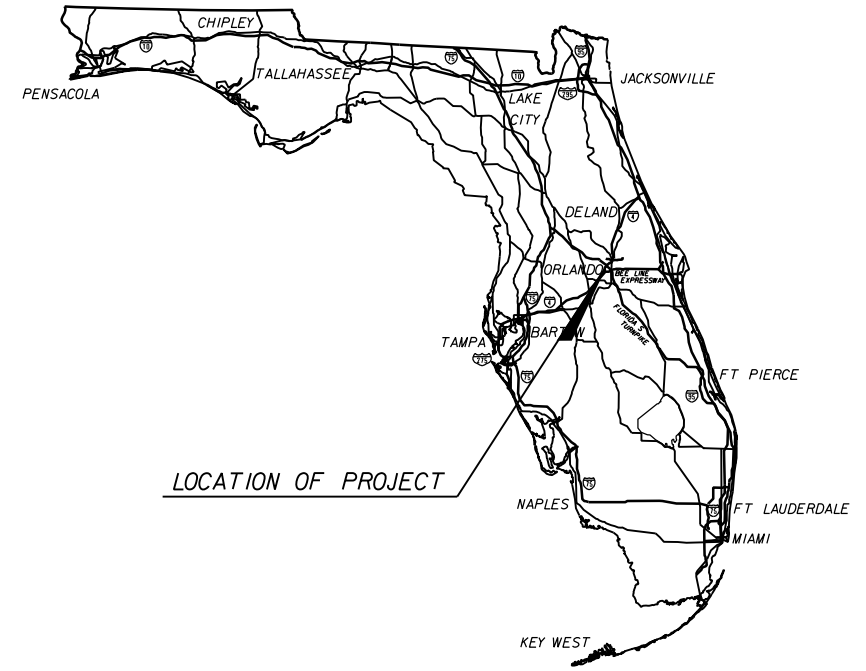


CITY OF WINTER PARK, FLORIDA

CONTRACT PLANS

FAIRBANKS AVENUE (S.R. 426)
 FROM I-4 TO US 17-92
 FPID 423353-1-58-01
 ORANGE COUNTY (75006)

LIGHTING PLANS



INDEX OF LIGHTING PLANS

| SHEET NO. | SHEET DESCRIPTION |
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| L-4 | POLE DATA AND LEGEND |
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| L-7 - L-16 | LIGHTING PLANS |
| L-17 | SPECIAL POLE DETAIL |
| L-18 | DECORATIVE LIGHT POLE FOUNDATION |

LIGHTING SHOP DRAWINGS
 TO BE SUBMITTED TO:
 DEEANGELA R. TJIKUENI, P.E.
 CH2M HILL
 225 E. ROBINSON ST.
 SUITE 505
 ORLANDO, FLORIDA 32801
 (407) 423-0030

PLANS PREPARED BY:
CH2MHILL
 225 E. ROBINSON ST.
 SUITE 505
 ORLANDO, FLORIDA 32801
 (407) 423-0030

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

90% PLANS
 MAY 2011

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

LIGHTING PLANS
 ENGINEER OF RECORD: DEEANGELA R. TJIKUENI
 P.E. NO.: 68301

| FISCAL YEAR | SHEET NO. |
|-------------|-----------|
| 2011 | L-1 |

CITY PROJECT MANAGER: DAVID L. ZUSI, P.E. FDOT PROJECT MANAGER: TUSHAR PATEL

TABULATION OF QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS | | | | | | | | | | | | | | | | | | | | TOTAL THIS SHEET | | GRAND TOTAL | | REF. SHEET |
|--------------|--|------|---------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------------------|-------|-------------|-------|------------|
| | | | L-7 | | L-8 | | L-9 | | L-10 | | L-11 | | L-12 | | L-13 | | L-14 | | L-15 | | L-16 | | PLAN | FINAL | PLAN | FINAL | |
| | | | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | | | | | |
| 555-1-1 | DIRECTIONAL BORE (LESS THAN 6') | LF | 81 | | 562 | | 564 | | 485 | | 523 | | 563 | | 441 | | 539 | | 642 | | 319 | | 4719 | | 4719 | | |
| 715-1-12 | LIGHTING - CONDUCTORS (FURNISH & INSTALL) (NO. 6) | LF | 243 | | 1686 | | 1692 | | 1455 | | 1569 | | 1689 | | 1323 | | 1617 | | 1926 | | 957 | | 14,457 | | 14,457 | | |
| 715-2-11 | LIGHTING CONDUIT (FURNISH & INSTALL) UNDERGROUND | LF | 81 | | 562 | | 564 | | 485 | | 523 | | 563 | | 441 | | 539 | | 642 | | 319 | | 4719 | | 4719 | | |
| 715-7-11 | LOAD CENTER (FURNISH & INSTALL) (SECONDARY VOLTAGE) | EA | | | 1 | | | | | | 1 | | | | | | | | 1 | | | 3 | | 3 | | | |
| 715-11-500 | LUMINAIRE, REMOVE | EA | | | | | | | | | | | | | | | | | 2 | | 2 | 4 | | 4 | | | |
| 715-14-11 | LIGHTING - PULL BOX (FURNISH & INSTALL) (ROADSIDE) | EA | | | 1 | | | | | | | | | | | | | | | | | 1 | | 1 | | | |
| 715-14-12 | LIGHTING - PULL BOX (FURNISH & INSTALL) (SIDEWALK) | EA | 1 | | 6 | | 2 | | | | 3 | | 5 | | 1 | | 4 | | 7 | | | 29 | | 29 | | | |
| 715-511-230* | LIGHT POLE COMPLETE, SPECIAL DESIGN (FURNISH & INSTALL) (SINGLE ARM SHOULDER MOUNT) (GALVANIZED STEELX30' HEIGHT AND 8' ARM) | EA | 1 | | 5 | | 5 | | 5 | | 5 | | 6 | | 4 | | 5 | | 5 | | 3 | 44 | | 44 | | | |

PAY ITEM NOTES:

1. * POLE 27, ON SHEET L-12 TO HAVE 8' CONCRETE FOUNDATION AS SHOWN IN FDOT STANDARD INDEX I7515, SHEET 4 OF 8. ALL OTHER POLE FOUNDATIONS TO BE AS SHOWN ON SHEET L-18.
2. PAY ITEM NUMBER 555-1-1 SHALL INCLUDE DIRECTION BORE ONLY. ALL CONDUIT TO BE PAID FOR UNDER PAY ITEM 715-2-11.

| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | TABULATION OF QUANTITIES | SHEET NO. L-2 |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|--------------------------|----------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | | |

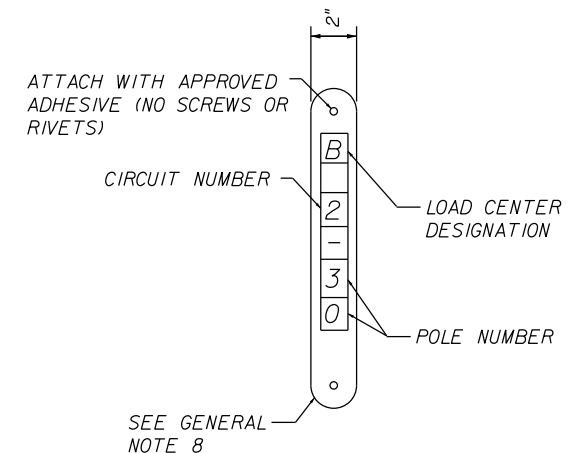
GENERAL NOTES

- 1) PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT TO THE EOR FOR REVIEW SHOP DRAWINGS AND DESIGN CALCULATIONS FOR THE PROPOSED LUMINAIRE, DECORATIVE ARM, DECORATIVE POLE AND FOUNDATION.
- 2) UTILITY OWNERS:
UTILITY CONTACTS LISTED ON THE ROADWAY PLAN GENERAL NOTES SHEET.
- 3) SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUT SHOWING HORIZONTAL FOOTCANDLE LEVELS TO BE OBTAINED USING THE SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION THE CONTRACTOR SHALL VERIFY THE HORIZONTAL FOOTCANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER.
- 4) ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), THE NATIONAL ELECTRICAL SAFETY CODE (N.E.S.C.) AND THE STATE OF FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
- 5) IN ACCORDANCE WITH N.E.C. IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANHOLE FOR EACH POLE.
- 6) PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURE'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED.
- 7) CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
- 8) FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHTING STANDARD. TAGS SHALL BE 2"x8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND, ATTACHED WITH APPROVED ADHESIVE (NO SCREWS OR RIVETS). CONTACT MAINTAINING AGENCY REGARDING POLE SEQUENCING NAME AND NUMBER. COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE. TAG SHALL BE PLACED 5 FEET ABOVE GRADE. LETTERING ON THE TAGS SHALL BE AT LEAST 1/2" IN HEIGHT AND WRITTEN WITH A MINIMUM 1/8" WIDE PENSTROKE. SCRIBING THE NUMBERS WITH ANY TYPE OF ENGRAVING TOOL SHALL NOT BE ACCEPTABLE.
- 9) CONTRACTOR SHALL USE THE CONCRETE FOUNDATION SHOWN ON SHEET L-18 FOR THIS PROJECT UNLESS OTHERWISE NOTED IN THE PLANS.
- 10) ALL CONDUITS UNDER ROADWAY (AND/OR SIDEWALK) SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE), EXCEPT WHERE OTHERWISE SPECIFIED IN THE PLANS.
- 11) AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO THE LIGHTING POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.
- 12) ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OF WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CAN NOT BE BACKFILLED IN THE SAME DAY/NIGHT OPERATION.
- 13) ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER.
- 14) THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING THE CONSTRUCTION OPERATION.
- 15) THE LIGHTING SYSTEM WILL BE MAINTAINED BY CITY OF WINTER PARK UPON FINAL ACCEPTANCE.
- 16) WHEN THE SOIL IS EXPOSED, THE CONTRACTOR SHALL PREPARE TEMPORARY STABILIZATION AS SOON AS PRACTICABLE, BUT IN NO CASE SHALL THE TIME BE GREATER THAN SEVEN (7) CALENDAR DAYS.
- 17) ALL PULL BOX METAL COVERS SHALL BE MARKED "STREET LIGHTING" AND SHALL BE PROVIDED WITH A GROUND LUG.
- 18) CONDUIT MUST BE PLACED WITHIN THE RIGHT-OF-WAY AND SHALL BE ADJUSTED TO FIT AROUND THE EXISTING AND PROPOSED UTILITIES, FDOT SIGNAL AND COMMUNICATION. WHERE PLANNED LOCATION OF LIGHTING CONDUIT RUNS 30" UNDER PAVEMENT IS FOUND TO CONFLICT WITH UNDERGROUND UTILITIES, THE LIGHTING CONDUIT POSITION SHALL BE ALTERED VERTICALLY OR HORIZONTALLY TO AVOID THE CONFLICT AS RECOMMENDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. A 24" ABSOLUTE MINIMUM DEPTH SHALL BE MAINTAINED WHERE LIGHTING CONDUITS ARE RELOCATED CLOSER THAN 30" BELOW THE GROUND SURFACE AND SHALL BE PLACED IN AN ADDITIONAL 3" PVC SLEEVE OR BACKFILLED WITH A MINIMUM OF 4"x4" OF CONCRETE. COST OF SUCH TREATMENT WILL BE INCIDENTAL TO PAY ITEMS PROVIDED.
- 19) PREPARE ACCURATELY DIMENSIONED "AS-BUILT" PLANS OF THE FINAL POLE, LOAD CENTER CABINET, PULL BOXES, CABLE AND CONDUIT LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED. UPON FINAL ACCEPTANCE OF THE PROJECT, FORWARD A COMPLETE SET OF AS-BUILT PLANS WITH ALL CHANGES MARKED IN RED TO THE ATTENTION OF: TROY ATTAWAY, P.E., CITY OF WINTER PARK, ENGINEERING DIVISION, 401 PARK AVENUE SOUTH, WINTER PARK, FLORIDA 32789
- 20) ALL SPLICES SHALL BE MADE IN PULL BOXES ONLY WITH COMPRESSION SLEEVES OR SPUT BOLT CONNECTORS, PROPERLY TAPED AND WATERPROOFED.
- 21) SPLICES AND CONNECTIONS MADE IN PULL BOXES SHALL BE LIMITED TO THE SERVICE POINT AND CONDUIT JUNCTION WITH MULTI-DIRECTIONAL CONDUITS AS INDICATED ON PLANS. THE CONNECTION MADE AT THESE POINTS SHOULD BE PROPERLY TAPED AND HEAT SHRINK TUBES OR CAPS SHALL BE USED TO WATERPROOF THESE CONNECTIONS.
- 22) INSPECT ALIGNMENT OF EACH INDIVIDUAL POLE AND FIXTURE AS FOLLOWS:

POLE ALIGNMENTS: WITHIN ONE HALF DEGREE ON VERTICAL +/- . CONFIRM VERTICAL ALIGNMENT. VIEWING FROM ADJACENT SERIES OF POLES. IN BOTH DIRECTIONS.

FIXTURE ALIGNMENT: WITHIN ONE DEGREE OF HORIZONTAL +/- . USING CALIBRATED LEVEL ALONG BOTH AXES OF CUT-OFF FIXTURE FACE. WITH LENS ONLY: NO FIXTURE REFRACTOR SHALL BE USED
- 23) ALL CONDUITS SHALL BE MANDREL TESTED AND CLEANED. CONDUITS PLACED FOR FUTURE USE SHALL HAVE POLYESTER CORD PULLED IN PLACE AND CAPPED. WITH NOTATION INSIDE CONDUIT AS TO LOCATION OF OPPOSITE END. PLACE DUCT MARKER OR PULL BOXES TO MARK ENDS OF EMPTY CONDUITS.
- 24) ALTHOUGH EXISTING UTILITIES ARE SHOWN ON THE PLAN SHEETS, ADDITIONAL UNDERGROUND UTILITIES MAY EXIST. BEFORE EXCAVATING CONTRACTOR SHALL TAKE RESPONSIBILITY FOR NOTIFYING THE UTILITY COMPANY OWNER(S) AND REQUEST THEM TO LOCATE AND STAKE THEIR UNDERGROUND FACILITIES. UTILITIES ARE TO BE ADJUSTED BY OTHERS AS DIRECTED BY THE ENGINEER.
- 25) PROVIDE NOTICE TO THE UTILITY OWNER(S) PER FLORIDA STATUTE 556 (2006). THIS STATUTE REQUIRES THAT BEFORE EXCAVATION, NOTICE BE GIVEN TO THE SUNSHINE STATE ONE-CALL OF FLORIDA, INC. (SSOCOF) A MINIMUM OF TWO (2) FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION, EXCLUDING SATURDAY, SUNDAY, AND LEGAL HOLIDAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF SSOCOF 1-800-432-4770.
- 26) THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS, FDOT SIGNAL AND COMMUNICATION SYSTEMS.
- 27) THE CONTRACTOR SHALL NOTIFY THE AFFECTED POWER COMPANIES (CITY OF WINTER PARK AND PROGRESS ENERGY) AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN 10 FEET OF ENERGIZED ELECTRICAL CONDUCTORS. THE AFFECTED POWER COMPANIES, AT ITS OPTION, SHALL ASSIST THE CONTRACTOR, COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITE, OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.
- 28) ALL EXISTING LIGHTING SHALL REMAIN IN PLACE AND OPERATIONAL UNTIL PROPOSED LIGHTING IS CONSTRUCTED AND OPERATIONAL. IN ALL CASES MAINTAIN EXISTING LIGHTING LEVELS (AT NIGHT) AS A MINIMUM DURING ALL PHASES OF CONSTRUCTION.
- 29) DIRECTIONAL BORINGS SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 555 AND 556 OF THE FDOT STANDARD SPECIFICATIONS.
- 30) THE CONTRACTOR SHALL VERIFY POLE LENGTHS REQUIRED PER THE ROADWAY CROSS SECTIONS AND OFFSETS IN ORDER TO ACHIEVE THE PROPER MOUNTING HEIGHT FOR EACH LUMINAIRE. THIS VERIFICATION SHALL OCCUR PRIOR TO THE SUBMISSION OF SHOP DRAWINGS. MOUNTING HEIGHTS ARE DETERMINED FROM THE BOTTOM OF THE LUMINAIRE HOUSING VERTICALLY TO PAVEMENT GRADE.
- 31) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EXISTING LIGHTING SYSTEM IN SERVICE UNTIL PROPOSED LIGHTING IS OPERATIONAL WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT. THIS WILL INCLUDE BUT IS NOT LIMITED TO THE ROUTINE MAINTENANCE AND/OR ANY DAMAGE BY THE CONTRACTOR AND/OR SUBCONTRACTOR TO POLES, BRACKET ARMS, LUMINAIRES, LAMPS, CONDUIT CONDUCTORS, PULL BOXES, POWER SOURCES, AND ALL NECESSARY APPURTENANCES. NOT MORE THAN 10% OF THE LIGHTS SHOULD BE OUT IN ONE CIRCUIT.
- 32) PULL BOXES AND LOAD CENTER GROUND MOUNT CABINETS SHALL NOT BE INSTALLED WITHIN ANY DITCHES OR AREAS THAT MAY CAUSE WATER INTRUSION.
- 33) CONTRACTOR SHALL ENSURE THAT AN UNOBSTRUCTED SIDEWALK WIDTH OF 4 FEET IS MAINTAINED AT ALL TIMES, AND ENSURE THAT A CONTINUOUS 3 FEET OF THAT WIDTH IS LEVEL (2.0% OR FLATTER) TO MEET ADA CRITERIA.

POLE IDENTIFICATION TAG DETAIL



| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|-----------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | |
| | | | | | | | | | L-3 | |

POLE DATA

| POLE NO. | CIRCUIT | STATION | ARM LENGTH | SIDE | LUMINAIRE WATTAGE | MOUNTING HEIGHT | POLE SETBACK | PAY ITEM |
|----------|---------|-----------|------------|------|-------------------|-----------------|--------------|-------------|
| 1 | A-1 | 104+20.00 | 8' | LEFT | 250 | 30' | 53.96' | 715-511-230 |
| 2 | A-1 | 105+00.00 | 8' | LEFT | 250 | 30' | 52.42' | 715-511-230 |
| 3 | A-1 | 106+14.00 | 8' | LEFT | 250 | 30' | 40.84' | 715-511-230 |
| 4 | A-1 | 107+18.00 | 8' | LEFT | 250 | 30' | 40.84' | 715-511-230 |
| 5 | A-2 | 108+60.00 | 8' | LEFT | 250 | 30' | 40.94' | 715-511-230 |
| 6 | A-2 | 109+87.00 | 8' | LEFT | 250 | 30' | 40.99' | 715-511-230 |
| 7 | A-2 | 110+96.00 | 8' | LEFT | 250 | 30' | 39.64' | 715-511-230 |
| 8 | A-2 | 112+10.00 | 8' | LEFT | 250 | 30' | 39.24' | 715-511-230 |
| 9 | A-2 | 113+29.00 | 8' | LEFT | 250 | 30' | 40.72' | 715-511-230 |
| 10 | A-2 | 114+47.00 | 8' | LEFT | 250 | 30' | 40.83' | 715-511-230 |
| 11 | A-2 | 115+90.00 | 8' | LEFT | 250 | 30' | 40.79' | 715-511-230 |
| 12 | A-2 | 117+18.00 | 8' | LEFT | 250 | 30' | 40.68' | 715-511-230 |
| 13 | A-2 | 118+08.00 | 8' | LEFT | 250 | 30' | 40.88' | 715-511-230 |
| 14 | A-2 | 118+79.00 | 8' | LEFT | 250 | 30' | 40.81' | 715-511-230 |
| 15 | A-2 | 120+07.00 | 8' | LEFT | 250 | 30' | 40.81' | 715-511-230 |
| 16 | A-2 | 121+05.00 | 8' | LEFT | 250 | 30' | 40.76' | 715-511-230 |
| 17 | B-2 | 122+13.00 | 8' | LEFT | 250 | 30' | 40.76' | 715-511-230 |
| 18 | B-2 | 123+38.00 | 8' | LEFT | 250 | 30' | 41.06' | 715-511-230 |
| 19 | B-1 | 124+54.00 | 8' | LEFT | 250 | 30' | 40.81' | 715-511-230 |
| 20 | B-1 | 125+68.00 | 8' | LEFT | 250 | 30' | 40.73' | 715-511-230 |
| 21 | B-1 | 126+74.00 | 8' | LEFT | 250 | 30' | 40.96' | 715-511-230 |
| 22 | B-1 | 127+71.00 | 8' | LEFT | 250 | 30' | 40.96' | 715-511-230 |
| 23 | B-1 | 128+85.00 | 8' | LEFT | 250 | 30' | 41.25' | 715-511-230 |
| 24 | B-1 | 129+57.00 | 8' | LEFT | 250 | 30' | 40.90' | 715-511-230 |
| 25 | B-1 | 130+58.00 | 8' | LEFT | 250 | 30' | 41.00' | 715-511-230 |
| 26 | B-1 | 131+54.00 | 8' | LEFT | 250 | 30' | 40.77' | 715-511-230 |
| 27 | B-1 | 132+89.00 | 8' | LEFT | 250 | 30' | 43.17' | 715-511-230 |
| 28 | B-1 | 134+10.00 | 8' | LEFT | 250 | 30' | 40.86' | 715-511-230 |
| 29 | B-1 | 135+21.00 | 8' | LEFT | 250 | 30' | 40.43' | 715-511-230 |
| 30 | B-1 | 136+34.00 | 8' | LEFT | 250 | 30' | 40.34' | 715-511-230 |
| 31 | B-1 | 137+40.00 | 8' | LEFT | 250 | 30' | 40.86' | 715-511-230 |
| 32 | C-1 | 138+82.00 | 8' | LEFT | 250 | 30' | 40.78' | 715-511-230 |
| 33 | C-1 | 139+90.00 | 8' | LEFT | 250 | 30' | 40.99' | 715-511-230 |
| 34 | C-1 | 140+82.00 | 8' | LEFT | 250 | 30' | 40.97' | 715-511-230 |
| 35 | C-1 | 142+04.00 | 8' | LEFT | 250 | 30' | 40.97' | 715-511-230 |
| 36 | C-1 | 143+40.00 | 8' | LEFT | 250 | 30' | 40.92' | 715-511-230 |
| 37 | C-1 | 144+46.00 | 8' | LEFT | 250 | 30' | 40.92' | 715-511-230 |
| 38 | C-1 | 145+48.00 | 8' | LEFT | 250 | 30' | 40.92' | 715-511-230 |
| 39 | C-1 | 146+58.00 | 8' | LEFT | 250 | 30' | 40.55' | 715-511-230 |
| 40 | C-1 | 147+81.00 | 8' | LEFT | 250 | 30' | 40.30' | 715-511-230 |
| 41 | C-2 | 149+01.00 | 8' | LEFT | 250 | 30' | 39.91' | 715-511-230 |
| 42 | C-2 | 150+00.00 | 8' | LEFT | 250 | 30' | 39.62' | 715-511-230 |
| 43 | C-2 | 151+57.00 | 8' | LEFT | 250 | 30' | 39.24' | 715-511-230 |
| 44 | C-2 | 152+98.00 | 8' | LEFT | 250 | 30' | 38.96' | 715-511-230 |

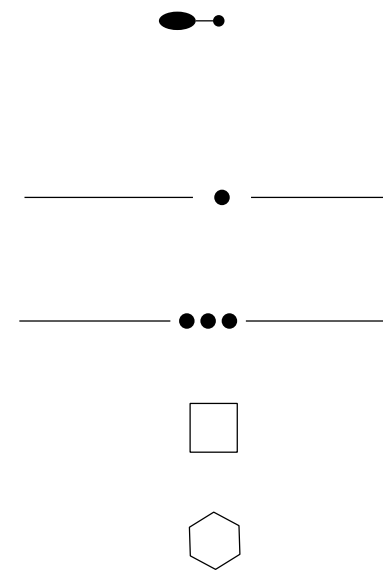
* POLE SETBACK REFERENCED FROM FAIRBANKS BASELINE OF SURVEY TO POLE CENTER

CONVENTIONAL LIGHTING DESIGN CRITERIA

AVERAGE INITIAL INTENSITY 1.0 FOOT CANDLES
 UNIFORMITY RATIO AVG./MIN. 4:1 OR LESS
 MAX./MIN. 10:1 OR LESS
 WIND SPEED 130 MPH

LEGEND

SYMBOLS



DESCRIPTION

SINGLE DECORATIVE POLE MOUNTED LUMINAIRE, 8' DECORATIVE SCROLL ARM, 30' MOUNTING HEIGHT, AND 250 WATT HIGH PRESSURE SODIUM LUMINAIRE. DESIGNED FOR MEDIUM SEMI-CUTOFF TYPE III DISTRIBUTION AND 240 VAC AT 27,500 INITIAL LUMEN OUTPUT. USE STERNBERG "1914" FIXTURE WITH HORIZONTAL LAMP, FULLY SEALED OPTICAL CHAMBER AND ACCESSIBLE BALLAST TRAY (STERNBERG CURVE NUMBER 1914A-R03SHL-250HPS) OR EQUIVALENT.

SIZE 2" SCHEDULE 40 PVC CONDUIT UNDERGROUND FOR LIGHTING.

DIRECTIONAL BORE FOR LIGHTING.

PULL BOX WITH POLYMER HEAVY DUTY TRAFFIC COVER MARKED "STREET LIGHTING".

DISTRIBUTION POINT 240 VAC, 3-WIRE, SINGLE PHASE, UNDERGROUND SERVICE, PHOTOCCELL REQUIRED. LOAD CENTER A, STA. 108+40.00, 41' LT; CKT A-1 AND A-2; LOAD CENTER B, STA. 123+43.00, 41' LT; CKT B-1 AND B-2; LOAD CENTER C, STA. 147+94.00, 40' RT; CKT C-1 AND C-2; 30 AMPS EACH, MAIN BREAKER 100 AMPS. FOR REQUIREMENTS SEE INDEX NO. 17504 OF DESIGN STANDARDS.

REVISIONS

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

Engineer of Record: DeeAngela R. Tjikueni
 P.E. License No.: 68301
CH2M HILL
 225 E. ROBINSON STREET
 SUITE 505
 ORLANDO, FL 32801-4322
 CERTIFICATE OF AUTHORIZATION NO. 000072

CITY OF WINTER PARK

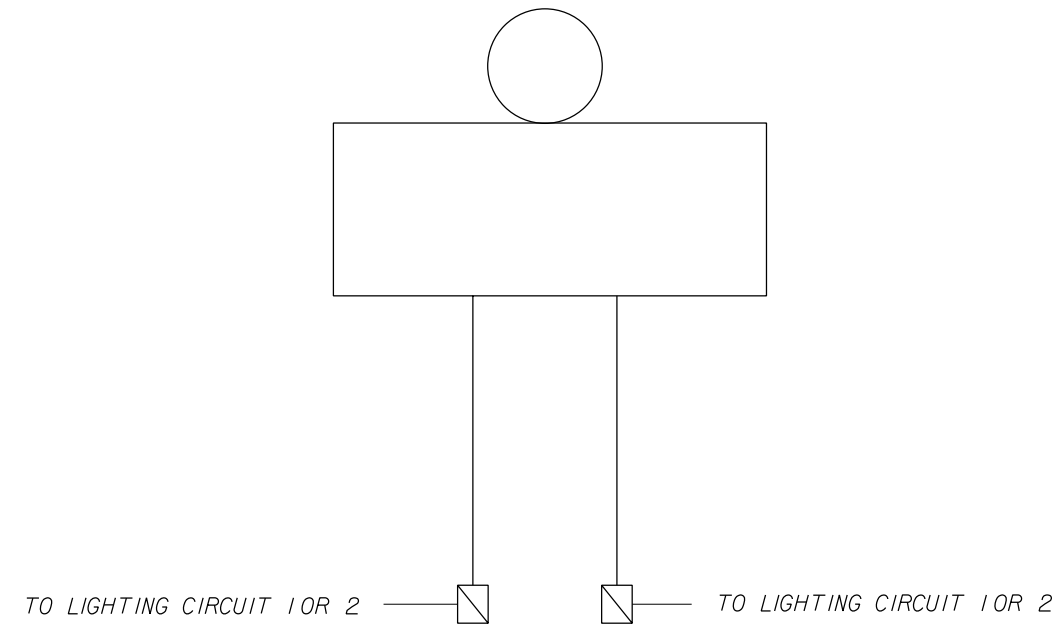
| ROAD NO. | COUNTY | CITY PROJECT NO. |
|----------|--------|------------------|
| SR 426 | ORANGE | 2010-01 |

POLE DATA AND LEGEND

SHEET NO.

L-4

| ELECTRICAL DATA | | | | | | | |
|-----------------|---------------------------|---------|--|-----------------------------|------------------|------------------|-------|
| LOAD CENTER | MAIN BREAKER (SEE NOTE 1) | | CONTACTOR | SINGLE POLE BRANCH BREAKERS | | | |
| | TRIP | FRAME | | CKT 1 | CKT 2 | CKT 3 | CKT 4 |
| A, B & C | 100 AMP | 100 AMP | ELECTRICALLY HELD 240V, 2P, 120V COIL | 30 AMP 2 POLE | 30 AMP 2 POLE | 15 AMP 2 POLE | SPARE |



LOAD CENTER 'A', 'B' AND 'C' CONDUIT/PULLBOX INSTALLATION DETAIL

NTS

LOAD CENTER SHALL HAVE 2 CONDUIT STUB OUTS AND 2 PULLBOXES
2 FOR CIRCUITS AS SHOWN

NOTES:
1. MCB SERVICE ENTRANCE RATED

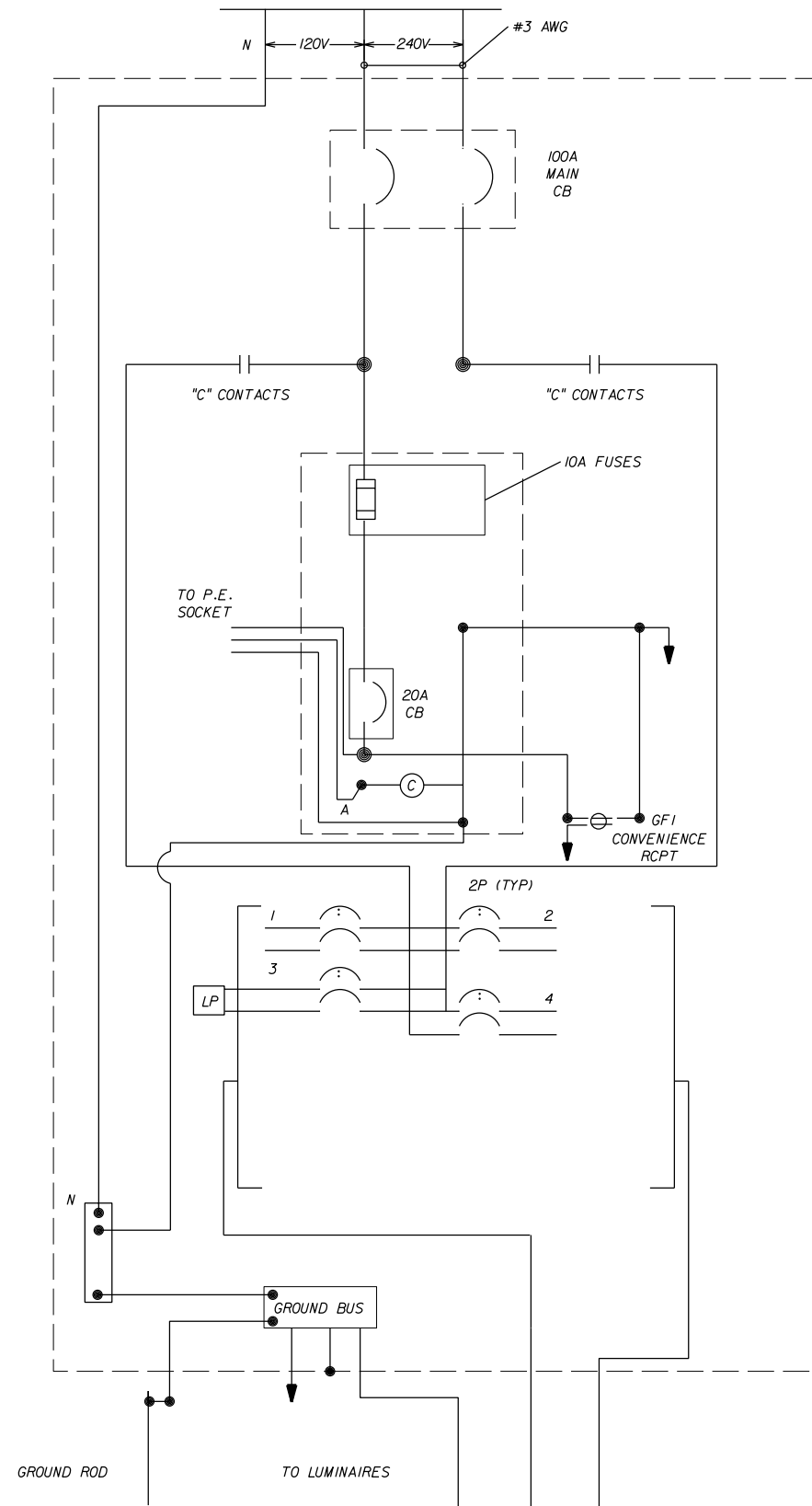
| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|-----------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | |
| | | | | | | | | | L-5 | |

LOAD CENTERS 'A', 'B' & 'C' (240V SINGLE PHASE-3 WIRE)

| NEW SERVICE A | | |
|----------------------------|-------|-------------|
| SERVICE VOLTAGE 120/240VAC | | |
| LOAD SUMMARY | | |
| DESCRIPTION | ADJ | TOTAL (KVA) |
| LIGHTING CKT A-1 | 125% | 1.68 |
| LIGHTING CKT A-2 | 125% | 5.04 |
| | TOTAL | 6.72 |
| | AMPS | 28.0 |

| NEW SERVICE B | | |
|----------------------------|-------|-------------|
| SERVICE VOLTAGE 120/240VAC | | |
| LOAD SUMMARY | | |
| DESCRIPTION | ADJ | TOTAL (KVA) |
| LIGHTING CKT B-1 | 125% | 5.46 |
| LIGHTING CKT B-2 | 125% | 0.84 |
| | TOTAL | 6.30 |
| | AMPS | 26.3 |

| NEW SERVICE C | | |
|----------------------------|-------|-------------|
| SERVICE VOLTAGE 120/240VAC | | |
| LOAD SUMMARY | | |
| DESCRIPTION | ADJ | TOTAL (KVA) |
| LIGHTING CKT C-1 | 125% | 3.78 |
| LIGHTING CKT C-2 | 125% | 1.68 |
| | TOTAL | 5.46 |
| | AMPS | 22.8 |

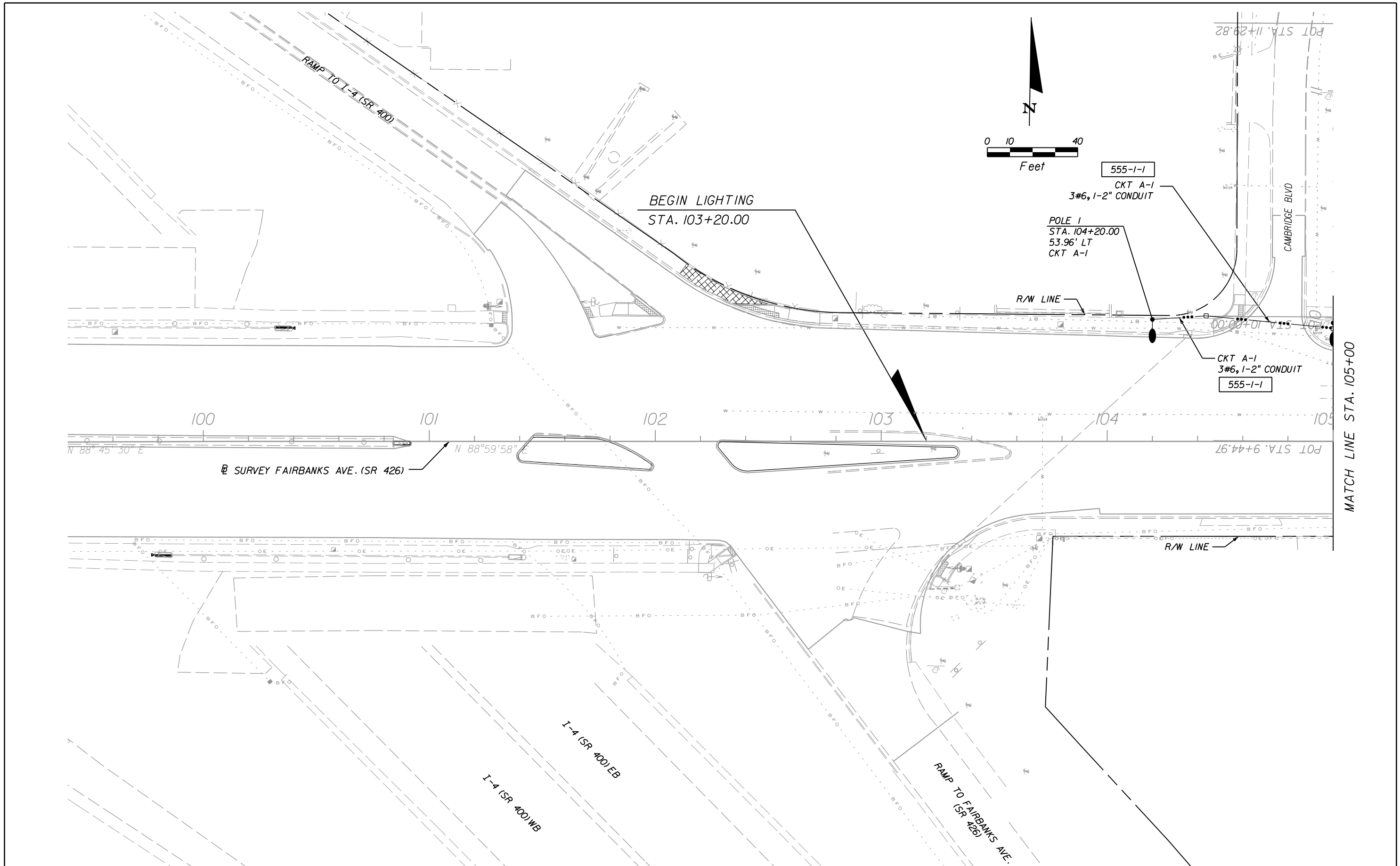


TYPICAL SCHEMATIC DIAGRAM

NTS

- NOTES:
- H.O.A NOT REQUIRED.
 - SEE SECTION 715-16 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR REQUIREMENTS.
 - "LP" EQUALS LIGHTNING PROTECTION.
 - LABEL UNUSED CIRCUIT BREAKERS AS "SPARE".
 - MAIN CIRCUIT BREAKER SERVICE ENTRANCE RATED.
 - MAIN CIRCUIT BREAKER 10KAIC SHORT-CIRCUIT RATED MINIMUM. CONTRACTOR SHALL CONFIRM AVAILABLE SHORT CIRCUIT CURRENT WITH PROGRESS ENERGY BEFORE PURCHASING EQUIPMENT.

| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|-----------|
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| | | | | | | | SR 426 | ORANGE | 2010-01 | |
| | | | | | | | | | L-6 | |



| REVISIONS | | | | | |
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| | | | | | |

Engineer of Record: DeeAngela R. Tjikueni
 P.E. License No.: 68301
CH2M HILL
 225 E. ROBINSON STREET
 SUITE 505
 ORLANDO, FL 32801-4322
 CERTIFICATE OF AUTHORIZATION NO. 000072

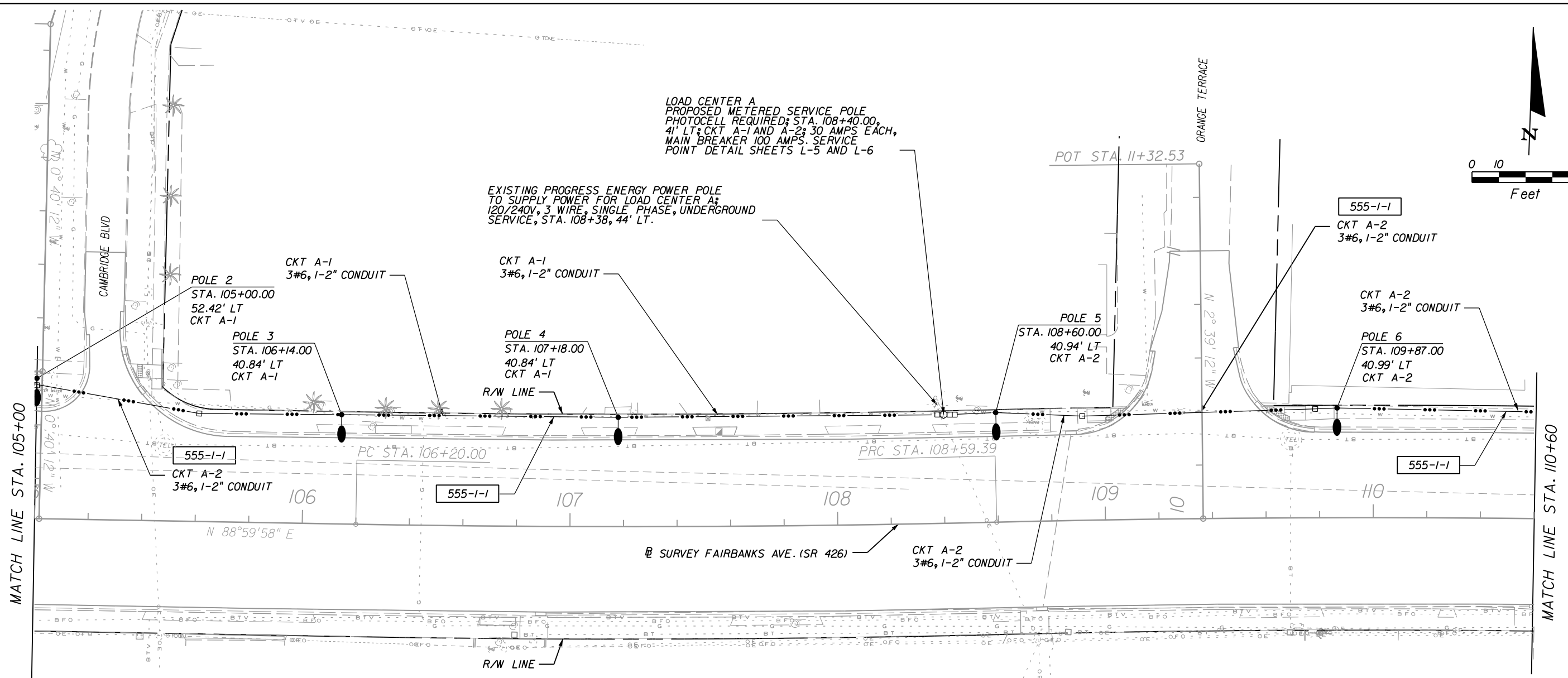
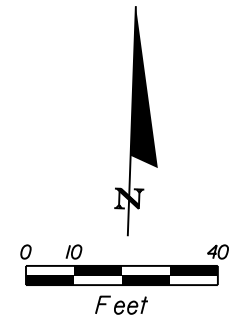
| CITY OF WINTER PARK | | |
|---------------------|--------|------------------|
| ROAD NO. | COUNTY | CITY PROJECT NO. |
| SR 426 | ORANGE | 2010-01 |

LIGHTING PLANS

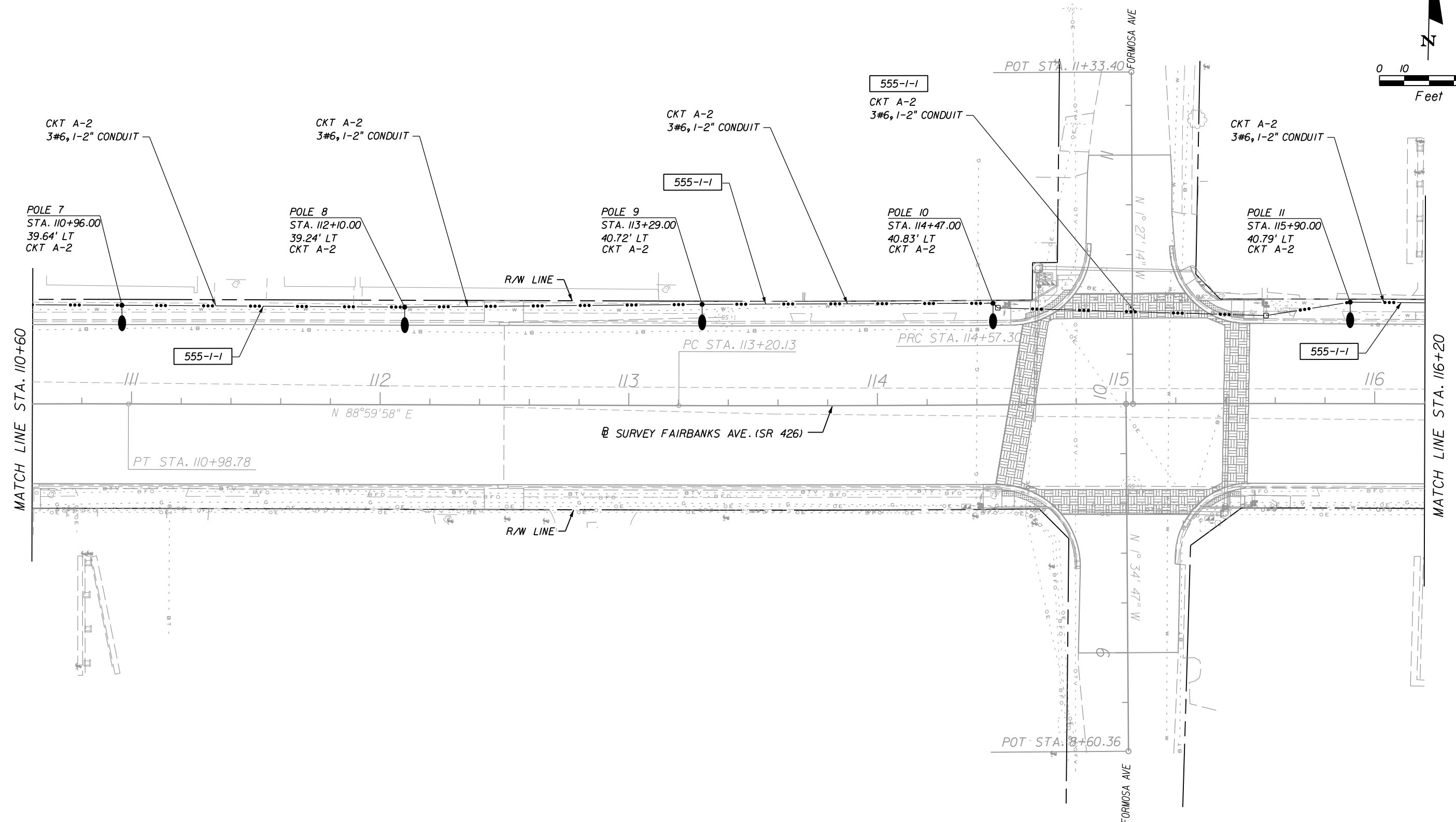
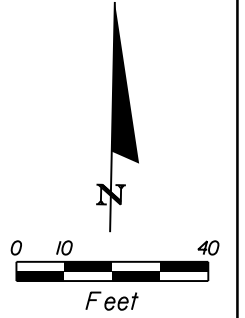
SHEET NO.
 L-7

LOAD CENTER A
 PROPOSED METERED SERVICE POLE
 PHOTOCELL REQUIRED; STA. 108+40.00,
 41' LT; CKT A-1 AND A-2; 30 AMPS EACH,
 MAIN BREAKER 100 AMPS. SERVICE
 POINT DETAIL SHEETS L-5 AND L-6

EXISTING PROGRESS ENERGY POWER POLE
 TO SUPPLY POWER FOR LOAD CENTER A;
 120/240V, 3 WIRE, SINGLE PHASE, UNDERGROUND
 SERVICE, STA. 108+38, 44' LT.



| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. LIGHTING PLANS L-8 |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|---|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | |



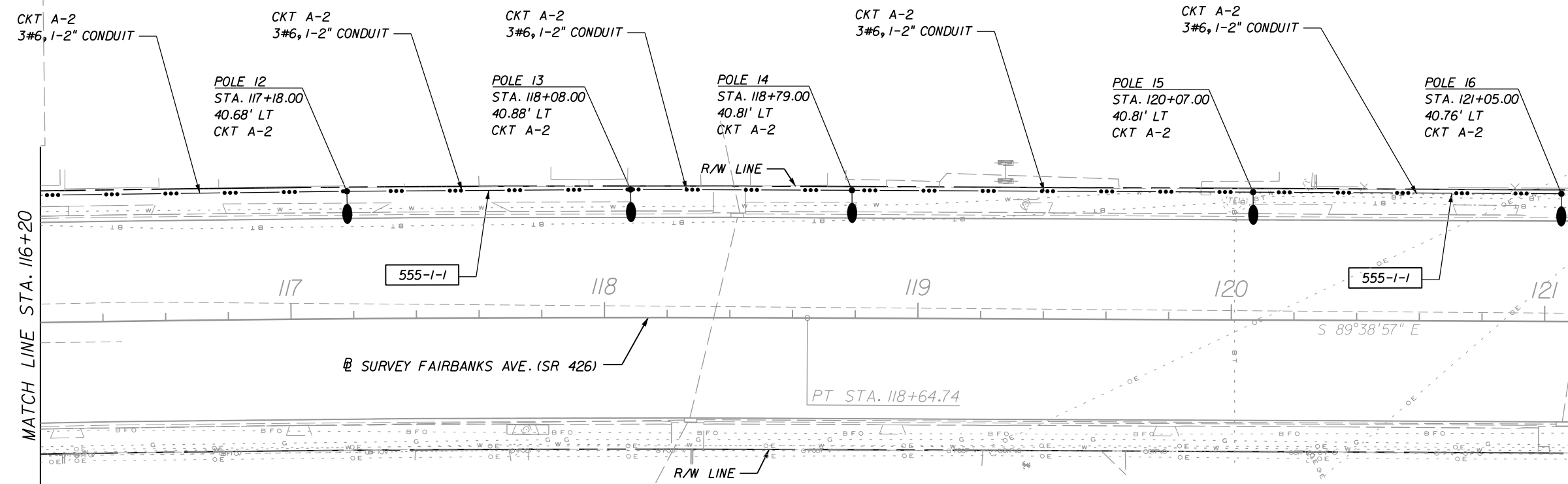
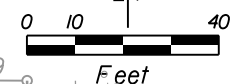
| REVISIONS | | | | | |
|-----------|----|-------------|------|----|-------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
| | | | | | |

Engineer of Record: DeeAngela R. Tjikueni
 P.E. License No.: 68301
CH2M HILL
 225 E. ROBINSON STREET
 SUITE 505
 ORLANDO, FL 32801-4322
 CERTIFICATE OF AUTHORIZATION NO. 000072

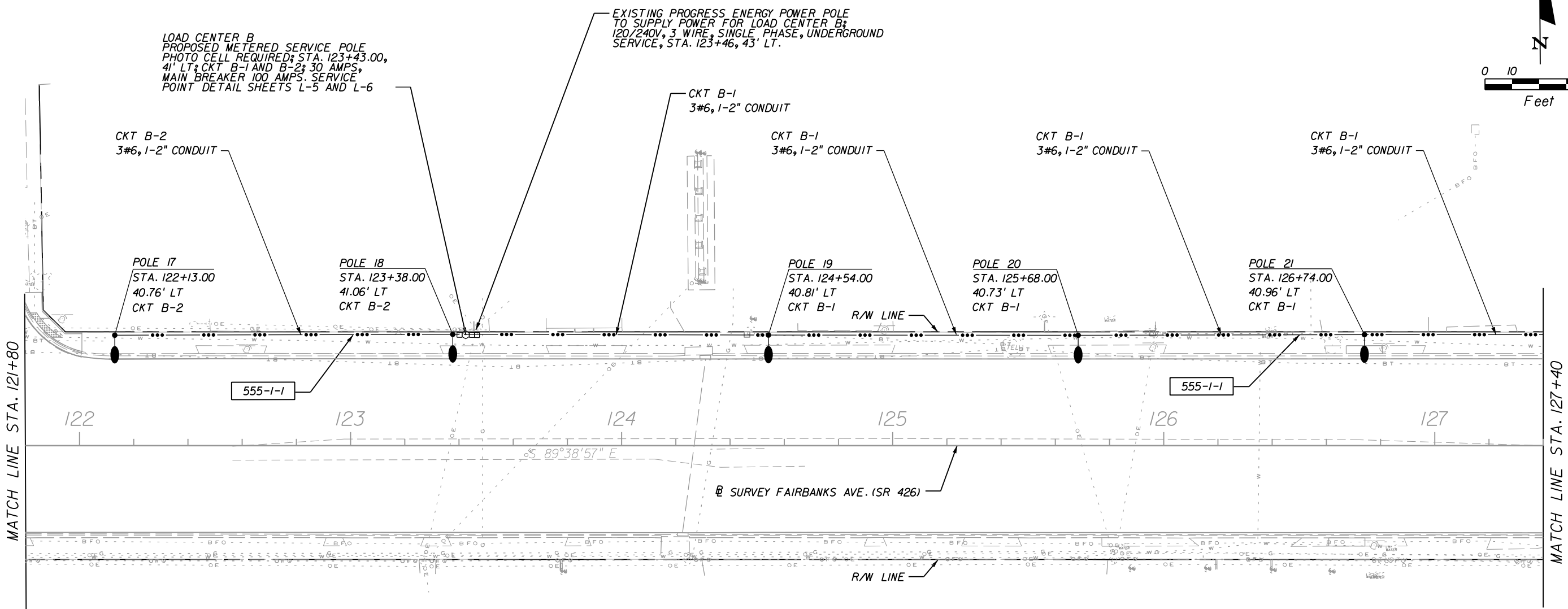
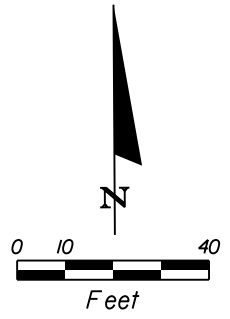
| CITY OF WINTER PARK | | |
|---------------------|--------|------------------|
| ROAD NO. | COUNTY | CITY PROJECT NO. |
| SR 426 | ORANGE | 2010-01 |

LIGHTING PLANS

SHEET NO.
L-9

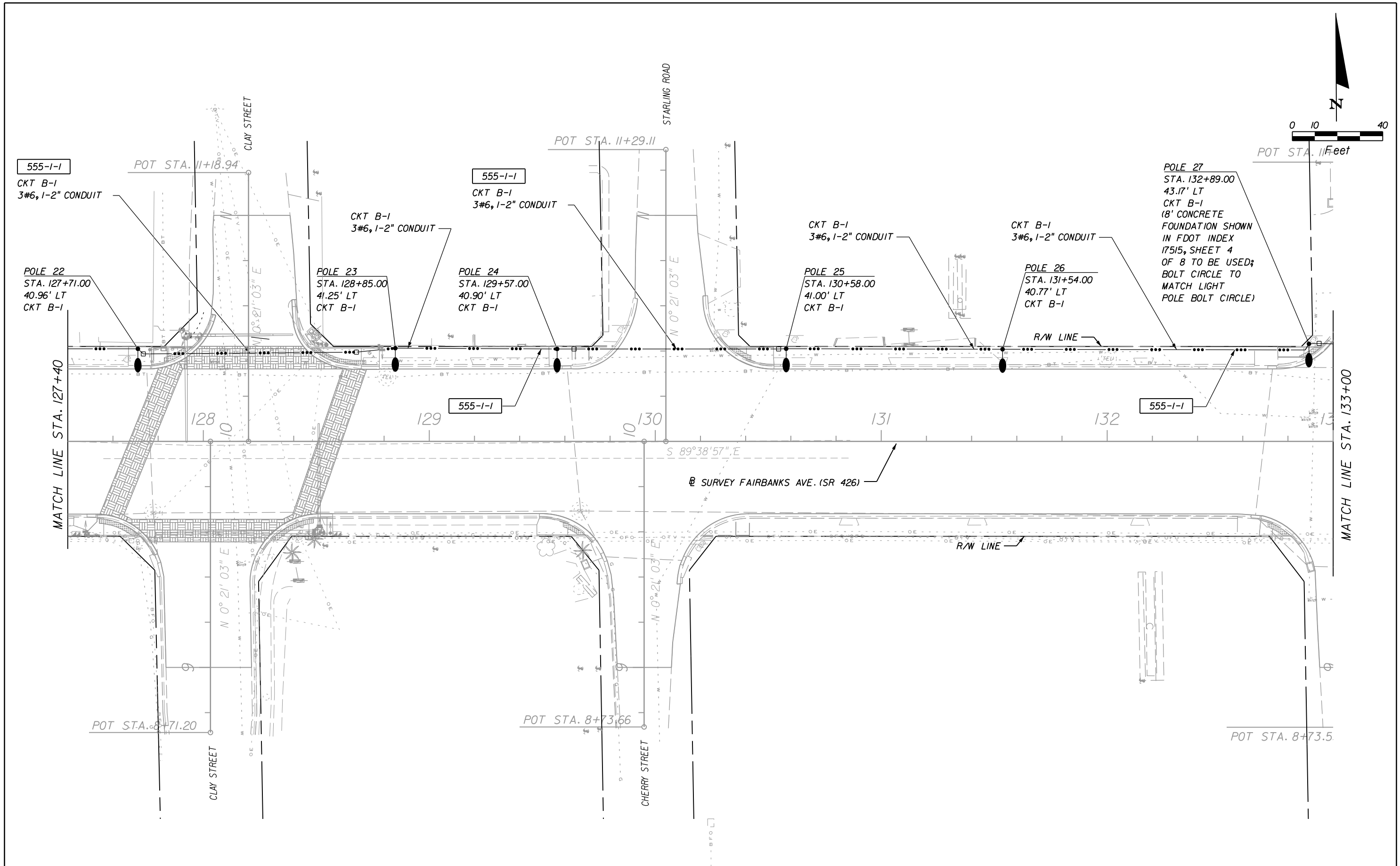


| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | LIGHTING PLANS | SHEET NO. L-10 |
|-----------|----|-------------|------|----|-------------|--|----------------------------|--------|------------------|-----------------------|-----------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | | |



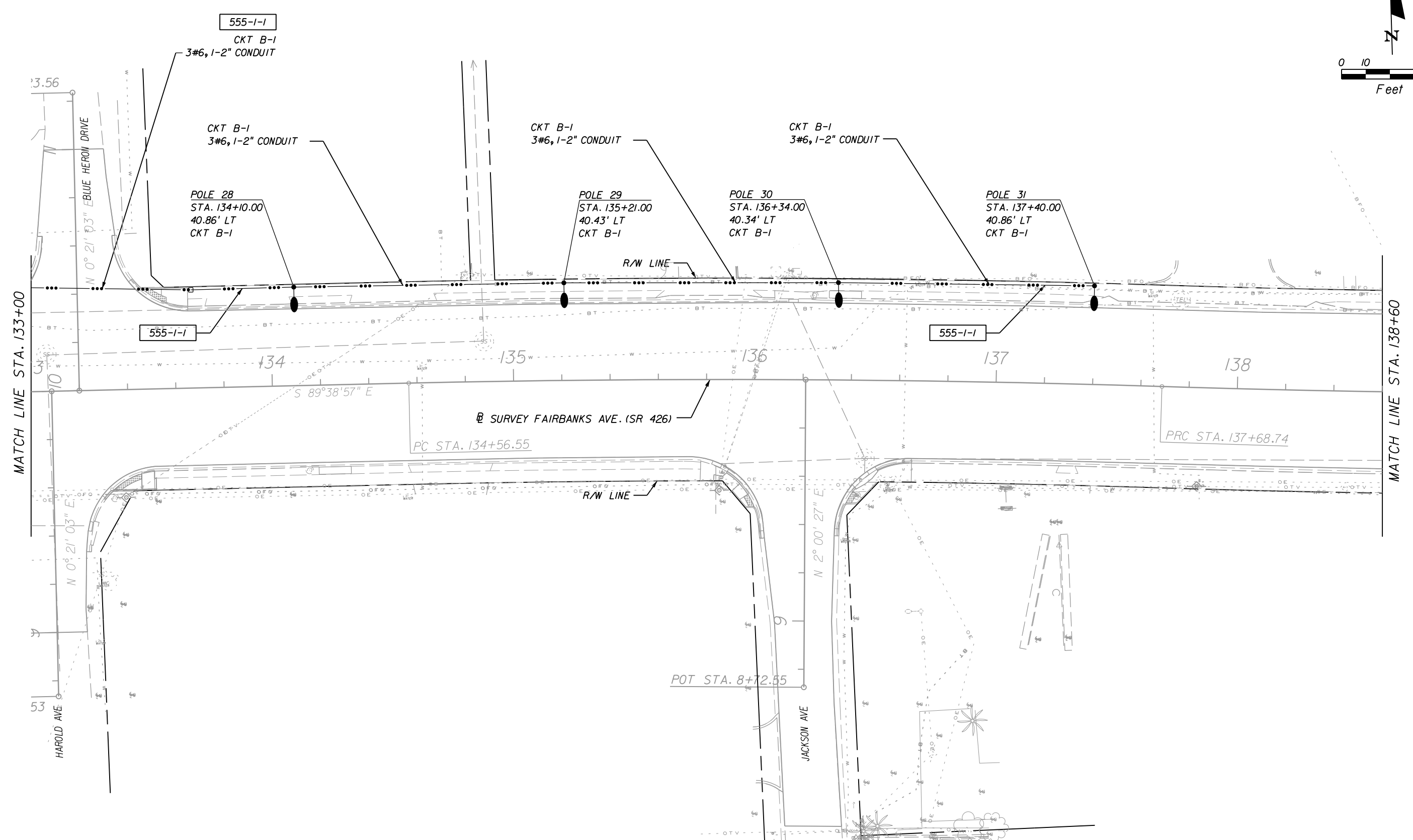
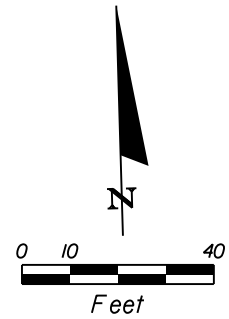
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|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|------------------------------|
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LIGHTING PLANS



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|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|------------------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
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LIGHTING PLANS



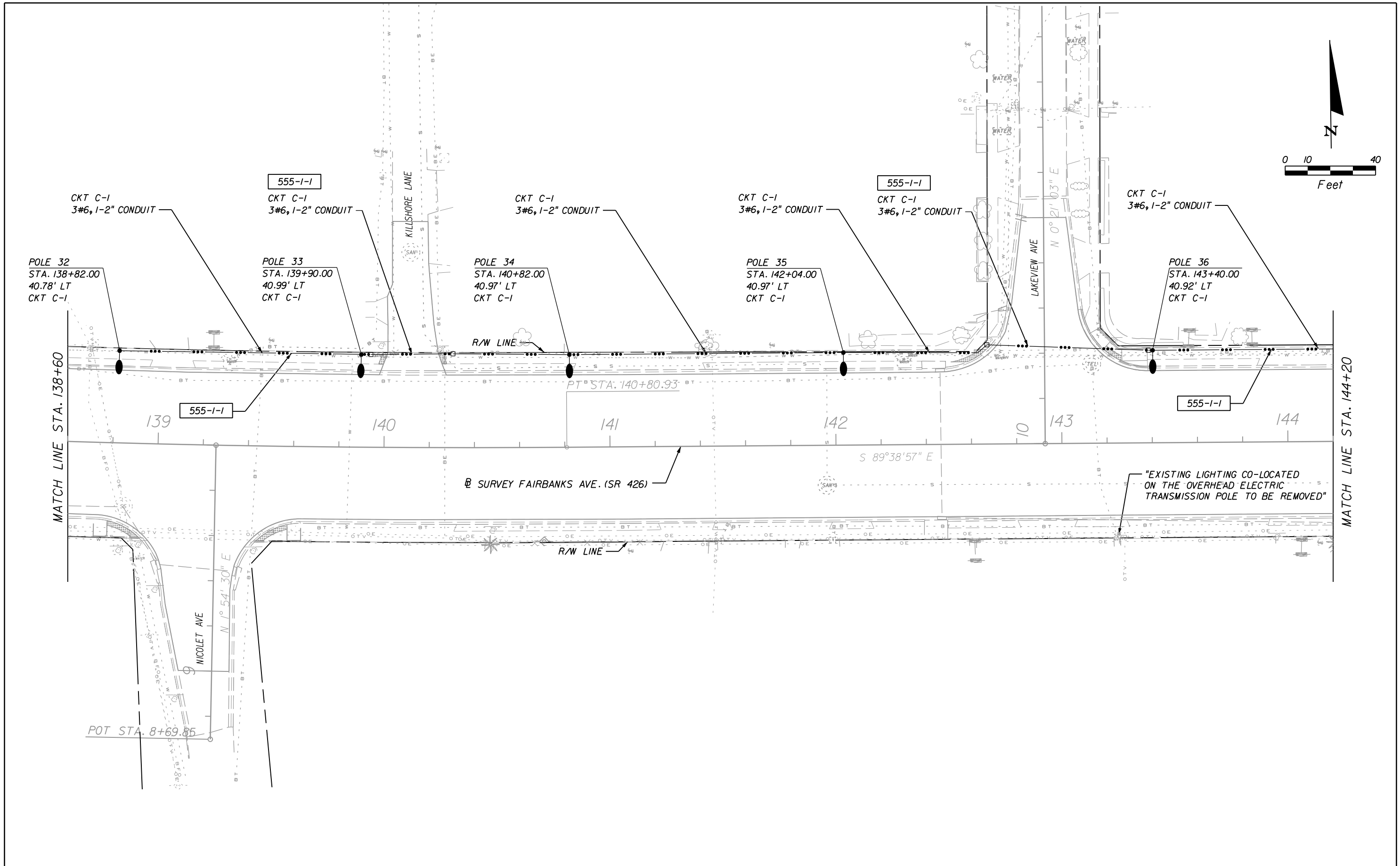
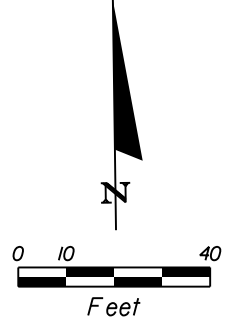
| REVISIONS | | | | | |
|-----------|----|-------------|------|----|-------------|
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| | | | | | |

Engineer of Record: DeeAngela R. Tjikueni
 P.E. License No.: 68301
CH2M HILL
 225 E. ROBINSON STREET
 SUITE 505
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|---------------------|--------|------------------|
| ROAD NO. | COUNTY | CITY PROJECT NO. |
| SR 426 | ORANGE | 2010-01 |

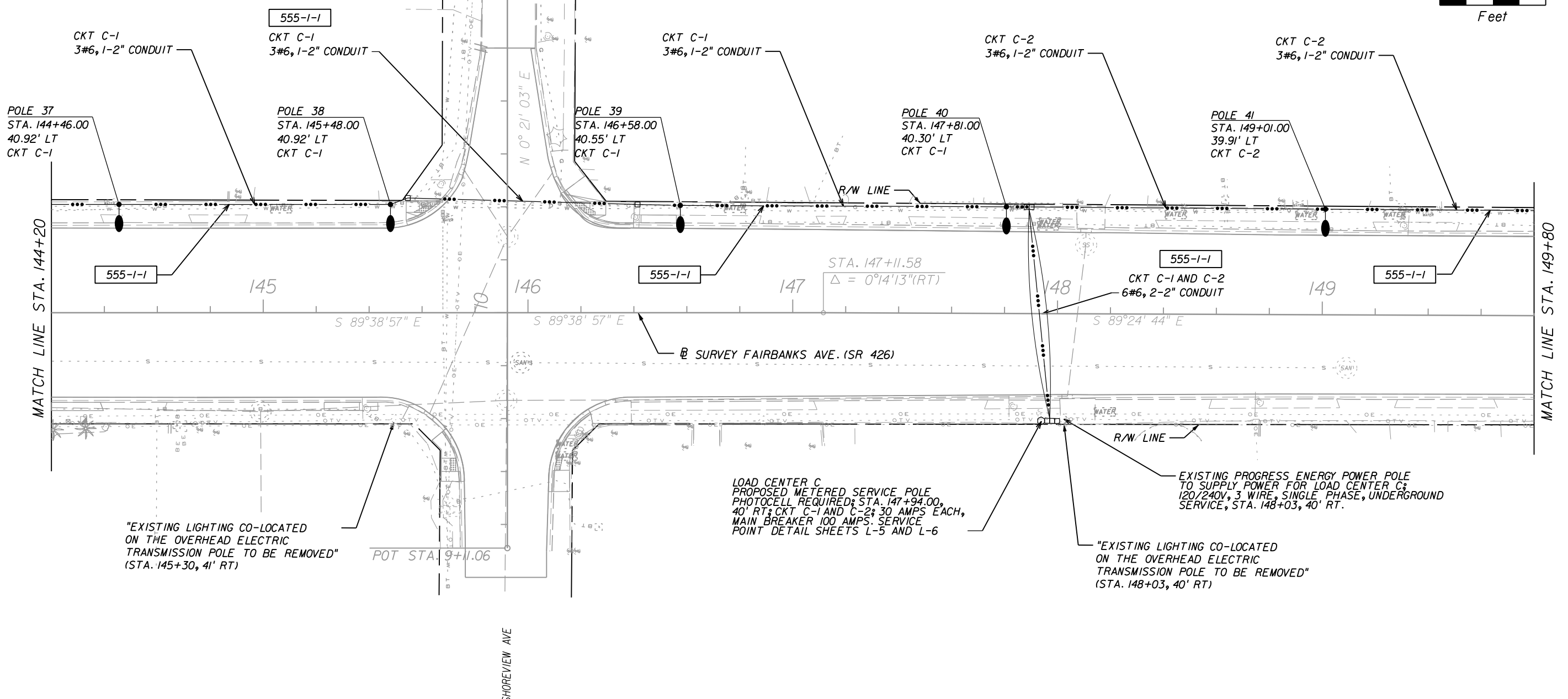
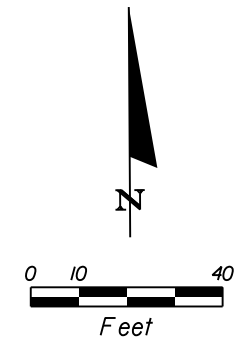
LIGHTING PLANS

SHEET NO.
L-13



| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. L-14 |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|------------------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | |

LIGHTING PLANS



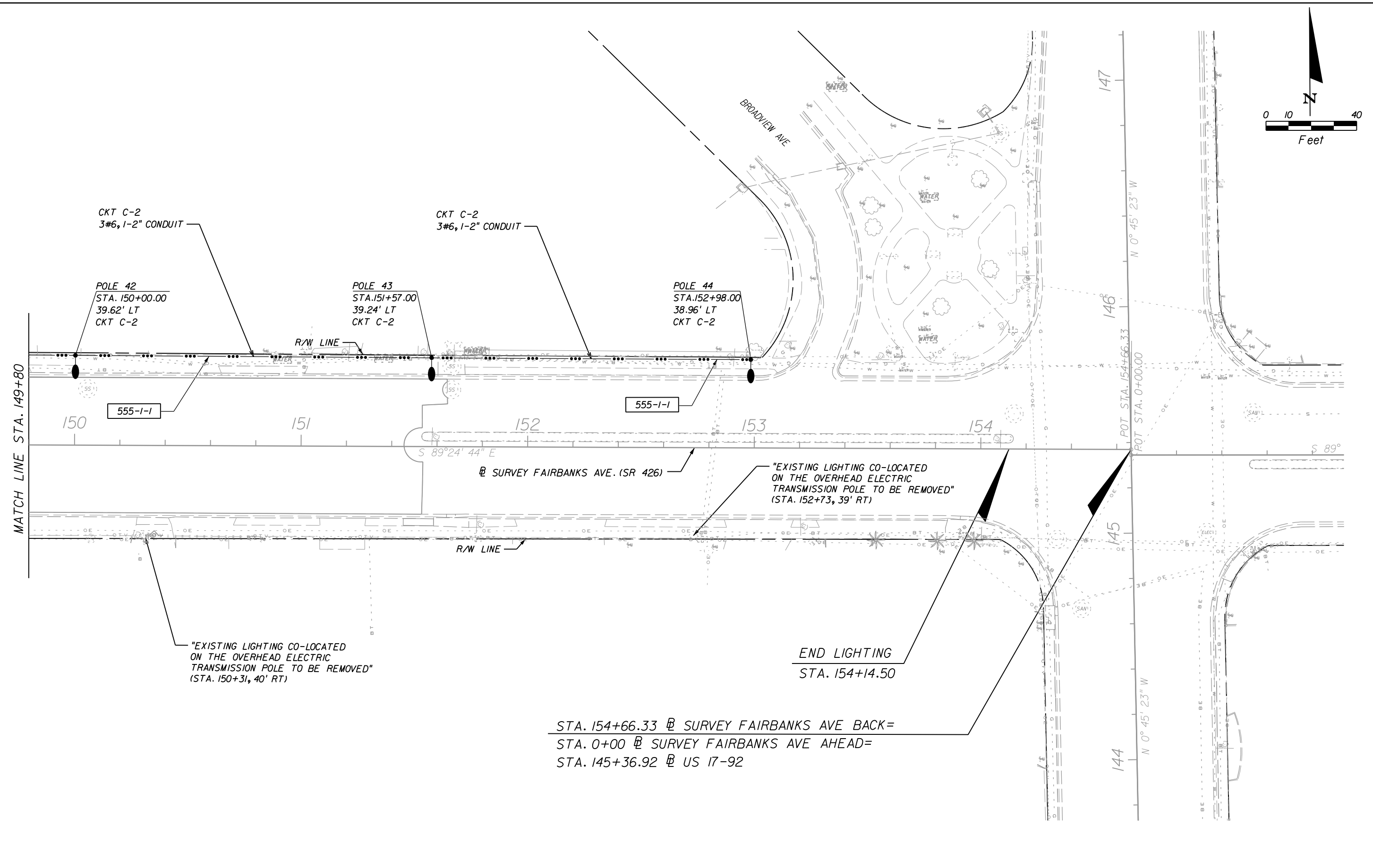
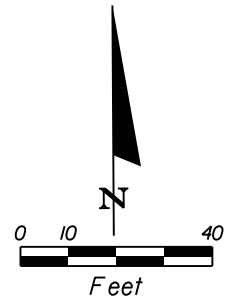
"EXISTING LIGHTING CO-LOCATED ON THE OVERHEAD ELECTRIC TRANSMISSION POLE TO BE REMOVED" (STA. 145+30, 41' RT)

LOAD CENTER C
PROPOSED METERED SERVICE POLE
PHOTOCELL REQUIRED; STA. 147+94.00,
40' RT; CKT C-1 AND C-2; 30 AMPS EACH,
MAIN BREAKER 100 AMPS. SERVICE
POINT DETAIL SHEETS L-5 AND L-6

EXISTING PROGRESS ENERGY POWER POLE TO SUPPLY POWER FOR LOAD CENTER C; 120/240V, 3 WIRE, SINGLE PHASE, UNDERGROUND SERVICE, STA. 148+03, 40' RT.

"EXISTING LIGHTING CO-LOCATED ON THE OVERHEAD ELECTRIC TRANSMISSION POLE TO BE REMOVED" (STA. 148+03, 40' RT)

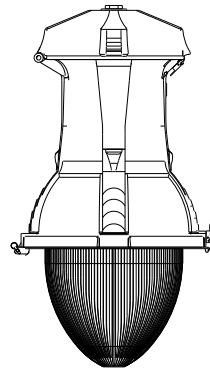
| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | LIGHTING PLANS SHEET NO. L-15 |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|--|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
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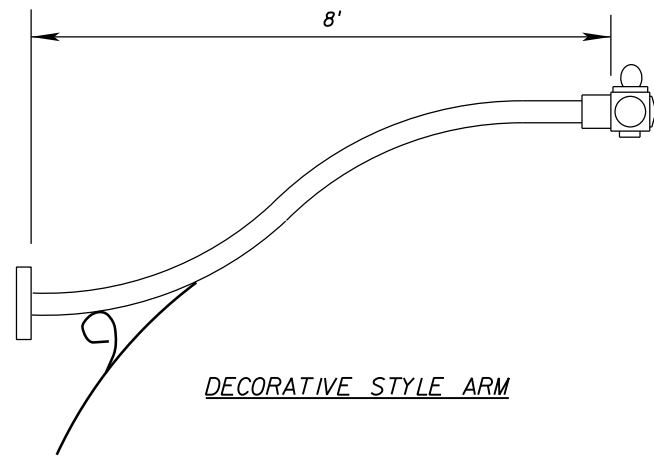
STA. 154+66.33 @ SURVEY FAIRBANKS AVE BACK=
 STA. 0+00 @ SURVEY FAIRBANKS AVE AHEAD=
 STA. 145+36.92 @ US 17-92

| REVISIONS | | | | | | Engineer of Record: DeeAngela R. Tjikueni P.E. License No.: 68301 CH2M HILL 225 E. ROBINSON STREET SUITE 505 ORLANDO, FL 32801-4322 CERTIFICATE OF AUTHORIZATION NO. 000072 | CITY OF WINTER PARK | | | SHEET NO. L-16 |
|-----------|----|-------------|------|----|-------------|--|---------------------|--------|------------------|------------------------------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | | ROAD NO. | COUNTY | CITY PROJECT NO. | |
| | | | | | | | SR 426 | ORANGE | 2010-01 | |

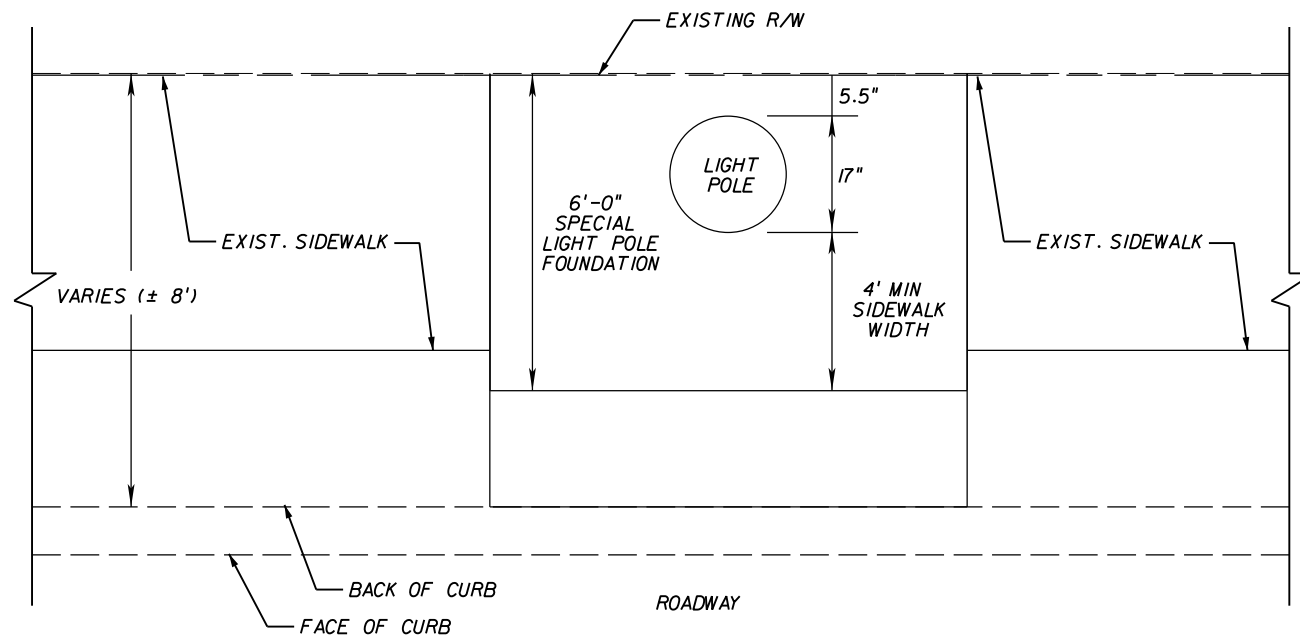
LIGHTING PLANS



DECORATIVE STYLE LIGHT FIXTURE

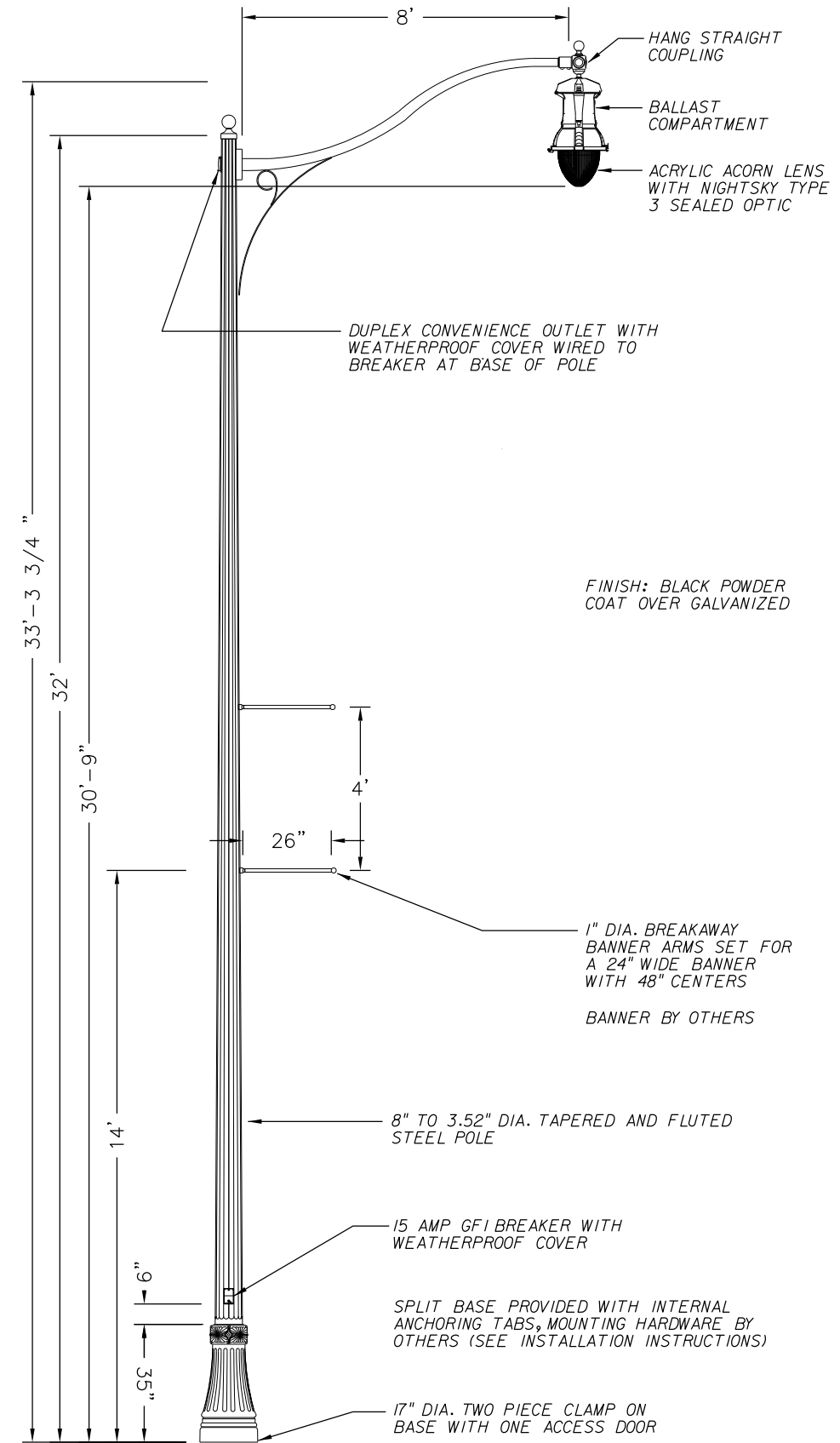


DECORATIVE STYLE ARM



TYPICAL POLE PLACEMENT DETAIL

N.T.S.



FINISH: BLACK POWDER COAT OVER GALVANIZED

1" DIA. BREAKAWAY BANNER ARMS SET FOR A 24" WIDE BANNER WITH 48" CENTERS
BANNER BY OTHERS

8" TO 3.52" DIA. TAPERED AND FLUTED STEEL POLE

15 AMP GFI BREAKER WITH WEATHERPROOF COVER

SPLIT BASE PROVIDED WITH INTERNAL ANCHORING TABS, MOUNTING HARDWARE BY OTHERS (SEE INSTALLATION INSTRUCTIONS)

17" DIA. TWO PIECE CLAMP ON BASE WITH ONE ACCESS DOOR

| REVISIONS | | | | | |
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| | | | | | |

Engineer of Record: DeeAngela R. Tjikueni
P.E. License No.: 68301
CH2M HILL
225 E. ROBINSON STREET
SUITE 505
ORLANDO, FL 32801-4322
CERTIFICATE OF AUTHORIZATION NO. 000072

CITY OF WINTER PARK

| | | |
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| ROAD NO. | COUNTY | CITY PROJECT NO. |
| SR 426 | ORANGE | 2010-01 |

SPECIAL POLE DETAIL

SHEET NO.

L-17

NOTES:

1. The foundation shown on this sheet is designed for the decorative light poles that will be placed along Fairbanks Avenue unless otherwise noted in the plans. This foundation shall not be used for any other purpose.

2. The following criteria were assumed for the design of the foundation:

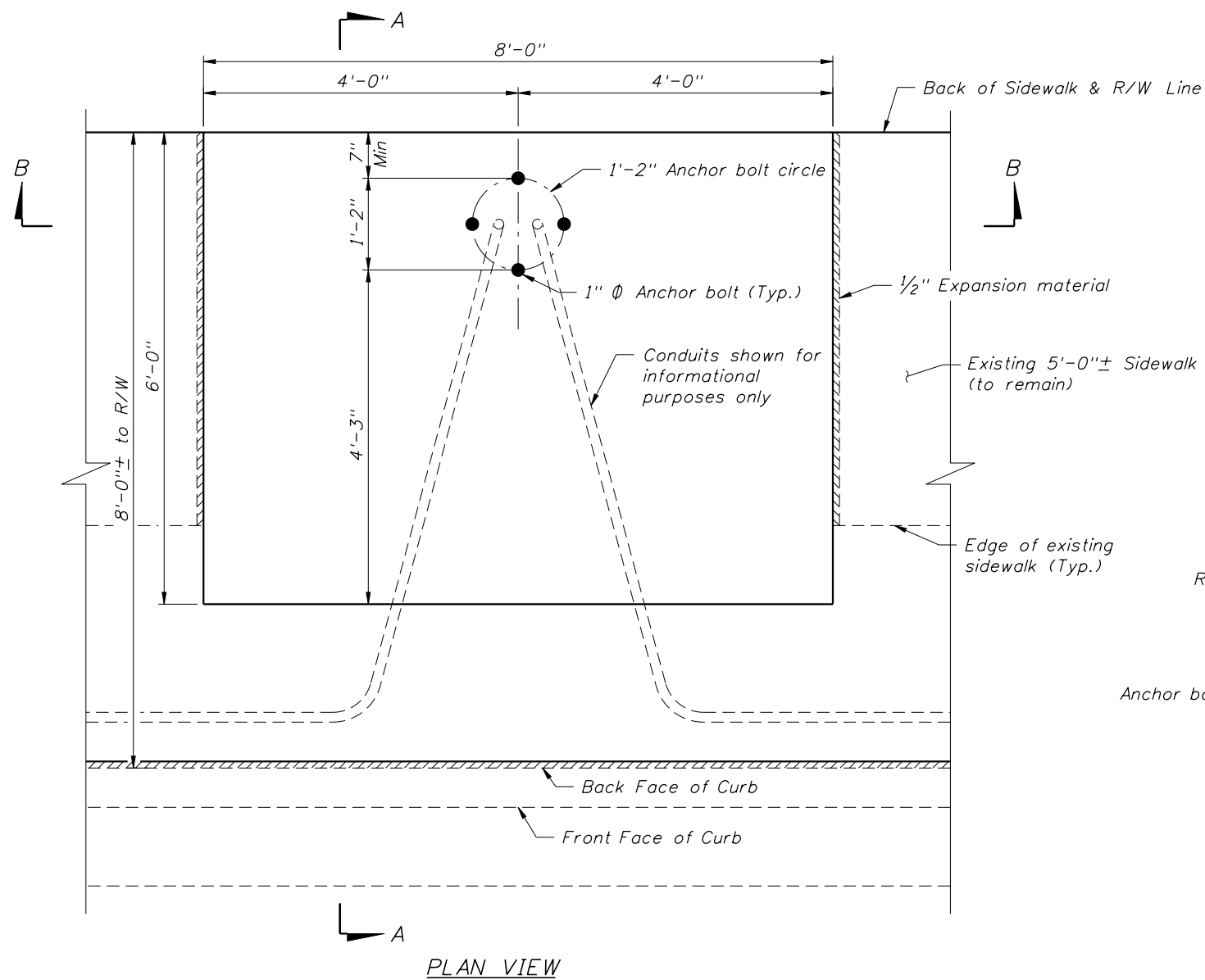
- a) Light Pole height = 32 ft,
- b) Light Pole base diameter = 17 inches
- c) Light Pole anchor bolt diameter = 1" inch
- d) Light Pole anchor bolt circle diameter = 14 inches
- e) Light Pole anchored by four (4) anchor bolts

3. The light pole foundation reinforcing steel shall be ASTM A615 Grade 60 ksi., and the foundation Concrete shall be FDOT Class I with a minimum 28-day compressive strength of 3,000 psi.

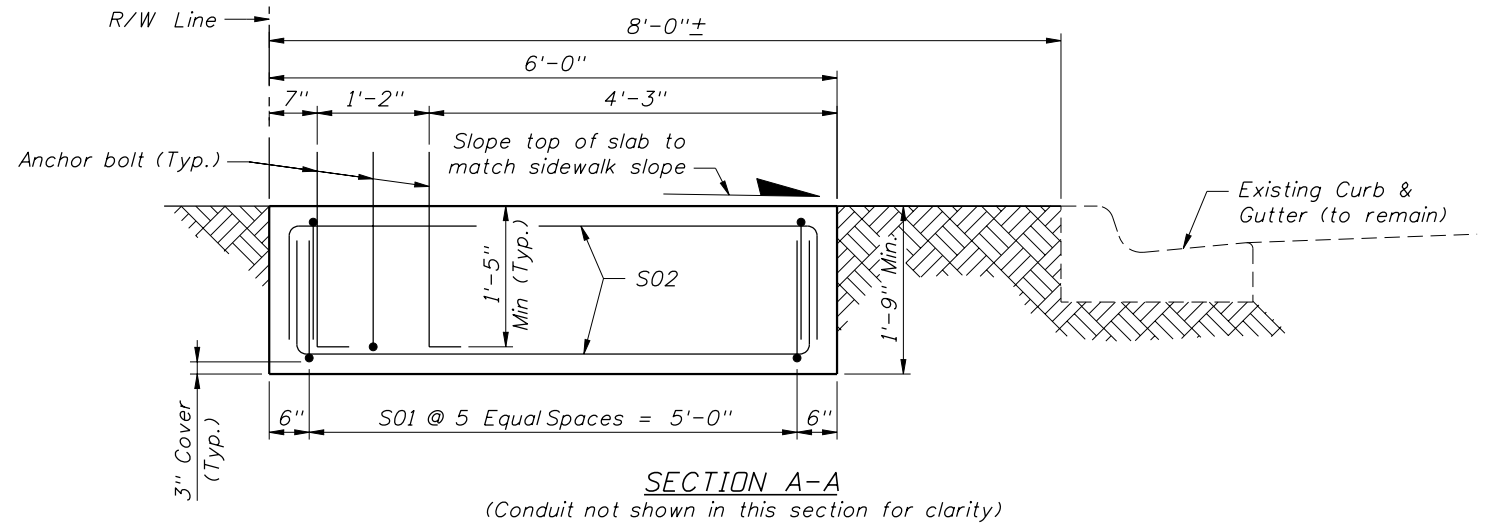
4. All anchor bolts for light poles shall be ASTM F1554 Grade 55 ksi, and all nuts for anchor bolts shall be ASTM F 436 Type 1. All anchor bolts and nuts shall be supplied with decorative light pole. Contractor shall coordinate with light pole manufacturer to verify that anchor bolts, nuts, and washers are correct. Anchor bolt projection above footing to be determined by contractor and submitted for review. Shown anchor bolt layout orientation/rotation shall be verified for the light pole provided.

5. Conduit necessary for light pole wiring shown schematically. Contractor shall be responsible for proper placement of conduit in accordance with all applicable codes.

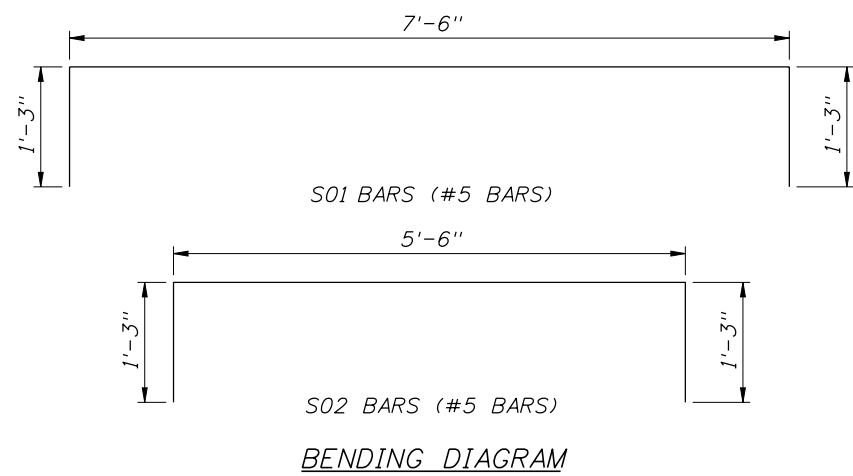
6. Payment: The cost for all concrete and reinforcing steel shall be included with the contractor's unit price for the light pole complete, special design. Pay Item 715-511-230.



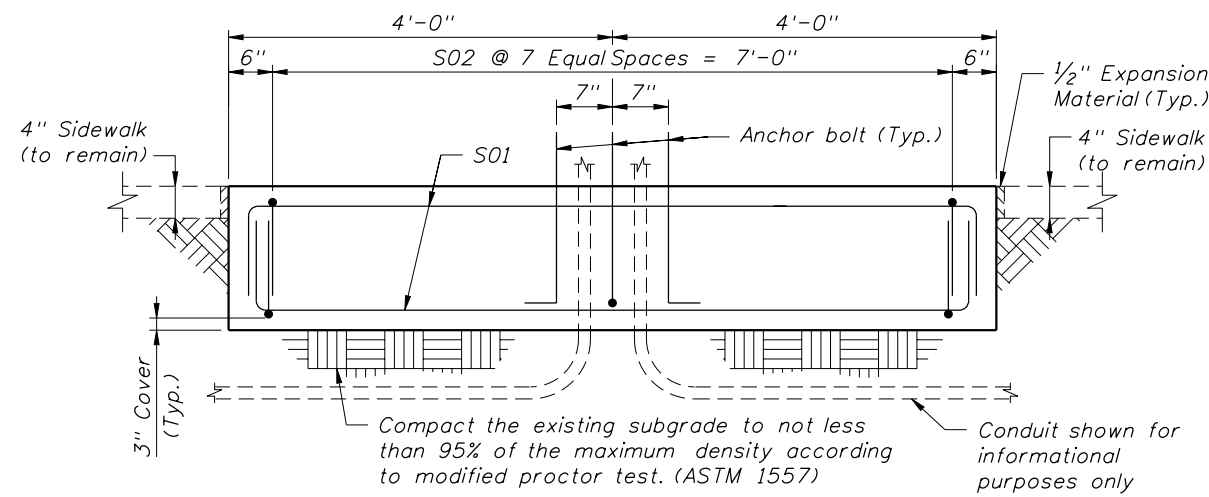
PLAN VIEW



SECTION A-A
(Conduit not shown in this section for clarity)



BENDING DIAGRAM



SECTION B-B

| ESTIMATED QUANTITIES FOR ONE LIGHT POLE FOUNDATION | | |
|--|-----|----|
| CLASS I CONCRETE | 3.1 | CY |
| REINFORCING STEEL | 267 | LB |

| UNFACTORED DESIGN LOADS APPLIED TO TOP OF LIGHT POLE FOUNDATION | | |
|---|------|--------|
| MOMENT | 11.4 | KIP-FT |
| SHEAR | 0.57 | KIPS |
| AXIAL | 0.66 | KIPS |

90% SUBMITTAL - NOT FOR CONSTRUCTION

| REVISIONS | | | | | | CITY OF WINTER PARK | | | SHEET TITLE | |
|---|----|-------------|------|----|-------------|---|--------|----------------------|----------------------------------|-----------|
| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | PROJECT NAME | SHEET NO. |
| | | | | | | SR 426 | ORANGE | 2010-01 | FAIRBANKS AVENUE (SR 426) | L-18 |
| DRAWN BY: EAG 01/11 CHECKED BY: PAW 01/11 DESIGNED BY: PAW 01/11 CHECKED BY: RLM 01/11 APPROVED BY: Randall L. Mock | | | | | | Engineer of Record: Peter A. Winkler P.E. License No.: 56720 CH2M HILL 9428 Baymeadows Road Suite 300 Jacksonville, FL 32256 Certificate of Authorization No. 000072 | | | DECORATIVE LIGHT POLE FOUNDATION | |