

ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF STAGE CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HRS & < 2 WKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HRS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

ITEM 614, MAINTAINING TRAFFIC (ROAD CLOSED SIGN)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN TRAFFIC SCD MT-101.60.

ITEM 614, MAINTAINING TRAFFIC (SIGNS AND BARRICADES)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES.

PERMITTED LANE CLOSURE SCHEDULE (PLCS)

LANE CLOSURE(S) SHALL CONFORM TO THE PLCS. LANE CLOSURE(S) SHALL NOT BE PERMITTED ON THE FOLLOWING HIGHWAYS WHEN AN APPLICABLE SCHEDULE IS NOT PUBLISHED: INTERSTATES (FUNCTIONAL CLASSIFICATION 1), OTHER FREEWAYS AND EXPRESSWAYS (FUNCTIONAL CLASSIFICATION 2), MULTILANE MAINLINE RAMPS, AND MULTILANE SYSTEM RAMPS. PUBLISHED PLCS INFORMATION CAN BE FOUND ON THE ODOT WEBSITE. THE MONTHLY PUBLISHED SCHEDULES REQUIRED TO BE USED, FOR EACH PLCS SEGMENT WITHIN THE PROJECT AREA, ARE THOSE THAT COMPRISE THE CONSECUTIVE 12-MONTH PERIOD BEGINNING 15 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE AND ENDING 4 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE. THESE SAME 12 MONTHS APPLY FOR THE LIFE OF THE PROJECT AND SHALL BE APPLIED TO EACH RESPECTIVE MONTH OF CONSTRUCTION (MONTH OF LANE CLOSURE(S) SHALL MATCH MONTH OF PLCS USED). LANE CLOSURE(S) IN PLACE FOR MULTIPLE MONTHS SHALL ALWAYS COMPLY WITH THE CURRENT RESPECTIVE MONTH.

(FOR EXAMPLE: IF THE SALE DATE FOR THE PROJECT WAS MARCH OF 2021, THE MONTHLY PUBLISHED SCHEDULES FOR EACH APPLICABLE PLCS SEGMENT WOULD BE DECEMBER 2019 TO NOVEMBER 2020. IF THIS WAS A THREE-YEAR PROJECT, YEAR THREE WOULD STILL BE USING THE DECEMBER 2019 TO NOVEMBER 2020 MONTHLY SCHEDULES. IF THE PROJECT DESIRED TO CLOSE TWO LANES IN JUNE 2021, REFERENCE WOULD BE MADE TO THE JUNE 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S). IF THE SAME TWO LANES WERE DESIRED TO BE CLOSED AGAIN IN JULY 2021, REFERENCE WOULD BE MADE TO THE JULY 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S).)

MORE RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE AT THE DISCRETION OF THE ENGINEER IN ORDER TO COMPLY WITH THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

LESS RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE SUBJECT TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)) AND SHALL NOT BE IMPLEMENTED UNTIL, AND UNLESS, APPROVED BY THE PROPER ODOT AUTHORITY. [EXISTING MOT EXCEPTIONS THAT HAVE ALREADY BEEN APPROVED IN ACCORDANCE TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY AND STANDARD PROCEDURE ARE DETAILED IN THE APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S) PLAN NOTE.]

ALLOWABLE LANE CLOSURE HOURS FOR FACILITIES NOT COVERED BY THE PLCS, IF ANY, SHALL BE AS SPECIFIED ELSEWHERE IN THE PLANS.

ITEM 614 MAINTENANCE OF TRAFFIC - ADDITIONAL LANE CLOSURES

IT IS THE INTENT OF THIS CONTRACT TO PERFORM THE REQUIRED WORK WHILE TRAFFIC IS MAINTAINED BY THE MAINTENANCE OF TRAFFIC (LUMP SUM) PAY ITEM. WHEN SERVICE WORK REQUIRES ADDITIONAL LANE OR SHOULDER CLOSURES THAT ARE OUTSIDE THE SCOPE OF ANNUAL MAINTENANCE ITEMS AND OTHER SCHEDULED WORK IDENTIFIED IN THIS PLAN SET, CONTRACTOR SHALL BE REIMBURSED FOR MAINTENANCE OF TRAFFIC COSTS BY THE ITEMS LISTED IN THIS NOTE.

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE PROVISIONS OF ITEM 614 OF THE SPECIFICATIONS. WHERE ALL WORK ACTIVITIES ARE CONFINED TO THE SHOULDER AND NO ENCROACHMENT INTO THE TRAVELED LANES IS NECESSARY, THE MINIMUM TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

WHEN WORKING ON THE NARROW BARRIER MEDIAN, TRAFFIC CONTROL SHALL BE PLACED ON BOTH SIDES OF THE MEDIAN AND PAID AS TWO (2) EACH OF APPROPRIATE PAY ITEMS.

ANY HAZARD DURING NONWORKING HOURS SHALL BE ADEQUATELY PROTECTED WITH DRUMS OR BARRICADES, OR AS DIRECTED BY THE ENGINEER. NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REPAIR THE DAMAGED ASSET. PAYMENT SHALL BE AT THE UNIT BID PRICE FOR ONLY ONE TRAFFIC CONTROL SET-UP AND TRAFFIC CONTROL REMOVAL AT THE SAME LOCATION.

WHERE ANY ENCROACHMENT ON THE TRAVELED LANES IS NECESSARY, THE CONTRACTOR SHALL PLACE LANE CLOSURES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC DEVICES, CURRENT EDITION, THE PLAN SHEETS, AND THE STANDARD CONSTRUCTION DRAWINGS.

WHERE MULTIPLE REPAIR LOCATIONS ARE IN SUFFICIENTLY CLOSE PROXIMITY, THEY CAN BE INCLUDED WITHIN ONE TRAFFIC CONTROL SET-UP. PAYMENT WILL BE MADE FOR ONLY ONE TRAFFIC CONTROL SET-UP FOR THE REPAIR OF SEVERAL AREAS; EXCEPT THAT IF THE TOTAL AMOUNT OF WORK EXCEEDS THAT WHICH CAN BE PRACTICALLY ACCOMPLISHED DURING ONE NORMAL DAY. THEN PAYMENT WILL BE MADE FOR ADDITIONAL SET-UPS ON SUBSEQUENT DAYS. LOCATIONS OF THIS TYPE SHALL BE DETERMINED BY THE ENGINEER.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAIN TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

EACH ITEM SHALL INCLUDE SET-UP OF TRAFFIC CONTROL, MAINTENANCE OF TRAFFIC CONTROL, AND THE REMOVAL OF THE TRAFFIC CONTROL. PAYMENT SHALL BE AT THE UNIT BID PRICE FOR EACH BID ITEM.

ITEM	UNIT	DESCRIPTION
614	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON TWO LANE HIGHWAY
614	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON FOUR LANE (UNDIVIDED) HIGHWAY
614	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON FOUR LANE OR GREATER (DIVIDED) HIGHWAY
614	EACH	MAINTENANCE OF TRAFFIC FOR SHOULDER CLOSURE



ITEM 614 - LAW ENFORCEMENT OFFICE (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINTS OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP.)

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING THE SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF THE SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF THE SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHOULD NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF THE SHIFT.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE - 75 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

RESTORATION AND CLEAN-UP IN WORK AREAS

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO THE EXISTING BEFORE THE WORK WAS STARTED, AS PER 104.04.

BROKEN GLASSWARE FROM LIGHTING UNITS IN THE WORK AREA SHALL BE CLEANED UP BY THE CONTRACTOR. THE BROKEN GLASSWARE SHALL BE CLEANED UP BY SWEEPING UP THE AREA SO THAT IT IS FREE OF BROKEN GLASS. THE GLASS WHICH IS SWEEPED UP SHALL BE DISPOSED OF IN REGULAR RUBBISH DISPOSAL UNITS. ALL BROKEN CONCRETE SHALL BE DISPOSED OF THE CONTRACTOR OFF THE RIGHT OF WAY. PAYMENT FOR RESTORATION WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

LOCK OUT/TAG OUT PROCEDURE

ALL LOCK OUT/TAG OUT INSTALLATIONS SHALL BE DOCUMENTED IN WRITING AND SUBMITTED TO THE ENGINEER. THE LIST SHALL BE UPDATED PROMPTLY WHEN CONDITIONS CHANGE.

CABLE INCIDENTALS

CONNECTORS, SPLICES, TERMINALS AND SIMILAR ITEMS NEEDED TO RESTORE CIRCUITS TO FULL OPERATION SHALL BE INCIDENTAL TO THE REPAIR OR REPLACEMENT OF ELECTRICAL CABLES AND WIRES THROUGHOUT THIS CONTRACT.

GROUNDING

IF EXISTING ITEMS OR EQUIPMENT HAVE EVIDENCE OF PREVIOUS GROUNDING BONDS, REPAIR OR REPLACEMENT OF THAT ITEM SHALL RESTORE GROUNDING. GROUNDING SHALL BE TESTED TO ENSURE IT PROVIDES ACCEPTABLE RESISTANCE. THIS WORK SHALL BE INCIDENTAL TO THE ITEM OF WORK COMPLETED.

UNDERDRAIN FOR PULLBOX

CONTRACTOR SHALL INSTALL UNDERDRAIN FOR PULLBOX AS DIRECTED BY ENGINEER. DRAIN SHALL BE INSTALLED PER STANDARD CONSTRUCTION DRAWING HL-30.11 WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THIS ITEM SHALL INCLUDE ANIMAL GUARDS ON THE OUTLET.

EXCAVATION ACTIVITIES

FOR LOCATIONS WHERE MAINTENANCE OR REPLACEMENT ACTIVITIES REQUIRE EXCAVATION, THE CONTRACTOR MUST PROVIDE THE LOCATION INFORMATION (DESCRIPTION OF WORK, AERIAL MAP OF LOCATION, AND LATITUDE/LONGITUDE OF LOCATION) TO THE DISTRICT ENVIRONMENTAL OFFICE (JARED.STEEGE@DOT.OHIO.GOV). THE DISTRICT ENVIRONMENTAL OFFICE WILL REVIEW THE LOCATION FOR ITS PROXIMITY TO LANDFILL LOCATIONS AND, IF NECESSARY, OBTAIN APPROPRIATE AUTHORIZATION FOR WORK IN PROXIMITY TO A LANDFILL. NO EXCAVATION WORK MAY OCCUR AT LOCATIONS REQUIRING EXCAVATION UNTIL THE DISTRICT ENVIRONMENTAL OFFICE HAS APPROVED THE EXCAVATION WORK. STANDARD CONSTRUCTION DRAWING HL-30.11 WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THIS ITEM SHALL INCLUDE ANIMAL GUARDS ON THE OUTLET.

LIGHTING SPECIAL SPECIFICATIONS

LIGHTING OUTAGE REPORTS

ENGINEER WILL PERFORM A NIGHT INSPECTION OF THE LIGHTING SYSTEM ONCE PER MONTH TO DETERMINE THE NUMBER OF OUTAGES BY LOCATION WITHIN MONTGOMERY COUNTY IN DISTRICT 7. A LOCATION IS DEFINED AS A LIGHTING CONTROL CENTER (LCC) AT AN INTERCHANGE, INTERSECTION, REST AREA, OR PARK AND RIDE. IF A LIGHTING CONTROL CENTER HAS MULTIPLE CIRCUITS, THE 90% GOAL WILL BE APPLIED TO THE SUM TOTAL OF LIGHTS ON EACH OF THE CIRCUITS. ANY OUTAGES WILL BE REPORTED TO THE CONTRACTOR.

CONTRACTOR SHALL MAINTAIN LIGHTS AT EACH LOCATION SUCH THAT AT LEAST 90% OF THE LAMPS ARE OPERATING AS EXPECTED. LIGHTS WILL PROVIDE CONSISTENT ILLUMINATION FROM DUSK TO DAWN AND BE OFF DURING DAYLIGHT HOURS. LIGHTS THAT DO NOT ILLUMINATE OR ARE CYCLING ON AND OFF ARE NOT PROVIDING CONSISTENT ILLUMINATION. LED FIXTURES ARE IN A FAILED CONDITION WHEN MORE THAN 10% OF THE TOTAL NUMBER OF ORIGINAL INDIVIDUAL LED EMITTERS IN THE LED LIGHT SOURCE FAIL TO ILLUMINATE. THE GOAL OF 90% MAY BE REFERRED TO AS THE "90% RULE". THE 90% RULE MAY BE WAIVED BY THE ENGINEER WHEN CONDITIONS HAVE CHANGED TO MAKE ENFORCEMENT OF THE 90% RULE IMPRACTICAL.

IN THE FIRST MONTH OF THE CONTRACT, AN INITIAL NIGHT INSPECTION WILL BE PERFORMED BY THE ENGINEER AND THE CONTRACTOR'S REPRESENTATIVE, IF DESIRED BY THE CONTRACTOR. IF THE LIGHTING DOESN'T MEET THE 90% CRITERIA IN THE INITIAL REPORT, THE CONTRACTOR WILL THEN HAVE 30 CALENDAR DAYS TO PERFORM WORK TO REACH THE CRITERIA. IF THE CONTRACTOR ENCOUNTERS EXCESSIVE PROBLEMS WITH AN AREA, THE CONTRACTOR SHALL NOTIFY THE ENGINEER ON THE REPAIRS NEEDED AND A TIME SCHEDULE FOR THE REPAIRS. THE ENGINEER WILL PROVIDE MONTHLY OUTAGE REPORTS. IF THE CONTRACTOR DOES NOT MEET THE 90% CRITERIA FOR TWO CONSECUTIVE REPORTS, THE CONTRACTOR SHALL BE SUBJECT TO \$900.00 PER DAY IN DISINCENTIVES PER CMS 108.07 UNTIL 90% OF THE LIGHTS AT THE LOCATION ARE OPERATING AS EXPECTED.

WHILE THE GOAL IS 90% OF THE LIGHTS FED FROM EACH LIGHTING CONTROL CENTER TO BE OPERATING, THE CONTRACTOR SHALL GIVE HIS ATTENTION TO THE LOCATIONS THAT ARE CONSISTENTLY OUT. THE CONTRACTOR SHALL INVESTIGATE THE PROBLEM, THEN DISCUSS WITH THE ENGINEER THE NECESSARY REPAIRS AND SCHEDULE TO COMPLETE THE WORK. A LIST OF KNOWN OUTAGES THAT ARE CONSISTENTLY NOT WORKING FOR TWO (2) OR MORE MONTHS SHALL BE PROVIDED TO THE CONTRACTOR. THESE LOCATIONS SHALL BE REPAIRED WITHIN 30 CALENDAR DAYS OF NOTIFICATION. FAILURE TO RESTORE THE ITEMS WITHIN THE 30 CALENDAR DAYS SHALL SUBJECT THE CONTRACTOR TO \$900.00 PER DAY IN DISINCENTIVES PER CMS 108.07 PER LUMINAIRE FOR EVERY DAY UNTIL THE LIGHTING HAS BEEN RESTORED.

DOWNGED LIGHT POLES SHALL BE REPAIRED WITHIN 14 CALENDAR DAYS OF NOTIFICATION BY THE ENGINEER. IF THE LIGHT POLE CAN'T BE REPAIRED IN THAT TIME FRAME, THE ENGINEER MUST APPROVE THE DELAY IN WRITING AND THE DOWNED POLE SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. IF THE DOWNED POLE IS DAMAGED AND CAN'T BE RESET, THEN IT SHOULD BE REMOVED FROM THE SITE WITHIN 7 CALENDAR DAYS. FAILURE TO RE-ERECT OR REMOVE THE DOWNED POLE WITHIN THE ALLOTTED TIME SHALL BE SUBJECT TO \$900.00 PER DAY IN DISINCENTIVES PER CMS 108.07 PER DOWNED POLE FOR EVERY DAY UNTIL THE DOWNED POLE HAS BEEN REMOVED OR RE-ERECTED.

UPDATE TO THE TOTAL QUANTITY OF LIGHTS IN OPERATION

DURING THE LIFE OF THIS CONTRACT, THE TOTAL NUMBER OF LIGHTS THAT THE CONTRACTOR MUST MAINTAIN MAY CHANGE DUE TO LIGHTS BEING ADDED OR REMOVED BY OTHER CONSTRUCTION PROJECTS.

WHILE A CONSTRUCTION PROJECT IS ACTIVE, LIGHTS WITHIN ITS WORK LIMITS MAY OR MAY NOT BECOME THE RESPONSIBILITY OF EACH CONSTRUCTION PROJECT WITHIN THIS PROJECT'S WORK LIMITS, THE ENGINEER WILL PROVIDE AN ACCURATE LISTING AND/OR DRAWING OF THE LIGHTS THAT WILL NOT BE MAINTAINED BY THIS CONTRACT. WHEN THE CONSTRUCTION PROJECT IS COMPLETE, THE ENGINEER WILL PROVIDE THE CONTRACTOR WRITTEN NOTICE VIA ELECTRONIC COMMUNICATION THAT THEY WILL RESUME MAINTENANCE RESPONSIBILITY FOR THE LIGHTS THAT WERE TEMPORARILY REMOVED.

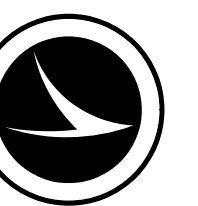
THE CURRENT QUANTITY OF MAINTAINED LIGHTS WILL BE USED FOR THE 90% LIGHTS IN OPERATION PER LOCATION CRITERIA.



625 LIGHTING, MISC.: CONNECTION, UNFUSED PERMANENT

THIS ITEM CONSISTS OF REPLACING ANY UNFUSED PERMANENT CONNECTIONS. THIS INCLUDES ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE SYSTEM TO NORMAL OPERATION.

DESIGN AGENCY



DESIGNER

CJP

REVIEWER

BJA

PROJECT ID

121505

SHEET TOTAL

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625 LIGHT POLE, MISC.: STRUCTURE MAINTENANCE FOR LIGHT POLES

THIS ITEM WILL APPLY TO ALL CONVENTIONAL AND LOW-MAST LIGHT POLES DESIGNATED FOR MAINTENANCE IN THIS FISCAL YEAR ON THE LIGHTING INVENTORY SUMMARY SHEET. THE DIVIDING LINE BETWEEN EVEN AND ODD FISCAL YEAR MAINTENANCE ALIGNS ROUGHLY WITH STATE ROUTE 4. STRUCTURE MAINTENANCE FOR LIGHT POLES WILL TAKE PLACE ONCE EVERY TWO YEARS.

THIS ITEM WILL INCLUDE THE GROUP CLEANING OF ALL FRANGIBLE BASES, A VISUAL INSPECTION OF POLES, A VISUAL INSPECTION OF FOUNDATIONS AND LUBRICATION OF PULL-APART CONNECTORS. THE INSPECTION SHOULD BE CONDUCTED IN A SYSTEMATIC AND ORGANIZED MANNER THAT WILL BE EFFICIENT AND MINIMIZE THE POSSIBILITY OF ANY ITEM BEING OVERLOOKED. THIS WORK SHALL BE PERFORMED ONCE DURING THE LIFE OF THE CONTRACT.

THE FOLLOWING TASKS ARE REQUIRED ON ALL STRUCTURES:

1. THE BASE AND THE SURFACE OF THE CONCRETE FOUNDATION SHALL BE CLEANED WITH A WIRE BRUSH, THEN VACUUMED OR BLOWN FREE OF ALL DUST AND/OR DEBRIS.
2. ALL LIGHT POLES, FRANGIBLE BASES AND FOUNDATIONS SHOULD BE VISUALLY INSPECTED. THE INSPECTION SHOULD INCLUDE, BUT NOT BE LIMITED TO, CRACKS IN THE CONCRETE, SOIL EROSION, NON-BEARING LEVELING NUTS, LOOSE ANCHOR NUTS, CRACKED WELDS, MISSING OR LOOSE HARDWARE AND CORROSION. A PHOTO OF THE POLE, BASE AND FOUNDATION SHALL BE TAKEN DURING THE INSPECTION AND STORED IN THE FIELD MAPS APP. APPROPRIATE CORRECTIVE ACTION SHOULD BE TAKEN TO CORRECT DETECTED DEFICIENCIES.
3. CONTRACTOR SHALL OPEN HANDHOLE OR FRANGIBLE BASE DOOR AND REVIEW INTERIOR CONDITION OF POLE, BASE, ANCHOR BOLTS, WIRING AND CONNECTOR KITS. IF STANDING WATER IS FOUND IN THE BASE OF THE POLE OR IN THE FRANGIBLE BASE, CONTRACTOR SHALL RESTORE WEEP HOLES AND/OR REMOVE DEBRIS WHICH IS CONTRIBUTING TO WATER COLLECTING INSIDE BASE. PRESENCE OF NON-BEARING LEVELING NUTS, LOOSE ANCHOR NUTS, CORRODED BOLTS, CRACKED WELDS, MISSING OR LOOSE HARDWARE, OR SIMILAR DETERIORATION SHALL BE NOTED IN THE INSPECTION REPORT. A PICTURE OF DETERIORATED CONDITION SHALL BE PROVIDED TO THE ENGINEER WITH POLE IDENTIFICATION INFORMATION SO THE RATE OF DETERIORATION MAY BE TRACKED OVER TIME.
4. REPLACE ANY MISSING HANDHOLE AND FRANGIBLE BASE COVERS, INCLUDING RETAPPING HOLES PLUGGED BY BROKEN BOLTS. ONLY STAINLESS STEEL OR ALUMINUM BOLTS SHALL BE USED. ABS PLASTIC DOORS MAY BE USED IN LIEU OF ALUMINUM DOORS.
5. THE MEDIAN WALL JUNCTION BOX CLOSEST TO THE POLE SHALL BE OPENED AND CLEANED OF DEBRIS, THEN VACUUMED OR BLOWN FREE OF ALL DUST AND/OR DEBRIS. REPLACE MISSING JUNCTION BOX COVER WITH COVER MATERIAL PROVIDED BY ODOT, IF NECESSARY. THIS ITEM INCLUDES RETAPPING HOLES PLUGGED BY BROKEN BOLTS AND REPLACING MISSING BOLTS. ONLY STAINLESS STEEL OR ALUMINUM BOLTS SHALL BE USED TO REPLACE MISSING BOLTS. ANTI-SIEZE LUBRICANT SHALL BE APPLIED TO ALL BOLTS. ENGINEER MAY WAIVE INSTALLATION OF BOLTS ON THE LOWEST SIDE OF THE COVER IF ENOUGH BOLTS ARE SECURING THE TOP AND SIDES OF THE COVER.
6. VOIDS AROUND FOUNDATIONS CAUSED BY EROSION SHALL BE BACKFILLED WITH DIRT AND SEEDED TO PREVENT ADDITIONAL EROSION.
7. INSPECT CONDUIT COMING OUT OF THE FOUNDATION. RESTORE OR REPLACE DUCT SEAL SO CONDUIT OPENING IS COMPLETELY COVERED. CHEMICAL FOAM MAY NOT BE USED TO FILL OR COVER OPENING.
8. REPAIR ANY DEFECTIVE WIRING BETWEEN THE STRUCTURE AND THE GROUND ROD.
9. LUBRICATE ALL PULL-APART CONNECTORS LOCATED IN EACH BASE.
10. IF A POLE IS LEANING, IT SHALL BE SHIMMED AT THE BASE IN ORDER TO RETURN IT TO ITS PROPER POSITION.
11. VERIFY THE EXISTING POLE IDENTIFICATION SYSTEM IS LEGIBLE AND COMPLIES WITH CMS 625.09 AND SCD HL-10.12, INCORPORATING THE CIRCUIT NUMBER AND POLE NUMBER (AS NEEDED). IF IT FAILS TO MEET THE CRITERIA, THEN CONTRACTOR SHALL REPLACE THE MARKINGS IN COMPLIANCE WITH CMS 625.09 AND SCD HL-10.12, INCORPORATING THE CIRCUIT NUMBER AND POLE NUMBER (AS NEEDED).

12. CONTRACTOR SHALL UTILIZE THE ODOT HIGHWAY LIGHTING COLLECTOR APPLICATION TO MAKE AN ENTRY WHEN PERFORMING MAINTENANCE ON EACH LUMINAIRE, UPDATING THE ASSET ACCORDINGLY CONCERNING THE ASSET'S INFORMATION AND COMPLETION OF THE INSPECTION FORM WITHIN THE APPLICATION.

THIS ITEM INCLUDES FURNISHING ALL LABOR, EQUIPMENT AND MATERIAL FOR MAINTAINING AND REPAIRING AS DESCRIBED HEREIN, FOR EACH COMPONENT PART OF THE HIGHWAY LIGHTING SYSTEM.

IF ANY ITEM UNDER STRUCTURE MAINTENANCE FOR POLES IS BEYOND REPAIR, IT SHALL BE REPLACED WITH NEW UNDER THE PERTINENT PAY ITEMS, AS DIRECTED BY THE ENGINEER.

625 LIGHT POLE (INSTALLATION ONLY), AS PER PLAN (BY TYPE)

THIS ITEM SHALL CONSIST OF ERECTING A NEW OR USED LIGHT POLE INCLUDING ANY NEW CONNECTOR KITS, WIRING, TESTING, LIGHT POLE IDENTIFICATION AND OTHER INCIDENTALS. LIGHT POLE IS DEFINED HEREIN AS THE VERTICAL SUPPORT. THE INCIDENTAL ATTACHMENTS INCLUDING BRACKET ARM AND FRANGIBLE BASE SHALL BE PAID FOR UNDER SEPARATE PAY ITEMS.

THE LIGHT POLE SHALL BE PROVIDED BY ODOT DISTRICT 7. POLE SHALL HAVE SIMILAR HEIGHT AND BASE AS THE EXISTING POLE. CONTRACTOR WILL BE REQUIRED TO TRANSPORT THE POLES FROM AN ODOT FACILITY TO THE LOCATION OF INSTALLATION AS PART OF THIS PAY ITEM. NO ADDITIONAL COMPENSATION WILL BE MADE FOR TRANSPORTING POLES FROM AN ODOT DISTRICT 7 FACILITY.

A CONVENTIONAL LIGHT POLE IS CONSIDERED ANYTHING UNDER 50 FEET TALL. A LOW MAST LIGHT POLE IS 50 FEET TALL WITHOUT A LOWERING MECHANISM.

THE CONTRACTOR'S RESPONSE TO A DOWNED LIGHT POLE SHALL BE ADDRESSED ACCORDING TO THE OUTAGE REPORT NOTE. POLES WHICH ARE NOT REUSABLE AS DETERMINED BY THE ENGINEER SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR REMOVAL AND DISPOSAL OUTSIDE THE RIGHT-OF-WAY. REMOVAL OF DOWNED LIGHT POLES SHALL BE INCIDENTAL TO THIS ITEM.

625 ERECTING REUSABLE DOWNED LIGHT POLE, AS PER PLAN

THIS ITEM SHALL CONSIST OF ERECTING A REUSABLE DOWNED POLE, INCLUDING THE REMOVAL OF BROKEN BOLTS, RETAPPING HOLES, REPLACING POLE CAPS, FURNISHING NEW CONNECTOR KITS, WIRING, TESTING, LIGHT POLE IDENTIFICATION AND OTHER INCIDENTALS NECESSARY TO RETURN THE UNIT TO NORMAL OPERATION.

THE CONTRACTOR'S RESPONSE TO A DOWNED LIGHT POLE SHALL BE ADDRESSED ACCORDING TO THE OUTAGE REPORT NOTE. THE DOWNED LIGHT POLES MAY BE FOUND AT THE LOCATION OF THE KNOCKDOWN OR AN ODOT DISTRICT 7 FACILITY. THE CONTRACTOR WILL BE REQUIRED TO TRANSPORT THE DOWNED POLES FROM AN ODOT FACILITY TO THE LOCATION OF KNOCKDOWNS AS PART OF THIS PAY ITEM. NO ADDITIONAL COMPENSATION WILL BE MADE FOR TRANSPORTING ANY DOWNED POLES TO AND FROM AN ODOT DISTRICT 7 FACILITY. POLES WHICH ARE NOT REUSABLE AS DETERMINED BY THE ENGINEER SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR REMOVAL AND DISPOSAL OUTSIDE THE RIGHT-OF-WAY. REMOVAL OF ALL NON-USABLE POLES WILL BE PERFORMED AS AN INCIDENTAL TO THIS ITEM.

625 LIGHT TOWER, MISC.: STRUCTURE MAINTENANCE FOR LIGHT TOWERS

THIS ITEM WILL INCLUDE THE MAINTENANCE AND VISUAL INSPECTION OF ALL TOWERS DESIGNATED FOR MAINTENANCE IN THIS FISCAL YEAR ON THE LIGHTING INVENTORY SUMMARY SHEET. THE DIVIDING LINE BETWEEN EVEN AND ODD FISCAL YEAR MAINTENANCE ALIGNS ROUGHLY WITH STATE ROUTE 4. STRUCTURE MAINTENANCE FOR LIGHT TOWERS WILL TAKE PLACE ONCE EVERY TWO YEARS.

THIS ITEM WILL INCLUDE THE GROUP CLEANING OF ALL FRANGIBLE BASES, A VISUAL INSPECTION OF THE POLE, A VISUAL INSPECTION OF THE FOUNDATION AND LUBRICATION OF PULL-APART CONNECTORS. THE INSPECTION SHOULD BE CONDUCTED IN A SYSTEMATIC AND ORGANIZED MANNER THAT WILL BE EFFICIENT AND MINIMIZE THE POSSIBILITY OF ANY ITEM BEING OVERLOOKED. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, IF ANY MAJOR PROBLEMS ARE DETECTED.

THIS WORK SHALL BE PERFORMED ONCE DURING THE LIFE OF THE CONTRACT. IF ANY ITEM UNDER STRUCTURE MAINTENANCE FOR LIGHT TOWER IS BEYOND REPAIR, IT SHALL BE REPLACED WITH NEW UNDER THE PERTINENT PAY ITEMS, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING TASKS ARE REQUIRED ON ALL STRUCTURES:

1. THE BASE AND THE SURFACE OF THE CONCRETE FOUNDATION SHALL BE CLEANED, THEN VACUUMED OR BLOWN FREE OF ALL DUST AND/OR DEBRIS. VOIDS AROUND FOUNDATIONS CAUSED BY EROSION SHALL BE BACKFILLED WITH DIRT AND SEEDED TO PREVENT ADDITIONAL EROSION. AT ALL LOCATIONS WHERE THE ANCHOR BOLTS ARE COVERED WITH DIRT AND DEBRIS, OR WHERE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL REGRADE THE SURROUNDING AREA TO GET THE TOP OF THE BASE ABOVE GROUND LEVEL. ENOUGH SOIL SHALL BE REMOVED TO BRING THE OUTSIDE EDGE OF THE BASE BETWEEN 1"-3" ABOVE GROUND LEVEL. THE FINISHED GRADE SHALL SLOPE IN THE DIRECTION OF THE NATURAL DRAINAGE, OR AS DIRECTED BY THE ENGINEER. LAWN AREAS SHALL BE SEEDED IN ACCORDANCE WITH CMS 659, AS PART OF THIS PAY ITEM.
2. ALL TOWER POLES AND FOUNDATIONS SHOULD BE VISUALLY INSPECTED. THE INSPECTION SHOULD INCLUDE, BUT NOT BE LIMITED TO, CRACKS IN THE CONCRETE, SOIL EROSION, NON-BEARING LEVELING NUTS, LOOSE ANCHOR NUTS, CRACKED WELDS, MISSING OR LOOSE HARDWARE AND CORROSION. A PHOTO OF THE POLE AND FOUNDATION SHALL BE TAKEN DURING THE INSPECTION AND STORED IN THE FIELD MAPS APP. APPROPRIATE CORRECTIVE ACTION SHOULD BE TAKEN TO CORRECT DETECTED DEFICIENCIES.
3. CONTRACTOR SHALL OPEN HANDHOLE DOOR AND REVIEW INTERIOR CONDITION OF POLE, BASE, ANCHOR BOLTS, WIRING AND CONNECTOR KITS. IF STANDING WATER IS FOUND IN THE BASE OF THE POLE, CONTRACTOR SHALL RESTORE WEEP HOLES AND/OR REMOVE DEBRIS WHICH IS CONTRIBUTING TO WATER COLLECTING INSIDE BASE. PRESENCE OF NON-BEARING LEVELING NUTS, LOOSE ANCHOR NUTS, CORRODED BOLTS, CRACKED WELDS, MISSING OR LOOSE HARDWARE, OR SIMILAR DETERIORATION SHALL BE NOTED IN THE INSPECTION REPORT. A PICTURE OF DETERIORATED CONDITION SHALL BE PROVIDED TO THE ENGINEER WITH POLE IDENTIFICATION INFORMATION SO THE RATE OF DETERIORATION MAY BE TRACKED OVER TIME. REPLACE THE LOCK ON THE DOOR, AS NEEDED.
4. ANCHOR BOLTS SHALL BE TESTED FOR STRUCTURAL INTEGRITY BY SOUNDING WITH A HAMMER. ANY ANCHOR BOLT NUTS THAT ARE LOOSE SHALL BE RETIGHTENED, USING THE "TURN OF THE NUT" METHOD DESCRIBED IN SECTION 630.06. ANY MISSING OR SEVERELY RUSTED NUTS AND WASHERS SHALL BE REPLACED WITH HARDWARE OF THE PROPER SIZE.

5. EACH TOWER LIGHTING FIXTURE SUPPORT RING SHALL BE LOWERED COMPLETELY TO DETERMINE IF THE LOWERING MECHANISM IS FUNCTIONING PROPERLY. IF MALFUNCTIONS ARE FOUND OR THE LIGHTING FIXTURE SUPPORT RINGS CANNOT BE LOWERED, ITEM 625 REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURES, AS PER PLAN SHALL BE UTILIZED.

WHILE LOWERED TO THE GROUND AT WORKING LEVEL THE POWER CORD SHALL BE PLUGGED INTO THE INLET ON THE SUPPORT RING AND THE LUMINAIRE ENERGIZED. THE TOWER LIGHTING MECHANISMS AND CABLES SHALL BE LUBRICATED TO INSURE PROPER OPERATION. A LITHIUM BASED GREASE SHALL BE USED FOR LUBRICATION PURPOSES. ANY DAMAGED OR CORRODED CABLE SHALL BE REPLACED AS PART OF THIS ITEM. THE SUPPORT RING SHALL BE LEVELED ACCORDING TO THE MANUFACTURER'S INSTRUCTION PRIOR TO FINAL LATCHING OF THE SUPPORT RING TO THE TOP OF THE TOWER.

6. IF TOWER IS ON A MEDIAN WALL, THE MEDIAN WALL JUNCTION BOX CLOSEST TO THE POLE SHALL BE OPENED AND CLEANED OF DEBRIS, THEN VACUUMED OR BLOWN FREE OF ALL DUST AND/OR DEBRIS. REPLACE MISSING JUNCTION BOX COVER WITH COVER MATERIAL PROVIDED BY ODOT, IF NECESSARY. THIS ITEM INCLUDES RETAPPING HOLES PLUGGED BY BROKEN BOLTS AND REPLACING MISSING BOLTS. ONLY STAINLESS STEEL OR ALUMINUM BOLTS SHALL BE USED TO REPLACE MISSING BOLTS. ANTI-SIEZE LUBRICANT SHALL BE APPLIED TO ALL BOLTS. ENGINEER MAY WAIVE INSTALLATION OF BOLTS ON THE LOWEST SIDE OF THE COVER IF ENOUGH BOLTS ARE SECURING THE TOP AND SIDES OF THE COVER.
7. INSPECT CONDUIT COMING OUT OF THE FOUNDATION. RESTORE OR REPLACE DUCT SEAL SO CONDUIT OPENING IS COMPLETELY COVERED. CHEMICAL FOAM MAY NOT BE USED TO FILL OR COVER OPENING.
8. REPAIR ANY DEFECTIVE WIRING BETWEEN THE STRUCTURE AND THE GROUND ROD.
9. LUBRICATE ALL PULL-APART CONNECTORS LOCATED IN EACH BASE.
10. VERIFY THE EXISTING POLE IDENTIFICATION SYSTEM IS LEGIBLE AND COMPLIES WITH CMS 625.09 AND SCD HL-10.12, INCORPORATING THE CIRCUIT NUMBER AND POLE NUMBER (AS NEEDED). IF IT FAILS TO MEET THE CRITERIA, THEN CONTRACTOR SHALL REPLACE THE MARKINGS IN COMPLIANCE WITH CMS 625.09 AND SCD HL-10.12, INCORPORATING THE CIRCUIT NUMBER AND POLE NUMBER (AS NEEDED).

11. CONTRACTOR SHALL UTILIZE THE ODOT HIGHWAY LIGHTING COLLECTOR APPLICATION TO MAKE AN ENTRY WHEN PERFORMING MAINTENANCE ON EACH TOWER, UPDATING THE ASSET ACCORDINGLY CONCERNING THE ASSET'S INFORMATION AND COMPLETION OF THE INSPECTION FORM WITHIN THE APPLICATION.

THIS ITEM INCLUDES FURNISHING ALL LABOR, EQUIPMENT AND MATERIAL FOR MAINTAINING AND REPAIRING AS DESCRIBED HEREIN, FOR EACH COMPONENT PART OF THE HIGHWAY LIGHTING SYSTEM.

IF ANY ITEM UNDER STRUCTURE MAINTENANCE FOR TOWERS IS BEYOND REPAIR, IT SHALL BE REPLACED WITH NEW UNDER THE PERTINENT PAY ITEMS, AS DIRECTED BY THE ENGINEER.



625 TRENCH, 24" DEEP, AS PER PLAN

THIS ITEM SHALL CONSIST OF EXCAVATING THE TRENCH TO A DEPTH OF 24 INCHES, BACKFILLING, AND RESTORING THE AREA. PLASTIC CAUTION TAPE SHALL BE USED TO MARK WHERE UNDERGROUND CABLE HAS BEEN INSTALLED.

THE TAPE SHALL BE AS PER 625.20 AND 725.22, EXCEPT THE TAPE SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED NO LESS THAN 2 INCH OR MORE THAN 12 INCHES BELOW THE FINAL FINISHED GRADE OF THE TRENCH. THE TAPE SHALL BE PLACED WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINAL GRADE.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT AND SHALL INCLUDE THE PLASTIC CAUTION TAPE.

625 GROUND ROD, AS PER PLAN

IN ADDITION TO 625.16 AND 725.16, THIS ITEM SHALL CONSIST OF FURNISHING AND DRIVING AN APPROVED AT LEAST 3/4 INCH BY TEN (10) FOOT SOLID AND 100% STAINLESS STEEL GROUND ROD SIX (6) INCHES BELOW GRADE INTO THE GROUND ADJACENT TO THE FOUNDATION OF THE POLE. ALSO INCLUDED IS THE FURNISHING AND RUNNING OF A SEVEN STRAND #4 WIRE FROM THE TOP OF THE GROUNDING ROD THROUGH A HOLE IN THE TRANSFORMER BASE (A HOLE SHALL BE BORED IF NONE EXISTS). THE WIRE SHALL BE WRAPPED AROUND A BOLT ON THE INSIDE OF THE TRANSFORMER BASE OR POLE BASE AND CONNECTED WITH A GROUND LUG. GROUND ROD RESISTANCE SHALL BE TWENTY-FIVE (25) OHMS MAXIMUM EXCEPT ON TOWERS WHERE IT SHALL BE TEN (10) OHMS MAXIMUM.

625 CIRCUIT BREAKER, TOWER LIGHTING

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE CIRCUIT BREAKER, FURNISHING AND INSTALLING A NEW CIRCUIT BREAKER OF APPROPRIATE AMPERAGE, WATTAGE AND VOLTAGE, INCLUDING ALL NECESSARY WIRING, TESTING AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE TOWER TO NORMAL OPERATION.

625 POWER SERVICE, AS PER PLAN (BY TYPE)

THIS ITEM SHALL CONSIST OF REMOVING AN EXISTING POWER SERVICE AND FURNISHING AND INSTALLING A NEW POWER SERVICE SO THAT THE CIRCUIT(S) IS(ARE) RETURNED TO NORMAL OPERATION.

625 CONTROL CENTER CABINET COMPLETE, AS PER PLAN, 100 AMP

THIS ITEM SHALL CONSIST OF REMOVING THE DAMAGED LIGHTING CONTROL CENTER AND FURNISHING A COMPLETE LIGHTING CONTROL CENTER WITH CABINET, BY TYPE, INCLUDING DISCONNECT SWITCH, LIGHTING CONTRACTOR, H-O-A SWITCH, LIGHTNING ARRESTOR, PHOTO-CELL TRANSFORMER, MOUNTING BRACKET AND STAINLESS STEEL CABINET, INCLUDING ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE SYSTEM TO NORMAL OPERATION. THE CONTRACTOR SHALL PROVIDE A NEW COMPLETE CONTROL CENTER FOR BOTH 2 AND 3 WIRE LIGHTING SYSTEMS.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CONTROL CENTER CABINET & SITE MAINTENANCE

THIS ITEM WILL INCLUDE THE MAINTENANCE AND VISUAL INSPECTION OF ALL CONTROL CENTER CABINETS DESIGNATED FOR MAINTENANCE IN THIS FISCAL YEAR ON THE LIGHTING INVENTORY SUMMARY SHEET. THIS WORK SHALL BE PERFORMED ONCE DURING THE LIFE OF THE CONTRACT. THE DIVIDING LINE BETWEEN EVEN AND ODD FISCAL YEAR MAINTENANCE ALIGNS ROUGHLY WITH STATE ROUTE 4. LIGHTING CONTROL CENTER MAINTENANCE WILL TAKE PLACE ONCE EVERY TWO YEARS.

IF ANY CONTROL CENTER CABINET IS BEYOND REPAIR, IT SHALL BE REPLACED WITH NEW UNDER ITEM 625 CONTROL CENTER CABINET COMPLETE, AS PER PLAN, 100 AMP, AS DIRECTED BY THE ENGINEER.

ALL CONTROL CENTER CABINETS SHALL BE VISUALLY INSPECTED. THE INSPECTION SHOULD BE CONDUCTED IN A SYSTEMATIC AND ORGANIZED MANNER THAT WILL BE EFFICIENT AND MINIMIZE THE POSSIBILITY OF ANY ITEM BEING OVERLOOKED. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY, IF ANY MAJOR PROBLEMS ARE DETECTED.

THE INSPECTION SHOULD INCLUDE, BUT NOT BE LIMITED TO, DOOR LATCH, SOIL EROSION, CRACKED WELDS, MISSING OR LOOSE HARDWARE, MISSING OR ILLEGIBLE LABELS, WIRING, DEBRIS CLEANOUT, VEGETATION REMOVAL, PADLOCK REPLACEMENT AND CORROSION. APPROPRIATE CORRECTIVE ACTION SHOULD BE TAKEN TO CORRECT DETECTED DEFICIENCIES UTILIZING PERTINENT PAY ITEMS FOR THE RESPECTIVE WORK.

THE FOLLOWING TASKS ARE REQUIRED ON ALL CONTROL CENTERS:

1. WHENEVER A MOVING PART, LATCH OR LOCK IS ACCESSED IT SHOULD BE LUBRICATED, IF NEEDED.
2. PADLOCKS TO BE REPLACED IF MISSING OR NON-OPERATIONAL.
3. WHENEVER A THREADED COVER FASTENER IS ACCESSED, AN APPROPRIATE ANTI-SEIZING AGENT SHOULD BE APPLIED OR REDISTRIBUTED.
4. DAMAGED OR MISSING FASTENERS SHOULD BE REPAIRED OR REPLACED.
5. DEBRIS SHOULD BE REMOVED FROM IN AND AROUND THE CONTROL CENTER CABINET (AND ENCLOSURE FENCE, IF USED).
6. ERODED AND SUNKEN AREAS ADJACENT TO THE CONTROL CENTER CABINET SHOULD BE FILLED, SEEDED AND COVERED WITH EROSION RESISTANT MATERIAL TO SLOW THE FLOW OF RUNOFF AND PROMOTE VEGETATION GROWTH.
7. INSPECT DISCONNECT SWITCH AND CHECK AND DOCUMENT SUPPLY VOLTAGE AND OUTPUT VOLTAGE.
8. CHECK FUSES AND REPLACE AS NEEDED.
9. CHECK CONTACTOR AND REPAIR/REPLACE AS NEEDED.

10. INSPECT CONTROL CIRCUIT WIRING INCLUDING CHECKING FOR PROPER CONNECTIONS AT THE GROUND BAR AND REPAIR ANY DEFECTIVE WIRING/CONNECTIONS AS NECESSARY.

11. INSPECT PHOTOCELL FOR PROPER OPERATION AND CONDITION, REPLACING ANY PHOTOCELLS SHOWING SIGNS OF CRACKING.

12. INSPECT H-O-A SWITCH FOR PROPER OPERATION AND CONDITION, REPLACING ANY MISSING KNOBS, SWITCHES AND CRACKED ENCLOSURES. REPLACE LABELS ON SWITCH IF FADED OR MISSING RENDERING

13. INSPECT THAT BONDS FOR ALL METALLIC PORTIONS OF THE CONTROL CENTER CABINET, SUPPORTING STRUCTURE AND CONDUIT TO EARTH GROUNDS ARE PROPERLY IN PLACE AND REPAIR IF NEEDED.

14. CHECK FOR ARC & HAZARD WARNING LABELS ON THE OUTSIDE OF THE CONTROL CENTER CABINET AND REPLACE IF MISSING OR ILLEGIBLE.

15. INSPECT WOOD OR PLASTIC MOLDINGS USED FOR GROUNDING CABLES INSTALLED ON WOOD POLES AND REPLACE IF NEEDED.

16. CHECK FOR CONTROL CENTER ID LABEL ON EXTERIOR OF CONTROL CENTER CABINET TO BE VISIBLE FROM THE ADJACENT ROADWAY AND REPLACE IF MISSING OR ILLEGIBLE. LABEL SHALL BE WHITE LETTERS ON GREEN BACKGROUND AS PER SCD HL-10.12 AND SHALL BE FURNISHED BY THE CONTRACTOR AS NEEDED.

17. THE CONTRACTOR SHALL UTILIZE THE ODOT HIGHWAY LIGHTING COLLECTOR APPLICATION TO MAKE AN ENTRY WHEN PERFORMING MAINTENANCE OF EACH LUMINAIRE, UPDATING THE ASSET ACCORDINGLY CONCERNING THE ASSET'S FIELD MAPS OF THE INSPECTION FORM WITHIN THE APPLICATION.

THIS INCLUDES FURNISHING ALL LABOR, EQUIPMENT AND MATERIAL FOR MAINTAINING AND REPAIRING AS DESCRIBED HEREIN, FOR EACH COMPONENT PART OF THE HIGHWAY LIGHTING SYSTEM.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, FUSE

REPLACE BLOWN FUSES LOCATED IN CONTROL CENTERS WITH FUSES OF PROPER TYPE, VOLTAGE AND AMP RATING IN THEIR PARTICULAR APPLICATION. THIS INCLUDES ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE SYSTEM TO NORMAL OPERATION.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CIRCUIT BREAKER

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE CIRCUIT BREAKER AND FURNISHING AND INSTALLING A NEW CIRCUIT BREAKER OF APPROPRIATE AMPERAGE, WATTAGE AND VOLTAGE IN AN EXISTING CONTROL CENTER, INCLUDING ALL NECESSARY WIRING, TESTING AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN CONTROL CENTER TO NORMAL OPERATION.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, DISCONNECT SWITCH

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE DISCONNECT SWITCH, FURNISHING AND INSTALLING A NEW DISCONNECT SWITCH OF PROPER TYPE, VOLTAGE, AND AMPERE RATING IN AN EXISTING CONTROL CENTER, INCLUDING ALL NECESSARY WIRE TESTING AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE CONTROL CENTER TO NORMAL OPERATION.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CONTACTOR

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE LIGHTING CONTACTOR, FURNISHING AND INSTALLING A NEW CONTACTOR OF THE PROPER TYPE AND AMPERE RATING IN AN EXISTING CONTROL CENTER, INCLUDING ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE CONTROL CENTER TO NORMAL OPERATION.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, PHOTOCELL TRANSFORMER

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE PHOTOCELL, FURNISHING AND INSTALLING A NEW PHOTO-CELL TRANSFORMER IN AN EXISTING CONTROL CENTER, INCLUDING ALL NECESSARY WIRING, TESTING AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE CONTROL CENTER TO NORMAL OPERATION.

625 CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, H-O-A SWITCH

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE H-O-A SWITCH, AND FURNISHING AND INSTALLING A NEW MANUAL SWITCH IN AN EXISTING CONTROL CENTER, INCLUDING ALL NECESSARY WIRING, TESTING AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN CONTROL CENTER TO NORMAL OPERATION. THE SWITCH SHALL BE THREE (3) POSITION, "MANUAL-OFF-AUTOMATIC", WITH REQUIRED RATING, AND THE TERMINALS ENCLOSED.

625 REERECT EXISTING LUMINAIRE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF RE-ERECTING AN EXISTING LUMINAIRE PREVIOUSLY REMOVED FOR REUSE IN THIS PROJECT.

THE LUMINAIRE SHALL BE THOROUGHLY CLEANED, TESTED FOR PROPER OPERATION, REPAIRED, OR UPGRADED AS REQUIRED TO RESTORE IT TO OPERATING ORDER AND BE COMPATIBLE WITH LIGHTING SYSTEM OF A DIFFERENT DESIGN AT ANOTHER LOCATION.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625 RE-ERECT EXISTING LUMINAIRE, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625 POWER CABLE FOR LIGHT TOWER, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING NEW CABLE OF THE PROPER SIZE IN AN EXISTING LIGHT TOWER. ALSO INCLUDED SHALL BE THE REMOVAL AND DISPOSAL OF DEFECTIVE CABLE AND ANY CONNECTIONS, TESTING, AND OTHER INCIDENTALS REQUIRED TO RETURN THE UNIT TO NORMAL OPERATION

625 REPAIRING UNDERGROUND BREAK OF CABLE IN DUCT OR CONDUIT

THIS ITEM SHALL CONSIST OF REPAIRING AN UNDERGROUND BREAK OR SHORT OF CABLE IN CONDUIT INCLUDING EXCAVATION AND UNCOVERING THE CABLE, REPAIRING THE BREAK WITH WATERPROOF SPLICE KITS, BACKFILLING AND RESTORING THE AREA. A MEGGER TEST SHALL BE PERFORMED TO ASSURE THE REPAIR IS SATISFACTORY AND OPERATIONAL.



625 FRANGIBLE BASE, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NEW FRANGIBLE BASE OF AN APPROVED DESIGN PER CMS 725.21 EXCEPT AS NOTED BELOW. ALSO INCLUDED SHALL BE THE EXTENSION OF ANY CABLES, CONNECTOR OR SPLICE KITS, TESTING AND INCIDENTALS REQUIRED TO RESTORE THE UNIT TO NORMAL OPERATION. PROPOSED BASES MEETING AASHTO 1975 REQUIREMENTS SHALL REPLACE BASES MEETING 1975 REQUIREMENTS AND PROPOSED BASES MEETING 1985 AASHTO REQUIREMENTS SHALL REPLACE BASES MEETING 1985 REQUIREMENTS. A 17" VERTICAL HEIGHT FOR THE 1985 BASE IS ACCEPTABLE. TRANSFORMER BASES SHALL BE PERMANENTLY MARKED OR LABELED TO IDENTIFY THAT THEY MEET THE 1975 OR 1985 AASHTO REQUIREMENTS.

625 FRANGIBLE BASE, AS PER PLAN, INSTALLATION ONLY

THIS ITEM SHALL CONSIST OF INSTALLING A NEW FRANGIBLE BASE THAT IS PROVIDED BY ODOT. ALSO INCLUDED SHALL BE THE EXTENSION OF ANY CABLES, CONNECTOR OR SPLICE KITS, TESTING AND INCIDENTALS REQUIRED TO RESTORE THE UNIT TO NORMAL OPERATION.

625 REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURES, AS PER PLAN

THIS ITEM CONSIST OF MAINTENANCE AND REPAIR OF A HEAD FRAME ASSEMBLY, A LUMINAIRE RING ASSEMBLY, AND A WINCH ASSEMBLY AS SPECIFIED IN CMS 725.21.

REPAIRS SHOULD BE MADE UTILIZING A CRANE WITH BASKET THAT CAN REACH UP TO 120' TOWERS. IF POWER CABLE REPLACEMENT IS NECESSARY, IT WILL BE PAID FOR UNDER ITS RESPECTIVE PAY ITEM.

625 SECONDARY SURGE PROTECTOR, AS PER PLAN (BY TYPE)

THIS ITEM SHALL CONSIST OF REMOVING AND DISPOSING OF A DEFECTIVE SECONDARY SURGE PROTECTOR, INSTALLING A NEW SECONDARY SURGE PROTECTOR, SQUARE D TYPE J9200-9A, OR EQUIVALENT FOR HIGH MAST (TOWER) FIXTURES. ALSO INCLUDED SHALL BE ANY CONNECTIONS, TESTING, AND INCIDENTALS REQUIRED TO RESTORE UNIT TO NORMAL OPERATION.

625 "SPECIAL" EMERGENCY RESPONSE-KNOCKDOWN, ROADWAY HAZARD AND/OR LIVE EXPOSED WIRE

THIS ITEM SHALL CONSIST OF THE CONTRACTOR RESPONDING TO AN EMERGENCY CALL-OUT UPON NOTIFICATION BY THE ENGINEER. SOME EXAMPLES OF A HAZARDOUS CONDITION THAT WOULD WARRANT AN EMERGENCY CALL-OUT OF THE CONTRACTOR WOULD BE A KNOCKDOWN THAT REQUIRED THE USE OF HEAVY EQUIPMENT TO REMOVE A POLE, OR AN ACCIDENT THAT WOULD REQUIRE A MAINTENANCE CREW TO REMOVE AND/OR SECURE ELECTRICAL CIRCUITS. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A SINGLE TELEPHONE NUMBER OR ANSWERING SERVICE WHERE THEY CAN BE CONTACTED 24 HOURS A DAY, 7 DAYS A WEEK. THE CONTRACTOR'S RESPONSE TIME, FROM THE TIME OF NOTIFICATION UNTIL PERSONNEL ARRIVE AT THE EMERGENCY, SHALL NOT EXCEED TWO (2) HOURS.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO A KNOCKDOWN, ROADWAY HAZARD AND/OR LIVE EXPOSED WIRE, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

625 LIGHTING, MISC.: PHOTOELECTRIC CELL

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING A NEW PHOTOELECTRIC CELL. ALL PHOTOCELLS, REGARDLESS OF THEIR LOCATION, SHALL BE CHECKED FOR PROPER CYCLING. IF THE PHOTO-CELL IS NOT CYCLING PROPERLY, IT SHALL BE MECHANICALLY ADJUSTED OR REPLACED, AS NECESSARY. PHOTO-CELL SOCKETS WHICH ARE DEFECTIVE SHALL BE REPLACED WITH A NEW ONE.

625 LIGHTING, MISC.: FUSED, PULL-APART CONNECTOR KIT

THIS ITEM CONSISTS OF REPLACING ANY DEFECTIVE PULL-APART CONNECTORS. WEATHERPROOF CONNECTORS ARE REQUIRED AS REPLACEMENTS AT ALL FRANGIBLE BASES. THIS INCLUDES ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE SYSTEM TO NORMAL OPERATION.

625 LIGHTING, MISC.: CONNECTOR KIT, KTK FUSE

REPLACE BLOWN FUSES LOCATED IN THE PULL-APART CONNECTOR KIT WITH FUSES OF PROPER TYPE, VOLTAGE AND AMP RATING IN THEIR PARTICULAR APPLICATION. THIS INCLUDES ALL NECESSARY WIRING, TESTING, AND OTHER MISCELLANEOUS ITEMS REQUIRED TO RETURN THE SYSTEM TO NORMAL OPERATION. AT EACH POLE, THE CONTRACTOR SHALL ONLY REPLACE A KTK FUSE TWICE IN 14 CALENDAR DAYS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL PRIOR TO REPLACING A KTK FUSE AT A POLE MORE THAN TWICE IN THIS TIME FRAME.

625 LIGHTING, MISC.: LAMP, (BY TYPE)

THE CONTRACTOR SHALL REPLACE ANY HIGH PRESSURE SODIUM, IF DEFECTIVE OR DAMAGED, FOR THE DURATION OF THE CONTRACT. ONLY NEW LAMPS THAT ARE LISTED ON THE QPL SHALL BE USED AS REPLACEMENTS.

625 LIGHTING, MISC.: RELAMP - CONVENTIONAL

THE CONTRACTOR SHALL REPLACE EACH HIGH PRESSURE SODIUM LAMP AS PART OF THE GROUP RE-LAMPING OF HIGH PRESSURE SODIUM LAMPS. ONLY NEW LAMPS THAT ARE LISTED ON THE QPL SHALL BE USED AS REPLACEMENTS. REPLACEMENT OF EACH LAMP SHALL OCCUR WHEN PERFORMING LUMINIARE MAINTENANCE.

625 LIGHTING, MISC.: REMOVAL AND REERECTION OF LIGHT POLE FOR FRANGIBLE BASE REPLACEMENT

THIS ITEM SHALL CONSIST OF DISCONNECTING OF WIRING, REMOVING AN UNDAMAGED POLE (VERTICAL SUPPORT) FROM A DEFECTIVE OR NONEXISTENT BASE, RE-ERECTING THE UNDAMAGED POLE ON A NEW BASE AND RECONNECTION OF WIRING. THE WORK SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS TO REMOVE AND REPLACE THE LIGHT POLE TO THE OPERATION THAT EXISTED PRIOR TO THE WORK. PAYMENT FOR A NEW FRANGIBLE BASE IS NOT INCLUDED IN THIS ITEM, BUT WILL BE PAID FOR UNDER ITS RESPECTIVE PAY ITEM.

625 LIGHTING, MISC.: REMOVING CABLE IN EXISTING DUCT OR CONDUIT

THIS ITEM SHALL CONSIST OF THE REMOVAL OF DAMAGED OR DETERIORATED CABLE TO BE REPLACED. CABLE AS USED HEREIN IS DEFINED AS ONE OR MORE CONDUCTORS WHICH WOULD NORMALLY BE PULLED OUT OF THE DUCT OR CONDUIT AT THE SAME TIME.

625 LIGHTING, MISC.: FAULT DIAGNOSIS

THIS ITEM SHALL CONSIST OF INVESTIGATING, AT THE REQUEST OF THE ENGINEER, A CIRCUIT OF HIGHWAY LIGHTING TO DETERMINE CAUSE OF FAILURE OR MALFUNCTIONING AND TO REPORT FAULT AND RECOMMEND CORRECTIVE ACTION TO THE ENGINEER. VISUAL INSPECTION, FAULT FINDERS, MEGGERS, ETC., SHALL BE USED TO LOCATE FAULTS TO AN ACCURACY THAT THE ENGINEER CAN MAKE SOUND DECISIONS ON GIVING THE CONTRACTOR APPROVAL TO PROCEED WITH CORRECTIVE ACTION ITEMS. IF MORE THAN ONE (1) FAULT EXISTS BETWEEN TWO (2) CABLE SPLICE POINTS, APPROVAL TO REPEAT THIS ITEM MUST BE OBTAINED FROM THE ENGINEER.

PAYMENT WILL BE MADE PER MAN-HOUR OF FAULT DIAGNOSIS TIME REQUIRED AT THE CONTRACT UNIT BID PRICE FOR ONLY ONE (1) CIRCUIT FAULT DETERMINATION OR COMPONENT FAULT PER REQUEST. HOURLY UNITS MAY BE BILLED IN PARTIAL HOUR OR FULL HOUR AMOUNTS.

625 LIGHTING, MISC.: MARKING EXISTING LIGHTING CABLE LOCATION

THIS ITEM SHALL CONSIST OF LOCATING AND MARKING EXISTING UNDERGROUND LIGHTING CABLE BY THE CONTRACTOR.

AT THE REQUEST OF THE ENGINEER, THE CONTRACTOR SHALL LOCATE THE EXISTING UNDERGROUND CABLE AND PLACE MARKING ON THE GROUND DIRECTLY ABOVE THE CABLE. THE MARKINGS SHOULD BE MADE WITH RED PAINT OR FLAGS AND WILL BE RELIED UPON BY OTHERS TO BE AN ACCURATE INDICATION OF THE LOCATION OF LIGHTING CABLE.

TRAFFIC SIGNAL SPECIAL SPECIFICATIONS

630 SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN

THE ITEM INCLUDES ALL NECESSARY HARDWARE TO ATTACH ONE INDIVIDUAL SIGN. SIGN SHOULD BE WEIGHTED WITH A 26 INCH LONG 3# BAR MOUNTED HORIZONTALLY WHERE BOTTOM BRACKET HOLES ARE NORMALLY LOCATED. DO NOT ATTACH SIGN TO BOTTOM TETHER.

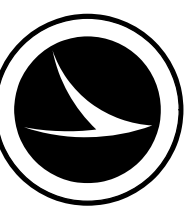
632 VEHICULAR SIGNAL HEAD, LED, POLYCARBONATE BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
4. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW MODULE LOCATED IN FRONT OF THE MAST ARM OR ALIGNED WITH YELLOW MODULES OF OTHER SIGNALS ON SAME APPROACH.
5. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER. BACKPLATES ARE NON-PERFORMED ON "NO BACKPLATE" BID ITEMS."
6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES. LEDs SHALL BE TRANSFERRED FROM EXISTING SIGNAL HEADS TO NEW SIGNAL HEAD HOUSINGS ON "NO LAMPS" ITEMS. NO LED MODULES WILL BE PROVIDED WHEN "NO LAMPS" IS IN BID ITEM."
7. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.11 INCHES.
8. SIGNAL HEADS SHALL INCLUDE A CUTAWAY TYPE VISORS WHEN PEDESTRIAN SIGNALS ARE NOT PRESENT. TUNNEL VISORS ARE USED WHEN PEDESTRIAN SIGNALS ARE PRESENT. IN CASES WHERE SIGNALS ARE REPLACING EXISTING HEADS, MATCHING THE PREVIOUS HEAD'S STYLE MAY OVERRULE OTHER GUIDANCE.
9. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.
10. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS OR TETHERED HEADS.

PAYMENT FOR ITEM 632 "VEHICULAR SIGNAL HEAD, LED, BLACK, (BY TYPE) WITH BACKPLATE, AS PER PLAN" SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

DESIGN AGENCY



DESIGNER
CJP

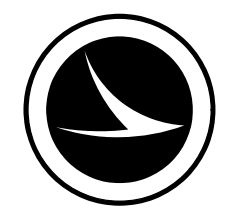
REVIEWER
BJA

PROJECT ID
121505

SHEET TOTAL
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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										01/SAF							
										20	611	00400	20	FT	4" CONDUIT, TYPE E, 725.051	ROADWAY	
										20	625	00481	20	EACH	CONNECTION, UNFUSED PERMANENT, AS PER PLAN	LIGHTING	9
										347	625	10500	347	EACH	LIGHT POLE, MISC.: STRUCTURE MAINTENANCE, AS PER PLAN		10
										10	625	10503	10	EACH	LIGHT POLE (INSTALLATION ONLY), AS PER PLAN, CONVENTIONAL		10
										5	625	10503	5	EACH	LIGHT POLE (INSTALLATION ONLY), AS PER PLAN, LOW MAST		10
										12	625	10505	12	EACH	ERECTING REUSABLE DOWNED LIGHT POLE, AS PER PLAN		10
										84	625	13500	84	EACH	LIGHT TOWER, MISC.: STRUCTURE MAINTENANCE, AS PER PLAN		10
										5	625	13500	5	EACH	LIGHT TOWER, MISC.: PLUG, AS PER PLAN		11
										5	625	13500	5	EACH	LIGHT TOWER, MISC.: JUNCTION BOX, AS PER PLAN		11
										5	625	13500	5	EACH	LIGHT TOWER, MISC.: PLUG ON TOWER RING, AS PER PLAN		11
										5	625	13500	5	EACH	LIGHT TOWER, MISC.: LIGHTNING ARRESTOR, AS PER PLAN		11
										5	625	14401	5	EACH	LIGHT POLE FOUNDATION REPAIR, AS PER PLAN		11
										5	625	14500	5	EACH	LIGHT POLE FOUNDATION		
										1	625	15100	1	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP		
										1	625	18600	1	EACH	BRACKET ARM, MISC.: CONVENTIONAL LIGHT POLE, AS PER PLAN		11
										5	625	18600	5	EACH	BRACKET ARM, MISC.: LOW MAST LIGHT POLE, AS PER PLAN		11
										10	625	18600	10	EACH	BRACKET ARM, MISC.: INSTALLATION OF REUSABLE BRACKET ARM, AS PER PLAN		11
										3,000	625	23201	3,000	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE, AS PER PLAN		11
										500	625	23301	500	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE, AS PER PLAN		11
										3,000	625	23401	3,000	FT	NO. 10 AWG POLE AND BRACKET CABLE, AS PER PLAN		11
										200	625	24101	200	FT	1-1/2" DUCT CABLE WITH TWO NO. 4 AWG 2400 VOLT CABLES, AS PER PLAN		11
										200	625	24301	200	FT	1-1/2" DUCT CABLE WITH TWO NO. 2 AWG 2400 VOLT CABLES, AS PER PLAN		11
										200	625	24321	200	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES, AS PER PLAN		11
										200	625	25400	200	FT	CONDUIT, 2", 725.04		
										500	625	25408	500	FT	CONDUIT, 2", 725.051		
										300	625	25900	300	FT	CONDUIT, JACKED OR DRILLED, 2"		
										300	625	25900	300	FT	CONDUIT, JACKED OR DRILLED, 3"		
										15	625	26253	15	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), IES-II-M, 13,600-16,400 LUMENS, AS PER PLAN, REMOVAL AND FURNISHING		11
										5	625	26263	5	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, REMOVAL AND FURNISHING		11
										5	625	26273	5	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, REMOVAL AND FURNISHING		11
										5	625	27503	5	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, REMOVAL AND FURNISHING		11
										200	625	27600	200	EACH	LUMINAIRE, MISC.: LUMINAIRE MAINTENANCE, AS PER PLAN		11
										15	625	27600	15	EACH	LUMINAIRE, MISC.: LED DRIVER, CONVENTIONAL, 240V		11
										15	625	27600	15	EACH	LUMINAIRE, MISC.: LED DRIVER, CONVENTIONAL, 480v, AS PER PLAN		11
										15	625	27600	15	EACH	LUMINAIRE, MISC.: LED DRIVER, LOW MAST, 480V, AS PER PLAN		11
										25	625	27600	25	EACH	LUMINAIRE, MISC.: LED DRIVER, TOWER, 480V, AS PER PLAN		11
										15	625	27600	15	EACH	LUMINAIRE, MISC.: LED DRIVER, UNDERPASS, 480V, AS PER PLAN		11
										300	625	29003	300	FT	TRENCH, 24" DEEP, AS PER PLAN		12
										10	625	30700	10	EACH	PULL BOX, 725.08, 18"		
										4	625	30706	4	EACH	PULL BOX, 725.08, 24"		
										5	625	31510	5	EACH	PULL BOX REMOVED		
										5	625	32001	5	EACH	GROUND ROD, AS PER PLAN		12
										2	625	33101	2	EACH	CIRCUIT BREAKER, TOWER LIGHTING, AS PER PLAN		12
										1	625	34001	1	EACH	POWER SERVICE, AS PER PLAN, POLE MOUNTED		12
										1	625	34001	1	EACH	POWER SERVICE, AS PER PLAN, GROUND MOUNTED		12
										1	625	34451	1	EACH	CONTROL CENTER CABINET, COMPLETE, AS PER PLAN, 100 AMP		12
										24	625	34507	24	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CONTROL CENTER CABINET & SITE MAINTENANCE		12
										5	625	34507	5	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, FUSE		12
										5	625	34507	5	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CIRCUIT BREAKER		12
										2	625	34507	2	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, DISCONNECT SWITCH		12
										5	625	34507	5	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, CONTACTOR		12
										2	625	34507	2	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, PHOTO-CELL TRANSFORMER		12
										2	625	34507	2	EACH	CONTROL CENTER MAINTENANCE ITEM, AS PER PLAN, H-O-A SWITCH		12
										5	625	35101	5	EACH	REERECT EXISTING LUMINAIRE, AS PER PLAN		12
										100	625	36201	100	FT	POWER CABLE FOR LIGHT TOWER, AS PER PLAN		12
										5	625	50001	5	EACH	REPAIRING UNDERGROUND BREAK OF CABLE IN DUCT OR CONDUIT, AS PER PLAN		12

DESIGN AGENCY



DESIGNER
CJP

REVIEWER
BJA

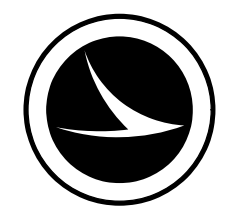
PROJECT ID
121505

SHEET TOTAL
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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										01/SAF							
LIGHTING																	
										20		625	50301	20	EACH	FRANGIBLE BASE, AS PER PLAN	13
										20		625	50301	20	EACH	FRANGIBLE BASE, AS PER PLAN, INSTALLATION ONLY	13
										1		625	50401	1	EACH	REPAIR INTEGRAL LUMINAIRE LOWERING MECHANISM OF TOWER LIGHTING FIXTURE, AS PER PLAN	13
										5		625	50451	5	EACH	SECONDARY SURGE PROTECTOR, AS PER PLAN, TOWER	13
										5		625	50451	5	EACH	SECONDARY SURGE PROTECTOR, AS PER PLAN, CONVENTIONAL	13
										25		SPECIAL	62550500	25	EACH	EMERGENCY RESPONSE-KNOCKDOWN, ROADWAY HAZARD AND/OR LIVE EXPOSED WIRE, AS PER PLAN	13
										15		625	75400	15	EACH	LIGHT POLE REMOVED	
										5		625	75501	5	EACH	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN	11
										1		625	98000	1	EACH	LIGHTING, MISC.: BARRIER WALL FOUNDATION REPAIR, AS PER PLAN	11
										20		625	98000	20	EACH	LIGHTING, MISC.: PHOTOELECTRIC CELL, AS PER PLAN	13
										75		625	98000	75	EACH	LIGHTING, MISC.: FUSED, PULL-APART CONNECTOR KIT, AS PER PLAN	13
										60		625	98000	60	EACH	LIGHTING, MISC.: CONNECTOR KIT, KTK FUSE, AS PER PLAN	13
										5		625	98000	5	EACH	LIGHTING, MISC.: LAMP FOR LUMINAIRE, UNDERDECK OR WALL MOUNT, AS PER PLAN	13
										10		625	98000	10	EACH	LIGHTING, MISC.: LAMP FOR LUMINAIRE, CONVENTIONAL, AS PER PLAN	13
										10		625	98000	10	EACH	LIGHTING, MISC.: RELAMP FOR LUMINAIRE, CONVENTIONAL, AS PER PLAN	13
										25		625	98000	25	EACH	LIGHTING, MISC.: REMOVAL AND REERECTION OF LIGHT POLE FOR FRANGIBLE BASE REPLACEMENT, AS PER PLAN	\$
										2,500		625	98100	2,500	FT	LIGHTING, MISC.: REMOVING CABLE IN EXISTING DUCT OR CONDUIT, AS PER PLAN	13
										100		625	98700	100	HOOR	LIGHTING, MISC.: FAULT DIAGNOSIS, AS PER PLAN	13
										200		625	98700	200	HOOR	LIGHTING, MISC.: MARKING EXISTING UNDERGROUND LIGHTING CABLE LOCATIONS, AS PER PLAN	13
TRAFFIC CONTROL																	
										10		630	79001	10	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN	13
										10		630	79100	10	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
										100		630	80100	100	SF	SIGN, FLAT SHEET	
TRAFFIC SIGNALS																	
										40		632	04000	40	EACH	VEHICULAR SIGNAL HEAD, MISC.: BACKPLATE, 3-SECTION, AS PER PLAN	14
										2		632	04000	2	EACH	VEHICULAR SIGNAL HEAD, MISC.: BACKPLATE, 4-SECTION, AS PER PLAN	14
										12		632	04000	12	EACH	VEHICULAR SIGNAL HEAD, MISC.: BACKPLATE, 5-SECTION, AS PER PLAN	14
										2		632	04911	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, ALUMINUM, AS PER PLAN, YELLOW	14
										4		632	05007	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK	13
										12		632	05007	12	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK, NO LAMP	13
										4		632	05007	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, YELLOW, NO BACKPLATE	13
										7		632	05007	7	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, YELLOW, NO LAMP, NO BACKPLATE	13
										1		632	05061	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, ALUMINUM, AS PER PLAN, YELLOW	14
										3		632	05065	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK	13
										1		632	05081	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, ALUMINUM, AS PER PLAN, YELLOW	14
										2		632	05087	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK	13
										6		632	05087	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK, NO LAMP	13
										5		632	05087	5	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, YELLOW, NO BACKPLATE	13
										6		632	05087	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, YELLOW, NO LAMP, NO BACKPLATE	13
										8		632	10101	8	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR RED	14
										8		632	10101	8	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR YELLOW	14
										8		632	10101	8	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR GREEN	14
										2		632	10101	2	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, YELLOW ARROW	14
										2		632	10101	2	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, GREEN ARROW	14
										2		632	10101	2	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, RED ARROW	14
										2		632	10101	2	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, YELLOW ARROW, BIMODAL	14
										12		632	10101	12	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, PEDESTRIAN SIGNAL MODULE, TYPE D2 COUNTDOWN	14
										8		632	20731	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN, BLACK	14
										16		632	20751	16	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, YELLOW	14
										24		632	26001	24	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN, YELLOW	14
										1		632	26501	1	EACH	DETECTOR LOOP, AS PER PLAN	14
										400		632	30000	400	FT	MESSENGER WIRE, 3 STRAND, 1/4" DIAMETER WITH ACCESSORIES	
										400		632	30200	400	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
										400		632	30601	400	FT	TETHER WIRE, WITH ACCESSORIES, AS PER PLAN	14
										100		632	40501	100	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG, AS PER PLAN	14
										3,500		632	40701	3,500	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG, AS PER PLAN	14
										1,500		632	43300	1,500	FT	SIGNAL CABLE, MISC.: RADAR DETECTION CABLE	14
										10		632	64020	10	EACH	PEDESTAL FOUNDATION	

GENERAL SUMMARY (2/3)

DESIGN AGENCY



DESIGNER
CJP

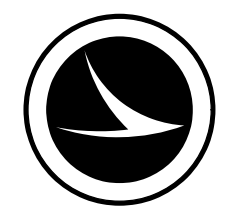
REVIEWER
BJA

PROJECT ID
121505

SHEET TOTAL
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SHEET NUM.								PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
							01/SAF			EXT	TOTAL				
TRAFFIC SIGNALS															
							100		632	65301	100	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG, AS PER PLAN	14	
							100		632	67191	100	FT	POWER CABLE, 1 CONDUCTOR, NO. 8 AWG, AS PER PLAN	14	
							1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	14	
							1		632	70301	1	EACH	CONDUIT RISER, 1-1/2" DIAMETER, AS PER PLAN	14	
							2		632	89910	2	EACH	PEDESTAL, 5' TALL, TRANSFORMER BASE		
							8		632	89920	8	EACH	PEDESTAL, 10.7' TALL, TRANSFORMER BASE		
							LS		632	90300	LS		SIGNALIZATION, MISC.: IPAD/IPHONE DEVICES AND TRAINING FOR FIELD MAPS APPLICATION	6	
							2		632	90400	2	EACH	SIGNALIZATION, MISC.: SPAN WIRE ADJUSTMENT	15	
							3		632	90400	3	EACH	SIGNALIZATION, MISC.: REPLACEMENT OF S-HOOK FOR TETHER WIRE	15	
							114		632	90400	114	EACH	SIGNALIZATION, MISC.: UPS SYSTEM INSPECTION & MAINTENANCE	15	
							100		632	90400	100	EACH	SIGNALIZATION, MISC.: 1-HOUR CALL OUT	15	
							150		632	90400	150	EACH	SIGNALIZATION, MISC.: NEXT-DAY CALL OUT	15	
							113		632	90400	113	EACH	SIGNALIZATION, MISC.: INSIDE CABINET MAINTENANCE	15	
							1		632	90400	1	EACH	SIGNALIZATION, MISC.: INSIDE CABINET MAINTENANCE - CFI INTERSECTION	15	
							113		632	90400	113	EACH	SIGNALIZATION, MISC.: OUTSIDE CABINET MAINTENANCE	15	
							1		632	90400	1	EACH	SIGNALIZATION, MISC.: OUTSIDE CABINET MAINTENANCE - CFI INTERSECTION	16	
							2		632	90400	2	EACH	SIGNALIZATION, MISC.: REPAIR OF UNDERGROUND CABLES	16	
							50		632	90500	50	FT	SIGNALIZATION, MISC.: RESEALING LOOP DETECTORS	16	
							100		632	90500	100	FT	SIGNALIZATION, MISC.: LASHING RODS	16	
							150		632	90800	150	HOURL	SIGNALIZATION, MISC.: MARKING EXISTING UNDERGROUND UTILITIES	16	
							1		633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN, GROUND MOUNTED	16	
							1		633	67200	1	EACH	CONTROLLER WORK PAD		
							4		633	67501	4	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), BATTERY REPLACEMENT, AS PER PLAN	16	
							1		633	75000	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT		
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: SHELF MOUNTED DETECTOR AMPLIFIER REPLACEMENT	16	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: VIDEO IMAGING DETECTION CAMERA REPLACEMENT	16	
							1		633	99000	1	EACH	CONTROLLER ITEM, MISC.: LOOP DETECTOR WIRING HARNESS	16	
							5		633	99000	5	EACH	CONTROLLER ITEM, MISC.: LOAD SWITCH/FLASHER REPLACEMENT	16	
							5		633	99000	5	EACH	CONTROLLER ITEM, MISC.: BUS INTERFACE UNIT REPLACEMENT	16	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: POWER SUPPLY REPLACEMENT	16	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: TROUBLESHOOTING FIBER OPTIC COMMUNICATION	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: INTERIM HOUSING ASSEMBLY WITH CONTROLLER, AS PER PLAN	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: REMOVE AND REPLACE FLASH TRANSFER RELAY	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: REMOVE AND REPLACE MERCURY RELAY SWITCH	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: REPLACE CAMERA CARD	17	
							3		633	99000	3	EACH	CONTROLLER ITEM, MISC.: REPLACE DETECTOR CARD	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: REPLACE RADAR DETECTOR CARD	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: REPLACE RADAR DETECTOR MODULE	17	
							2		633	99000	2	EACH	CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY (UPS), INVERTER	17	
							4		633	99000	4	EACH	CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY (UPS) BATTERY REPLACEMENT, INSTALLATION ONLY	17	
							4		633	99000	4	EACH	CONTROLLER ITEM, MISC.: MALFUNCTION MANAGEMENT UNIT (MMU) REPLACEMENT, 16 CHANNEL, INSTALLATION ONLY	17	
							80		633	99000	80	EACH	CONTROLLER ITEM, MISC.: CONTROLLER SOFTWARE UPDATE	15	
							200		633	99400	200	HOURL	CONTROLLER ITEM, MISC.: ENGINEERING SERVICES SIGNAL TIMING REGULAR RATE	17	
							80		633	99400	80	HOURL	CONTROLLER ITEM, MISC.: ENGINEERING SERVICES SIGNAL TIMING OVERTIME RATE	17	
							1		804	35001	1	EACH	FUSION SPLICE, AS PER PLAN	17	
							4		809	69000	4	EACH	ADVANCE RADAR DETECTION	17	
							8		809	69001	8	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	17	
							4		809	69100	4	EACH	STOP LINE RADAR DETECTION	17	
							8		809	69101	8	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	17	
							5		809	69123	5	EACH	ATC CONTROLLER, AS PER PLAN	17	
MAINTENANCE OF TRAFFIC															
							75		614	11110	75	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	9	
							LS		614	11000	LS		MAINTAINING TRAFFIC	7	
							1		614	13600	1	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A TWO LANE HIGHWAY		
							1		614	13700	1	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A FOUR LANE UNDIVIDED HIGHWAY		
							1		614	13800	1	EACH	MAINTENANCE OF TRAFFIC, ONE LANE CLOSURE ON A 4 LANE OR GREATER DIVIDED HIGHWAY		
							1		614	13900	1	EACH	MAINTENANCE OF TRAFFIC FOR SHOULDER CLOSURE		
INCIDENTALS															
							LS		103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND		
							LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
							LS		624	10000	LS		MOBILIZATION		

DESIGN AGENCY



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PROJECT ID
121505

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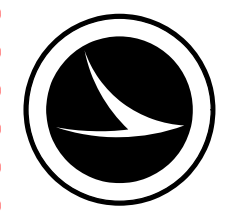
Loc. No.	County	Route	SLM (mi)	Description	"Control Center ID"	Circuits	Power Service Voltage	Power Service Wiring	Underdeck			Conventional			Tower and Low Mast							Total Luminaires	No. of Lighting Control Centers	Tower Structure										
									LED	100W UD	150W UD	LED	310W HPS	Poles	LED	LED	LED	LED	LED	LED	Low Mast Poles				Tower Poles									
												III			31K	63K	31K	63K	85K	112K														
Lumens IES Type									Luminaire on Highways																									
M-1	Montgomery	IR-70	6.03	Brookville-Salem	070-Broo	A	240					2	2									2	1	ODD										
M-2	Montgomery	IR-70	11.02	SR-48	070-048	A,B	480 L-N	3-#4													16	-	7	16	1	ODD								
M-29	Montgomery	IR-70	12.19	Meeker Rd	070-Meek	B	240	3-#4																2	1	ODD								
M-30	Montgomery	IR-70	12.67	Frederick Pike	070-Fred	C	240	3-#4																2	1	ODD								
M-3	Montgomery	IR-70	14.40	Airport Access	070-Pete	A1,A2	480 L-N	3-#4						18								17	9	5	35	1	ODD							
M-4	Montgomery	IR-70	19.00	SR-202	070-Airp	B1,B2	480 L-N	3-#4						10								22	5	8	32	1	ODD							
M-5	Montgomery	IR-70	20.97	SR-201	070-202	T	480 L-N	3-#4														12	6		6	18	1	ODD						
M-6	Montgomery	IR-70	23.34	SR-235	070-201	S1	480 L-N	3-#4														9	11	4	33	1	ODD							
M-6	Montgomery	IR-70	23.34	SR-235	070-235 1	A,B	480 L-N	3-#2 & 3-#4														9	10		9	19	1	ODD						
M-6	Montgomery	IR-70	23.34	SR-235	070-235 2	C,D	480 L-N	3-#2 & 3-#4														11	18		8	29	1	ODD						
M-17	Montgomery	IR-75	22.92	Northwoods Boulevard	075-Nort	A,B	480 L-L	2-#2 & 2-#4														3	11		5	14	1	ODD						
M-16	Montgomery	IR-75	22.26	US-40	075-40	A,B	480 L-L	2-#2 & 2-#4														7	8		5	15	1	ODD						
M-15	Montgomery	IR-75	20.44	IR-70	075-070C	C1,C2,C3	480 L-N	3-#2 & 3-#4																	14	14	67	1	ODD					
M-15	Montgomery	IR-75	20.44	IR-70	075-070D	D1,D2	480 L-N	3-#2 & 3-#4																	14	20	34	1	ODD					
M-15	Montgomery	IR-75	20.44	IR-70	075-070E	E1,E2,E3	480 L-N	3-#2 & 3-#4																	14	28	56	1	ODD					
M-15	Montgomery	IR-75	20.44	IR-70	075-070F	F1,F2	480 L-N	3-#4																	2	14	16	1	ODD					
M-14	Montgomery	IR-75	18.82	Little York (Park Center Dr)	075-Litt	D1,D2	480 L-L	2-#4																	40	20	40	1	ODD					
M-14	Montgomery	IR-75	18.82	Benchmark/Wyse	075-Benc	E1,E2,E3	480 L-L	2-#4																	8	16	24	1	ODD					
M-14	Montgomery	IR-75	18.82	Stop Eight	075-Stop	C1,C2	480 L-L	2-#4																		34	17	34	1	ODD				
M-13	Montgomery	IR-75	17.29	Needmore	075-Need	B1,B2	480 L-N	3-#4																		13	24	37	1	ODD				
M-12	Montgomery	IR-75	16.34	Keats/Neff	075-Keat	A1-N,A2-N	480 L-N	3-#2 & 3-#4																		11	11	25	1	ODD				
M-11	Montgomery	IR-75	15.82	Wagoner Ford	075-Wago	C1,C2	480 L-N	3-#4																		6	3	3	1	ODD				
M-11	Montgomery	IR-75	16.34	Neva	075-Neva	A1-S,A2-S	480 L-N	3-#4																		7	7	11	1	ODD				
M-35	Montgomery	IR-75	15.03	Leo - North	075-Leo B	B2,B5	480 L-N	3-#2																			1	16	17	1	ODD			
M-35	Montgomery	IR-75	15.03	Leo - South	075-Leo A	A1	480 L-N	3-#2																		14	14	7	1	ODD				
M-35	Montgomery	IR-75	13.46	SR-4 - Towers	075-Webs	F1	480 L-N	3-#2																		3	5	9	1	EVEN				
M-34	Montgomery	IR-75	13.46	SR-48/SR-4 South Circuits	075-4 S	C1,C2	480 L-N	3-#4 & 3-1/0																		51	51	4	4	55	1	EVEN		
M-34	Montgomery	IR-75	13.46	SR-48/SR-4 South Circuits	075-4 S	E1,E2	480 L-N	3-#4																		15	15	10	10	25	1	EVEN		
M-33	Montgomery	IR-75	12.00	Monument St	075-Monu	NC,ND	480 L-N	3-#4 & 3-#6																			14	14	2	2	28	1	EVEN	
M-33	Montgomery	IR-75	12.00	Third Street	075-Thir	MA,MB	480 L-N	3-#4 & 3-#6																			9	9	4	4	1	EVEN		
M-32	Montgomery	IR-75	11.76	US 35	075-35	J1,J2	480 L-N	3-#2																			7	7	19	1	EVEN			
M-32	Montgomery	IR-75	11.76	US-35 Ramps	075-35Rmp	K1,K2	480 L-N	3-#2																		28	77	77	105	1	EVEN			
M-32	Montgomery	IR-75	11.76	US 35 (Edwin C. Moses)	075-Mose	L1,L2,L3	480 L-N	3-#2																			24	24	21	5	55	1	EVEN	
M-31	Montgomery	IR-75	10.78	Dayton Corp to Fifth St	075-Dayt	D1	480 L-N	3-#2																				5	5	5	1	EVEN		
M-10	Montgomery	IR-75	9.60	SR-741 - I-75 Median	075-741 H	H1	480 L-N	3-#4																			21	21	21	1	EVEN			
M-10	Montgomery	IR-75	9.60	SR-741	075-741 S	A,B,C	480 L-L	2-#4																		4	31	31	35	1	EVEN			
M-9	Montgomery	IR-75	9.32	Dryden Road	075-Dryd M	M1,M2,M3,M4	480 L-L	2-#2																				14	3	9	11	26	1	EVEN
M-9	Montgomery	IR-75	9.32	Dryden Road	075-Dryd UP	N1,N2,N3	480 L-L	2-#2																			19				1	EVEN		
M-8	Montgomery	IR-75	6.39	Dixie Drive	075-Dixi	DA, DB	480 L-N	3-#6																				15	15	15	1	EVEN		
M-7	Montgomery	IR-75	3.73	SR-725	075-725	A,B,C	480 L-L	2-#2 & 2-#4																				11	11	35	6	52	1	EVEN
M-7	Montgomery	IR-75	3.73	Lyons Road	075-Lyon	C	480 L-L	2-#4																				8	8	8	1	EVEN		
M-25	Montgomery	IR-75	0.76	Austin Blvd	075-Aust S	O																						7	7	7	1	EVEN		
M-25	Montgomery	IR-75	0.76	Austin Blvd - North (LCC on I-75)	075-Aust N	A																						30	30	30	1	EVEN		
M-18	Montgomery	IR-675	0.00	IR-75 (LCC at SR 741)	675-741	B	480 L-L	2-#4																				7	7	7	1	EVEN		
M-18	Montgomery	IR-675	2.10	SR-725 (Wash.ChurchRd)	675-725WC	D	480 L-L	2-#4																				7	7	7	1	EVEN		
M-19	Montgomery	IR-675	2.10	SR-725/Yankee	675-725YA	E1,E2,E3	480 L-L	2-#4																				6	29	29	35	1	EVEN	
M-19	Montgomery	IR-675	2.10	Yankee Ramps (McEwen)	675-McEw	F	480 L-L	2-#4																				7	7	7	1	EVEN		
M-20	Montgomery	IR-675	2.10	Alex-Bell	675-Alex	A1	480 L-L	2-#4																				13	13	13	1	EVEN		
M-20	Montgomery	IR-675	3.72	SR-48	675-48	B1,B2	480 L-L	2-#4																			2	33	33	35	1	EVEN		
M-21	Montgomery	IR-675	6.55	Wilmington Pike	675-Wilm	A1,A2,A3	480 L-L	2-#4																				32	32	32	1	EVEN		
M-23	Montgomery	US-35	11.08	Infirmiry Road	035-Infi	B1,B2	480 L-N	3-#4																				32	23	32	1	EVEN		
M-22	Montgomery	US-35	10.32	SR-49	035-49	A1	480 L-N	3-#4																				16	11	16	1	EVEN		
Total for Highway Lighting									25	85	14	542	37	528																				

MODEL: Sheet PAPER: 34x22 (in.) DATE: 5/27/2026 TIME: 3:16:37 PM PLTDRV: OHDOT_PDF.plt PENTBL: OHDOT_Pen.tbl USER: Benjamin.Ankrom@dot.ohio.gov WORKSPACE: OHDOTCEV02 WORKSET: 121505 PRODUCT: OpenRoadsDesigner 24.00.00.205
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Loc. No.	County	Route	SLM (mi)	Description	480V													240 Volt			Total Units	Tower Structure	Year for Inspection		
					Underdeck			Conventional				Tower and Low Mast						Conventional							
					100W UD	100W Wall	150W UD	LED	200W HPS	250W HPS	310W HPS	400W HPS	LED	LED	LED	LED	LED	LED	400 W Low Mast	400W Tower				1000W Tower	LED
				Lumens IES Type				III						31K	63K	31K	63K	85K	112K				III		
				Luminares at Traffic Signals																					
M-24	Montgomery	IR-70	3.36	WB Ramp & Arlington Road (CR 533)																					2
M-25	Montgomery	IR-70	3.36	EB Ramp & Arlington Road (CR 533)																					2
M-26	Montgomery	IR-675	7.44	NB Ramp & Wilmington Pike (CR 85)																					2
M-27	Montgomery	IR-675	7.44	SB Ramp & Wilmington Pike (CR 85)																					2
M-28	Montgomery	US-40	5.63	SR 49																					2
M-29	Montgomery	SR-48	0.60	Social Row Road (CR 166)																					2
M-30	Montgomery	SR-48	1.07	Nutt-Hibbert Road (TR 146/2271)																					4
M-31	Montgomery	SR-48	5.37	Whipp Road																					4
M-32	Montgomery	SR-741	6.04	Alex-Bell Road (CR 78)																					2
M-33	Montgomery	SR-741	5.84	Meijers Drive																					2
M-34	Montgomery	SR-741	4.64	Vienna Parkway																					2
M-35	Montgomery	SR-741	3.60	SR-725																					2
M-36	Montgomery	SR-741	2.93	Lyons Road (CR 150)																					3
M-37	Montgomery	SR-741	1.23	Innovation Drive (Austin Landing 'C')																					2
M-38	Montgomery	SR-741	1.03	Landing Way (Austin Landing 'B')																					4
M-39	Montgomery	SR-741	0.75	Austin Pike (CR 166)																					8
				Total for Intersection Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
				Total for Highway Lighting	49	37	4	260	147	21	330	11	14	77	29	214	142	54	8	24	14	0	4	0	0
				Total	49	37	4	260	147	21	330	11	14	77	29	214	142	54	0	24	14	45	4	0	1476

LOCATION AND DETAILS
INVENTORY - HIGHWAY LIGHTING (2/2)

DESIGN AGENCY



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PROJECT ID
121505

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