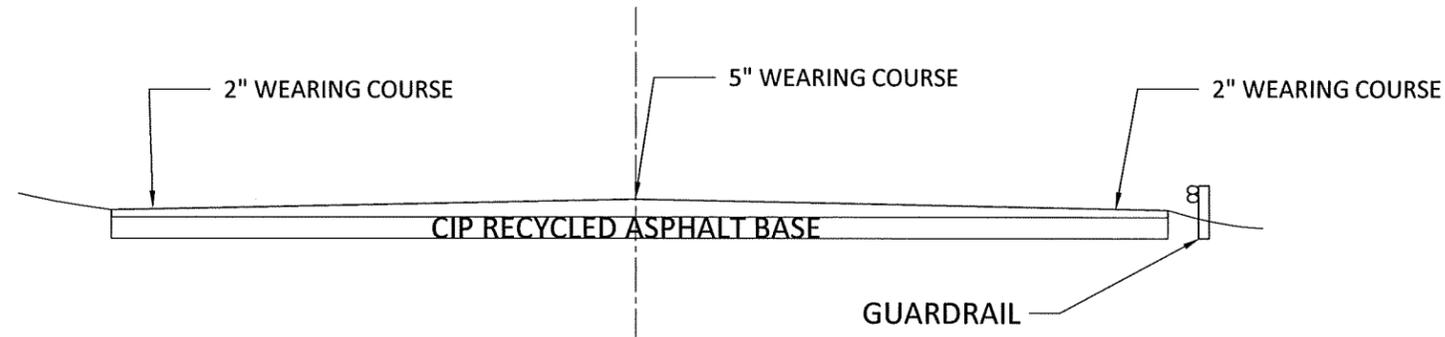


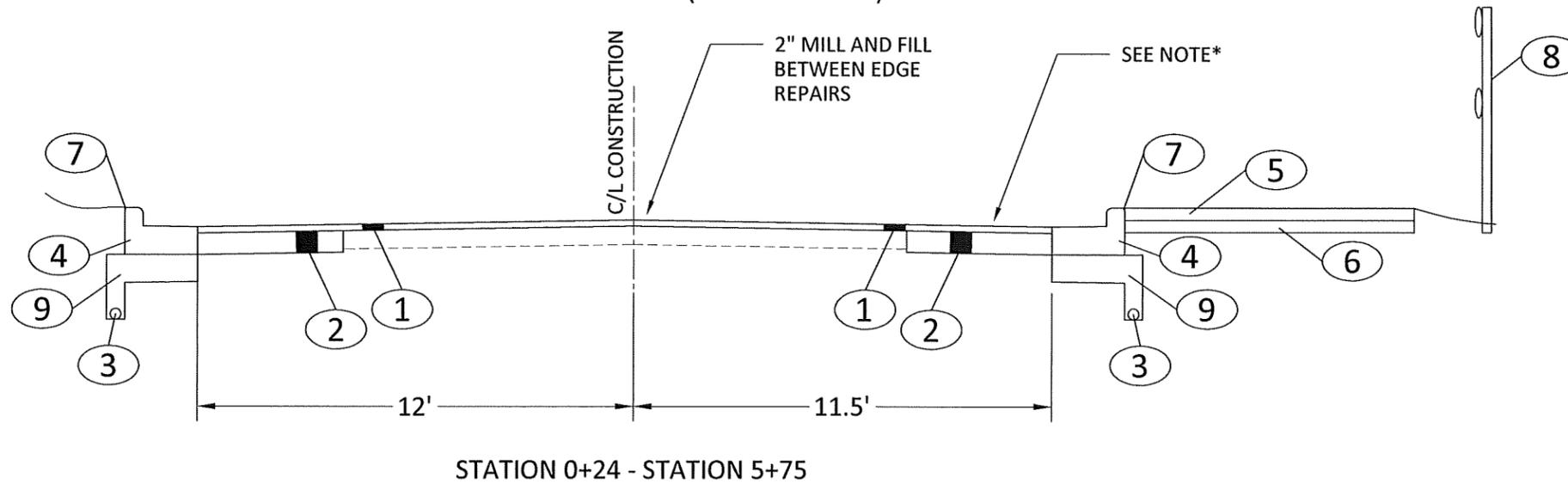
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OLENTANGY EXISTING (LOOKING WEST)



* NOTE: PAVEMENT TO BE REMOVED FROM OLENTANGY AVE OUTSIDE DEEP MILLING AREAS WHERE CURB TO BE INSTALLED IS TO BE INCIDENTAL ITEM 609 COC CURB AND GUTTER.

PROPOSED OLENTANGY (LOOKING WEST)



STATION 0+24 - STATION 5+75

* NOTE: 4-FT WIDE, 8-INCH DEEP EDGE MILL FOLLOWED BY 6-INCHES OF 306, THEN 2-INCHES OF 448 TO BE PLACED DURING ENTIRE STREET OVERLAY.

- ① ITEM 448 2 INCH ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H, PG 70-22
- ② ITEM 306 6 INCH PORTLAND CEMENT CONCRETE BASE
- ③ ITEM 605 4 INCH UNCLASSIFIED PIPE UNDERDRAINS
- ④ ITEM 609 CITY OF COLUMBUS COMBINATION CURB AND GUTTER, TYPE STANDARD (COC STANDARD DRAWING 2010)
- ⑤ ITEM 608 CONCRETE WALK (8-FT WIDE BY 4-IN THICK), AS PER PLAN
- ⑥ 4-INCHES OF No. 57 OR No. 8 STONE, AS PER COD STANDARD DRAWINGS RDWD - 19.1 THRU 19.4 (MATERIAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 608.)
- ⑦ EXPANSION MATERIAL, (EXPANSION MATERIAL SHALL BE 1/2" REFLEX RUBBER EXPANSION JOINT MATERIAL OR EQUIVALENT, CONFORMING TO THE ATTACHED SPECIFICATIONS. FOAMTECH CONCRETE EXPANSION JOINT FILLER OR EQUIVALENT SHALL BE USED AROUND RADII. THE INSTALLATION OF ALL EXPANSION JOINT MATERIAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 608.)
- ⑧ ITEM 607 FENCE, MISC.: WOOD (ODOT RM-5.2 BIKEWAY RAILING)
- ⑨ No. 57 STONE

REVISIONS	DESCRIPTION	DATE	APPROVED

OLENTANGY AVENUE
IMPROVEMENT PLAN

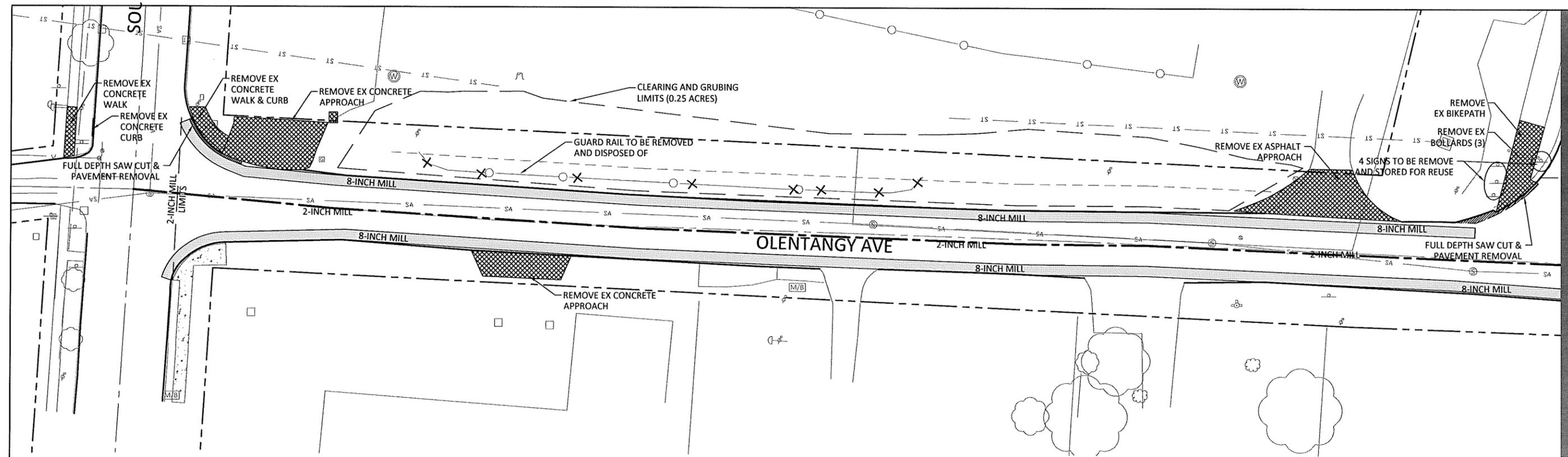
TYPICAL SECTIONS



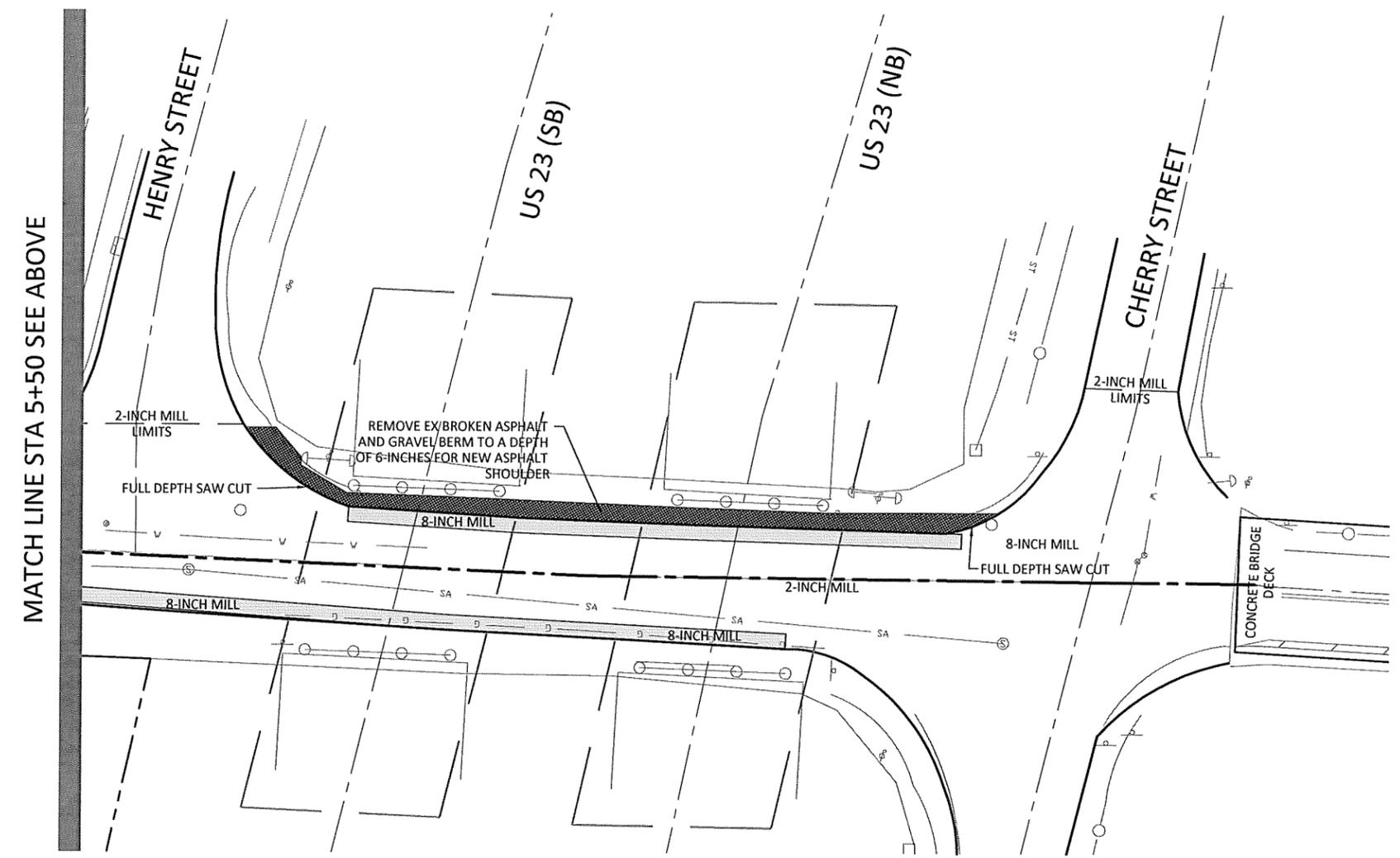
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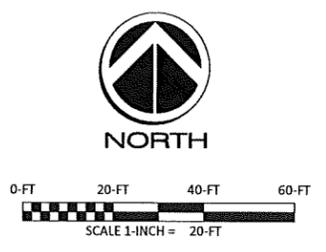
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* NOTE: PAVEMENT TO BE REMOVED FROM OLENTANGY AVE OUTSIDE DEEP MILLING AREAS WHERE CURB TO BE INSTALLED IS TO BE INCIDENTAL ITEM 609 COC CURB AND GUTTER.



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MATCH LINE STA 5+50 SEE BELOW

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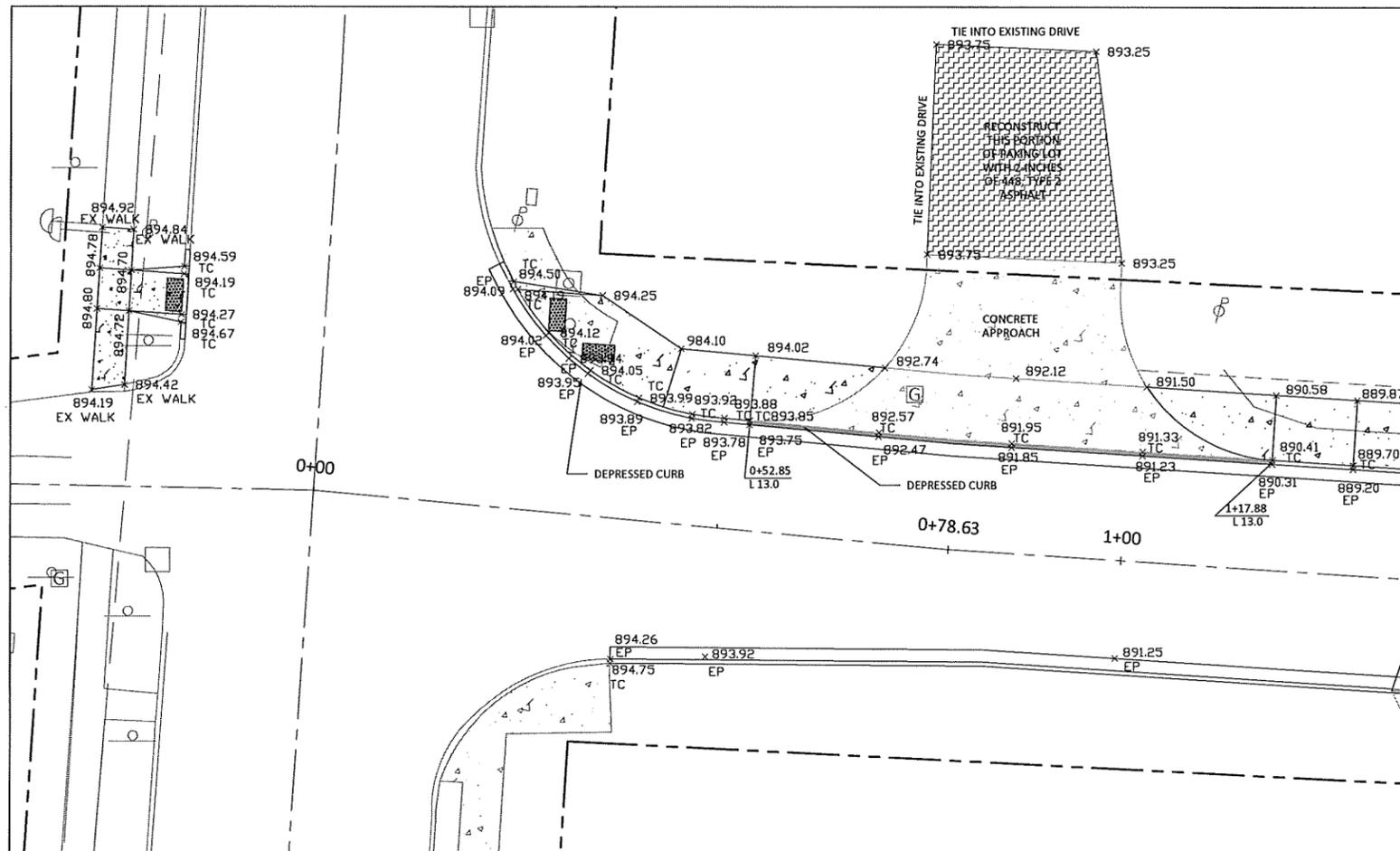
OLENTANGY AVENUE IMPROVEMENT PLAN

DEMOLITION PLAN

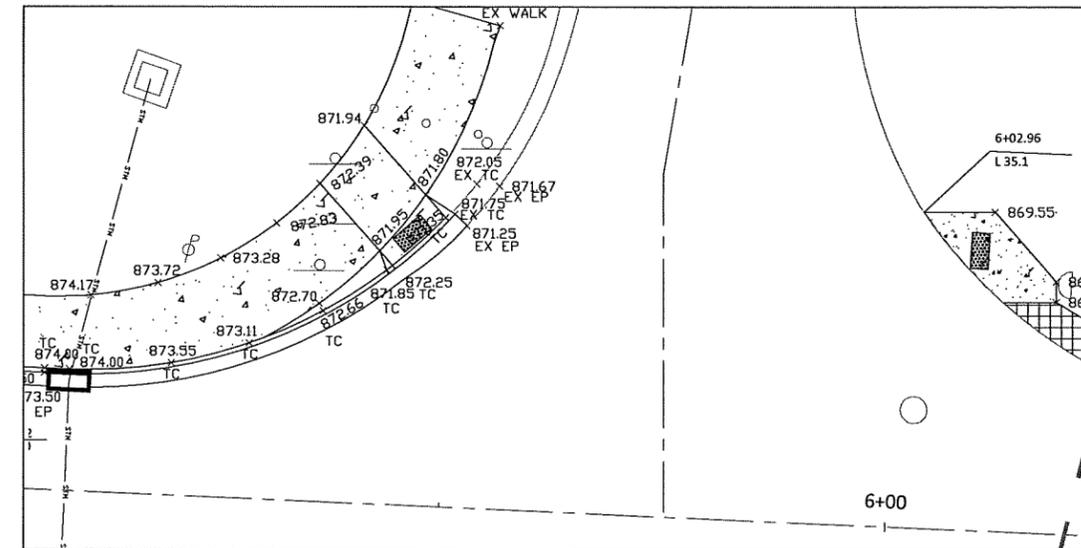


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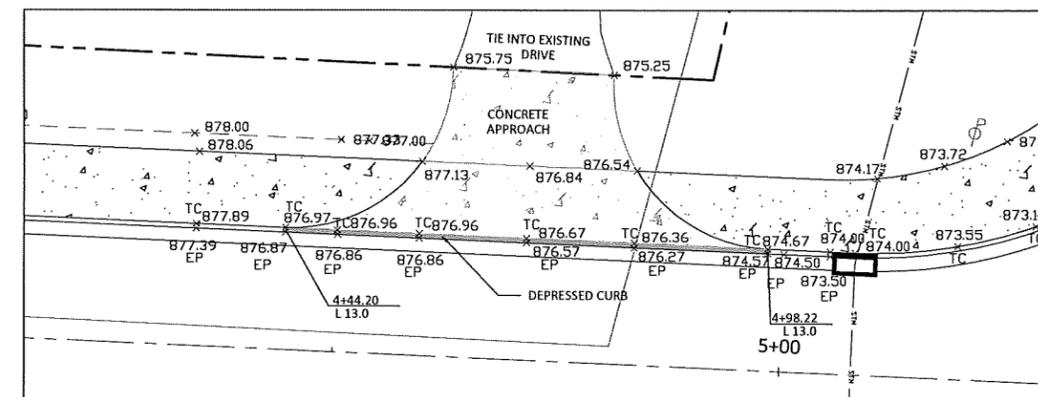
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SANDUSKY STREET AND OLENTANGY AVE. INTERSECTION

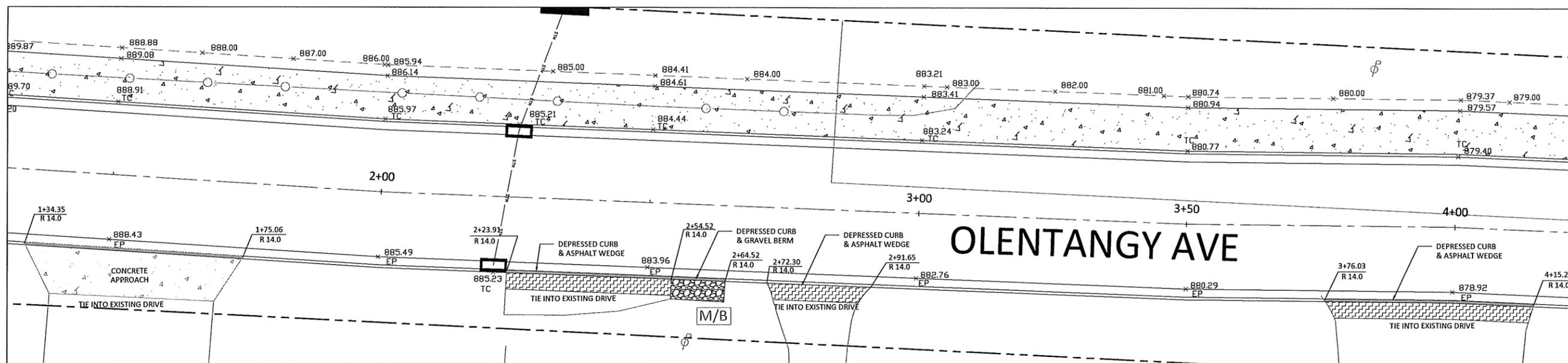


CHERRY STREET AND OLENTANGY AVE. INTERSECTION



SERVICE DRIVEWAY AT OLENTANGY AVE. JUST NORTH OF HENRY ST.

DRAFT



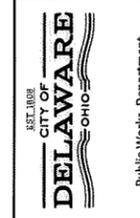
DRIVEWAYS FOR BUSINESSES AND RESIDENCES ALONG EAST SIDE OF OLENTANGY AVE.



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OLENTANGY AVENUE IMPROVEMENT PLAN

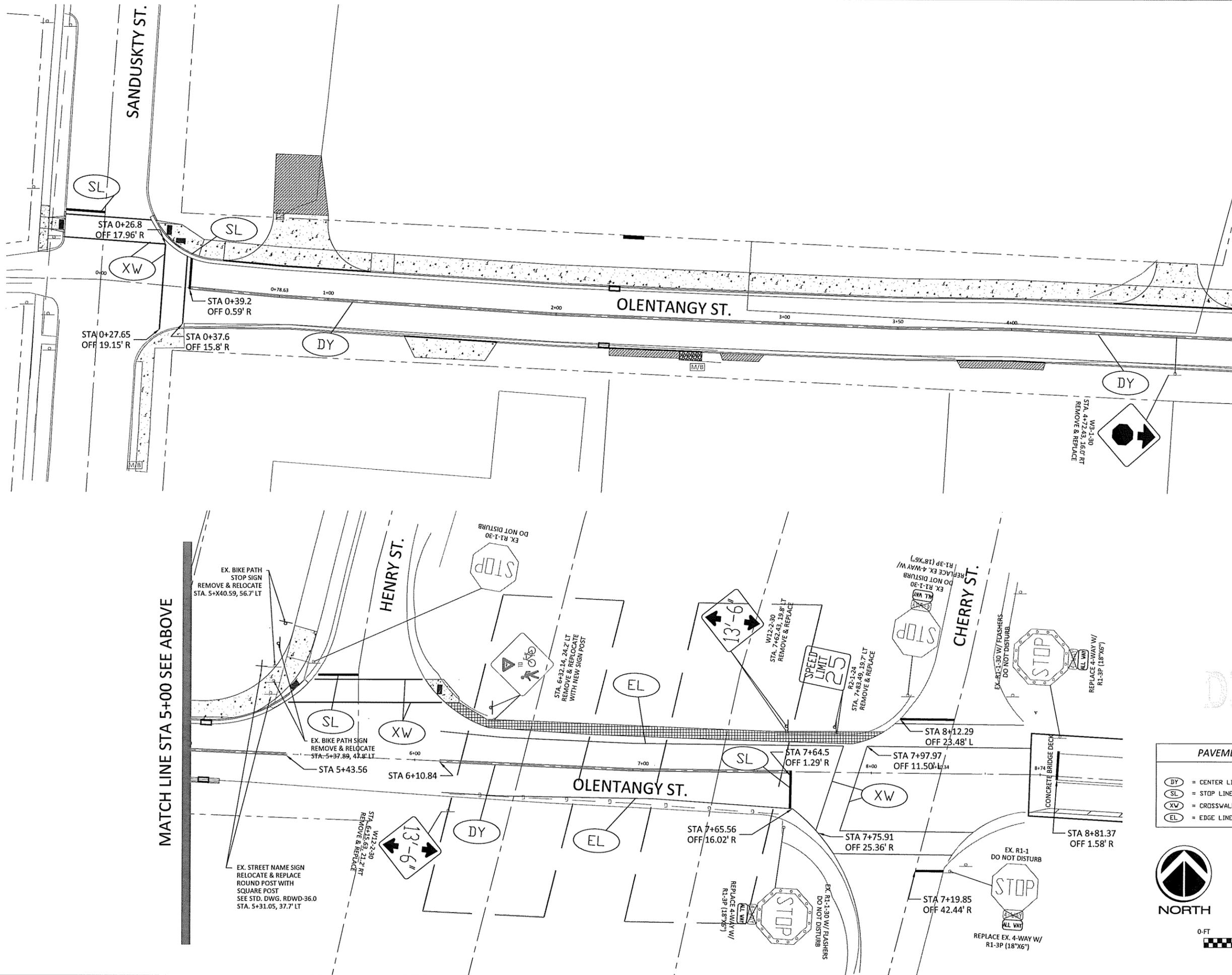
PRIVATE DRIVE APPROACH DETAILS



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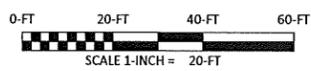
MATCH LINE STA 5+00 SEE ABOVE

MATCH LINE STA 5+00 SEE BELOW

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PAVEMENT MARKING LEGEND

(DY)	= CENTER LINE, 4" DOUBLE YELLOW
(SL)	= STOP LINE, 20" WHITE
(XW)	= CROSSWALK LINE, 12" WHITE
(EL)	= EDGE LINE, 4" WHITE



NO.	DATE	DESCRIPTION	APPROVED

**OLENTANGY AVENUE
IMPROVEMENT PLAN**

**SIGNAGE &
STRIPING
PLAN**



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GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL EQUIPMENT, IN CONFORMANCE TO THESE PLANS AND SPECIFICATIONS, AND THE 2013 STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ALL SUPPLEMENTAL SPECIFICATIONS, THEY SHALL INSTALL ALL TRAFFIC SIGNAL EQUIPMENT IN CONFORMANCE TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS LATEST REVISION, AND IN CONFORMANCE TO THE OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL EQUIPMENT INSTALLED, AS PART OF THE CONTRACT, SHALL OPERATE SATISFACTORILY FOR A PERIOD OF ONE (1) YEAR FOLLOWING COMPLETION OF THE TEN (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 FROM THE SAME MANUFACTURER. MATERIAL AND LABOR COSTS INCURRED IN CORRECTING UNSATISFACTORY OPERATION SHALL BE RESPONSIBILITY OF THE CONTRACTOR. THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC SIGNAL INSTALLATION: CONTROLLER, LOOP DETECTOR UNITS, CONFLICT MONITOR, RADIOS, INTERCONNECT ITEMS, AND ALL ASSOCIATED EQUIPMENT. ANY MANUFACTURER GUARANTEES AND WARRANTIES FOR EQUIPMENT SHALL BE PROVIDED TO THE PUBLIC WORKS DEPARTMENT 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.

TEN DAY TEST REQUIREMENTS

THE CITY OF DELAWARE REQUIRES A TEN (10) DAY TEST TO START AFTER THE SIGNAL INSTALLATION IS 100% COMPLETE. NO PARTIAL TESTS WILL BE CONDUCTED. THE CITY SHALL MONITOR THE TEST AND SHALL BE THE SOLE AGENCY TO ACCEPT THE SIGNAL INSTALLATION. IF LESS THAN 100% COMPLETION IS DETECTED UPON INSPECTION BY THE CITY OR ANY MALFUNCTION IS DETECTED, THE TEN (10) DAY TEST SHALL BE COMPLETELY RESTARTED.

TRANSITION TO SIGNAL CONTROL

THE CONTRACTOR SHALL NOTIFY THE CITY OF DELAWARE FORTY-EIGHT (48) HOURS PRIOR TO THE SIGNAL TURN-ON. THE TURN-ON SHALL NOT BEGIN UNTIL REPRESENTATIVES FROM THE CITY, CONTRACTOR, AND SIGNAL EQUIPMENT SUPPLIER ARE ON-SITE TO OBSERVE THE TURN-ON. STANDARD CONSTRUCTION DRAWING MT-120.00 BY THE OHIO DEPARTMENT OF TRANSPORTATION SHALL BE UTILIZED FOR TRANSITION TO SIGNAL CONTROL, MODIFIED TO REFLECT IMMEDIATE OPERATION UPON TURN-ON BECAUSE OF SIGNAL RELOCATION CONDITION.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC. THE CONTRACTOR SHALL CONFORM TO STANDARD DRAWING MT-120.00 FOR THE NEW SIGNAL ACTIVATION, WITH THE EXCEPTION OF LEGS, PERMANENT SUPPORTS, AND PERMANENT "SIGNAL AHEAD" SIGNS INCLUDED AS BID ITEMS IN THE PLAN, THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS, ETC. NECESSARY TO COMPLETE THIS ITEM ARE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN. BECAUSE NONE OF THE SIGNS SHOWN ON MT-120.00 WILL BE PERMANENT, ALL OF THE ITEMS NEEDED TO CONFORM TO MT-120.00 SHALL BE PART OF THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN. ALL SIGNS MUST BE BAGGED AND READY. ANY EXISTING STOP SIGNS MUST COME DOWN IMMEDIATELY UPON THE STOP-AND-GO.

MAINTENANCE OF TRAFFIC SIGNAL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATION WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS: EXISTING SIGNAL 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.

NEW OR REUSED SIGNAL 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 MAINTAINING AGENCY 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 TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED 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 8 HOURS AFTER THE CONTRACTOR IS NOTIFIED OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

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 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSIDERED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION, THAT IS WHERE MORE THAN ONE OUTAGE OCCURS 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 THE COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO AND OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIOD AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF ODOT CMS SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE CITY OF DELAWARE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISION 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 DEPARTMENT OF ENGINEERING SERVICES, 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 7-9 AM & 3-6 PM. ANY SIGNALIZED INTERSECTION, WHERE THE 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, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING, WHICH WILL BE OUT OF OPERATION, SHALL BE COVERED IN THE MANNER DESCRIBED IN ODOT CMS 632.22.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

TIME OF NOTIFICATION OF MALFUNCTION

TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION

ACTION TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED

A DIAGNOSIS OF THE REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE

TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE

A COPY OF THESE RECORDS SHALL BE PROVIDED THE DEPARTMENT OF ENGINEERING SERVICES WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

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

GROUNDING AND BONDING

THE REQUIREMENTS OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE ODOT HL AND TC SERIES OF STANDARD CONSTRUCTION DRAWINGS 5 ARE MODIFIED AS FOLLOWS:

ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDING CONDUCTOR IN THE POWER SERVICE.

DISCONNECT SWITCH

PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUIT (725.04) IN ADDITION TO CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS CONNECTOR

WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

METALLIC CONDUIT CARRYING THE LOOP WIRES FROM THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR

METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME AS PROVIDED IN HL-30.11. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS USED.

THE MESSENGER WIRE AT SIGNALIZED INTERSECTION WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

CONDUITS

ALL 725.04 AND 725.05 CONDUIT SHALL HAVE BRUSHINGS INSTALLED AT TERMINATION POINTS.

BRUSHINGS ON 725.04 CONDUIT SHALL BE EQUIPPED WITH A GROUNDING LUG. THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BRUSHINGS MAY BE USED.

BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

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.

WIRE FOR GROUNDING AND BONDING

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:

USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER CABINETS.

USE A MINIMUM OF 8 AWG BETWEEN THE LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN ABOVE.

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 A MINIMUM SIZE OF 4 AWG.

GROUND ROD

A 1/2-INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE FOUNDING 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

THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

ALL WIRING FOR THE SIGNAL CONTROLLER AND SIGNAL HEADS MUST BE PER NEMA STANDARDS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET, POWER SERVICE AND DISCONNECT SWITCH

AT THE POWER SWITCH LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH AC- NEUTRAL BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

THE AC- SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE AC- (NEUTRAL) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

IF SECONDARY CONTROLLER DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE AC- SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

PAYMENT

ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 625 TRENCH

IN ADDITION TO THE REQUIREMENTS OF ODOT CMS 625.12 AND THE STANDARD CONSTRUCTION DRAWINGS, WITHIN EACH TRENCH, THE LOCATION OF UNDERGROUND CABLE OR CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. ONE STRIP OF MARKING TAPE SHALL BE PLACED BETWEEN 6-INCHES AND 12-INCHES BELOW FINISHED GRADE WITH A TAPE LENGTH EQUAL TO LENGTH OF THE CONDUIT OR CABLE. THE TAPE SHALL BE PLACED PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED, OR OTHERWISE MISPLACED IN COMPLETION OF THE TRENCH BACKFILL.

THE TAPE SHALL BE AN INERT MATERIAL HIGHLY RESISTANT TO ALKALIS, ACIDS, AND OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE 3-INCHES TO 6-INCHES WIDE, AND A HIGH VISIBILITY COLOR SUCH AS ORANGE OR RED. THE TAPE SHALL BE PRINTED WITH THE WORD "ELECTRIC" APPROXIMATELY EVERY 5X (6) FEET IN BLACK LETTERS WITH INK THAT WILL NOT CHANGE WHEN EXPOSED TO ACIDS AND OTHER DESTRUCTIVE SUBSTANCES COMMONLY FOUND IN SOIL. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE.

THIS ITEM SHALL BE PAID FOR PER LINEAR FOOT OF ITEM 625, TRENCH, AS PER PLAN, COMPLETE AND IN PLACE.

ITEM 625 CONDUIT, (BY SIZE), 725.05, AS PER PLAN

CONDUIT SHALL BE SCHEDULE 40 PVC CONFORMING TO THE SPECIFICATIONS OF NEMA STANDARD PUBLICATION NO. TC-2.

ITEM 625 PULL BOX, 725.08, (BY SIZE), AS PER PLAN

PULL BOXES SHALL HAVE THE WORD "TRAFFIC" ON THE LID. ALL PULL BOXES WITHIN OF ADJACENT TO SIDEWALK SHALL BE FLUSH WITH THE WALK. PAYMENT SHALL BE AS PER ITEM 625.

ITEM 632 VEHICULAR SIGNAL HEAD, LED, YELLOW, (BY SECTION), 8" LENS, 1-WAY OR 3-WAY, AS PER PLAN

ALL VEHICULAR SIGNAL HEADS SHALL BE GELCORE BRAND L.E.D. SIGNALS AND POLYCARBONATE OR APPROVED EQUAL. ALL SIGNAL HEADS MUST BE FREE SWINGING AND ATTACHED USING SPAN WIRE HANGER ASSEMBLIES WITH BALANCE ADJUSTER.

PAYMENT SHALL BE AT THE UNIT PRICE BID, COMPLETE AND IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

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

IN ADDITION TO ODOT ITEM 632 AND 732, THE PEDESTRIAN SIGNAL HEADS SHALL CONTAIN THE FOLLOWING:

L.E.D. PED-GE MODULE

HAVE A FULL HAND/MAN OVERLAY

18 INCH OVERLAY

PLUS COUNTDOWN UNIFORM

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH, COMPLETE AND IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN

ALL PUSHBUTTONS SHALL BE POLARA BRAND 2" ADA PUSHBUTTONS IN YELLOW WITH AN ULTRA-BRIGHT L.E.D. AND BEEPER ("BULLDOG MODEL BDM-Y REAR HOUSING) OR APPROVED EQUAL. ALL PUSHBUTTONS SHALL BE ADA COMPLIANT AND BE LOCATED TO CONFORM TO ALL ADA REQUIREMENTS.

ITEM 632 PEDESTAL FOUNDATION, AS PER PLAN

THE ANCHOR BASE POLE FOUNDATION SIDES SHALL BE ORIENTED PARALLEL TO THE SIDEWALK OR BACK OF CURB OR EDGE OF PAVEMENT AS SHOWN ON THE SIGNAL PLANS. THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH ANY ADJACENT SIDEWALK OR CONCRETE AREA EXCEPT WHERE THE GROUND RISES STEEPLY BEHIND THE SIDEWALK OR CONCRETE AREA. THE BACK SIDE OF THE FOUNDATION SHALL MATCH THE GROUND SLOPE AND THE STREET SIDE OF THE FOUNDATION SHALL BE ABOVE THE SIDEWALK OR CONCRETE AREA AND COMPLETELY OUT OF THE SIDEWALK OR CONCRETE AREA. A MINIMUM OF TWO 2" CONDUIT ELLS, USED OR UNUSED, SHALL BE INSTALLED IN EACH POLE FOUNDATION. SEE POLE ORIENTATION CHART FOR ANGULAR POSITION. THE ANCHOR BOLTS AND CONDUIT ELLS ARE INCIDENTAL TO THIS ITEM. THE POLE FOUNDATION TOP SHALL BE EDGED USING A 1/2" SIDEWALK EDGER AND NOT CHAMFERED.

ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION

THE EXISTING TRAFFIC SIGNAL RELOCATION, INCLUDING SIGNAL HEADS, CABLE, AND MESSENGER WIRE SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS. ALL SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND PEDESTRIAN PUSHBUTTONS REMOVED MUST BE SALVAGED AND DELIVERED TO THE CITY OF DELAWARE PUBLIC WORKS DEPARTMENT LOCATED AT 440 E. WILLIAM STREET DELAWARE, OHIO 43015.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID FOR EACH.

ITEM 632 PEDESTAL, 11", TRANSFORMER BASE, AS PER PLAN

THE SIGNAL SUPPORTS, TENONS, MAST ARMS AND PEDESTALS SHALL BE GALVANIZED. ALL SIGNAL CABLES SHALL BE RUN INSIDE THE POLE. CAST ALUMINUM TOP ORNAMENT (88-13) ASSEMBLED WITH POLE TOP, LUMINAIRE ARM WITH ALUMINUM ORNAMENT AND PROJECTED TENONS MUST BE INCLUDED WITH SIGNAL SUPPORT AS SHOWN IN PLANS AND SHALL BE INCLUDED IN THE COST BID FOR THE SIGNAL SUPPORTS.

PRIOR TO ORDERING THE SUPPORTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING NO OVERHEAD OR UNDERGROUND UTILITY CONFLICTS. SHOULD THE CONTRACTOR FIND CONFLICT WITH UTILITIES, THE CONTRACTOR SHALL, UPON APPROVAL OF THE ENGINEER, BE RESPONSIBLE FOR COORDINATING SIGNAL SUPPORT RELOCATION AND/OR UTILITY RELOCATION.

PAINT CHIP SAMPLES AND SHOP DRAWINGS FOR ALL COMPONENTS MUST BE SUBMITTED TO THE DES FOR REVIEW AND APPROVAL AT LEAST 7 DAYS PRIOR TO ORDERING MATERIALS.

IN ADDITION TO THE REQUIREMENTS OF ITEM 632, ALL SIGNAL SUPPORTS SHALL CONFORM TO THE SIGNAL SUPPORT DETAIL AND TYPICALS INCLUDED IN THE PLANS.

IF DURING TRANSPORTATION, ERECTION, OR INSTALLATION OF SIGNAL HARDWARE, OR AT ANY TIME BEFORE FINAL ACCEPTANCE THE PAINTED SURFACES ARE SCRATCHED OR MARRED IN ANY MANNER, THE CONTRACTOR SHALL BE REQUIRED TO APPLY "TOUCH-UP" PAINT OF THE SAME TYPE AS SPECIFIED ABOVE TO THE AFFECTED AREAS.

ITEM 632 COVERING OF VEHICULAR AND PEDESTRIAN SIGNAL HEAD

ALL SIGNAL HEADS THAT ARE INSTALLED PRIOR TO BEING USED TO CONTROL TRAFFIC OR PEDESTRIANS SHALL BE COVERED. IF PLASTIC BAGS ARE USED, ONLY HEAVY DUTY PLASTIC BAGS SHALL BE PERMITTED. TWO BAGS PER HEAD SHALL BE USED. THE BAGS SHALL BE SECURELY LASHED DOWN SO THAT WIND DOES NOT RIP THEM FROM THE SIGNAL HEAD. ALL SIGNAL HEADS WHILE COVERED SHALL BE DARK EITHER BY REMOVING, UNSCREWING, OR DISCONNECTING THE POWER TO THE BULBS. NO COVERED HEAD SHALL BLOCK THE VIEW OF AN OPERATING HEAD. ANY EXISTING VEHICULAR OR PEDESTRIAN HEAD THAT IS NOT FUNCTIONAL SHALL BE REMOVED IMMEDIATELY OR COVERED.

REVISIONS	DESCRIPTION	DATE	APPROVED

OLENTANGY AVENUE IMPROVEMENT PLAN

TRAFFIC SIGNAL NOTES

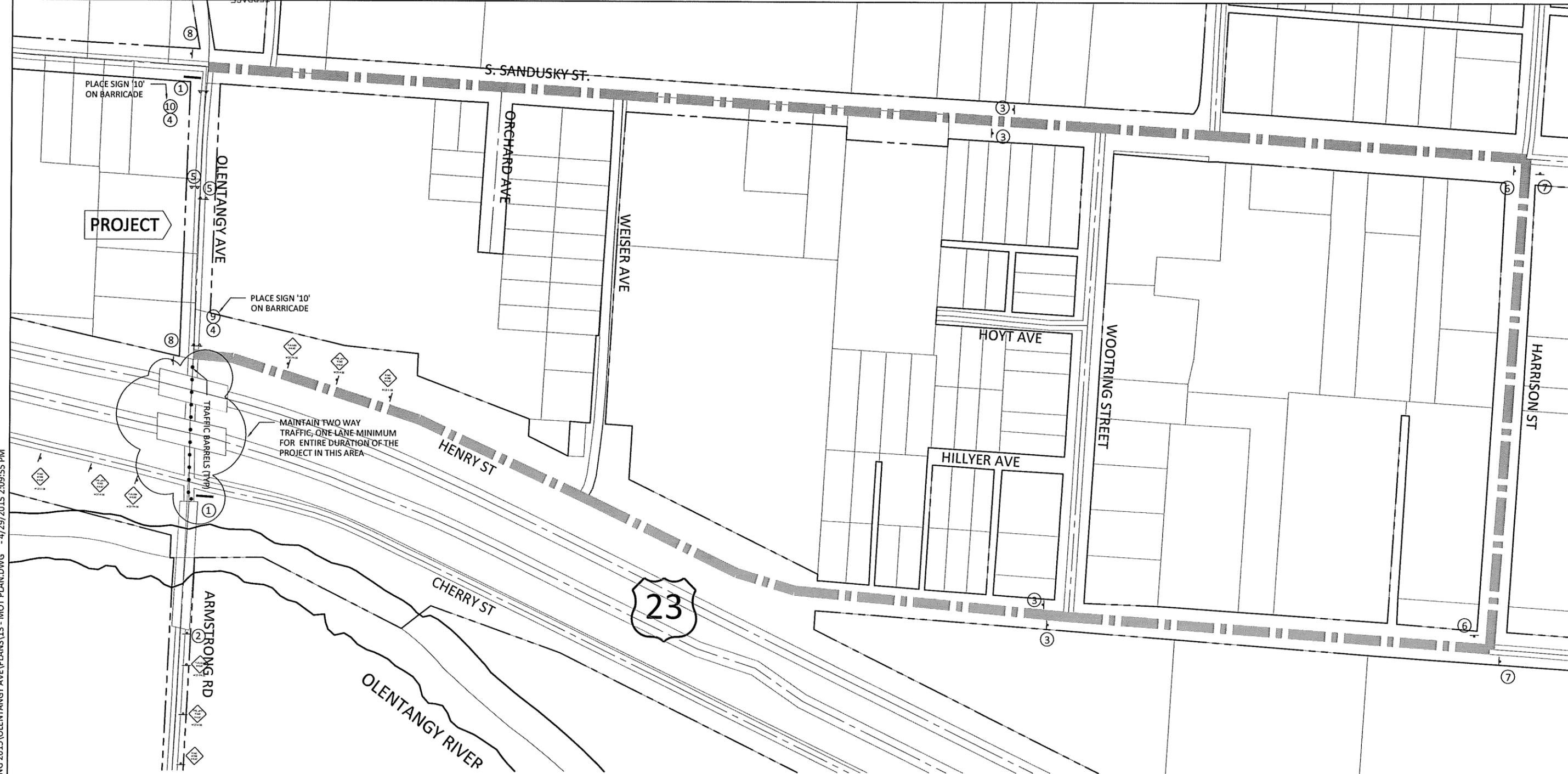


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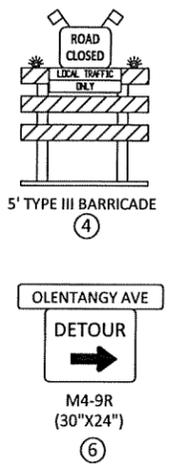
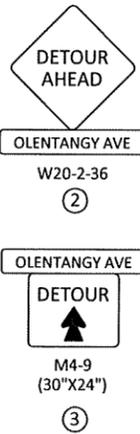
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CHANGEABLE MESSAGE SIGN SEQUENCE

- MESSAGE
- OLENTANGY AVE CLOSED
- STARTING XX/XX/11
- FOLLOW DETOUR



GENERAL

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS" (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING THE CONSTRUCTION. PERMANENT TRAFFIC CONTROL THAT IS NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL PROVIDE A 24 HOUR CONTACT WHO WILL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC FOR THE DURATION OF THE PROJECT.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE AND APPROVED BY THE ENGINEER.

ACCESS TO ALL ADJOINING PROPERTIES TO BE MAINTAINED AT ALL TIMES.

MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES INCLUDING DRUMS, SIGNS, BARRICADES, SIGN BOARDS, DETOUR SIGNAGE, ETC., SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

DRUMS SHALL BE PLACED AS FOLLOWS: 20' C/C ON TANGENTS, 8' C/C ON TAPERS, AND 8' C/C IN RADII UNLESS OTHERWISE NOTED.

STEADY-BURNING TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. CONES ARE NOT APPROVED FOR USE AT NIGHT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 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, MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS JULY 4TH MEMORIAL DAY	NEW YEARS THANKSGIVING	JUG DAY (SEPTEMBER 22, 2012) LABOR DAY
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ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

FAIR WEEK (THIRD FULL WEEK IN SEPTEMBER)

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER-ITEM 616 AND CALCIUM CHLORIDE-ITEM 616, FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. ALL COSTS ARE TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

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APPROVED	
REVISIONS	DESCRIPTION
No.	DATE
OLENTANGY AVENUE IMPROVEMENT PLAN	
MAINTENANCE OF TRAFFIC PLAN	
 Public Works Department	
DATE ISSUED:	
05/01/15	
Sheet	
13/13	