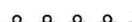


CITY OF MASSILLON
CITY ENGINEERING DEPARTMENT
STARK COUNTY, OHIO
Lake Ave and Amherst Intersection Improvement

PROJECT DESCRIPTION

Work shall include installation of new traffic signal (mast arms, traffic signal heads, pedestrian poles, pedestrian signal heads, vehicular detections system, wiring, controller, power service, directional drilling.

CONVENTIONAL SIGNS

RIGHT OF WAY	EXISTING:		PROPOSED:						
COUNTY LINE									
TOWNSHIP LINE									
CORPORATION LINE									
FENCE LINE	EXISTING:		PROPOSED:						
GUARDRAIL	EXISTING:		PROPOSED:						
MANHOLES	EXISTING:		PROPOSED:		REHABILITATED:				
CATCH BASINS	EXISTING:		PROPOSED:		REHABILITATED:				
SIGNS	1-POST:		2-POST:		3-POST:		STREET:		#
EXISTING POLES	POWER:		TELEPHONE		LIGHT		SPAN		
PROPOSED POLES	POWER:		TELEPHONE		LIGHT		SPAN		
EXIST. UTILITIES	VALVE:		HYDRANT:		METERS:		GUY:		C

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG

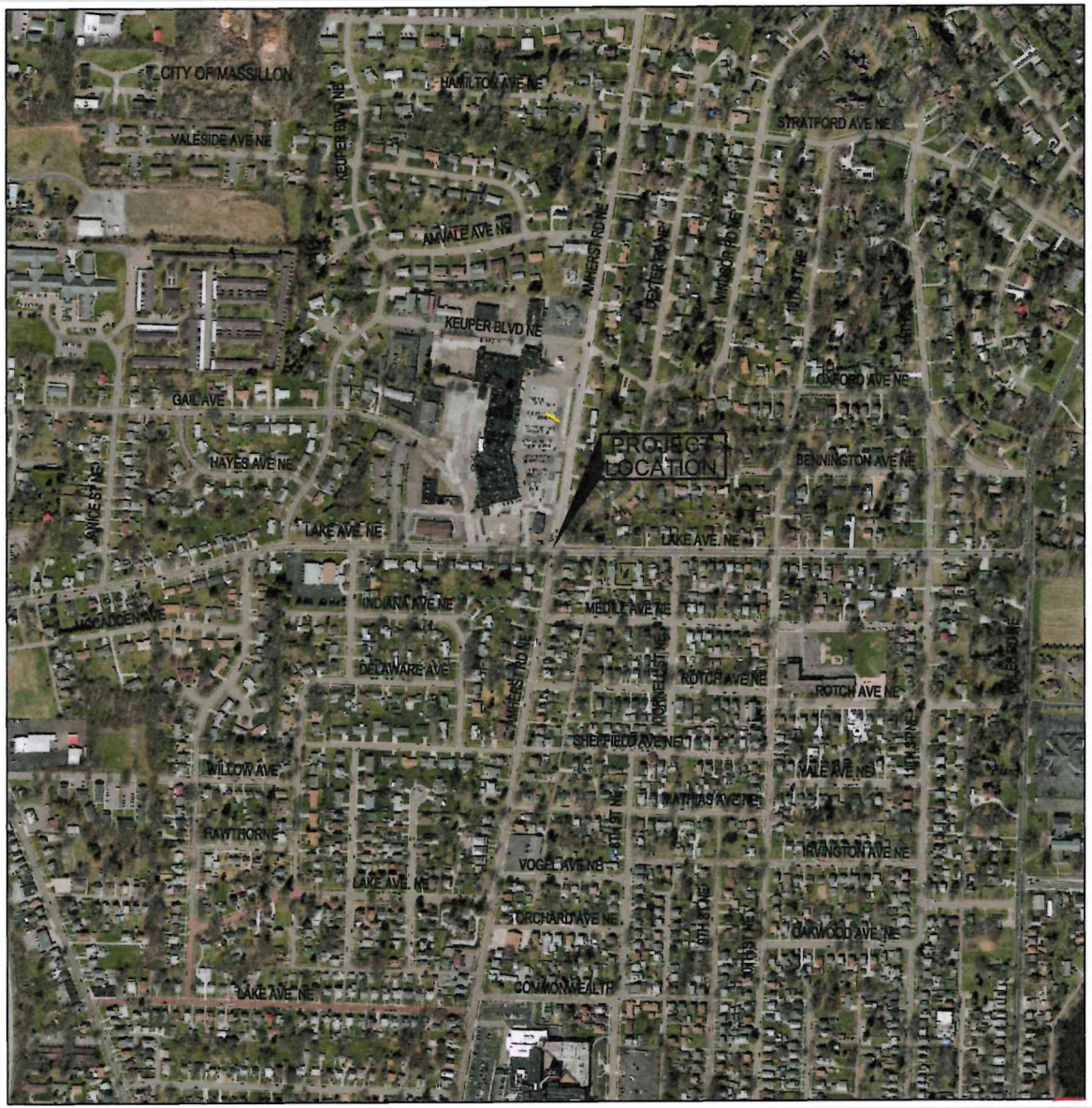


OHIO
Utilities
Protection
SERVICE

Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-925-0988

OUPS REFERENCE:



LOCATION MAP

PORTION TO BE IMPROVED
STREETS

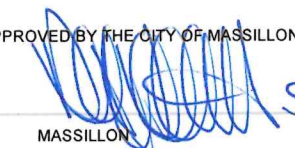


Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

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APPROVALS

APPROVED BY THE CITY OF MASSILLON THIS 28th DAY OF August, 2023

MASSILLON

MASSILLON ENGINEER
ALEX PITTS, P.E.
DATE 8/28/23

CITY OF MASSILLON ELECTED OFFICIALS

KATHY CATAZARO-PERRY	MAYOR
JUSTIN RICHARD	DIRECTOR OF LAW
JAYNE FERRERO	AUDITOR
LINDA LITMAN	TREASURER
COUNCIL	
CLAUDETTE O. ISTNICK	PRESIDENT
MARK LOMBARDI	1st WARD
AARON VIOLAND	2nd WARD
MICHAEL GREGG	3rd WARD
JILL CREAMER	4th WARD
JULIE HARWIG SMITH	5th WARD
MICHAEL SNEE	6th WARD
JAMIE SLUTZ	AT LARGE
ED LEWIS IV	AT LARGE
TED HERNICANE	AT LARGE



VERTICAL SCALE
0 2 4
HORIZONTAL SCALE IN FEET
0 2 4

CHECKED BY: ANP
DATE: Aug, 2023
DRAWN BY: FPW
DATE: May, 2023

REVISIONS:
DATE DESCRIPTION

Lake Ave and Amherst Intersection Improvement
Title Sheet
City of Massillon
Stark County, Ohio



DRAWING NAME:
Lake Ave and Amherst Intersection Improvement
CITY NUMBER:
23ST01
1 / 9

* THE FOLLOWING NOTES ARE CITY OF MASSILLON STANDARD NOTES AND MAY NOT BE APPLICABLE TO ALL PROJECTS.

UTILITIES

LISTED BELOW ARE ALL KNOWN UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T 50 W. BOWERY, 6TH FLOOR AKRON, OH. 44308 800-364-8057	AQUA WATER P.O. BOX 584 MASSILLON, OH. 44646 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S ERIE ST. (330) 830-7085	MASSILLON CABLE P.O. BOX 814 MASSILLON, OH. 44646 (330) 833-4134	GREAT LAKES 104 6TH ST SW CANTON, OH. 44702 (330) 456-2454
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST SW CANTON, OH 44706 (330) 478-3142	NORTHEAST OHIO NATURAL GAS CORP. 9081 S.R. 250 STRASBURG, OH. 44680-9766 (330) 878-5589	

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO WORK.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE.

OUPS - 1-800-362-2764
OGUPUPS - 1-800-925-0988

DATUM ELEVATION

ALL BENCHMARKS ARE BASED ON REFERENCE BENCHMARKS PROVIDED BY THE CITY OF MASSILLON

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE BASELINE AS SHOWN.

NOTIFICATION OF SAFETY FORCES AND BUS GARAGES

THE CONTRACTOR SHALL NOTIFY ALL AGENCY LISTED BELOW AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

MASSILLON SAFETY SERVICE 330-830-1702	MASSILLON FIRE DEPARTMENT 330-833-1053	PERRY TOWNSHIP HALL 330-833-2141	NORTH LAWRANCE FIRE DEPT 330-832-6347
TUSCARAWAS TOWNSHIP HALL 330832-4337	JACKSON FIRE DEPARTMENT 330-832-1553	MASSILLON POLICE DEPARTMENT 330-830-1735	MASSILLON SCHOOL BUS GARAGE 330-830-1849
JACKSON TOWNSHIP HALL 330-832-7416	PERRY FIRE DEPARTMENT 330478-5121	JACKSON POLICE DEPARTMENT 330-497-7440	JACKSON SCHOOL BUS GARAGE 330-830-8042
PERRY POLICE DEPARTMENT 330-833-3865	PERRY SCHOOL BUS GARAGE 330-477-1300	STARK COUNTY SHERIFF 330-430-3887	TUSCARAWAS SCHOOL BUS GARAGE 330-837-7805

SARTA
330-454-5333

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING THEIR BID. PROSPECTIVE BIDDERS ARE TO COORDINATE WITH THE OWNER FOR ACCESS TO THE SITE FOR INSPECTIONS AND EXPLORATORY EXCAVATION. THE BIDDER SHALL CONTACT THE OWNER AT LEAST 72 HOURS IN ADVANCE OF THE DESIRED INSPECTION OR EXCAVATION. THE BIDDER SHALL CONTACT O.U.P.S. AND OBTAIN LOCATIONS OF OTHER UTILITIES.

QUANTITIES

QUANTITIES ARE INDICATED FOR COMPARISON OF BIDS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY QUANTITIES BEFORE ORDERING MATERIALS. VARIATIONS FROM THE PLAN QUANTITIES SHALL BE APPROVED BY THE CITY OF MASSILLON ENGINEER BEFORE MATERIAL ORDERS ARE PLACED. MATERIALS REJECTED DUE TO INCOMPATIBILITY BETWEEN ORDERED QUANTITIES AND FIELD CONDITIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION IS TO BE COMPLETED ACCORDING TO THE CURRENT CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHEN A CONFLICT ARISES BETWEEN THE CITY OF MASSILLON AND ODOT'S STANDARDS, THE MORE STRINGENT STANDARD WILL BE USED AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER. THE CONTRACTOR SHALL FOLLOWALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

PRESERVATION OF EXISTING UTILITY SERVICES

ANY EXISTING WATER LINE, SANITARY SEWER, STORM SEWER, GAS LINE OR OTHE UTILITY IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

PRESERVATION OF PRIVATE PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC.. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AND ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. PRIOR ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THE ABOVE ITEMS ARE PERFORMED.

ACCESSIBILITY TO PRIVATE PROPERTY

ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THE TRENCH SHALL BE BACKFILLED AT THE END OF EACH WORK DAY TO PROVIDE ACCESS. THE CONTRACTOR MUST NOTIFY EACH PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF CUTTING THEIR DRIVEWAY.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE CONTRACTOR SHALL PROVIDE FOR THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT. A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE BID FORM FOR ITEM201SPEC, CLEARING AND GRUBBING. THIS ITEM SHALL INCLUDE ALL PROVISIONS AS SET FORTH IN THE 2023 ODOT SPECIFICATIONS. REMOVAL ITEMS MAY INCLUDE TREES, STUMPS, AND BRUSH AS DETERMINED BY THE CITY ENGINEER.

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201SPEC, CLEARING AND GRUBBING.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND ANY TYPE OF LAND MONUMENT. HE SHALL HAVE ALL LAND MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. HE SHALL REPLACE DESTROYED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY AN OHIO REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

ITEM 659, TOPSOIL, SEEDING AND MULCHING

ITEM 659 SHALL BE APPLIED TO ALL EXPOSED SOIL AREAS DISTURBED DURING CONSTRUCTION. SUCH AS SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING.

THE CITY SHALL APPROVE SEED MIX PRIOR TO APPLICATION TO BE USED THROUGHOUT CONSTRUCTION LIMITS.

CONDITIONS OF WORK

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, STATE, COUNTY, AND CITY OF MASSILLON LAWS AND REGULATIONS. ALL WORK, AT ALL TIMES SHALL BE SUBJECT TO OBSERVATION BY THE CITY OF MASSILLON ENGINEER AND/OR HIS REPRESENTATIVE. ALL WORK SHALL COMPLY WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS AND OHIO EPA, AND STANDARDS OF THE CITY OF MASSILLON. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, AND APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL FOLLOW THE MORE STRINGENT GUIDELINES OF THE CITY OF MASSILLON OR ODOT AT THE DESCRETION OF THE CITY OF MASSILLON ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN FACILITIES FOR A CONSTRUCTION OFFICE, EMPLOYEE PARKING, AND EMPLOYEE SANITARY FACILITIES. ON STREET PARKING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE FOR THE LAWFUL OFF-SITE DISPOSAL OF DEMOLITION DEBRIS AND CONSTRUCTION WASTE.

DIRECTIONAL DRILLING

WORK SHALL BE PERFORMED PER OHIO DEPARTMENT OF TRANSPORTATION HORIZONTAL DIRECTIONAL DRILLING AND SHALL BE PAID FOR UNDER

ITEM 632SPEC SIGNAL CABLING COMPLETE INCLUDING CONDUIT AND BOXES
ITEM 632SPEC POWER WIRING COMPLETE INCLUDING CONDUIT AND BOXES.

NEW TRAFFIC SIGNAL INSTALLATION

THIS WORK CONSISTS OF FURNISHING AND INSTALLING TRAFFIC SIGNAL EQUIPMENT, COMPLETE AND READY FOR SERVICE. THIS WORK ALSO INCLUDES NECESSARY EXCAVATION AND BACKFILL, DISPOSAL OF DISCARDED MATERIALS, RESTORATION OF DISTURBED FACILITIES AND SURFACES TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE WORK STARTED, AND ELECTRICAL TESTING AS SPECIFIED.

PULL BOXES, CONDUITS, GROUND RODS, AND CABLE SPLICING KITS REQUIRED FOR TRAFFIC SIGNAL EQUIPMENT INSTALLATIONS ARE SPECIFIED IN ITEM 625. BEFORE ANY WORK IS STARTED ON THE TRAFFIC SIGNAL, THE ENGINEER AND THE CONTRACTORS REPRESENTATIVE SHALL REVIEW AND RESOLVE ANY POTENTIAL PROBLEMS AT THE LOCATION WHERE THE NEW SIGNAL WILL BE CONSTRUCTED.

ALL OF THE REQUIRED PERMANENT SIGNS SHALL BE ERECTED AND THE REQUIRED PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO THE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL.

ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

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

- SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
- PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL.
- THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
- ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE RED LENS LOCATED IN FRONT OF THE MAST ARM.
- THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF CMS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY, 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.
- SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.
- SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- 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.
- BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS OR TETHERED HEADS.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, (LED), BLACK, (BY TYPE), 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.



NTS
HORIZONTAL
SCALE IN FEET

CHECKED BY:
ANP

DATE:
Aug. 2023

DRAWN BY:
FPW

DATE:
Moy, 2023

REVISIONS:	DATE	DESCRIPTION

Lake Ave and Amherst Intersection Improvement
General Notes
City of Massillon
Stark County, Ohio



DRAWING NAME:
GeneralNotes1
CITY NUMBER:
23s101

ITEM 632 - COVERING OF VEHICULAR SIGNAL HEAD

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), COUNTDOWN, TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 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. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
- 4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
- 5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED.
- 6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C.

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.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN

THE ELECTRICAL TRAFFIC CONTROL EQUIPMENT PROVIDED SHALL MEET THE FOLLOWING SPECIFICATIONS. THE EQUIPMENT PROVIDED AS PART OF THIS CONTRACT SHALL BE THE LATEST MODEL, CURRENTLY UNDER PRODUCTION AND NEW. THE CONTROLLER CABINET AND ACCESSORIES SHALL MEET THE NEMA TS-2, 1992 STANDARD FOR ACTUATED CONTROLLER UNITS, AND SHALL BE SIZED IN ACCORDANCE WITH PIS 208320. THE CABINET SHALL BE ALUMINUM WITH THE NATURAL ALUMINUM FINISH INSIDE AND OUTSIDE. THE LOAD BAY SHALL BE THE TF5016 OR NEWER, WITH 16 LOAD SWITCH POSITIONS. PROVIDE ONLY THE EXACT NUMBER OF LOAD SWITCHES REQUIRED. EACH LOAD SWITCH SHALL HAVE LIGHT EMITTING DIODES (LEDs) FOR THE CONTROLLER OUTPUT AND LOAD SWITCH OUTPUT. ALSO PROVIDE 8 FLASH RELAY POSITIONS (BUT ONLY SUPPLY THE EXACT NUMBER OF RELAYS NEEDED FOR EACH SPECIFIC INTERSECTION), 1 NEMA 2-CIRCUIT FLASHER, AND AN MMU MONITOR. EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE CABINET SHALL BE EQUIPPED WITH A CABINET POWER SUPPLY (CPS). THE POLICE PANEL ON THE OUTSIDE OF THE CABINET DOOR SHALL HAVE A FLASH SWITCH, A SWITCH FOR AUTOMATIC/MANUAL OPERATION, SIGNAL ON/OFF SWITCH AND A MANUAL PUSHBUTTON WITH A MINIMUM CORD LENGTH OF 10 FEET. THE TECHNICIAN PANEL ON THE INSIDE OF THE CABINET DOOR SHALL INCLUDE A FLASH SWITCH, A STOP TIME SWITCH, AND AN EQUIPMENT ON/OFF SWITCH. A CABINET DOOR OPEN SWITCH AND A CABINET LIGHT ON / OFF SWITCH SHALL ALSO BE SUPPLIED.

THE CONTROLLER CABINET SHALL ALSO INCLUDE:

- * A SLIDE-OUT LAPTOP SHELF.
- * INTERIOR, UNDERSHELF LED CABINET LIGHTING, INCLUDING A MINIMUM OF 2PANELS OF 6 HIGH-INTENSITY LED'S EACH AND A DOOR-ACTIVATED SWITCH. THE LED PANELS SHALL BE MOUNTED IN LOCATIONS TO MAXIMIZE LIGHT ON THE CABINET EQUIPMENT.
- * A GOOSENECK/ADJUSTABLE LIGHT FIXTURE WITH AN LED LAMP. THE ADJUSTABLE LIGHT FIXTURE SHALL BE MOUNTED ON THE LOWER RIGHT SIDE OF THE CONTROLLER CABINET.
- * A MINIMUM OF TWO (2) GFCI PROTECTED RECEPTACLES.
- * A MINIMUM OF SIX (6) SURGE PROTECTED (NON-GFCI) RECEPTACLES.

SIGNAL HEAD FIELD WIRING PHASE NUMBER, DIRECTION, MOVEMENT TYPE, AND COLOR (RED, YELLOW, GREEN, YELLOW ARROW, GREEN ARROW) OR PEDESTRIAN MOVEMENT.

THE CONTROLLER TIMER SHALL BE THE SIEMENS M60 OR ECONOLITE COBALT (OR MOST CURRENT MODEL) OR APPROVED EQUAL NEMA TS-2 TYPE 2 AND COME EQUIPPED WITH ALL INTERNAL COMPONENTS TO MAKE IT FULLY SYSTEM READY FOR THE ACTRA (OR LATEST) SYSTEM, INCLUDING THE INTERNAL MODEM. THE CONTROLLER SUPPLIED SHALL BE FULLY COMPATIBLE WITH THE EXISTING SIGNAL SYSTEM.

EACH CONDUIT ENTRANCE TO THE CABINET SHALL BE SEALED WITH A RUBBER PIPE/CONDUIT SEAL GASKET. THE SEAL SHALL BE OF A MATERIAL AND TYPE TIGHTLY FITTED AND ABLE TO SEAL OUT WATER, INSECTS, RODENTS, AND DIRT. THE SEAL SHALL BE EASILY REMOVED FOR SERVICE INSTALLATIONS OR CABLE REPLACEMENTS.

THE CONTRACTOR SHALL PROVIDE THE CABINET WIRING DIAGRAM/PLANS IN PDF FORMAT TO THE CITY.

PAYMENT FOR ITEM 633 CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN, WILL BE AT THE CONTRACT BID PRICE COMPLETE AND IN PLACE AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 632-POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

- 1. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
 - 2. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
 - 3. THE METERBASE SHALL BE ATTACHED TO THE CONTROL CABINET.
 - 4. THE POWER SERVICE SHALL RUN EXTERNAL AND SEPARATE FROM ALL TRAFFIC SIGNAL CABLE, UNTIL IT ENTERS THE TRAFFIC SIGNAL DISCONNECT SWITCH IN THE CONTROL CABINET.
- THE POWER SERVICE CONDUIT SHALL RUN EXTERNAL TO THE CONTROL CABINET UNTIL IT ENTERS THE METERBASE. THE CONDUIT SHALL BE NEATLY MOUNTED TO THE CABINET, IN A FASHION AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING MATERIALS. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAINING AGENCY.

ITEM 630SPEC - SIGN INCLUDING ARM MOUNTED (R10-11)

SIGN ATTACHED TO TRAFFIC SIGNAL MAST ARMS SHALL BE RIGID MOUNT. THE ATTACHMENT HARDWARE SHALL BE SIMILAR TO TC-22.20, OR EQUAL AS APPROVED BY THE ENGINEER.

CONTINUE ITEM 630SPEC - SIGN INCLUDING ARM MOUNTED (R10-11)

SIGN SHALL BE AN R10-11 PER MOST CURRENT OMUTCD

PAYMENT FOR ITEM 630SPEC - SIGN ARM MOUNTED INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO RIGIDLY MOUNT THE OVERHEAD SIGN, AS APPROVED BY THE ENGINEER

ITEM 659, TOPSOIL, SEEDING AND MULCHING

ITEM 659 SHALL BE APPLIED TO ALL EXPOSED SOIL AREAS DISTURBED DURING CONSTRUCTION. SUCH AS SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING.

THE CITY SHALL APPROVE SEED MIX PRIOR TO APPLICATION TO BE USED THROUGHOUT CONSTRUCTION LIMITS.

EQUIPEMENT MATERIALS, AND NEW ATTACHMENT HARDWARE.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- 1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
 - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- 2. CONDUITS.
 - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
 - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
 - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
 - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- 3. WIRE FOR GROUNDING AND BONDING.
 - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
 - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
 - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.
- 4. GROUND ROD.
 - A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
 - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
- 5. PAYMENT.
 - A. ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED.
 - B. WORK ON BRIDGES MAY BE INCLUDED IN THE BID ITEM FOR "ITEM 625, STRUCTURE GROUNDING."
 - C. IN A 3-WIRE HIGHWAY LIGHTING SYSTEM, THE THIRD CONDUCTOR OF THE DUCT CABLE OR DISTRIBUTION CABLE WILL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR AND MAY AS SUCH BE PART OF THE CABLE BID ITEM.

UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSSES OVER THE POWER CORD.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED AND CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY", WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

ABOVE WORK SHALL BE PAID UNDER ITEM 632SPEC POWER WIRING INCLUDING CONDUIT AND BOXES

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HORIZONTAL SCALE IN FEET

CHECKED BY:

DATE: May, 2023
DRAWN BY: FPW

DATE: May, 2023

REVISIONS:

DESCRIPTION

DATE

Lake Ave and Amherst Intersection Improvement

General Notes
City of Massillon
Stark County, Ohio

Kathy Calzavara-Perry, Mayor

Massillon

City of Champions

DRAWING NAME: GeneralNote2
CITY NUMBER: 23s101
3 / 9

ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN

WITHIN TWO (2) WEEKS OF RECEIVING A SIGNED CONTRACT, THE CONTRACTOR SHALL LAYOUT THE PERIMETER OF EACH FOUNDATION THEN CONTACT OUPS [1-800-362-2764] AND OGPUPS [1-800-925-0988]. A MEETING BETWEEN THE CONTRACTOR, ENGINEER AND A REPRESENTATIVE FROM THE MAINTAINING AGENCY WILL BE HELD ON SITE NO LATER THAN TWO (2) WEEKS AFTER THE OUPS NOTIFICATION. BASED UPON THE PRIORITIES DETERMINED AT THIS MEETING, THE CONTRACTOR WILL CONSTRUCT FOUNDATIONS BEGINNING WITH THE HIGHEST PRIORITY FIRST.

IF A UTILITY OR OTHER CONFLICT EXISTS WHICH REQUIRES THAT A SIGNAL SUPPORT BE CONSTRUCTED AT A LOCATION OTHER THAN WHAT IS INDICATED IN THE PLAN, THE MAINTAINING AGENCY AND THE ENGINEER SHALL DETERMINE WHETHER THE SPECIFIED MAST ARM LENGTH IS APPROPRIATE. IF A LONGER ARM IS REQUIRED, WITHIN TEN (10) WORKING DAYS, THE MAINTAINING AGENCY WILL PROVIDE THE CONTRACTOR WITH REVISED POLE AND ARM DATA. THE CONTRACTOR SHALL NOT ORDER THE POLES PRIOR TO RECEIVING THIS DATA. SUPPORT FOUNDATION LOCATIONS SHALL BE ADJUSTED ONLY WHEN APPROVED BY THE ENGINEER.

THE CONTRACTOR IS ADVISED TO LOCATE AND CONSTRUCT THE SIGNAL SUPPORT FOUNDATIONS AS SOON AS POSSIBLE IN ORDER TO PROVIDE AMPLE LEAD TIME TO ORDER THE SIGNAL SUPPORTS AND THEIR ASSOCIATED MAST ARMS. ALL FOUNDATIONS SHALL BE HAND EXCAVATED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. NO TIME EXTENSIONS SHALL BE GRANTED FOR DELAYS WHICH ARE CAUSED BY THE CONTRACTOR'S FAILURE TO PLAN FOUNDATION WORK AS SOON AS POSSIBLE IN THE CONTRACTOR'S PROGRESS SCHEDULE.

FOUNDATIONS THAT HAVE BEEN CONSTRUCTED SHALL BE PROTECTED AS PER SECTION 107.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT FOR ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO EXCAVATE AND BUILD THE FOUNDATION SYSTEM, COMPLETE IN PLACE AND ACCEPTED.

ITEM 614SPEC - MAINTAINING EXISTING SIGNAL

THIS WORK SHALL INCLUDED ALL NECESSARY MATERIAL, LABOR, AND PERMITS TO MAINTAIN THE EXISTING SIGNALS UNTIL OPERATION OF NEW SIGNAL.. CONTRACTOR SHALL BE RESPONSIBLE TO DEVELOP A PLAN. CONTRACTOR MAY UTILIZE EXISTING SIGNAL AND SETTING A TEMPORARY POLE ON THE SE CORNER.

PAYMENT FOR ITEM 644SPEC- MAINTAINING EXISTING SIGNAL SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER LUMP SUM. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO COMPLETE AND ACCEPTED.

VIDEO DETECTION SYSTEM

- 816.01 DESCRIPTION
- 816.02 MATERIALS
- 816.03 DOCUMENTATION AND TESTING
- 816.04 INSTALLATION REQUIREMENTS
- 816.05 TRAINING
- 816.06 METHOD OF MEASUREMENT
- 816.07 BASIS OF PAYMENT

816.01 DESCRIPTION. THIS WORK CONSISTS OF FURNISHING AND INSTALLING VIDEO DETECTION EQUIPMENT (ECONOLITE (AUTOSCOPE) OR APPROVED EQUAL COMPLETE AND READY FOR SERVICE.

816.02 MATERIALS. THE VIDEO DETECTION SYSTEM SHALL CONSIST OF POWER SUPPLY, HARD-WIRED VIDEO CAMERAS, ALL NECESSARY VIDEO AND POWER CABLING WITH END CONNECTORS, MOUNTING BRACKETS, SURGE PROTECTION AS RECOMMENDED BY THE MANUFACTURER, VIDEO DETECTION PROCESSORS/EXTENSION MODULES CAPABLE OF PROCESSING THE NUMBER OF CAMERA AND PHASE COMBINATION VIDEO SOURCES SHOWN ON THE PROJECT PLANS. PROVIDE SUFFICIENT NUMBER OF CAMERAS TO PROCESS VEHICLE PRESENCE, PASSAGE AND SYSTEM DETECTION ZONES AS SHOWN ON THE PROJECT PLANS. FURNISH MATERIALS FROM THE DEPARTMENT'S QUALIFIED PRODUCTS LIST (QPL) CONFORMING TO THE FOLLOWING:

VIDEO DETECTION SYSTEM.....907

816.03 DOCUMENTATION AND TESTING. ALL PRODUCT DOCUMENTATION SHALL BE WRITTEN IN THE ENGLISH LANGUAGE. PROVIDE ONE BOUND COPY AND ONE PDF VERSION OF THE USER'S MANUAL. PERFORM FUNCTIONAL TESTS AND 10-DAY PERFORMANCE TEST ACCORDING TO 632.28. 816.04 INSTALLATION REQUIREMENTS. RUN ALL CABLES SERVING THE CAMERAS UNSPLICED BETWEEN THE CAMERA AND CONTROLLER CABINET, WITH TEN FEET OF SLACK PROVIDED IN THE CONTROLLER CABINET. 816.05 TRAINING. FURNISH TWO DAYS OF TRAINING IN THE OPERATION, SETUP AND MAINTENANCE OF THE VIDEO DETECTION SYSTEM INSTALLED AS PART OF THE CONTRACT. FURNISH ALL HANDOUTS, MANUALS AND PRODUCT INFORMATION. FOR THE TRAINING, USE THE SAME MODELS OF EQUIPMENT FURNISHED FOR THE PROJECT. THE MAINTAINING AGENCY SHALL FURNISH THE FACILITIES IN WHICH THE TRAINING WILL TAKE PLACE. FURNISH ALL MEDIA AND TEST EQUIPMENT NEEDED TO PRESENT THE TRAINING. COORDINATE VIDEO DETECTION TRAINING WITH THE ENGINEER A MINIMUM OF 30 DAYS IN ADVANCE OF PROPOSED DATE OF TRAINING.

816.06 METHOD OF MEASUREMENT. THE DEPARTMENT WILL MEASURE VIDEO DETECTION SYSTEM BY EACH INTERSECTION SHOWN ON THE PLANS, IN PLACE, COMPLETE AND READY FOR SERVICE AND WILL INCLUDE ALL MATERIALS, TESTING, LABOR AND SOFTWARE. THE DEPARTMENT WILL MEASURE TRAINING ON A LUMP SUM BASIS. AND WILL INCLUDE PROVIDING THE INSTRUCTION MATERIALS, INSTRUCTOR TRAVEL EXPENSES AND TEST OR MEDIA EQUIPMENT FOR PRESENTING THE TRAINING MATERIAL.

816.07 BASIS OF PAYMENT. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICES AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
816	EACH	VIDEO DETECTION SYSTEM
816	LUMP	TRAINING FOR VIDEO DETECTION SYSTEM

GENERAL SUMMARY

SHEET No.																	ITEM	GRAND TOTAL	UNIT	DESCRIPTION
						4	5	8	9	10	12	13	14	15	17	45b				ROADWAY
																	201	1	LUMP	CLEARING AND GRUBBING
																	203	50	CY	EXCAVATION INCLUDING ROADWAY
																	203	50	CY	EMBANKMENT
																	632SPEC	2	EACH	REMOVAL OF EXISTING TRAFFIC SIGNAL SYSTEM, INCLUDING FOUNDATIONS
																				EROSION CONTROL
																	659SPEC	1	LUMP	TOPSOIL, SEEDING AND MULCHING
																				PAVEMENT
																	608	424	SF	CURB RAMP ADA SPEC
																	608	927	SF	CONCRETE WALK
																	609	189	LF	CURB, TYPE 6
																				DRAINAGE
																	611	1	EACH	CATCH BASIN MASS7030-R
																				TRAFFIC CONTROL
																	625SPEC	1	LUMP	GOUNDING
																	625SPEC	1	LUMP	POWER SERVICE, INCUDING PERMITS
																	625SPEC	1	LUMP	SIGNAL CABLING COMPLETE INCLUDING CONDUIT AND PULL BOXES, AS PER PLAN
																	625SPEC	1	LUMP	POWER WIRING COMPLETE INCLUDING CONDUIT AND BOXES, AS PER PLAN
																	632	8	EACH	SIGN INCLUDING ARM MOUNTED (R10-11)
																	632	2	EACH	SIGNAL SUPPORT TC 81.22-DESIGN NO. 2, INCLUNDING FOUNDATION
																	632	1	EACH	SIGNAL SUPPORT TC 81.22-DESIGN NO. 4, INCLUNDING FOUNDATION
																	632	1	EACH	SIGNAL SUPPORT TC 81.22-DESIGN NO. 12, INCLUNDING FOUNDATION
																	632	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, INCLUDING RIGID MOUNT
																	632	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, INCLUDING RIGID MOUNT
																	632	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2
																	632	1	LUMP	PEDESTRIAN PUSHBUTTON
																	632	1	LUMP	CONTROLLER, CABINET AND FOUNDATION, AS PR PLAN
																	632SPEC	1	LUMP	COVERING OF SIGNAL HEADS AND PEDESTRIAN HEADS
																	632SPEC	1	LUMP	VIDEO DETECTION SYSTEM
																	633SPEC	1	LUMP	UNINTERRUPTIBLE POWER SUPPLY (UPS)
																				MAINTENANCE OF TRAFFIC
																	614SPEC	1	LUMP	MAINTAINING EXISTING SIGNAL
																	614	1	LUMP	MAINTAINING TRAFFIC
																	619	1	LUMP	CONSTRUCTION STAKING
																	623	1	LUMP	MOBILIZATION

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CHECKED BY:

DATE:

May, 2023

DRAWN BY:

FPW

DATE:

May, 2023

REVISIONS:

DESCRIPTION

DATE

Lake Ave and Amherst Intersection Improvement

General Notes

City of Massillon

Stark County, Ohio

Authy Colasanto-Perry, Mayor

Massillon

City of Champions

DRAWING NAME:

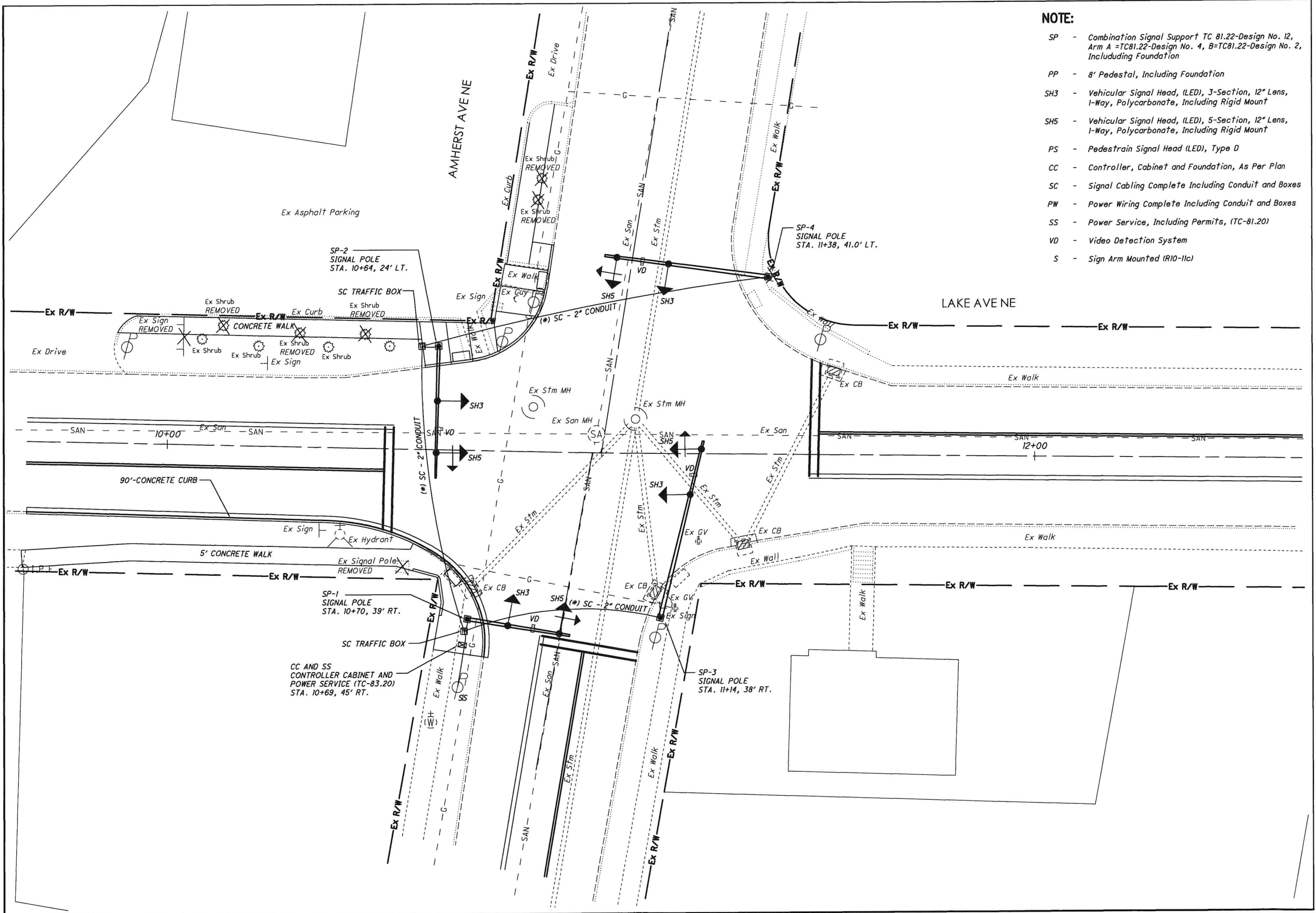
GeneralNotes3

CITY NUMBER:

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- NOTE:**
- SP - Combination Signal Support TC 81.22-Design No. 12, Arm A =TC81.22-Design No. 4, B=TC81.22-Design No. 2, Including Foundation
 - PP - 8' Pedestal, Including Foundation
 - SH3 - Vehicular Signal Head, (LED), 3-Section, 12" Lens, 1-Way, Polycarbonate, Including Rigid Mount
 - SH5 - Vehicular Signal Head, (LED), 5-Section, 12" Lens, 1-Way, Polycarbonate, Including Rigid Mount
 - PS - Pedestrian Signal Head (LED), Type D
 - CC - Controller, Cabinet and Foundation, As Per Plan
 - SC - Signal Cabling Complete Including Conduit and Boxes
 - PW - Power Wiring Complete Including Conduit and Boxes
 - SS - Power Service, Including Permits, (TC-81.20)
 - VD - Video Detection System
 - S - Sign Arm Mounted (R10-11c)

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VERTICAL SCALE

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CHECKED BY:

DATE:

Aug, 2023

DRAWN BY:

FPW

DATE:

Aug, 2023

REVISIONS:	DESCRIPTION
DATE	

Lake Ave and Amherst Intersection Improvement

Signal Plan

City of Massillon

Stark County, Ohio

Kathy Catanzaro-Perry, Mayor

Massillon

City of Champions

DRAWING NAME:

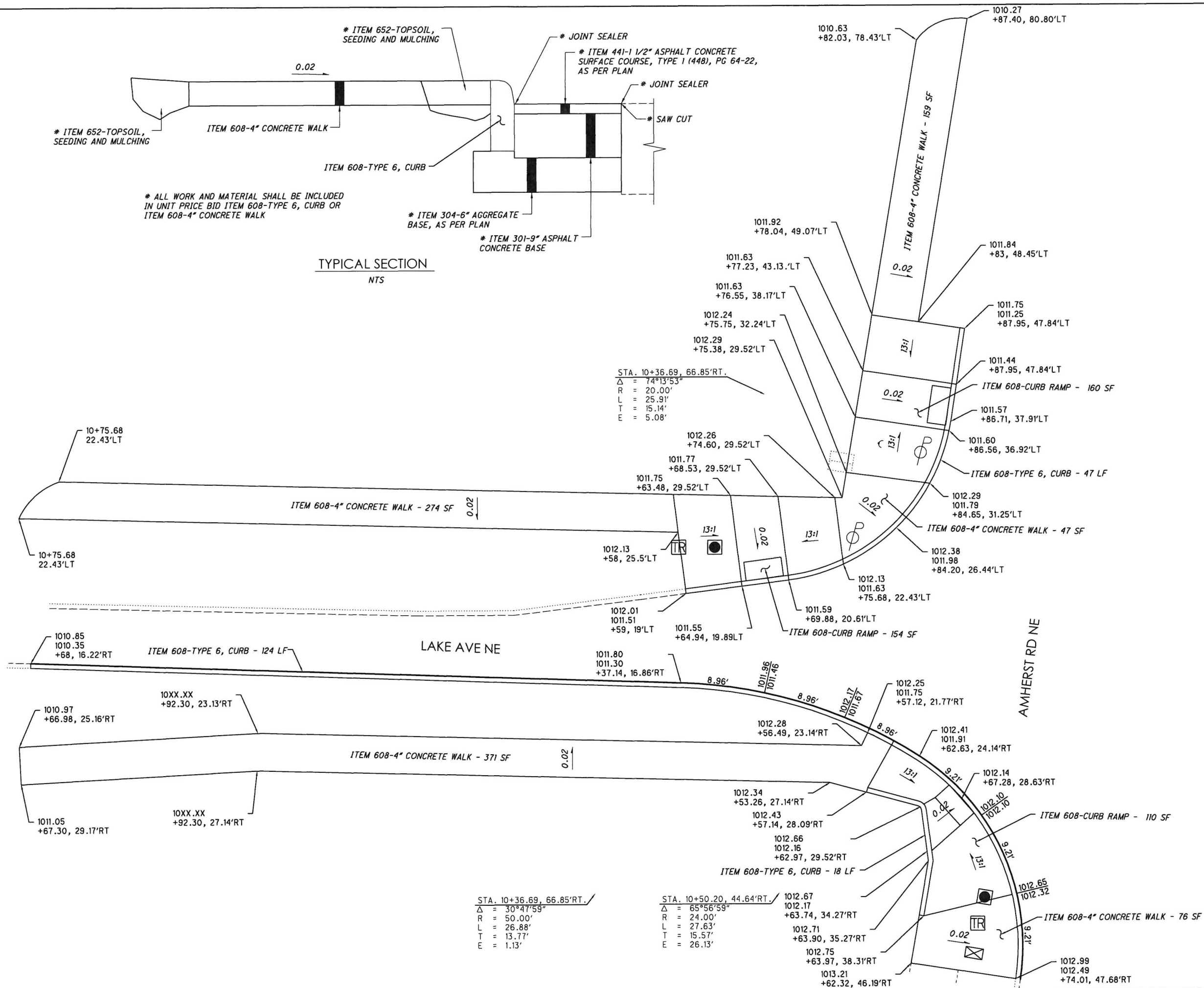
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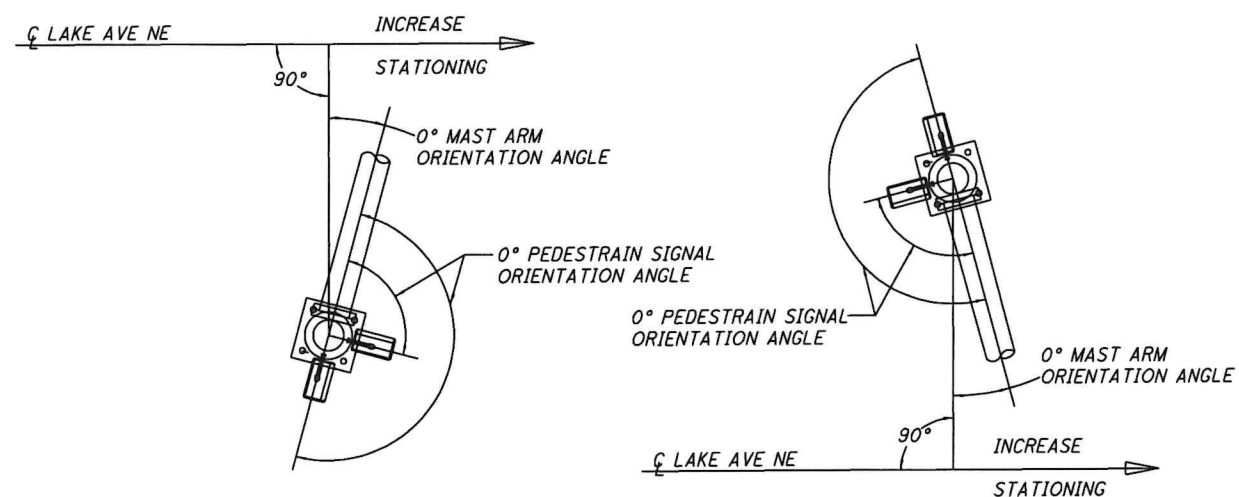
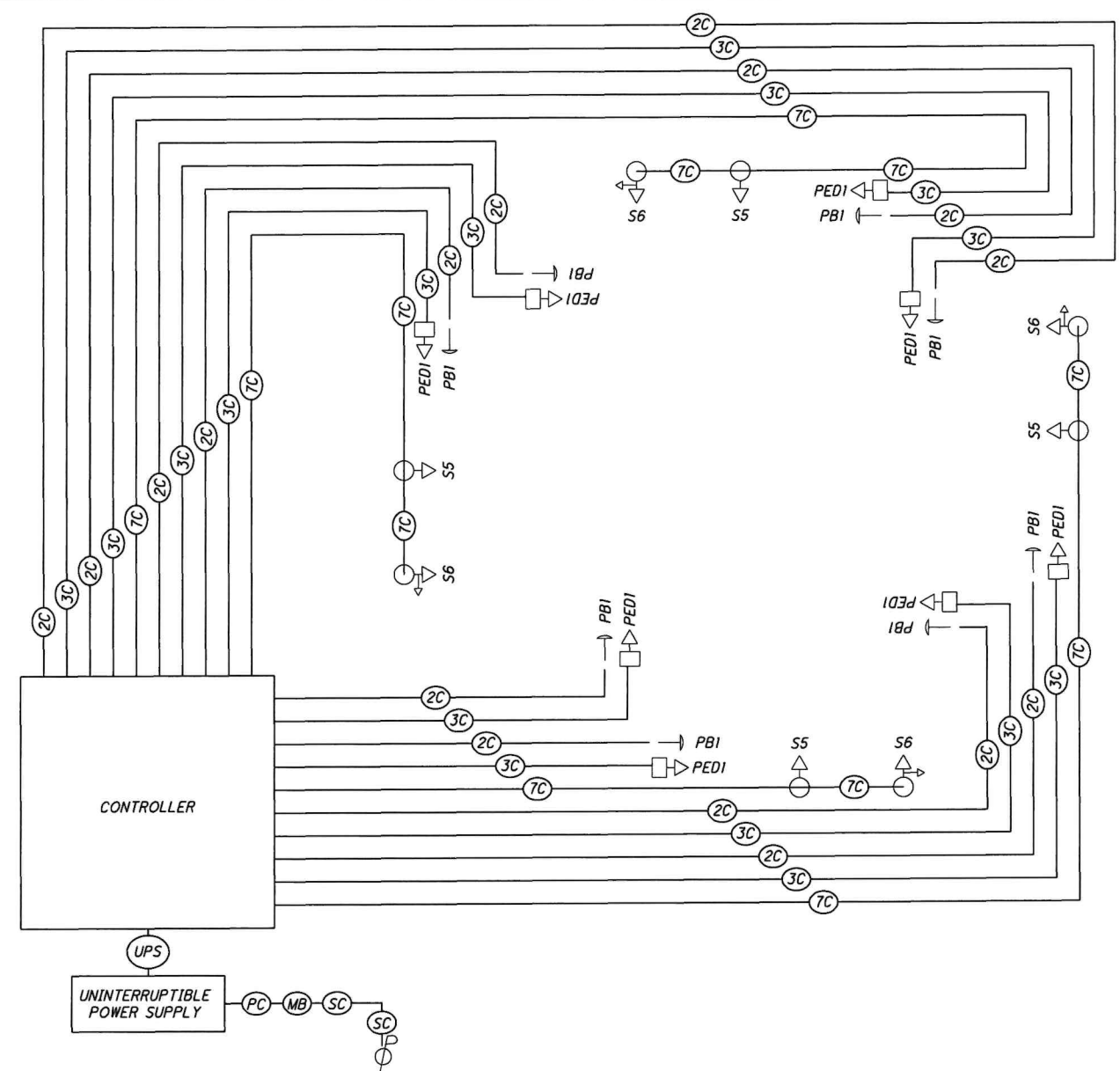
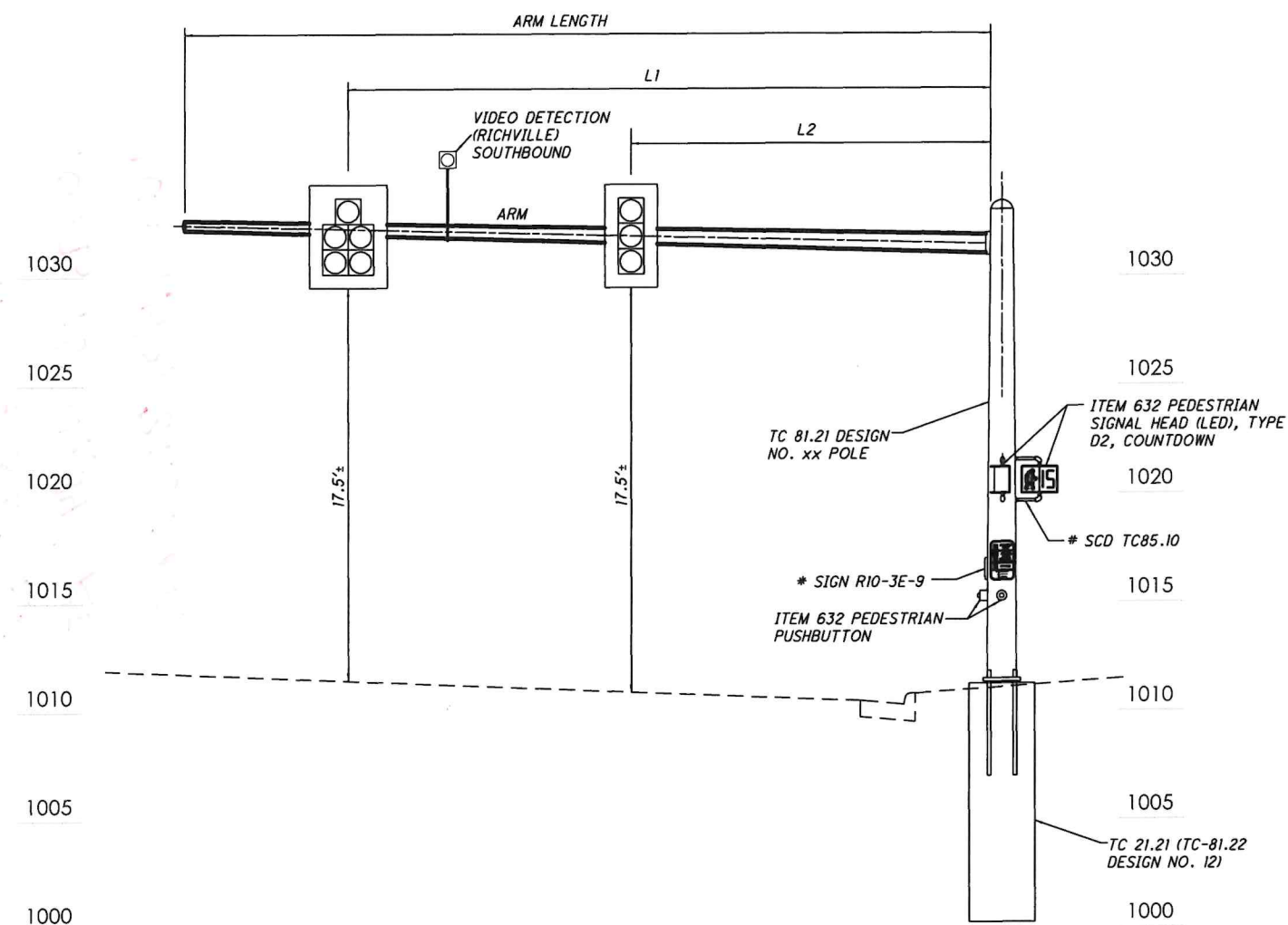
CITY NUMBER:

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* PAYMENT FOR THE MOUNTING ARE INCIDENTAL TO ITEM 632
VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY,
POLYCARBONATE TYPICAL
ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS,
1-WAY, POLYCARBONATE TYPICAL

POLE REF. No.	CENTERLINE OF CONST.	STATION	OFFSET	SIGNAL SPACING (FEET)						MAST ARM ORIENT. ANGLE	ORIENTATION ANGLE FROM MAST ARM			ODOT POLE DESIGN NUMBER	ODOT ARM DESIGN NUMBER	L MAST ARM LENGTH (FEET)	
				L1	L2	C	S1	S2	S3		PED BUTTON		PED SIGNAL				HAND HOLE
LAKE AVE NE AT AMHERST RD NE																	
SP-1	LAKE	10+62	28' RT	21.5'	9.5'	15'				98°			173°	261°	2	2	28
SP-2	LAKE	10+64	24' LT	26'	14'	20'				0°			180°	270°	2	2	32
SP-3	LAKE	11+14	38' RT	40'	29'	34'				12°			92°	247°	12	12	48
SP-4	LAKE	11+38	41' LT	35'	35'	29'				268°			8°	268°	4	4	38

LEGEND

-  5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
 PEDESTRIAN SIGNAL HEAD
 PEDESTRIAN PUSH BUTTON
 VIDEO DETECTION CAMERA
 METER BASE (MOUNT TO SIDE OF CONTROL CABINET)
 SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
 SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG
 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
 VIDEO CAMERA CABLE
 SERVICE CABLE, BY POWER COMPANY
 POWER CABLE, 2 CONDUCTOR, NO. 4 AWG
 UNINTERRUPTIBLE POWER SUPPLY CABLE
 POWER SOURCE

