

# GENERAL NOTES

## ITEM 605 3" SHALLOW PIPE UNDERDRAIN

AN ESTIMATED QUANTITY OF 30 LINEAR FEET OF ITEM 605 SHALLOW PIPE UNDERDRAIN IS PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN PROVIDING POSITIVE DRAINAGE FOR PULL BOXES. PERFORATED 3" PVC PIPE OR CONDUIT MATERIAL APPROVED BY THE ENGINEER SHALL BE USED IN CONSTRUCTION OF THIS ITEM.

## ITEM 630 REMOVAL OF GROUND MOUNTED SIGN, ~~AS PER PLAN~~

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING STOP SIGNS (R-1-48) ON THE EXIT RAMPS BUT LEAVING THE "DO NOT ENTER" & THE "ONE WAY" SIGNS WITH THE POSTS. THESE STOP SIGNS SHALL REMAIN ON THE SITE TO BE PICKED UP BY ODOT FOR STORAGE.

## ITEM 632 LOOP DETECTOR UNITS, BY TYPE, AS PER PLAN

- IN ADDITION TO THE REQUIREMENTS OF 632, THE LOOP DETECTOR AMPLIFIERS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES
1. THE OUTPUT RELAY SHALL BE ELECTROMECHANICAL WITH THE NORMALLY CLOSED NORMALLY OPEN AND THE RELAY COMMON CONTACTS BROUGHT OUT IN THE HARNESS.
  2. THE AMPLIFIER SHALL BE AUTOMATICALLY SELF TUNING.
  3. THE UNITS ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY REPLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN 732.07.
  4. EACH AMPLIFIER SHALL BE NUMBERED IN THE CONTROLLER TO CORRESPOND TO ITS LOOP NUMBER AS SHOWN ON SHEETS 6 & 7.

## 632 INTERCONNECT CABLE, 8-CONDUCTOR No. 12 AWG, WITH SUPPORT MESSENGER, AS PER PLAN

THE CONTRACTOR SHALL BE PERMITTED TO USE EITHER OF TWO TYPES OF INTERCONNECT CABLE CONSTRUCTION AND INSTALLATION UNDER THIS ITEM AS FOLLOWS:

1. INTEGRAL MESSENGER TYPE INTERCONNECT CABLE MEETING THE REQUIREMENTS OF 732.19. UNDER THIS METHOD ANY SECTIONS OF CABLE SHOWN IN THE PLANS TO BE CONTAINED IN CONTROLLERS, CABINETS, POLES, CONDUITS OR SUPPORTED ON MESSENGER WIRE INSTALLED FOR OTHER PURPOSE SHALL HAVE THE SUPPORTING MESSENGER AND JACKET WEB NEATLY REMOVED BY A USE OF A TOOL SPECIFICALLY DESIGNED AND SIZED FOR THIS PURPOSE. DEVIATIONS FROM THE CABLE ROUTING SHOWN IN THE PLAN, FOR THE SOLE PURPOSE OF REDUCING THE AMOUNT OF MESSENGER TO BE REMOVED, WILL NOT BE PERMITTED. THE CABLE SHALL BE INSTALLED WITH APPROXIMATELY ONE TWIST FOR EACH 15 FEET OF SPAN LENGTH.
2. SEPARATE INTERCONNECT CABLE MEETING THE REQUIREMENTS OF 732.19 PLUS A 1/4 INCH MESSENGER WIRE AND LASHING MEETING THE REQUIREMENTS OF 732.18. UNDER THIS METHOD THE CONTRACTOR WILL INSTALL A SEPARATE 1/4 INCH MESSENGER TO SUPPORT THE SPANS OF INTERCONNECT CABLES IN ALL LOCATIONS WHERE THE PLANS SHOW INTERCONNECT CABLE WHICH IS NOT OTHERWISE SUPPORTED BY A SIGNAL MESSENGER WIRE OR OTHER SUITABLE SUPPORT. UTILIZATION OF EXISTING MESSENGER WIRE, NOT PROVIDED BY THE PROJECT OR DESIGNATED THEREIN AS AVAILABLE FOR USE, IS PROHIBITED. DEVIATION FROM THE CABLE ROUTING SHOWN ON THE PLANS, FOR THE PURPOSE OF REDUCING THE NEED FOR SEPARATE MESSENGER WIRE, WILL NOT BE PERMITTED.

IN EITHER CASE THE NUMBER OF SPLICE LOCATIONS WILL BE KEPT TO A MINIMUM. MEASUREMENT WILL BE BASED UPON THE "INTERCONNECT CABLE, 8-CONDUCTOR No. 12 AWG, WITH SUPPORT MESSENGER, AS PER PLAN" IN PLACE IN ACCORDANCE WITH THE METHOD DESCRIBED IN 632.28 AND NO SEPARATE PAYMENT WILL BE PROVIDED FOR ANY SEPARATE MESSENGER WIRE USED TO SUPPORT INTERCONNECT CABLES.

## 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 ITE SPECIFICATIONS.
- B) PLASTIC LENSES SHALL BE USED.
- C) PIPE, SPACERS, AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVINIZED STEEL OR ALUMINUM.

## ITEM 632 VEHICULAR SIGNAL HEADS, 3,5-SECTION, 12 INCH LENS, 1-WAY, AS PER PLAN

THE SIGNALS SHALL HAVE LONG LIFE, KRYPTON GAS, 12,000 HOUR (AT 130 VOLTS) LAMPS. THEY SHALL BE DESIGNED FOR 12" SIGNAL UNITS, 150 WATTS, 1950 INITIAL LUMENS, LIGHT CENTER LENGTH OF 3" AND WITH CLEAR GLASS ENVELOPES.

## 633. CONTROLLER ACTUATED, 3 PHASE, SOLID STATE DIGITAL, MICROPROCESSOR, AS PER PLAN

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1-1983. IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL ALSO HAVE EXTENDED MONITORING (IN ACCORDANCE WITH 733.04 PART 3B). THE CONTROLLER CABINET SHALL BE KEYS TO THE STATE MASTER. CONTROLLER CABINET SHALL BE PAINTED YELLOW, FEDERAL STANDARD 595 COLOR 13655. CONTROLLER CABINET SIZE SHALL COMPLY TO THE REQUIREMENTS OF NEMA TS-1 SECTION 14 OR SECTION 4 WHICHEVER IS SMALLER. PRINTED BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACK SIDE OF THE BACK PANEL. ALL CONTROLLER MEMORIES SHALL BE INVOLATILE AND SHALL NOT REQUIRE BATTERIES OR OTHER SOURCES OF ENERGY TO RETAIN DATA WHILE POWER IS REMOVED FROM THE CONTROLLER. PAYMENT FOR ITEM 633 CONTROLLER, ACTUATED 3 PHASE, SOLID STATE DIGITAL, MICROPROCESSOR, WITH CABINET BY TYPE, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

## MAINTENANCE OF NEW TRAFFIC SIGNAL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF EACH TRAFFIC SIGNAL CONSTRUCTED UNTIL SUCH TIME AS TESTING REQUIREMENTS ARE SATISFIED, AND THE SIGNAL INSTALLATION IS COMPLETE AND ACCEPTED BY THE ENGINEER.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY OF WICKLIFFE AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES ARE LOCATED. 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 TROUBLE CALLS. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAULTS, 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 IS NOTIFIED OF THE OUTAGE.

IN THE EVENT THE NEWLY INSTALLED SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE SIGNAL SHALL BE BACK IN SERVICE WITHIN EIGHT HOURS AFTER THE CONTRACTORS NOTIFICATION OF OUTAGE.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE CONSTRUCTION OF AND/OR REVISIONS TO THE SIGNAL SYSTEMS.

THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY WORK ITEM AND THE COST SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS ITEMS MAKING UP THE SIGNAL SYSTEM.

## GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS, AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE TRAFFIC CONTROL SYSTEM CONTROLLER, ASSOCIATED EQUIPMENT AND DETECTOR AMPLIFIERS.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO, AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

## CERTIFICATION AND APPROVAL OF TRAFFIC CONTROL ITEMS

SUBMISSIONS BY THE CONTRACTOR FOR APPROVAL SHALL CONFORM WITH 632.02 AND 633.02 AS APPROPRIATE EXCEPT THAT THREE ADDITIONAL SETS OF INFORMATION SHALL BE FORWARDED BY THE ENGINEER TO THE CITY OF WICKLIFFE FOR THEIR INFORMATION AND COMMENTS.