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CLEVELAND PUBLIC POWER (CPP) GENERAL CONSTRUCTION NOTES

ALL CONSTRUCTION NOTES ARE MINIMUM DESIRABLE STANDARDS. ALL EXCEPTIONS TO BE APPROVED BY CPP REPRESENTATIVE TO COMPLY WITH SAFETY CODES AND REGULATIONS.

CONTACT OHIO UTILITIES PROTECTION SERVICE (OUPS), TWO WORKIND DAYS PRIOR TO START OF CONSTRUCTION. IN OHIO, CALL TOLL FREE 1-800-362-2764. IT'S THE LAW.

UTILITIES SHOWN ARE FROM BEST AVAILABLE RECORDS AND FIELD INVESTIGATION AND ARE NOT NECESSARILY COMPLETE OR EXACT. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN IN THIS PLAN OR NOT.

PROPOSED WORK

A. THE CONTRACTOR SHALL RELOCATE AND/OR REMOVE ALL OVERHEAD AND UNDERGROUND CLEVELAND PUBLIC POWER (CPP) FACILITIES OF THE CITY OF CLEVELAND, AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER ONLY AFTER CPP HAS VISIBLY CONFIRMED THAT SAID CPP FACILITIES HAVE BEEN DE-ENERGIZED AND DISCONNECTED, INCLUDING INCIDENTALS, AS SHOWN ON THE DRAWINGS AND HEREINAFTER SPECIFIED.

B. ALL WORK IN THIS CONTRACT SHALL CONFIRM TO THE LATEST NATIONAL ELECTRIC SAFETY CODE (NEC) AND OSHA, EXCEPT WHERE LOACL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN. ALL WORK SHALL BE IN CONFORMANCE WITH CPP REGULATIONS.

C. THE MAJOR ITEMS TO BE PERFORMED BY THE CONTRACTOR SHALL BE AS FOLLOWS:

REMOVE EXISTING ASBESTOS CONDUITS ACROSS BRIDGE. INSTALL NEW 5" FIBER REINFORCED EPOXY (FRE) DUCTS ACROSS BRIDGE USING EXISTING BRIDGE UTILITY SUPPORTS. INSTALL NEW SCHEDULE 40 IPS PVC PIPE BEHIND ABUTMENTS.

FURNISH AND INSTALL UNDERGROUND CONDUIT BANK AND MANHOLE CASTING CONSTRUCTION.

REMOVAL OF OVERHEAD AND UNDERGROUND FACILITIES WHERE DIRECTED TO.

ALL POWER CONDUIT RUNS ARE TO BE CONSTRUCTED BY USING 5" PVC/FRE CONDUITS AS DEPICTED ON THE PLANS, ENCASED WITH A 3" CONCRETE ENVELOPE, UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS. THE CONCRETE ENVELOPE IS TO BE PSI (CITY OF CLEVELAND CONCRETE MIX). EACH CONDUIT SHALL HAVE A PULLING LINE INSTALLED WITH A SLACK AT EACH END.

A RUGGED POLYETHYLENE MATERIAL WITH WARNING TAPE CAPABLE OF RESISTING HIGH OR LOW PH CONDITIONS MUST BE PLACED ABOVE THE ELECTRICAL CONDUIT BANK. THIS WARNING TAPE IS TO BE SIX INCHES WIDE, RED IN COLOR, AND IMPRINTED WITH THE WORDS, " DANGER-BURIED HIGH VOLTAGE CABLES BELOW". THIS TAPE IS TO BE PLACED 6" ABOVE THE NEWLY INSTALLED DUCT BANK. THIS SHALL CONFIRM WITH THE STANDARDS AS SET BY OHIO UTILITIES PROTECTION SERVICE (OUPS). WARNING TAPE PAYMENT SHALL BE INCLUDED IN APPROPRIATE CONDUIT PAY ITEM.

AS AN OPTION, CONTRACTOR MAY ELECT TO ENCASE CPP'S CONDUIT IN RED CONCRETE. BOTH METHODS ARE APPROVED BY CLEVELAND PUBLIC POWER (CPP) AND RECOMMENDED BY OHIO UTILITIES PROTECTION SERVICE (OUPS). PAYMENT FOR TINTED DUCT CONCRETE OR TINTED CONCRETE PROTECTIVE SLABS SHALL BE INCLUDED IN APPROPRIATE CONDUIT PAY ITEM.

PROPOSED WORK (CONT.)

THE TOP OF THE CONCRETE ENCASED CONDUIT ENVELOPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 3'-0" BELOW THE EXISTING AND/OR PROPOSED GRADES. THE TOTAL TRENCH DEPTH WILL BE BASED UPON THE CONDUIT FORMATION. SEE DRAWINGS IF ISSUED BY CPP FOR DETAILS.

VERTICAL AND HORIZONTAL CURVES SHALL HAVE A MINIMUM RADIUS OF NO LESS THAN 30 FEET. THESE CURVES ARE TO BE CONDUITS AS NOTED AND CONSTRUCTED BY USING THE APPROPRIATE 5' COUPLINGS, AND ASSOCIATED CORD LENGTHS AS SHOWN ON THE PLAN VIEW AND/OR AS SHOWN ON THE CONDUIT CURVE CONSTRUCTION CHART. ANY OTHER CURVE DESIGN, FIELD CHANGES OR THE USE OF PREFORMED RADIUS BENDS MUST BE APPROVED BY THE ENGINEERING DEPARTMENT OF CLEVELAND PUBLIC POWER.

ALL MANHOLES OUTSIDE WALLS AND CONDUIT RUNS ARE TO HAVE A MINIMUM CLEARANCE OF 5' (FACE TO FACE), HORIZONTALLY FROM ALL WATER LINES. VERTICAL CLEARANCE SHALL BE AT A MINIMUM OF 1'-6" OR AS SHOWN ON THE PROFILE SHEETS. CLEARANCE BETWEEN OTHER UTILITIES SHALL BE 1 FOOT UNLESS NOTED OTHERWISE. CPP'S DUCT BANK SHALL CROSS OVER OR UNDER OTHER UTILITIES AT AN ANGLE OF NO LESS THAN 45 DEGREES.

ANY CONDUIT RUNS THAT ARE CROSSING ANY STEAM LINES SHALL HAVE A MINIMUM CLEARANCE OF 5', OR AS SHOWN ON THE PROFILE SHEET OF THE PROJECT. IN THE EVENT THAT THIS CANNOT BE ACCOMPLISHED, NOTIFY THE ENGINEERING DEPARTMENT OF CPP PRIOR TO THE INSTALLATION OF CONDUITS.

THE CONTRACTOR SHALL PROVIDE CLEVELAND PUBLIC POWER WITH AS-BUILT PLANS OF THE NEWLY INSTALLED CONDUIT SYSTEM, SHOWING BOTH VERTICAL AND HORIZONTAL LOCATIONS. THESE LOCATIONS SHALL BE AT 50' INTERVALS (MAX). ALL COORDINATES AND ELEVATIONS ARE TO BE BASED ON THE STATE PLANE COORDINATE SYSTEM. IN ADDITION, THE CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION OF THE MANHOLES, INCLUDING BUT NOT LIMITED TO AS-BUILT PHOTOGRAPHS OF ALL INTERIOR SURFACE (WALLS, FLOORS AND CEILINGS). PAYMENT SHALL BE INCLUDED IN APPROPRIATE CONDUIT PAY ITEM.

BACKFILL MATERIAL AND BACKFILLING PROCEDURES

FOR ALL BACKFILL UNDER ROADWAY PAVEMENT, REFER TO FLOWABLE FILL SPECIFICATIONS IN THIS SHEET. FOR ALL OTHER LOCATIONS, THE BACKFILL MATERIAL USED SHALL BE CRUSHED LIMESTONE OR GRAVEL AS PER ODOT ITEM 304-AGGREGATE BASE. CRUSHED AIR-COOLED SLAG MEETING #304 GRADATION MAY BE USED WITH PRIOR WRITTEN APPROVAL OF THE CPP ENGINEERING DEPARTMENT. THE USE OF SAND OR #57 AGGREGATE AS A PREMIUM BACKFILL IS PROHIBITED. SAND MAY ONLY BE USED AS INDICATED ON THE PLAN DETAILS FOR ITEMS SUCH AS CONDUIT COVER. THE SAND MATERIAL SHALL BE NATURAL RIVER OR BANK SAND; FREE OF SILT, CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC MATTER. THE BACKFILL SHALL BE INSTALLED IN 4 INCH LIFTS AND COMPACTED USING MECHANICAL MEANS ONLY. COMPACT TO WITHIN 12" OF SUBGRADE AND EACH LAYER OF BACKFILL TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR TEST (ASTM D698). THE USE OF WATER FOR COMPACTION IS PROHIBITED, E.G. FLOODING OR PUDDLING. SAND USED AS EMBANKMENT CONSTRUCTION AND AS BACKFILL AROUND STRUCTURES SHALL BE ODOT ITEM 203-EMBANKMENT OR MEETING THE REQUIREMENTS OF 703-SPECIAL BACKFILL MATERIAL OF THE SECTION.

EMPLOY A PLACEMENT METHOD THAT DOES NOT DISTURB OR DAMAGE CONDUIT ENCASEMENT.

DO NOT BACKFILL OVER WET, FROZEN OR UNSTABLE SUBGRADE SURFACES.

FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES

PART I - CERTIFICATE OF COMPLIANCE

MATERIAL MUST COME FROM A PLANT WITH A CURRENT CERTIFICATE OF COMPLIANCE DEMONSTRATING THE ABILITY OF THE MIX DESIGN TO MEET THE SPECIFIED REQUIREMENTS. CERTIFICATES IN EXCESS OF ONE YEAR WILL NOT BE ACCEPTED. CERTIFICATES MUST CONTAIN THE NAME OF SUPPLIER, DATE, CONTRACT NUMBER AND MIX DESIGN DATA ON EACH DELIVERY TICKET.

PART II - MATERIALS

ALL MATERIALS SHOW CONFORM TO THE APPLICABLE REQUIREMENTS STATED HEREIN.

1. CEMENT SHALL BE ASTM C-150 TYPE I.
2. THE USE OF FLY ASH IS STRICTLY PROHIBITED.
3. FIND AGGREGATE SHALL CONFORM TO ODOT SPECIFICATION 703.03. FINE AGGREGATE FOR MORTAR OR GROUT. (ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS MOST CURRENT EDITION). THE USE OF SPENT FOUNDRY SAND OR CORE SAND IS STRICTLY PROHIBITED.

PART III - PERFORMANCE ENHANCING ADMIXTURE

AN AIR-ENHANCING ADMIXTURE SHALL BE INCORPORATED IN THE MIX THAT WILL HAVE THE EFFECT OF LOWERING THE WATER/CEMENT RATIO TO BETWEEN 95 AND 105 LBS/CUBIC FOOT. THE AIR AND TRAINED CONTENT FOR THE MIX SHALL BE 30% TO ELIMINATE/MINIMIZE THE EXCESSIVE WATER AND SEGREGATION. COMPRESSIVE STRENGTHS SHALL HAVE A RANGE OF 50PSI TO 100 PSI AT 28 DAYS.

APPROVED ADD MIXTURES:

MANUFACTURER	PRODUCT
A. MASTER BUILDERS	RHEOFILL
B. AXIM	FLOW AIR
C. W.R. GRACE	DARAFILL
D. OR APPROVED EQUAL	

PART IV - FLOWABLE FILL MIX DESIGN

THE MIX DESIGN SHALL BE PROPORTIONED AS FOLLOWS:

CEMENT (TYPE I)	50 LBS/CUBIC YARD
SAND (SSD)	2475 LBS/CUBIC YARD
WATER	25 GALLONS/CUBIC YARD
ADMIXTURE (AIR)	3 OZ/CUBIC YARD

VARIATIONS FROM THE AFOREMENTIONED MIX DESIGN ARE STRICTLY PROHIBITED.

PART V - APPLICATION

1. FLOWABLE FILL SHALL BEGIN 12 INCHES ABOVE THE TOP OF PIPE AND CONTINUE IN THE TRENCH TO THE CONCRETE BASE.
2. MATERIAL FOR PIPE BEDDING AND PIPE ZONE TO A MAXIMUM DEPTH OF 12 INCHES OVER THE TOP OF PIPE SHALL BE AS SPECIFIED BY THE UTILITY.
3. EXPOSED BOLTS AND WALLS EXPOSED IN THE TRENCH SHOULD BE WRAPPED WITH POLYETHYLENE MATERIAL CONFIRMING TO ODOT 748.07 (8 MIL THICK).
4. COVER ALL JOINTS IN CLAY PIPE IN THE TRENCH AREA WITH POLYETHYLENE MATERIAL BEFORE POURING FLOWABLE FILL. REPAIR ALL OBSERVED OPENINGS IN ANY PIPE OR MANHOLE IN THE TRENCH AREA PRIOR TO BACKFILLING WITH FLOWABLE FILL. REPAIR TECHNIQUES SHALL BE IN ACCORDANCE WITH THE UTILITY COMPANY'S STANDARD REPAIR PROCEDURES.
5. CONTACT THE RESPECTIVE UTILITY OWNER FOR REPAIR PROCEDURES.

FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES (CONT.)

CONCRETE DESIGN MIX (CITY OF CLEVELAND MIX)

UNDER THIS SECTION OF THESE SPECIFICATIONS THE CONTRACTOR IS REQUIRED TO SUBMIT A SEPARATE MIX DESIGN FOR EACH COMBINATION OF CEMENT TYPE, AGGREGATE TYPE, AND CONCRETE SUPPLIER THEY WILL USE UNDER THIS CONTRACT. EACH MIX SHALL BE DESIGNED IN ACCORDANCE WITH ASTM C-94-94 OPTION C AND AS HEREIN MODIFIED.

MINIMUM COMPRESSIVE STRENGTH:

4000 PSI FOR 28 DAYS COMPRESSIVE STRENGTH TEST. FOUR CYLINDERS WILL BE TAKEN AND TESTED AS PER ASTM C-39-94. ONE TO BE TESTED AT SEVEN DAYS AND THE REMAINING THREE WILL BE TESTED AT TWENTY-EIGHT DAYS ACCEPTANCE WILL BE BASED ON THE AVERAGE RESULTS OF THE THREE CYLINDERS.

MINIMUM CEMENT CONTENT:

650 LBS PER CUBIC YARD. THE CEMENT SHALL CONFORM TO ASTM C-150-94 OR C-595-94.

WATER CEMENT RATIO:

0.45 MAXIMUM

SLUMP:

NOMINAL THREE INCHES (3") AS PER ASTM C-94-94 (2'-4" ACTUAL). THE USE OF CHEMICAL ADMIXTURES MEETING ASTM C-494, TO INCREASE THE SLUMP TO A MAXIMUM OF 7" MAY BE USED WITH PRIOR WRITTEN APPROVAL OF THE DIVISION OF ENGINEERING AND CONSTRUCTION INSPECTOR. IF THIS OPTION IS SELECTED, THE ADMIXTURE AND RESULTANT MAXIMUM SLUMP SHALL BE SUBMITTED FOR APPROVAL.

AIR CONTENT:

FOUR PERCENT (4%) TO SEVEN AND ONE-HALF PERCENT (7-1/2 %) ASTM C-173-94 OR C-231-94.

AGGREGATE SIZE:

NO. 57 FOR COARSE AGGREGATE SHALL BE LIMESTONE, GRAVEL OR CRUSHED AIR-COOLED BLAST FURNACE SLAG. BOTH COARSE AND FINE AGGREGATE AS PER ASTM C-33-94.

IF CRUSHED AIR-COOLED BLAST FURNACE SLAG IS USED, IT SHALL MEET ALL THE REQUIREMENTS OF ODOT 703.01 AND ODOT 703.02. COPIES OF ALL TESTS AND CERTIFICATIONS FOR THE CRUSHED AIR-COOLED BLAST FURNACE SLAG, IF USED, SHALL BE SUBMITTED AS PART OF THE CONCRETE MIX DESIGN.

WHEN HIGH EARLY STRENGTH IS REQUIRED, ASTM C-150-94 TYPE III A CEMENT OR ADD MIXTURES IN ACCORDANCE WITH A STM C-494-94 SHALL BE USED.

SPECIFICATIONS

ALL WORK IN THIS CONTRACT SHALL CONFORM TO THE LATEST STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS, NATIONAL ELECTRIC SAFETY CODE (NEC) AND OSHA REQUIREMENTS, EXCEPT WHERE LOCAL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN.

REGULATIONS GOVERNING THE LAYING AND REPAIR OF CONCRETE SIDEWALKS, APRONS, AND CURBING

CONCRETE WALKS SHALL BE OF ONE-COURSE CONSTRUCTION AND SHALL BE 4.5 INCHES IN THICKNESS, EXCEPT ALONG ARTERIAL AND COLLECTOR STREETS WHERE THEY MUST BE 6 INCHES IN THICKNESS. CONCRETE FOR WALKS, CURBS, DRIVES, AND APRONS SHALL BE CLASS "C" CONCRETE AS PER ITEM 608 AND SPECIAL OF THE "SUPPLEMENTAL TO STATE SPECIFICATIONS FOR THE CITY OF CLEVELAND" 1967 .

WHEN CONCRETE BLOCKS ARE LAID ON CLAY, EXTRA EXCAVATION TO A DEPTH OF 1 1/2 INCHES MUST BE MADE AND FILLED WITH SAND OR GRAVEL TO ACT AS A FOUNDATION TO THE FOUR INCHES OF SIDEWALK PROPER.

NO BLOCKS OFF CONCRETE SHALL BE LARGER THAN 6 FEET AND THE JOINTS MUST BE CUT BY THE USE OF AN APPROVED GROOVING TOOL MAKING A GROOVE ONE-FOURTH (1/4") INCHES DEEP. ALL EDGES SHALL BE ROUNDED WITH AN APPROVED EDGING TOOL TO A RADIUS OF ONE-FOURTH INCH.

EXISTING APRONS AND "DRIVE AREAS" OF THE WALK MUST BE CONSTRUCTED OF CONCRETE. APRONS AND THE AREA OF WALK OVER WHICH VEHICLES DRIVE MUST BE NO LESS THAN 6 INCHES IN THICKNESS, AND MUST BE LAID IN ACCORDANCE WITH SUPPLEMENTAL TO STATE SPECIFICATIONS FOR THE CITY OF CLEVELAND.

AT ALL WATER-METER COVERS, GAS BOXES, HYDRANTS, OR OTHER OBSTRUCTIONS, NEATLY FITTED OPENINGS SHALL BE CUT IN THE SIDEWALK. NO WALK SHALL BE LAID UNTIL ALL THESE OBSTRUCTIONS HAVE BEEN RAISED OR LOWERED TO THE CORRECT ELEVATIONS.

NO OBSTRUCTIONS SHALL BE PLACED IN FRONT OF ANY CATCH BASIN, FIRE HYDRANT, FIRE ALARM BOX OR LETTERBOX, OR NEAR ENOUGH TO THE SAME TO INTERFERE WITH THEIR USE.

NO CHANGE IN THE WIDTH OF THE WALK TO BE LAID SHALL BE MADE FROM THAT OF EXISTING WALKS ON THE STREET AT THE TIME WORK IS DONE UNDER THIS PERMIT, UNLESS SPECIALLY PERMITTED BY THE DIRECTOR OF PUBLIC SERVICE. TREES, LAWNS, AND SHRUBBERY SHALL NOT BE INTERFERED WITH OR DESTROYED BY ANY WORK PERFORMED BY THE CONTRACTOR. WALKS MUST BE LAID TO THE SAME GRADE AS EXISTING WALKS ON THE STREET, UNLESS PERMISSION FOR CHANGE OF GRADE IS OBTAINED FROM THE DIRECTOR OF PUBLIC SERVICE.

ONLY ONE-HALF OF THE SIDEWALK IN THE BUSINESS DISTRICT CAN BE OBSTRUCTED AT ONE TIME, UNLESS CONTRACTOR HAS AN OBSTRUCTION PERMIT. GUTTERS MUST BE LEFT OPEN AT ALL TIMES.

THE SPACING BETWEEN THE WALK AND THE CURB LINE MUST BE GRADED TO ALLOW WATER DRAINAGE, AND MUST BE OF A GRADUAL SLOPE FROM THE WALK TO THE CURB LINE.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DIRT AND RUBBISH CAUSED BY HIS WORK.

FAILURE OF A CONTRACTOR TO COMPLY WITH THESE REGULATIONS SHALL RESULT IN THE WITHHOLDING OF FUTURE PERMITS AND SHALL SUBJECT THE HOLDER OF THIS PERMIT TO THE PENALTIES PRESCRIBED IN THE SIDEWALK ORDINANCE.

CURBING: CURBING SHALL CONFORM TO THE STANDARDS ESTABLISHED FOR SIZE AND QUALITY IN THE DISTRICT IN WHICH IT IS TO BE INSTALLED. CAST-IN-PLACE CONCRETE CURBS AND INTEGRAL CURBS, WHERE USED, SHALL CONFORM TO DETAIL PLAN NO. ME-246 OF THE CITY OF CLEVELAND.

COPIES OF THESE SPECIFICATIONS AND PLANS FOR PAVEMENT REPAIR AND LAYING OF CONCRETE SIDEWALKS MAY BE OBTAINED, UPON REQUEST, FROM THE DIVISION OF ENGINEERING AND CONSTRUCTION OF THE CITY OF CLEVELAND.

SCOPE OF WORK

A. THE CONTRACTOR SHALL RELOCATE OR REMOVE ALL CLEVELAND PUBLIC POWER FACILITIES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER ONLY AFTER CPP HAS VISIBLY CONFIRMED THAT SAID CPP FACILITIES HAVE BEEN DE-ENERGIZED AND DISCONNECTED. THIS WORK SHALL BE PROPERLY COMPLETED, INCLUDING INCIDENTALS, AS SHOWN ON THE DRAWINGS AND HEREINAFTER SPECIFIED.

B. THE MAJOR ITEMS OF WORK TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE AS FOLLOWS:

WORK BY THE PROJECT CONTRACTOR:

THE CONTRACTOR SHALL CONSTRUCT THE CPP UNDERGROUND POWER DISTRIBUTION NETWORK WITHIN THE PROJECT LIMITS. THIS WORK INCLUDES BUT IS NOT LIMITED TO:

- FURNISHING AND INSTALLING CONCRETE ENCASED PVC DUCT BANKS OF VARIOUS ARRANGEMENTS

- FURNISHING AND INSTALLING PRECAST BUILT-IN-PLACE ELECTRICAL VAULTS AND MANHOLES

- FURNISHING AND INSTALLING ELECTRICAL VAULT RACKING SYSTEMS WITHIN VAULTS AND MANHOLES

- REMOVING EXISTING UNDERGROUND DUCT BANKS, VAULTS, MANHOLES AND PULL BOXES

- COORDINATING WITH CPP AND ITS CONTRACTORS

- REMOVING EXISTING CPP OWNED POWER POLES

- FURNISHING AND INSTALLING FIBER REINFORCED EPOXY (FRE) DUCT BANK SYSTEMS ACROSS BRIDGES INCLUDING BEAM SUPPORT SYSTEMS

- FINISHING AND INSTALLING WOODEN POWER POLES FOR TRANSITIONS FROM UNDERGROUND TO OVERHEAD SYSTEMS AND WHERE OVERHEAD SYSTEMS ARE IMPACTED BY PROJECT CONTRACTOR'S WORK

- FURNISHING AND INSTALLING OVERHEAD ELECTRICAL CABLES, SPLICES AND HARDWARE

WORK BY CPP:

- DE-ENERGIZING ELECTRICAL SYSTEM

- REMOVING EXISTING CPP PRIMARY DISTRIBUTION CABLES ACROSS SCRANTON ROAD OVER IR-90 AFTER CABLES HAVE BEEN DE-ENERGIZED.

- FURNISHING AND INSTALLING NEW ELECTRICAL CABLE IN DUCTS.

- TESTING NEW PRIMARY DISTRIBUTION CABLES.

- INSTALLING CABLE ID TAGS ON NEW CABLES AS NECESSARY.

- ENERGIZING ELECTRICAL SYSTEM

ALONG PORTIONS OF THE CORRIDOR, THE PROJECT CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE EXISTING ELECTRICAL SYSTEM UNTIL COMPLETION AND ACTIVATION OF THE PROPOSED UNDERGROUND POWER SYSTEM. THE CONTRACTOR SHALL COORDINATE THE DETAILS OF THIS WORK WITH CPP.

SUBMITTALS

IN ADDITION TO THE REQUIREMENTS OF CMS 105, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY CPP ENGINEERING DEPARTMENT ON ALL EQUIPMENT AND MATERIAL FURNISHED AND REQUIRED TO PERFORM THE WORK.

DEFINITIONS

WHENEVER IN THESE SPECIFICATIONS OR IN ANY DOCUMENT OR INSTRUCTIONS ON CONSTRUCTION WHERE THESE SPECIFICATIONS GOVERN, THE FOLLOWING TERMS (OR PRONOUNS IN PLACE OF THEM) ARE USED, THE INTENT AND MEANING SHALL BE INTERPRETED AS FOLLOWS: THE CITY OF CLEVELAND, IS THE DIRECTOR OF CITY OF CLEVELAND DEPARTMENT OF PUBLIC UTILITIES.

STATUS OF CITY INSPECTOR

INSPECTORS AS DESIGNATED BY THE CITY OF CLEVELAND SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND MATERIALS FURNISHED. SUCH INSPECTING MAY EXTEND TO ALL OR ANY PART OF THE WORK, AND TO THE PREPARATION OR MANUFACTURING OF THE MATERIALS TO BE USED IN THE WORK. THE CITY INSPECTOR, AS DESIGNATED BY THE DIRECTOR OF PUBLIC UTILITIES SHALL GIVE WORK INSTRUCTIONS TO THE PROJECT ENGINEER.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN

THIS ITEM CONSISTS OF CONSTRUCTING NINE (9) 5 INCH CONDUITS IN A CONCRETE ENVELOPE WITH 4000 PSI (CITY OF CLEVELAND CONCRETE MIX SPECIFICATIONS) AS PER THE DETAILED DRAWINGS. ENCASED CONCRETE CONDUITS SHALL BE MEASURED FROM THE CENTER OF THE ADJUSTED CPP MANHOLES. PAYMENT SHALL BE FOR ACCEPTED QUANTITIES PER FOOT FOR FURNISHING AND INSTALLING THE NINE (9) 5 INCH CONDUITS ENCASED IN A CONCRETE ENVELOPE FOR ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN. ANY PAVEMENT, CURB AND SIDEWALK THAT IS OUTSIDE THE PROPOSED FULL DEPTH PAVEMENT LIMITS AND IS DISTURBED TO PERFORM THIS WORK SHALL BE REPLACED IN KIND. PAYMENT FOR PERFORMING THE WORK SHALL BE INCIDENTAL TO THIS ITEM.

THE FOLLOWING ITEMS HAVE BEEN ADDED TO THE PLANS AND CARRIED TO THE GENERAL SUMMARY FOR PERFORMING THIS WORK.

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

ITEM 625 - TRENCH, 48" DEEP

ITEM 625 - CONDUIT, MISC.: CPP BRIDGE MOUNTED CONDUITS AND INCIDENTALS

THIS ITEM CONSISTS OF CONSTRUCTING NINE (9) 5 INCH FRE CONDUITS IN THE BRIDGE STRUCTURE, UTILITY SUPPORTS AND ALL INCIDENTAL ITEMS SUCH AS CONDUIT FRAME, COUPLINGS AND EXPANSION JOINTS.

THE FOLLOWING ITEM HAS BEEN ADDED TO THE PLANS FOR PERFORMING THIS WORK.

ITEM 625 - CONDUIT, MISC.: CPP BRIDGE MOUNTED CONDUITS AND INCIDENTALS

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AND CONNECT TO MANHOLES, AS SHOWN ON THE PLANS OR AS DIRECTED. ALL NON-REINFORCED AND REINFORCED CONCRETE ENCASED PVC/FRE CONDUIT AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. ALL CONDUITS SHALL BE CONCRETE ENCASED UNLESS NOTED OTHERWISE.

B. CONDUIT AND FITTINGS

POLYVINYL CHLORIDE PVC CONDUIT SHALL CONFIRM TO THE UL651 STANDARDS, 5 INCH IRON PIPE SIZE (I.P.S) WITH CONCRETE ENCASEMENT AS DETAILED ON THE PLANS. COUPLINGS SHALL BE SOCKET TYPE, END BELLS AT MANHOLE ENTRANCE, 5 DEGREES SWEEPS, 11 1/4 DEGREE TO 90 DEGREES INCLUDING FILED DEGREES ANGLE COUPLINGS, STANDARD COUPLINGS, VARIOUS BENDS AND PLUGS OR CAPS TO CLOSE UNUSED CONDUITS, SHALL BE MADE OF THE SAME MATERIAL AS THE CONDUIT. CONDUIT SPACERS SHALL BE SURE AS SHOWN IN THE PLAN DETAILS. CONCRETE BLOCK SPACERS WILL NOT BE ACCEPTED.

C. CONCRETE

CONCRETE USED FOR ENCASEMENT OF CONDUITS SHALL CONFORM TO ROADWAY PLAN GENERAL NOTE CONCRETE DESIGN MIX (CLEVELAND 650). 4000 PSI CITY OF CLEVELAND MIX.

D. INSTALLATION

CONDUIT SHALL BE INSTALLED BY THE BUILT-UP METHOD WITH JOINTS IN ADJACENT DUCTS STAGGERED. NECESSARY SPACERS SHALL BE PLACED AT NO GREATER THAN 8 FEET INTERVALS TO HOLD DUCTS IN THE DESIRED CONFIGURATION, WITH THE DUCT BANK BRACED SECURELY TO KEEP IT FROM SHIFTING AND FLOATING WHILE CONCRETE IS POURED. SEALER COMPOUND FURNISHED BY THE CONDUIT AND EACH SECTION SHALL BE TAPED SECURELY INTO PLACE IN THE PREVIOUS COUPLING TO OBTAIN JOINTS THAT ARE TIGHT AND LEAK-PROOF.

1. CONCRETE SHALL BE WORKED INTO SPACES BETWEEN DUCTS SO THAT THE CONDUIT BANK IS EFFECTIVELY ENCASED IN CONCRETE WITHOUT VOIDS OR EMPTY SPACES. REINFORCING RODS SHALL BE INSTALLED AS REQUIRED AND WHERE SHOWN ON THE PLANS.

2. CONDUIT WHICH IS CUT TO FIT SHORT SECTIONS SHALL BE DEBURRED ON THE DUCT END AND THE END OF THE BELL SHALL BE REAMED IN THE INSIDE DIAMETER FOR EACH ENTRY OF THE DUCT INTO COUPLING TO PRODUCE THE SAME JOINTING CONDITIONS AS PROVIDED BY FACTORY MADE CONDUIT SECTIONS.

3. THE END BELLS SHALL BE GROUTED IN PLACE.

4. INSTALL PULLING LINE IN EACH CONDUIT.

E. BACKFILLING

REFER TO NOTES "BACKFILL MATERIAL AND BACKFILLING PROCEDURES AND FLOWABLE FILL SPECIFICATION FOR UTILITY TRENCHES".

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CLEVELAND PUBLIC POWER NOTES

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ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC) (CONT.)

F. MEASUREMENT

THE NUMBER OF FEET OF CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET FURNISHED AND PLACED AND ACCEPTED IN ACCORDANCE WITH THESE SPECIFICATIONS, AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE , INCLUDING FITTINGS.

G. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACTOR PRICE BID PER FOOT UNDER ITEM 625 AS DESCRIBED BELOW, CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR EXCAVATING AND FOR FURNISHING, HAULING, PLACING THE CONDUIT, FITTINGS, CAPPING, PULLING LINES, SPACERS, CONCRETE, REINFORCING STEEL, SHEETING AND BRACING, BACKFILL, PLASTIC CAUTION TAPE (OR RED TINTED CONCRETE), INCIDENTAL CONCRETE, REMOVAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL, BREAKING AND RESTORATION OF EXISTING MANHOLE WALLS AND ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. THESE ITEMS AS MEASURED AS PROVIDED ABOUT SHALL BE PAID FOR UNDER:

ITEM UNIT DESCRIPTION

ITEM 625 - CONDUIT, CONCRETE ENCASED, AS PER PLAN (5" PVC)

MAINTAIN EXISTING LIGHTING AND POWER

THE CONTRACTOR SHALL NOT INTERRUPT EXISTING LIGHTING AND POWER EXCEPT FOR SUCH PERIODS AS THE ENGINEER MAY REQUIRE FOR THE PROPER CONSTRUCTION OF NEW FACILITIES TO BE IN PLACE AND OPERATION. FINAL CONNECTION SHALL BE MADE BY CPP AFTER ALL TESTING HAS BEEN CONDUCTED AND FACILITIES HAVE BEEN ACCEPTED BY CPP.

PAVEMENT REPAIR

CONCRETE PAVEMENT:

ALL PAVEMENT OPENINGS SHALL BE SAWED FULL DEPTH AND HAVE SMOOTH VERTICAL FACES. DOWELS SHALL BE REQUIRED.

CONCRETE REPAVING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE AND/OR SLAB IN WHICH THE REPAIR AREA IS LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE AND/OR SLAB, THAT LANE OR SLAB SHALL BE REPAVED.

ASPHALT PAVEMENT:

ALL PAVEMENT OPENINGS SHALL BE SAWED FULL DEPTH AND HAVE SMOOTH VERTICAL FACES. DOWELS SHALL BE REQUIRED.

ASPHALT RESURFACING SHALL BE PERFORMED IN SUCH A MANNER THAT THE ENTIRE LANE IN WHICH THE REPAIRS ARE LOCATED SHALL BE RESTORED. SHOULD ANY PORTION OF THE REPAIR AREA EXTEND INTO AN ADJACENT LANE, THAT LANE SHALL ALSO BE RESURFACED. FOR PAVEMENT WITH A WIDTH OF 40 FEET OR LESS, A LANE SHALL BE CONSIDERED 1/2 THE PAVEMENT WIDTH.

EXTEND OVER CUT IN LONGITUDINAL DIRECTION 2 FEET UNTO UNDISTURBED SUBGRADE.

ITEM 202 - REMOVAL MISC.: CONDUIT

THE CONTRACTOR SHALL REMOVE ALL CONDUIT THAT RUNS BETWEEN THE CPP MANHOLES LOCATED AT STA. 7+66 AND STA. 11+82 AFTER CPP HAS REMOVED THE PRIMARY DISTRIBUTION CABLE FROM THESE CONDUITS. PAYMENT FOR ALL THE LABOR, EQUIPMENT AND MATERIALS NEEDED TO PERFORM THIS WORK HAS BEEN INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 202-REMOVAL MISC.: CONDUIT AND CARRIED TO THE GENERAL SUMMARY.

ITEM 202 - REMOVAL MISC.: CONDUIT 166 FT

CPP - POWER CABLE INSTALLATION

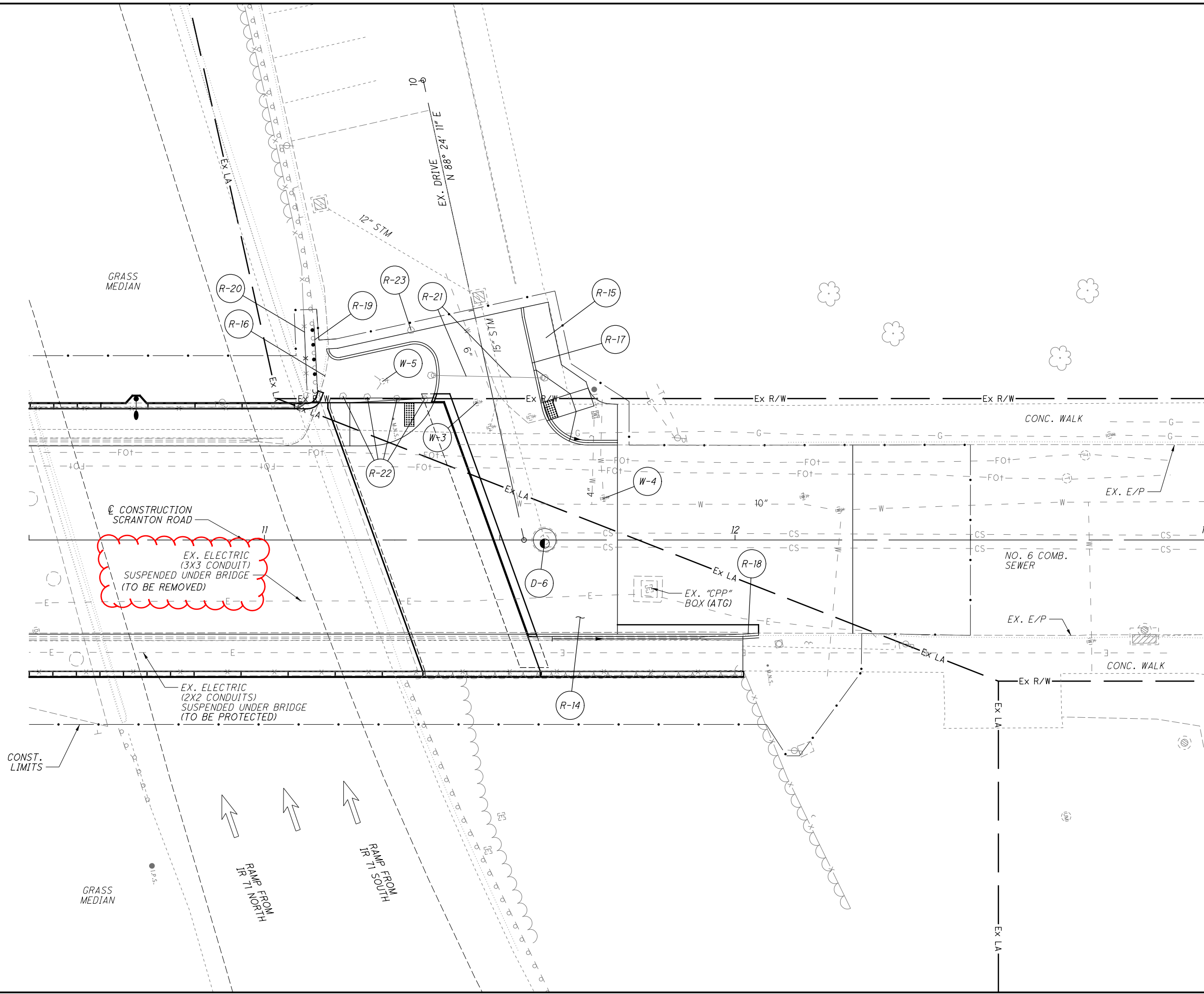
AFTER THE CONTRACTOR HAS INSTALLED THE PVC DUCTS IN THE PAVEMENT AND APPROACH SLABS AND FRE DUCTS ACROSS THE BRIDGE, CPP WILL BE INSTALLING ELECTRICAL CABLE IN THE NEW DUCTS AND SPLICING INTO ITS EXISTING FACILITIES. CONTRACTOR SHALL GIVE CPP THREE WEEKS NOTICE PRIOR TO ALLOWING CPP ON SITE TO COMMENCE THIS WORK. ALL DUCTS MUST BE IN PLACE BEFORE CPP CAN BEGIN THEIR WORK. CPP SHALL THEN BE ALLOWED A MINIMUM OF THREE CALENDAR WEEKS TO COMPLETE INSTALLATION AND SPLICING. CPP MAY NOT ALWAYS NEED EXCLUSIVE ACCESS TO THE SITE DURING THIS WORK AND THE CONTRACTOR AND CPP SHALL COORDINATE ACCORDINGLY TO FACILITATE COMPLETION OF THE PROPOSED WORK.

CPP - POWER CABLE REMOVAL

CPP SHALL REMOVE THE EXISTING ELECTRICAL CABLE IN THE CONDUIT THAT RUNS BETWEEN THE CPP MANHOLES LOCATED AT STA. 7+66 AND STA. 11+82. CONTRACTOR SHALL GIVE CPP THREE WEEKS NOTICE PRIOR TO ALLOWING CPP ON SITE TO COMMENCE THIS WORK. CPP SHALL BE ALLOWED A MINIMUM OF ONE CALENDAR WEEK TO COMPLETE REMOVING THE CABLES. CPP MAY NOT ALWAYS NEED EXCLUSIVE ACCESS TO THE SITE DURING THIS WORK AND THE CONTRACTOR AND CPP SHALL COORDINATE ACCORDINGLY TO FACILITATE COMPLETION OF THE PROPOSED WORK.

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0 5 10 20
HORIZONTAL
SCALE IN FEET

REMOVAL AND ADJUST TO GRADE PLAN
SCRANTON ROAD / SCHOOL DRIVE

CUY-90-14.52

LEGEND

- FULL DEPTH PAVEMENT
- PAVEMENT RESURFACING
- PROPOSED STRUCTURE
- PROPOSED 4 1/2" CONCRETE WALK
- (ATG) ADJUSTED TO GRADE
- (DND) DO NOT DISTURB
- (TBR) TO BE REMOVED
- (TBD) TO BE DETERMINED
- FRE FIBER REINFORCED EPOXY
- UTILITY LOCATED BY RECORD DRAWING ONLY
- Ⓣ ANCHOR ASSEMBLY, MGS TYPE T

- Ⓐ STA. 8+01.23 @ CONSTRUCTION SCRANTON ROAD = STA. 9+33.24 @ CONSTRUCTION WADE AVENUE
- Ⓑ STA. 9+66.21 @ CONSTRUCTION SCRANTON ROAD = STA. 936+47.55 @ IR-90
- Ⓒ STA. 11+55.16 @ CONSTRUCTION SCRANTON ROAD = STA. 11+00.00 @ CONSTRUCTION SCHOOL DRIVE

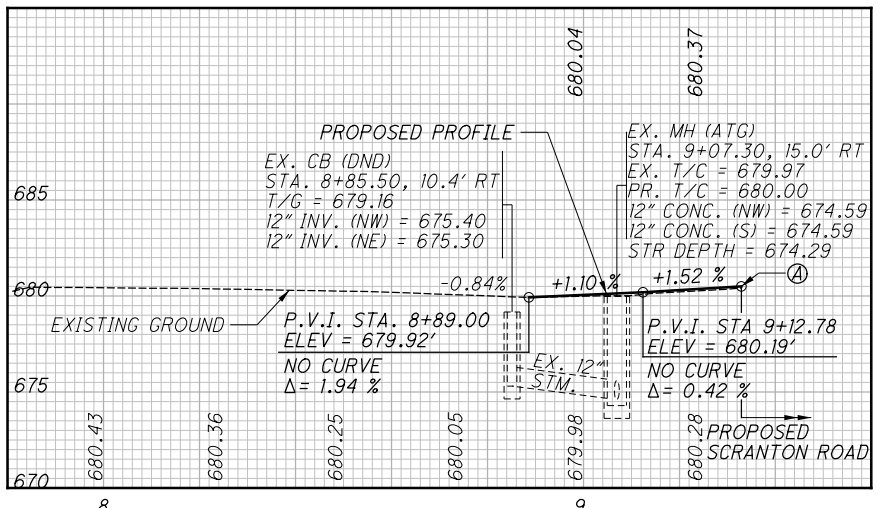
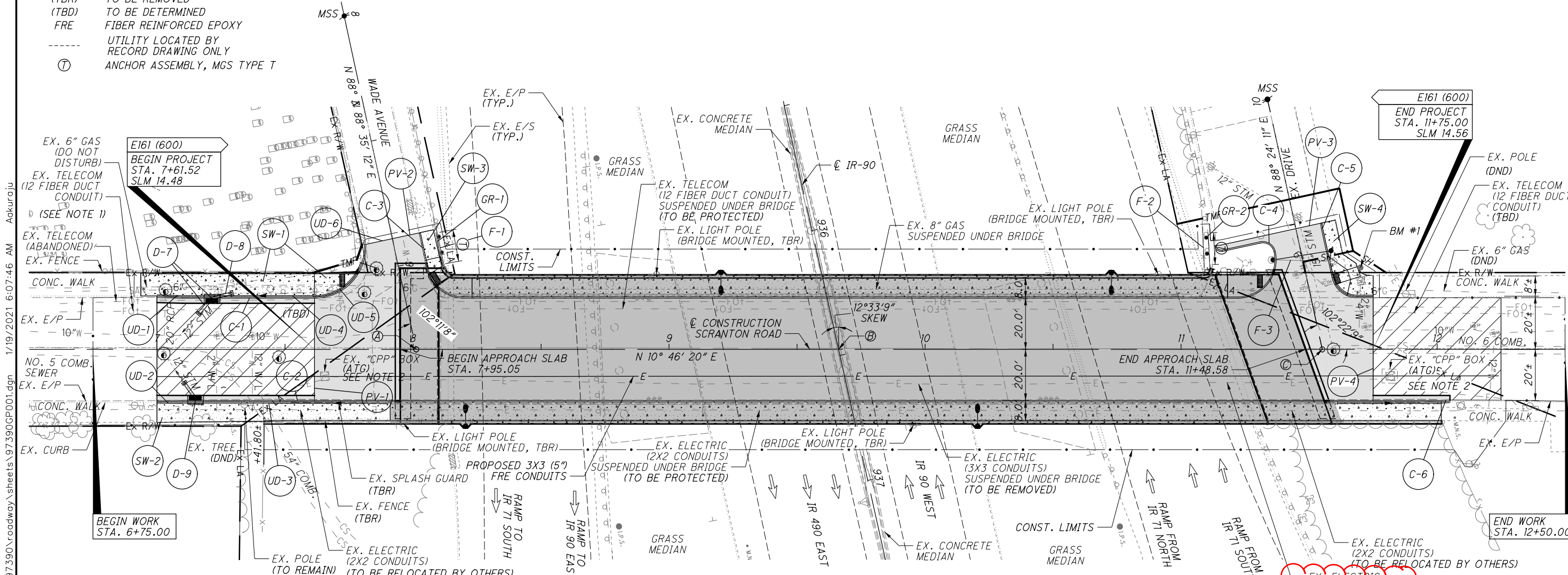
SEE SHEETS & FOR PAVEMENT AND INTERSECTION DETAILS.

NOTE 1:
THE PROPOSED CATCH BASIN AND STORM SEWER ARE LOCATED IN CLOSE PROXIMITY TO THE EXISTING AT&T FIBER OPTIC CONDUITS. CONTRACTOR SHALL CONTACT AT&T PRIOR TO EXCAVATION. A REPRESENTATIVE FROM AT&T WILL BE ON SITE TO AID IN THE LOCATION AND SUPPORT OF THE CONDUITS.

NOTE 2:
REPLACE EXISTING CPP SQUARE CASTINGS WITH 36" ROUND CASTINGS.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
24-26	SUBSUMMARY
30	PROFILE
31-36	CROSS SECTIONS
43-44	TRAFFIC CONTROL
47	LIGHTING PLAN

BENCHMARK DATA	
BM#1	5/8" REBAR STA. 11+70.10, 31.96' LT ELEV. 679.243
BM#2	5/8" REBAR STA. 14+28.15, 31.87' LT ELEV. 677.779



PROFILE - WADE AVENUE

PLAN SHEET
STA. 6+50.00 TO STA. 12+50.00

CUY-90-14.52

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GENERAL NOTES:

PROPOSED WORK: MAJOR REHABILITATION

THE EXISTING DECK WILL BE REPLACED WITH A NEW COMPOSITE REINFORCED CONCRETE DECK ON THE EXISTING 4-SPAN SUPERSTRUCTURE. THE EXISTING TURNBACK WINGWALLS AT THE SOUTH WILL BE MODIFIED AS SHOWN IN THE PLANS. THE ABUTMENTS WILL BE RECONSTRUCTED AS SEMI-INTEGRAL. ALL EXISTING BEARINGS WILL BE REPLACED WITH NEW ELASTOMERIC BEARINGS. THE PIER CAPS WILL BE RAISED. THE EXISTING STRUCTURAL STEEL WILL BE PAINTED.

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7/17/15
AS-2-15	REVISED	1/19/18
BR-2-15	REVISED	7/17/15
GSD-1-96	REVISED	7/19/02
PCB-91	REVISED	1/18/13
SICD-1-96	REVISED	7/18/14
SICD-2-14	DATED	7/18/14
VPF-1-90	REVISED	7/20/18

AND THE FOLLOWING HIGHWAY LIGHTING STANDARD DRAWINGS:

HL-20.14	REVISED	1/19/18
HL-30.32	REVISED	1/17/14
HL-50.21	REVISED	7/20/18

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002, AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN LOADING:

HS20, CASE II AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

DESIGN DATA:

CONCRETE, QC/QA CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE, QC/QA CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (PARAPET)
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60000 PSI
STRUCTURAL STEEL - ALL NEW STEEL, ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50000 PSI.
EXISTING STEEL, ASTM A36, MINIMUM YIELD STRENGTH 36000 PSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202. PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05. THIS WORK CONSISTS OF:

- A. REMOVAL OF ENTIRE EXISTING DECK, CURBS, WALK, RAILS, PORTIONS OF END CROSS-FRAMES, AND BEARINGS. THE TOTAL EXISTING BRIDGE DECK THICKNESS IS APPROXIMATELY 11".
- B. PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

C. REMOVALS METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVAL OVER STRUCTURAL MEMBERS (STEEL GIRDERS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS [16 KILOGRAMS] BUT NOT TO EXCEED 90 POUNDS [41 KILOGRAMS] UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G. FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED ENGINEER TO THE DIRECTOR. OBTAIN DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

D. EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES

E. REMOVAL OF PORTIONS OF ABUTMENTS INCLUDING BACKWALLS AND WINGWALLS AS SHOWN ON PLANS.

F. MODIFY EXISTING PIERS AS SHOWN ON PLANS.

G. CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING NEW CONCRETE.

H. SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

I. MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

J. EXISTING UTILITIES SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.

K. REMOVAL OF EXISTING CPP ASBESTOS CONDUITS (SEE ASBESTOS NOTIFICATION NOTE ON THIS SHEET).

EXISTING STRUCTURE VERIFICATION:

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

INSPECTION OF EXISTING STRUCTURAL STEEL:

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.20 KIPS FOR A TOTAL MACHINE LOAD OF 17.6 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

ASBESTOS NOTIFICATION:

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT 5,580 SQUARE FEET OF ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM
OHIO EPA, DAPC
50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE:
1) THE CONTRACTORS NAME AND ADDRESS,
2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND
3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GAFFLE HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN: ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE ENTIRE EXISTING APPROACH SLABS. THE TOTAL EXISTING APPROACH SLAB THICKNESS IS APPROXIMATELY 15".

ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF CAULK, PEJF, CONCRETE, REINFORCEMENT, RUB PLATES, DOWEL HOLES, AND NON-SHRINK, NON-METALLIC GROUT AS FOLLOWS:

ITEM	UNIT
511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	EACH

ITEM 516. JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

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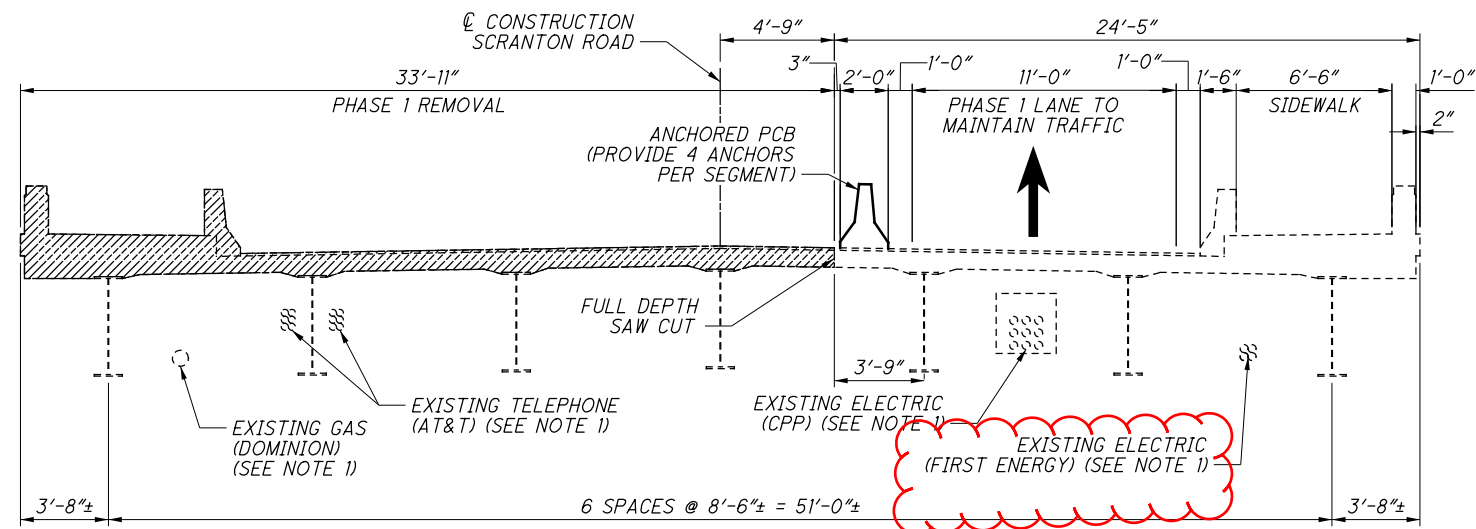
DATE: 1/29/2019
STRUCTURE FILE NUMBER: 1809261

DESIGNED: CCJ
CHECKED: CCJ
AMEND: REVISED

GENERAL NOTES - 1
BRIDGE NO. CUY-090-1452
SCRANTON ROAD OVER I.R. 90

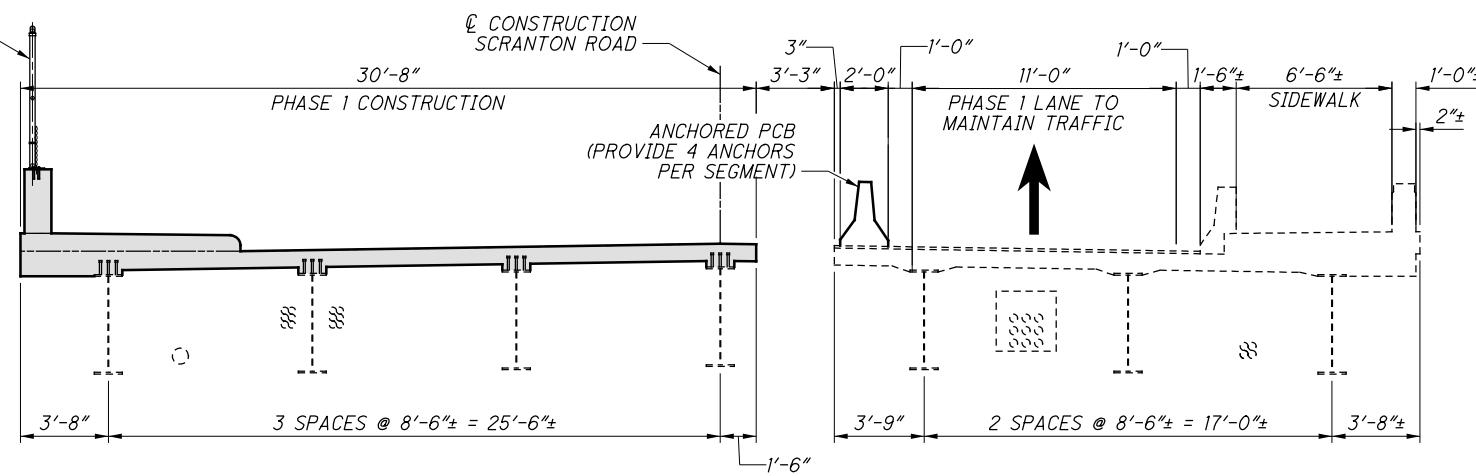
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PHASE 1 REMOVAL

VANDAL PROTECTION FENCE (PS-4) WITH BASE PLATE (BP-1), SEE STANDARD DRAWING VPF-1-90 (TYP.)



PHASE 1 CONSTRUCTION

PHASE 1 REMOVAL:

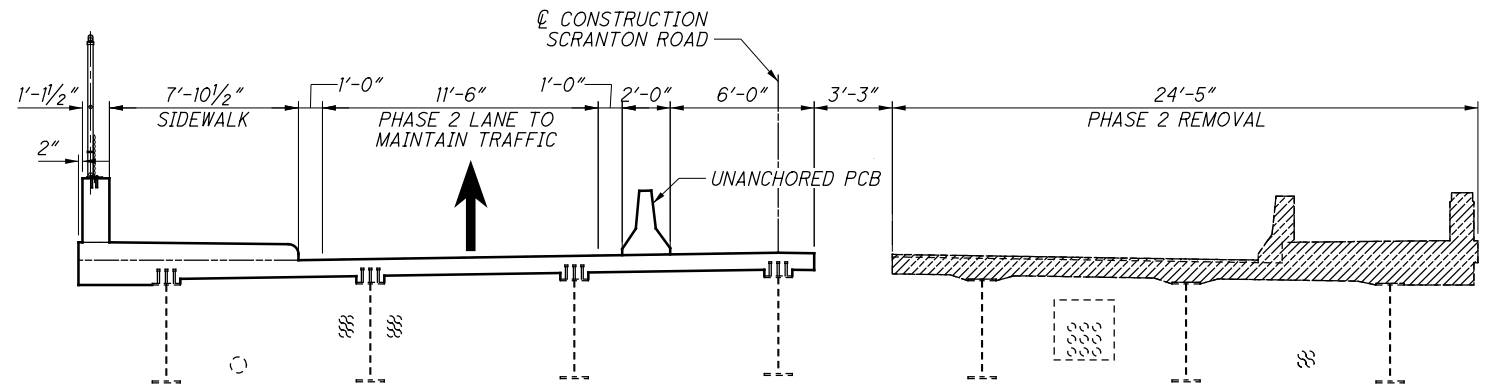
1. INSTALL TEMPORARY TRAFFIC BARRIER ON EXISTING STRUCTURE IN THE LOCATION SHOWN.
2. SHIFT TRAFFIC TO THE EAST SIDE OF THE EXISTING STRUCTURE AND MAINTAIN ONE-LANE, ONE-WAY (NORTHBOUND) TRAFFIC. SHIFT PEDESTRIANS TO THE SIDEWALK ON THE EAST SIDE OF THE EXISTING STRUCTURE.
3. REMOVE EXISTING DECK, SIDEWALK, PARAPETS, AND APPROACH SLABS.
4. REMOVE THE EXISTING REAR AND FORWARD ABUTMENTS TO THE LIMITS SHOWN ON SHEETS 8/38 THROUGH 11/38.

PHASE 1 CONSTRUCTION:

1. MAINTAIN ONE-LANE, ONE-WAY (NORTHBOUND) TRAFFIC ON THE EAST SIDE OF THE EXISTING STRUCTURE AS SHOWN. MAINTAIN PEDESTRIAN TRAFFIC ON THE EAST SIDE OF THE EXISTING STRUCTURE AS SHOWN.
2. CONSTRUCT THE WEST PORTIONS OF THE REAR AND FORWARD ABUTMENTS, WINGWALLS, AND PIERS.
3. CONSTRUCT THE NEW CONCRETE DECK, SIDEWALK, PARAPETS, VANDAL PROTECTION FENCE, AND APPROACH SLABS TO THE LIMITS SHOWN.

PHASE 2 REMOVAL:

1. INSTALL TEMPORARY TRAFFIC BARRIER ON PROPOSED STRUCTURE IN THE LOCATION SHOWN.
2. SHIFT TRAFFIC TO THE WEST SIDE OF THE EXISTING STRUCTURE AND MAINTAIN ONE-LANE, ONE-WAY (NORTHBOUND) TRAFFIC. SHIFT PEDESTRIANS TO THE SIDEWALK ON THE WEST SIDE OF THE PROPOSED STRUCTURE.
3. REMOVE EXISTING DECK, SIDEWALK, PARAPETS, AND APPROACH SLABS.
4. REMOVE THE EXISTING REAR AND FORWARD ABUTMENTS TO THE LIMITS SHOWN ON SHEETS 8/38 THROUGH 11/38.



PHASE 2 REMOVAL

NOTES:

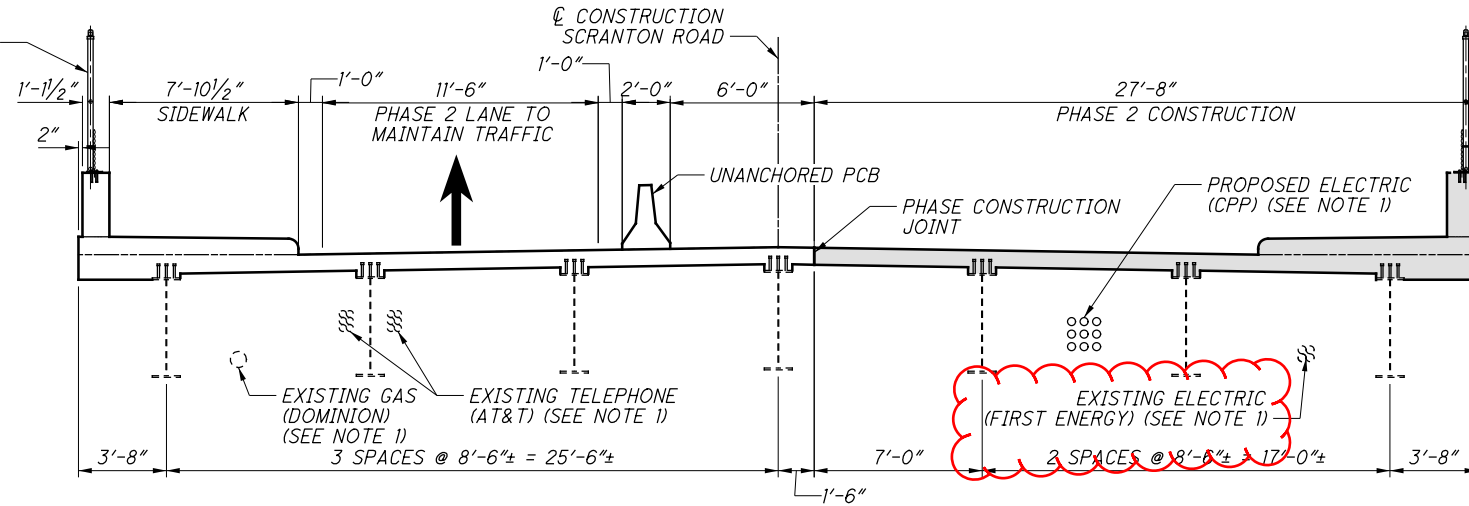
1. FOR UTILITY INFORMATION, SEE GENERAL NOTES SHEET 5/91.
2. FOR PORTABLE CONCRETE BARRIER DETAILS, SEE STD. DWG. PCB-91.
3. FOR ADDITIONAL PORTABLE CONCRETE BARRIER (PB) LAYOUT AND PAYMENT FOR PB, SEE MAINTENANCE OF TRAFFIC SHEETS.

LEGEND:

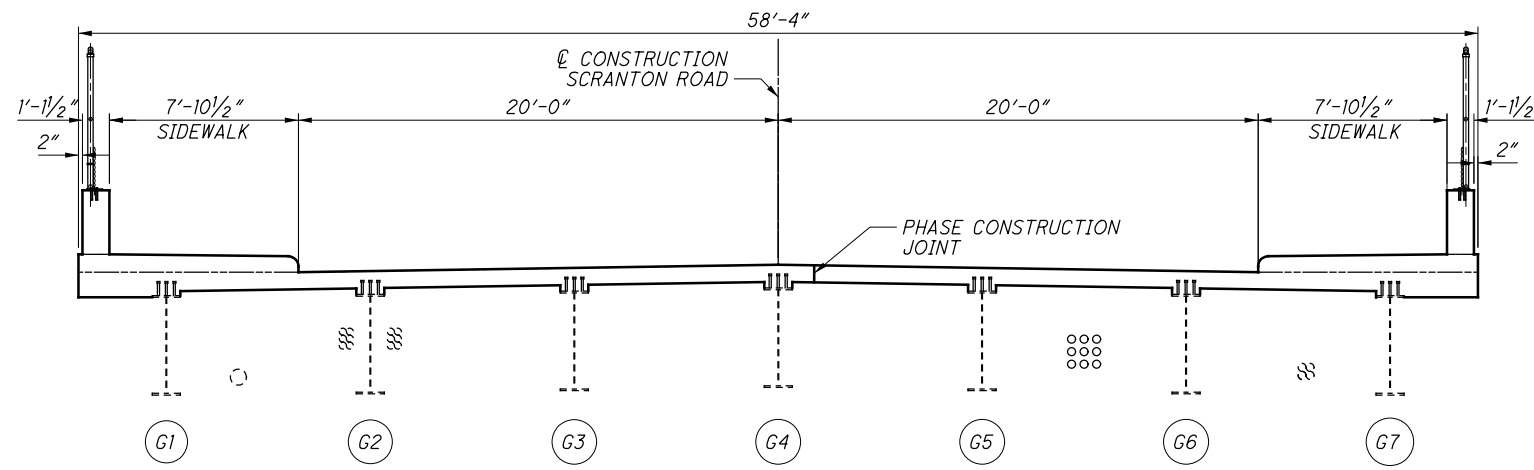
- = LIMITS OF REMOVAL
- = NEW CONSTRUCTION

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VANDAL PROTECTION FENCE (PS-4)
WITH BASE PLATE (BP-1), SEE
STANDARD DRAWING VPF-1-90 (TYP.)



PHASE 2 CONSTRUCTION



PHASE 2 CONSTRUCTION:

1. MAINTAIN ONE-LANE, ONE-WAY (NORTHBOUND) TRAFFIC ON THE WEST SIDE OF THE PROPOSED STRUCTURE AS SHOWN. MAINTAIN PEDESTRIAN TRAFFIC ON THE WEST SIDE OF THE NEW STRUCTURE AS SHOWN.
2. CONSTRUCT THE EAST PORTIONS OF THE REAR AND FORWARD ABUTMENTS, WINGWALLS, AND PIERS.
3. CONSTRUCT THE NEW CONCRETE DECK, SIDEWALK, PARAPETS, VANDAL PROTECTION FENCE, AND APPROACH SLABS.

NOTES:

1. FOR UTILITY INFORMATION, SEE GENERAL NOTES SHEET $\frac{5}{91}$.
2. FOR PORTABLE CONCRETE BARRIER DETAILS, SEE STD. DWG. PCB-91.
3. FOR ADDITIONAL PORTABLE CONCRETE BARRIER (PB) LAYOUT AND PAYMENT FOR PB, SEE MAINTENANCE OF TRAFFIC SHEETS.

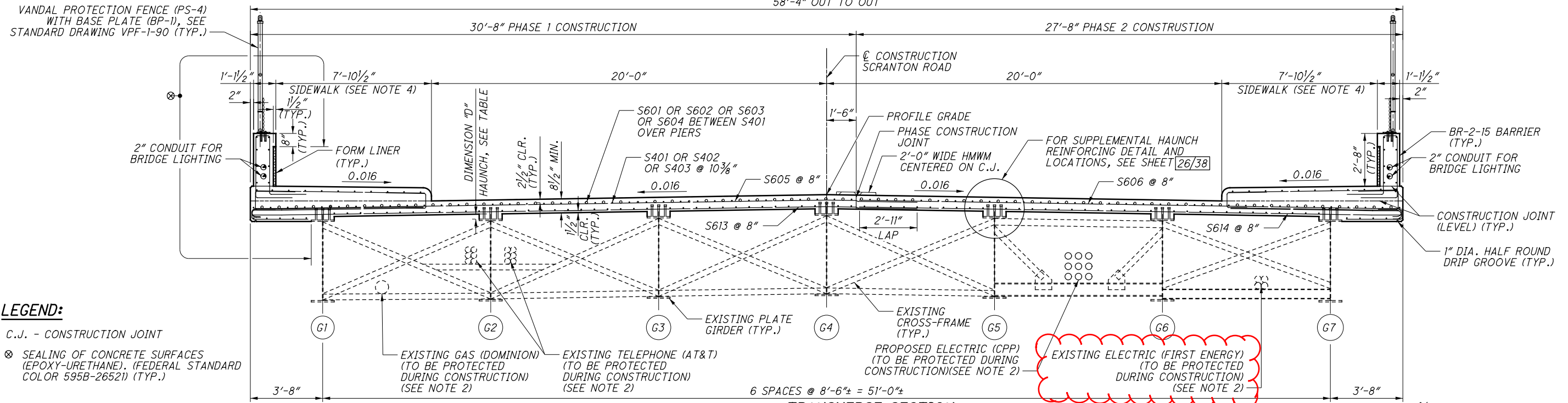
LEGEND:

= NEW CONSTRUCTION

 DESIGN AGENCY PRIME A/E 8415 Pulaski Place, Suite 300 Columbus Ohio 43240
PART WIDTH CONSTRUCTION DETAILS - 2 BRIDGE NO. CUY-090-1452 SCRANTON ROAD OVER I-90
CUY-90-14.52 PID No. 97390
7 / 38 54 91

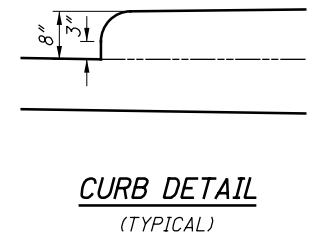
DESIGNED	AMT	CHECKED	CCU
DRAWN	AMT	REVISED	
REVIEWED	GTB	STRUCTURE FILE NUMBER	1809261
DATE	1/29/2019		

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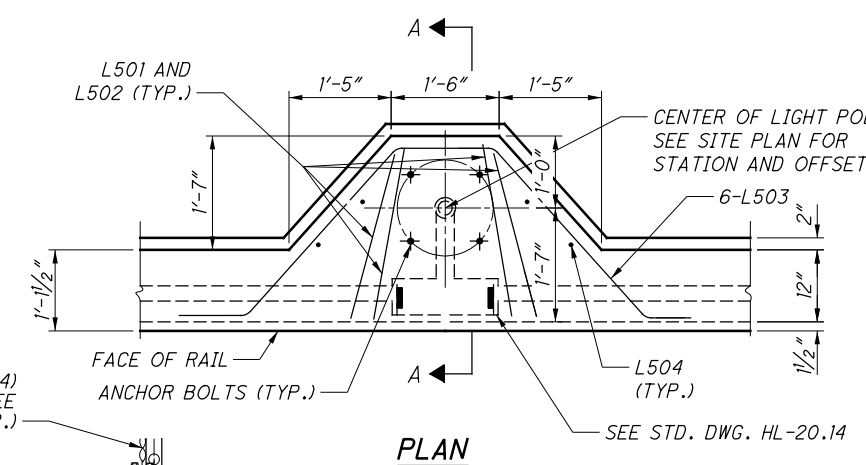
LEGEND:
 C.J. - CONSTRUCTION JOINT
 ☒ SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). (FEDERAL STANDARD COLOR 595B-2652I) (TYP.)

DIMENSION "D" TABLE - HAUNCH THICKNESS @ C. GIRDER					
GIRDER	R.A.	P1	P2	P3	F.A.
G1	3 ⁹ / ₁₆ "	3 ¹ / ₁₆ "	3 ¹ / ₁₆ "	4 ¹ / ₄ "	5 ¹ / ₁₆ "
G2	2 ¹ / ₁₆ "	2 ⁹ / ₁₆ "	3 ¹ / ₁₆ "	3 ¹ / ₁₆ "	3 ¹ / ₁₆ "
G3	2 ¹ / ₁₆ "	3 ¹ / ₁₆ "	3 ¹ / ₁₆ "	3 ¹ / ₂ "	3 ¹ / ₁₆ "
G4	2 ³ / ₄ "	3"	3 ⁵ / ₁₆ "	3 ⁵ / ₈ "	3"
G5	3 ¹ / ₄ "	3 ¹ / ₄ "	3"	3 ⁷ / ₁₆ "	3 ³ / ₁₆ "
G6	2 ¹ / ₁₆ "	2 ¹ / ₁₆ "	2 ¹ / ₁₆ "	3 ³ / ₁₆ "	3 ³ / ₈ "
G7	4 ⁹ / ₁₆ "	4 ¹ / ₈ "	4"	4 ¹ / ₄ "	4 ³ / ₈ "

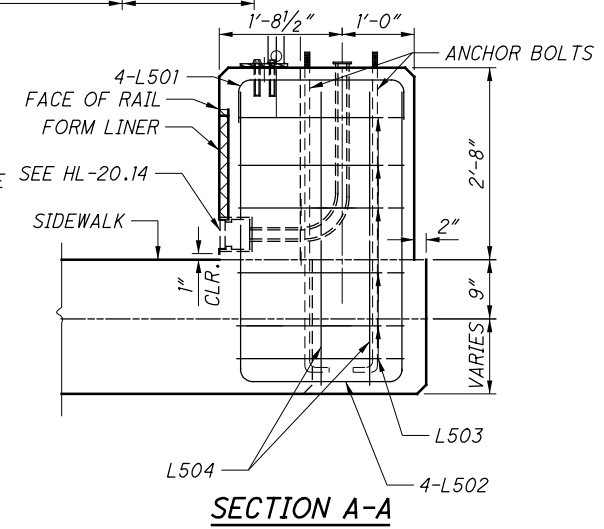


VANDAL PROTECTION FENCE (PS-4) WITH BASE PLATE (BP-1), SEE STANDARD DRAWING VPF-1-90 (TYP.)

TRANSVERSE SECTION

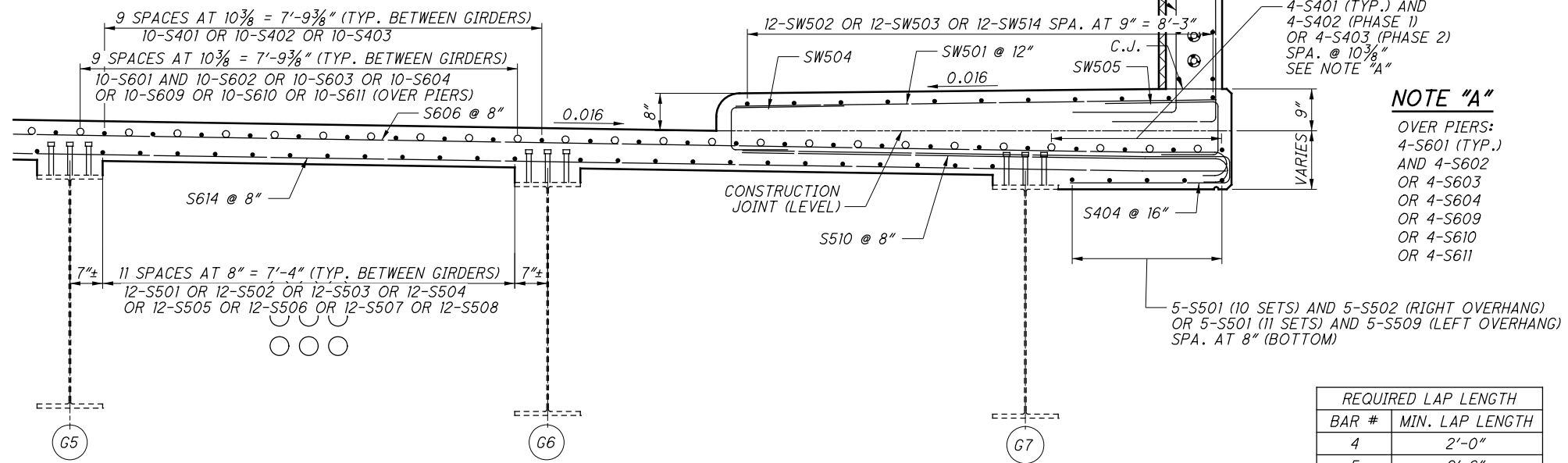


PLAN



SECTION A-A

LIGHT POLE PILASTER DETAILS
 FOR MORE DETAILS, SEE STD. DWG. HL-20.14 (4 REQUIRED)



ENLARGED PARTIAL TRANSVERSE SECTION
 (CROSSFRAMES AND UTILITIES NOT SHOWN)

NOTE "A"
 OVER PIERS:
 4-S601 (TYP.) AND 4-S602 OR 4-S603 OR 4-S604 OR 4-S609 OR 4-S610 OR 4-S611

REQUIRED LAP LENGTH	
BAR #	MIN. LAP LENGTH
4	2'-0"
5	2'-6"
6	2'-11"

NOTES:

- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OF EACH GIRDER FLANGE. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE TOP OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
- UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION. SEE NOTE FOR ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN ON SHEET [3/38].
- SIDEWALK AND RAILING AREA WITH FORM LINER SHALL BE SEALED WITH NON-EPOXY SEALER.
- THE SIDEWALK CONCRETE IS INCLUDED WITH ITEM 511 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK FOR PAYMENT.
- FOR ADDITIONAL STRUCTURE CONDUIT DETAILS, SEE STD. DWG. HL 30.32.

DESIGN AGENCY
PRIME AE
 8415 Pulaski Place, Suite 300
 Columbus Ohio 43240

DATE
 1/29/2019

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 GTB

BRIDGE NO. CUY-090-1452

SCRANTON ROAD OVER I.R. 90

TRANSVERSE SECTION

CUY-90-14.52

PID No. 97390

21/38

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