

TRAFFIC CONTROL GENERAL NOTES

SCOPE

THESE NOTES AND SPECIFICATIONS SUPPLEMENT THE STATE OF OHIO'S CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE SUPPLEMENTAL SPECIFICATIONS NOTED ON THE TITLE SHEET. THE WORK TO BE PERFORMED BY THE CONTRACTOR IN CONNECTION OF FURNISHING LABOR, SUPPLIES, EQUIPMENT, MATERIALS, AND PERFORMING ALL OPERATIONS NECESSARY FOR THE ACCEPTABLE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, IN STRICT ACCORDANCE WITH THESE PLANS, NOTES AND SPECIFICATIONS. THESE NOTES, SCHEDULES, AND DRAWINGS ARE INTENDED TO PROVIDE FOR ALL MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL A COMPLETE TRAFFIC CONTROL SYSTEM.

ITEM 625 POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM THE CLEVELAND ELECTRIC ILLUMINATING AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

THE REMOVAL SHALL CONSIST OF VEHICULAR SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, CONTROLLER WITH CABINET, TRAFFIC POLES AND PEDESTALS, MESSENGER WIRE, CABLE, CONDUIT RISER, AND ALL OTHER PORTIONS OF THE TRAFFIC SIGNAL INSTALLATION.

CONTRACTOR SHALL STORE REMOVED EQUIPMENT AND MATERIALS ON THE SITE FOR PICKUP BY THE CITY OF MENTOR. IF THE EQUIPMENT AND MATERIALS, HAVE NOT BEEN PICKED UP BY THE CITY AT THE END OF CONSTRUCTION, THE EQUIPMENT AND MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE CITY OF MENTOR TO DISCONNECT EXISTING POWER SERVICE BEFORE THE EXISTING SIGNAL INSTALLATION IS REMOVED.

ITEM 632 LOOP DETECTOR UNITS, DELAY AND EXTENSION TYPE, AS PER PLAN

- A.) EACH AMPLIFIER SHALL BE NUMBERED TO CORRESPOND TO ITS LOOP NUMBER. THE LOOP NUMBERS ARE SHOWN ON SHEETS 52, 8, 54
- B.) THE AMPLIFIER SHALL BE AUTOMATICALLY SELF TUNING.
- C.) THE UNITS ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY REPLACEMENTS WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN 732.07.

ITEM 632 PEDESTRIAN SIGNAL HEADS, TYPE D-2, AS PER PLAN

SECTION 732.05 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- A) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF ALUMINUM AND MEET ITC SPECIFICATIONS.
- B) PLASTIC LENSES SHALL BE USED.
- C) PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

ITEM 632 VEHICULAR SIGNAL HEAD, 3-SECTION, 12" LENS, 1-WAY AS PER PLAN

SECTION 732.01 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- A) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITC SPECIFICATIONS.
- B) PLASTIC LENSES SHALL BE USED.
- C) PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF GALVANIZED STEEL OR ALUMINUM.
- D) PROPER EXTERIOR COLORS SHALL BE OBTAINED BY THE USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- E) SIGNALS SHALL BE RIGID MOUNTED

ITEM 632 VEHICULAR SIGNAL HEAD, 5-SECTION, 12" LENS, 1-WAY AS PER PLAN

SECTION 732.01 OF THE SPECIFICATIONS IS MODIFIED FOR THIS PROJECT AS FOLLOWS:

- A) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITC SPECIFICATIONS.
- B) PLASTIC LENSES SHALL BE USED.
- C) PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF GALVANIZED STEEL OR ALUMINUM.
- D) PROPER EXTERIOR COLORS SHALL BE OBTAINED BY THE USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- E) SIGNALS SHALL BE RIGID MOUNTED.

ITEM 632 INTERCONNECT CABLE, 6 PAIR, 19 AWG, SOLID, REA (PE-39), AS PER PLAN

MEASUREMENT WILL BE BASED UPON THE NUMBER OF LINEAR FEET "INTERCONNECT CABLE, 6 PAIR, 19 AWG, SOLID, REA (PE-39)" IN PLACE.

THE NUMBER OF SPLICE LOCATIONS WILL BE ZERO. THE LOCATION OF SPLICES SHALL OCCUR ONLY AT THE TERMINALS OF THE HARDWARE INTERCONNECT PANEL.

ITEM 632 SIGNAL CABLE, 2-CONDUCTOR, 14AWG, AS PER PLAN

SIGNAL CABLE USED FOR PEDESTRIAN PUSHBUTTON WIRING SHALL BE TYPE: 2-CONDUCTOR, SHIELDED, TWISTED PAIR, STRANDED.

ITEM 633 CONTROLLER ACTUATED 4 PHASE, SOLID STATE, DIGITAL MICROPROCESSOR, AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND INSTALL AN ACTUATED, 4 PHASE, SOLID STATE, DIGITAL MICROPROCESSOR CONTROLLER WITH BASE MOUNTED CABINET AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE CONTROLLER COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

THE CONTROLLER SHALL BE MENU-DRIVEN AND CAPABLE OF PROVIDING THE SIGNAL DISPLAYS AND TIMING AS SHOWN ON SHEETS 52, 54.

THE CONTROLLER AND CABINET SHALL CONFORM TO ODOT SPECIFICATIONS AND SHALL HAVE THE FOLLOWING FEATURES:

1. THE LOAD SWITCHES SHALL PROVIDE INPUT AND OUTPUT INDICATORS.
2. TTH CONFLICT MONITOR CAPABLE OF 4 PHASE OPERATION SHALL MONITOR GREENS, AMBERS, WALKS, AND ABSENCE OF REDS
3. THE FOLLOWING SWITCHES SHALL BE ACCESSIBLE VIA THE POLICE DOOR PANEL:
 - A. SIGNAL SHUTDOWN
 - B. FLASH CONTROL
 - C. AUTOMATIC/MANUAL TRANSFER
4. THE FOLLOWING SWITCHES SHALL BE MOUNTED ON THE SWITCH PANEL IN THE CABINET:
 - A. RUN/STOP TIME
 - B. CONTROLLER SHUTDOWN
 - C. DETECTOR TEST
5. FLUORESCENT SERVICE LAMP WITH DOOR ACTIVATED ON/OFF SWITCH.
6. THE BASE MOUNTED CABINET SHALL BE ALUMINUM.
7. THE CONTRACTOR SHALL FURNISH FOR APPROVAL A CABINET PLAN SHOWING COMPONENT REPLACEMENT.
8. THE CABINET SHALL BE LARGE ENOUGH TO ACCOMODATE (4) FOUR ADDITIONAL DETECTOR AMPLIFIERS AND THE CONTRACTOR SHALL ALSO PROVIDE THE WIRING HARNESS.
9. THE CONTROLLER SHALL BE EQUIPPED WITH A TELEMETRY MODULE(S) AND AN I/O INTERFACE BOARD.

THE CONTROLLER UNIT BID ITEM SHALL BE LIMITED TO THE FOLLOWING MODEL AND MANUFACTURERS:

- 1: MODEL LMD 8000 SERIES MENU DRIVEN ACTUATED CONTROLLER MANUFACTURED BY TRAFFIC CONTROL TECHNOLOGIES, INC., P.O. BOX 0399, LIVERPOOL, NEW YORK 13088-0399.
- 2: MODEL ASC-8000RM ADVANCED SYSTEM CONTROLLER MANUFACTURED BY ECONOLITE CONTROL PRODUCTS, INC., 3360 EAST LaPALMA, ANAHEIM, CALIFORNIA 92806.
- 3: MODEL 1880EL CONTROLLER MANUFACTURED BY TRANSYT CORPORATION, 4920 WOODLANE CIRCLE, TALLAHASSEE, FLORIDA 32303.

TEMPORARY MAINTENANCE OF EXISTING SIGNALS

FOR MAINTENANCE OF EXISTING TRAFFIC SIGNALS DURING CONSTRUCTION, SEE MAINTENANCE OF TRAFFIC PLANS SHEETS 6 THRU 17.

CERTIFICATION AND APPROVAL OF TRAFFIC CONTROL ITEMS

SUBMISSIONS BY THE CONTRACTOR FOR APPROVAL SHALL CONFORM WITH 632.02 AND 633.03 AS APPROPRIATE EXCEPT THAT THREE ADDITIONAL SETS OF INFORMATION SHALL BE REQUIRED AND SUBMITTED TO THE CITY OF MENTOR FOR THEIR INFORMATION AND COMMENTS.

TRAFFIC CONTROL STANDARD DRAWINGS

REFERENCE TO SUPPLEMENTAL SPECIFICATIONS 857, 858, 861, 957, 958, AND 961 ON THE TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 630, 631, 633, 730, 731, AND 733.

LOOP DETECTOR INSTALLATION

PRIOR TO LOOP DETECTOR PAVEMENT CUTTING, THE CONTRACTOR SHALL SPOT PAINT ALL LOOP DETECTOR LOCATIONS. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF MENTOR TRAFFIC ENGINEER 48 HRS. IN ADVANCE OF ANY LOOP DETECTOR PAVEMENT CUTTING SUCH THAT HE MAY INSPECT FINAL LOOP DETECTOR LOCATIONS. THE CITY OF MENTOR TRAFFIC ENGINEER: 255-1100

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- A.) EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
- B.) NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGES.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGES EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN EIGHT HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED EIGHT HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OF REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIOD AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF MENTOR FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 2 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:30 AM - 8:30 AM, AND 4PM-6PM, MONDAY THROUGH FRIDAY.

ANY SIGNALIZED INTERSECTION, WHERE THE TRAFFIC SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY THE CONTRACTOR

WITH THE PRESENCE OF OFF-DUTY CITY OF MENTOR POLICE, HIRED BY THE CONTRACTOR.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COST RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.