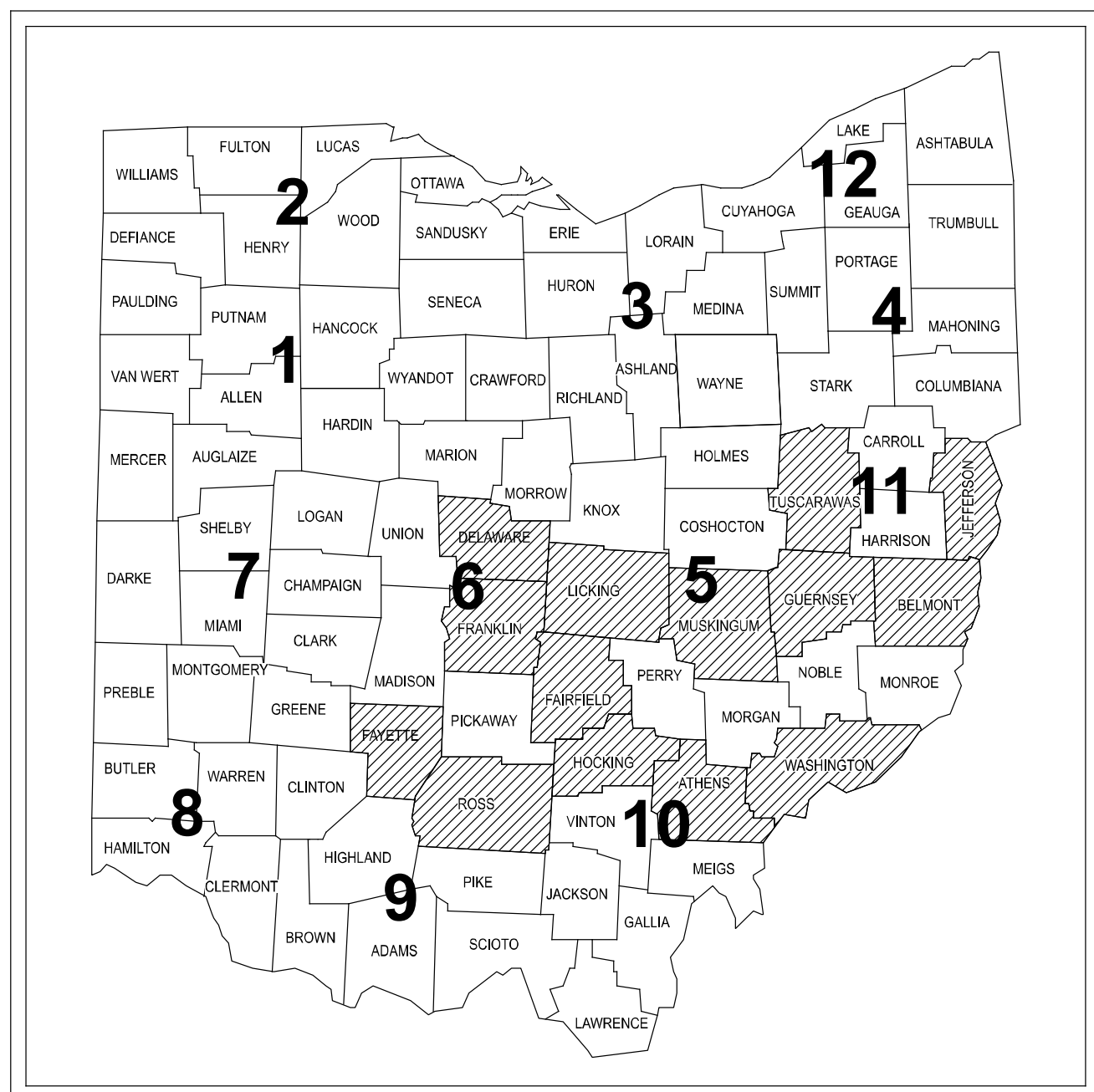


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## Lighting Optimization SE Ohio

FAIRFIELD, FAYETTE, LICKING, GUERNSEY, MUSKINGHAM  
FRANKLIN, ROSS, HOCKING, ATHENS, WASHINGTON  
BELMONT, JEFFERSON, AND TUSCARWARWAS COUNTIES



**LOCATION MAP**

**INDEX OF SHEETS:**

|                            |  |                          |  |
|----------------------------|--|--------------------------|--|
| TITLE SHEET                | 1  | D05 LIGHTING SUB-SUMMARY | 10   |
| DISTRICT 05 WORK LOCATIONS | 2  | D06 LIGHTING SUB-SUMMARY | 11   |
| DISTRICT 06 WORK LOCATIONS | 3  | D09 LIGHTING SUB-SUMMARY | 12   |
| DISTRICT 09 WORK LOCATIONS | 4  | D10 LIGHTING SUB-SUMMARY | 13   |
| DISTRICT 10 WORK LOCATIONS | 5  | D11 LIGHTING SUB-SUMMARY | 14 <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">14A</span> |
| DISTRICT 11 WORK LOCATIONS | 6  | D05 LIGHTING PLAN SHEETS | 15-54  |
| LIGHTING NOTES             | 7 <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">7A</span> | D06 LIGHTING PLAN SHEETS | 55-173   |
| MOT NOTES                  | 8  | D09 LIGHTING PLAN SHEET  | 174  |
| GENERAL SUMMARY            | 9  | D10 LIGHTING PLAN SHEETS | 175-185  |
|                            |  | D11 LIGHTING PLAN SHEETS | 186-197  |

**FEDERAL PROJECT NUMBER**

NON-FEDERAL

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

LIGHTING OPTIMIZATION AND UPGRADES FOR HIGH MAST AND LOW MAST LIGHTING UNITS IN DISTRICTS 5, 6, 9, 10, & 11. PROPOSED UPGRADES INCLUDE REPLACEMENT OF HIGH PRESSURE SODIUM FIXTURES WITH LED FIXTURES AND, IN SOME INSTANCES, REDUCING THE NUMBER OF FIXTURES REQUIRED ON HIGH MAST UNITS.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: N/A (MAINTENANCE)  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A (MAINTENANCE)  
NOTICE OF INTENT EARTH DISTURBED AREA: NOI NOT REQUIRED

**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

**2019 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED *Jason Z. Styer*  
DATE 2/3/2022 DISTRICT 5 DEPUTY DIRECTOR

APPROVED *GC*  
DATE 2/4/22 DISTRICT 6 DEPUTY DIRECTOR

APPROVED *Michael J. ...*  
DATE 02/04/2022 DISTRICT 9 DEPUTY DIRECTOR

APPROVED *Darla Miller*  
DATE 2/4/2022 DISTRICT 10 DEPUTY DIRECTOR

APPROVED *Thomas D. Coay*  
DATE 2/4/2022 DISTRICT 11 DEPUTY DIRECTOR

APPROVED *Jackie ...*  
DATE 3/21/22 DIRECTOR, DEPARTMENT OF TRANSPORTATION

**DESIGN DESIGNATION**

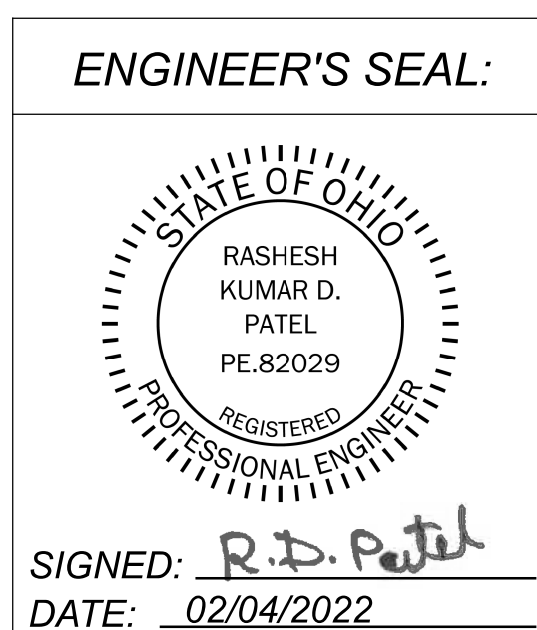
N/A

**DESIGN EXCEPTIONS**

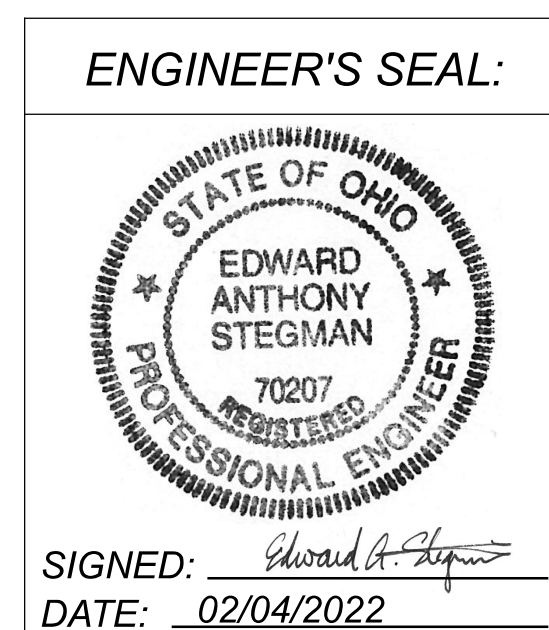
NONE REQUIRED

**ADA DESIGN WAIVERS**

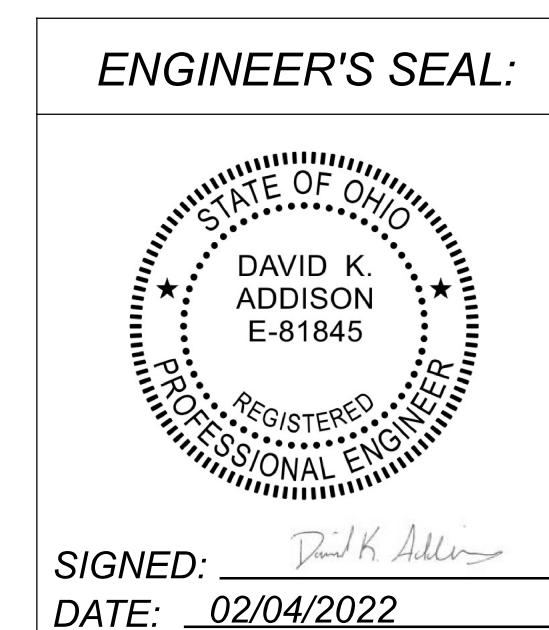
NONE REQUIRED



SIGNED: *R.D. Patel*  
DATE: 02/04/2022  
SIGNATURE AND SEAL APPLY TO SHEETS WITH SINGH & ASSOCIATES LOGO IN BORDER



SIGNED: *Edward A. Stegman*  
DATE: 02/04/2022  
SIGNATURE AND SEAL APPLY TO SHEETS WITH KZF DESIGN LOGO IN BORDER



SIGNED: *David K. Addison*  
DATE: 02/04/2022  
SIGNATURE AND SEAL APPLY TO SHEETS WITH JOHNSON, MIRMIRAN, & THOMPSON INC. LOGO IN BORDER

| STANDARD CONSTRUCTION DRAWINGS |         |  |  | SUPPLEMENTAL SPECIFICATIONS | SPECIAL PROVISIONS |
|--------------------------------|---------|--|--|-----------------------------|--------------------|
| HL-10.31                       | 4/17/20 |  |  | 800                         | 1/21/22            |
| MT-95.30                       | 7/19/19 |  |  | 813                         | 10/19/18           |
| MT-95.31                       | 7/19/19 |  |  | 821                         | 4/20/12            |
| MT-95.32                       | 4/19/19 |  |  | 832                         | 10/19/18           |
| MT-95.45                       | 1/17/20 |  |  | 913                         | 4/16/21            |
| MT-95.60                       | 4/19/19 |  |  | 921                         | 4/20/12            |
| MT-95.61                       | 4/19/19 |  |  |                             |                    |
| MT-98.10                       | 1/17/20 |  |  |                             |                    |
| MT-98.11                       | 1/17/20 |  |  |                             |                    |
| MT-98.20                       | 4/19/19 |  |  |                             |                    |
| MT-98.22                       | 1/17/20 |  |  |                             |                    |
| MT-98.28                       | 1/17/20 |  |  |                             |                    |
| MT-105.10                      | 1/17/20 |  |  |                             |                    |

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

**OHIO811.org**  
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
(Non members must be called directly)

LIGHTING TITLE SHEET

DESIGN AGENCY



DESIGNER

VN

REVIEWER

SG 01/07/22

PROJECT ID

112676

SHEET TOTAL

P.1 197

Lighting Upgrade FY2021

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/4/2022 TIME: 3:40:06 PM USER: vnuñez pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\_Statewide\Statewide\112676\6401-Engineering\_Lighting\Sheets\112676\_GT001.dgn

**ITEM 625, REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (A)**

THIS ITEM SHALL CONSIST OF REPLACING GALVANIZED LOWERING CABLES WITH STAINLESS STEEL FOR HIGH MAST LIGHTING TOWERS WITH **FUNCTIONAL** LOWERING DEVICES AS IDENTIFIED IN THE PLANS OR BY DISTRICT PERSONNEL.

THE CONTRACTOR SHALL CONTACT HOLOPHANE FOR THE RECOMMENDED PROCEDURE TO REPLACE THE LOWERING CABLES. EACH TOWER HAS THREE CABLES THAT WILL BE REPLACED. THE CONTRACTOR CREW LEADER SHALL BE PRESENT DURING ALL CABLE REPLACEMENTS INCLUDING THE REPLACEMENTS WITH A HOLOPHANE REPRESENTATIVE PRESENT.

AFTER INSTALLATION, THE LOWERING CABLES SHALL BE TESTED ACCORDING TO 625.19E WITH AN ODOT REPRESENTATIVE PRESENT. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES FOUND DURING TESTING.

PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH TOWER AND SHALL INCLUDE ALL LABOR AND EQUIPMENT REQUIRED TO PERFORM THIS ITEM OF WORK AS DESCRIBED ABOVE.

**ITEM 625, REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (B)**

THIS ITEM SHALL CONSIST OF REPLACING GALVANIZED LOWERING CABLES WITH STAINLESS STEEL FOR HIGH MAST LIGHTING TOWERS WITH **NON-FUNCTIONAL** LOWERING DEVICES THAT WILL REQUIRE THE TOWER TO BE LAID DOWN IN ORDER TO REPLACE CABLES AS IDENTIFIED IN THE PLANS OR BY DISTRICT PERSONNEL.

ALL REQUIREMENTS STATED IN "ITEM 625, REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (A)" SHALL APPLY.

PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH TOWER AND SHALL INCLUDE ALL LABOR AND EQUIPMENT REQUIRED TO PERFORM THIS ITEM OF WORK AS DESCRIBED ABOVE.

**ITEM 625 - LIGHTING, MISC.: HOLOPHANE FIELD REPRESENTATIVE**

THIS ITEM SHALL CONSIST OF THE PRESENCE OF A HOLOPHANE FIELD REPRESENTATIVE. THE HOLOPHANE FIELD REP SHALL BE PRESENT FOR THE FIRST TWO DAYS OF LOWERING CABLE REPLACEMENT. THE FIELD REP SHALL VERIFY THE PROPER PROCEDURE IS BEING FOLLOWED BY THE CONTRACTOR. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH DAY.

**DISTRICT 5 (06/ERD/OT) - 20 HOUR**  
**DISTRICT 10 (09/ERD/OT) - 20 HOUR**  
**DISTRICT 11 (10/ERD/OT) - 20 HOUR**

**ITEM 625, LIGHTING, MISC.: TOWER LIFT CABLE INSPECTION AND LUBRICATION**

THIS ITEM CONSISTS OF EXPOSING, INSPECTING, AND LUBRICATING A PARTICULARLY CORROSION-PRONE AREA OF CERTAIN HIGH MAST TOWER LIFT CABLES, ESPECIALLY THOSE THAT USE GALVANIZED LIFT CABLES THAT RUN THROUGH A GUIDE TUBE WHEN THEY PASS THROUGH THE HOLLOW AXIS OF THE CENTERING ARMS. THIS PARTICULAR METHOD OF LIFT CABLE CONSTRUCTION IS MOST COMMON IN HOLOPHANE BRAND LOWERING DEVICES. THE BRAND OF MANUFACTURE IS OFTEN PRESENTED ON A SMALL ALUMINUM TAG ATTACHED TO THE HOISTING WINCH GEARBOX.

THE CONTRACTOR MAY USE FACTORY-AUTHORIZED INSPECTION PROCEDURE, THE CONTRACTOR'S OWN ESTABLISHED AND DOCUMENTED INSPECTION PROCEDURE (WITH WRITTEN APPROVAL OF THE ENGINEER), OR THE WRITTEN PROCEDURE BELOW.

IT IS RECOMMENDED THAT THIS INSPECTION BE PERFORMED PRIOR TO INSTALLING NEW LED LUMINAIRES, IN CASE A SIGNIFICANT CABLE ISSUE IS FOUND AND THE ENGINEER DETERMINES THAT THE RING SHOULD NOT BE RAISED.

BELOW IS THE ODOT OFFICE OF ROADWAY ENGINEERING RECOMMENDED INSPECTION PROCEDURE TO CHECK FOR CORROSION AND SECTION LOSS IN THE GUIDE TUBE PORTION OF GALVANIZED WIRE ROPE LIFT CABLES ON HOLOPHANE LOWERING DEVICES (TYPICALLY MODEL LD05). THIS INSPECTION PROCEDURE ALSO INCLUDES ROUTINE LIFT CABLE LUBRICATION GUIDANCE.

1. LOWER THE DEVICE. STAND WELL BACK FROM THE TOWER BASE FOR SAFETY, IN CASE THE RING FALLS. THIS IS A GENERAL SAFETY REQUIREMENT FOR ALL HIGH MAST TOWER LD OPERATIONS. STOP LOWERING WHEN THE RING REACHES A GOOD WORKING HEIGHT.
2. CRIB UP THE DEVICE WITH A CAGE OR STILTS MADE FROM 2 X 4S, LARGE JACK STANDS, ETC. WITH THE RING AT A GOOD WORKING HEIGHT.
3. AFTER THE RING IS CRIBBED, START ADDING SMALL AMOUNTS OF SLACK TO THE WIRE ROPE ASSEMBLY WHILE PULLING DOWN ON THE ENDS OF THE LIFT CABLES WHERE THE STRAND VISE IS ATTACHED. MAINTAIN CONSTANT TENSION IN THE LIFT CABLES. THIS IS BEST DONE WITH 2-3 HELPERS PULLING THE CABLES DOWN, OR POSSIBLY BY ATTACHING WEIGHTS TO WIRE ROPE THE END LOOP COILS IF NECESSARY.
4. CONTINUE EXPOSING THE ENDS OF THE WIRE ROPE UNTIL THE ENTIRE PORTION THAT IS NORMALLY HIDDEN INSIDE THE AXIS OF THE GUIDE ARM MECHANISM IS EXPOSED, ABOUT 18-24 INCHES. BE AWARE THAT AT SOME POINT THE TRANSITION PLATE MAY HIT THE TOP OF THE TOWER, AT WHICH POINT NO MORE WIRE ROPE CAN BE PULLED DOWN BELOW THE RING.
5. KEEP A CLOSE EYE ON THE DRUM CABLE. IF THE DRUM CABLE STARTS TO GO SLACK, BE SURE TO PULL IT OUT OF THE DOOR AND MAINTAIN TENSION ON IT SO, THE ROLLS ON THE WINCH DRUM DO NOT LOOSEN OR GET CROSSED; THE WINDINGS ON THE DRUM SHOULD REMAIN NEAT AND TIGHTLY COILED.
6. SLIDE THE GUIDE TUBE UP TO EXPOSE THE PORTION OF WIRE ROPE NORMALLY INSIDE IT. THE TOP PORTION OF THE WIRE ROPE INSIDE THIS TUBE IS THE FOCUS OF THIS INSPECTION: A LOCATION SUBJECT TO CORROSION OF GALVANIZED LIFT CABLES.

**ITEM 625, LIGHTING, MISC.: TOWER LIFT CABLE INSPECTION AND LUBRICATION (CONT'D)**

7. USE A STIFF, NYLON-BRISTLE BRUSH TO CLEAN ANY LOOSE SCALE FROM THE WIRE ROPE. A SMALL AMOUNT OF SURFACE CORROSION IS EXPECTED WITH GALVANIZED WIRE ROPES AND MAY BE IGNORED. CLEAN THE INSIDE OF THE GUIDE TUBE, PREFERABLY WITH COMPRESSED AIR. REPORT TO THE ENGINEER ANY SIGNIFICANT CORROSION, BROKEN WIRES, OR OTHER LOSS OF SECTION IN THE WIRE ROPE. A MARLINSPIKE (E.G., MCMaster-CARR 3876T19) MAY BE USED TO SEPARATE THE STRANDS FOR CLOSE INSPECTION AT THE SUBJECT LOCATION. FOR REFERENCE, ODOT SPECS (725.21) CALL FOR WIRE ROPE COMPRISED OF 7 STRANDS OF 19 WIRES (7 X 19).
8. INSPECT ALL VISIBLE PORTIONS OF THE LIFT CABLES, NOT JUST THE NOTED LOCATION INSIDE THE GUIDE TUBE. REPORT TO THE ENGINEER ANY SIGNIFICANT CORROSION, BROKEN WIRES, OR OTHER LOSS OF SECTION IN THE WIRE ROPE. DO NOT RAISE THE LOWERING DEVICE IF THESE CONDITIONS ARE PRESENT, UNLESS AUTHORIZED TO DO SO BY THE ENGINEER, OR IF THE RING IS LOCATED IN AN AREA THAT IT WOULD PRESENT A HAZARD TO TRAFFIC IF LEFT IN THE LOWERED STATE.
9. CLEAN AND LUBRICATE ALL ACCESSIBLE PORTIONS OF THE LIFT CABLES AND DRUM CABLE. USE A LUBRICANT SUITABLE FOR APPLICATION TO WIRE ROPE (E.G., MCMaster-CARR 1242K14). FOR A STANDING TOWER, TYPICALLY ONLY THE UPPER AND LOWER PORTIONS OF THE LIFT CABLES WILL BE ACCESSIBLE FOR LUBRICATION, BUT THE DRUM CABLE CAN USUALLY BE LUBRICATED ENTIRELY AS PART OF THE INSPECTION PROCEDURE.

PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH TOWER AND SHALL INCLUDE ALL LABOR AND EQUIPMENT REQUIRED TO PERFORM THIS ITEM OF WORK AS DESCRIBED ABOVE.

**ITEM 625, LIGHTING, MISC.: TOWER LIFT CABLE INSPECTION**

THIS ITEM CONSISTS OF EXPOSING AND INSPECTING HIGH MAST TOWER LIFT CABLES WHERE THEY PASS THROUGH THE HOLLOW AXIS OF THE CENTERING ARMS.

THE CONTRACTOR MAY USE FACTORY-AUTHORIZED INSPECTION PROCEDURE, THE CONTRACTOR'S OWN ESTABLISHED AND DOCUMENTED INSPECTION PROCEDURE (WITH WRITTEN APPROVAL OF THE ENGINEER), OR THE WRITTEN PROCEDURE BELOW.

IT IS RECOMMENDED THAT THIS INSPECTION BE PERFORMED PRIOR TO INSTALLING NEW LED LUMINAIRES, IN CASE A SIGNIFICANT CABLE ISSUE IS FOUND AND THE ENGINEER DETERMINES THAT THE RING SHOULD NOT BE RAISED.

1. LOWER THE DEVICE. STAND WELL BACK FROM THE TOWER BASE FOR SAFETY, IN CASE THE RING FALLS. THIS IS A GENERAL SAFETY REQUIREMENT FOR ALL HIGH MAST TOWER LD OPERATIONS. STOP LOWERING WHEN THE RING REACHES A GOOD WORKING HEIGHT.
2. CRIB UP THE DEVICE WITH A CAGE OR STILTS MADE FROM 2 X 4S, LARGE JACK STANDS, ETC. WITH THE RING AT A GOOD WORKING HEIGHT.
3. AFTER THE RING IS CRIBBED, START ADDING SMALL AMOUNTS OF SLACK TO THE WIRE ROPE ASSEMBLY WHILE PULLING DOWN ON THE ENDS OF THE LIFT CABLES WHERE THE STRAND VISE IS ATTACHED. MAINTAIN CONSTANT TENSION IN THE LIFT CABLES. THIS IS BEST DONE WITH 2-3 HELPERS PULLING THE CABLES DOWN, OR POSSIBLY BY ATTACHING WEIGHTS TO WIRE ROPE THE END LOOP COILS IF NECESSARY.
4. CONTINUE EXPOSING THE ENDS OF THE WIRE ROPE UNTIL THE ENTIRE PORTION THAT IS NORMALLY HIDDEN INSIDE THE AXIS OF THE GUIDE ARM MECHANISM IS EXPOSED, ABOUT 18-24 INCHES. BE AWARE THAT AT SOME POINT THE TRANSITION PLATE MAY HIT THE TOP OF THE TOWER, AT WHICH POINT NO MORE WIRE ROPE CAN BE PULLED DOWN BELOW THE RING.
5. KEEP A CLOSE EYE ON THE DRUM CABLE. IF THE DRUM CABLE STARTS TO GO SLACK, BE SURE TO PULL IT OUT OF THE DOOR AND MAINTAIN TENSION ON IT SO, THE ROLLS ON THE WINCH DRUM DO NOT LOOSEN OR GET CROSSED; THE WINDINGS ON THE DRUM SHOULD REMAIN NEAT AND TIGHTLY COILED.
6. SLIDE THE GUIDE TUBE UP TO EXPOSE THE PORTION OF WIRE ROPE NORMALLY INSIDE IT. THE TOP PORTION OF THE WIRE ROPE INSIDE THIS TUBE IS THE FOCUS OF THIS INSPECTION: A LOCATION SUBJECT TO CORROSION OF GALVANIZED LIFT CABLES.
7. USE A STIFF, NYLON-BRISTLE BRUSH TO CLEAN ANY LOOSE SCALE FROM THE WIRE ROPE. A SMALL AMOUNT OF SURFACE CORROSION IS EXPECTED WITH GALVANIZED WIRE ROPES AND MAY BE IGNORED. CLEAN THE INSIDE OF THE GUIDE TUBE, PREFERABLY WITH COMPRESSED AIR. REPORT TO THE ENGINEER ANY SIGNIFICANT CORROSION, BROKEN WIRES, OR OTHER LOSS OF SECTION IN THE WIRE ROPE.
8. INSPECT ALL VISIBLE PORTIONS OF THE LIFT CABLES, NOT JUST THE NOTED LOCATION INSIDE THE GUIDE TUBE. REPORT TO THE ENGINEER ANY SIGNIFICANT CORROSION, BROKEN WIRES, OR OTHER LOSS OF SECTION IN THE WIRE ROPE. DO NOT RAISE THE LOWERING DEVICE IF THESE CONDITIONS ARE PRESENT, UNLESS AUTHORIZED TO DO SO BY THE ENGINEER, OR IF THE RING IS LOCATED IN AN AREA THAT IT WOULD PRESENT A HAZARD TO TRAFFIC IF LEFT IN THE LOWERED STATE.

PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH TOWER AND SHALL INCLUDE ALL LABOR AND EQUIPMENT REQUIRED TO PERFORM THIS ITEM OF WORK AS DESCRIBED ABOVE.

DESIGN AGENCY



DESIGNER

JSL

REVIEWER

KRD 04/22/22

PROJECT ID


112676

SHEET TOTAL

P.7A 197


| SHEET NUM. |    |   |       |       |    |     |     |     | PART       |            |            |            |            |            |            |            |            |            | ITEM | ITEM EXT | GRAND TOTAL | UNIT  | DESCRIPTION | SEE SHEET NO. |   |    |  |
|------------|----|---|-------|-------|----|-----|-----|-----|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|----------|-------------|-------|-------------|---------------|---|----|--|
| 7          | 7A | 8 | 10    | 11    | 12 | 13  | 14  | 14A | 01/ERD/O T | 02/ERD/O T | 03/ERD/O T | 04/ERD/O T | 05/ERD/O T | 06/ERD/O T | 07/ERD/O T | 08/ERD/O T | 09/ERD/O T | 10/ERD/O T |      |          |             |       |             |               |   |    |  |
|            |    |   | 555   | 1,504 | 18 | 118 | 102 |     | 555        | 1,504      | 18         | 118        | 102        |            |            |            |            |            |      |          | 625         | 26263 | 2,297       | EACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, SYMETRICAL, 70-80K LUMENS, 480V   | 7  |  |
|            |    |   | 12    |       |    | 3   |     |     | 12         |            |            | 3          |            |            |            |            |            |            |      |          | 625         | 26263 | 15          | EACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, SYMETRICAL, 60-69K LUMENS, 480V   | 7  |  |
|            |    |   | 122   | 876   | 17 | 82  | 71  |     | 122        | 876        | 17         | 82         | 71         |            |            |            |            |            |      |          | 625         | 26263 | 1,168       | EACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, ASYMETRICAL, 70-80K LUMENS, 480V  | 7  |  |
|            |    |   | 40    | 149   |    |     |     |     | 40         | 149        |            |            |            |            |            |            |            |            |      |          | 625         | 26263 | 189         | EACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, ASYMETRICAL, 60-69K LUMENS, 480V  | 7  |  |
|            |    |   | 26    |       |    |     |     |     | 26         |            |            |            |            |            |            |            |            |            |      |          | 625         | 26263 | 26          | EACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, ASYMETRICAL, 50-59K LUMENS, 480V  | 7  |  |
| 187        |    |   |       |       |    |     |     |     | 38         | 127        | 2          | 11         | 9          |            |            |            |            |            |      |          | 625         | 26263 | 187         | FACH          | LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (FURNISH ONLY)                     | 7  |  |
|            |    |   |       | 177   |    |     |     |     |            | 177        |            |            |            |            |            |            |            |            |      |          | 625         | 26273 | 177         | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, SYMETRICAL, 60-69K LUMENS, 480V    | 7  |  |
|            |    |   | 4     | 149   |    | 35  | 7   |     | 4          | 149        |            | 35         | 7          |            |            |            |            |            |      |          | 625         | 26273 | 195         | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, SYMETRICAL, 42-47K LUMENS, 480V    | 7  |  |
|            |    |   | 5     | 3     |    |     |     |     | 5          | 3          |            |            |            |            |            |            |            |            |      |          | 625         | 26273 | 8           | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, SYMETRICAL, 37-42K LUMENS, 480V    | 7  |  |
|            |    |   | 31    | 11    |    |     |     |     | 31         | 11         |            |            |            |            |            |            |            |            |      |          | 625         | 26273 | 42          | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, ASYMETRICAL, 42-47K LUMENS, 480V   | 7  |  |
|            |    |   | 10    | 13    |    |     |     |     | 10         | 13         |            |            |            |            |            |            |            |            |      |          | 625         | 26273 | 23          | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, ASYMETRICAL, 28-32K LUMENS, 480V   | 7  |  |
| 24         |    |   |       |       |    |     |     |     | 3          | 18         |            | 2          | 1          |            |            |            |            |            |      |          | 625         | 26273 | 24          | EACH          | LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN (FURNISH ONLY)                      | 7  |  |
|            |    |   | 302   | 1,611 | 37 | 94  | 21  |     | 302        | 1,611      | 37         | 94         | 21         |            |            |            |            |            |      |          | 625         | 27600 | 2,065       | EACH          | LUMINAIRE, MISC.: LUMINAIRE GLASS, REFLECTOR, AND SOCKET REMOVED                        | 7  |  |
|            |    |   | 13    | 65    | 2  | 4   | 1   |     | 13         | 65         | 2          | 4          | 1          |            |            |            |            |            |      |          | 625         | 27600 | 85          | EACH          | LUMINAIRE, MISC.: COUNTERWEIGHT HIGH MAST   | 8  |  |
|            |    |   |       |       |    |     |     |     | 102        |            |            |            |            |            | 10         |            |            |            |      |          | 625         | 50401 | 102         | EACH          | REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (A) | 7A |  |
|            |    |   |       |       |    |     |     |     | 5          |            |            |            |            |            | 2          |            |            |            |      |          | 625         | 50401 | 5           | EACH          | REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (B) | 7A |  |
|            |    |   | 805   | 2,861 | 35 | 238 | 180 |     | 805        | 2,861      | 35         | 238        | 180        |            |            |            |            |            |      |          | 625         | 75506 | 4,119       | EACH          | LUMINAIRE REMOVED   |    |  |
|            |    |   | 445   | 953   |    | 105 | 112 |     | 445        | 953        |            | 105        | 112        |            |            |            |            |            |      |          | 625         | 75507 | 1,615       | EACH          | LUMINAIRE REMOVED, AS PER PLAN  | 7  |  |
|            |    |   |       |       |    |     |     |     | 12         |            |            |            |            |            |            | 12         |            |            |      |          | 625         | 98000 | 12          | EACH          | LIGHTING, MISC.: TOWER LIFT CABLE INSPECTION AND LUBRICATION                            | 7A |  |
|            |    |   |       |       |    |     |     |     | 1,050      |            |            |            |            |            |            | 1,050      |            |            |      |          | 625         | 98000 | 1,050       | EACH          | LIGHTING, MISC.: TOWER LIFT CABLE INSPECTION  | 7A |  |
| 60         |    |   |       |       |    |     |     |     |            |            |            |            |            |            | 20         |            |            |            |      |          | 625         | 98700 | 60          | HOUR          | LIGHTING, MISC.: HOLOPHANE FIELD REPRESENTATIVE   | 7A |  |
|            |    |   |       |       |    |     |     |     |            |            |            |            |            |            |            |            |            |            |      |          |             |       |             |               |   |    |  |
|            |    |   | 1,568 |       |    |     |     |     | 256        | 1,008      | 16         | 112        | 176        |            |            |            |            |            |      |          | 614         | 11110 | 1,568       | HOUR          | LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE                                  |    |  |
|            |    |   |       |       |    |     |     |     | LS         | LS         | LS         | LS         | LS         |            |            |            |            |            |      |          | 614         | 11000 | LS          |               | MAINTAINING TRAFFIC   |    |  |
|            |    |   |       |       |    |     |     |     | LS         | LS         | LS         | LS         | LS         |            |            |            |            |            |      |          | 624         | 10000 | LS          |               | MOBILIZATION  |    |  |

GENERAL SUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 JSL  
 REVIEWER  
 KR D 04/22/22  
 PROJECT ID  
 112676  
 SHEET TOTAL  
 P.9 197

| LOCATION                                 | SHEET NO. | DESCRIPTION  | 625   | 625   | 625   | 625   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|-----------|--|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |           |  | REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (A)<br>EACH | REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN (B)<br>EACH | LIGHTING MISC.: TOWER CABLE INSEPECTION AND LUBRICATION<br>EACH | LIGHTING MISC.: TOWER CABLE INSEPECTION<br>EACH |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D05-01                                   | 15,18     | <b>I-70 AND S.R. 204/TAYLOR RD</b><br>X-3,Q-11 (100')<br><br>CONTINGENCY<br>(LOCATIONS TO BE PROVIDED BY DISTRICT)   |   | 2   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D06                                      | 55-173    | <b>ALL TOWER LOCATIONS</b>   |   |   |   | 1,050   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D09-56                                   | 174       | <b>US-35 AND S.R. 159</b><br>A-1 TO A-6, B-1 TO B-6 (100')   |   |   | 12  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D10-57                                   | 175-176   | <b>US-33 AND S.R. 78</b><br>B-1 TO B-8 (100')  | 8   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D10-63                                   | 181       | <b>I-77 AND S.R. 7</b><br>A-1 TO A-8, B-3,B-7 TO B-10 (110')<br>B-1, B-2 (120')  | 13<br>2   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D10-65                                   | 183-185   | <b>S.R. 7 AND US-50/S.R. 339</b><br>A-A1 (80')<br>A-A6,D-B1,D-B3,D-B5 TO D-B7 (100')<br>A-A4,A-A5,A-A7,B-A2 TO B-A4,C-A1,C-A4,D-DB (110')<br>D-A1 (110')<br>A-A2,A-A3,A-B1,A-B3,B-A1,C-A2,D-B4 (120')<br>A-B2,D-B2 (130')<br>C-A3 (140') | 1<br>6<br>9<br>7<br>2<br>1  | 1   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D11                                      | 186-197   | <b>ALL TOWER LOCATIONS WITH GALVANIZED CABLES</b><br>(LOCATIONS TO BE PROVIDED BY DISTRICT)<br><br>NOTE: ASSUME 100' TOWER HEIGHT IF NOT SPECIFIED   | 43  | 2   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>TOTALS CARRIED TO GENERAL SUMMARY</b> |           |  | 102   | 5   | 12  | 1,050   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

LIGHTING SUB-SUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 JSL  
 REVIEWER  
 KR D 04/22/22  
 PROJECT ID  
 112676  
 SHEET TOTAL  
 P.14A 197