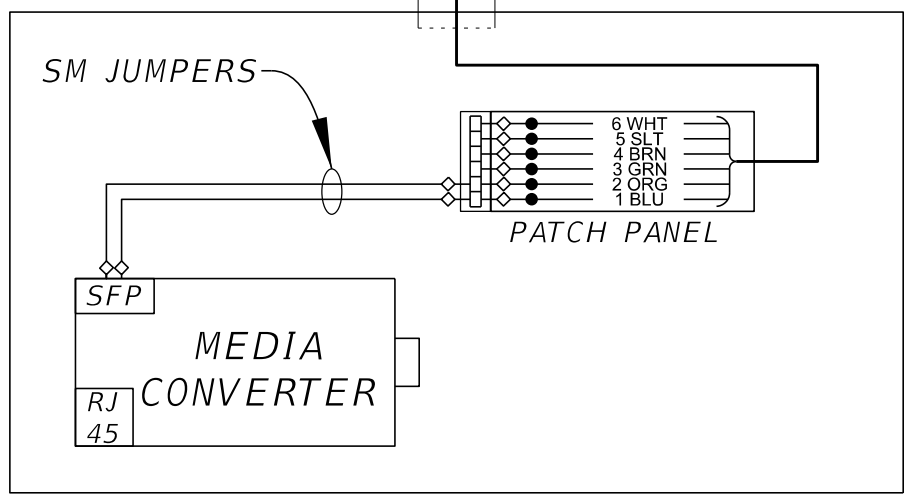
FIBER OPTIC
PULL BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

SM JUMPERS



ITS POLE #3
AUXILIARY CABINET #2
STA. 991+85 [LT]

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ├ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "TRANSMISSION"

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|-----------|-------------|------|-------------|---|--|--------|----------------------|---|----------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
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MATCHLINE (SEE PREVIOUS SHEET)

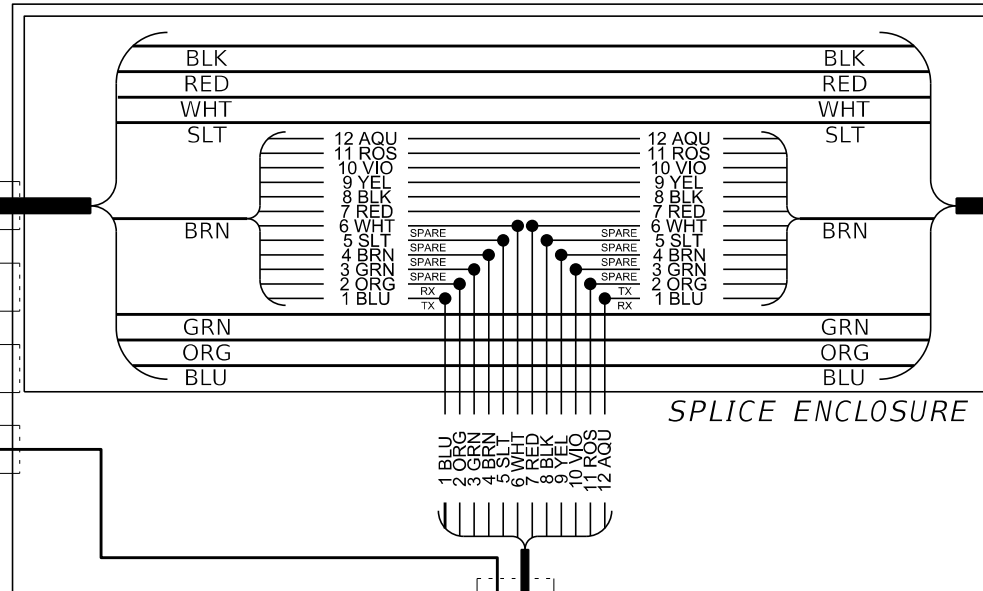
MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

6 SM FOC



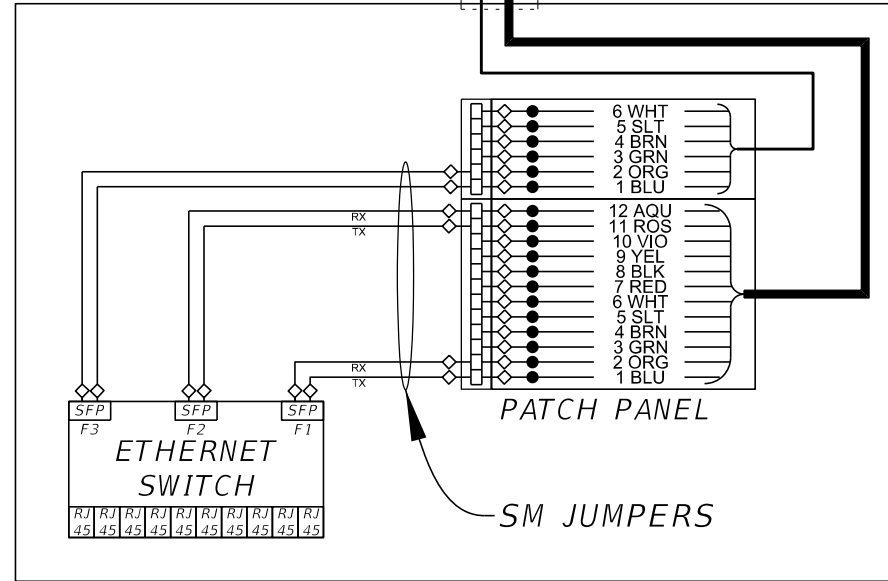
FIBER OPTIC SPLICE BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

12 SM FOC DROP

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ├ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |



ITS POLE #4
LOCAL HUB #2
STA. 1021+58 [LT]

96 SM FOC "TRANSMISSION"

| REVISIONS | | | |
|-----------|-------------|------|-------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-53

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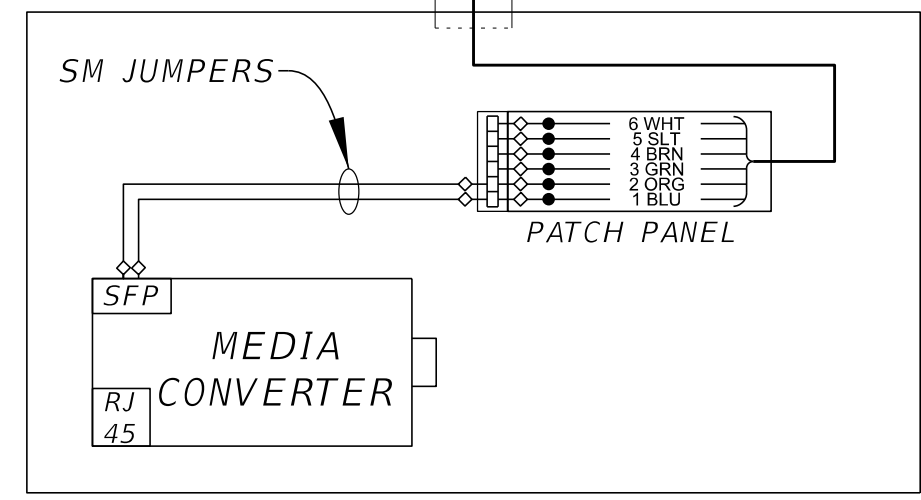
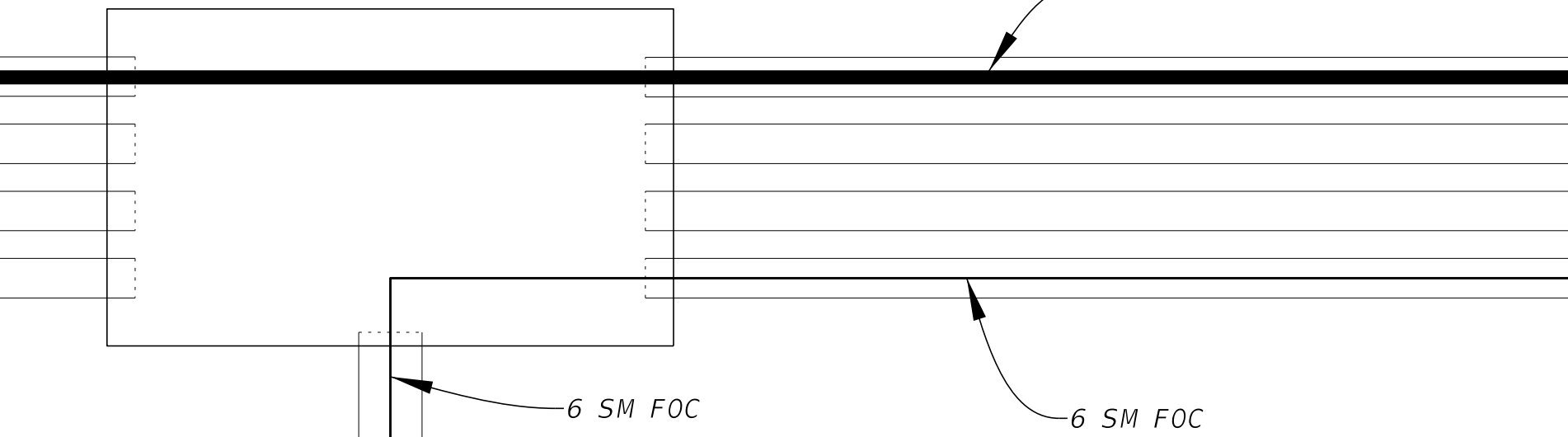
MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

FIBER OPTIC
PULL BOX

96 SM FOC "DISTRIBUTION"

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ├ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |



ITS POLE #5
AUXILIARY CABINET #3
STA. 1041+61 [LT]

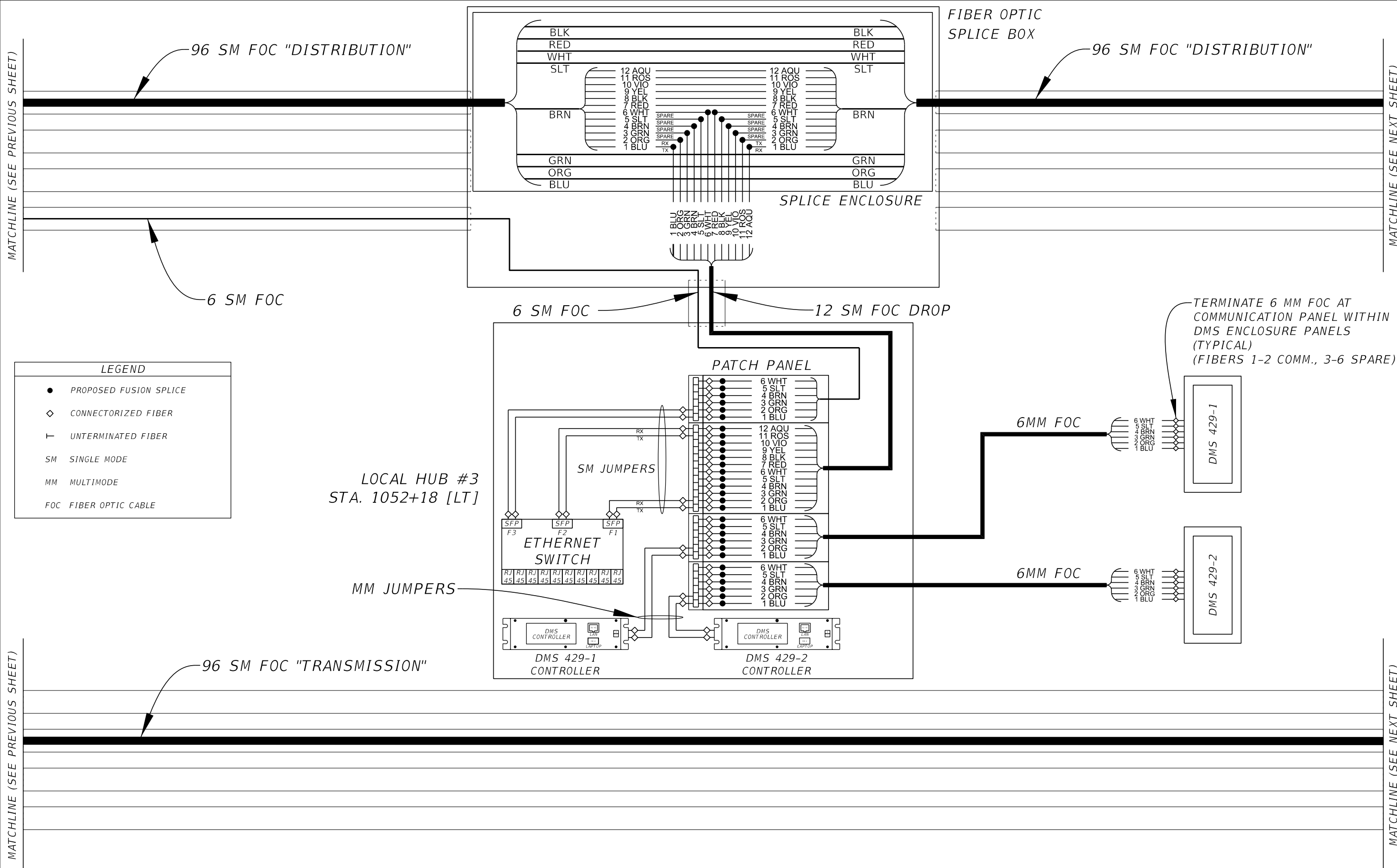
MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "TRANSMISSION"

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|-----------|-------------|------|-------------|---|--|----------|----------------------|---------------------------|
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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-55

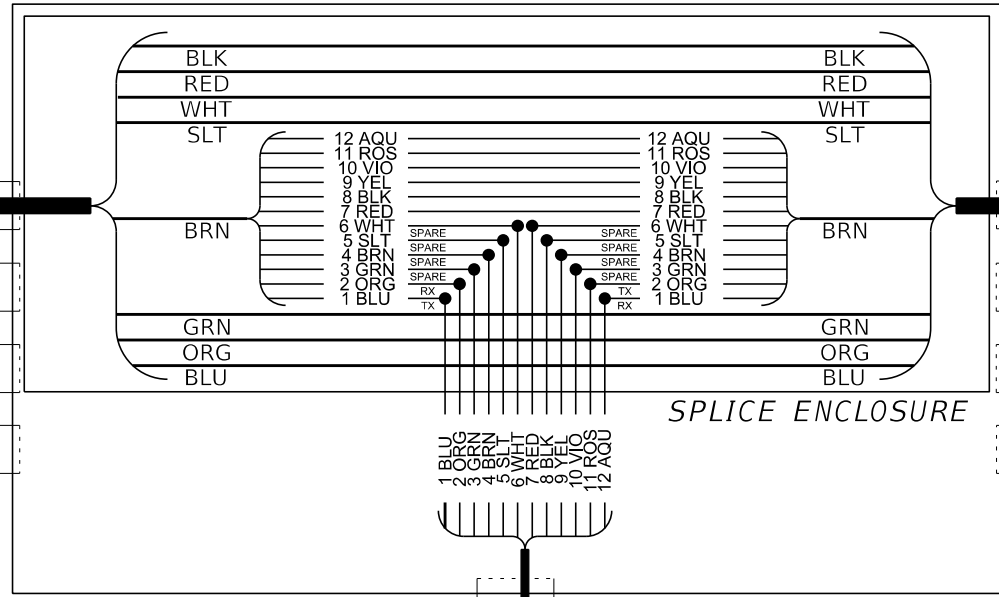
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

96 SM FOC "DISTRIBUTION"

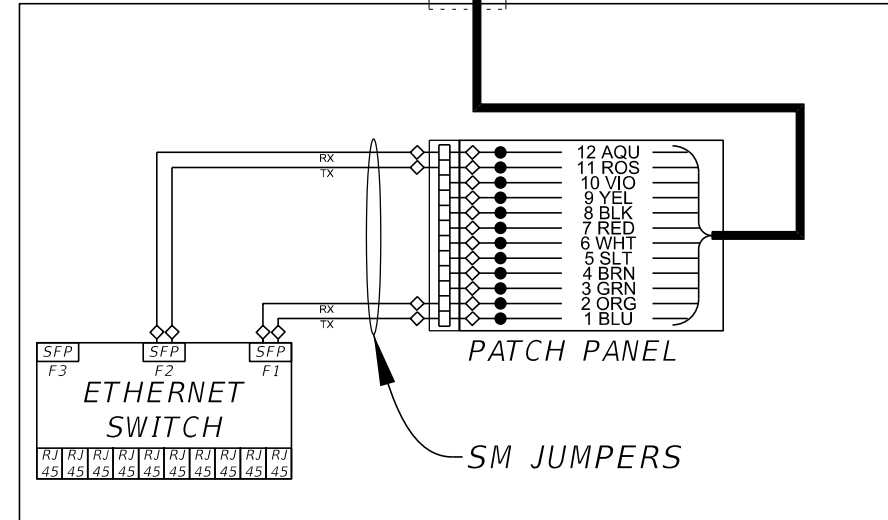


FIBER OPTIC SPLICE BOX

SPLICE ENCLOSURE

12 SM FOC DROP

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ┌ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |



ITS POLE #6
LOCAL HUB #4
STA. 1061+64 [LT]

96 SM FOC "TRANSMISSION"

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

| REVISIONS | | | |
|-----------|-------------|------|-------------|
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| | | | |

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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-56

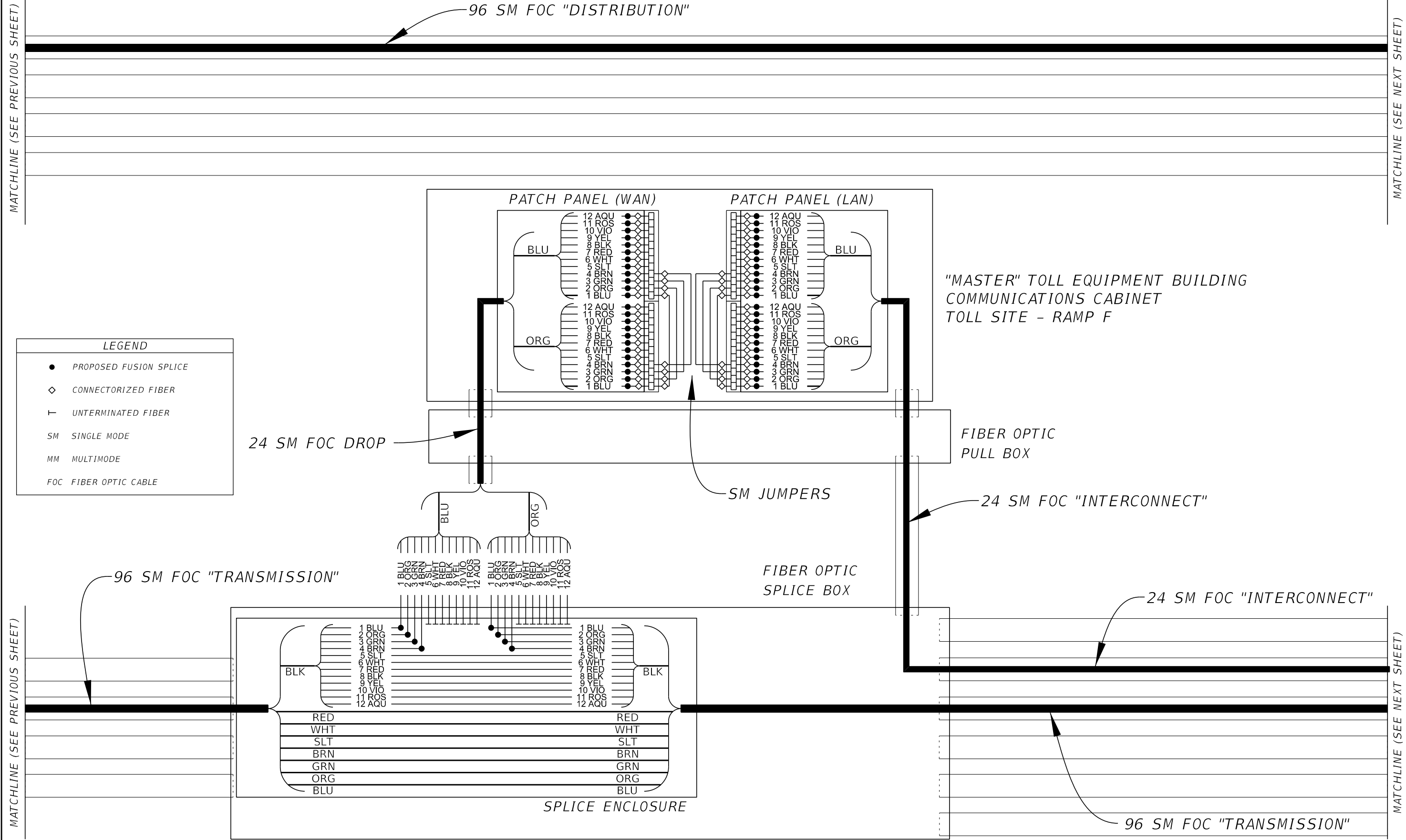
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



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

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 DeBary, FL 32713 Fax: 386.753.0778
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**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-57

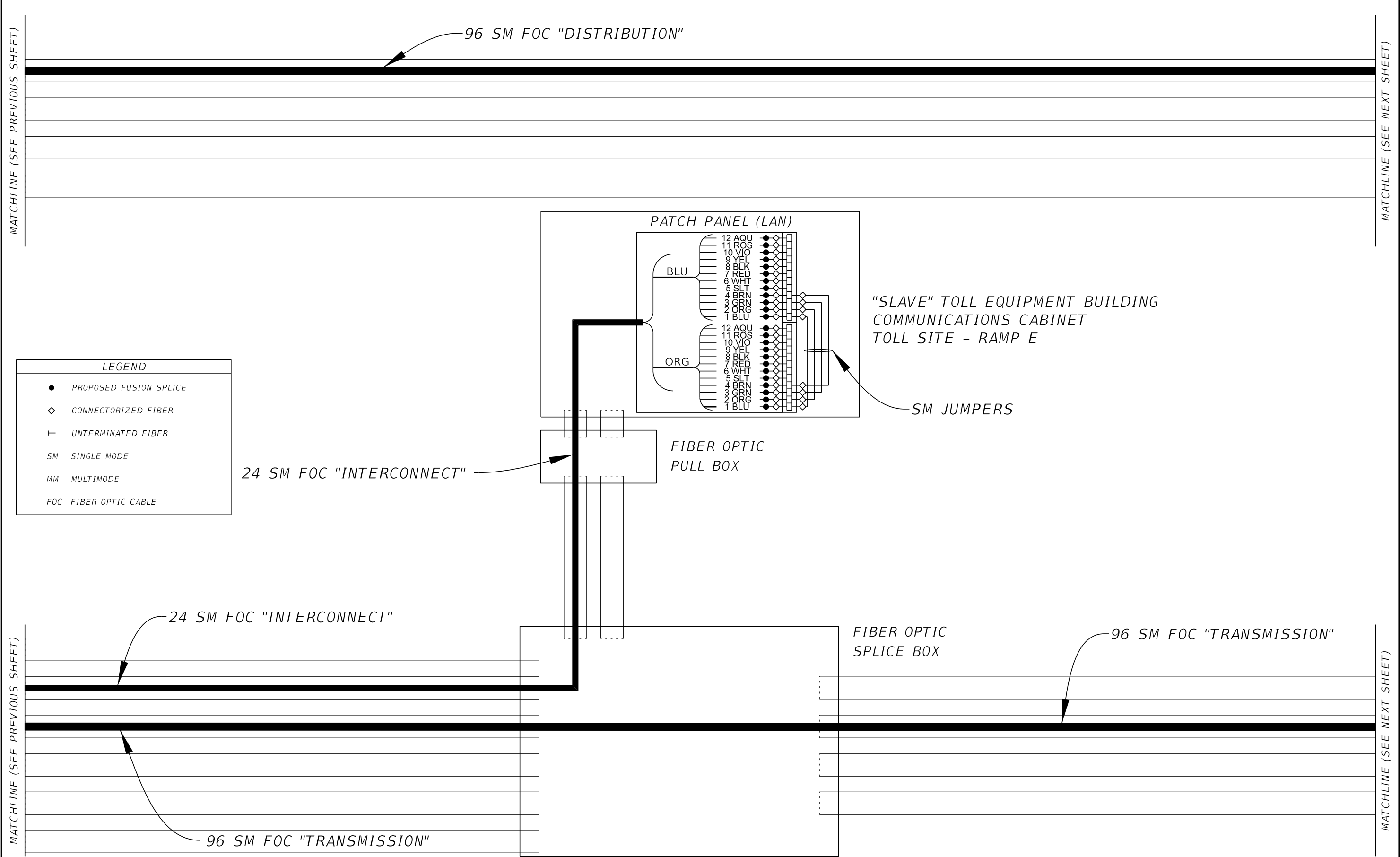
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MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



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| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

| | | |
|--|----------|----------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

**FIBER OPTIC
SPLICING DIAGRAMS**

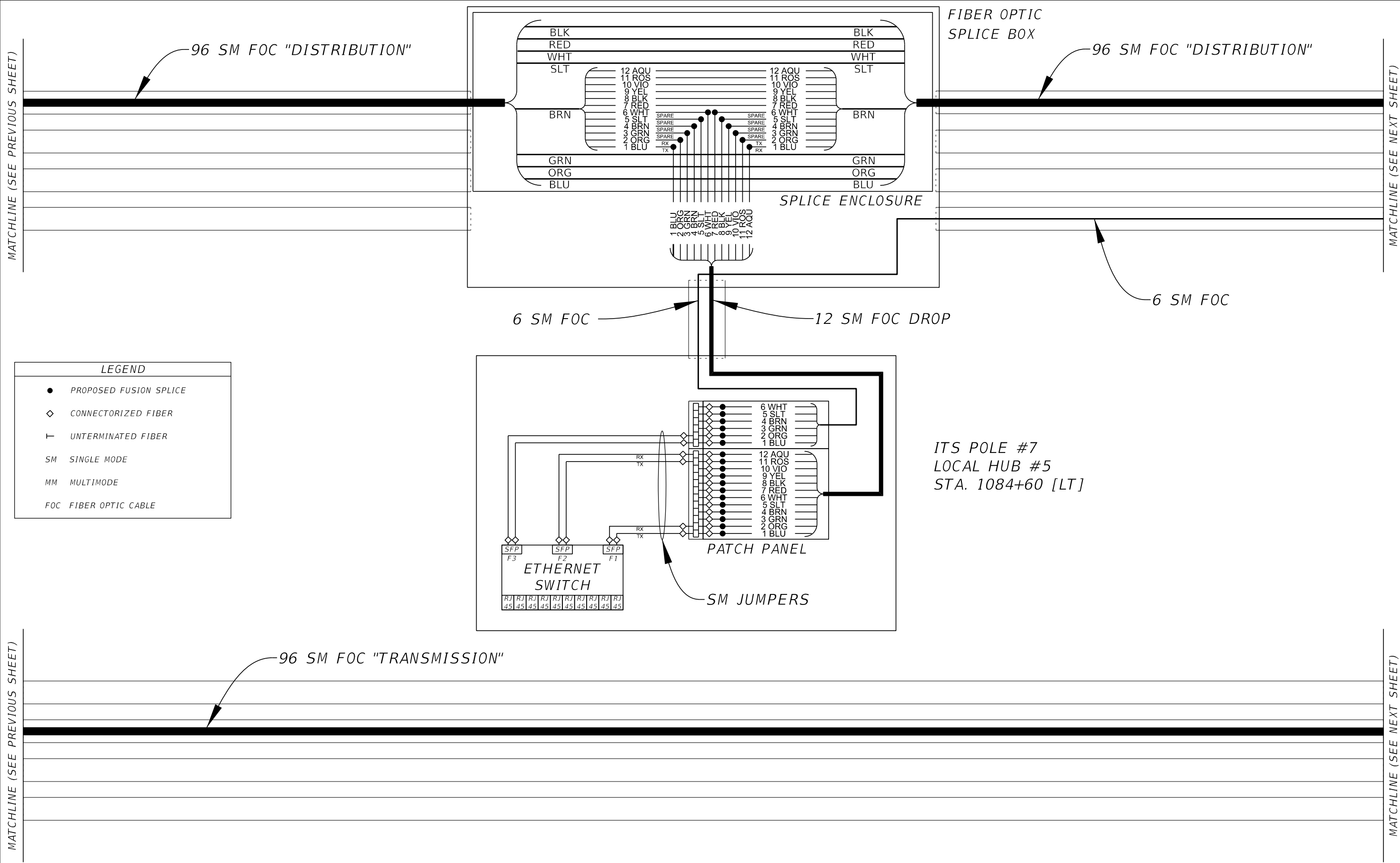
SHEET NO.
IT-58

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)



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| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | FIBER OPTIC SPLICING DIAGRAMS | SHEET NO. |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---|-----------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | IT-59 |

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "DISTRIBUTION"

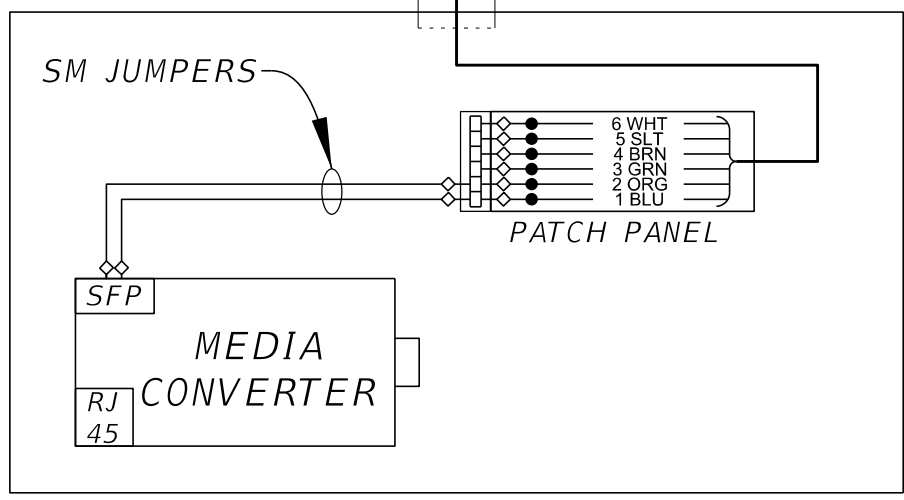
FIBER OPTIC
PULL BOX

96 SM FOC "DISTRIBUTION"

6 SM FOC

6 SM FOC

| LEGEND | |
|--------|------------------------|
| ● | PROPOSED FUSION SPLICE |
| ◇ | CONNECTORIZED FIBER |
| ├ | UNTERMINATED FIBER |
| SM | SINGLE MODE |
| MM | MULTIMODE |
| FOC | FIBER OPTIC CABLE |



ITS POLE #8
AUXILIARY CABINET #4
STA. 1109+49 [LT]

MATCHLINE (SEE PREVIOUS SHEET)

MATCHLINE (SEE NEXT SHEET)

96 SM FOC "TRANSMISSION"

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

ALEXANDER TEAL MIMS, P.E. PE No. 77095
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

**FIBER OPTIC
SPLICING DIAGRAMS**

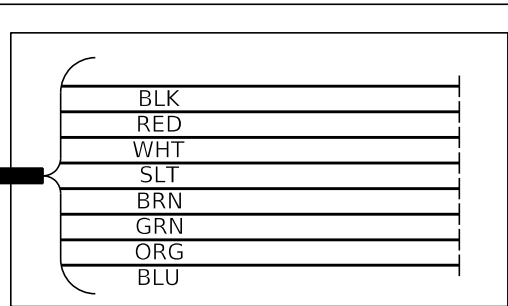
SHEET NO.
IT-60

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

MATCHLINE (SEE PREVIOUS SHEET)

96 SM FOC "DISTRIBUTION"

FIBER OPTIC
SPLICE BOX
STA. 1114+45 [LT]



SPLICE ENCLOSURE

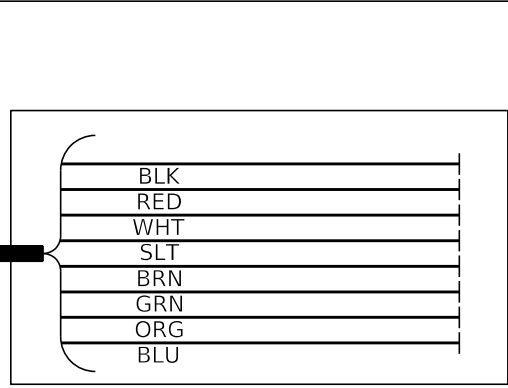
LEGEND

- PROPOSED FUSION SPLICE
- ◇ CONNECTORIZED FIBER
- ├ UNTERMINATED FIBER
- SM SINGLE MODE
- MM MULTIMODE
- FOC FIBER OPTIC CABLE

MATCHLINE (SEE PREVIOUS SHEET)

96 SM FOC "TRANSMISSION"

FIBER OPTIC
SPLICE BOX
STA. 1114+45 [RT]



SPLICE ENCLOSURE

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

ALEXANDER TEAL MIMS, P.E. PE No. 77095
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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

| | | |
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 429 | SEMINOLE | 240200-2-52-01 |

**FIBER OPTIC
SPLICING DIAGRAMS**

SHEET NO.
IT-61

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

FIBER OPTIC LOSS BUDGET

| FROM DEVICE | TO DEVICE | RECOMMENDED TRANSCEIVER TYPE | FIBER OPTIC LINK LOSS | | | | | | | | | | | POWER MARGIN | | | | |
|--------------|-----------------------|------------------------------|---------------------------------------|------------|---------------------------|---------------------------|---|-----------------|-----------------------------------|---------------------------|--------------|-----------------------------|------------------------|----------------------|----------------------------|--------------------------|--------------------|-----------------------|
| | | | ESTIMATED TRANSMISSION DISTANCE (Mi.) | FIBER TYPE | OPERATING WAVELENGTH (nm) | FIBER ATTENUATION (dB/km) | TOTAL FIBER ATTENUATION [INCLUDES 10% CONTINGENCY] (dB) | # OF CONNECTORS | CONNECTOR LOSS PER CONNECTOR (dB) | TOTAL CONNECTOR LOSS (dB) | # OF SPLICES | SPLICE LOSS PER SPLICE (dB) | TOTAL SPLICE LOSS (dB) | TOTAL LINK LOSS (dB) | RECEIVER SENSITIVITY (dBm) | TRANSMITTER OUTPUT (dBm) | DYNAMIC RANGE (dB) | LINK LOSS MARGIN (dB) |
| Local Hub #1 | Local Hub #2 | 1000BASE-LX | 1.240 | SM | 1310 | 0.35 | 0.77 | 4 | 0.5 | 2 | 2 | 0.1 | 0.2 | 2.97 | -19 | -11 | 8 | 5.03 |
| Local Hub #2 | Local Hub #3 | 1000BASE-LX | 0.660 | SM | 1310 | 0.35 | 0.41 | 4 | 0.5 | 2 | 2 | 0.1 | 0.2 | 2.61 | -19 | -11 | 8 | 5.39 |
| Local Hub #3 | Local Hub #4 | 1000BASE-LX | 0.302 | SM | 1310 | 0.35 | 0.19 | 4 | 0.5 | 2 | 2 | 0.1 | 0.2 | 2.39 | -19 | -11 | 8 | 5.61 |
| Local Hub #4 | Local Hub #5 | 1000BASE-LX | 0.562 | SM | 1310 | 0.35 | 0.35 | 4 | 0.5 | 2 | 2 | 0.1 | 0.2 | 2.55 | -19 | -11 | 8 | 5.45 |
| Local Hub #1 | Auxilliary Cabinet #1 | 1000BASE-LX | 0.643 | SM | 1310 | 0.35 | 0.40 | 2 | 0.5 | 1 | 0 | 0.1 | 0 | 1.40 | -19 | -11 | 8 | 6.60 |
| Local Hub #2 | Auxilliary Cabinet #2 | 1000BASE-LX | 0.643 | SM | 1310 | 0.35 | 0.40 | 2 | 0.5 | 1 | 0 | 0.1 | 0 | 1.40 | -19 | -11 | 8 | 6.60 |
| Local Hub #3 | Auxilliary Cabinet #3 | 1000BASE-LX | 0.229 | SM | 1310 | 0.35 | 0.14 | 2 | 0.5 | 1 | 0 | 0.1 | 0 | 1.14 | -19 | -11 | 8 | 6.86 |
| Local Hub #5 | Auxilliary Cabinet #4 | 1000BASE-LX | 0.571 | SM | 1310 | 0.35 | 0.35 | 2 | 0.5 | 1 | 0 | 0.1 | 0 | 1.35 | -19 | -11 | 8 | 6.65 |

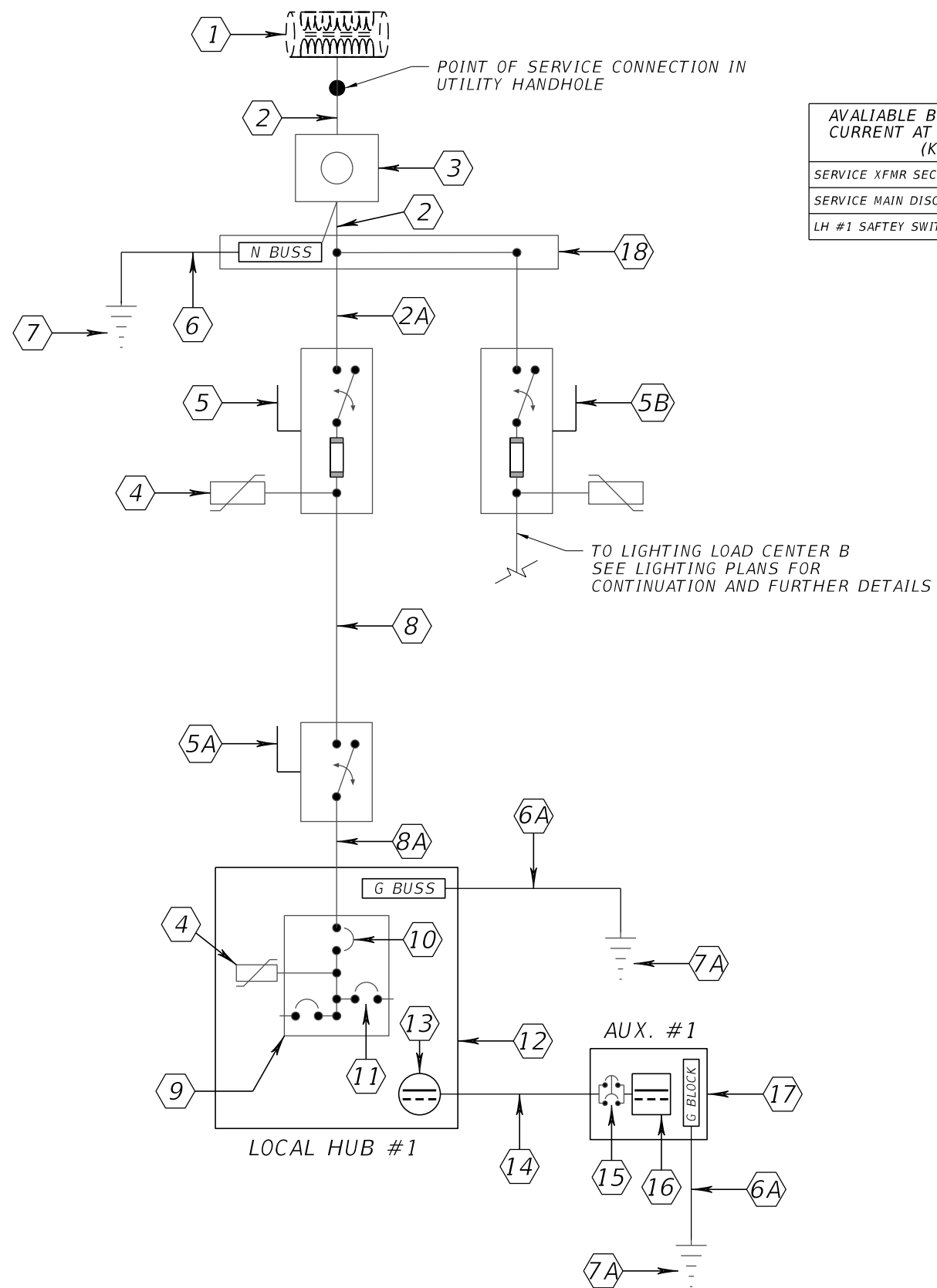
NOTES:

- EQUIPMENT PERFORMANCE PROVIDED IN THE TABLE ABOVE ARE BASED ON TYPICAL VALUES AND MAY VARY FROM MANUFACTURER TO MANUFACTURER.
- NUMBER OF SPLICES, CONNECTORS, AND FIBER OPTIC TRANSMISSION DISTANCE SHOULD BE CONSIDERED APPROXIMATE AND MAY VARY FROM INSTALLED VALUES DEPENDING ON INSTALLATION PROCEDURES AND FIELD CONDITIONS.
- THE TABLE ABOVE IS MEANT TO PROVIDE GUIDANCE IN SELECTING OPTICAL TRANSCEIVERS CAPABLE OF COMMUNICATION LINKS INDICATED IN THESE PLANS, AND AS A BASIS FOR POST INSTALLATION TESTING OF FIBER OPTIC LINKS. IF THE CONTRACTOR WOULD PREFER TO USE DIFFERENT OPTICAL TRANSCEIVERS THAN THOSE INDICATED IN THE TABLE ABOVE, ENSURE THAT THE TRANSCEIVERS ARE CAPABLE OF THE TRANSMISSION DISTANCES REQUIRED, ARE CONSISTENT WITH FDOT SPECIFICATIONS, COMPATIBLE WITH OTHER EQUIPMENT, AND PROVIDE EQUIVALENT DATA THROUGHPUT SPEEDS.

| | | | | | | | | | |
|-----------|-------------|------|-------------|---|--|----------|----------------------|------------------------------------|-----------|
| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | FIBER OPTIC LOSS BUDGET | SHEET NO. |
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | IT-62 |

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

POWER SOURCE #1
ONE-LINE DIAGRAM



| AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA) | |
|---|------|
| SERVICE XFMR SECONDARY | 31.9 |
| SERVICE MAIN DISC. | 14.0 |
| LH #1 SAFTEY SWITCH | 3.5 |

LEGEND:

- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 2A 120V SINGLE PHASE CIRCUIT; TAPPED IN WIRE TROUGH TO SERVICE CONDUCTORS; 1-#6 AWG UNGROUNDED CONDUCTOR AND 1-#6 AWG GROUNDED CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTING ARRESTOR)
- 5 ITS SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 40 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 100 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE; BOND ENCLOSURE TO GROUNDED CONDUCTOR (NEUTRAL) WITH #6 AWG MAIN BONDING JUMPER
- 5A POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, NON-FUSIBLE, SINGLE THROW SAFETY SWITCH; 240V RATED; 100 AMP RATED; 10K SSCR MIN.; NEMA 3R PADLOCKABLE ENCLOSURE
- 5B LIGHTING SERVICE MAIN DISCONNECT: SEE LIGHTING PLANS FOR FURTHER DETAIL
- 6 #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR (COMMON). BOND THE SERVICE GROUNDED CONDUCTOR (NEUTRAL) TO GROUND IN WIRE TROUGH AT NEUTRAL BUSS.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 3/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 CABINET POWER PANEL
- 10 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 11 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 POLE MOUNTED TYPE 336S CABINET
- 13 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 14 48VDC CIRCUIT: 2/C #12 AWG TYPE TC CABLE
- 15 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 16 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 POLE MOUNTED AUXILIARY CABINET
- 18 NEMA 3R WIRE TROUGH SIZED PER NEC FILL REQUIREMENTS; CONTAINING 1/4" THICK X 2" WIDE (MIN.) COPPER GROUNDING BUSS TO SERVE AS COMMON GROUNDING ELECTRODE CONDUCTOR

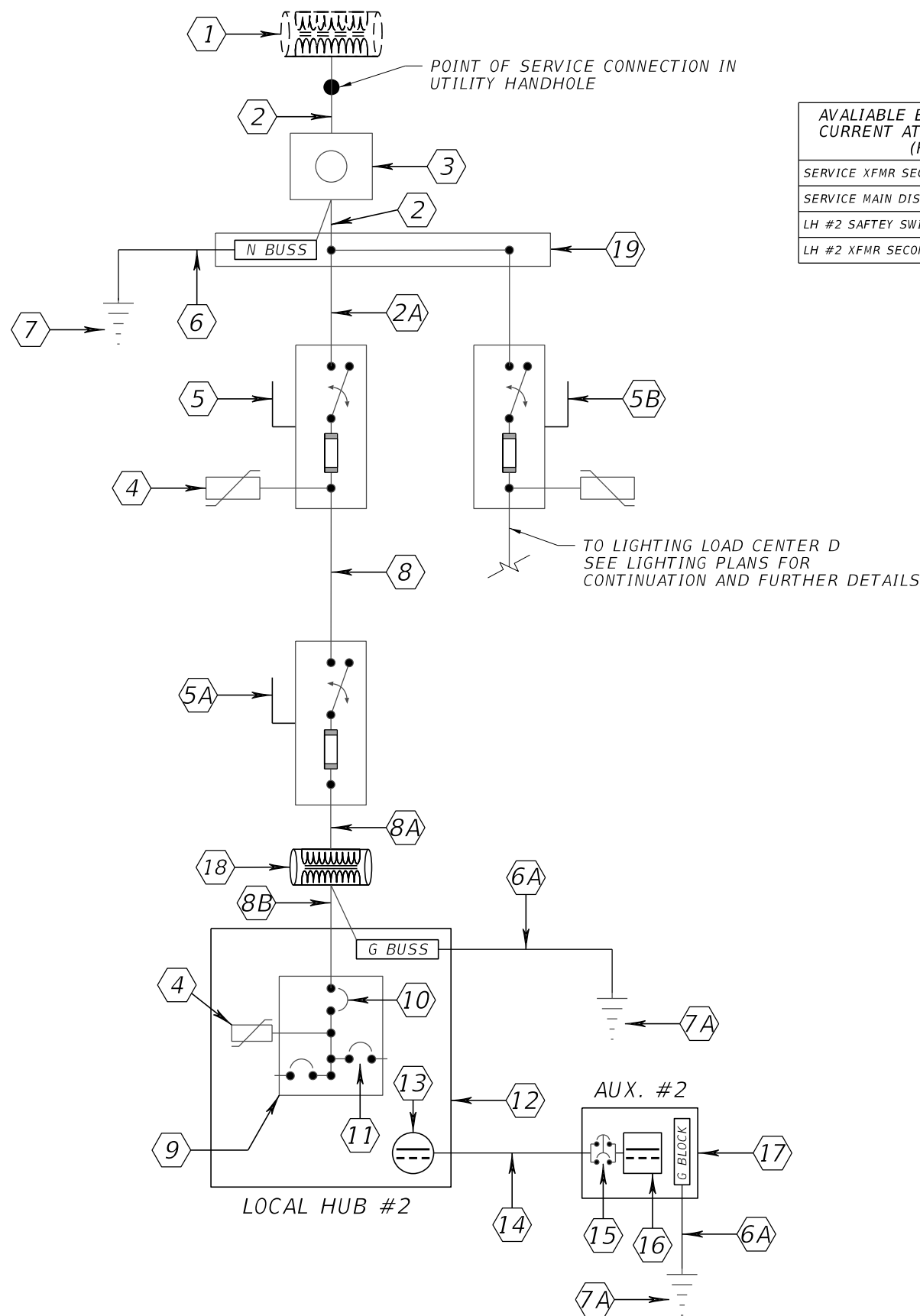
NOTES:

1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | POWER SERVICE DETAILS | SHEET NO. IT-63 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|-----------------------|--------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | |

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POWER SOURCE #2
ONE-LINE DIAGRAM



| AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA) | |
|---|------|
| SERVICE XFMR SECONDARY | 31.9 |
| SERVICE MAIN DISC. | 12.3 |
| LH #2 SAFTEY SWITCH | 0.25 |
| LH #2 XFMR SECONDARY | 0.30 |

LEGEND:

- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, UNDERGROUND SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 2A 240V SINGLE PHASE CIRCUIT; TAPPED IN WIRE TROUGH TO SERVICE CONDUCTORS; 2-#6 AWG UNGROUNDED CONDUCTORS AND 1-#6 AWG GROUNDED CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTING ARRESTOR)
- 5 ITS SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 40 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 100 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE; BOND ENCLOSURE TO GROUNDED CONDUCTOR (NEUTRAL) WITH #6 AWG MAIN BONDING JUMPER
- 5A POLE MOUNTED SAFTEY SWITCH: GENERAL DUTY, TWO-POLE, FUSIBLE, SINGLE THROW; FUSED AT 20 AMPS; 240V RATED; 100 AMP RATED; 10K AIC MIN. RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 5B LIGHTING SERVICE MAIN DISCONNECT: SEE LIGHTING PLANS FOR FURTHER DETAIL
- 6 #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR (COMMON). BOND THE SERVICE GROUNDED CONDUCTOR (NEUTRAL) TO GROUND IN WIRE TROUGH AT NEUTRAL BUSS.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 240V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8B 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 CABINET POWER PANEL
- 10 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 11 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 POLE MOUNTED TYPE 336S CABINET
- 13 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 14 48VDC CIRCUIT: 2/C #12 AWG TYPE TC CABLE
- 15 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 16 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 POLE MOUNTED AUXILIARY CABINET
- 18 3 KVA POLE MOUNTED DRY TYPE OUTDOOR TRANSFORMER: 240x480V PRIMARY AND 120/240V SECONDARY; NEMA 3R ENCLOSURE; BOND TRANSFORMER SECONDARY TO EFFECTIVE GROUND-FAULT CURRENT PATH PER NEC REQUIREMENTS; REFER TO WIRING DIAGRAMS FOR FURTHER DETAIL
- 19 NEMA 3R WIRE TROUGH SIZED PER NEC FILL REQUIREMENTS; CONTAINING 1/4" THICK X 2" WIDE (MIN.) COPPER GROUNDING BUSS TO SERVE AS COMMON GROUNDING ELECTRODE CONDUCTOR

NOTES:

- 1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
- 2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
- 3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|------|-------------|------|-------------|
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ALEXANDER TEAL MIMS, P.E. PE No. 77095
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
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| SR 429 | SEMINOLE | 240200-2-52-01 |

POWER SERVICE DETAILS

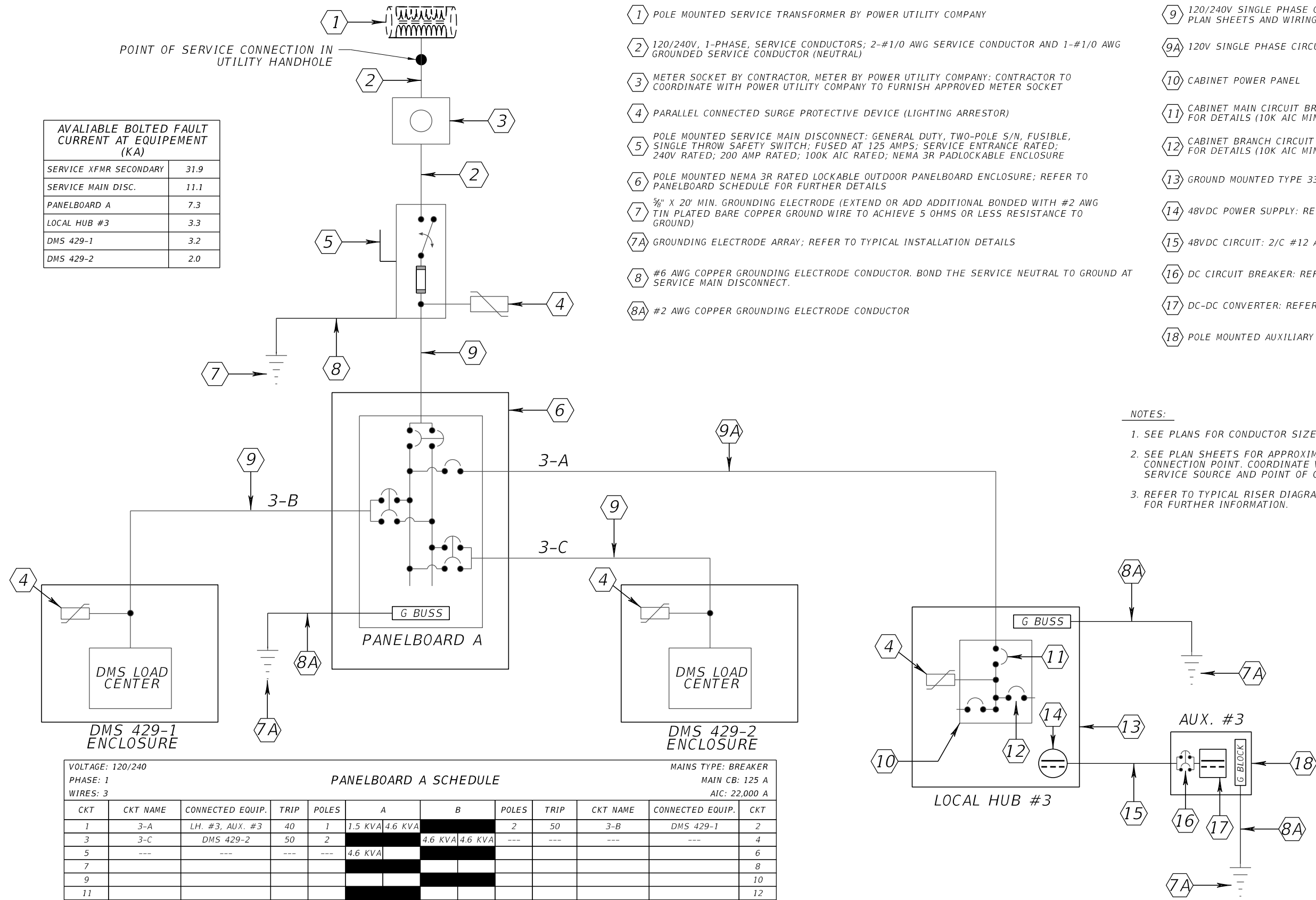
SHEET NO.
IT-64

POWER SOURCE #3
ONE-LINE DIAGRAM

LEGEND:

POINT OF SERVICE CONNECTION IN UTILITY HANDHOLE

| AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA) | |
|---|------|
| SERVICE XFMR SECONDARY | 31.9 |
| SERVICE MAIN DISC. | 11.1 |
| PANELBOARD A | 7.3 |
| LOCAL HUB #3 | 3.3 |
| DMS 429-1 | 3.2 |
| DMS 429-2 | 2.0 |



- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1/0 AWG SERVICE CONDUCTOR AND 1-#1/0 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTING ARRESTOR)
- 5 POLE MOUNTED SERVICE MAIN DISCONNECT: GENERAL DUTY, TWO-POLE S/N, FUSIBLE, SINGLE THROW SAFETY SWITCH; FUSED AT 125 AMPS; SERVICE ENTRANCE RATED; 240V RATED; 200 AMP RATED; 100K AIC RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 6 POLE MOUNTED NEMA 3R RATED LOCKABLE OUTDOOR PANELBOARD ENCLOSURE; REFER TO PANELBOARD SCHEDULE FOR FURTHER DETAILS
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 #6 AWG COPPER GROUNDING ELECTRODE CONDUCTOR. BOND THE SERVICE NEUTRAL TO GROUND AT SERVICE MAIN DISCONNECT.
- 8A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 9 120/240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS AND WIRING DIAGRAMS
- 9A 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN PLAN SHEETS
- 10 CABINET POWER PANEL
- 11 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 13 GROUND MOUNTED TYPE 334 CABINET
- 14 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 15 48VDC CIRCUIT: 2/C #12 AWG TYPE TC CABLE
- 16 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 18 POLE MOUNTED AUXILIARY CABINET

NOTES:

1. SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
2. SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
3. REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

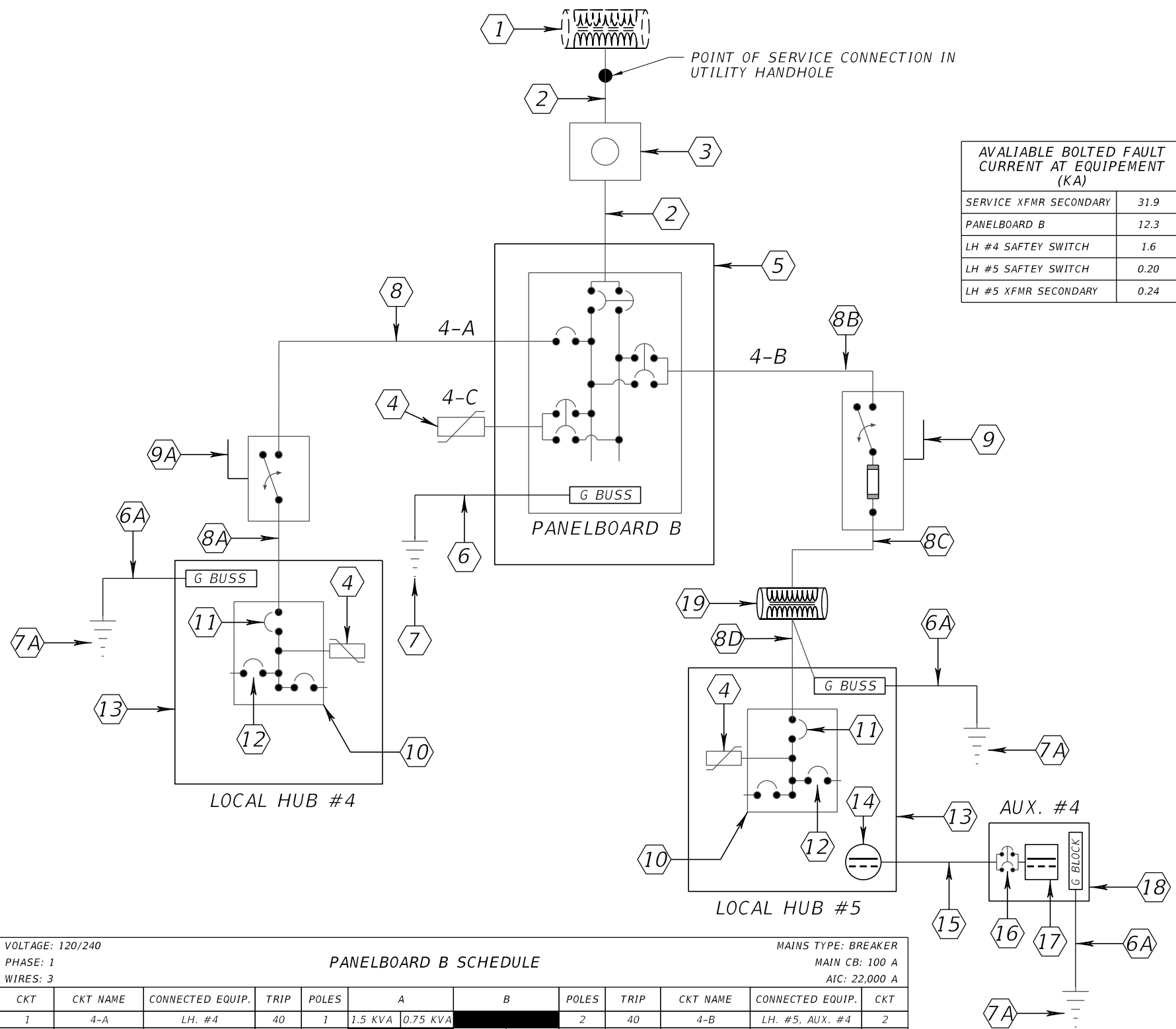
| PANELBOARD A SCHEDULE | | | | | | | | | | | |
|--|----------|------------------|------|-------|--|---------|-------|------|----------|------------------|-----|
| VOLTAGE: 120/240 PHASE: 1 WIRES: 3 | | | | | MAINS TYPE: BREAKER MAIN CB: 125 A AIC: 22,000 A | | | | | | |
| CKT | CKT NAME | CONNECTED EQUIP. | TRIP | POLES | A | B | POLES | TRIP | CKT NAME | CONNECTED EQUIP. | CKT |
| 1 | 3-A | LH. #3, AUX. #3 | 40 | 1 | 1.5 KVA | 4.6 KVA | 2 | 50 | 3-B | DMS 429-1 | 2 |
| 3 | 3-C | DMS 429-2 | 50 | 2 | | 4.6 KVA | --- | --- | --- | --- | 4 |
| 5 | --- | --- | --- | --- | 4.6 KVA | | | | | | 6 |
| 7 | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | 12 |
| TOTAL LOAD: | | | | | 10.7 KVA | 9.2 KVA | | | | | |
| TOTAL AMPS: | | | | | 89.2 | 76.7 | | | | | |

| <p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | | | | DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | <p>ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392</p> | | <p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>SR 429</td> <td>SEMINOLE</td> <td>240200-2-52-01</td> </tr> </tbody> </table> | | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | SR 429 | SEMINOLE | 240200-2-52-01 | <p>SHEET NO. IT-65</p> | |
|--|-------------|----------------------|-------------|------|-------------|------|-------------|--|--|--|--|--|--|--|--|--|----------|--------|----------------------|--------|----------|----------------|----------------------------|--|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | | | | | | | | | | | | | | | | | | | | | |
| SR 429 | SEMINOLE | 240200-2-52-01 | | | | | | | | | | | | | | | | | | | | | | |

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POWER SOURCE #4
ONE-LINE DIAGRAM

LEGEND:



- 1 POLE MOUNTED SERVICE TRANSFORMER BY POWER UTILITY COMPANY
- 2 120/240V, 1-PHASE, SERVICE CONDUCTORS; 2-#1 AWG SERVICE CONDUCTOR AND 1-#1 AWG GROUNDED SERVICE CONDUCTOR (NEUTRAL)
- 3 METER SOCKET BY CONTRACTOR, METER BY POWER UTILITY COMPANY; CONTRACTOR TO COORDINATE WITH POWER UTILITY COMPANY TO FURNISH APPROVED METER SOCKET
- 4 PARALLEL CONNECTED SURGE PROTECTIVE DEVICE (LIGHTING ARRESTOR)
- 5 POLE MOUNTED MAIN SERVICE PANEL: POLE MOUNTED NEMA 3R RATED LOCKABLE OUTDOOR SERVICE ENTRANCE RATED PANELBOARD ENCLOSURE; REFER TO PANELBOARD SCHEDULE FOR FURTHER DETAILS
- 6 #6 AWG COPPER GROUNDING ELECTRODE CONDUCTOR. BOND THE SERVICE NEUTRAL TO GROUND IN MAIN SERVICE PANEL.
- 6A #2 AWG COPPER GROUNDING ELECTRODE CONDUCTOR
- 7 5/8" X 20' MIN. GROUNDING ELECTRODE (EXTEND OR ADD ADDITIONAL BONDED WITH #2 AWG TIN PLATED BARE COPPER GROUND WIRE TO ACHIEVE 5 OHMS OR LESS RESISTANCE TO GROUND)
- 7A GROUNDING ELECTRODE ARRAY; REFER TO TYPICAL INSTALLATION DETAILS
- 8 120V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8A 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8B 240V SINGLE PHASE CIRCUIT: CONDUCTOR SIZE AS SHOWN ON PLAN SHEETS
- 8C 240V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 8D 120V SINGLE PHASE CIRCUIT: 2-#6 AWG AND 1-#6 AWG GROUND
- 9 POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, FUSIBLE, SINGLE THROW; FUSED AT 20 AMPS; 240V RATED; 100 AMP RATED; 10K AIC MIN. RATED; NEMA 3R PADLOCKABLE ENCLOSURE
- 9A POLE MOUNTED SAFETY SWITCH: GENERAL DUTY, TWO-POLE, NON-FUSIBLE, SINGLE THROW; 240V RATED; 100 AMP RATED; 10K SSCR MIN.; NEMA 3R PADLOCKABLE ENCLOSURE
- 10 CABINET POWER PANEL
- 11 CABINET MAIN CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 12 CABINET BRANCH CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS (10K AIC MIN. RATED)
- 13 POLE MOUNTED TYPE 336S CABINET
- 14 48VDC POWER SUPPLY: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 15 48VDC CIRCUIT: 2/C #12 AWG TYPE TC CABLE
- 16 DC CIRCUIT BREAKER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 17 DC-DC CONVERTER: REFER TO CABINET WIRING DIAGRAMS FOR DETAILS
- 18 POLE MOUNTED AUXILIARY CABINET
- 19 3 KVA POLE MOUNTED DRY TYPE OUTDOOR TRANSFORMER: 240x480V PRIMARY AND 120/240V SECONDARY; NEMA 3R ENCLOSURE; BOND TRANSFORMER SECONDARY TO EFFECTIVE GROUND-FAULT CURRENT PATH PER NEC REQUIREMENTS; REFER TO WIRING DIAGRAMS FOR FURTHER DETAIL

VOLTAGE: 120/240
PHASE: 1
WIRES: 3

PANELBOARD B SCHEDULE

MAINS TYPE: BREAKER
MAIN CB: 100 A
AIC: 22,000 A

| CKT | CKT NAME | CONNECTED EQUIP. | TRIP | POLES | A | | B | | POLES | TRIP | CKT NAME | CONNECTED EQUIP. | CKT |
|-------------|----------|------------------|------|-------|------|------|-----|------|-------|------|----------|------------------|-----|
| | | | | | KVA | AMPS | KVA | AMPS | | | | | |
| 1 | 4-A | LH. #4 | 40 | 1 | 1.5 | 0.75 | | | 2 | 40 | 4-B | LH. #5, AUX. #4 | 2 |
| 3 | 4-C | SPD | 30 | 2 | | | SPD | 0.75 | --- | --- | --- | --- | 4 |
| 5 | --- | --- | --- | --- | | | SPD | | | | | | 6 |
| 7 | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | 12 |
| TOTAL LOAD: | | | | | 2.25 | 0.75 | | | | | | | |
| TOTAL AMPS: | | | | | 18.8 | 6.25 | | | | | | | |

- NOTES:
- SEE PLANS FOR CONDUCTOR SIZES NOT INDICATED ON THIS SHEET.
 - SEE PLAN SHEETS FOR APPROXIMATE LOCATION OF THE SERVICE CONNECTION POINT. COORDINATE WITH POWER UTILITY COMPANY FOR THE SERVICE SOURCE AND POINT OF CONNECTION EXACT LOCATIONS.
 - REFER TO TYPICAL RISER DIAGRAM, AND TYPICAL INSTALLATION DETAILS, FOR FURTHER INFORMATION.

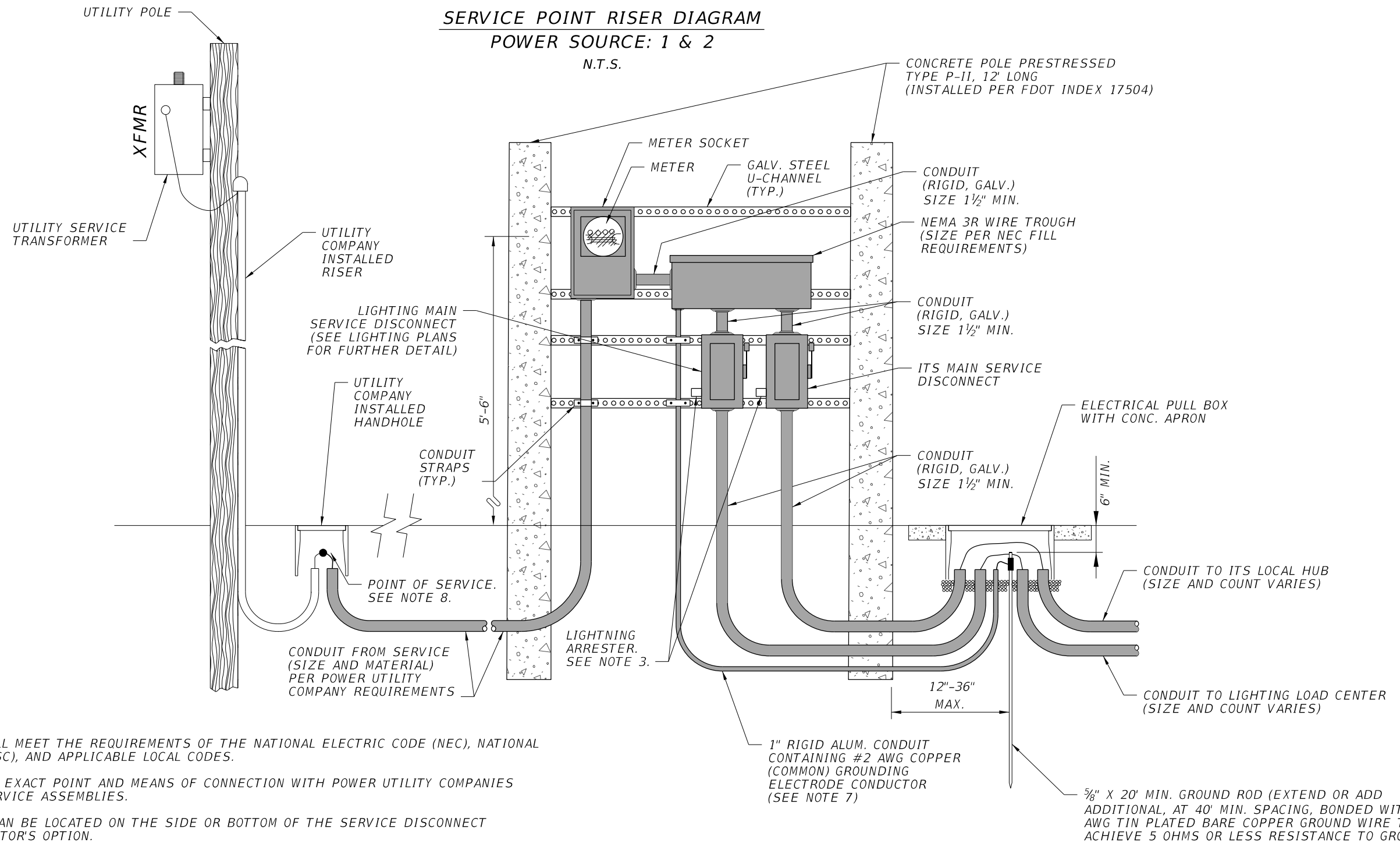
| | | | | | | | |
|----------|-------------|---|--|----------|------------------------------|------------------------|----------------------|
| REVISONS | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | POWER SERVICE DETAILS | SHEET NO. IT-66 | |
| DATE | DESCRIPTION | | ROAD NO. | COUNTY | | | FINANCIAL PROJECT ID |
| | | | SR 429 | SEMINOLE | | | 240200-2-52-01 |

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SERVICE POINT RISER DIAGRAM

POWER SOURCE: 1 & 2

N.T.S.



NOTES:

1. SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), NATIONAL ELECTRIC SAFETY CODE (NEC), AND APPLICABLE LOCAL CODES.
2. CONTRACTOR TO COORDINATE EXACT POINT AND MEANS OF CONNECTION WITH POWER UTILITY COMPANIES PRIOR TO CONSTRUCTING SERVICE ASSEMBLIES.
3. THE LIGHTNING ARRESTER CAN BE LOCATED ON THE SIDE OR BOTTOM OF THE SERVICE DISCONNECT ENCLOSURE AT THE CONTRACTOR'S OPTION.
4. MEET ALL GROUNDING REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.
5. THE MAIN SERVICE DISCONNECTS SHALL BE LOCKABLE BY PADLOCK AND FOUR KEYS PROVIDED TO THE MAINTAINING AGENCY. THE DOOR SHALL HAVE A MINIMUM OF THREE HINGES AND BE LOCKABLE. NO SCREWS TO BE USED TO ATTACH DOOR.
6. ALL SERVICE EQUIPMENT ENCLOSURES SHALL BE NEMA 3R OR BETTER RATED. WEATHER TIGHT HUBS SHALL BE USED AT LOCATIONS WHERE CONDUITS ATTACH TO ENCLOSURES.
7. CONDUIT CONTAINING GROUNDING ELECTRODE CONDUCTORS SHALL BE EITHER RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT. IF STEEL CONDUIT (FERROUS) IS USED ENSURE CONDUIT IS BONDED TO GROUNDING ELECTRODE CONDUCTOR AT BOTH ENDS IN ACCORDANCE WITH THE NEC.
8. CONTRACTOR TO PROVIDE 10' OF SLACK SERVICE CONDUCTOR WITHIN HANDHOLE FOR CONNECTION BY POWER UTILITY COMPANY.

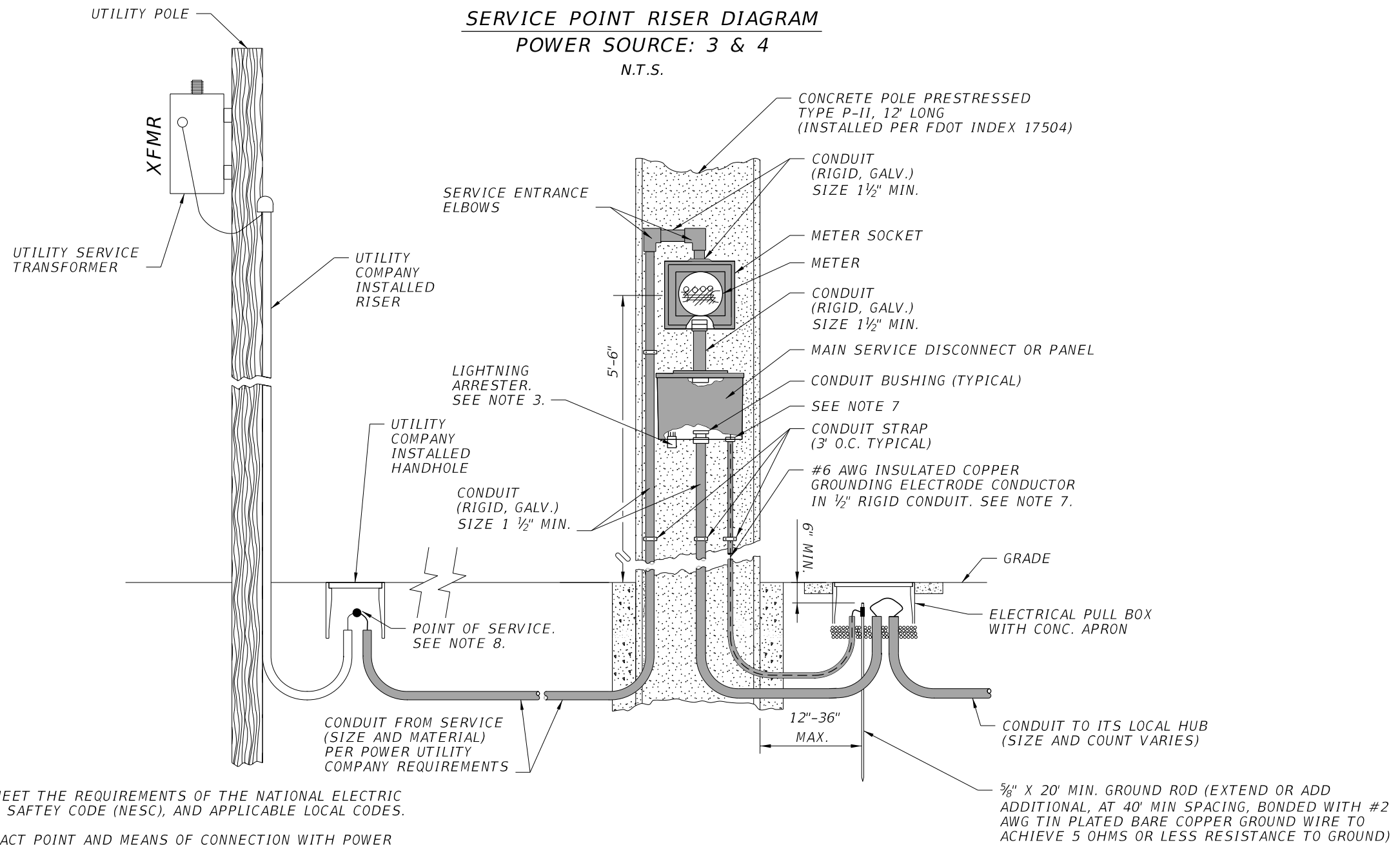
| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | POWER SERVICE DETAILS | SHEET NO. IT-67 |
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| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
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SERVICE POINT RISER DIAGRAM

POWER SOURCE: 3 & 4

N.T.S.



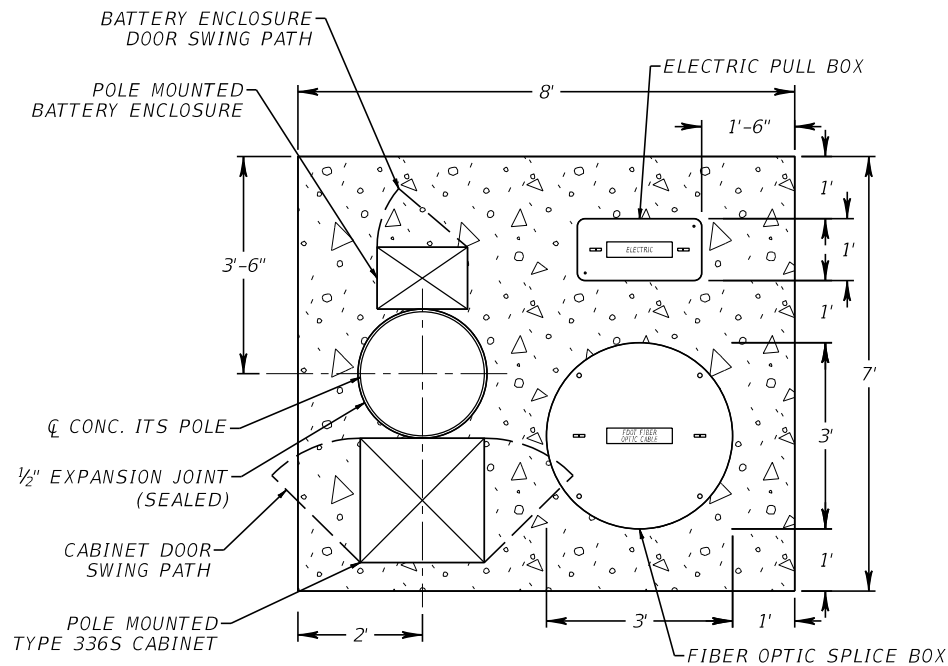
NOTES:

1. SERVICE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), NATIONAL ELECTRIC SAFETY CODE (NESC), AND APPLICABLE LOCAL CODES.
2. CONTRACTOR TO COORDINATE EXACT POINT AND MEANS OF CONNECTION WITH POWER UTILITY COMPANIES PRIOR TO CONSTRUCTING SERVICE ASSEMBLIES.
3. THE LIGHTNING ARRESTER CAN BE LOCATED ON THE SIDE OR BOTTOM OF THE SERVICE DISCONNECT ENCLOSURE AT THE CONTRACTOR'S OPTION.
4. MEET ALL GROUNDING REQUIREMENTS OF SECTION 620 OF THE STANDARD SPECIFICATIONS.
5. THE MAIN SERVICE DISCONNECT OR PANEL SHALL BE LOCKABLE BY PADLOCK AND FOUR KEYS PROVIDED TO THE MAINTAINING AGENCY. THE DOOR SHALL HAVE A MINIMUM OF THREE HINGES AND BE LOCKABLE. NO SCREWS TO BE USED TO ATTACH DOOR.
6. ALL SERVICE EQUIPMENT ENCLOSURES SHALL BE NEMA 3R OR BETTER RATED. WEATHER TIGHT HUBS SHALL BE USED AT LOCATIONS WHERE CONDUITS ATTACH TO ENCLOSURES.
7. CONDUIT CONTAINING GROUNDING ELECTRODE CONDUCTORS SHALL BE EITHER RIGID GALVANIZED STEEL OR RIGID ALUMINUM CONDUIT. IF STEEL CONDUIT (FERROUS) IS USED ENSURE CONDUIT IS BONDED TO GROUNDING ELECTRODE CONDUCTOR AT BOTH ENDS IN ACCORDANCE WITH THE NEC.
8. CONTRACTOR TO PROVIDE 10' OF SLACK SERVICE CONDUCTOR WITHIN HANDHOLE FOR CONNECTION BY POWER UTILITY COMPANY.

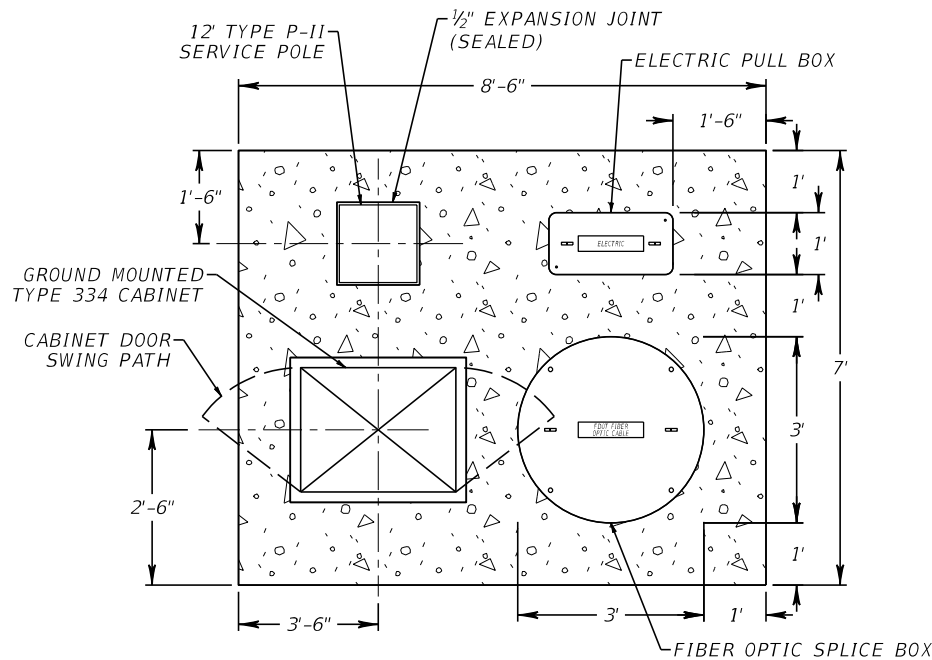
| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. IT-68 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---------------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | |

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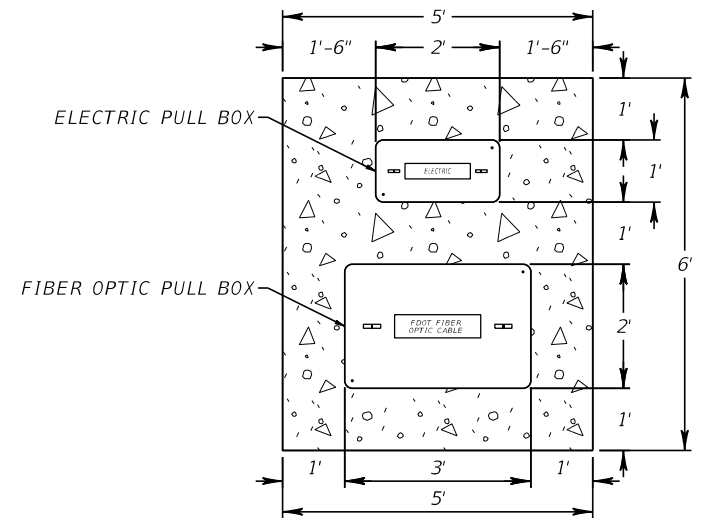
CONCRETE APRON DETAILS
N.T.S.



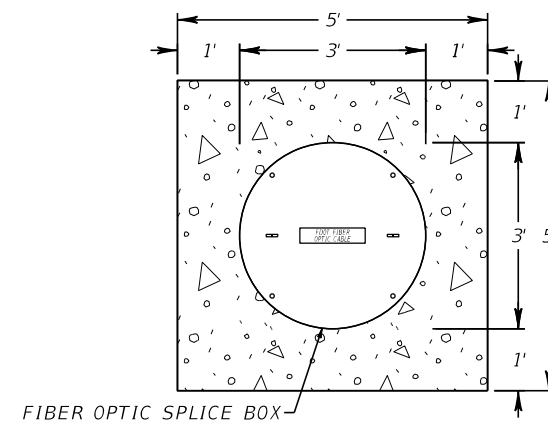
TYPICAL CCTV POLE



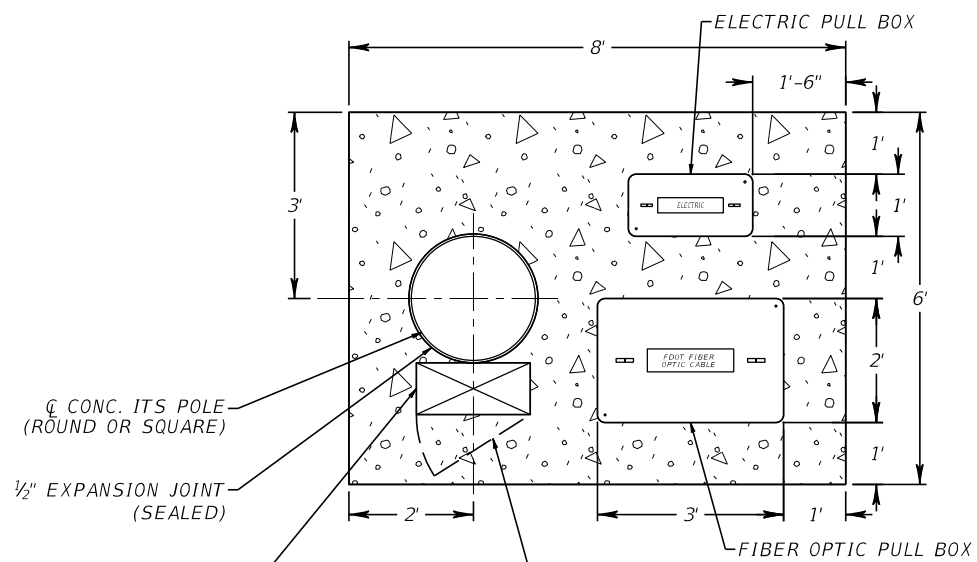
TYPICAL DMS LOCATION



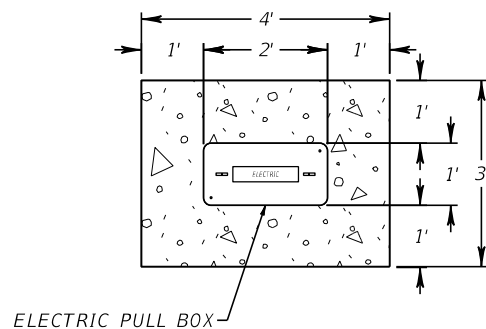
ELECTRICAL & FIBER OPTIC PULL BOXES



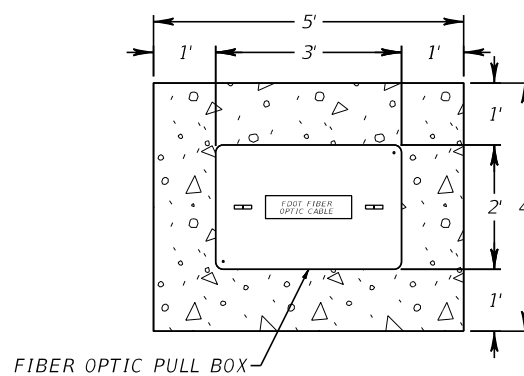
FIBER OPTIC SPLICE BOX



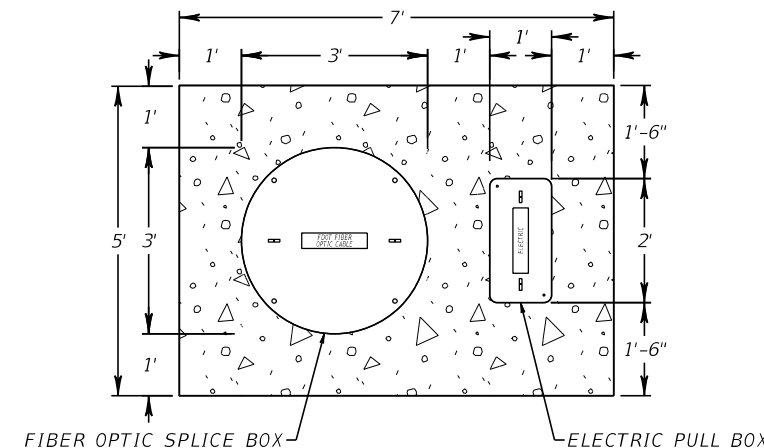
TYPICAL MVDS POLE



ELECTRICAL PULL BOX



FIBER OPTIC PULL BOX



FIBER OPTIC SPLICE BOX & ELECTRICAL PULL BOX

- NOTE:
1. CONCRETE REINFORCEMENT AND INSTALLATION REQUIREMENTS TO BE PER INDEX 17700.
 2. APRON DIMENSIONS ARE APPROXIMATE AND MAY BE MODIFIED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS.

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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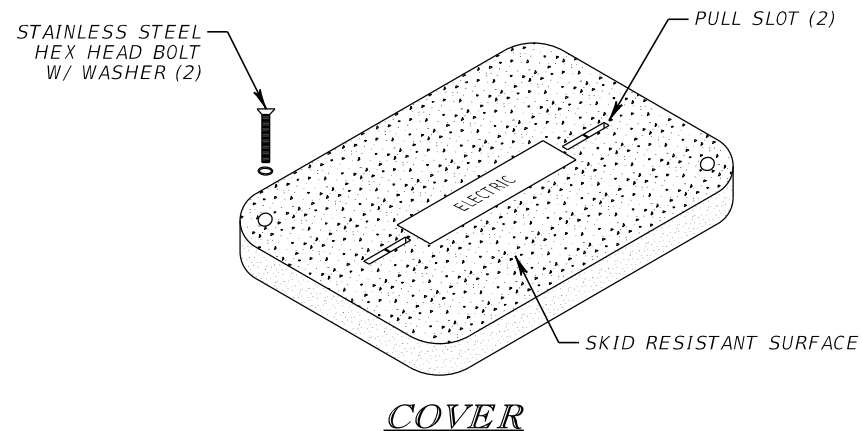
ALEXANDER TEAL MIMS, P.E. PE No. 77095
 Traffic Engineering Data Solutions, Inc.
 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
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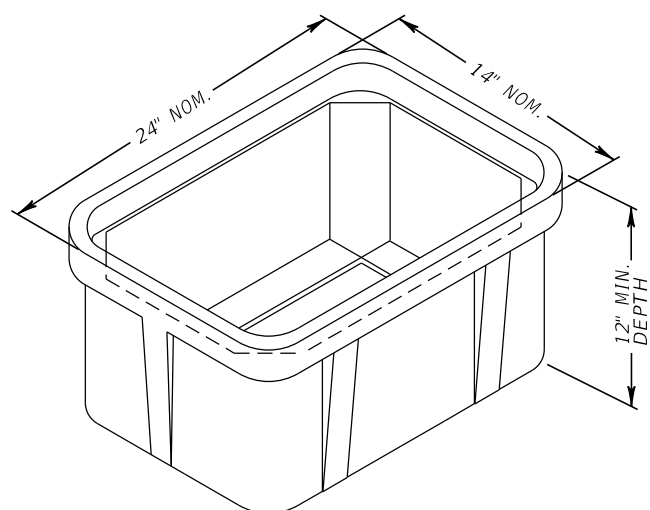
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| CONCRETE APRON DETAILS | | SHEET NO. |
| | | IT-69 |

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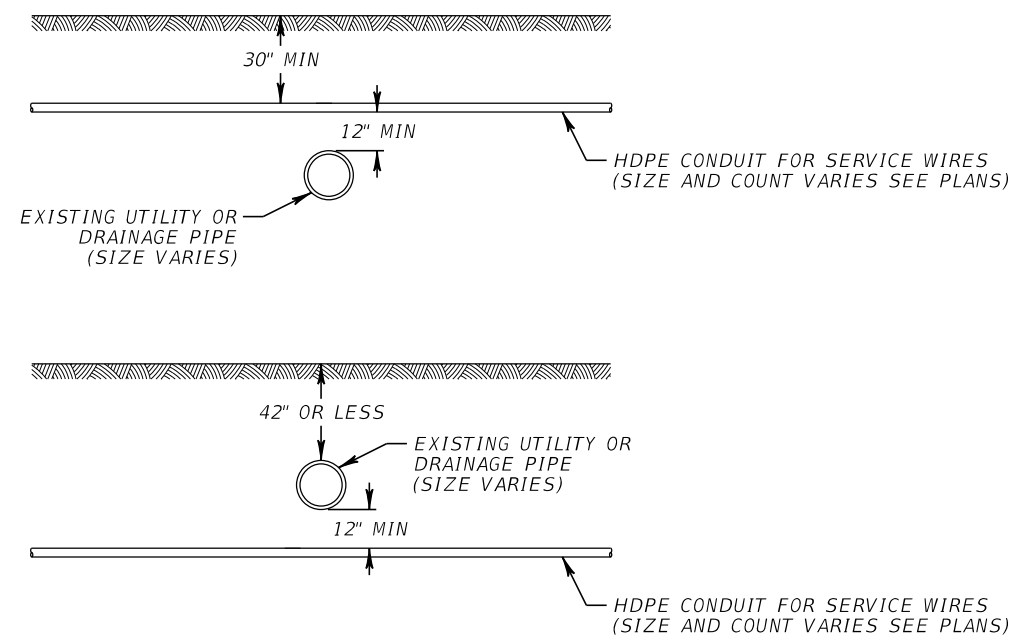
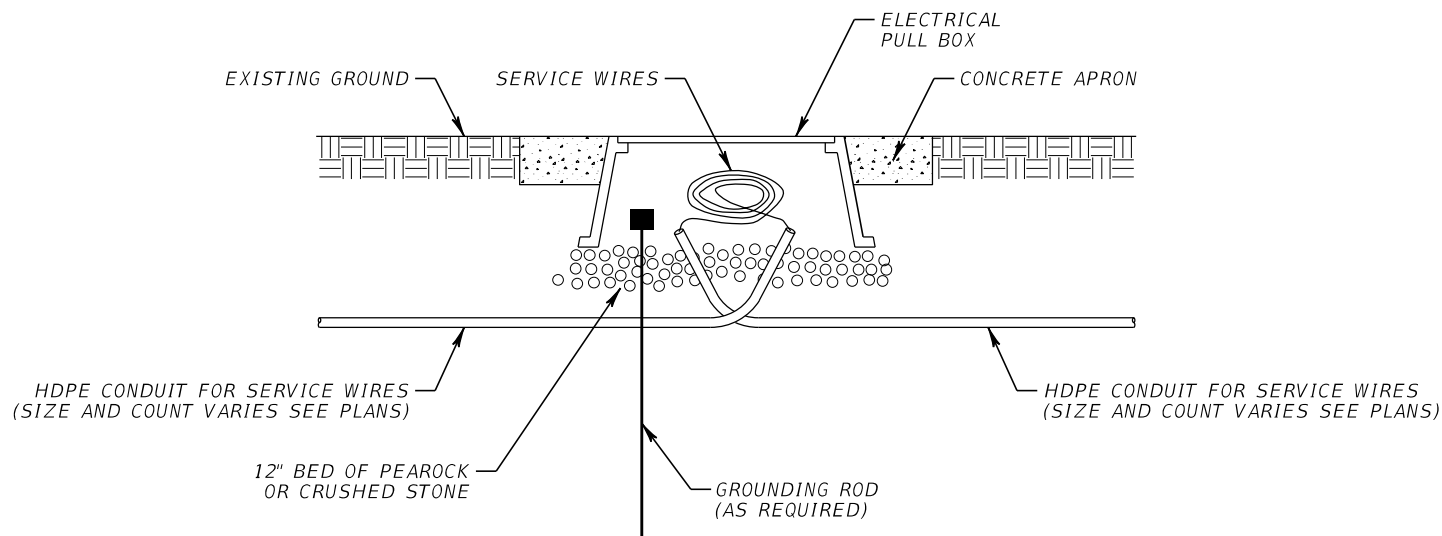
ELECTRICAL PULL BOX AND CONDUIT DETAILS
N.T.S.



COVER



BOX



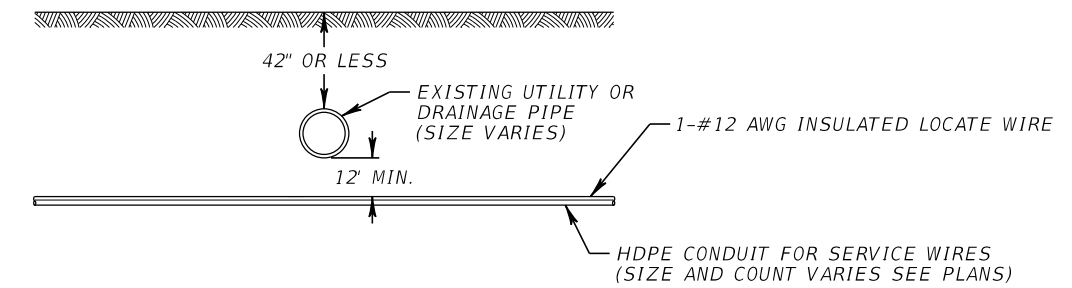
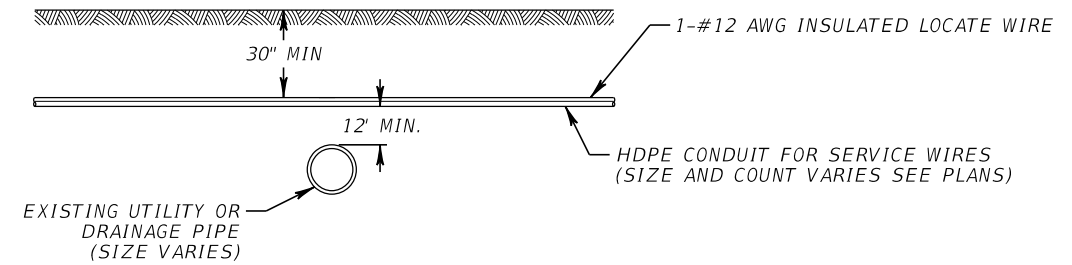
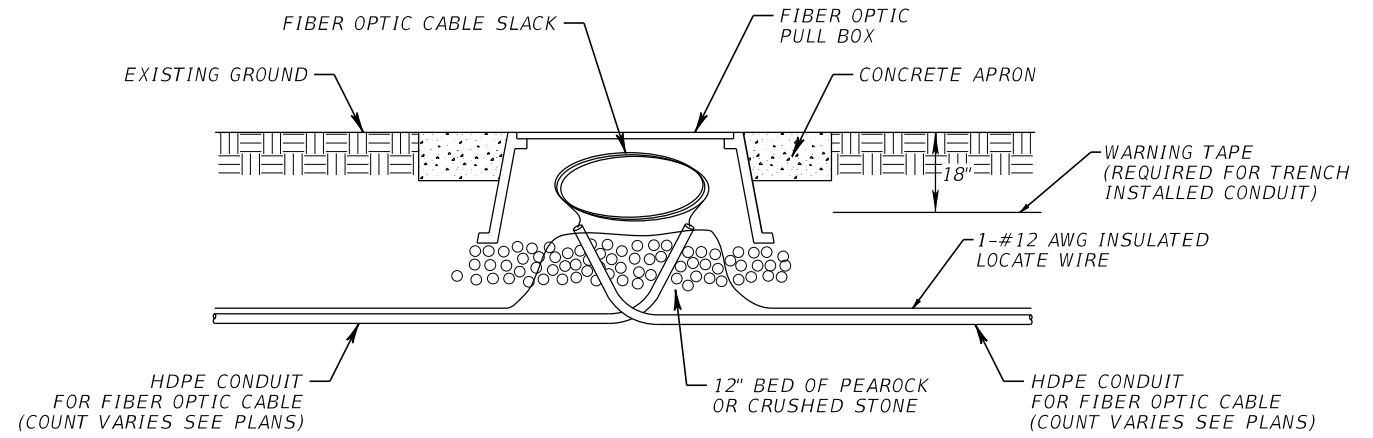
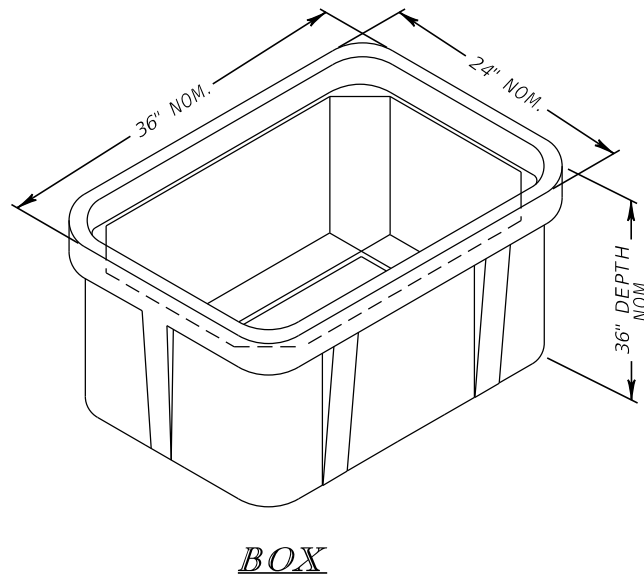
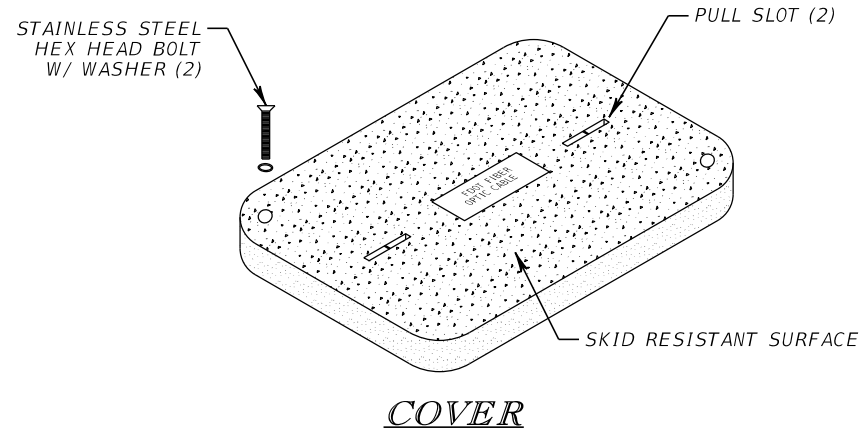
NOTES:

1. ELECTRICAL PULL BOX SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
3. ALL PULL BOXES, AND PULL BOX COVERS, SHALL BE NON-METALLIC.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | PULL BOX & CONDUIT DETAILS | SHEET NO. |
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FIBER OPTIC PULL BOX AND CONDUIT DETAILS
N.T.S.



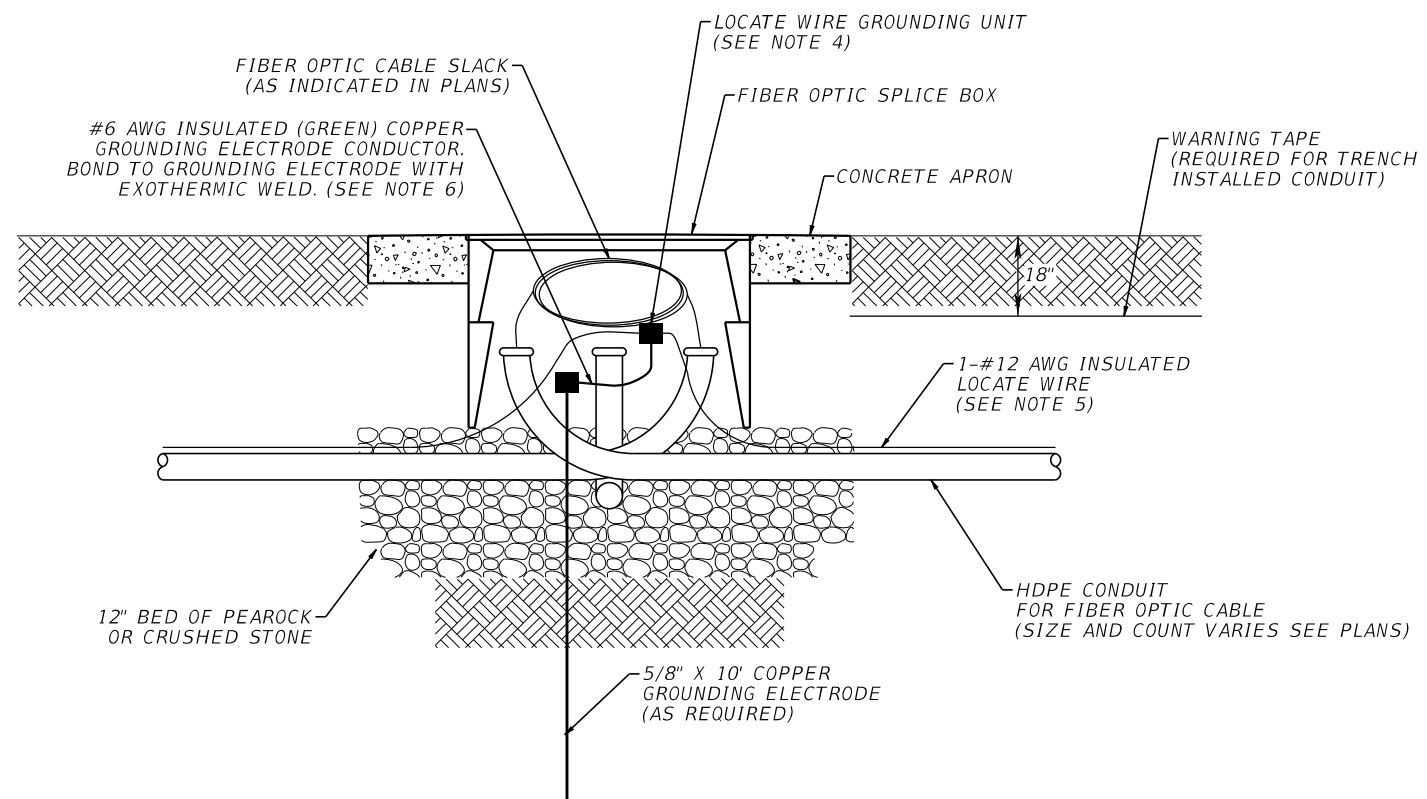
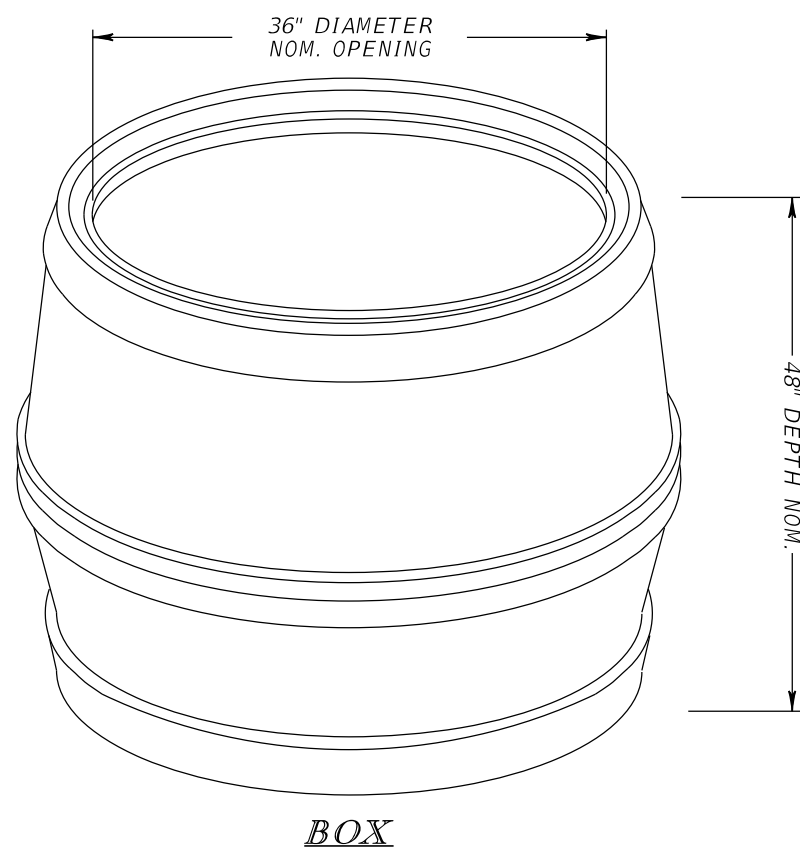
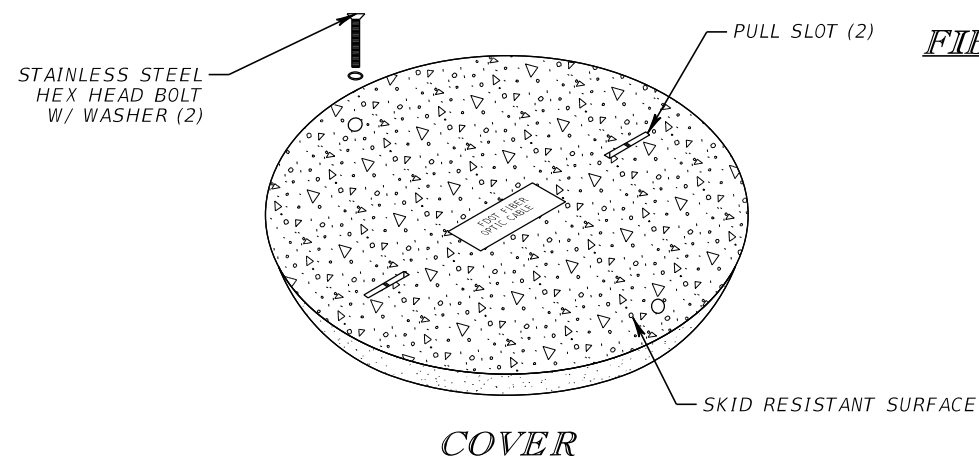
NOTES:

1. FIBER OPTIC PULL BOXES SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT \varnothing SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
3. SPARE FIBER OPTIC CABLE IS TO BE WOUND NEATLY AND CAREFULLY, AS NOT TO EXCEED THE MAX. BENDING RADIUS OF THE FIBER OPTIC CABLE.
4. LOCATE WIRE MAY BE PLACED WITHIN SPARE FIBER OPTIC CABLE CONDUIT AT CONTRACTORS OPTION. DO NOT INSTALL LOCATE WIRE IN A CONDUIT WITH FIBER OPTIC CABLE.
5. ALL PULL BOXES, AND PULL BOX COVERS, SHALL BE NON-METALLIC.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | PULL BOX & CONDUIT DETAILS | SHEET NO. IT-71 |
|-----------|-------------|------|-------------|---|--|--------|----------------------|---------------------------------------|--------------------|
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FIBER OPTIC SPLICE BOX AND CONDUIT DETAILS
N.T.S.



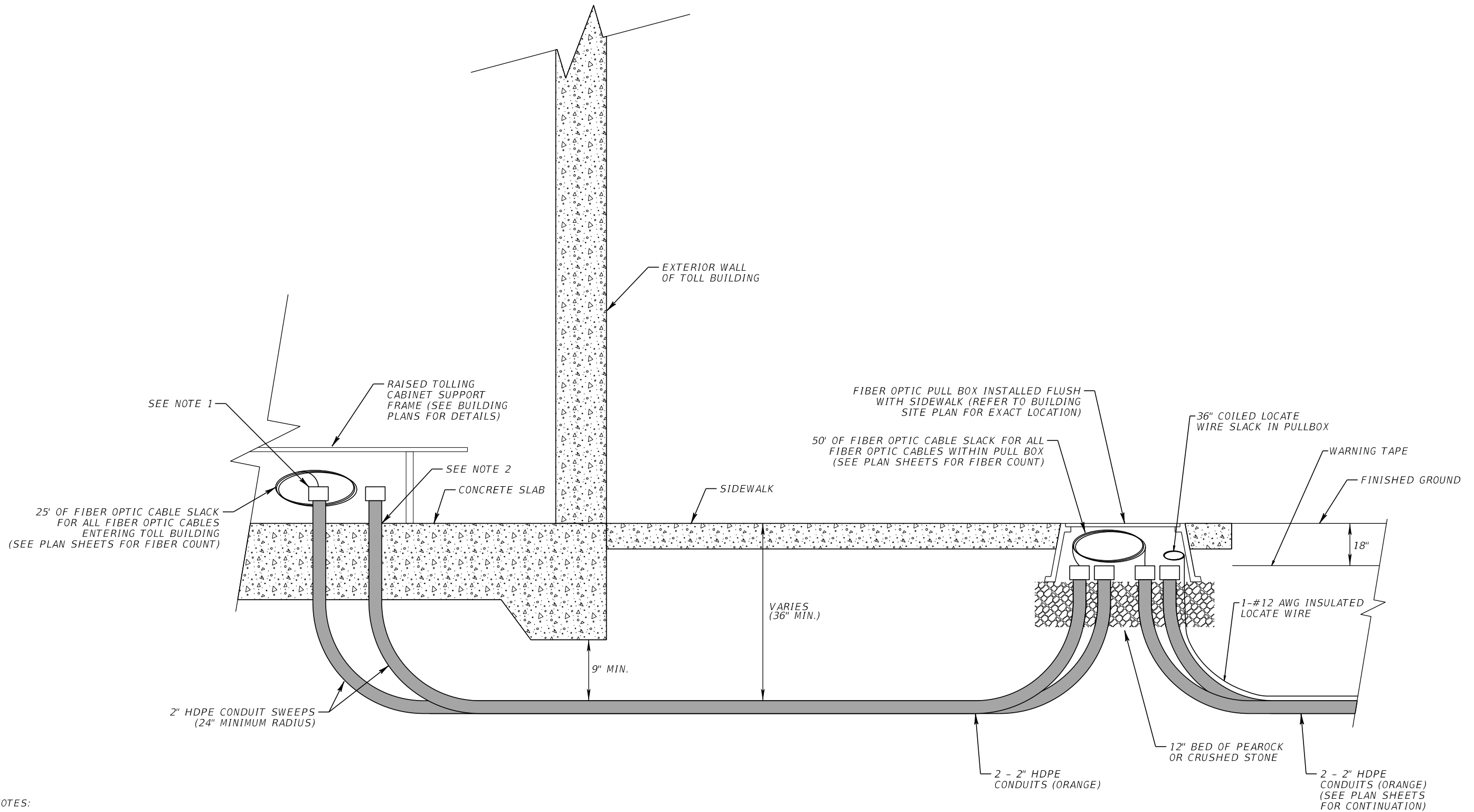
NOTES:

1. FIBER OPTIC SPLICE BOXES SHALL NOT BE INSTALLED IN ROADWAYS, DRIVEWAYS, OR SIDEWALK CURB RAMPS.
2. CONDUIT \varnothing SHALL BE ALIGNED TO TOP EDGE OF SPLICE BOX TO FACILITATE CABLE PULLING.
3. SPARE FIBER OPTIC CABLE IS TO BE WOUND NEATLY AND CAREFULLY, AS NOT TO EXCEED THE MAXIMUM BENDING RADIUS OF THE FIBER OPTIC CABLE. NEATLY STORE ALL SPLICE ENCLOSURES WITHIN A SPLICE BOX. ATTACH THE SPLICE ENCLOSURE TO THE SPLICE BOX INTERIOR WALL TO PREVENT THE ENCLOSURE FROM LYING ON THE BOTTOM OF THE SPLICE BOX.
4. WIRE GROUNDING UNIT REQUIRED, AT A MINIMUM, WITHIN EVERY FIBER OPTIC SPLICE BOX FOR THE LENGTH OF THE PROJECT AND AT LOCATE WIRE TERMINI. MOUNT WIRE GROUNDING UNIT TO INTERIOR WALL OF FIBER OPTIC SPLICE BOX.
5. LOCATE WIRE MAY BE PLACED WITHIN SPARE FIBER OPTIC CABLE CONDUIT AT CONTRACTORS OPTION. DO NOT INSTALL LOCATE WIRE IN A CONDUIT WITH FIBER OPTIC CABLE.
6. ALL SPLICE BOXES, AND SPLICE BOX COVERS, SHALL BE NON-METALLIC.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. IT-72 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|---------------------------|
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TOLLING BUILDING TYPICAL CONDUIT ENTRY DETAIL
N.T.S.

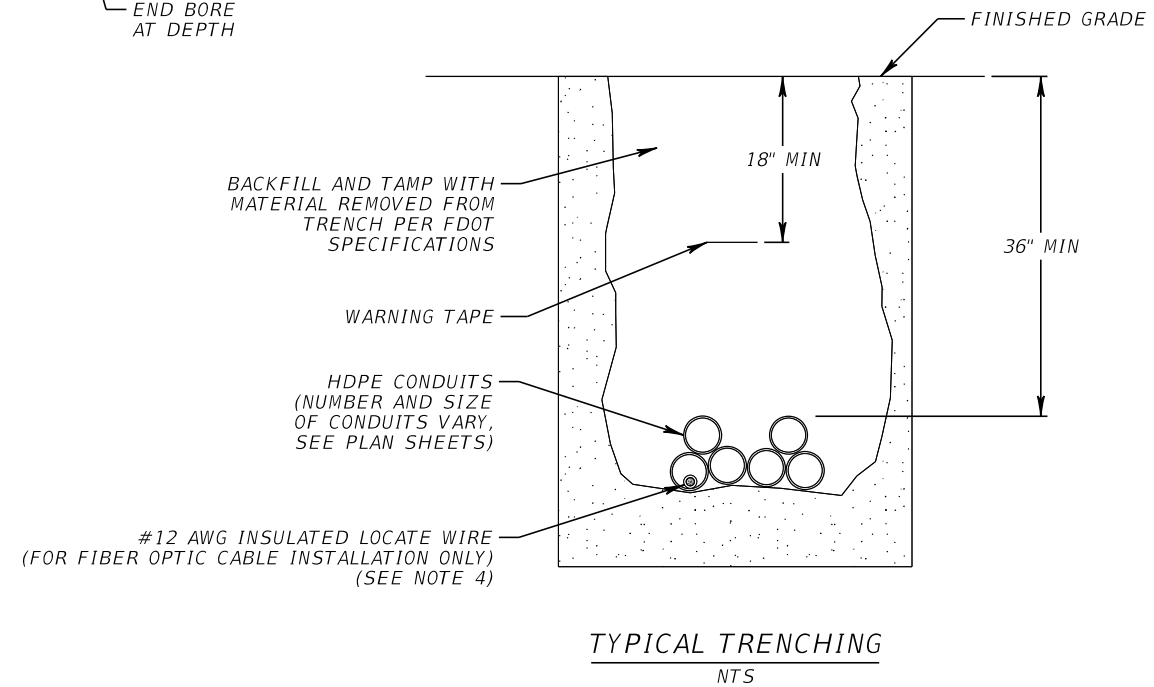
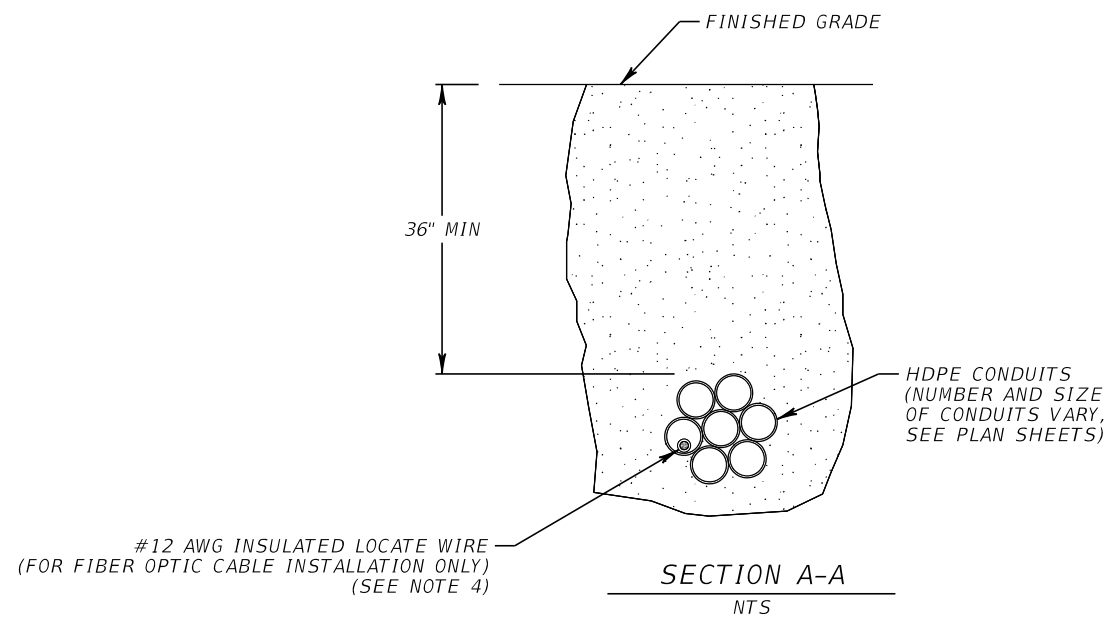
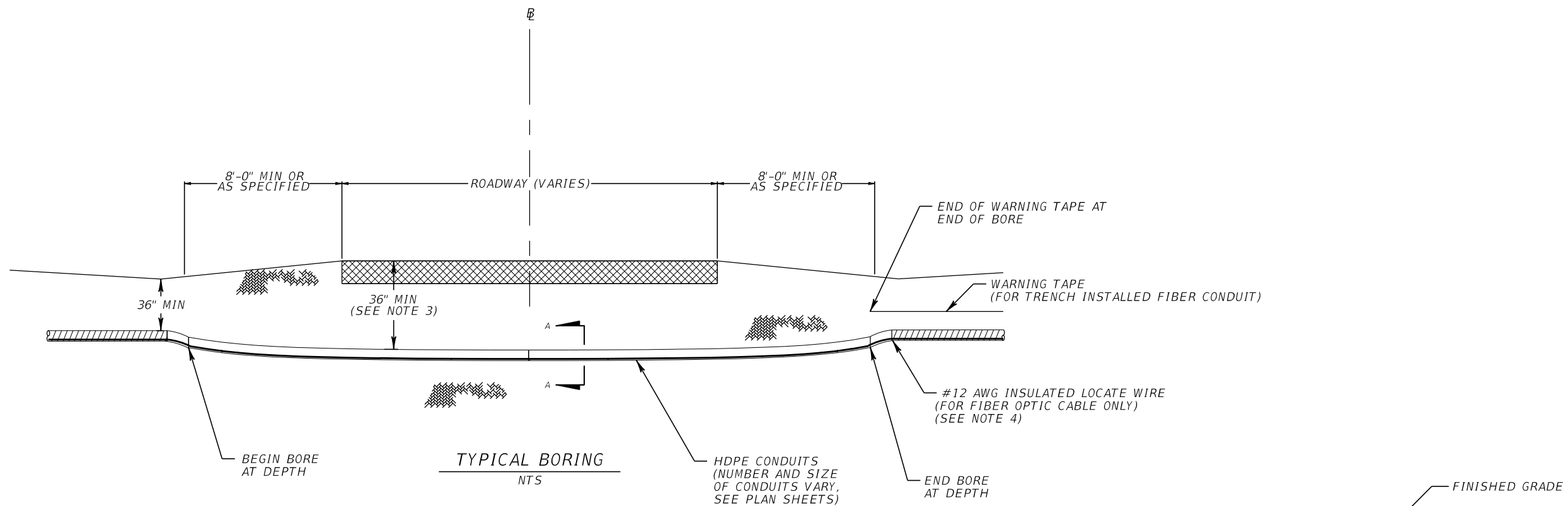


NOTES:

1. STUB CONDUITS 6" ABOVE SLAB AND INSTALL CONDUIT DUCT PLUGS TO CREATE WATERTIGHT SEAL AROUND FIBER OPTIC CABLES AND IN SPARE CONDUITS AS APPLICABLE.
2. ALL CONCRETE PENETRATIONS AROUND CONDUITS SHALL BE WATERPROOF.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | PULL BOX & CONDUIT DETAILS | SHEET NO. IT-73 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|----------------------------|--------------------|
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NOTES:

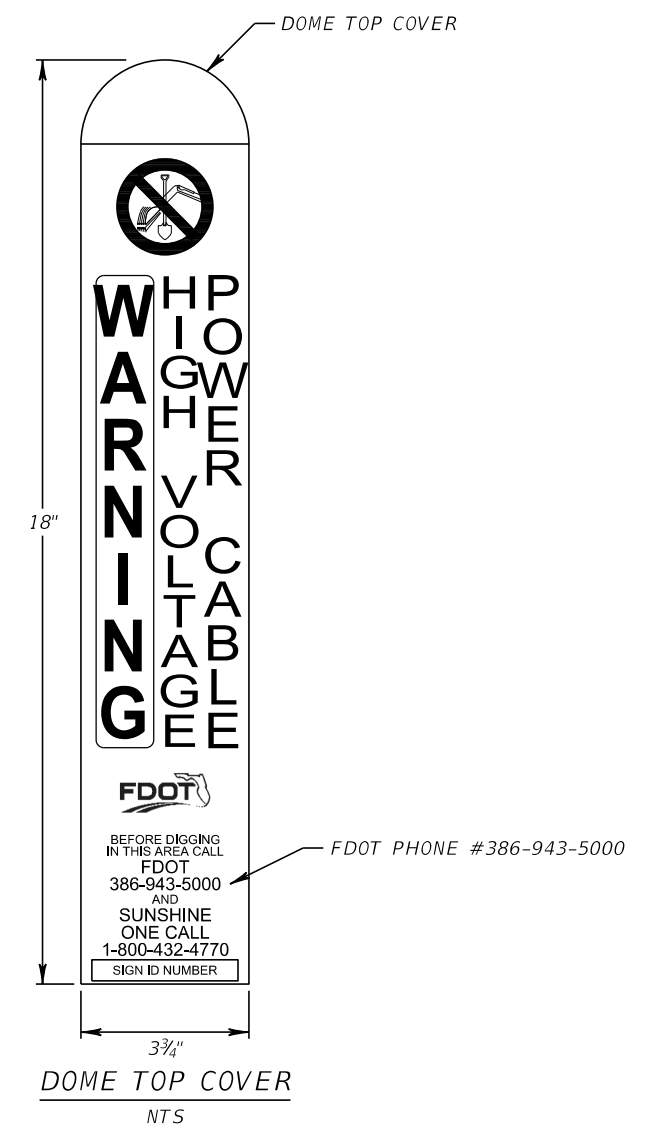
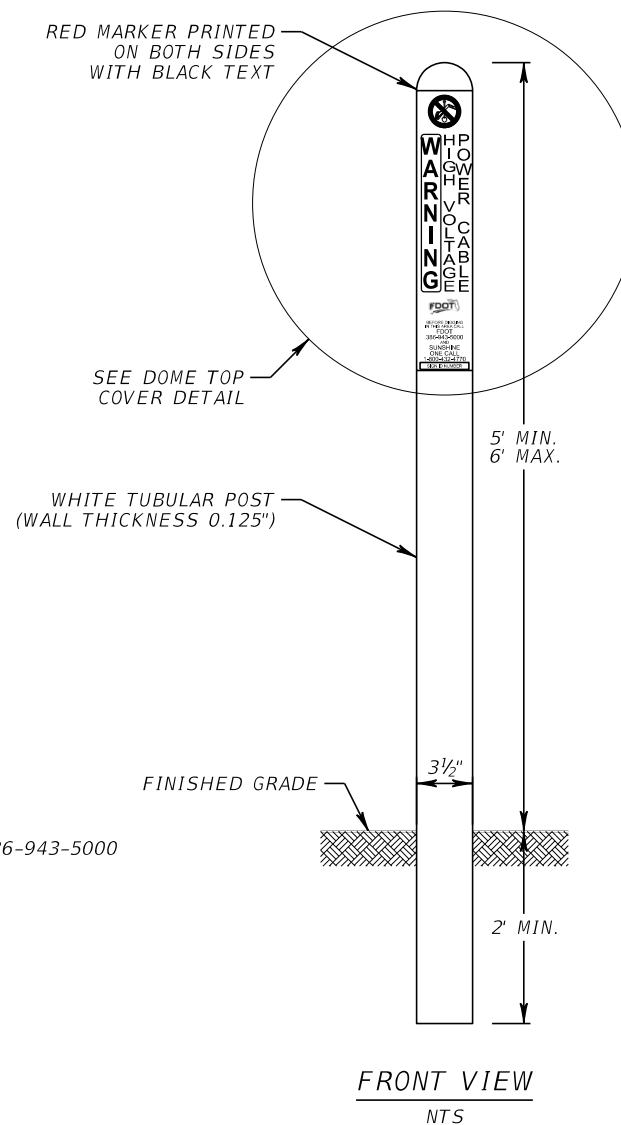
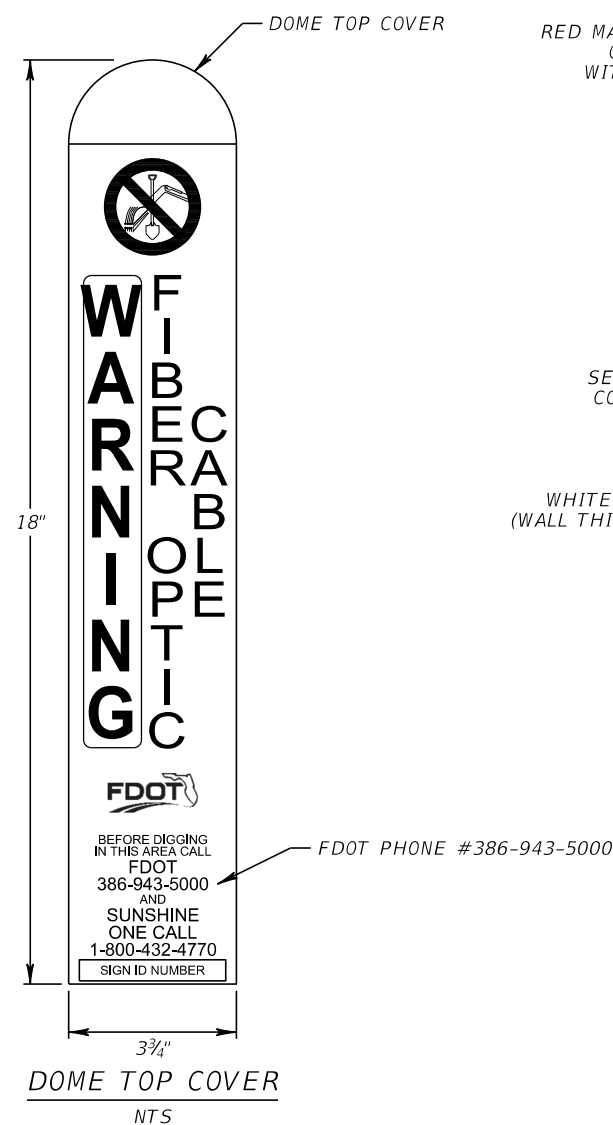
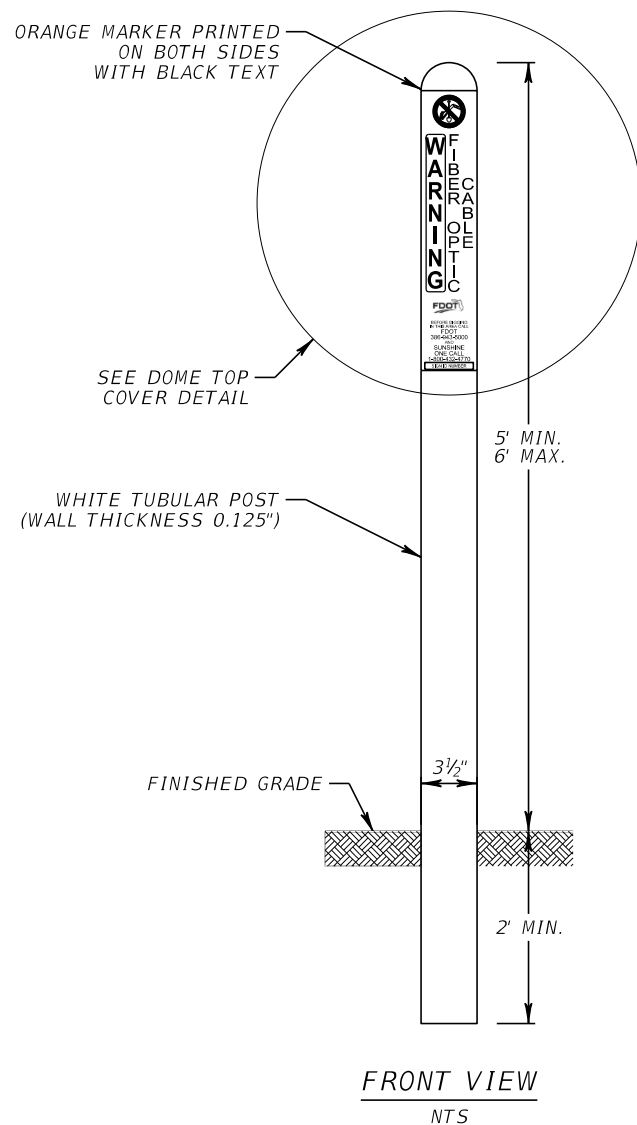
1. UTILITIES IN THE PATH OF THE BORE SHALL BE LOCATED AND THE DEPTH OF THE BORE CROSSING SHALL BE ADJUSTED TO CROSS UNDER OR OVER THE UTILITIES WITH 12" MINIMUM SEPARATION; MINIMUM HORIZONTAL DEPTH, AS INDICATED ON THIS SHEET, SHALL BE MAINTAINED.
2. HORIZONTAL DEPTH SHALL BE IN ACCORDANCE WITH FDOT UTILITY ACCOMODATION MANUAL.
3. MINIMUM DEPTH SHALL BE TEN (10) TIMES THE REAMER DIAMETER FOR REAMER SIZES GREATER THAN 8".
4. LOCATE WIRE MAY BE DIRECTLY BURIED ABOVE FIBER OPTIC CABLE CONDUIT, OR PLACED WITHIN SPARE CONDUIT AT CONTRACTORS OPTION. IF DIRECTLY BURIED, LOCATE WIRE SHALL BE PLACED NO FURTHER THAN 3" ABOVE THE TOP OF THE PROPOSED FIBER OPTIC CABLE CONDUIT.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | DIRECTIONAL BORE AND TRENCHING DETAIL | SHEET NO. |
|-----------|-------------|------|-------------|---|--|--------|----------------------|--|----------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | | SR 429 | SEMINOLE | | 240200-2-52-01 |

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FIBER OPTIC CABLE ROUTE MARKER

ELECTRICAL CABLE ROUTE MARKER



NOTES:

1. IN INSTANCES WHERE FIBER AND POWER CONDUITS ARE INSTALLED IN-LINE (ADJACENT TO OR ON TOP OF EACH OTHER), THE MARKERS SHALL ALTERNATE BETWEEN FIBER AND HIGH VOLTAGE POWER.
2. A DOME TOP COVER SHALL BE INSTALLED ON EACH MARKER: ORANGE FOR FIBER AND RED FOR POWER.
3. POST EMBEDMENT AND ANCHORING SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS.

| REVISIONS | | | | ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392 | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | ROUTE MARKER DETAILS | SHEET NO. IT-75 |
|-----------|-------------|------|-------------|---|--|----------|----------------------|-------------------------|---------------------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | |
| | | | | | SR 429 | SEMINOLE | 240200-2-52-01 | | |

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