TRAFFIC CONTROL GENERAL NOTES

SCOPE
THESE NOTES AND SPECIFICATIONS SUPPLEMENT THE STATE OF OHIO'S CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED 1989 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 PAINESVILLE UTILITIES COMPANY AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

ITEM 632 LOOP DETECTOR UNITS, DELAY AND EXTENSION 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 SHEET __44__.

ITEM 632 PEDESTRIAN SIGNAL HEADS, TYPE D2, 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 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 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.
D) PROPER EXTERIOR COLORS SHALL BE OBTAINED BY THE USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

ITEM 632 VEHICULAR SIGNAL HEAD, 5 –SECTION, 12" LENS, 1–WAY 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 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.
D) PROPER EXTERIOR COLORS SHALL BE OBTAINED BY THE USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

ITEM 633 CONTROLLER ACTUATED 3 PHASE, EXPANSIBLE TO 4 PHASE, SOLID STATE, DIGITAL MICROPROCESSOR, AS PER PLAN
THE CONTRACTOR SHALL FURNISH AND INSTALL A FULL ACTUATED, 3 PHASE, EXPANDIBLE TO 4 PHASE, SOLID STATE, DIGITAL 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 CAPABLE OF PROVIDING THE SIGNAL DISPLAYS AND TIMING AS SHOWN ON THE SHEETS.

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. THE 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 EXTERIOR SHALL BE ALUMINUM.
7. THE CONTRACTOR SHALL FURNISH FOR APPROVAL A CABINET PLAN SHOWING COMPONENT REPLACEMENT.

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.
REFERENCES TO ITEM 608, 4" CONCRETE WALK ON THE TRAFFIC CONTROL STANDARD DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ ITEM 633, CONTROLLER WORK PAD. REFERENCES TO STANDARD CONSTRUCTION DRAWING HL–2 SHALL BE CONSIDERED TO READ AS REFERENCES TO STANDARD CONSTRUCTION DRAWING HL–10.12.

MAINTENANCE OF NEW TRAFFIC SIGNAL
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF EACH TRAFFIC SIGNAL HE HAS IN PART OR FULLY 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 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 NEW 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 CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

WHEN 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 AND ANY SUBSEQUENT BILLINGS TO THE STATE FROM LAKE COUNTY 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 FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT AND DETECTOR AMPLIFIERS. CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE COUNTY OF STARK ENGINEER 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 ODOT 632.02 AND ODOT 633.03 AS APPROPRIATE EXCEPT THAT THREE ADDITIONAL SETS OF INFORMATION SHALL BE REQUIRED AND SUBMISSIONS SHALL BE MADE TO THE ENGINEER FOR THEIR INFORMATION AND COMMENTS.